



Annual Report 2004



This annual report was filed with the French financial market authorities AMF (Autorité des Marchés Financiers) on April 18, 2005, in accordance with articles 211-1 to 211-42 of its General Regulations. It may be used in support of a financial transaction if it is accompanied by an offering circular signed by the AMF.

“We issued an unqualified opinion on the annual company financial statements and the consolidated financial statements for the year ended December 31, 2004, with two observations drawing attention to the matters discussed in Note 1.1 and Note 22 of the notes to the consolidated financial statements.

These observations relate to:

- the impact of changes in presentation concerning the provisions for losses to completion, the non-consolidation of UCITS controlled by AREVA and the consolidation of the entity holding the perpetual subordinated bonds,
- the uncertainties relating to the assessment of costs relating to waste storage and the share to be borne by EDF in the back-end of the cycle.”

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General comments

This annual report contains information on AREVA's objectives, prospects and strategies, particularly in Chapters 4 and 7. This information is not meant as a presentation of past performance data and should not be interpreted as a guarantee that events or data set forth herein are assured or that objectives will be met. Forward looking statements made in this document also address known and unknown risks, uncertainties and other factors that could, were they to translate into fact, cause AREVA's future financial performance, operating performance and production to differ significantly from the objectives presented or suggested herein. Those factors include, in particular, changes in international, economic or market conditions, as well as risk factors presented in section 4.14.3. Neither AREVA nor the AREVA Group is committing to updating forward looking statements or information contained in the annual report.

This annual report contains information on the markets, market shares and competitive position of the AREVA Group. Unless otherwise indicated, all historical data and forward looking information are based on Group estimates (source: AREVA) and are provided as examples only. To AREVA's knowledge, no report is available on the AREVA Group's markets that is sufficiently complete or objective to serve as a sole reference source. The AREVA Group developed estimates based on several sources, including in-house studies and reports, statistics provided by international organizations and professional associations, data published by competitors and information collected by AREVA subsidiaries.

The main sources, studies and reports used include (i) the International Atomic Energy Agency (IAEA), the International Energy Agency (IEA), the World Nuclear Association (WNA), the Nuclear Energy Institute (NEI), Nuclear Assurance Corporation (NAC), the European Atomic Energy Community (Euratom) and the Commissariat à l'Énergie Atomique (CEA) for the nuclear business; and (ii) the AEIA for the electricity transmission and distribution business; and (iii) Bishop and Associates for the Connectors business.

AREVA believes that this information provides an adequate picture of the size of these markets and of the Group's competitive position. However, the estimates and studies used by the AREVA Group have not been verified by independent experts. Accordingly, AREVA does not provide any guarantee that another person would obtain comparable results using different methods to compile, analyze or compute this information.

In this document, the company is referred to as "AREVA". The "Group" or the "AREVA Group" refers to AREVA and its subsidiaries.

A glossary defining the technical terms used herein is available at the end of this annual report.



Chapter 1

Persons responsible for the annual report
and for auditing the financial statements

» 1.1. Person responsible for the annual report

Mrs Anne Lauvergeon
Chairman of the AREVA Executive Board

» 1.2. Attestation by the person responsible for the annual report

To the best of my knowledge, the information contained in this prospectus fairly reflects the current situation and includes all information necessary for investors' understanding of the assets, operations, financial position and future prospects of AREVA. No material aspects of such information have been omitted.

Signed at Paris, April 15, 2005



Mrs Anne Lauvergeon
Chairman of the AREVA Executive Board

» 1.3. Persons responsible for auditing the financial statements for 2002, 2003 and 2004

The term of office of the statutory auditors is six years.

1.3.1. Statutory auditors

Mazars & Guérard

Le Vinci - 4, allée de l'Arche - 92075 La Défense Cedex - France

- Term began: First term granted by the Combined Meeting of Shareholders convened June 26, 1989 and renewed at the Combined Meeting of Shareholders convened June 18, 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2006.

Deloitte Associés

185, avenue Charles de Gaulle - 92524 Neuilly-sur-Seine Cedex - France

- Term began: Term granted by the Annual General Meeting of Shareholders convened May 31, 2002, to replace Barbier Frinault & Autres, resigning.
- Term ends: Annual General Meeting convened to approve the financial statements for the year ending December 31, 2006.

Salustro Reydel

8, avenue Delcassé - 75378 Paris cedex 08 - France

- Term began: Term granted by the Annual General Meeting of Shareholders convened May 31, 2002.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2007.

1.3.2. Deputy auditors

Max Dusart

Espace Nation - 125, rue de Montreuil - 75011 Paris - France

- Term began: Term granted by the Annual Combined Meeting of Shareholders convened June 18, 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2006.

Beas

7-9, villa Houssaye - 92524 Neuilly-sur-Seine cedex - France

- Term began: Term granted by the Annual General Meeting of Shareholders convened May 31, 2002, to replace Alain Gouverneyre, resigning.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2006.

Jean-Claude Reydel

8, avenue Delcassé - 75378 Paris cedex 08 - France

- Term began: Term granted by the Annual General Meeting of Shareholders convened May 31, 2002.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2007.

» 1.4. Statutory auditors' attestation on the 2004 reference document

The following is a free translation of a French language original for convenience purposes only. Accounting principles and auditing standards and their application in practice vary among nations. The accompanying financial statements are not intended to present the financial position, results of operations and cash flows in accordance with accounting principles and practices generally accepted in countries other than France. In addition, the procedures and practices utilized by the statutory auditors in France with respect to such financial statements included in a prospectus may differ from those generally accepted and applied by auditors in other countries. Accordingly, the French financial statements and the auditors' report of which a translation for convenience purposes only is presented in this document are for use by those knowledgeable about French accounting procedures, auditing standards and their application in practice.

In our capacity as statutory auditors of AREVA and pursuant to Article 211-5-2 of Book II of the AMF's (*Autorité des Marchés Financiers*) General Regulations, we have performed certain procedures on the information contained in this "Reference Document" relating to the financial situation and the historical financial statements of the company.

The Executive Board is responsible for the preparation of the "Reference Document". Our responsibility is to report on the fairness of the information presented in the "Reference Document" relating to the financial situation and the financial statements.

We have conducted our work in accordance with professional standards applicable in France. Those standards require that we assess the fairness of the information presented relating to the financial situation and the financial statements and its consistency with the financial statements on which we have issued a report. Our procedures also include reading the other information contained in the "Reference Document" in order to identify material inconsistencies with the information relating to the financial situation and the financial statements and to report any apparent material misstatement of facts that we may have found in reading the other information based on our general knowledge of the Company obtained during the course of our engagement.

The forward-looking information presented in the "Outlook" section in the Group's Management Report corresponds to management's objectives and not selected data resulting from an organized process.

In accordance with professional standards applicable in France, we have audited the annual company financial statements and the consolidated financial statements for the fiscal years ended December 31, 2002, 2003 and 2004, which were approved by the Executive Board of AREVA.

We issued an unqualified opinion on the annual company financial statements and the consolidated financial statements for the year ended December 31, 2002, in accordance with professional standards applicable in France, with two observations drawing attention to the matters discussed in Note 1.1 and Note 21 of the notes to the consolidated financial statements.

These observations relate to:

- the impact of the change in accounting method resulting from the first-time application of CRC Regulation No. 2000-06 on liabilities,
- the uncertainties inherent in assessing end-of-life cycle costs, due to ongoing revisions to certain decommissioning estimates and the share of them to be borne by customers, in particular EDF.

We issued an unqualified opinion on the annual company financial statements and the consolidated financial statements for the fiscal year ended December 31, 2003, with two observations drawing attention to the matters discussed in Note 1.1 and Note 22 of the notes to the consolidated financial statements.

These observations relate to:

- the impact of changes in presentation concerning the provisions for expenses to be incurred, the financial assets earmarked for facility decommissioning and the interest-bearing advances from customers,
- the uncertainties inherent in assessing end-of-life cycle costs and the share to be borne by customers, in particular EDF.

We issued an unqualified opinion on the annual company financial statements and the consolidated financial statements for the year ended December 31, 2004, with two observations drawing attention to the matters discussed in Note 1.1 and Note 22 of the notes to the consolidated financial statements.

These observations relate to:

- the impact of changes in presentation concerning the provisions for losses to completion, the non-consolidation of UCITS controlled by AREVA and the consolidation of the entity holding the perpetual subordinated bonds,
- the uncertainties relating to the assessment of costs relating to waste storage and the share to be borne by EDF in the back-end of the cycle.

The consolidated financial statements for the period ending December 31, 2004 presented as part of the Group's management report, restated per the IFRS reference system, were established under the authority of the Executive Board in the framework of the transition to the IFRS reference system adopted by the European Union for the preparation of the consolidated financial statements for 2005. We have completed our verifications of these financial statements, whose restatements were the subject of an audit by ourselves performed according to standards applicable to the accounting profession in France,

and have no observation to make on their faithfulness in terms of the rules for their establishment, which specify:

- the reasons that the comparative information presented in the consolidated financial statements for fiscal year 2005 could be different from the restated consolidated financial statements,
- the fact that the restated consolidated financial statements do not include comparative information relating to fiscal year 2003, nor do they include all of the notes to the consolidated financial statements required by the IFRS reference system, since the purpose is to prepare for the transition to the IFRS reference system adopted by the European Union for the establishment of the consolidated financial statements of fiscal year 2005.

Based on the procedures performed, we have no matters to report regarding the fairness of the information relating to the financial situation and the financial statements presented in the "Reference Document."

Neuilly sur Seine, La Défense and Paris, April 18, 2005

The Statutory Auditors

Deloitte & Associés

Mazars & Guérard

Salustro Reydel

Pascal Colin

Jean-Paul Picard

Thierry Blanchetier

Michel Rosse

Denis Marangé

Hubert Luneau

» 1.5. Persons responsible for financial information

The persons responsible for financial information are:

- **Gérald Arbola**, Chief Financial Officer and member of the Executive Board
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: gerald.arbola@areva.com
- **Olivier Mallet**, Deputy Director of Finance
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: olivier.mallet@areva.com
- **Vincent Benoit**, Investor Relations Director
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: vincent.benoit@areva.com

» 1.6. Communications policy and tentative financial communications schedule

The Executive Board's objective is to report on the Group's operations to shareholders and investment certificate owners. Accordingly, AREVA has had a financial communications program in place since it was formed. The goals of this program are to build strong relations with our shareholders and investment certificate owners and to develop the Group's presence on the financial markets by providing more information on our operations.

1.6.1. Information programs

Information of a financial, commercial, organizational or strategic nature that may be of interest to the financial community is provided to the domestic and international media and to press agencies via press releases. All information provided to the financial markets (press releases, audio and video presentations of a financial or strategic nature) is available on our website, www.areva.com, under the "Finance" tab. Individuals wishing to receive press releases by e-mail may register on the Group's site, which also features a schedule of upcoming events and announcements.

AREVA publishes half-year and annual results and makes quarterly sales announcements, in accordance with French law. It should be noted that, in the nuclear business, comparisons of quarterly data from one year to that of the preceding year may show significant variances that may not be a good indicator of the expected trend for the year as a whole.

At least twice a year, the Group organizes information meetings to comment on its business and financial performance. These meetings are usually broadcast live on the Internet.

1.6.2. Tentative financial communications schedule

A tentative schedule of upcoming events and announcements is provided below. It is regularly updated on the AREVA website.

Date	Event
4/28/2005	First quarter 2005 sales figures
5/12/2005	Annual General Meeting of the Shareholders
6/30/2005	Dividend payment for fiscal year 2004
7/28/2005	Second quarter 2005 sales figures
9/19/2005	First half 2005 financial performance
9/20/2005	Information meeting on first half 2005 financial performance (media, analysts, investors)
10/27/2005	Third quarter 2005 sales figures
February 2006	2005 sales
March 2006	2005 financial performance

1.6.3. Technical information on the Group's businesses

The AREVA group organized a series of presentations and site tours to enhance the financial community's understanding of the Group's operations from a technical as well as economic point of view.

This was the purpose of the "AREVA Technical Days" (ATD) program. Five sessions were held in 2002, 2003 and 2004 to present our businesses: a general overview in Paris, an overview of the **Back End** Division at COGEMA-La Hague, an overview of the **Reactors & Services** Division in Chalon-sur-Saône, an overview of the **Front End** Division in Avignon, and an overview of the **Transmission & Distribution** Division in Istanbul and Gebze, Turkey. Each session was attended by about a hundred participants.

Additional sessions are planned for 2005.

To ensure that those not attending receive the same information as those attending the sessions, delayed broadcasts of the meetings and related question-and-answer sessions may be seen in the ATD program section of AREVA's website.

1.6.4. Contact persons

The Investor Relations Director (see section 1.5 above) is assisted by:

- Frédéric Potelle, Deputy Director, Investor Relations
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: frederic.potelle@areva.com
- Anne Mills, Senior Manager, Financial Information and Retail Shareholding
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: anne.mills@areva.com
- Alice Gallardo, Investor Relations
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: alice.gallardo@areva.com
- Pauline Briand, Marketing, Investor Relations
Address: 27-29, rue Le Peletier, 75009 Paris, France
E-mail: pauline.briand@areva.com

In 2004, the Group also set up an investor relations desk for individual shareholders that can be reached at the French toll-free number of 0810 699 756 (calls from within France only).



Chapter 2

Information pertaining to the transaction

Not applicable

In the event of a transaction involving publicly-raised funds were to be decided, information pertaining to the transaction would be disclosed in an prospectus and filed with the Autorité des Marchés Financiers (AMF, French Financial Markets Authority) for approval.



Chapter 3

General information on the company
and share capital

» 3.1. Information on AREVA

3.1.1. Legal name (article 2 of the bylaws)

The company's corporate name is *Société des Participations du Commissariat à l'Énergie Atomique*.

The company's trade name is AREVA.

3.1.2. Establishing order

The establishing order for *Société des Participations du Commissariat à l'Énergie Atomique* (CEA) is decree No. 83-1116 of December 21, 1983. This decree was amended mainly by decree No. 2001-342 of April 19, 2001, then by decree No. 2003-94 of February 4, 2003, which provides for the following:

- amendments to company bylaws are approved by decree; however, capital increases are subject to joint approval by the Minister of Industry and the Minister of Economy (article 2, paragraphs 2 and 3);
- CEA shall retain the majority of the company's capital (article 2, paragraph 1);
- the sale or exchange of any AREVA shares held by the *Commissariat à l'Énergie Atomique* (CEA) is subject to the same conditions as for capital increases (article 2, paragraph 2);
- a government comptroller shall attend Supervisory Board meetings (article 4, paragraph 2);
- the company is subject to the articles of decree No. 53-707 of August 9, 1953, except for article 2 of the decree, which deals principally with the remuneration of executives of public-sector companies (article 5, paragraph 1);
- decisions of the Supervisory Board become automatically effective only after a ten-day waiting period, during which time the government comptroller may reject them (article 5, paragraph 2);
- sales of AREVA shares are subject to approval by AREVA's Supervisory Board, except for shares traded on a regulated stock market (article 6).

3.1.3. Legal form of the company (article 1 of the bylaws)

AREVA is a *Société anonyme à Directoire et Conseil de Surveillance* (business corporation with an Executive Board and a Supervisory Board) governed by book II of the French Commercial Code and by the March 23, 1967 decree on Business Corporations.

3.1.4. Corporate purpose (article 3 of the bylaws)

The corporate purpose of the company, in France and abroad, is:

- to acquire direct or indirect participating and equity interests, in whatever form, in any French or foreign company or enterprise involved in financial, commercial, industrial, real estate or securities operations;
- to purchase, sell, exchange, subscribe or manage any securities or participating or equity interests;
- to provide any type of service, particularly services supporting the operations of any Group company;
- to manage any industrial or commercial operation, especially in the nuclear, information technology, electronics and connectors fields, and to this end:
 - to examine projects concerning the creation, development or reorganization of any industrial enterprise;
 - to implement any such project or contribute to its implementation by any appropriate means, particularly by acquiring participating or equity interests in any existing or proposed business venture;
 - to provide financial resources to industrial enterprises, especially by acquiring participating interests and through loan subscriptions;
- more generally, the company's objective is to undertake any industrial, commercial, financial, real estate or securities operation, in France or abroad, that is directly or indirectly related to the above in furtherance of its purpose or supporting that purpose's achievement and development.

3.1.5. Corporate headquarters (article 4 of the bylaws)

The company's corporate office is located at 27-29, rue Le Peletier, 75009 Paris, France.

3.1.6. Statutory term (article 5 of the bylaws)

AREVA was registered to do business in France on November 12, 1971. Its business registration expires on November 12, 2070, unless this term is extended or the company is dissolved beforehand.

The statutory term of the company is ninety-nine years from its date of registration, unless extended earlier or the company is dissolved beforehand.

3.1.7. Business registry, business code, registration number

Business and trade register (RCS): Paris 712 054 923
 Business code (APE): 741J (Company management)
 Business registration number (Siret): 712 054 923 00032

3.1.8. Availability of legal documents

The company's legal documents may be reviewed at the corporate headquarters at 27-29, rue Le Peletier, 75009 Paris, France.

3.1.9. Annual financial statements

3.1.9.1. Fiscal year (article 43 of the bylaws)

The fiscal year is the 12-month period beginning January 1 and ending December 31 of each year.

3.1.9.2. Company financial statements (article 44 of the bylaws)

After the year-end closing, the company's Executive Board presents a balance sheet, an income statement with notes and a management report. The Supervisory Board submits its remarks on the Executive Board's report and on the financial statements to the Annual General Meeting of Shareholders.

Any shareholder, investment certificate owner or voting right certificate holder has the right to review these documents, as well as any other document that must by law be provided, subject to the conditions stipulated in current regulations. A shareholder may also request that these documents be sent by AREVA as provided by the regulations.

3.1.9.3. Information on subsidiaries and participating interests (article 45 of the bylaws)

Information on subsidiaries and equity interests that must by law be provided is included in the report presented to the Annual General Meeting of Shareholders by the Executive Board and, as applicable, by the statutory auditors.

The Executive Board reports on the operations of all subsidiaries, defined as companies in which the Group's participating interest is greater than 50% of share capital. The report is segmented by business line and discloses actual financial performance.

The Executive Board attaches a table to the balance sheet in the format required by law which presents the financial position of its subsidiaries and participating interests.

3.1.9.4. Consolidated balance sheet and financial statements (article 46 of the bylaws)

The Executive Board prepares the consolidated balance sheet, income statement, notes to the financial statements and management report.

The method used to prepare the consolidated balance sheet and income statements must be disclosed in a note attached to those documents.

3.1.9.5. Appropriation and distribution of profits (article 48 of the bylaws)

1. The net profit or loss for the period consists of the difference between income and expenses, net of depreciation, depletion, amortization and provisions.
2. No less than 5% of the profits for the year, adjusted for any prior year losses, are allocated to a reserve fund called "legal reserve". This allocation is no longer required once the legal reserve reaches 10% of the company's share capital.
3. The profit available for distribution is equal to the profit for the year less prior year losses, and less reserve allocations required by law and by the company bylaws, plus retained earnings.
4. Except in cases of capital decrease, there shall be no profit distribution to the combined shareholders and equity investors if shareholders' equity is less than an amount equal to share capital plus legal reserves, in accordance with the law and with the company's bylaws, or if the distribution would cause it to fall below that amount.

3.1.10. Information on General Meetings of Shareholders and voting right certificate holders

3.1.10.1. Provisions common to all Meetings Forms and deadlines for Notices of Meeting (article 30 of the bylaws).

Meetings are convened as provided by law.

Admission to Meetings – Deposit of securities (article 32 of the bylaws)

1. Any shareholder or holder of a voting right certificate may participate in person or by proxy in General Meetings of Shareholders, as provided by law, by offering proof of his or her identity and of his or her ownership of the shares or voting right certificates, either by registering the shares or certificates with the company at least three days before the General Meeting of Shareholders or, in the case of bearer shares (when such shall exist), by providing a statement

confirming the non-availability of the shares until the date of the Meeting.

2. In the event of the subdivision of share or certificate ownership, only the voting right holder may participate in or be represented at the General Meeting.
3. Joint owners of undivided shares and/or voting right certificates are represented at the General Meeting by one of the joint owners or by a single proxy who shall be designated, in the event of disagreement, by order of the President of the Commercial Court in summary proceedings at the request of any of the joint owners.
4. Any shareholder or voting right certificate holder who owns securities of a given class may participate in any Special Meeting of the Shareholders for that particular class of securities, subject to the conditions outlined above.
5. The Company Works Council shall designate two of its members to attend General Meetings of Shareholders, one from among the company's managers, technicians and supervisors, and the other from among its administrative /clerical personnel and craft/manual workers. Alternatively, the persons mentioned in paragraphs 3 and 4 of article L. 432-6 of the French Labor Code may participate in the meetings.

Voting procedures (article 35 of the bylaws)

1. The voting rights attached to shares of share capital or dividend shares and to voting right certificates are proportionate to the fraction of capital represented by such shares. Each full share shall be entitled to at least one vote.
2. The voting right attached to a share or a voting right certificate belongs to the beneficial owner in Annual General Meetings of the Shareholders and to the bare owner in Extraordinary General Meetings or meetings dealing with matters relating to the bylaws.

Voting rights attached to shares given as collateral remain with the owner of the shares.

3.1.10.2. Rules governing Annual General Meetings of Shareholders

Quorum and majority (article 39 of the bylaws)

The Annual General Meeting of Shareholders may deliberate validly after the first notice of meeting only if the shareholders and/or voting right certificate holders present in person, represented by proxy or voting by mail, or attending via videoconference or a telecommunications medium allowing them to be identified, possess at least 25% of the shares and certificates entitled to a vote. No quorum is required for a meeting held after a second notice of meeting has been given.

The Annual General Meeting of Shareholders adopts resolutions by a majority vote of the shareholders and/or voting right certificate holders present in person, represented by proxy or voting by mail, or attending the Annual General Meeting via videoconference or a telecommunications medium allowing them to be identified.

3.1.10.3. Rules governing Extraordinary General Meetings of Shareholders

Purpose and conduct of Extraordinary General Meetings of Shareholders (article 40 of the bylaws)

1. The Extraordinary General Meeting of Shareholders has sole authority to amend any of the provisions of the company bylaws, or to increase or decrease the company's share capital. However, the Extraordinary General Meeting of Shareholders may not increase the obligations of any shareholder or investment certificate holder, except in the case of share consolidations that have been properly performed or in the case of fractional shares resulting from a capital increase or decrease.
2. As an exception to the exclusive authority of the Extraordinary General Meeting of Shareholders in matters of bylaws amendment, the Executive Board may amend bylaw provisions relating to the company's share capital or the number of shares, investment certificates or voting right certificates representing such capital, insofar as such changes automatically result from a duly authorized capital increase, decrease or redemption.

Quorum and majority (article 41 of the bylaws)

Unless otherwise provided by law, the Extraordinary General Meeting of Shareholders may deliberate validly after the first notice of meeting only if one third of the shareholders and voting right certificate holders are present in person, represented by proxy or voting by mail, or attending the Meeting via videoconference or a telecommunications medium allowing them to be identified, in accordance with applicable laws and regulations. The quorum required after the second notice of meeting is 25% of all shares and voting right certificates entitled to vote.

If no quorum has been reached for the second notice of meeting, the second meeting may be postponed for no more than two months after the date for which it had been called.

Unless otherwise provided by law, resolutions of the Extraordinary General Meeting are adopted by a two-thirds majority of the voting rights of the shareholders and/or voting right certificate holders present in person, represented by proxy, voting by mail, or participating via videoconference or a telecommunications medium allowing them to be identified, in accordance with applicable laws and regulations.

3.1.10.4. Rules governing Special Meetings of Investment Certificate Holders (article 42 of the bylaws)

All investment certificate holders may participate in the Special Meeting.

The Special Meeting has the authority, in instances provided by law, to waive the preemptive subscription right held by investment certificate holders. The Special Meeting is called at the same time and in the same form as General Meetings of Shareholders called to decide on a proposed capital increase, convertible bond issue, or bond issue with share subscription warrants.

Investment certificate holders may attend the meeting following the same procedures as those applicable to the shareholders, described in article 32 of the bylaws.

The Special Meeting of Investment Certificate Holders adopts resolutions according to the rules applicable to the Extraordinary General Meeting of Shareholders.

» 3.2. Information on share capital and voting rights

3.2.1. Share capital (article 6 of the bylaws)

3.2.1.1. Share capital issued

The company's share capital is fully paid up and stands at one billion three hundred forty-six million eight hundred twenty-two thousand six hundred thirty-eight euros (€1,346,822,638), divided into thirty-four million thirteen thousand five hundred ninety-three shares (34,013,593) with a par value of thirty-eight euros (€38.00) per share, and one million four hundred twenty-nine thousand one hundred eight (1,429,108) investment certificates with a par value of thirty-eight euros (€38.00) per certificate, and one million four hundred twenty-nine thousand one hundred eight (1,429,108) voting right certificates.

There is only one class of shares.

3.2.1.2. Authorized share capital

No distinction is made between authorized share capital and outstanding share capital. There are no securities outstanding that could ultimately result in the creation of new shares. Accordingly, the concept of potential share capital does not apply to AREVA.

As of the date of filing of this annual report, the Annual General Meeting of Shareholders had not passed any resolution authorizing the issuance of securities giving access to AREVA share capital.

3.2.1.3. Changes in share capital – Paying up of shares

Subject to the regulatory rules applicable to AREVA concerning increases in its share capital, the company's capital can be increased or decreased on one or several occasions under the terms laid down by the laws and regulations applicable to French *sociétés anonymes* (corporations).

In the event of a capital increase for cash, provided there are still investment certificates outstanding, and unless the holders of investment certificates have waived their preferential investment rights as provided by law, the holders of the investment certificates have a preferential right – in proportion to the number of certificates they hold – to subscribe to shares that carry the same rights as the investment certificates.

3.2.2. Changes in share capital since 1989 (article 7 of the bylaws)

Changes in share capital since 1989*

Transaction date	Transaction	Number of capital securities issued/cancelled			Nominal amount of increase/decrease in capital**	Total premium (stock issue / merger / asset contribution)**	Cumulative amount**	Number of capital securities after transaction			Nominal amount**		Amount of capital after transaction**
		Shares	IC	Total				Shares	IC	Total	Shares	IC	
May 29, 1989	Capital increase (conversion of 3,112 participating interest certificates)	0	12,448	12,448	3,112,000	311,200	3,423,200	27,985,200	12,448	27,997,648	250	250	6,999,412,000
May 31, 1990	Capital increase (conversion of 17,088 participating interest certificates)	0	68,352	68,352	17,088,000	1,708,800	18,796,800	27,985,200	80,800	28,066,000	250	250	7,016,500,000
March 28, 1992	Capital increase (conversion of 337,077 participating interest)	0	1,348,308	1,348,308	337,077,000	33,707,700	370,784,700	27,985,200	1,429,108	29,414,308	250	250	7,353,577,000
June 23, 2000	Capital reduction (for conversion into euros)	0	0	0	(3,301,883)	N/A	N/A	27,985,200	1,429,108	29,414,308	38	38	1,117,743,704
Sept. 3, 2001	Capital increase (for takeover-merger of Biorisys and Framatome SA)*	5,279,748	0	5,279,748	200,630,424	1,540,164,350	1,740,794,774	33,264,948	1,429,108	34,694,056	38	38	1,318,374,128
Sept. 3, 2001	Capital increase (for payment of transfer of COGEMA shares)*	748,645	0	748,645	28,448,510	143,931,861	172,380,371	34,013,593	1,429,108	35,442,701	38	38	1,346,822,638

* See paragraph 4.1.3 for further information on these transactions.

** In French francs, then in euros as of June 23, 2000.

3.2.3. Breakdown of AREVA shareholders and voting rights

The company's share capital as of December 31, 2004 is as follows:

- 34,013,593 shares,
- 1,429,108 investment certificates,
- 1,429,108 voting right certificates.

In addition to AREVA's ordinary shares, there are investment certificates and voting right certificates.

An original share is automatically recreated with full rights and privileges when a voting right certificate and an investment

certificate are reunited. The CEA owns all of the voting right certificates. The investment certificates are quoted on Compartment B of the Eurolist market managed by Euronext™ and are held by the public.

With the exception of investment certificates, which by definition are devoid of any voting rights, all AREVA securities carry a single voting right.

Each member of the AREVA Supervisory Board, including the representatives of salaried personnel but excluding members representing the French State, holds one share of stock. Members of the Executive Board do not own shares in the company.

The table below shows the percentages of share capital and voting rights owned by shareholders, holders of investment certificates, and holders of voting right certificates as of December 31, 2004:

	12/31/2000		12/31/2001		12/31/2002		12/31/2003		12/31/2004	
	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights
CEA	95.14	100*	78.96	82.99*	78.96	82.99*	78.96	82.99*	78.96	82.99*
French State	-	-	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19
Caisse des Dépôts et Consignations	-	-	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59
Erap	-	-	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21
EDF	-	-	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42
Framépargne (employees)	-	-	1.58	1.58	1.18**	1.18**	1.06**	1.06**	0.86**	0.86**
Calyon	-	-	-	-	0.40**	0.40**	0.52**	0.52**	0.72**	0.72**
Société Total	-	-	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
IC holders	4.86	-	4.03	-	4.03	-	4.03	-	4.03	-
Members of the Supervisory Board	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* The reason for the difference in the percentage of share capital and percentage of voting rights held by the CEA in AREVA is that the CEA owns all of the voting right certificates.

** Calyon, formerly Crédit Agricole Indosuez, entered into a liquidity guarantee with Framépargne under which it agreed to acquire, in the event of insufficient liquidity, AREVA shares held by Framépargne that the latter would have to sell to meet share repurchase requirements. Pursuant to this guarantee, Calyon purchased a portion of AREVA shares beginning in July 2002.

3.2.4. Treasury shares

AREVA does not own any treasury shares.

3.2.5. Form of shares, investment certificates and voting right certificates (article 11 of the bylaws)

Subject to the condition precedent that the shares and/or investment certificates issued by AREVA are listed for trading on a regulated market, the holders may, at their discretion, record their ownership on the company's registers or hold their securities as bearer shares. All securities are registered in an account in accordance with applicable laws and regulations.

Provided that securities that confer an immediate or future right to vote in meetings of AREVA shareholders are listed for trading on a regulated stock market, the company may request the name (or the legal name in the case of a legal entity), nationality, year of birth (or year of establishment in the case of a legal entity) and address of each holder of such securities from the clearing organization at any time for the purpose of identifying the holders

of the securities as well as the number of securities held by each and any restrictions on same, in accordance with the law in these matters.

Ownership of voting right certificates must always be recorded in the company's registers.

3.2.6. Transfer of shares, investment certificates and voting right certificates (article 12 of the bylaws)

1. Shares and investment certificates are transferred from account to account upon sale. If the shares or investment certificates transferred are not fully paid up, the transferee must also sign the transfer order. Any transfer expenses are borne by the buyer.
2. The sale to a third party of company shares not listed for trading on a regulated market, for whatever reason, even when the sale is limited to bare ownership or beneficial ownership of such shares, is subject to the prior approval

of the Supervisory Board in the manner and under the conditions set forth below.

- a) The request for approval of transfer shall be delivered to the company by registered mail with return receipt requested and shall include the last name, first name, middle name and address of the transferee, the number of shares to be transferred, and the price offered.
- b) If the sale is approved, the company shall notify the transferor by registered mail with return receipt requested. However, the request shall be deemed to have been granted if no answer is given within three months of the date of the request.
- c) If the Supervisory Board rejects the transfer and the transferor maintains its intention to sell the shares, the company shall, within a legal time period, cause a third party to acquire the shares, or shall acquire the shares itself for the purpose of reducing the company's share capital. The original transfer request shall be deemed approved if the company-sponsored acquisition has not been completed within the time frame mentioned above. However, the deadline may be extended by a court ruling at the company's request.
- d) In the absence of an agreement between the parties, and in all instances of acquisition under the provisions of the preceding paragraph, the share price shall be set by an expert as provided under article 1843-4 of the French Civil Code.

3. Investment certificates are freely transferable.

A voting right certificate may be sold only in combination with an investment certificate, unless the buyer already owns an investment certificate, in which case the transaction shall result in the permanent recreation of a share.

3.2.7. Rights and obligations attached to shares, investment certificates and voting right certificates (article 14 of the bylaws)

Possession of a share, an investment certificate or a voting right certificate automatically signifies acceptance of the company's bylaws and of the resolutions duly adopted in any General Meeting of Shareholders.

The rights and obligations attached to any share, investment certificate or voting right certificate remain attached to the securities regardless of owner.

3.2.8. Pledges

There are no pledges on AREVA shares or investment certificates.

The shares of Group subsidiaries held by AREVA are similarly unencumbered by pledges.

There are no pledges on any significant AREVA asset.

3.2.9. Breaching shareholding thresholds

On the date this Annual Report was filed, there were no statutory thresholds which, if breached, would give rise to any reporting obligation.

» 3.3. Stock market information

3.3.1. Trading exchange

The investment certificates are quoted on Compartment B of the Eurolist market managed by Euronext™, under the reference code Euroclear 004540972 and the reference code ISIN FR 0004275832.

3.3.2. Custodian services

Custodian and transfer services are provided by:

Euros Emetteurs Finance

Service Financier Valeurs Françaises

48, boulevard des Batignolles

75850 Paris Cedex 17 - France

Fax: +33 1 55 30 59 60

3.3.3. Historical data

Summary of investment certificate prices and trading volumes since January 2002.

2002

<i>(in euros)</i>	High*	Low*	Volume traded	Values
January	171.3	160.0	80,861	13,382,871
February	183.5	167.9	80,183	14,165,927
March	192.0	179.5	57,202	10,705,435
April	201.0	188.0	157,140	30,671,713
May	193.0	177.0	92,923	17,425,652
June	195.0	171.0	127,814	23,892,366
July	182.0	156.1	70,984	12,269,050
August	168.9	151.2	61,553	10,065,721
September	167.5	135.1	47,658	7,526,030
October	152.3	116.0	59,784	8,101,460
November	170.0	143.0	31,460	4,834,870
December	155.0	134.1	25,558	3,634,080

2003

<i>(in euros)</i>	High*	Low*	Volume traded	Values
January	150.0	134.2	96,171	14,030,000
February	137.6	126.0	59,654	7,874,000
March	149.5	126.0	40,132	5,386,000
April	168.5	137.3	53,489	7,895,000
May	188.0	158.0	61,966	10,673,000
June	183.9	167.3	61,216	11,017,000
July	177.7	165.0	39,301	6,785,000
August	185.1	171.6	38,115	6,932,000
September	193.9	180.1	93,271	17,432,000
October	195.8	184.5	42,713	8,204,000
November	194.4	187.6	37,075	7,127,000
December	208.3	190.1	55,545	10,958,000

Source : Reuters.

* Daily closing prices.

2004

(in euros)	High*	Low*	Volume traded	Values
January	224.0	200.1	98,264	20,905,200
February	223.5	213.5	185,570	40,450,200
March	223.0	206.0	147,326	31,649,800
April	239.5	211.5	213,363	48,462,200
May	225.9	197.2	214,308	45,101,900
June	234.0	217.0	89,527	20,280,400
July	245.0	226.8	179,425	42,381,700
August	260.0	231.0	102,902	25,295,400
September	302.6	251.0	275,848	76,340,800
October	297.3	271.0	181,019	51,292,100
November	295.0	273.0	173,545	49,385,800
December	335.0	293.0	132,491	41,301,900

2005

(in euros)	High*	Low*	Volume traded	Values
January	339.5	305.0	123,980	39,990,600
February	379.0	299.0	399,299	130,365,600
March	395.0	315.0	288,326	101,341,300

Source: Reuters.

* Intraday prices.

From AREVA's establishment on September 3, 2001 through the end of March 2005, the price of the investment certificate (IC) rose by 127%, despite difficult market conditions, as indicated by the CAC 40 market index loss of 12.1% and the 17.2% drop in the EuroStoxx50 market index.

In 2004, the price of the investment certificate rose by 66.7%, as compared with increases of 6.2% for the CAC 40 and of 5.5% for the EuroStoxx50 index. The liquidity of the investment certificates increased sharply, with an average daily trading volume of 7,697 certificates, compared with 2,653 certificates in 2003 and 3,439 certificates in 2002. In terms of value, the average daily amount traded was 1,902,000 euros, compared with 447,000 euros in 2003 and 602,000 euros in 2002.

In early 2004, the *Conseil Scientifique des Indices* added the AREVA investment certificate to the SBF 120 index of

Euronext™ Paris. The investment certificate was previously included in the SBF 250 index.

» 3.4. Dividends

3.4.1. Dividend payment (article 49 of the bylaws)

Dividends are paid annually on the date and place set by the Annual General Meeting of Shareholders or, in the absence of such a decision, within nine months of the fiscal year-end on the date and place set by the Executive Board.

Dividends properly received may not be claimed back. Dividends that have not been collected within five years from the set date of distribution are automatically paid to the French State.

3.4.2. Five-year dividend data

(in euros)	Dividend	Tax credit	Gross dividend
Fiscal year 2000	22.85	11.42	34.27
Fiscal year 2001	6.20	3.10	9.30
Fiscal year 2001 (exceptional dividend)	12.28	6.14	18.48
Fiscal year 2002	6.20	3.10	9.30
Fiscal year 2003	6.20	3.10	9.30
Fiscal year 2004*	9.59	-	9.59

* Dividend proposed by the Executive Board to the Annual General Meeting of Shareholders of May 12, 2005.

3.4.3. Dividend policy

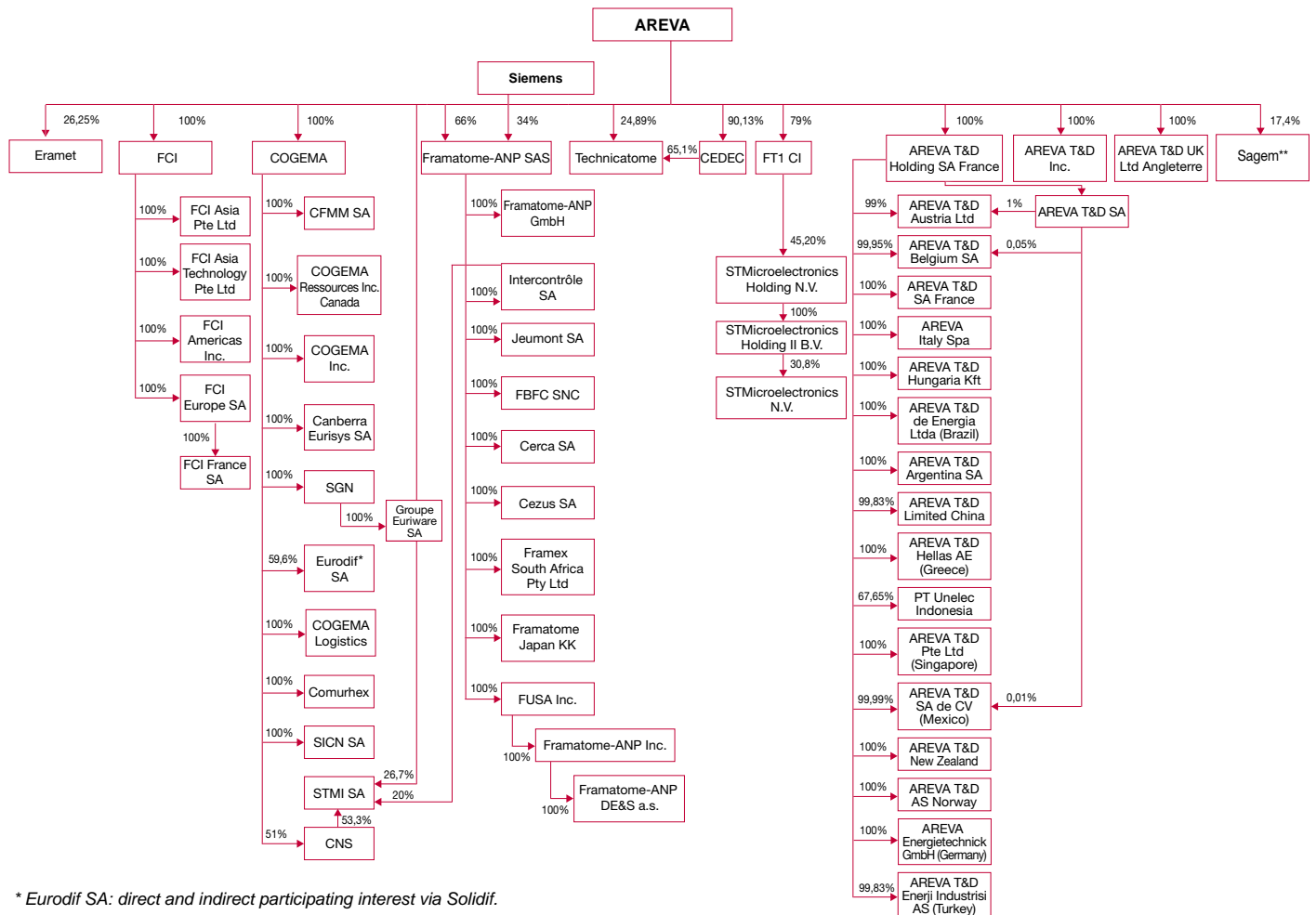
Fiscal years 2002, 2003 and 2004 were transition years. Accordingly, no dividend policy has yet been established.

The annual dividend amount is set in agreement with representatives of the French State and the CEA, which together hold a majority of the group's capital. The distribution rates for 2002, 2003 and 2004 were, respectively, 92%, 57% and 80% of the group's consolidated net income for those years. The distribution for 2004 is subject to approval by the Annual General Meeting of Shareholders, to be held on May 12, 2005. These distribution rates are not an indication of the company's future dividend policy.

AREVA will eventually establish a dividend policy. The amount of the dividends distributed will be a percentage of the group's consolidated net income, and will be close to the distribution rates of other companies in the sector.

» 3.5. Organizational chart of the AREVA group

The Group's simplified legal structure was as follows on December 31, 2004:



* Eurodif SA: direct and indirect participating interest via Solidif.
 ** Significant participating interest but company not consolidated.

» 3.6. Participating interests

AREVA's major participating interests were as follows on the date this annual report was filed:

• *STMicroelectronics NV:*

- Percent owned indirectly via holding companies: 11%.
- Business: STMicroelectronics is one of the largest semiconductor companies in the world. In 2004, it had sales of \$8,760 million.
- History of AREVA's involvement: since its establishment, CEA's laboratory, Leti, collaborated with STMicroelectronics to develop integrated circuit technology. In 1993, STMicroelectronics was equally controlled by the Italian company Stet and public shareholders in Italy and by the French company Thomson-CSF. STMicroelectronics, which at the time was in financial difficulty, received fresh capital from a French vehicle, FT1CI, jointly set up by CEA-Industrie (subsequently AREVA) and France Telecom. FT1CI owns its interest in STMicroelectronics through holding companies that are jointly held with Italian partners: STMicroelectronics Holding NV and STMicroelectronics Holding II BV. STMicroelectronics Holding II BV was the majority shareholder in the past and remains the leading shareholder in STMicroelectronics today.
- Consolidation: Equity method (the Group uses the equity method to consolidate FT1CI's entire 13.9% holding and deducts France Telecom's 2.9% share as minority interests).
- Trading exchanges: Compartment A of the Eurolist market managed by Euronext™, the New York Stock Exchange, and Milan.
- Market capitalization as of December 31, 2004: €12,985 million.

• *Eramet:*

- Percent owned: 26.28% of the share capital and 30.99% of the voting rights.
- Business: Eramet is a mining and metallurgy group that produces nonferrous metals, high-performance specialty steels and alloys. Eramet had 2004 sales of €2,521 million.
- History of AREVA's involvement: A reorganization of the French State's participating interest in Eramet was decided when the State reorganized its participating interests in mining. This reorganization was implemented, in particular, by exchanging the Eramet shares owned by Erap, accounting for 22.5% of Eramet's capital, for COGEMA shares. In addition, COGEMA acquired the Eramet shares held by BRGM, which owned 1.5% of Eramet's capital.
- Consolidation: equity method.
- Trading exchange: Compartment A of Eurolist managed by Euronext™.
- Market capitalization as of December 31, 2004: €1,693 million.

• *Sagem:*

- Percent owned: 17.4% of the share capital and 23.32% of the voting rights, including 0.06% of the share capital and 0.04% of the voting rights held by Cogera, an investment management company and AREVA subsidiary.
- Business: Sagem is a high-tech group with two operating branches: telecommunications and defense. It is ranked second in France in telecommunications and third in Europe in defense and security electronics. Sagem had 2004 sales of €3,570 million.
- History of AREVA's involvement: COGEMA formerly owned a 5.1% participating interest in Sagem. AREVA's interest in Sagem increased automatically as a result of the takeover-merger of Coficem by Sagem in December 2003. AREVA's participating interest in Sagem is about to be diluted because of the planned takeover-merger of Snecma by Sagem. Once this transaction has been completed, with a scheduled date of May 2005, AREVA should own about 7.4% of Sagem's capital and about 11.7% of its voting rights.
- Consolidation: Because the company does not exert any particular influence on Sagem, this participating interest is not consolidated. It is listed under long-term notes and investments at its original acquisition cost.
- Trading exchange: Compartment A of Eurolist managed by Euronext™.
- Market capitalization at December 31, 2004: €2,783 million.

» 3.7. Shareholders' agreements

The shareholders' agreements involving AREVA are described in section 3.7.1. below. The main shareholders' agreements concerning companies in which AREVA has significant equity interests are described in section 3.7.2.

3.7.1. Shareholder's agreements concerning AREVA shares

Except for agreements described in sections 3.7.1.1. and 3.7.1.2. below, there is, to AREVA's knowledge, no right of first refusal concerning the investment certificates or at least 0.5% of AREVA's share capital or voting rights.

3.7.1.1. Shareholders' agreement between Caisse des Dépôts et Consignations (CDC) and Commissariat à l'Energie Atomique (CEA)

CDC and CEA concluded an agreement on December 28, 2001, by which the parties agreed in particular that, in the event that AREVA shares are admitted for public trading on a regulated market through the sale of AREVA shares owned by CEA, CDC may, if it chooses, sell as many AREVA shares in the public offering as those offered for sale by the CEA. CEA further agreed to undertake its best efforts to allow CDC to sell its shares in the event that the latter wishes to relinquish all of its AREVA shares under certain specific circumstances, and particularly in the event that: (i) AREVA shares are not admitted for public trading by December 31, 2004; (ii) the shares of first-tier subsidiaries (apart from FCI) in which AREVA owns more than half the capital and voting rights should be listed for trading on a regulated exchange in France; (iii) CEA should no longer hold a majority participating interest in AREVA's capital or voting rights.

3.7.1.2. Memorandums of understanding between Total Chimie, Total Nucléaire, AREVA and COGEMA

Under the terms of separate memorandums of understanding dated June 27, 2001, Total Chimie and Total Nucléaire agreed to sell five sixths of their participating interest in COGEMA to CEA and to contribute the remaining shares to AREVA (formerly called CEA-Industrie) prior to the split-up and merger decided by the Combined Meeting of Shareholders, which was completed in September 2001.

That memorandum of understanding also provides that Total Chimie and Total Nucléaire agree to retain their AREVA shares received in exchange for their contributions until such time as AREVA shares are publicly traded on a regulated market. If admission to a regulated market does not take place by September 30, 2004, at the latest, and assuming that Total Chimie or Total Nucléaire wish to sell all of their AREVA shares, then Total Chimie, Total Nucléaire and AREVA have agreed to undertake their best efforts to ensure that the sale of the participating interest of Total Chimie or Total Nucléaire is carried out promptly and under mutually acceptable terms and conditions for all parties.

3.7.2. Main shareholders' agreements concerning AREVA's participating interests

The main shareholder agreements concerning AREVA's participating interests are set forth below.

• Framatome-ANP

In July 2000, Framatome SA (subsequently taken over by AREVA) and Siemens AG reached an agreement to combine their nuclear operations in Framatome-ANP. Siemens AG's asset contribution to Framatome-ANP was implemented in two phases: the German operations were contributed on January 30, 2001, and the U.S. operations were contributed on March 19, 2001.

These contributions were supplemented with a cash contribution by Siemens AG to Framatome-ANP, giving Siemens AG 34% of the share capital of Framatome-ANP. Siemens' nuclear operations were divided equally between AREVA's **Front End** and **Reactors & Services** divisions in 2001.

Framatome-ANP is a French *société par action simplifiée* (simplified corporation) managed by a President chosen by a six-person Board of Directors designated for a five-year term by the shareholders on a simple majority vote.

Under Framatome-ANP's bylaws, the company's shares cannot be transferred to a third party for a ten-year period starting December 1, 2002, unless all shareholders approve the transfer. After this period of non-transferability, any sale of shares by one of the shareholders to a third party will be subject to a preemptive subscription right and prior approval by the company's other shareholders.

The shareholders' agreement concluded on January 30, 2001 between Siemens AG and Framatome SA, now taken over by AREVA, includes a put and call clause establishing sell and buy options. Under this clause, Siemens AG may exercise a sell option, thus obliging AREVA to buy all of the Framatome-ANP shares held by Siemens AG. Similarly, AREVA may exercise a buy option, thus obliging Siemens AG to sell all of its shares in Framatome-ANP to AREVA. These options may be exercised by the parties under the following circumstances:

- in the event of a confirmed and final disagreement between the parties over decisions vested in the Board of Directors, in particular, approving new company shareholders or designating the company President;

- in the event of a confirmed and final disagreement regarding a change in Framatome-ANP's bylaws or the shareholders' agreement;
- in the event that Siemens does not approve the company's business plan or its company financial statements for two consecutive years and there is no agreement with AREVA.

These options can also be exercised if one of the parties is taken over by a competitor, or there is a significant drop in Framatome-ANP's market value after a change in control with respect to any of the parties.

Lastly, any party may terminate the shareholders' agreement and exercise its option on the eleventh anniversary of the agreement at the earliest, i.e. on January 30, 2012, or on each subsequent anniversary date of the agreement. From each of these dates, three-year prior notice shall be required for Siemens to exercise its put option or AREVA to exercise its call option.

Under the terms of the shareholders' agreement, and unless an agreement has been reached by the parties, the share price to exercise the buy or sell options described above will be set by an expert opinion, according to the terms set out in the agreement.

• **Eurodif**

- **Agreement governing the establishment of Eurodif**

Under the terms of an agreement dated October 9, 1973 among CEA, Comitato Nazionale per l'Energia Nucleare of Italy, AGIP Nucleare, ENUSA Empresa Nacional del Uranio (Spain), AB Atomenergi (Sweden), SYNATOM and the Centre d'Etude de l'Energie Nucléaire (Belgium), it was decided to establish a jointly-owned company in the form of a French *société anonyme* (corporation) with executive and supervisory boards, called Eurodif, to conduct studies and research in the field of gaseous diffusion enrichment, to build and operate plants, and to market enriched uranium.

CEA owned the majority of Eurodif's capital, with the other shareholders being minority shareholders. CEA's participating interest was transferred to Cogema when Cogema was established in 1976. On the date this Annual Report was filed, Cogema held, directly and indirectly through Sofidif, 59.6% of Eurodif's capital.

As of the date this annual report was filed, Eurodif's shareholders were as follows:

- COGEMA: 44.65%
- Sofidif: 25%

- Synatom: 11.11%
- Enusa: (11.11%)
- Enea: (8.13%)

In the second half of 2004, Synatom, an Electrabel subsidiary and an 11.11% minority shareholder in Eurodif, indicated its intention to sell its participating interest. The transaction is in progress.

- **Agreements relating to the establishment of Sofidif**

As part of a bilateral agreement for cooperation in the field of enrichment, France and Iran signed an agreement in 1974.

This agreement led to the establishment of Sofidif.

Under those agreements, the Iranian shareholder, Atomic Energy Organization of Iran (AEOI), holds 40.4% of Sofidif's capital. COGEMA holds the remaining 59.6% of the company's capital.

Sofidif's sole asset is a 25% participating interest in Eurodif's capital. Sofidif's role is limited to taking part in meetings of Eurodif's Supervisory Board, collecting its share of Eurodif's dividends and redistributing those dividends to its own shareholders.

• **Technicatome**

- **Agreement of December 28, 1993 relating to Cedec**

On December 28, 1993, CEA-Industrie, which has become AREVA, entered into an agreement with DCN International (hereafter referred to as DCN-I) to create a joint company called Cedec, for the purpose of holding a 65.1% participating interest in Technicatome.

As of the date this annual report was filed, Cedec was 90.13% controlled by AREVA, while DCN-I owned 9.87% of its share capital.

The agreement of December 28, 1993 contemplates, in particular, that each party shall have a preemptive subscription right to acquire the other party's shares when these shares are being sold. If this preemptive right is not exercised, any sale of shares to a third party shall be subject to advance approval by the Executive Board, voting with a two-thirds majority.

The agreement also stipulates that Cedec's Executive Board shall consist of seven members, of which four will be recommended by AREVA and three by DCN-I.

- **Agreement of March 12, 1993 relating to Technicatome**

Technicatome is 24.89%-owned by AREVA and 65.1% by Cedec. EDF owns the remaining shares, i.e. 10%.

An agreement on changes in the share ownership of Technicatome was reached between CEA-Industrie (AREVA) and DCN-I on March 12, 1993, with a further amendment on October 5, 2000.

The agreement stipulates, in particular, that Technicatome's Board of Directors shall consist of fifteen directors, of whom five are elected by the employees in accordance with the law of July 26, 1983 on making the public sector more democratic, with the remaining directors designated by Cedec (six directors), AREVA (three directors), and EDF (one director). The Chairman of the Board is appointed by the Board of Directors after consultation with the various parties and on the recommendation of Cedec, subject to AREVA's approval. Some board decisions require a two-thirds majority vote, notably approval of the annual financial statements, capital increases or reductions, changes to the bylaws, acquisition or disposal of equity interests, approval of new shareholders, authorization of certain agreements between related parties as specified by law, capital investments exceeding €1.5 million, etc. In addition, the explicit agreement of the directors nominated by Cedec and AREVA must be obtained beforehand.

In the event that EDF wishes to sell all or part of its equity interest in Technicatome, AREVA will have priority over the other parties (Cedec) to buy the shares on mutually acceptable terms.

If either Cedec or AREVA contemplates the sale of all or part of its shares or rights in Technicatome, Cedec and AREVA have a reciprocal and irrevocable agreement under which each would first offer the shares for sale to the other party (unless AREVA were to sell the shares to the CEA).

It is also stipulated that if the CEA were to own less than 51% of AREVA, the CEA would have to buy the Cedec shares owned by AREVA, representing 90.13% of Cedec's share capital.

• ETC

With the aim of cooperating in the field of uranium centrifuge enrichment, AREVA signed an agreement on November 24, 2003 with Urenco and its shareholders under which AREVA will buy 50% of the share capital of Enrichment Technology Company Ltd (ETC), which combines Urenco's activities in the design and construction of equipment and facilities for uranium centrifuge enrichment, as well related research and development.

The acquisition was submitted to the European anti-trust authorities, which gave their official approval on October 6, 2004. Nonetheless, as of the date this annual report was filed, the signature and ratification of the quadripartite treaty among

Germany, the Netherlands, the United Kingdom and France had yet to take place, before December 31, 2005 at the latest, unless the deadline is extended. Also required is a formal approval to implement the agreement by the committee to be set up under the treaty (see section 4.14.3.1. below).

ETC will be the exclusive vehicle for uranium centrifuge enrichment technology for Urenco and AREVA.

Once AREVA has completed the acquisition of 50% of ETC's capital, a shareholders' agreement will define the relations between AREVA and Urenco as shareholders in ETC, covering in particular the composition of the Board of Directors, the making of decisions that require a unanimous vote by the directors present, and restrictions on selling ETC shares.

• Eramet

(a publicly traded company - see section 3.6 above)

AREVA's participating interest in Eramet is subject to an agreement dated June 17, 1999 among Sorame, Ceir, Erap and the shareholders in Sorame. Erap's participating interest in Eramet was transferred to COGEMA on December 1, 1999, and then to CEA-Industrie (subsequently AREVA) on September 4, 2001. AREVA has therefore replaced Erap, taking on its initial rights and obligations. Under the terms of this agreement, AREVA, acting in concert with Sorame and Ceir, controls Eramet. The agreement expires on June 30, 2006, but will be automatically renewed for one-year periods, unless one of the parties states that it wishes to withdraw a month before the expiration date of the period in question.

The shareholders' agreement specifies in particular: (i) with respect to the fifteen seats on Eramet's Board of Directors, AREVA may request the nomination of three people as directors as well as an additional two people nominated in consideration of their expertise and independence from AREVA and Eramet; (ii) a reciprocal right of first refusal on any sale of Eramet shares by one of the parties consisting of a block of at least 25,000 shares, or on any planned sale of shares by the parties, on one or several occasions, over a period of twelve months for a total price of €7.5 million.

This agreement has been the subject of several decisions by the CMF: decisions No. 199C1045 of August 3, 1999, No. 199C2064 of December 29, 1999, No. 201C0921 of July 25, 2001, and No. 201C1140 of September 12, 2001.

As part of its declaration of intent dated September 12, 2001, AREVA has indicated that it will not increase its participating interest in Eramet by more than 2% in any given fiscal year, either in terms of share capital or in terms of voting rights,

and that it will not own more than 33.32% of Eramet's share capital at any time, unless AREVA exercises its right of first refusal or its share purchase option under the shareholders' agreement.

• **FT1CI**

FT1CI is a holding company currently held by France Telecom (21%) and AREVA (79%) that holds 45.2% of STMicroelectronics Holding N.V. (STH), with the remaining 54.8% held by Finmeccanica and Cassa Depositi et Prestiti. STH holds 100% of STMicroelectronics Holding II B.V. (STH II), which holds 30.8% of STMicroelectronics.

France Telecom and AREVA signed a shareholders' agreement on December 28, 2001 to define their relations as FT1CI shareholders and agree between themselves on the methods of implementing the STMicroelectronics shareholders' agreement concluded with Finmeccanica (see below), and, in particular, how each FT1CI shareholder would receive the sale proceeds of its indirect participating interest in STMicroelectronics.

This agreement also covers the division of seats on FT1CI's Board of Directors (since the end of 2004, FT1CI's four-person Board of Directors consists of three directors put forward by AREVA and one director recommended by France Telecom, as the latter's participating interest in FT1CI is now below 30%); how certain decisions within FT1CI are to be taken, in particular the designation of directors and officers for STH, STH II, and STMicroelectronics; and a preemptive subscription right for each party in the event of a sale of FT1CI shares by the other party, plus a tag-along right of withdrawal for France Telecom if AREVA were to lose majority control of FT1CI's capital.

Certain decisions by FT1CI are subject to approval by France Telecom's representative(s) to the Board of Directors, in particular taking out any loans for more than €2 million, granting loans and advances made with FT1CI funds to parties other than AREVA group companies as part of the process of centralized cash management, providing sureties or guarantees, entering into or amending a shareholders' agreement entered into by FT1CI, paying dividends or other forms of distribution, and approving new shareholders.

On March 17, 2004, France Telecom and AREVA signed an agreement amending the shareholders' agreement of December 28, 2001 to make any necessary changes thereto so as to take into account the new situation created by the signature of the new shareholders' agreement, described below, among Finmeccanica, France Telecom and AREVA pertaining to their shareholding in STMicroelectronics. The

shareholders' agreement of December 28, 2001 remains in force with respect to all of the provisions that have not been amended by this subsequent agreement. The agreement provides for, under certain circumstances, the elimination of France Telecom's preemptive subscription right in the event that AREVA sells FT1CI shares.

• **STMicroelectronics**

(a publicly traded company - see section 3.6. above)

STMicroelectronics (STM) is subject to a shareholders' agreement among AREVA, France Telecom, FT1CI and Finmeccanica, which are indirect shareholders via STMicroelectronics Holding N.V. and STMicroelectronics Holding II B.V. (hereinafter known collectively as "STH"). The agreement, renewed on March 17, 2004, establishes rules governing the four parties' interests and is intended to improve the liquidity of their indirect holdings in the company and to maintain a stable and balanced shareholding structure to support the company's growth and independence. The agreement provides for the preservation of equal Franco-Italian control, independent of economic interests in STH resulting from sales of shares.

In December 2004, Finmeccanica sold part of its indirect interest in STM to Cassa Depositi e Prestiti, which signed the above-mentioned shareholders' agreement on December 23, 2004.

The shareholders' agreement also contains provisions for defensive measures against a take-over bid, allowing the issuance of preferred shares to STM. Its main provisions are:

- continued Franco-Italian governance with equal representation of both parties on the Supervisory Board, subject to retention of minimum participating interests with STM voting rights;
- simplification of disposals of the parties' indirect shareholdings in STM; and
- the right to acquire additional STM shares under certain circumstances.

1. Current shareholding structure

As of December 31, 2004, AREVA, Finmeccanica, Cassa Depositi et Prestiti and France Telecom held indirect interests in STM of 11%, 6.6%, 10.3% and 2.9%, respectively, via STH. The indirect shareholdings of AREVA and France Telecom are held through FT1CI. STH is equally owned, on the one hand, by FT1CI (the "French party") and, on the other, by Finmeccanica and Cassa Depositi e Prestiti (the "Italian party").

Among these shareholdings:

- 20,000,000 of the STM shares indirectly held by Finmeccanica are underlying shares of exchangeable bonds that were issued by Finmeccanica;

- all of the STM shares held indirectly by France Telecom (i.e. 26,423,404 STM shares) are the underlying shares for exchangeable bonds with a maturity date of August 6, 2005 issued by France Telecom. In addition, on December 3, 2004, France Télécom sold part of its indirect participating interest in STM in a block sale that amounted to 30,000,000 shares, i.e. 3.3% of STM's capital.

2. Corporate decision-making powers

Corporate decisions in respect of STM will remain equally shared between the French party and the Italian party for a four-year period starting from the execution of the new shareholders' agreement, i.e. March 17, 2004, subject to each of the parties indirectly holding at any time at least 9.5% (i.e. at least 19% for both parties) of the voting rights of STM (taking into account underlying shares of STM for exchangeable instruments issued by each of the parties, as long as the voting rights pertaining to such shares remain held by STH).

During that period, the two parties will recommend to the general meeting of shareholders the same number of representatives for nomination to the Board of STM, and any important decision concerning STM will require the unanimous approval of both parties.

In the event the shareholding of one of the two parties falls below the 9.5% threshold for STM voting rights due to a capital increase of STM or to an exchange of exchangeable instruments, such party will have the right to cause STH to purchase STM shares in order to increase its shareholding up to 9.5%.

If each of the parties has maintained its indirect shareholding above the 9.5% threshold for STM voting rights until the end of the four-year period, corporate decision-making powers will remain equally shared, under the same terms and conditions, as from the end of this period, provided, however, that both parties' indirect shareholding in voting rights in STM held by STH remain at least 47.5%.

In the event that the shareholding of both parties is less than the 47.5% threshold prior to the expiration of this four-year period, such party will have the right to cause STH to purchase STM shares in order to rebalance the shareholdings of the parties.

If the indirect shareholding of one of the two parties falls below the 9.5% threshold during the initial four-year period, or below the 47.5% threshold of voting rights held by STH in STM as of the end of such four-year period, corporate decision-making

powers will cease to be shared equally. However, the minority party will have a veto right on certain specific decisions, subject to its indirect shareholding exceeding certain thresholds.

3. Sales of STM Shares

Each of the parties to the shareholders' agreement has the right to cause STH to sell its indirect shareholding in STM shares, subject to a right of first refusal and a tag-along withdrawal right of the other party. However, the right of first refusal applies only (among other conditions) to transfers of shares that result in the selling party holding less than 7% of the share capital of STM.

Such sales of STM shares can be triggered by the issue of financial instruments exchangeable into STM shares, through equity swaps or through structured finance deals. In the case of an issuance of exchangeable securities, the tag-along right and, if applicable, the right of first refusal apply on the date of such issue. If all or part of the financial instruments remain un-exchanged on the date on which they are no longer exchangeable into STM shares, the relevant party is entitled to cause STH to proceed with disposals of those STM shares without application of the right of first refusal or of the tag-along withdrawal right. These restrictions apply in particular to the underlying STM shares for the exchangeable bonds issued by Finmeccanica and France Telecom, if they remain un-exchanged.

4. Acquisition of STM Shares

In the event of a hostile bid or similar action on STM shares, the parties have rights under an option agreement concluded between STM and STH which, if exercised, allows STH, subject to the prior consent of STM's Supervisory Board, to buy STM's preferred shares up to a limit of 50% of STM's voting rights plus one share. Exercising the option agreement is subject to ownership of a certain percentage of STM's voting rights, which percentage, in accordance with the new agreement, has been reduced from 30% to 19%.

Provided that a third party, acting alone or in concert, holds more than 2% of the share capital of STM or announces its intention of taking control of STM, any party will have the right to increase its indirect shareholding in STM through the acquisition of shares in STM by STH. Such acquisition will be subject to the veto right of the other party, as long as corporate decision-making in respect of STM remains equally shared (and except for the case of a hostile take-over bid on STM). Nevertheless, if such acquisition has been vetoed, both parties will have the right to acquire the same number of shares in STM directly, without going through STM.

In the event that such direct acquisition occurs, the relevant party undertakes to vote on such shares in accordance with the vote exercised by STH in STM.

- **Sagem**

(a publicly traded company - see section 3.6. below)

On December 12, 2003, BNP Paribas, Club Sagem, and COGEMA signed a shareholders' agreement that came into force on December 18, 2003, following Sagem's takeover-merger of Coficem, a holding company for the purchase of Sagem by its employees. The objective of the parties was to provide support to Sagem during the transition period following the takeover-merger. In particular, this shareholders' agreement stipulates the following:

- BNP Paribas and COGEMA agreed that neither may: (i) transfer⁽¹⁾ the shares received in exchange for their Coficem shares at the time of Sagem's takeover-merger for a period of twenty months, starting with the entry into force of the agreement and ending on August 18, 2005; (ii) tender their shares in the event of a take-over bid on Sagem's shares, unless the bid has been approved by Sagem's Supervisory Board.
- The parties jointly agreed to a preemptive subscription first (with the possibility of replacement by another party) in the

event of the transfer of shares, representing at least 0.1% of the company's voting rights after the merger, to one or more third parties. However, this right of first refusal will not apply in the event of a take-over bid or exchange offer for the company's shares.

The shareholders' agreement shall remain in force through December 18, 2008. However, it can be terminated earlier (i) with respect to any of the parties, at such party's request, if such party has not received the sale price of shares sold after a preemptive subscription right has been exercised; or (ii) if the participating interest of Club Sagem and the Sagem employees' mutual funds falls below 10% of the company's capital for a period of six consecutive months. With respect to this provision, it should be mentioned that the takeover-merger of Snecma by Sagem, planned for May 2005, could lead to the participating interest of Club Sagem and the Sagem employees' mutual funds falling below this 10% threshold, and so result in the termination of the shareholders' agreement six months after the merger.

This shareholders' agreement was the subject of an opinion by the *Autorité des Marchés Financiers* (AMF), published on December 15, 2003 (Decision No. 203C2129).

(1) i.e. sell, contribute, exchange or transfer the shares in any form whatsoever.



Chapter 4

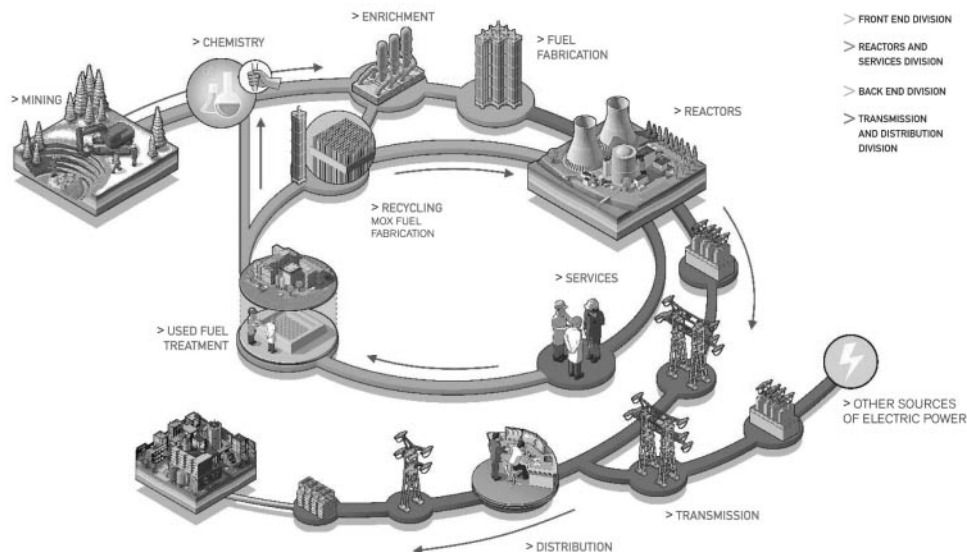
Information on company operations,
new developments and future prospects

» 4.1. Overview and strategy of the AREVA group

4.1.1. Overview of the AREVA group

The AREVA group is a worldwide provider of solutions for CO₂-free power generation and electricity distribution. In 2004, AREVA's consolidated sales revenue rose to €11.1 billion, with consolidated net income of €428 million. With manufacturing facilities in close to 40 countries, AREVA employs more than 70,000 people.

AREVA's businesses



AREVA's Energy operations are comprised of four divisions, including three divisions in Nuclear Power:

- **The Front End Division contributed 23% to AREVA's consolidated sales revenue in 2004**, i.e. €2,524 million and it is in charge of uranium ore exploration, mining, conversion and enrichment, and nuclear fuel design and fabrication. AREVA is the world leader in the front end of the nuclear cycle. The Group controls a diversified portfolio of mining properties in countries such as Canada, Kazakhstan and Niger. In addition, AREVA owns and operates first-rate industrial facilities, most of which are located in Europe, including France, Germany, and Belgium, and in the United States.
- **The Reactors & Services Division contributed 19% to AREVA's consolidated sales revenue in 2004**, i.e. €2,145 million and it is in charge of nuclear reactor design and construction. It also offers products and services to maintain, operate, upgrade and optimize nuclear power plants. AREVA is the leading supplier of light water nuclear reactors in the world in terms of installed capacity, and the leading supplier of heavy replacement components for nuclear power plants. Recurring business represents 90% of the division's total operations.

Energy is AREVA's leading business. The Group is the world's largest supplier of nuclear power solutions and number three worldwide in electricity transmission and distribution. AREVA is the only Group active in every stage of the nuclear power supply chain. AREVA's customers include the world's largest electric utilities. Long-and medium-term contracts with these utilities represent a significant portion of AREVA's sales revenue. The Group's businesses are summarized below:

From a strong engineering and industrial base in France and in Germany, the division successfully expanded into the United States, where AREVA is the leading supplier of services and heavy components. To date, AREVA is the only nuclear reactor builder with a contract to supply a third-generation European Pressurized Reactor (EPR - see Glossary).

- **The Back End Division contributed 17% to AREVA's consolidated sales revenue in 2004**, i.e. €1,946 million and it is in charge of operations for the treatment and recycling of fuel following its use in nuclear power plants. The Division also provides logistics, engineering and nuclear cleanup services. AREVA is the world leader in the back end of the nuclear cycle. The Group offers a complete range of used fuel management solutions, including dry storage for the once-through nuclear fuel cycle, and treatment and recycling for the close fuel cycle. AREVA's customer base in the back end of the fuel cycle is comprised primarily of European utilities. The Group has also signed agreements to transfer technology to Japan and to the United States in preparation for facility decommissioning.
- **The Transmission & Distribution Division contributed 29% to AREVA's consolidated sales revenue in 2004**, i.e. €3,186 million.

The **T&D** Division manufactures, installs and maintains equipment and systems to transmit and distribute medium and high voltage electricity. T&D is one of a very few global suppliers on the electricity transmission and distribution market. T&D is the third largest supplier worldwide and the second largest supplier to electric utilities. With a global presence consisting of 61 manufacturing sites in 20 countries, AREVA T&D is recognized for the strength of its technology, particularly in high voltage systems.

AREVA's ability to meet customer requirements in every stage of the nuclear cycle is an important asset. As a supplier of nuclear materials, nuclear fuel, equipment, services and solutions to store and recycle used fuel, AREVA is the only supplier able to satisfy customer requirements at every stage of the value chain. The Group also meets their expectations for global solutions that are consistent with stringent safety criteria.

AREVA is recognized for its technology expertise in every stage of the nuclear cycle. AREVA's expertise is backed by 30 years of research and operating experience, and by a network of over 1,500 scientists. The Group's technology represents a significant competitive advantage and a barrier to market entry, particularly in the field of new generation reactors and in the back end of the fuel cycle.

AREVA does business primarily in Europe, North America and Asia. The Group is guided by sustainable development principles, ensuring profitable growth in a socially responsible manner while being mindful of the environment. For example, AREVA's nuclear business is limited to countries that have signed the entire Nuclear Non-Proliferation Treaty, thereby agreeing to ongoing control by the International Atomic Energy Agency (IAEA).

AREVA's baseload business provides excellent visibility. In the Nuclear divisions, which contributes approximately 60% to AREVA's sales revenue, long- and medium-term contracts and recurring services represent a significant portion of the Group's business. Visibility is also excellent in the **T&D** Division, thanks to a diversified backlog of orders from customers who wish to maintain established relationships.

AREVA's business is the growing energy market. Electricity demand is in a continuous growth cycle fueled by strong economic development in several emerging countries, in particular China and India. In this environment, AREVA believes

that nuclear power will be a necessary component of the energy mix in the coming years. Indeed, nuclear power, which contributed 16% to the world's electricity production in 2004, is competitive in terms of generating costs, relatively immune to raw material price increases and free of harmful CO₂ effects.

Nuclear power plants will have to be replaced in due time. Their number is, in fact, likely to grow over the medium to long term. At the very least, existing reactors will be upgraded or their generating capacity increased, as is already the case in the United States, for example. Finland and France have already decided to build EPR reactors. China has issued several calls for tenders to expand its nuclear power program. In addition to the reactor construction and upgrading activities that will benefit the **Reactors & Services** Division directly, the renewal and expansion of nuclear power programs, will benefit all of AREVA's nuclear operations, including the **Front End** and **Back End** divisions. Similarly, electricity transmission and distribution networks must be modernized or upgraded. The grids must also be interconnected to comply with market deregulation and expanded to accommodate new electric generating capacity.

Building on its presence in regions where power generation will undoubtedly grow, AREVA has the necessary experience and assets to respond to the key challenges of its utility customers: to generate power at a competitive cost without generating greenhouse gases (CO₂), and to transport electricity.

Beside its core business, AREVA owns and operates the **Connectors** Division. This activity involves the design and manufacturing of interconnection systems, mainly for the telecommunications, consumer electronics, computer and automotive markets. The **Connectors** Division contributed 12% to AREVA's consolidated sales revenue in 2004, i.e. €1,289 millions.

4.1.2. Strategy of the AREVA group

Energy is AREVA's core business. The Group's mission is to provide advanced, high-quality products and services that help our customers generate and transport electricity in a cleaner, safer and ever more economical manner. Both of AREVA's Energy businesses are expected to benefit from the continuing growth in electric power demand worldwide. AREVA is convinced that nuclear power, in particular, is part of any answer to the energy and environmental challenges facing our planet.

AREVA's strategy for growth is to strengthen and develop our leadership positions along the lines described below:

- **Strengthen our position as the world's leading provider of solutions for nuclear power generation.** We have set the following objectives to achieve this mission:
 - **Maintain a prominent presence in all nuclear business segments** to offer global solutions meeting our utility customers' expectations. These solutions must allow our customers to optimize their energy business assets in terms of life cycle and total cost of ownership while meeting all safety requirements.
 - **Confirm our leadership position in the front end of the fuel cycle.** To meet this objective, we will update our production facilities and expand our exploration programs to increase our mining resources.
 - **Implement the EPR projects in Finland and in France and continue to promote third generation technologies in Europe and the rest of the world.** To achieve this goal, we will strengthen our engineering capabilities for new reactors, develop our local knowledge base in China and secure a license for our new generation reactor designs (EPR) in North America.
 - **Anticipate political change in national used fuel management policies,** particularly in the United States and Japan, where AREVA is already providing solutions.
 - **Update our technical expertise and develop forward-looking technologies to maintain our leadership,** particularly in next generation reactors and fuel cycles.
 - **Capitalize on our solid nuclear safety, industrial safety and risk prevention record.**
- **Develop our T&D operations while achieving satisfactory financial and operating performance.** The following actions will be undertaken:
 - **Implement the 2004 optimization plan.** This restructuring and profitability improvement plan has four main facets: strengthen our centralized purchasing and control program, improve business processes, restructure production facilities and optimize our portfolio of businesses. This plan will remain in effect until the **Transmission & Distribution Division** reaches a profitability level on a par with that of the most efficient companies in the sector.
 - **Increase our development efforts in high-growth regions.** To support the **Transmission & Distribution Division's** optimization plan, AREVA will provide the resources necessary to boost development in high-growth regions such as China and India, including the development of new production capacities.

- **Strengthen our international operations in a balanced manner, with emphasis on our three pillars: Europe, North America and Asia.** The Group will focus first and foremost on organic growth as it continuously strives to invest and innovate to serve its customers. AREVA also intends to strengthen its positions through carefully targeted acquisitions and partnerships with local players vital to our increased penetration of key markets. AREVA's acquisition of the electricity transmission and distribution business complements our product offering and gives us greater access to utilities worldwide. It also complements our expertise and allows us to develop our portfolio of customers as well as our international operations.
- **Continue to improve financial performance in Connectors.** The **Connectors Division**, represented by FCI, restructured its operations successfully despite a market decline in 2001 and 2002. AREVA's goal is to continue to improve FCI's profitability to a level close to that achieved by the most efficient companies in the business. To succeed, we need to continue our current business improvement efforts, restructure our customer portfolio and launch new products. AREVA will protect its investment in this division by providing ongoing support.
- **Promote sustainable development as a core AREVA value that is key to our operating excellence.** AREVA will continue to incorporate sustainable development principles in all of our business processes. Our AREVA Way program enables each unit to perform a self-assessment of its performance with respect to AREVA's sustainable development commitments for economic performance, social responsibility and the environment. To this end, each unit sets performance objectives that are approved by AREVA's management. AREVA's budgets and strategic action plans also include sustainable development indicators, which are closely monitored by AREVA's management.
- **Maintain a strong balance sheet and solid cash flows:**
 - **It is AREVA's policy to maintain a strong balance sheet.** This not only serves as assurance for our customers, it allows us to enter into major contracts, particularly for the sale of new reactors. This policy allows AREVA to operate its businesses efficiently and to fund capital programs for the future. AREVA has set up provisions to cover decommissioning obligations. We have also assembled a portfolio of financial assets sufficient by itself to fund all estimated decommissioning expenses. A special committee of the Supervisory Board is in charge of monitoring this portfolio of financial assets and its adequacy for future decommissioning expenses.
 - **Maintaining a solid, recurring operating cash flow** to fund our capital expenditures and create value for our shareholders. To achieve this goal, AREVA will continue to pursue its efforts to improve productivity and business visibility.

4.1.3. Background of the AREVA group

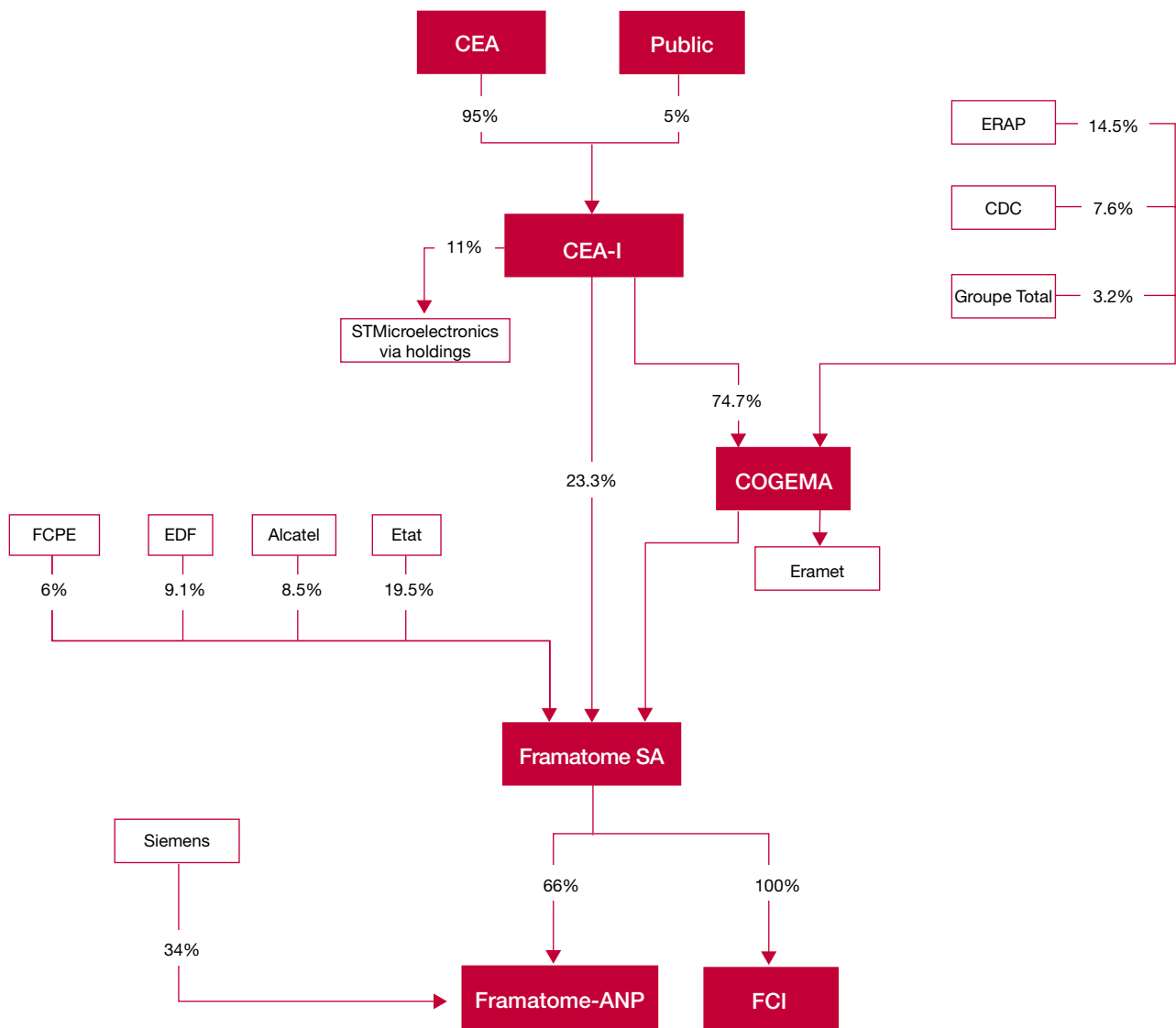
Two major nuclear industry companies held directly and indirectly by CEA-Industrie – AREVA's former name – were combined to form the AREVA Group on September 3, 2001:

- COGEMA, (Compagnie Générale des Matières Nucléaires), established in 1976 to incorporate most of the CEA's former production division assets in uranium mining, uranium enrichment and used fuel treatment;

- Framatome, established in 1958, is one of the world's leading companies in the design and construction of nuclear reactors, in nuclear fuel and the supply of services relating to those activities. In 2001, Framatome established Framatome-ANP as a joint company held by Framatome (66%) and Siemens (34%), thus merging the nuclear operations of the two groups.

Before this merger, the CEA-Industrie group was organized as indicated below.

Structure of the CEA-Industrie group in early 2001



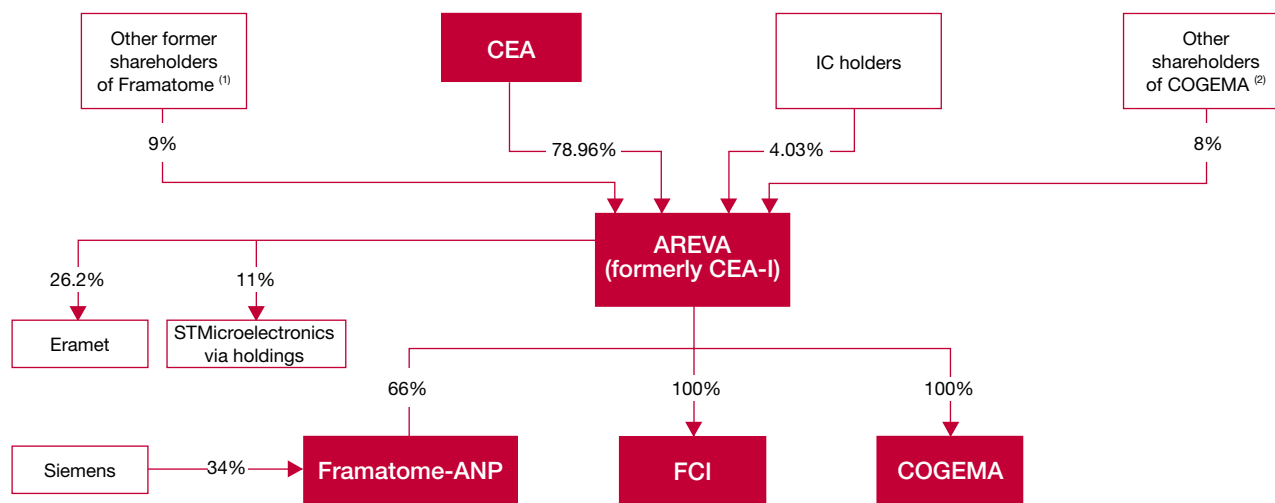
The purpose of AREVA's establishment was to create an industrial group with a world leadership position in its businesses and a streamlined organization giving the Group:

- complete coverage of every aspect of the nuclear business and a unified strategy with respect to major customers,
- an expanded customer base for all of the Group's nuclear products and services,

- better cost control by pooling the purchasing function and some overhead costs, and
- optimum financial resource management.

This restructuring entailed a series of asset contributions and mergers resulting in the establishment of the AREVA group. The organization of the group following that restructuring is shown below.

Structure of the AREVA group immediately after the 2001 restructuring



* Consolidated under the equity method – Percentages are expressed in holding percentages.

(1) French government, EDF, Framépargne.

(2) Total, CDC, Erap.

AREVA was thus formed from the legal structure of CEA-Industrie and retained the Euronext™ Paris listing of a portion of the latter's share capital in the form of investment certificates.

A summary of the main events since AREVA's establishment in 2001 follows.

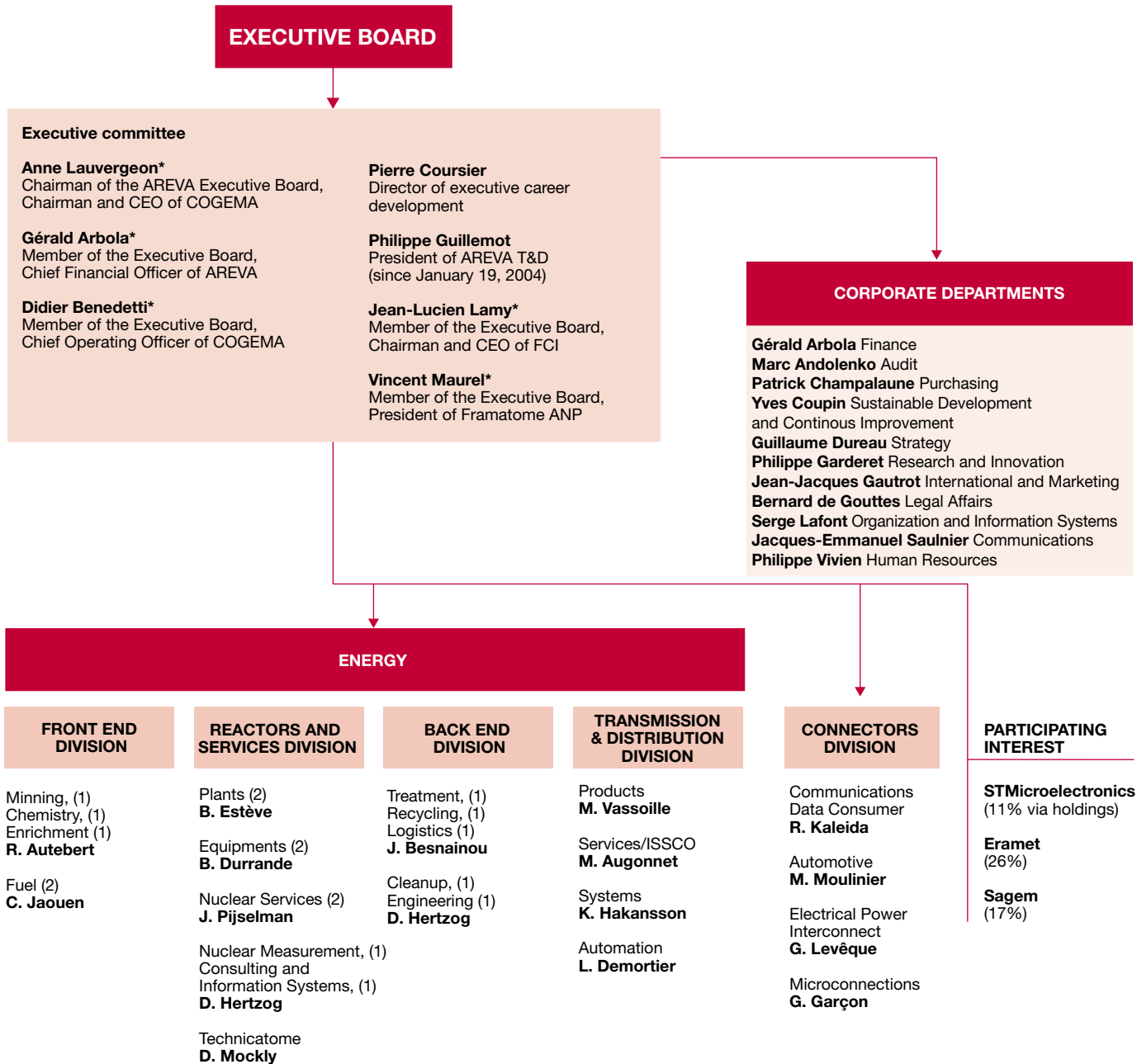
- 2002
- Acquisition of Duke Engineering & Services, a nuclear engineering and services company in the U.S..
 - The U.S. government chooses AREVA's technology to recycle surplus defense plutonium via MOX fuel (see Glossary).
- 2003
- AREVA signs an agreement with Urenco that would give AREVA access to the world's most efficient uranium enrichment technology: gaseous centrifugation.
 - Finnish utility TVO chooses AREVA's EPR as its next reactor.
 - Sale of the Connectors Division's MAI (Military Aerospace Industrial) to AXA Private Equity as part of the restructuring of the business.

- 2004
- Acquisition of the **Transmission & Distribution Division**. On January 9, 2004, AREVA signs a final agreement to acquire Alstom's transmission and distribution operations (T&D). The European Commission and other relevant antitrust organizations approve the transaction. The purchase is financed entirely with the Group's own funds. With the T&D acquisition, AREVA broadens its commercial platform and strengthens its strategic position in the energy business.
 - EDF decides to build an EPR reactor designed by AREVA. The first in a series of this third-generation reactor will be built at EDF's Flamanville site to replace reactors in the French pool over the long term.
 - AREVA acquires control of the uranium mining company, Katco, in Kazakhstan. With this acquisition, the Group expects to gain access to approximately 30,000 metric tons of additional uranium resources.
- 2005
- As part of a program to dispose of non-strategic assets, AREVA signs an agreement to sell the T&D Division's electricity services and telecommunications business in Australia and New Zealand.

4.1.4. Operational organization

The AREVA Group encompasses 23 business units organized into five divisions: **Front End, Reactors & Services, Back End, T&D and Connectors.**

The AREVA Group’s management organization is aligned with the markets to which it provides products and services, as shown below. The Group’s legal structure is described in section 3.5.



* Members of the Executive Board.

(1) Business Units of COGEMA.

(2) Business Units of Framatome-ANP.

» 4.2. The Nuclear and Transmission & Distribution markets

4.2.1. The global energy situation

World electricity consumption will inevitably rise over the long-term, buoyed by economic development paired with increasing use of electricity.

According to the World Energy Outlook published in October 2004 by the International Energy Agency (IEA), demographic growth and increased consumer access to energy have pushed the use of primary energy in the world from 6 billion metric tons of oil equivalent⁽¹⁾ (Btoe) in 1973 to 10 Btoe in 2001, with use forecast at 16.3 Btoe by 2030, i.e. a 1.7% average annual volume increase over the period 2001-2030. The report states that developing countries represent two thirds of the increase in energy demand. Fossil fuels, including oil, natural gas and coal, are expected to satisfy almost 85% of the demand. These assumptions could change, depending on factors such as demographics, the availability of fossil fuels, or government policies regarding energy conservation, nuclear power and the reduction of greenhouse gases.

Worldwide electricity use rose to 17,294 TWh in 2004, compared with 5,217 TWh in 1971, i.e. an average annual volume increase of 3.7%. Based on the assumption that the world's GDP will increase by about 3% annually, per capita electricity consumption in OECD member countries would increase from approximately 6,000 kWh in 1990 to about 10,000 kWh by 2030. In other countries, the average annual per capita consumption of electricity would increase from less than 1,000 kWh in 1990 to 2,000 kWh by 2030. For the IEA, this implies that the annual growth in electricity demand will remain close to 2.5% over the period 2001-2030.

The IEA also estimates capital expenditures in the electric power sector at \$10,000 billion over the same period. This total includes \$4,400 billion for power generation, corresponding to 4,600 GWe to replace electric generating capacities while meeting increasing demand, and \$5,600 billion for power transmission, corresponding to an increase in the span of transmission and distribution networks from 3.5 million kilometers to 7.2 million kilometers.

In addition, accelerating energy market deregulation is expected to promote market interdependency. Electricity markets are

increasingly regional. This development requires additional interconnections between the grids to improve their efficiency. Grid interconnection offers a way to adjust short-term variations between generation and demand without maintaining excess capacity, thus reducing costs without impacting the final user.

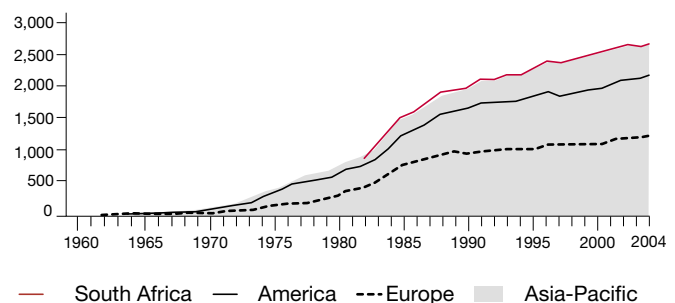
The sharp increase in the price of fossil fuels over the past two years, including coal, oil and natural gas, is also noteworthy. Over the period 2002-2004, geopolitical tensions and, more significantly, a strong increase in demand in developing countries such as China have contributed to a significant rise in fossil fuel prices. These price increases, representing 50% for oil, 100% for coal and 50% for natural gas in Europe, and 100% in the United States, have pushed electricity prices up by 15% to 20% on average.

4.2.2. The role of nuclear power in power generation

4.2.2.1. Historical perspective

The first nuclear power programs were launched in the 1960s in the United States and at the beginning of the 1970s in Europe. In the 1970s, several countries opted for nuclear power to counter the effects of a possible shortage of fossil fuels. These programs expanded rapidly in the 1970s and 1980s, as shown in the chart below.

Change in nuclear power generation (in TWh)



Sources: IEA/OCDE (1990), Nucleonics Week (1995 - 2004).

This steady expansion slowed down after the public expressed concerns about nuclear power following accidents at Three Mile Island in 1979 and, especially, at Chernobyl in 1986.

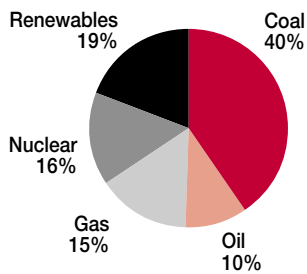
As a result, whereas 399 reactors had been built over the period 1970-1990, installed capacity increased by only 1.2% over the period 1989-2004. Nuclear programs in Eastern Europe and Asia are now replacing the huge programs of yesteryear in the United States and Europe. It should be noted, however, that

(1) 1 GWe = 1.10⁹ Watts (unit of measure of nominal power for electricity).
 1 kWh = 86.10⁻⁹ Btoe (unit of measure for electricity usage. Source: CEA Memorandum on energy).
 Btoe = metric ton of oil equivalent, unit of measure for primary energy from all sources.

nuclear power generation continued to grow at an average annual rate of 2.1% over the 1989-2004 period, due in particular to efficiency improvements at existing reactors. Thus, the average reactor load factor in terms of capacity rose from 67% in 1989 to over 80% by the end of 2004.

With more than 2,744 TWh produced in 2004, representing a 4.4% increase over 2003, world nuclear power generation contributes approximately 16% to total electric power generation worldwide, as shown in the chart below.

2004 Worldwide electric power generation by source



Source: World Nuclear Association (WNA), janvier 2005.

Also, as show in the table below, Europe is the region where nuclear power generation is the highest in proportion to other sources of energy:

Share of nuclear power in total electricity production (2004)

Region	Nuclear power generation in 2004	Nuclear power generation/ Total electric power generation by region
Europe	1,267 TWh	25%
Americas	942 TWh	17%
Asia-Pacific	520 TWh	9%
Africa and Middle-East	15 TWh	1%

Source: AREVA, based on Nucleonics Week, NucNet and IAEA data.

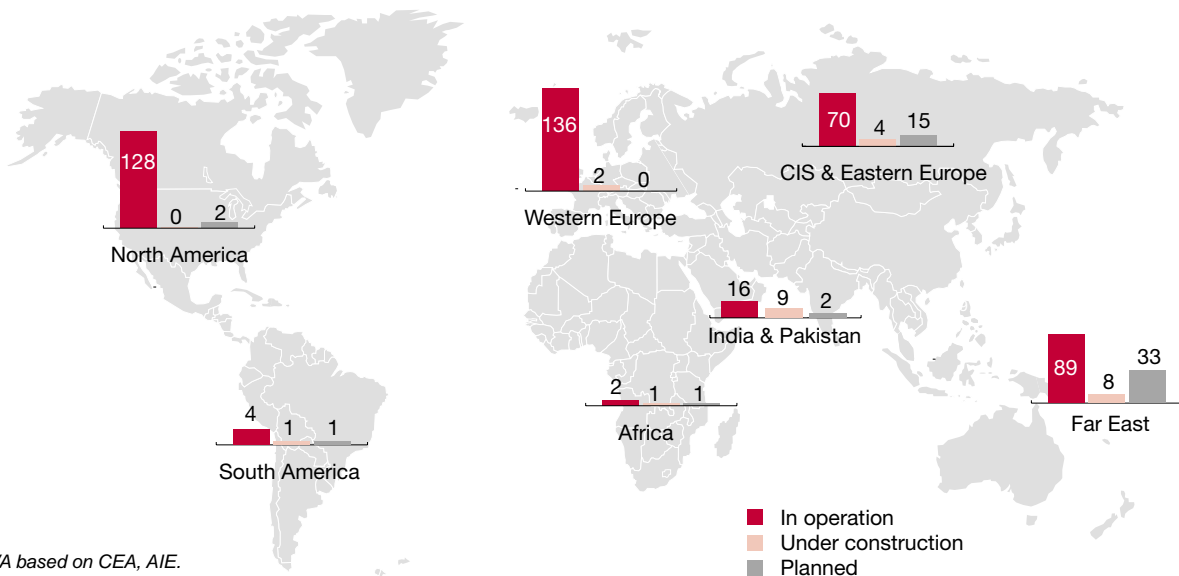
As of December 31, 2004, 445 reactors representing 387 GWe of capacity were connected to the grid in 31 countries, including the world's largest energy-consuming countries. A total of 437 reactors were in operation in 2004, for 379 GWe.

European installed capacity remains the largest in the world, representing 50% of the world's total, ahead of the United States, which itself accounts for approximately one third.

However, over the medium term through 2015, most of the potential for growth in nuclear power is located in Asian countries such as Japan, Korea and now China, and to a lesser extent in the CIS, as shown in the chart below.

At the end of 2004, 25 reactors were under construction worldwide and close to 60 were in the design stage or planned for the coming years.

Reactors in operation, under construction or planned worldwide at year-end 2004



Source: AREVA based on CEA, AIE.

These reactors fall into one of three main categories of reactors:

- Light water reactors, representing most of the capacity installed in the world. These are further divided in two groups: Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs). There are 361 such reactors in operation, including 53 Russian-designed VVER-type PWRs.
- Heavy water reactors designed in Canada (Candu technology): 44 reactors were in operation in 2004.
- Gas-cooled Magnox and AGR reactors: 22 units were in operation in the United Kingdom in 2004.

Other reactor types in operation include fast breeder reactors and Russian-designed RBMK-type graphite-moderated light water reactors.

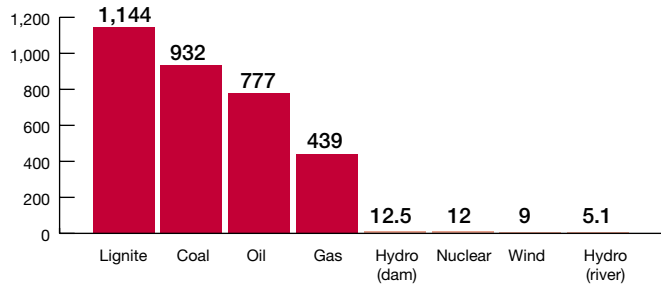
4.2.2.2. Current environment in nuclear power

According to the IAE, the sharp increase in the forecasts for energy use will trigger a 70% increase in CO₂ emissions, with dramatic consequences in terms of climate change. Greenhouse gas emissions are one of the main causes of climate change. This situation could translate into temperature increases of almost 1.5°C by the end of the century, according to the World Business Council for Sustainable Development (WBCSD).

A World Energy Council (WEC) report of July 2004 points out that nuclear power generates large quantities of electricity without significant CO₂ production. As shown in the graph below, the report compares emissions in tons of CO₂ equivalent produced for each unit of electricity generated by each source of energy, taking into account their entire production cycle. There is a clear gap between carbon-based sources of energy, including lignite, coal, fuel oil and natural gas, and non-carbon energies such as nuclear power and renewable energies. The minimum ratio between the two groups

varies from 1 to 5, and even much higher when no CO₂ scrubbing mechanism is used.

CO₂ emissions by energy system

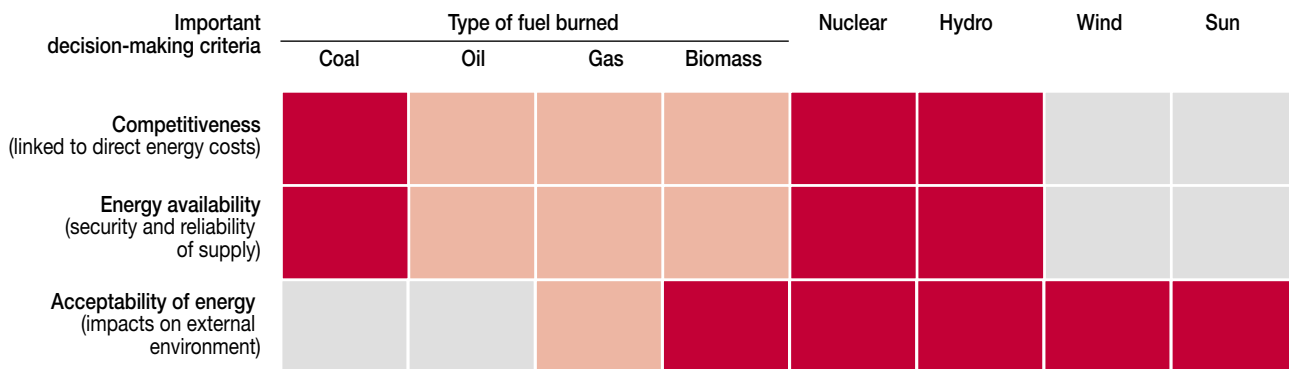


Source: AREVA, based on the World Energy Council report of July 2004/ "Comparison of Energy Systems Using Life Cycle Analysis".

The countries that have ratified the Kyoto Protocol have committed to lowering their greenhouse gas emissions over the 2008-2012 time frame to levels below 1990 emissions. In parallel, effective January 1, 2005, the European Union has established a system to limit CO₂ emissions, with emissions credit swapping possibilities. These provisions will create a market value for emissions reductions. At the present time, nuclear power is not among the sources of energy eligible for the swapping system. Nonetheless, nuclear power's contribution to the fight against global warming is likely to make it a necessary component of the energy mix.

As shown in the chart below, the WCE report also indicates that nuclear power is the most advantageous source of energy, together with hydropower, based on a combination of three criteria, including price competitiveness (energy accessibility and availability), security of supply and environmental impacts.

Comparison of energy sources for electric power generation



Relative rank based on selected decision-making criteria

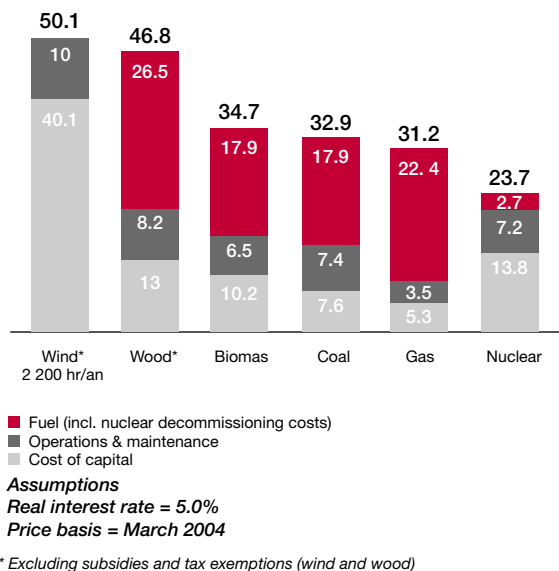
- Favorable energy source
- Medium/neutral energy source
- Unfavorable energy source

Source: AREVA based on World Energy Council report of July 2004/ "Comparison of Energy Systems Using Life Cycle Analysis".

Last but not least, a cost study completed in April 2004 by the Lappeenranta University of Technology in Finland has reached conclusions essentially similar to those reached by the French government agencies DGEMP (energy and raw materials) and DIDEME (energy markets) in a July 2003 study on “reference costs in electricity production”. As shown in the graph below, the Finnish conclusions are that nuclear and renewable energies are not only more competitive when fossil fuel prices remain high for extended periods of time, but also that, unlike its fossil fuel competitors, nuclear power is relatively immune to changes in fuel prices, which represent approximately 15% of its production cost. Based on current prices, natural uranium itself represents approximately 5% of the cost of nuclear electricity.

Thus, according to this study, a 50% increase in the cost of natural uranium would raise the cost of nuclear-generated electricity from €23.70 to €24.30. A 50% increase in the cost of natural gas or coal would raise the cost of electricity produced with these sources of energy from €31.20 to €42.40 for natural gas and from €32.90 to €41.85 for coal.

Price competitiveness of nuclear-generated electricity (€/MWh)



Source: Lappeenranta University of Technology, avril 2004.

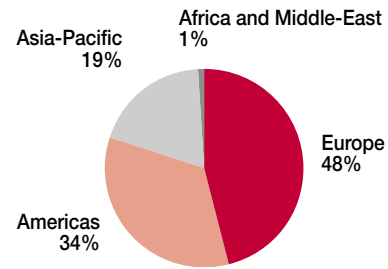
4.2.2.3. Nuclear power market outlook in the main regions of the world

Recognition of the advantages of nuclear power should translate first into the revamping of existing reactors, the extension of their service life and reactor optimization to increase generating capacities. It will also trigger the construction of new reactors to replace and supplement the capacities available

today, thus providing a potential source of long-term growth for all other nuclear cycle activities.

The chart below demonstrates the importance of Europe, the Western Hemisphere, and Asia as the three major regions for nuclear power generation in 2004.

Nuclear power generation by region in 2004



AREVA believes that the developments of the past few years announce the start of a recovery for nuclear power programs worldwide. The speed of implementation will depend on political agendas, which vary by region.

In Europe, the replacement of existing reactors and the expansion of nuclear programs will not begin until the beginning of the next decade in countries with more recent programs, unless major policy changes take place. France, however, has already started to prepare for the replacement of its existing reactors, with the announcement of a decision to build the first of a series of EPR reactors in Flamanville. Similarly, Finland ordered its first EPR in 2003.

In North America, electric utilities started to extend the service life of their reactors in 2000. This trend should continue until 2015. Starting in 2010 and over the following ten years, this phase could be progressively replaced by the construction of new reactors under the “Nuclear Power 2010” program initiated by President George W. Bush in his first term of office.

In Asia, following Korea, India, Japan and Taiwan, new reactor construction will take place principally in China under the 2005-2020 plan. An initial expansion phase is anticipated for the near future, and will most likely be followed by the establishment of a Chinese nuclear industry supply chain.

Europe

The European nuclear market includes 206 reactors with a production capacity of 182 GWe. Nuclear power generation

amounted to 1,267 TWh in 2004, up 0.8% over 2003. This compares with total electricity production estimated at 5,060 TWh in 2004, which would represent an increase of 2.9% over 2003.

Nuclear power would therefore represent 25% on average of all electricity generated in Europe in 2004, with very diverse percentages by country. Countries such as France and Belgium used a large quantity of nuclear electricity: about 78% and 55% respectively of all electricity generated in those countries. The percentage is much lower in Germany, Finland and Russia, at about 32%, 26% and 16% respectively. The development and prospects of nuclear power in various countries are described hereunder.

European Union. Positive developments for growth of the nuclear power market took place in 2004, despite previous political decisions to phase out nuclear power in certain countries. **France:** Following passage of a new law on energy policy, EDF selected the Flamanville site to build its first EPR reactor. **Belgium:** The government appears to be reconsidering its decision to phase out nuclear power, made in 2003. Its Federal Planning Office indicated in 2004 that the country will have to extend the service life of its reactors, and may even have to build new ones in the longer term, in order to meet its CO₂ emission reduction commitments under the Kyoto Protocol. **Germany:** Maintenance spending on nuclear plants continues despite the law requiring a phase-out of nuclear power. **Finland:** Construction of the Olkiluoto 3 EPR reactor continues. Meanwhile, work on the deep repository for used fuel continues at the Onkalo site. This is the first site of this type to be built in the world. **United Kingdom:** Nuclear power remains an option for the future. A new law on energy authorized establishment of the National Decommissioning Authority (NDA), which is in charge of cleanup at British nuclear sites. Operations are scheduled to begin in 2005. **Sweden:** The government confirmed that the Barsebäck plant's second reactor will be closed in 2005. This reactor closure, delayed for four years, follows a decision made in the 1980s to discontinue nuclear power. Nonetheless, electric utilities continue to invest in their nuclear power generating facilities and in the program to store used fuel. **Spain:** Nuclear power contributes 23% to the country's electricity production. The government has stopped all further development since 1997, but nuclear power is still an option for the future.

Also, the European Union now includes 10 additional countries, including 5 with a total of 18 nuclear reactors as of year-end 2004: the Czech Republic, Hungary, Lithuania, Slovakia and Slovenia. Those plants had to be upgraded or shut down to meet European Union safety standards. Western companies participated in the power plants' modernization programs.

These countries are now facing the need to replace their production capacity. **Lithuania:** To meet European Union safety requirements, the first of two reactors was shut down on December 31, 2004 at the Ignalina nuclear plant. That reactor's design was similar to that of Tchernobyl.

Other European countries. **Russia:** At the end of 2004, the nuclear power development program culminated in the commissioning of the Kalinin 3 reactor, a VVER-1000 type reactor. Reform of the electric power sector continued with the establishment of the first independent power generating companies ("Gencos"). **Ukraine:** Two new reactors were connected to the grid: Rovno 4 and Khmel'nitsky 2. **Romania and Bulgaria:** Both countries have decided to build new reactors. **Turkey:** Three reactors are contemplated beginning in 2011.

Americas

The Western Hemisphere's nuclear market includes 132 reactors with a generating capacity of 123 GWe. Nuclear power generation amounted to 943 TWh in 2004, up 4.8% over 2003. This compares with total power generation estimated at about 5,650 TWh in 2004, a 0.1% decrease from 2003.

Nuclear power therefore represented about 17% of all electricity produced in the Western Hemisphere in 2004, with very diverse percentages by country. For example, nuclear power represented 20% and 15% of the power generated in the United States and in Canada respectively. The percentage was only 3 in Brazil. The development and prospects of nuclear power in various countries are described hereunder.

- **United States:** License renewals continue in order to extend reactor service life to 60 years. Nuclear licenses have already been extended from 40 years to 60 years at 30 nuclear plants, and 18 additional applications are in the process of approval. Three teams were formed to prepare a combined license application (COL) to build and operate a new reactor by 2008-2010. Other significant events for 2004 include an increase in the price and demand for uranium, triggering a significant jump in exploration programs in Canada and the United States; and deferral to 2005 of the license application for the Yucca Mountain used fuel storage facility, mainly due to uncertainties regarding environmental protection regulations.
- **Canada:** To meet increasing demand, electric utilities continue their extensive revamping program to restart eight nuclear reactors shut down in 1995. Bruce 3 was restarted in 2004, following Bruce 4 and Pickering 4 in 2003. Discussions are under way regarding the construction of new reactors in Ontario.

Pacific-Asia

The Pacific-Asia nuclear market represents 105 reactors with a generating capacity of 80 GWe. Nuclear power generation amounted to 520 TWh in 2004, up 13.3% over 2003. This compares with total electricity production, estimated at about 5,520 TWh in 2004, which would represent a 9% decrease from 2003.

In 2004, nuclear power therefore represented 9% of all electricity generated in the region in 2004, with very diverse percentages by country. Countries such as South Korea and Japan generate a relatively large quantity of nuclear power, at 38% and 28% respectively of all electricity generated in those countries. Nuclear power's contribution in percentage is still very modest in India (3%) and China (2%). Several countries have confirmed and are pursuing their nuclear power programs. Important calls for tenders have also been issued. Significant events are described below:

- **Japan:** A program was launched to restart the reactors shut down in 2003. Simultaneously, new construction continued on three reactors, including newly started construction of the Tomari 3 reactor. An additional 13 reactors are in the planning stage. The Japanese Atomic Energy Commission (AEC) approved the Japanese used fuel treatment and recycling policy. This announcement triggered regulatory approval of the uranium testing program at the Rokkasho Mura treatment plant. The first reloading of a Japanese reactor with MOX fuel was delayed for at least a year following a non-nuclear accident in the conventional island of the Mihama nuclear plant.
- **China:** The country confirmed the commitment to nuclear power development to satisfy growing demand for electricity. Calls for tenders were issued concerning nuclear reactors and services. The technology selected will likely serve as a basis for the development of the Chinese nuclear power program, a major undertaking for the country: by 2020, an additional 32,000 MWe of capacity must be added to the 8,500 MWe already in operation or under construction. China has established contacts throughout the world to purchase the uranium necessary to fuel its ambitious program.
- **India:** This country has not yet signed all of the provisions of the Nuclear Non-Proliferation Treaty. Accordingly, its program is not available to countries that have signed the Treaty, including France.

Africa

South-Africa is the only nuclear power generator in the region. Generated at the two Koeberg reactors, nuclear power represents approximately 6% of the country's electric

needs. Market demand would require the construction or restart of 2,000 MWe to 5,000 MWe of additional electric generating capacity by 2010. Also, the government has confirmed its financial support for the Pebble Bed Modular Reactor project (PBMR), a high-temperature nuclear reactor.

4.2.3. Current environment and regional challenges in electricity transmission & distribution

4.2.3.1. Current environment in electricity transmission & distribution

Rising investments in transmission and distribution are largely the result of macroeconomic factors such as an increase in GDP or in demand for electricity, particularly in emerging countries. Additional growth engines include the following:

- Market deregulation, although in the short term this factor has a lesser impact on the T&D industry than on power generation, particularly as far as new facilities are concerned. In addition, this impact varies widely by country, depending on the characteristics of existing facilities.
- Interconnections between generating areas and demand areas.
- Replacement of aging grids, particularly in Europe and the United States.
- Development of renewable energies.

However, this potential for growth is limited by price pressures and by the deferral of certain investment programs, mainly due to financing considerations.

4.2.3.2. Regional challenges on worldwide electricity transmission and distribution markets

Europe

To a large extent, electrical grid investments aim to counteract the aging of existing assets. In the wake of market deregulation, current needs also include grid upgrades and interconnections.

For example, the European Union has identified nine priority projects, including seven which have already been approved in principle, especially the strengthening of interconnections between France, Germany and the Benelux countries; between Italy and Spain and their respective neighbors; and between Great Britain and continental Europe. However, financing for these projects is not yet assured. A vast interconnection project concerning the combined Mediterranean countries is also under study.

United Kingdom: The regulatory authority, OFGEM, wants to invest €8 billion in electrical grids in the next five years. This represents a 48% increase over the level of spending for 2004.

Authorities fear a blackout due to insufficient capacity in the country.

France and Germany: Aging grids will require new equipment in the medium term, although no major implementation of investment decisions is anticipated for the coming years.

Russia: The replacement market could become very significant after deregulation, considering the degree of obsolescence of the grid. Unified Energy System (UES) puts the amount to be invested in the electric energy sector over the next 10 years at \$55 billion, including grid maintenance and modernization.

Americas

North America is a market of opportunity in which an inadequate regulatory environment acts as an obstacle to the significant investments required to modernize electrical grids. Together with China, this is the market with the highest growth potential.

United States: Incentives are anticipated and discussed as part of the Energy Bill, which should clarify the framework and regulatory conditions applicable to compensation of electric utilities. The Electric Power Research Institute (EPRI) estimates the investment required to maintain transmission systems at \$14 billion, including \$10 billion for automation systems and substations. The remaining \$4 billion will be invested in control, monitoring and communication systems. **Canada:** Discussions are under way regarding a major project to connect the country's eastern and western grids.

South America: Various countries are considering a possible interconnection of their grids. Peru and Ecuador began their grid interconnection project in December 2004. Uruguay is in talks with Brazil over the possible construction of a power line to connect the two countries.

Asia-Pacific

China has the best potential for growth in all segments of the T&D market. According to the International Energy Agency (IEA), 66% of a total T&D investment of \$5.6 billion by 2030 will be invested outside the OECD. China will be the largest market, with 22% of all T&D spending. Between 1995 and 2003, China's electrical grid investment represented 40% of the total amount invested in the electric power sector in the country. The slow pace of grid development makes it difficult for the country to meet the population's increasing demand for energy. Significant investments in infrastructure and interconnections between regions will be required to transport the country's constantly growing electric generating capacity and to ensure the safety and reliability of electric power supply.

India is an emerging market for transmission and distribution. The demand for secondary distribution and high voltage systems are expected to increase. Rural areas are in serious need of grid connections. In addition, a program has been launched to curtail transmission losses by 19,000 Mw over the next three years.

Africa and Middle-East

Africa: The latest plan contemplated and supported by the New Partnership for Africa's Development (NEPAD) was to build a continental-scale grid connecting South Africa to Egypt.

Middle-East: The high level of investment in medium voltage in the past is expected to decline. However, large transmission projects for interconnections in the Persian Gulf are coming into play. The Gulf States have reached agreement on a major interconnection project, with a first phase connecting Kuwait, Saudi Arabia, Bahrain and Qatar. During a second phase, Oman will be connected with the United Arab Emirates.

» 4.3. The energy businesses of the AREVA group

4.3.1. AREVA's Nuclear Power business

4.3.1.1. A few fundamental concepts for an understanding of the Group's nuclear power operations

Nuclear fission and the chain reaction, the underlying mechanisms of nuclear power

Nuclear fission and the chain reaction are events that are triggered in the core of nuclear power plants, where they produce useful energy in the form of heat.

All matter is made of atoms. All atoms have the same structure: most of its weight is concentrated in the central nucleus of the atom, consisting of protons and neutrons, while most of its volume is occupied by electrons that spin around the nucleus. Protons and electrons carry an electrical charge, with each proton carrying a positive charge and each electron carrying a negative charge. Neutrons are not electrically charged. Each atom is electrically neutral in that there are an equal number of protons and electrons. For example, the oxygen atom consists of eight electrons that spin around a nucleus consisting of eight protons and eight neutrons. The uranium 238 atom consists of 92 electrons, 92 protons and 146 neutrons.

The nuclei of atoms that make up a chemical element may have differing numbers of neutrons. In that case, several isotopes of the element are said to exist. Uranium 238 and uranium 235 are the two most abundant isotopes of uranium. In the natural state, the proportion of uranium 238 to uranium 235 is invariably 0.7%. The nucleus of uranium 235 consists of 92 protons, but it has only 143 neutrons, unlike the 146 neutrons for uranium 238.

Uranium 235 is a natural element with unique properties. The uranium 235 atom is scarce in natural uranium (0.7%), but it is the only element to possess very high reactivity to slow-moving neutrons. When a neutron strikes the atom, it divides into two smaller atoms, expelling neutrons and releasing energy: this is the fission process.

The fission process is a reaction that produces a large amount of energy. Each of the neutrons expelled during fission of a uranium 235 atom can strike another atom, causing it to fission and to release more energy and expel more neutrons, which will in turn strike other atoms: this is called the "chain reaction". Because of its reactivity to neutrons, uranium 235, even in small proportions, can sustain the chain reaction. The

reaction propagates at very high speed from one atom to the next, considerably increasing the cumulative amount of energy: the fission reaction of one kilogram of enriched uranium can supply as much energy as is produced by burning 10 metric tons of oil.

A nuclear power reactor makes use of both the nuclear fission phenomenon and the chain reaction phenomenon. To be used in a light water reactor, uranium is slightly enriched in uranium 235 (around 4%). The energy released by the fuel during the fission process is recovered in the form of heat and converted into electricity through a steam cycle.

Using fission energy in nuclear power plants

A nuclear power plant is an electric generating station with one or more reactors. Like all conventional thermal power plants, it consists of a steam supply system that converts water into steam. The steam drives a turbine, which in turn drives a generator, producing electricity.

In nuclear power plants, the only area in which radioactivity is present is the steam supply system, called the "reactor".

The reactor is enclosed in a reinforced containment building that must comply with nuclear safety requirements. The three main components needed to sustain, control and cool the fission process in the reactor core are fuel, a moderator and a coolant. Reactor types are a function of the combination of these three components. Several combinations have been tested, but only a few of them have gone beyond the prototype stage to commercial operations.

A heat source and a cooling source

Like all other power plants, a nuclear power plant has a heat source (the nuclear steam supply system with its heat exchangers) and a cooling source to remove the resulting heat. This is why power plants are usually built near the sea or a river – the water is used to cool the steam. Many power plants also have cooling towers, where the water is sprayed, evaporating as it falls and dissipating residual heat.

Moderator and coolant

During the fission process, neutrons are released at very high speed. They slow down as they strike lighter atoms, making them react much more with uranium 235 atoms. Reactors called "thermal neutron" (slow) reactors take advantage of this property, which reduces the uranium 235 enrichment level required for the chain reaction. In light water reactors, water is the slowing medium (moderator) as well as the heat removal medium (coolant).

The world's most prevalent reactor: the pressurized water reactor

In pressurized water reactors (PWRs), the fuel is made of slightly enriched uranium and the moderator and coolant both consist of water.

The reactor core is flooded with pressurized water from the primary cooling system. The fission reaction heats the water. The heat is transferred via heat exchangers to water in a secondary cooling system, converting it to steam. The nuclear steam supply system consists of the reactor core and the steam generators. For safety reasons, the primary cooling system is separate from the secondary cooling system, whose steam drives the turbo-generator.

PWR reactors have a triple containment system to prevent the release of radioactive fission products. The primary barrier in this system is the metal cladding around the fuel. The secondary barrier consists of the separate primary and secondary cooling systems. The third barrier is comprised of the nuclear steam supply system enclosed in a concrete containment building designed to contain hazardous products in the event of a leak. Most of the reactors in the French nuclear power program are PWRs, as is the case around the globe.

Boiling water reactors (BWR) are generally comparable to PWRs. The main difference is that the water boils when it comes into contact with the fuel and the primary and secondary cooling systems are not separate.

4.3.1.2. Nuclear Power operations

Operating through its **Front End**, **Back End** and **Reactor & Services** Divisions, AREVA is the only Group active in every stage of the nuclear power cycle.

In the front end of the cycle, it supplies uranium ore, and converts and enriches the ore to fabricate the fuel assemblies that go into the reactor core.

In the **Reactors & Services** Division, the Group has expertise in all of the technologies needed for reactor design, construction, maintenance and continuous improvement. PWRs and BWRs are its primary markets.

In the back end of the cycle, AREVA is a specialist in used fuel management, and in particular in the treatment of used fuel,

from which it recovers reusable materials for recycling into MOX fuel, which can be used in both PWRs and BWRs.

The **Front End** Division is in charge of:

- uranium ore exploration, mining and concentration;
- conversion into uranium hexafluoride (UF₆);
- uranium enrichment;
- design and fabrication of nuclear fuel.

The **Reactors & Services** Division is in charge of:

- nuclear power plant design, construction and upgrading;
- equipment supply to nuclear power plants;
- nuclear services, particularly during scheduled reactor outages.

The **Back End** Division is in charge of:

- treatment of used fuel to recover reusable materials and recycle them in the form of Mox or UO₂ fuel for nuclear reactors,
- design and fabrication of casks to transport and store nuclear materials,
- transport of materials and logistics.

In summary, the Group:

- sells uranium to its utility customers,
- supplies conversion and enrichment services to produce fuel, and designs and fabricates fuel assemblies;
- designs and builds power plants and provides life extension services;
- offers engineering services, equipment and services to optimize power plant performance; and
- recycles its customers' used fuel to recover reusable materials and/or treat them for the safe disposal of nuclear waste.

However, the Group generally does not own the uranium transformed on behalf of its customers, nor the final waste from used fuel treated for customers or from nuclear power plants. AREVA does not own or operate any nuclear power plants.

AREVA's competitive positions

Due to the unique character of the processes involved, each stage in the nuclear fuel cycle constitutes an industry in its own right, with its own technologies and business models. The AREVA group has built up know-how that gives it a leadership position worldwide and has adopted an industrial organization that is consistent with these different business sectors. AREVA is the world leader in civilian nuclear power, as illustrated below.

Competitive positions in 2003-2004 per AREVA data

	2003 Market	Cameco* (CAN)	Urenco (UK/Germny/NL)	Usec* (US)	AREVA	BNFL (UK)/Westinghouse (UK)	FAAE Russia	General Electric* (US)	Other
FRONT END	Mining/Natural uranium	70,000 t	20%		20%		10%		50%
	Conversion/chemistry	65,000 t	20%		25%	5% (shot down in 2006)	20%		30%
	Enrichment	38.5 MUTS**		20%	30%***	25%	BNFL shareholder of Urenco	20%****	5%
	Natural Uranium fuel (UO ₂)	6,500 t				35%	25%	10%	15%
	Reactors & Services	350 GWe				25%	15%	15%	10%
BACK END	Reprocessing (t. processed)	1,500 t				75%	15%	10%	JNFL in time
	Recycling & MOX	150 t				90%	BNFL/SMP a/c 2004		10% JNFL in time

* Listed companies. ** Separative Work Units. *** Including half purchased from Minatom (HEU). **** Plus the 15% sold to USEC (HEU).

Source: AREVA – Data based on averages over the past three years.

4.3.2. AREVA's Electricity Transmission & Distribution business

4.3.2.1. Fundamental concepts for an understanding of the Transmission & Distribution business

Electricity is generated at relatively low voltages of 10,000 to 25,000 volts. Voltage is increased before the electricity is transmitted. Transmission over high voltage lines (230,000 to 765,000 volts) reduces power losses due to heating and enables electricity to be transported over long distances at low cost.

The electricity grid consists of the transmission lines and their connection to stations and substations. Electricity moves through the grid according to the "path of least resistance" rule of physics, like water flowing through a canal system. Electricity enters a medium voltage distribution system via a sub-station. The voltage is reduced to 120 or 240 volts via a final sub-station for use by the consumer.

In addition, deregulation of the electricity markets requires the development of interconnections between the grids of the various operators to provide transportation of power between countries.

4.3.2.2. Transmission & Distribution products, services and solutions

Electricity transmission and distribution includes the supply of electricity transmission and distribution products, systems and services that are used to regulate, switch, transform and dispatch electric current in electric power grids connecting the power plant to the final user. The T&D Division's products and solutions play an essential role in electricity grid reliability, quality and safety.

The T&D Division designs, manufactures and installs complete product lines used at every stage of electricity transmission and distribution. The T&D Division is ranked third in the sector worldwide and is the second largest supplier to electric utilities.

The T&D Division supplies equipment, systems, software and services used for:

- high voltage electricity transmission: electrical equipment, shielded substations, measurement transformers and power transformers;
- medium voltage distribution: compact substations, distribution transformers, circuit breakers, engine starting cells and lightning protection systems;
- substation protection and monitoring; and
- grid management.

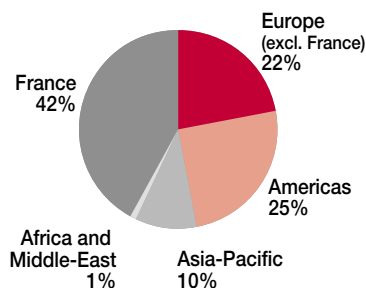
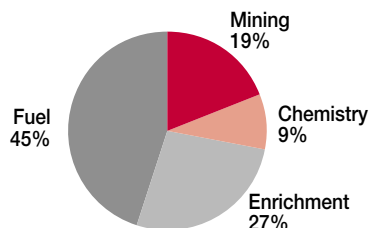
The Division's customers are electric utilities as well as the oil, mining and metals, wind energy, paper and glass, transportation, and power electronics industries.

» 4.4. Front End Division

Key data

(in millions of euros)	2004	2003	2002
Sales revenue	2,524	2,683	2,562
Operating income	314	316	319
Workforce at year-end	10,952 people	9,719 people	9,536 people

2004 sales revenue by Business Unit and region



Overview

The Front End Division represents 23% of the AREVA group's sales revenue. It combines all of the fuel cycle operations that take place before nuclear power is generated:

- uranium exploration, mining and concentration by the Mining Business Unit;
- conversion into uranium hexafluoride (UF₆) by the Chemistry Business Unit;
- uranium enrichment by the Enrichment Business Unit; and
- nuclear fuel design and fabrication by the Fuel Business Unit.

AREVA is the only international Group to operate in every stage of the nuclear fuel cycle. This gives us a definite competitive edge by giving our customers comprehensive solutions and creating synergies among our Business Units. We estimate that our Group ranks first worldwide in the front end of the nuclear cycle.

In **Mining**, AREVA is the world's second largest producer of uranium (see paragraph 4.4.1.3), with a market share of around 20% ie 12,470 tons sold and an output of 6,125 metric tons (MT)

in 2004. The Group has a world-class diversified mining portfolio in operation in Canada, Kazakhstan and Niger, or under development, with Cigar Lake in Canada being the main one. The Group's 142,000 MT of reserves are equal to twenty times its 2004 production. AREVA's long-term contracts also provide it with strong visibility in this business.

In **Chemistry**, AREVA is the world's foremost supplier of conversion services, with about a 25% share of the world market and a very strong market position in Europe.

In **Enrichment**, AREVA is a world leader in enrichment services, with about a 25% share of global production capacity. The Group should also profit from new opportunities as it implements centrifuge technology, whose use is planned in the future Georges-Besse II plant.

In **Fuel**, AREVA ranks first worldwide. It supplies around 35% of the world's nuclear fuel requirements and 40% for the boiling water reactors (BWRs) and pressurized water reactors (PWRs) used in the west.

The Group has the technical expertise required in these businesses to supply electric utilities with the products of the highest quality.

Customers retain ownership of the materials used in these operations. They buy uranium concentrates from AREVA that are then commercially processed up to fabrication of the fuel assembly.

The Group operates mines and production plants in **Europe, North America, Asia, Australia and Africa**. Its customers are the main nuclear power plant operators (utilities), with whom contracts are generally signed for periods of several years to ensure security of supply, as well as research laboratory operators.

This Division mainly serves light water reactors (LWRs), a potential market of some 350 units. Taken together, the world's LWRs require some 6,000 to 7,000 MT of enriched uranium fuel for their operations. Every year, it takes around 68,000 MT of natural uranium and 38 million separative work units (SWU - see Glossary) to produce this enriched uranium.

The Division's economic model is characterized by **capital-intensive production processes. These require large capital outlays over a long period of time, which create major barriers to entry.** In light of this, commercial relationships tend to be sealed by medium- to long-term contracts averaging five years whenever possible. This economic model gives the Division good visibility on order backlogs, which amounted to €7,158 million at year-end

2004, or around three years of sales revenue. Over the short to medium-term, this revenue is not very sensitive to natural uranium prices, or to the costs of its enrichment or conversion.

Strategy and outlook

The Front End Division plans to strengthen its strategic advantages by developing its mining resources, by optimizing and replacing its production sites, and by streamlining its range of fuel products.

For more than 15 years, the market for natural uranium has suffered from an imbalance between the supply of uranium straight from the mine and demand. This imbalance is offset by the use of so-called secondary resources. The secondary resources come from strategic inventories stockpiled by utilities in the 1980s and, beginning in the late 1990s, from the arrival on the market of materials originating from inventories of the former Soviet block. They also stem from the arrival on the civilian market of natural uranium derived by diluting highly enriched uranium (HEU) from the dismantling of Russia's defense arsenal.

The "Megatons to Megawatts" agreement entered into between the United States and Russia on February 18, 1993 is the first commercial non-proliferation agreement. For 20 years, or until 2013, Russia has agreed to convert 500 MT of HEU from its dismantled nuclear warheads into low-enriched uranium for civilian use. The conversion is done in Russia using a dilution process. The 5.5 million SWUs of HEU recovered each year in this manner are covered by a business contract with USEC, the American enrichment company and sole agent authorized to market this compound. The natural uranium compound, which represents about 9,000 MT of natural uranium a year on average, is covered by a business contract between the Russians and a team consisting of AREVA, Cameco and RWE Nukem. AREVA's share averages some 2,600 MT of natural uranium per year. The contracts expire in 2013.

The gradual depletion of secondary resources has two main effects:

- It places considerable pressure on spot prices for natural uranium, doubling the spot price in U.S. dollars from year-end 2002 to year-end 2004. This in turn puts pressure on price negotiations between suppliers and electric utilities for their medium- and long-term contracts.
- It means that major players, including AREVA, must continue their exploration efforts and increase their capacity to mine uranium. This will enable them to fill the gap in primary and secondary resources when the time comes early in the next decade. With its mineral rights in the key regions of Canada, Niger and Kazakhstan, AREVA is well-positioned in this

regard. AREVA will also benefit from the start-up of production at the Katco site in Kazakhstan and at Cigar Lake in Canada. After production ramp-up from 2006 to 2010, these two ore bodies should give AREVA access to 4,000 MT of uranium per year.

The enrichment market is structured around a small number of international players: the United States, Europe and Russia. Demand is sustainable, with moderate growth in line with growth in installed power. The Group's Georges-Besse production plant was initially designed for a useful life of 20 years. It has been operating successfully since 1979. Through regular investment in maintenance and modernization, the plant's technical sustainability is assured until early in the next decade, but the outlook is uncertain thereafter. In addition, the price of electricity, which comes to around 60% of the cost of enrichment by gaseous diffusion, could eventually become an issue.

To deal with these technical and economic considerations, AREVA intends to shut down the plant early in the coming decade and to replace it with a new facility. AREVA plans to use gaseous centrifuge enrichment technology at the Georges-Besse II plant, which has been proven from both a production and economic standpoint (see paragraph 4.4.3.3.). This will require an outlay of around €3 billion from 2006 to 2018 for 7.5 million SWUs of capacity, including the cost of rights to the technology. This assumes that the agreement with Urenco will be implemented (see paragraph 4.14.3.1.).

The fuel fabrication industry has strong barriers to entry consisting of a wide range of technical specifications, which only reactor designers can fully grasp. It is nonetheless still a highly competitive market, given the excess production capacity worldwide. Market growth is essentially a function of installed generating capacity minus the effect of heightened fuel performance. Against this backdrop, the Group intends to continue its productivity efforts by optimizing site operations and standardizing its product range.

AREVA's main competitors operate in only part of the front end of the cycle. These competitors are Cameco in the mining and chemistry sectors, Urenco and USEC for the enrichment business, and BNFL-Westinghouse in the chemistry, enrichment and fuel sectors. Russia's FAE (formerly Minatom) is the only competitor that could offer products and services spanning the entire front end, although it is positioned differently than AREVA, particularly due to its home market. As a result, AREVA is the world leader in the entire nuclear fuel fabrication chain.

4.4.1. Mining Business Unit

4.4.1.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	475	443	536
Workforce at year-end	2,390 people	1,545 people	1,565 people

4.4.1.2. Businesses

In addition to trading (see Glossary), the Mining Business Unit's four main activities are the exploration, mining and processing of ores and the reclamation of the Group's sites after the end of the operating period. Most of its employees are located in Africa, North America and Europe. They also work in Australia, where they produce gold and explore for uranium, and in Kazakhstan, where they build plants and drill for in situ leaching operations (see Glossary).

Most of the Group's mining operations involve uranium. A relatively abundant metal that is evenly distributed in the earth's crust, uranium contains three main isotopes: non-fissile U238 (99% by weight), fissile U235 (0.7%) and U234 in very small proportions.

AREVA also produces gold. In the 1980s, gold was a diversification opportunity when the uranium market weakened after large deposits were discovered. AREVA's teams of geologists focused on gold's similarity to uranium in terms of site selection, mining and processing techniques. Gold is also very easy to sell on the spot market.

The Business Unit's mining operations cover particularly long cycles requiring significant capital expenditures over several years before mining operations [per se] begin, i.e. when the first deliveries of uranium are made and the first revenues collected. Then, cash flow increases before once again falling off in the final years of operation. The first phases of exploration consist of 1) the detection of surface indicators using aerial geophysical prospecting, which is made possible by the radiation emitted by the uranium rock, 2) geochemistry and 3) surface geological investigations. This is followed by test drilling to make an initial estimate of the deposit's

resources.

Once the attractiveness of the deposit has been confirmed, the drilling grid is tightened to refine the estimate of resources and confirm mining feasibility from both a technical and economic standpoint. These operations, which generally require an exploration permit eventually conferring mining rights, take an average of 10 to 15 years at an average cost of €50 million per deposit. AREVA's uranium exploration budget was around €13 million in 2004.

Once the ore processing mill associated with the mine has been built, as applicable, mining operations may last from an average of 10 to 50 years. Uranium ore is mined in both underground and open pit mines. Once the ore has been mined, it is crushed and the uranium is removed by leaching the ore with acid solutions. The resulting solution is precipitated and dried to produce a uranium concentrate called "yellowcake". This product is packaged and shipped to the conversion facility of the customer's choice.

The reclamation of mining sites operated by the Group is an important activity that calls for specialized mining and civil engineering techniques and calls on a full range of disciplines from the earth and life sciences.

To date, the Group has spent over €300 million to dismantle mining facilities and reclaim the sites of some 10 mining sectors in France, Gabon, the United States and Canada. Once reclamation is completed, the land is replanted and radiologically monitored over long periods of time (in France, that period is ten years). In France, mill tailings are listed by Andra, the French radioactive waste management agency. They remain COGEMA's responsibility and are subject to special environmental and radiological monitoring.

Exploration is an ongoing activity for the Mining Business Unit. In 2004, exploration focused on the origins of deposits and on improving mining and ore processing methods. The Business Unit spent €16 million on mineral exploration and mine development in 2004, or 3% of its sales revenue.

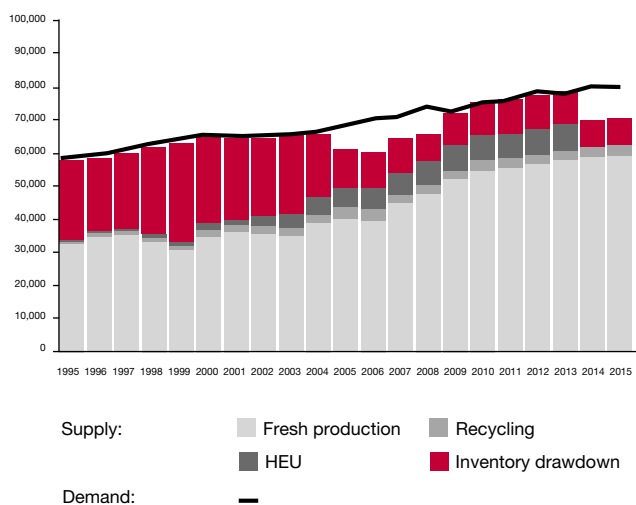
4.4.1.3. Market and competitive position

The demand for uranium by nuclear power programs worldwide, i.e. “gross” demand, expressed in natural uranium equivalent, was around 70,000 MT in 2004. It has grown slightly in the past five years, largely due to increased load factors, the connection of a few new reactors to the electric grid, and an increasing number of existing reactors whose power was updated.

Worldwide uranium production covers a little over half of world demand, so there is an imbalance between market demand and supply. Indeed, since the beginning of the 1990s, over 40% of the demand has been satisfied with secondary resources: excess inventories held by utilities and fuel cycle companies, material from diluted HEU, use of mixed uranium/plutonium oxide fuel (Mox) (see Glossary), and uranium from used fuel treatment.

The depletion of these excess inventories held by utilities, together with recent, very clear signs that Russian sources are drying up, will probably upset the supply and demand balance in coming years, as shown in the graph below.

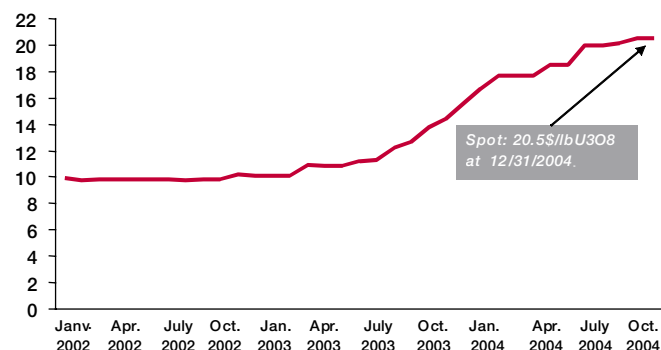
World supply and demand



Source: AREVA.

These two factors are likely to firm up the higher uranium prices seen since 2003, as shown in the curve below. Production is expected to rise gradually as a result, but possibilities for any short-term increases are limited.

Recent trend in uranium spot price indices (USD)



Source: Trade Tech Ux.

In geographical terms, nearly half of the estimated 40,000 MTU produced worldwide in 2004 came from Canada and Australia, followed by Central Asia (including Russia) and the African continent, as shown in the table below.

Estimated worldwide uranium production by country in 2004 (40,000 MTU)

Country	Production by country	
	2004 estimated production	Approximate %
Canada	11,600	29%
Australia	8,800	22%
Niger	3,280	8%
Russia	3,280	8%
Kazakhstan	3,100	8%
Namibia	3,040	8%
Uzbekistan	2,000	5%
Ukraine	1,000	2%
United States	890	2%
South Africa	750	2%
Other	2,260	6%
TOTAL	40,000	100%

Source: AREVA.

Ranking of producers

Producer	2004 estimated production	Approximate %
Cameco	7,910	20%
AREVA	6,125	15%*
ERA / Rio Tinto ⁽¹⁾	4,360	11%
WMC / ODM	3,740	9%
TVEL Russia	3,280	8%
Kazatomprom	3,100	8%
Rössing/Rio Tinto ⁽¹⁾	3,040	8%
Total Top 7/world production	31,555	79%
Other	8,445	21%
Worldwide production	40,000	100%

* This 15% share of production and AREVA's secondary resources make up the 20% market share indicated in paragraph 4.3.1.2.

(1) The mines belonging to ERA and Rössing are operated by Rio Tinto, but they are managed separately and are not consolidated.

Source: AREVA.

The world's three largest producers of uranium concentrates in 2004 were AREVA, Cameco and Rio Tinto. These three producers each accounted for 10-20% of total uranium production worldwide. The seven largest producers combined represent approximately 80% of world production. AREVA's competitive strength is based on a well-organized and diversified mining portfolio covering three of the world's four main producing regions. This situation gives its customers the benefit of security of supply under long-term contracts.

Development costs for new projects and their time to market pose a significant entry barrier that limits the risk of seeing new players in the market. Given these conditions, AREVA is in a favorable position that should enable it to help to meet the growing demand for uranium in the years to come.

4.4.1.4. Resources, reserves and production sites

Uranium

The mineral reserves⁽¹⁾ in deposits accessible to AREVA are around 142,000 MTU⁽²⁾, or more than 20 times its production in

2004. The reserves in the ground are supplemented with so-called secondary sources. In particular, AREVA has access to the equivalent of close to 26,000 MT of natural uranium during the 2004 to 2013 time frame, or about 2,600 MT per year, in connection with so-called HEU agreements to reuse uranium from Russia's dismantled nuclear weapons.

After subtracting the uranium mined in 2004, the Group's reserves were about 17,000 MT lower than in 2003. The new number also factors in the reclassification of a portion of the Kazakhstan reserves as resources and an adjustment to the allocation of Katco's mineral resources under an agreement signed in April 2004. The Group made a change in how it estimates its reserves from 2003 to 2004. In 2004, the estimate reporting was made based on "mineral reserves in the ground output" to comply with accounting methods adopted by its partners and competitors. In previous years, that estimate reporting was based on "plant output" concentrates leaving the mill, after applying a recovery yield. The 2003 and 2002 figures in the table below were recalculated to reflect this change in reporting method.

The volume of resources is around 236,000 MT, including reserves. In addition, the Group had nearly 250,000 MT of additional mineral resources in the ground, which were reported as "Other mineral resources" at year-end 2004. The Group's total underground mineral resources in the ground thus come to nearly 490,000 MT of uranium.

AREVA is expanding its research and exploration activities around sites that have already been mined in well-characterized geological settings or in little-explored regions with promising uranium potential, notably Australia. The timetables for these activities spans more than ten years.

In Niger, Canada and Kazakhstan, AREVA's three main areas of commercial operations, the Group now operates mainly through several joint ventures. AREVA's resources and reserves at year-end 2004, together with its uranium production in 2004, are listed in the table below.

(1) "Mineral Reserves" are defined as the portion of resources offering the most accurate estimate and which were the subject of a pre-feasibility study or a feasibility study based on calculated or estimated costs.

"Mineral Resources" means moderately- to well-characterized ore bodies, based on test drillings which were or are yet to be the subject of a mining feasibility study, and which will or will likely be mined. They include the reserves defined above.

"Other mineral resources" means ore bodies that are not being mined for administrative reasons or that require more favorable market conditions to be profitably mined.

"Global mineral resources" means the sum of all categories of resources. They serve as a good criterion for long-term comparisons of producer portfolios.

(These concepts are described in greater detail in the Glossary).

(2) The average recovery yield from the mills for 2004 is estimated at about 95%. The yield varies according to processing method.

Estimating methods

AREVA's resources and reserves are estimated based on data gathered by the Group's employees or are derived from audited reports. The Group's Reserves department is responsible for these estimates.

In Canada, the Group's reserves are established based on independent estimates or audit reports by the shareholders of the companies operating the mines. In Niger, they are established in a certification report meeting Canadian standard NI-43-101 prepared by Systèmes Géostat International Inc.

Estimated underground mineral reserves at year-end 2004

Country	Sites	Proven (1)		Probable (2)		Total Resources (1)+(2)			AREVA's share***		AREVA's share removed****
		MTU*	%**	MTU	%	MTU	%	%	MTU	%	MTU
Canada	CIGAR LAKE	86,996	167.8	2,069	35.4	89,065	154.39	37.1	33,043	37.1	33,043
Canada	KEY LAKE	272	4.4	0	0	272	4.4	16.67	45	30.2	82
Canada	MARTHUR1	128,438	225.17	32,908	161.61	161,346	208.45	30.2	48,718	30.2	48,719
Canada	MCCLEAN	6,836	9.51	0	0	6,836	9.51	70	4,785	70	4,785
Canada	MIDWEST	10,262	60.5	0	0	10,262	60.5	69.16	7,097	69.16	7,097
Kazakhstan	MUYUNKUM Phase 1	3,182	0.59	3,966	0.61	7,148	0.6	51	3,645	100	7,148
Kazakhstan	MUYUNKUM Phase 2	0	0	7,521	0.62	7,521	0.62	51	3,836	51	3,836
Kazakhstan	TORTKUDUK Phase 1	0	0	11,829	0.53	11,829	0.53	51	6,033	100	11,829
Kazakhstan	TORTKUDUK Phase 2	0	0	3,117	0.53	3,117	0.53	51	1,590	51	1,590
Niger	COMINAK	7,889	5.13	15,737	4.29	23,626	4.54	34	8,033	46.4	10,963
Niger	SOMAIR	5,569	3.04	7,921	2.96	13,489	2.99	63.4	8,552	100	13,489
Total YE 2004		249,443	23.07	85,070	1.59	334,514	5.2		125,377		142,581
Underground mineral reserves at YE 2003						355,761			133,231		159,311
Underground mineral reserves at YE 2002						341,568			127,113		123,181

Source: AREVA.

NB: The terms "proven" and "probable" relate to the level of reliability in estimates of mineral reserves in terms of quality, assay value, density, form and physical characteristics (reliability of estimates ranging from the highest level to the lowest level in this table).

MTU: metric tons of uranium

** Mineral's assay value in %.

***AREVA's share: percentage of AREVA's equity stake in the mining joint venture.

****AREVA's share removed: the share mined by the AREVA group, meaning the amount of uranium produced during the year and "sold/distributed" to AREVA by the mining joint venture.

Estimated underground mineral deposits (including reserves) at year-end 2004

Country	Sites	Measured (1)		Indicated (2)		Inferred (3)		Total Resources (1)+(2)+(3)		AREVA's share***	AREVA's share removed****		
		MTU*	% **	MTU	%	MTU	%	MTU	%		MTU	%	
Canada	CIGAR LAKE	86,996	167.8	2,069	35.4	45,446	143.51	134,511	150.53	37.1	49,904	37.1	49,904
Canada	KEY LAKE	272	4.4	0	0	0	0	272	4.4	16.67	45	30.2	82
Canada	MCARTHUR1	132,228	215.41	35,739	146.78	40,597	80.63	208,564	153.26	30.2	62,976	30.2	62,976
Canada	MCCLEAN	6,836	9.51	0	0	0	0	6,836	9.51	70	4,785	70	4,785
Canada	MIDWEST	10,262	60.5	2,247	18.31	2,252	39.31	14,761	42.22	69.16	10,209	69.16	10,209
Kazakhstan	MUYUNKUM Phase 1	3,182	0.59	3,966	0.61	0	0	7,148	0.6	51	3,645	100	7,148
Kazakhstan	MUYUNKUM Phase 2	369	0.59	8,735	0.62	120	0.55	9,224	0.62	51	4,704	51	4,704
Kazakhstan	TORTKUDUK Phase 1	0	0	11,829	0.53	0	0	11,829	0.53	51	6,033	100	11,829
Kazakhstan	TORTKUDUK Phase 2	0	0	3,117	0.53	9,538	0.53	12,656	0.53	51	6,454	51	6,454
Niger	ARLIT CONCESSION	0	0	0	0	22,200	3.76	22,200	3.76	100	22,200	100	22,200
Niger	COMINAK	11,981	4.43	22,707	3.98	21,458	2.57	56,146	3.35	34	19,090	46.4	26,052
Niger	SOMAIR	6,030	3	14,318	2.19	10,127	3.01	30,475	2.56	63.4	19,321	100	30,475
Total at year-end 2004		258,157	20.13	104,727	1.7	151,739	4.13	514,623	4.63		209,366		236,818
								Other underground resources at year-end 2004	286,196		198,578		249,191
								Total underground resources at year-end 2004	800,819		407,944		486,009
								Other underground mineral resources at year-end 2003	519,823		210,110		250,961
								Total underground mineral resources at year-end 2003	277,978		197,008		247,660
								Total underground mineral resources at year-end 2003	797,801		407,118		498,621
								Underground mineral resources, including reserves, at year-end 2002	545,548		222,335		215,079
								Other underground mineral resources at year-end 2002	269,964		192,643		239,645
								Total underground mineral resources at year-end 2002	815,512		419,978		454,724

Source: AREVA.

NB: The terms "measured", "indicated", and "inferred" relate to the level of reliability in estimates of mineral resources in terms of quality, assay value, density, form and physical characteristics (reliability of estimates ranging from the highest level to the lowest level in this table).

* MTU: metric tons of uranium

** mineral's assay value in %

*** AREVA's share: percentage of AREVA's equity stake in the mining joint venture

**** AREVA's share removed: the share mined by the AREVA group, meaning the amount of uranium produced during the year and "sold/distributed" to AREVA by the mining joint venture

Uranium production in 2004

Country	Sites	Total mines 2004		AREVA's share in 2004**		AREVA's share removed in 2004***		AREVA's share removed in 2003		AREVA's share removed in 2002	
		MTU*	%	MTU	%	MTU	MTU	MTU	MTU		
Canada	Cluff LAKE	0	100	0	100	0		31		1,621	
Canada	MC ARTHUR	7,200	30.2	2,174	30.2	2,174		1,760		2,158	
Canada	MC CLEAN	2,310	70	1,617	70	1,617		1,623		1,641	
France	DIV. MIN. HERAULT	7	100	7	100	7		9		18	
Kazakhstan	MUYUNKUM Phase 1	53	51	27	100	53		82		44	
Niger	COMINAK	2,005	34	682	46.4	997		909		909	
Niger	SOMAIR	1,277	63.4	810	100	1,277		1,126		1,066	
Total		12,852		5,317		6,125		5,540		7,457	

Source: AREVA.

* MTU: metric tons of uranium

** AREVA's share: percentage of AREVA's equity stake in the mining joint venture

*** AREVA's share removed: the share mined by the AREVA group, meaning the amount of uranium produced during the year and "sold/distributed" to AREVA by the mining joint venture.

Gold

Estimated underground reserves at year-end 2004

Country	Sites	Proven (1)		Probable (2)		Total Reserves (1)+(2)		%	AREVA's share*		AREVA's share removed**
		kg	g/MT	kg	g/MT	kg	g/MT		kg	%	kg
Australia	MUNGARI EAST	1,353	5.65	1,056	4.61	2,408	5.14	51	1,228	51	1,228
Australia	MUNGARI WEST	3,356	2.55	747	1.55	4,103	2.28	51	2,092	51	2,092
Ivory Coast	SMI	17,420	5.25	560	4	17,980	5.2	51	9,170	100	17,980
Sudan	AMC	23,507	5.4	0	0	23,507	5.4	40	9,403	40	9,403
Total at year-end 2004		45,636	4.94	2,363	2.78	47,999	4.76		21,893		30,704
Underground reserves at year-end 2003						51,637			23,788		33,704
Underground reserves at year-end 2002						62,970			29,391		39,462

Source: AREVA.

NB: The terms "proven" and "probable" relate to the level of reliability in estimates of mineral reserves in terms of quality, assay value, density, form and physical characteristics (reliability of estimates ranging from the highest level to the lowest level in this table).

*AREVA's share: percentage of AREVA's equity stake in the mining joint venture.

**AREVA's share removed: the share mined by the AREVA group, meaning the amount of uranium produced during the year and "sold/distributed" to AREVA by the mining joint venture.

Underground mineral resources, including reserves, at year-end 2004

Country	Sites	Measured (1)		Indicated (2)		Inferred (3)		Total Resources (1)+(2)+(3)		%	AREVA's share*		AREVA's share removed**
		kg	g/MT	kg	g/MT	kg	g/MT	kg	g/MT		kg	%	kg
Australia	MUNGARI EAST	6,964	6.14	11,557	5.46	3,145	5.63	21,665	5.69	51	11,049	51	11,049
Australia	MUNGARI WEST	3,356	2.55	747	1.55	57	2.55	4,160	2.29	51	2,121	51	2,121
Ivory Coast	FETEKRO	0	0	0	0	6,020	2.17	6,020	2.17	65	3,913	100	6,020
Ivory Coast	SMI	17,420	5.25	560	4	0	0	17,980	5.2	51	9,170	100	17,980
Sudan	AMC	23,507	5.4	0	0	0	0	23,507	5.4	40	9,403	40	9,403
Total at year-end 2004		51,247	5.06	12,864	4.70	9,221	2.75	73,332	4.52		35,656		46,574
Other underground mineral resources at year-end 2004						6,861			4,010		6,665		
Total underground mineral resources at year-end 2004						80,193			39,666		53,239		
Underground mineral resources, including reserves, at year-end 2003						83,796			40,277		53,327		
Other underground mineral resources at year-end 2003						18,244			9,814		12,469		
Total underground mineral resources at year-end 2003						102,040			50,091		64,796		
Underground mineral resources, including reserves, at year-end 2002						127,771			62,953		76,548		
Other underground mineral resources at year-end 2002						14,913			8,116		9,138		
Total underground mineral resources at year-end 2002						142,684			71,069		85,686		

Source : AREVA.

NB: The terms "measured", "indicated", and "inferred" relate to the level of reliability in estimates of mineral resources in terms of quality, assay value, density, form and physical characteristics (reliability of estimates ranging from the highest level to the lowest level in this table).

*AREVA's share: percentage of AREVA's equity stake in the mining joint venture.

**AREVA's share removed: the share mined by the AREVA group, meaning the amount of uranium produced during the year and "sold/distributed" to AREVA by the mining joint venture.

AREVA produced 3,849 kg (~8,486 pounds) of gold in 2004, compared with 4,276 kg (~9,427 pounds) in 2003.

4.4.1.5. Operations and highlights

The Group sold 12,470 MT of uranium in 2004, including traded amounts, and produced 6,125 MT, for 10% increase compared with 2003. The increase is attributable to a return to normal production at the McArthur mine in Canada, which was shut down for three months in 2003 following a flood in April of that year. The Group also had secondary resources, in particular those resulting from the HEU agreements described earlier. In 2004, the initial agreement dated March 1999 between AREVA and its partners Cameco, RWE Nukem and Technabexport was amended, giving the Group access to more than 26,000 MT of natural uranium by 2013, i.e. about 2,600 MT per year. The Group is preparing to mine new deposits to substitute for the so-called secondary reserves in time.

On December 20, 2004, having receiving the necessary approvals from the Canadian Nuclear Safety Commission (CNSC), the project partners decided to bring the Cigar Lake mine on line in 2007. This deposit is one of the richest in the world. When operating at full capacity, the mine will contribute around 2,600 MT of uranium annually to the Group's total production.

In Kazakhstan, the heads of AREVA and Kazatomprom signed a series of agreements on April 28, 2004 laying out new commercial and financial conditions for their partnership. This launched the industrial phase of Katco's uranium production project. Katco is a 51%-owned subsidiary of AREVA located in Kazakhstan. It is expected that Katco will have built the bulk of its new facilities by year-end 2005 and should begin mining the Tortkuduk and Muyunkum deposits. Katco will gradually raise its uranium output to 1,500 MT a year. A new plant with a total capacity of 2,000 tons will produce concentrates in oxide form. The subsidiary will contribute to the social and economic development of a region where uranium constitutes the main source of wealth.

AREVA signed a mining agreement with the Niger Government in September 2004. The agreement allows it to apply for a permit for ground exploration in targeted and promising areas. After a thirty-year hiatus, geologists will resume prospecting in one of the world's richest uranium-bearing regions.

Gold production stood at nearly 4 MT in 2004, a 10% decline from 2003. The resumption of production at the Ity mine in Côte d'Ivoire partly offsets the scheduled shutdown of the Angovia mine in the same country in 2004, and a slight drop in production in Australia.

4.4.1.6. Outlook and development goals

The Business Unit had a significant backlog of orders at year-end 2004, equivalent to five years of sales revenue.

The pressure on uranium prices should begin to have a positive impact on the Business Unit's sales revenue and earnings starting in 2007-2008, and an even greater effect starting in 2009. Eighty percent of the Group's unfilled orders are based on pre-2003 uranium prices and cover the period from 2004 to 2014, during which time the higher prices will have little effect. A total of 15,000 MT in orders were booked in 2004, with a few deliveries scheduled for 2005. Most deliveries begin in 2006 and 2007.

Conversely, the weak U.S. dollar dampens selling prices when translated to euros and Canadian dollars, the principal currencies used in the Group's mining regions.

Around €170 million will be spent over three years to develop existing deposits, mainly Cigar Lake and Katco, which should ultimately contribute close to 4,000 MT to the Group's production. This investment is in addition sums invested by the Group each year on exploration for all deposits and prospects combined. The Group, moreover, continues to conduct exploration.

The Mining Business Unit plans to continue with its capital spending program so as to fully profit over the medium term from the favorable prospects offered by rising demand and higher prices in the natural uranium market.

4.4.2. Chemistry Business Unit

4.4.2.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	232	226	173
Workforce at year-end	1,652 people	1,604 people	1,584 people

4.4.2.2. Businesses

Conversion of natural uranium into uranium hexafluoride (UF₆)

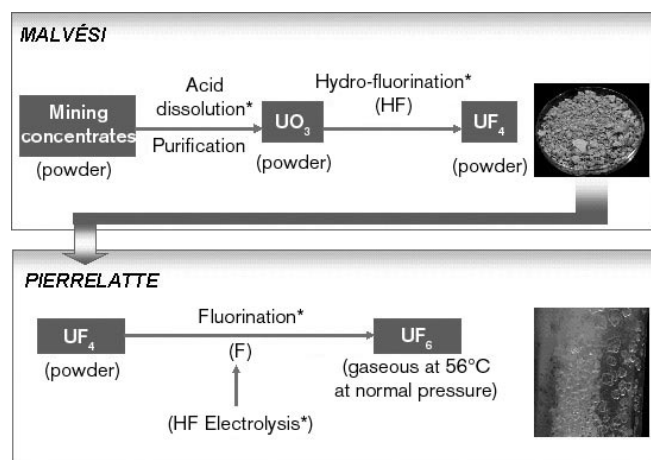
The Chemistry Business Unit converts the natural uranium coming from the mines into uranium hexafluoride (UF₆). Uranium enrichment, the necessary next step in nuclear fuel fabrication, requires uranium in the chemical form of UF₆ as feed material, regardless of the type of enrichment process used.

Uranium concentrates shipped from the mine for conversion are already owned by an electric utility at this stage. Conversion is a two-stage process. In the first stage, the uranium is converted

into uranium tetrafluoride (UF_4). This involves dissolving the mine concentrates with acid, then purifying, precipitating and calcining them to produce UO_3 powder. The powder is fluorinated with aqueous hydrofluoric acid (HF), which converts it into uranium tetrafluoride powder (UF_4), a green granular solid. These operations are carried out in Comurhex-Malvési's plant in Narbonne (France).

In the second stage, the UF_4 is converted into uranium hexafluoride (UF_6) through fluorination. UF_6 has the advantage of being a gas when heated at a relatively low temperature. The fluorine used in this process is produced through electrolysis of hydrofluoric acid. These operations are carried out in AREVA's Comurhex-Pierrelatte plant located in the Rhone valley region of France.

The following diagram summarizes the process:



* Strictly "chemical" operations.

Stabilizing uranium hexafluoride (UF_6) through defluorination

The uranium enrichment process (see Enrichment Business Unit) generates depleted uranium hexafluoride that is converted into uranium oxide, a stable, non-soluble and non-corrosive form that can be safely stored pending reuse. The COGEMA-Pierrelatte defluorination plant is the only facility in the world that converts depleted UF_6 into uranium oxide on an industrial scale. During the conversion process, ultra-pure hydrofluoric acid (70%) is produced and is marketed to the chemical industry.

Recycling of reprocessed uranium

When nuclear fuel is unloaded from the reactor, after a residence time of three or four years, it still contains 96% uranium by weight. The uranium is recovered through treatment operations such as those performed at the COGEMA-La Hague plant (see Treatment Business Unit) and is transported in the form of uranyl nitrate to the Chemistry Business Unit's

Pierrelatte site for conversion into oxide or reconversion into uranium hexafluoride. Some European reactors, such as the Cruas nuclear power plant in France, are loaded with fuel made of recycled uranium from used fuel treatment.

Other fluorine derivatives

The Business Unit's conversion know-how in the field of uranium fluorination has also been used for non-nuclear applications, which represent about 5% of the Business Unit's sales.

In fact, Comurhex has developed a whole range of fluorine derivatives:

- tungsten hexafluoride, for example, is used to make many of today's communication devices, from cell phones to smart cards to global positioning systems;
- fluorine-nitrogen products are used in the automobile industry to treat plastic materials and seal gasoline tanks; and
- chlorine trifluoride is used by the microprocessor industry and to clean gaseous diffusion enrichment barriers.

In the fluorine derivatives sector, the two main customers, Air Liquide and Air Products, are suppliers of utilities to manufacturing industries.

The Group is the leading fluorine producer in Europe and the second largest in the world.

4.4.2.3. Manufacturing capabilities

Most of the Chemistry Business Unit's operations are conducted at five plants, all of which are located in France:

- UF_4 is produced at the Comurhex-Malvési plant. The plant's five furnaces operate concurrently.
- UF_6 is produced by Comurhex-Pierrelatte in two flame reactors.
- Depleted uranium is defluorinated in four production lines at COGEMA-Pierrelatte.
- Uranyl nitrate is converted into oxide or hexafluoride through denitration, performed in three plants at the Pierrelatte site, two belonging to COGEMA and one to Comurhex.
- COGEMA recycles lithium at its Miramas plant.

The Business Unit's annual production capacities include 14,000 MT of UF_6 conversion, 14,000 MT of defluorination, 2,800 MT of denitration and 80 MT of fluorine derivatives for industry.

The proximity of the Chemistry Business Unit's facilities to those of the Enrichment Business Unit is an advantage, since it reduces customer transportation costs.

4.4.2.4. Market and competitive position

The annual demand for conversion services in 2004 was around 65,000 MT, including 19,000 MT in Western Europe, 9,200 MT in Eastern Europe and the CEI, 21,500 MT in North America and 14,700 MT in Asia.

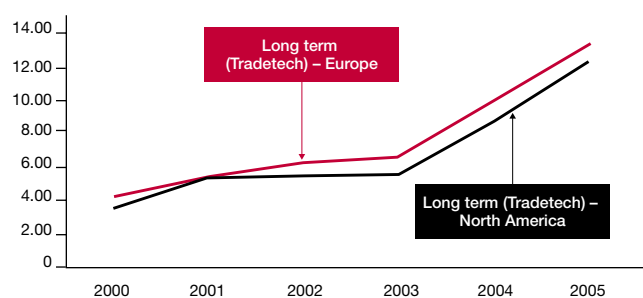
AREVA has a leading position worldwide, with a UF₆ conversion volume produced of some 14,000 MT in 2004, up considerably from 2003.

Its main competitors are Cameco in Canada, Converdyn in the United States, BNFL in the United Kingdom and FAAE in Russia. Cameco and Converdyn have nominal conversion capacities of the same order of magnitude, at 12,500 MT/year⁽¹⁾ and 12,700 MT/year respectively. Though BNFL announced in 2001 that it would withdraw from this market by 2006, BNFL and Converdyn signed a commercial agreement in the first quarter of 2005 by which BNFL will supply UF₆ conversion services for 5,000 MT of uranium per year over a period of ten years.

Russia has a large amount of underused capacity at its FAAE plants due to technical and geographical limitations. The plants are mainly used to satisfy the needs of the Russian reactors.

Prices for UF₆ conversion reached very low levels in 2000-2001, falling to \$2.50/kg of uranium contained in the UF₆, mainly due to the arrival of UF₆ inventories on the market in the wake of the USEC's privatization in the United States and the use of HEU. Since then, as shown in the graph below, prices have been rising. In 2002, they reached their level of the early 1990s, or \$5 to \$6/kg. The representative price for UF₆ conversion in Europe climbed to over \$10/kg in 2003-2004 under the cumulative effect of 1) absorbing the inventories of UF₆ available on the market, 2) Converdyn's problems, 3) reduced amounts of UF₆ stemming from the use of HEU and 4) BNFL's announcement that it would withdraw from the market in 2006. However, the dollar's weakness against the euro mitigates the higher prices.

UF₆ conversion price indices in dollars since 2000
(Long-term, European spot and world spot prices)



Source: Tradetech.

(1) Source: Cameco.

The Group also enjoys attractive positions in the related business of high-purity fluorine derivatives for the electronic and automotive industries. These sectors constitute diversification opportunities for the Business Unit's expertise.

4.4.2.5. Operations and highlights

In 2004, the Chemistry Business Unit reported more than 14,000 MT of new conversion orders, resulting in a backlog exceeding four years of production at year-end 2004. Also in 2004, the leading long-term contracts were signed with Finnish electric utility TVO, Tepco of Japan and with American utilities, for a total of more than €100 million. These contracts indicate AREVA's diversified regional presence in the conversion market. EDF also signed two contracts with Comhurex in April 2003 and a contract with COGEMA SA in July 2004.

In 2004, 14,067 MT of U³⁰⁸ were converted, compared with 13,079 MT in 2003.

At the request of nuclear utilities, the average contract term is being extended from three-five years to terms of up to ten years.

4.4.2.6. Outlook and development goals

The Chemistry Business Unit's strategic objective is to bolster its position on the uranium conversion market, notably in Europe. AREVA will continue to benefit from operational integration and from the geographic proximity of the Enrichment and Chemistry Business Units.

Due to the average term of its contracts, AREVA does not expect to profit in the short term from higher conversion prices.

Under these conditions, the Chemistry Business Unit began the design phase to adapt its production plants to potential growth in demand. This initiative is being made in keeping with the group's enrichment programs and in particular plans to build the Georges-Besse II plant.

4.4.3. Enrichment Business Unit

4.4.3.1. Key data

(in millions of euros)	2004	2003	2002
Sales revenue	681	727	662
Workforce at year end	1,517 people	1,471 people	1,516 people

4.4.3.2. Businesses

The Enrichment Business Unit enriches natural UF₆ delivered to the enrichment plant by the customer. Natural UF₆ is a

chemical compound of uranium and fluorine that is gaseous at a temperature of 80°C and that contains the fissile isotope of uranium (U^{235}) necessary for the fabrication of nuclear fuel for light water reactors. Enrichment is the process by which the 0.7% content of U^{235} in natural UF_6 is raised to 3-5% to achieve a level of fuel reactivity suitable for reactor requirements.

Two enrichment processes are currently in use on an industrial scale: centrifugation and gaseous diffusion. The AREVA group uses the latter process at the present time.

An agreement signed with Urenco in 2003 should give AREVA access to centrifugation technology, which will consume 50 times less power than the gaseous diffusion process while lowering facility maintenance costs. Centrifugation technology also provides the advantages of modular construction, enabling gradual power increases and adjustment of production capacity to market needs. This process is expected to be used in the new Georges-Besse II plant, at an estimated cost of €3 billion. Construction should span the period from 2006 to 2018.

The capital-intensive enrichment industry also has a strong political dimension. Historically, major nuclear nations have sought to maintain their own production capabilities to ensure energy self-sufficiency while limiting nuclear proliferation. This aspect is vital to understanding decisions by the key market players and placing them in their proper context.

4.4.3.3. Manufacturing capabilities

The Enrichment Business Unit uses the plant of its subsidiary Eurodif, in which COGEMA holds a 59.7% interest, directly and indirectly, with foreign partners holding the remaining 40.3%.

The Eurodif enrichment plant, known as the Georges-Besse plant, consists of an enrichment cascade with 1,400 diffusion stages divided into 70 groups. The plant's modular design, the possibility of isolating groups and the ability to modify the profile of the cascade are such that a shut-down of groups for technical or commercial reasons does not affect plant capacity, which is set at a maximum of 10.7 million SWUs per year. The modular concept also accommodates a wide range of enrichment assays and production quantities on short notice.

The gaseous diffusion process takes advantage of the difference between the atomic weights of $U^{235}F_6$ and $U^{238}F_6$ to separate those isotopes. The molecules of gas are in perpetual motion, thus striking the walls of whatever encloses them. Since these molecules all have the same kinetic energy, lighter ones - those that carry the U^{235} isotope - are also the fastest, and thus will strike the wall of the enclosure more often statistically than the heavier molecules carrying the U^{238} molecule. If that wall is porous, the lighter molecule has a higher probability of crossing through this barrier than the heavier molecule.

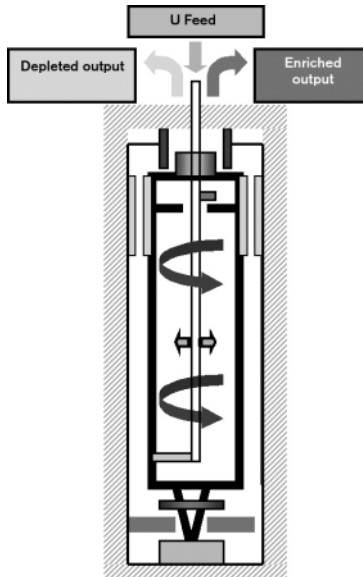
The UF_6 is converted into a gas that is enriched in a cascade of 1,400 diffusion barrier stages. The resulting isotopic separation is measured in "Separative Work Units" (SWU). This is the basis of the enrichment service sold to electric utilities. The SWU is an international unit of measure for enrichment services and sales, and is independent of the separation process used.

The gaseous diffusion enrichment process uses large amounts of energy: electricity represents some 60% of the enrichment cost. To provide enrichment services to some 100 reactors operated by 30 electric utilities worldwide, the Enrichment Business Unit consumes as much electricity as the greater Paris area, or an average of 4-5% of France's entire production of electricity. The Business Unit receives most of the power it needs to carry out the enrichment services from EDF under a contract ending in 2005. The renewal of that contract is now being negotiated. The Eurodif plant adjusts its electric power requirements to seasonal peak and off-peak demand to get the best available electric rates. In the particular case of EDF, the Enrichment Business Unit's biggest customer, SWU sales to EDF are made under a processing contract in which EDF provides the electricity necessary for its own enrichment needs. Consequently, EDF only pays for the enrichment service, and not the cost of the electricity.

Ultimately, the Enrichment Business Unit will operate the future Georges-Besse II plant through *Société d'Enrichissement du Tricastin*, which is wholly owned by the Group.

Like gaseous diffusion, the centrifugation process to be used in the future plant uses the difference in atomic weight between U^{235} and U^{238} , but the approach is different.

Centrifugation concept



An elongated cylinder spins in a vacuum at very high speeds inside a sealed housing. Uranium in the form of gaseous uranium hexafluoride (UF₆) is introduced, as it is in the gaseous diffusion process.

The centrifugal force of the machine throws the heaviest particles to the cylinder walls, effectively separating them from the lighter isotope. The gas enriched in the lighter isotope, located closer to the center of the bowl, flows towards the top of the machine, while the gas with the heavier isotope flows towards the bottom. The enriched and depleted products are recovered at either end of the machine.

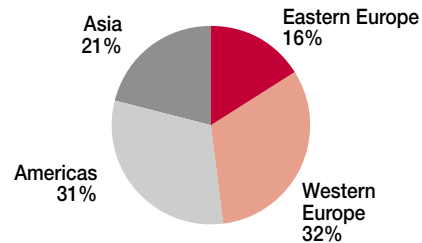
4.4.3.4. Market and competitive position

Worldwide enrichment capacity is approximately 33.5 million SWU, excluding 5.5 million SWU from the dilution of HEU from Russia’s defense program (see Section 4.4, “Strategy and outlook” of the **Front End Division**), for which USEC is the sole importer. Available capacities are shown below.

Operator	Available capacity	Process
USEC - production	5m SWU/yr	Gaseous diffusion
- imports	5.5m SWU/yr	Dilution
AREVA/Eurodif (France)	10m SWU/yr	Gaseous diffusion
FAAE (Russia)	10m SWU/yr	Centrifugation
URENCO (UK, Germany, Netherlands)	6.5m SWU/yr	Centrifugation
CNEIC (China)	1 MUTS /an	Centrifugation
JNFL (Japan)	< 1m SWU/yr	Centrifugation
Total	38 to 39m SWU/yr	

Source: AREVA.

The AREVA group thus has approximately 25% of the world’s total available capacity. Worldwide demand is 38.5m SWU, equal to available capacities, as shown:



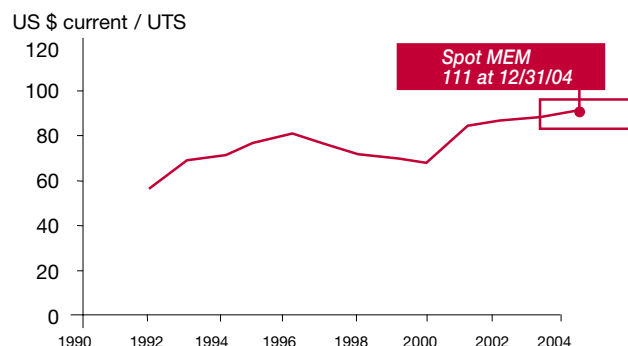
AREVA has the largest share of the Western European enrichment market, ahead of Urenco and Minatom. In Eastern Europe, the demand is almost entirely met by FAAE, for historical reasons.

In the United States, close to 50% of demand is met with enriched uranium diluted from HEU recovered from russian weapons and imported by USEC under an exclusive agreement, supplemented in part by USEC’s domestic production. Both Urenco and AREVA operate in the U.S. market, despite the edge that USEC has due to its access to HEU, but USEC has filed dumping and illegal subsidies claims against them (see 4.14.4.2. below).

USEC is also the largest supplier to Asia, mostly for historical reasons, while AREVA is ranked second, ahead of Urenco and JNFL.

Supply exceeded demand from 1995-2000, primarily due to the use of HEU, causing prices to fall. The situation was compounded by USEC’s marketing strategy in reaction to growing competition from other enrichment service providers. Since 2001, the year USEC brought a lawsuit against European enrichers, spot prices have been rising, primarily in the U.S. market, going from \$80 to close to \$110 per SWU, as shown in the figure below. These price levels are holding steady in a context of balanced supply and demand. However, the price rise in dollars is significantly offset by the fall in the dollar/euro exchange rate over the past two years. Most sales are made in euros in the euro zone, and much of the backlog from Asia and North America, quoted in dollars, is hedged.

1990-2004 SWU prices



Source: Average SWU values published monthly by TradeTech.

The market for enrichment services is a medium-term market, with contracts currently signed for 3-5 year terms. Market growth is limited in volume but relatively secure, especially in Asia, where nuclear power programs are growing faster than in the three other major regions of the world. The growth in this market is also due to the general rise in nuclear power plant load factors, burnups requiring higher enrichment content, and new projects.

The market is also regulated by geopolitical considerations. In Europe, the Euratom Supply Agency controls the supply of uranium and enrichment services in accordance with the Corfu Declaration, which governs SWU imports into the European Union. In the United States, the application of the HEU agreement allows the U.S. import of materials from the dismantling of Russian weapons. In addition, pursuant to the Suspension Agreement, Russia agrees not to deliver any other enrichment service to the United States.

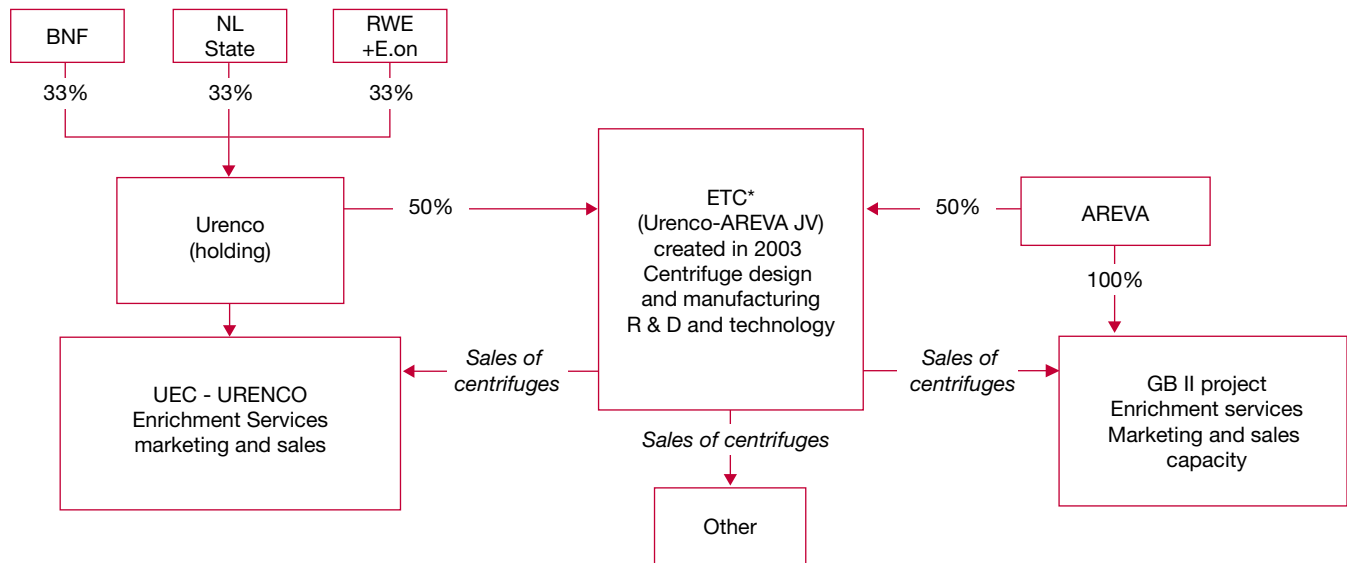
4.4.3.5. Operations and highlights

In 2004, the volume of SWU sales stabilized at 10.4 million, backing up the very high level of 10.6 million SWUs reached in 2003.

To prepare for the future, the project for the new enrichment plant using the centrifugation process has advanced to a new stage. In November 2003, the shareholders of Urenco and AREVA signed an agreement allowing the Group to acquire a 50% equity stake in the Enrichment Technology Company (ETC). This company designs and fabricates centrifuges used in the construction of centrifugation plants; it will be the partners' exclusive vehicle for research and development of centrifugation technology. From an economic as well as industrial standpoint, the equity stake should give the group access to the best available technology for uranium enrichment by centrifugation. It should also pave the way for construction of the Group's future Georges-Besse II plant, to be located at the Tricastin site in France, with the corresponding centrifuges coming from ETC.

On October 6, 2004, the European Commission approved this merger by authorizing the creation of a joint venture between AREVA and Urenco in the area of uranium enrichment equipment, as long as the competitive situation in the enrichment market does not change. This was done mainly by creating a clear division between the activities of AREVA and Urenco, and by requiring them to disclose the prices they charge electric utilities to the Euratom Supply Agency. Implementation of the agreement between AREVA and Urenco is still contingent on the signature and ratification of a quadripartite intergovernmental treaty between France, Germany, the United Kingdom and the Netherlands, which would extend the Almelo Treaty to France. All of this should occur no later than December 31, 2005, unless this period is extended in the contract.

Legal organization chart



(*) Enrichment Technology Company.
Source: AREVA.

Synatom, which has an 11.11% equity stake in Eurodif, has expressed its intention of transferring its interest to COGEMA. Discussions are in progress on this subject, in light of the sale option provided under the Eurodif shareholders' agreement (see paragraph 3.7.2).

In the dispute with USEC, the U.S. Department of Commerce (DOC) notified Eurodif in July 2004 of an 80% decrease in the amount of countervailing duties paid by Eurodif in 2001 and 2002. Moreover, the U.S. Court of Appeals for the Federal Circuit (CAFC) rendered a decision on the merits on March 3, 2005 supporting Eurodif's legal analysis. However, that decision can still be appealed (see paragraph 4.14.4.2).

4.4.3.6. Outlook and development goals

Demand is assured for the next 20 years, based on current nuclear power programs and the known service life of reactors. Growth is slow but steady, at approximately 1% per year. Growth in Asia should coincide with that of nuclear power revivals in some countries, particularly the United States and Finland.

In the medium-term, and subject to a rising US dollar compared with the euro, the Enrichment Business Unit should see its backlog continue to fill up and be more evenly balanced among the three large markets of Europe, the United States and Asia. The export backlog has grown stronger. As of the end of 2004, the average export backlog was equal to four years of sales.

The Business Unit's next objective is to acquire the centrifugation technology that will replace its gaseous diffusion facilities and to ensure a successful transition. The total capital outlay for the Georges-Besse II project will be about €3 billion from 2005 to 2017, including the cost of technology rights, for a production capacity of roughly 7.5 million SWUs. On the condition that the Urenco agreement regarding ETC (see above) enters into force quickly, the plant should begin production within three years, with a gradual increase in activity until about 2017-2018.

4.4.4. Fuel Business Unit

4.4.4.1. Key data

(in millions of euros)	2004	2003	2002
Sales revenue	1,136	1,284	1,189
Workforce at year-end	5,393 people	5,099 people	4,871 people

4.4.4.2. Businesses

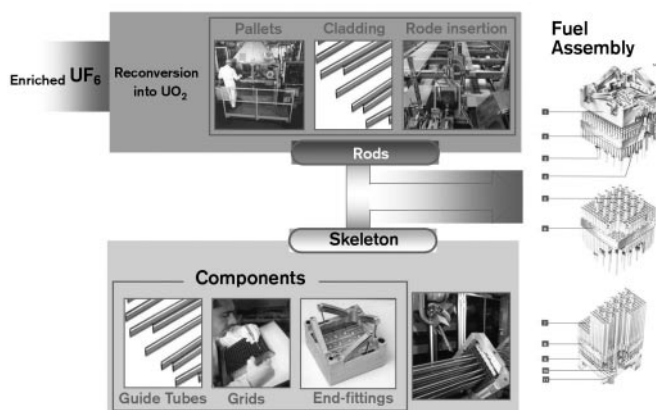
Nuclear fuel assembly design and fabrication

The Fuel Business Unit designs, fabricates and sells nuclear fuel assemblies (the fissile material is generally owned by the customer) for PWR and BWR-type power plants and for research reactors. In addition to conventional enriched uranium oxide fuel, the Business Unit also supplies Mox (mixed plutonium/uranium oxide fuel) and enriched reprocessed uranium fuel (ERU – see Glossary) using fissile materials recovered through used fuel reprocessing. The Back End Division's Recycling Business Unit fabricates Mox fuel (see paragraph 4.6.1.). The Fuel Business Unit sells Mox to plants designed by the Group; the Recycling Business Unit sells Mox to other plants.

Fuel is a very high-tech, consumable product that must be replaced at regular intervals. Fuel assemblies form the reactor core, where energy-producing nuclear fission occurs. For example, a modern pressurized water reactor such as the EPR contains close to 120 metric tons of fissile material divided among the 241 assemblies that form the reactor core, the only part of the reactor that is truly “nuclear”.

A fuel assembly is made of cylindrical tubes called “fuels rods” containing sintered uranium oxide pellets - the fissile material - which are held in place in a metal frame, or “skeleton”, usually made of zirconium alloy. An assembly can contain 200 to 500 kilos (~440 to 1,102 pounds) of fissile material, depending on the type of assembly.

Main stages in fuel assembly fabrication



Source: AREVA.

Reactor safety is a function of several requirements:

- containment of all radioactive materials, as defined by nuclear safety standards, under both normal and potential accident situations;
- control of the chain reaction; and
- cooling of the reactor core.

Fuel assemblies participate in reactor safety by sealing fissile materials and radioactive fission products inside zirconium alloy cladding, which forms the primary containment barrier.

The fuel assembly is designed so that the fissile material needed for the chain reaction is appropriately spaced. Fuel design also aims to minimize damage in the event of an accident, allowing control rods (see Glossary) to be inserted and the reactor core to be cooled under all circumstances.

Once unloaded from the reactor, the fuel assembly must continue to provide fissile material and fission product containment. Fuel design must also allow for handling and dissipation of residual heat.

Used fuel is periodically replaced (every 12 to 24 months) with partial core reloads representing between 20% and 50% of the total number of assemblies in the reactor, depending on core management techniques and fuel assembly performance. The number of assemblies replaced simultaneously constitutes a reload.

The Fuel Business Unit is expert in the entire design and fabrication process, including the production of zirconium and its alloys up to fabrication of the final fuel assembly, and thus meets the very demanding operating conditions and specific requirements of each customer. Nuclear fuel is by no means an ordinary or easily substituted product. A large number of high-level scientific and technical skills are needed to achieve flawless design and fabrication quality, an absolute requirement. The Fuel Business Unit has expertise in three key areas:

- design: This includes neutronic, thermohydraulic and mechanical strength modeling and a database amassed from lessons learned from many years of reactor operating experience. Fuel designs are referenced in the reactor license application, making the fuel designer one of the utility's most important partners during discussions with the nuclear safety authorities.
- zirconium and zirconium alloy production: this requires knowledge of chemical and metallurgical processes and technologies.
- fuel assembly fabrication: This requires knowledge of chemistry, powder metallurgy, various assembly techniques, including advanced welding, mechanical systems and machining, and numerous non-destructive examination methods and physical/chemical analyses.

Supply of zirconium products

AREVA is the only Group to possess expertise in every aspect of nuclear fuel design and fabrication, particularly in the area of zirconium alloy materials used in the fabrication of fuel cladding and structural components. Zirconium is an essential material for most of the products fabricated by the Fuel Business Unit. Raw materials, excluding semi-finished products, represent close to 25% of the total cost of the Business Unit's purchases in 2004, and have remained essentially constant over the years.

The Business Unit also fabricates and markets finished and semi-finished zirconium products. Several of the Business Unit's competitors – fuel designers and/or fabricators – are also its customers.

For zircon flour, the imbalance between supply and demand persists. This imbalance is caused by high demand from China and the drop in production from the mines. Prices soared by about 25 to 30% in 2004. With this market conditions as a backdrop, a strategic inventory has been established to cap prices and secure supplies. Moreover, supply sources are diversified (Australia and South Africa) and a source in the United States is now being qualified.

For zirconium, in the ongoing process of qualifying an outside source of supply, back-up contracts with suppliers of zirconium scrap, tubular blanks and sponge have been maintained despite a significant drop in demand, due on the one hand to the completion of in-house certification following the merger of Framatome-ANP and Siemens, and, on the other hand, a stronger internal recycling policy traceable to the sustainable development initiative.

4.4.4.3. Manufacturing capabilities

The Fuel Business Unit is organized into three business lines:

- Design and marketing, based in Germany, France and the United States.
- Zirconium, with five plants in France and one in Germany, each specializing in one aspect of zirconium metallurgy or forming.
- Fuel fabrication, organized into seven plant sites – two in the United States and five in Europe – supplying mainly European utilities.

With the Fuel Fabrication Business Unit, the Group has nominal annual production capacity of 2,750 metric tons of heavy metal (MTHM) (see Glossary), including 1,850 in Europe and 900 in the United States. AREVA's total fuel fabrication capacity is thus one third of worldwide capacity for light water reactors and is close to half of the annual fuel requirements of those reactors.

The Fuel Business Unit includes two other entities:

- Cerca, with plants in France, is mainly active in the fabrication and sale of fuel elements for research reactors, a market in which it is the world leader.
- Federal Operations, located in the United States, provides nuclear engineering services to the US Department of Energy (DOE) as well as to other US federal government programs.

4.4.4.4. Market and competitive position

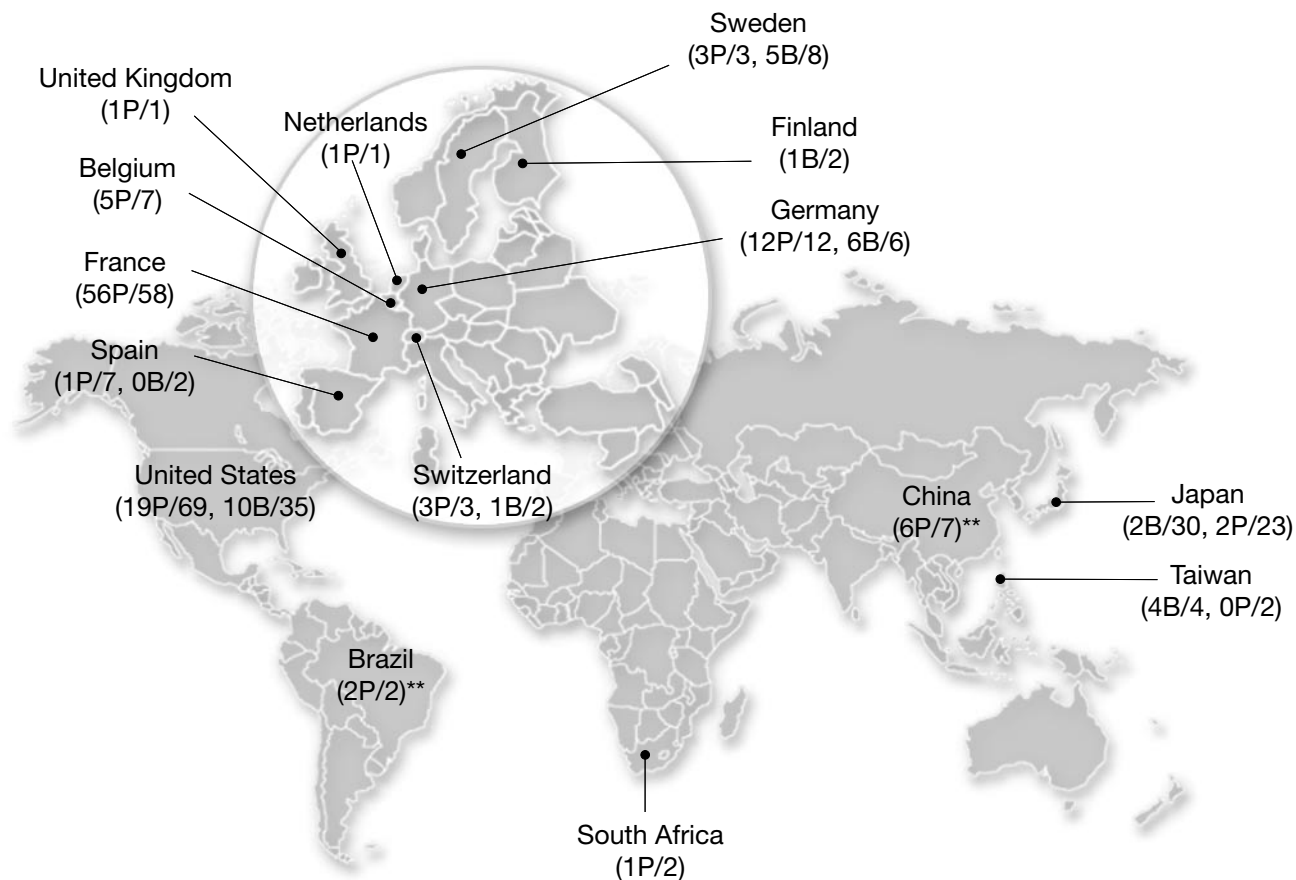
The Business Unit's principle business is the fuel assembly market for commercial BWRs and PWRs – excluding Russian-designed VVERs – and for research reactors. AREVA holds 40% of this market.

In 2004, the worldwide market represented about 6,000 MTHM (uranium or plutonium) contained in the assemblies. The United States accounts for 36% of worldwide demand, Europe 35% and Asia 27%.

The fuel Industry has reorganized several times over the past few years, leaving three leading groups to satisfy 80% of global fuel demand: AREVA, BNFL-Westinghouse and GNF (GE, Toshiba and Hitachi).

AREVA has supplied a total of close to 155,000 fuel assemblies, two thirds of them PWR and one third BWR. Today, 142 of the world's 308 operating PWRs and BWRs (excluding VVERs) routinely use AREVA fuel, as shown in the figure below.

Reactors loaded with AREVA fuel in the world*



* Sources: IAEA, WNA, Nuclear Assurance Corporation (December 2004)

Key:

• In addition to the 286 PWR and BWR reactors in operation worldwide shown on this map, there are also PWRs and BWRs that do not use AREVA fuel, located in Mexico (2 BWR), Slovenia (1 PWR), South Korea (16 PWR), India (2 BWR) and Pakistan (1 PWR).

• P: Pressurized Water Reactor

• B: Boiling Water Reactor

(-/-) Number of reactors served by AREVA/total number of reactors in service

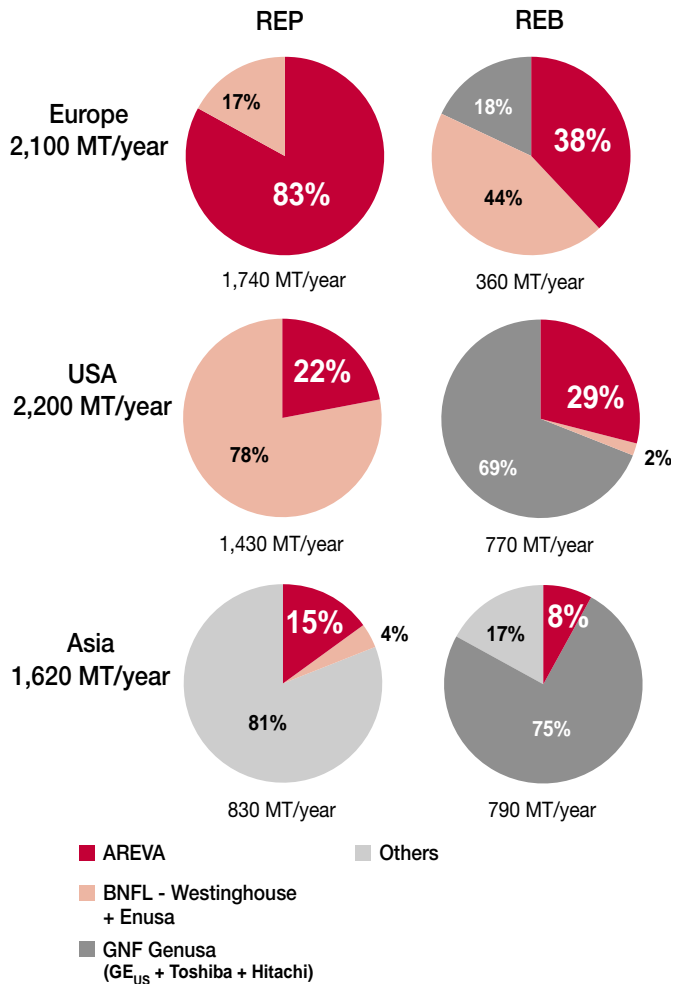
**Local manufacturer using Framatome-ANP technology

Of the 142 reactors that purchase fuel from AREVA:

- two-thirds are reactors designed by AREVA, thus demonstrating the synergies between the Fuel Business Unit and the **Reactors and Services** Division, which accounts for 95% of AREVA's installed capacity,
- the other third accounts for 25% of AREVA's competitors' installed capacity.

As the following charts show, the AREVA group is the european leader. Its market shares have risen significantly in the United States and are continuing to expand in Asia.

Market share of fuel players in 2004



Source: Nuclear Assurance Corporation (Fuel Trac 08/2004 edition); average values for 2004+/- 1 year.

In 2004, in accordance with requirements laid down by the European authorities in 2001 for EDF to accord market share for fuel supply to operators other than AREVA, the BNFL-Westinghouse group entered the French market. AREVA is still EDF's main supplier, with about 85% of its fuel supply in 2004. Certification processes for products and suppliers are very demanding; they require operating experience and are a formidable obstacle to the entry of new players.

A key discriminator is each supplier's ability to develop a strong, long-term partnership with its customers based on:

- technical support for reactor license applications submitted to the customer's nuclear safety regulators (the DGSNR in France, NRC in the United States, TÜVs in Germany);
- continual reduction of operating costs through enhanced fuel designs and service offerings.

The utility's operating costs depend on factors such as:

- fuel reliability, which is a direct function of design and fabrication quality, with one lost day of reactor operation due to fuel failure costing five times the fabricator's added value in the fuel assembly (the fissile material is supplied by the utility); and
- the amount of energy produced by the fuel before it is "used up", measured in terms of burnup and expressed as megawatt days per metric ton of heavy metal (MW days per MTHM).

Market volume is up very slightly, with the impact of continuing fuel enhancements offset by the steady increase in load factors and capacities of currently operating plants. Conversely, competition among suppliers and the existing excess capacity, with demand at roughly 65% of supply, caused prices to plunge 25-40% from 1995 to 2003, with a tendency to stabilize.

Elsewhere, price differences among the geographic regions of Asia, Europe and North America converged to +/-25% in 2004. The markets are regional and the prices AREVA charges are competitive in each of these three regions.

4.4.4.5. Operations and highlights

In 2004, Business Unit volumes dropped due to less favorable fuel reload delivery schedules, particularly in France and Germany. However, the Fuel Business Unit won major contracts in 2004, some of which are the result of synergies with other Business Units in the Group:

- Duke Power of the United States contracted with AREVA to supply fuel for its seven reactors;
- an agreement was reached with U.S. utility Exelon, and the supply contract for the La Salle reactor in Illinois was renewed for ten reloads;
- Omaha Public Power District, also in the United States, chose AREVA to supply five fuel reloads to the Fort Calhoun nuclear station starting in 2006;
- Electrabel, a Belgian utility, formalized its intention to use AREVA to supply five of its seven reactors through 2008;
- EDF extended its fuel supply contract through 2007;
- long-term supply contracts through 2011 were concluded with German electric utilities E.ON, EnBW, EnKK and RWE;
- Ansto, the Australian agency, selected AREVA to supply fuel for its new research reactor and to remove the used fuel for reprocessing.

The BLEU Project (Blended Low Enriched Uranium), launched in the United States, moved into the production phase in 2004. This project is comprised of several contracts worth more than €200 million. The site where the UO₂ powder (see Glossary) is made in Erwin, Tennessee, has been started up and the first delivery of powder was made to the fuel fabrication site in Richland, Washington, in the second half of 2004. The first

assemblies filled with BLEU pellets were delivered to the Tennessee Valley Authority (TVA) at the end of the second half of 2004.

Efforts to integrate skills from the Group's sites in France, Germany and the United States have paid off with major progress in product harmonization and industrial organization. The harmonized products, now in the marketing phase, further enhance the product offering by capitalizing on the best components and technological advances, including the M5TM alloy, the HMP grid assembly, and the Robust FuelGuard nozzle.

4.4.4.6. Outlook and development goals

For the 2005-2009 period, 50% of the world's fuel requirements have already been ordered, and 35% of those orders went to AREVA, for about three years of sales. The market's annual growth in volume is limited but relatively certain.

With this as a backdrop, the Business Unit's objective is to strengthen its market shares by expanding its international marketing position. The Business Unit also plans to take advantage of a renewed product range to position itself favorably for tenders, and particularly for the Chinese request for tender for the construction of new power plants.

To achieve its objectives of greater reliability, performance and competitiveness, the Business Unit has identified three areas for development:

To achieve that objective, the Business Unit is implementing a series of targeted actions:

- In products: pursue enhanced fuel assembly designs and continue to leverage the combined staff of Framatome-ANP and Siemens following the merger of their nuclear businesses, while continuing to streamline the portfolio of existing products and to reduce its fabrication programs.
- In manufacturing, the Business Unit continues to optimize its manufacturing capabilities:
- after completing a joint licensing program at the Romans and Lingen plants in France and Germany enabling each facility to manufacture products based on technology originating in either country, the Business Unit embarked on a licensing process, now entering the final stage of review, to expand the plants' capacity while improving productivity and gaining flexibility to satisfy a wide spectrum of customer requirements;
- the Business Unit launched a four-year, 100 million euro renovation program at the Romans plant to meet the most stringent nuclear safety, industrial safety and radiation protection standards.
- In R&D, an average of 4-5% of the Fuel Business Unit's sales revenue for the past three years has been invested in R&D

programs. A long view is taken in R&D, given that it takes 5-10 years to develop a new product and 10-15 years to develop a new alloy.

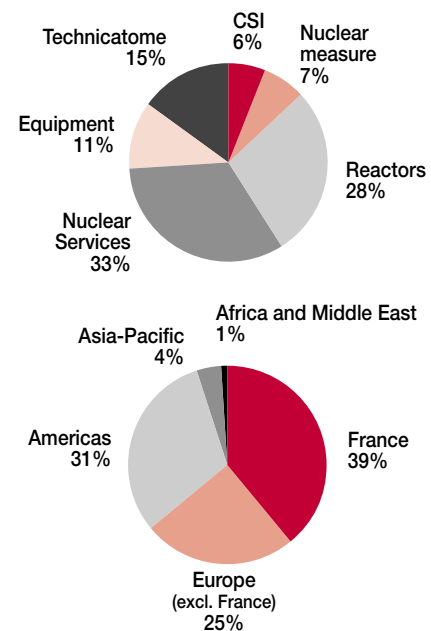
These targeted actions have been carried out under the umbrella of the Zero Tolerance for Failure initiative (ZTF), launched in 2003 in all sectors of the Business Unit with a view to providing state-of-the-art, reliable and competitive products.

» 4.5. Reactors & Services Division

Key data

(in millions of euros)	2004	2003	2002
Sales revenue	2,146	2,124	1,932
Operating income	90	52	64
Workforce at year end	14,066 people	13,251 people	13,549 people

2004 sales revenue by Business Unit and region



Overview

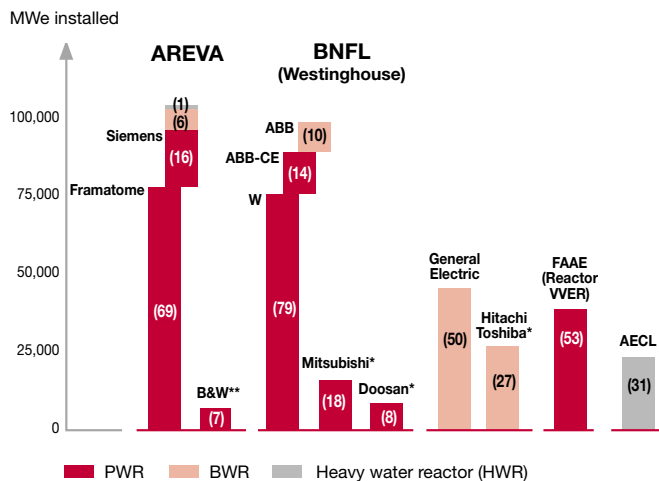
The Reactors and Services Division contributed 19.3% to AREVA Group sales. The Division designs and builds the two leading types of reactors currently in use around the world - pressurized water reactors (PWR) and boiling water reactors (BWR) - as well as naval propulsion and research/test reactors. It also offers products and services for nuclear propulsion, nuclear measurements, and the day-to-day operation, servicing and upgrading of all types of nuclear power plants.

The Division is organized into six Business Units:

- Plants Business Unit: design, construction and engineering of nuclear power plants;

- Equipment Business Unit: design and fabrication of nuclear power plant components;
- Nuclear Services Business Unit: maintenance, inspection and servicing of nuclear power plants;
- Technicatome Business Unit: design and fabrication of naval propulsion reactors and safety systems;
- Nuclear Measurements Business Unit: design and fabrication of nuclear measurement systems;
- Consulting and Information Systems Business Unit: consulting, systems integration and facilities management.

AREVA is the world's leading supplier of equipment and services for nuclear power and is ranked first in terms of installed capacity, with more than 100,000 MWe served, ahead of BNFL (including ABB/Combustion Engineering and Westinghouse) and General Electric. The Group had built 91 of the 308 BWRs and PWRs in service around the globe as of the end of 2004 (excluding VVERs), or close to one third of the world's operating capacity.



* Licensed by: Westinghouse to Mitsubishi and Doosan
G.E. to Hitachi/Toshiba

** Following Framatome's purchase of the commercial reactors business from B&W at the end of the 1990s, AREVA may be considered as the preferred service partner for these reactors in the United States, although it is not liable as a constructor.

These PWR and BWR power plants are clustered in three regions: the United States, Europe and Asia (mainly Japan).

Recurring operations, i.e. support for existing reactors, accounted for about 80% of the Division's sales revenue in 2004. Business increased due to the large size of the installed generating capacity served by the group as well as sales and marketing efforts outside this base. The Division mainly provides services, such as maintenance, inspection and engineering, and equipment for reactor upgrades, capacity increases and service life extension.

Power plant life extensions, which generate heavy investment in replacement equipment and improve the performance of existing plants, is one of the key contributors to the Division's growth, in addition to the prospect of renewed investment in new nuclear power generating capacities.

The average service life of the currently operating nuclear power plants is 40 years. However, depending on the country, and subject to approval by the safety authorities, that service life could be extended by 10 to 20 years, depending on the results of scheduled ten-year maintenance, as has already been done for 18 plants in the United States. The world's first power reactors were built in the United States in the 1960s and are often 10 to 15 years older than their European counterparts. The need to modernize aging plants thus emerged in the U.S. market first.

US electric utilities long focused on reducing their operating and maintenance expenses. Today, the trend is towards increasing capital spending, not for new reactors, but on existing ones. These investments, generally to replace heavy equipment or to upgrade control systems, are justified because they extend the service life of the facilities.

U.S. nuclear power plant performance has improved considerably over the past ten years as a result of upgrades. In ten years, the gross load factor, or Kp (similar to utilization rate), went from 70% to 90%, or the equivalent of almost 19 new 1,000 MWe reactors operating with a load factor of 0.90. The same reactors are thus producing one third more power than in the early 1990s. This translates into lower kWh prices for nuclear-generated power, and thus better economic performance for the utility.

Non-recurring operations, such as new reactor construction, amounted to roughly 20% of the Division's sales revenue in 2004. In structural terms, this percentage should increase in the medium term due to the construction of new reactors to replace and expand existing installed generating capacity and to meet the growing demand for power, especially nuclear power. In this area, AREVA's technology has 30 years of demonstrated operating experience. AREVA is the only player in the market to have been awarded a contract to build a new third generation reactor: Finland chose the Group's European Power Reactor (EPR), whose technological breakthroughs promise significantly improved operating performance and economic competitiveness as well as enhanced safety levels.

The Division has successfully expanded from its stronghold in Europe to the United States, where it has become the leader, and continues to expand in Asia. Its main manufacturing facilities are located in its large markets of France, Germany and the United States.

In Europe, the Group traditionally has very strong positions in France and Germany, which offer a recurring base for business. The Group has also substantially increased its business with other major operators, particularly in Northern Europe. The EPR's recent success in Finland and prospects in France have bolstered this position.

European countries with Russian-designed plants, including Finland and Eastern Europe (38 outside Russia), are also a market for upgrades. Russian reactor technology is similar to Western PWR technology, enabling AREVA to offer services to upgrade safety and performance levels. The problem with this market is that the utilities have difficulty obtaining the necessary financing.

The Reactors & Services Division is experiencing strong growth in the United States, which has the world's largest installed capacity, mainly due to the integration of Siemens' nuclear operations in 2001 (and its large U.S. branch) and the buyout of Duke Engineering & Services in 2002. In the past three years, AREVA has conquered considerable market share for control system modernization, service life extension, and heavy equipment replacement. For example, AREVA now holds 80% of the very buoyant reactor vessel head replacement market. Moreover, the Division's vast experience in the design and construction of nuclear plants allows it to offer global solutions through "Alliancing" type contracts based on a partnership with the customer.

In Asia, the main accessible market is China. The Group has been active in China for 20 years, where it built four of the eight existing units as of the end of 2004 and has developed joint ventures in the front end of the cycle. In February 2005, AREVA responded to a call for tender and submitted a proposal to build four new nuclear reactors.

Deregulation and an increasingly competitive market have prompted U.S. customers to demand new contracting mechanisms that are more financially attractive, streamlined and comprehensive. The preference is for global service proposals covering the supply of replacement components, replacement operations [per se], and related engineering and licensing support. With its capabilities in design, manufacturing, installation, licensing support and services, the AREVA group fully meets these demands. As an example, the policy of establishing long-term contracts with U.S. utilities, begun in 2002, is continuing.

The Division's leading Business Units take advantage of strong synergies to provide global services to electric utilities, strengthening the Division's competitive position.

The growth of the Group's installed reactor capacity is also a source of growth for the **Front End** and **Back End** Divisions.

Strategy and outlook

In addition to the activities of inspection, maintenance, renovation and modernization of existing facilities, which have accounted for almost all of the **Reactors & Services** Division's revenue for the past three years, new challenges are emerging.

In services and equipment, utility customers are increasingly outsourcing and partnering for facility maintenance and management to optimize their operations. This approach involves new contracting mechanisms in which utilities and service providers become partners. Their common goal is not only to optimize costs, but to decrease reactor outage times for maintenance. AREVA's objective is to be the preferred partner for the operation and maintenance of installed generating capacity in order to maintain and expand a strong engineering and services business. In particular, AREVA could undertake targeted acquisitions in Europe, depending on market opportunities.

In reactors, the Group plans to take full advantage of prospects for a nuclear power revival arising from the growing demand for electricity combined with the need to reduce greenhouse gases, in particular to meet commitments under the Kyoto Protocol. The revival will create additional opportunities in the long run to supply nuclear islands and even turnkey reactors. The Group has products such as the EPR, the first of which was ordered in December 2003 by Finnish utility TVO, followed by EDF's decision in October 2004 in favor of the EPR for the Flamanville 3 site.

Other potential for this reactor include Asia, the rest of Europe and the United States, where the Group is planning to have its reactor models licensed so that it can take part in an eventual resumption of nuclear power plant construction. In this regard, AREVA's objective is to strengthen its position as the world's leading reactor constructor, primarily with the EPR, and to anticipate technological trends by pursuing research and development in the Plants Business Unit. The Division's objective is to boost profitability over the coming years by increasing its workload and improving productivity.

4.5.1. Plants Business Unit

4.5.1.1. Key data

(in millions of euros)	2004	2003	2002
Sales revenue	582	539	484
Workforce at year-end	3,605 people	2,539 people	3,378 people

4.5.1.2. Introduction and definitions

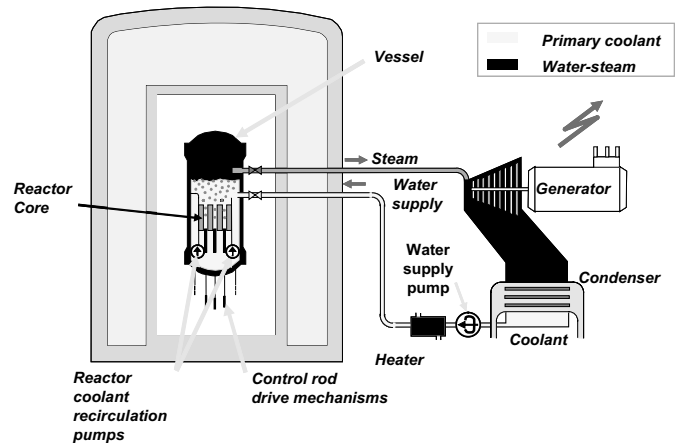
A “nuclear power station” is defined as an industrial plant that generates electrical or thermal energy from one or more nuclear reactors. A “nuclear reactor” is a machine that produces heat from the energy released by the fission of uranium and plutonium atoms in a controlled chain reaction. A “nuclear steam supply system” is the combination of equipment enabling the production of pressurized water vapor from fission energy. A “nuclear island” is the system encompassing the nuclear steam supply system and the fuel-related facilities, as well as the equipment required for the system’s operation and safety. A “conventional island” consists of the alternating current turbogenerator coupled to the nuclear island, along with the equipment required for its operation.

A nuclear power station consists of a nuclear island, a conventional island and various equipment.

In nuclear power stations, the turbogenerator is driven by the steam produced by energy from the fission of the material in the reactor core.

There are two types of “light” water reactors: boiling water reactors (BWR) and pressurized water reactors (PWR). In BWRs (see figure below), water vaporizes in the vessel containing the core, which consists of fuel assemblies. The heat from the core is released to the water flowing through it. This steam drives the turbine, and then returns to liquid form as it cools in the condenser before being injected back into the reactor vessel. Thus, in a BWR, the water is in a closed cycle in which the steam expands directly into the turbine.

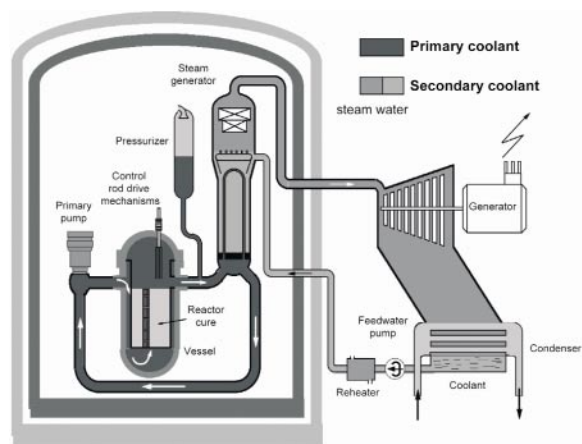
Boiling Water Reactor (BWR) operating concept



Source : AREVA.

In a PWR (see figure below), an intermediate cooling system – the secondary cooling system – is placed between water in the primary cooling system, which has been heated by the reactor core, and the turbine. The heat generated in the reactor’s primary coolant system is transferred to the water in the secondary coolant system via heat exchangers called steam generators. The water, vaporized in the secondary part of the steam generators, then drives the turbine. The “power generation” function is thus separate from the “steam generation” function. This functional separation prevents the secondary coolant from coming into contact with water that was in contact with the fuel, thus facilitating major maintenance operations and other things.

Pressurized Water Reactor (PWR) operating concept



Source : AREVA.

4.5.1.3. Businesses

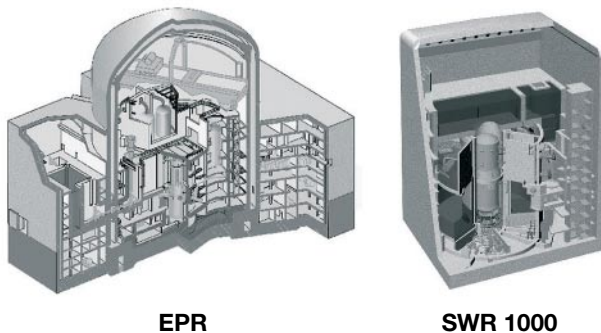
The Plants Business Unit is involved in every aspect of reactor and nuclear island construction, from their design through their connection to the grid. The Business Unit also provides services for reactor service life extension, performance enhancement and renovation. The Group provides nuclear islands for both PWRs and BWRs.

The Business Unit's main resource is its engineering staff. It serves as project manager for reactor upgrades and construction. The Business Unit does not have its own production capabilities; it relies on the Equipment Business Unit and on subcontractors.

The Business Unit is active in:

- Recurring operations (engineering for existing reactors):
 - renovation of any type of reactor in existence, especially to control aging to extend service life, and associated engineering services;
 - performance improvement services, such as capacity increases and improvements in availability;
 - upgrades and retrofits to control systems for existing nuclear power stations;
 - services for liquid metal fast breeder reactors, including reactor dismantling;
 - a variety of services for research reactors; and
 - detailed safety analyses and license applications for large component replacements and reactor restarts, as well as engineering studies of unit operations, including license renewals, service life extensions, increasing availability and performance, shortening outage times and exposures, and more.
- Non-recurring operations:
 - design, construction and commissioning of nuclear islands and various nuclear facilities; and
 - design and fabrication of electrical systems and advanced control systems for new reactors.

The Group currently offers two-third generation reactor models: the EPR (PWR) and the SWR-1000 (BWR).



The EPR (Evolutionary Power Reactor) is the most advanced PWR (third generation reactor) marketed by AREVA. It uses either uranium oxide, enriched up to 5%, or Mox as fuel (see Glossary). Its net electrical output is approximately 1,600 MWe. Compared to reactors of earlier generations, the EPR provides substantially improved performance paired with increased economic competitiveness, significant technological advances that give it an even better safety level, simplified operating and maintenance conditions, and even more satisfactory solutions to environmental concerns, with a 15% reduction in the production of long-lived radioactive waste. The EPR also has an estimated service life of 60 years, as compared to an initial service life of 40 years for other types of reactors.

The SWR 1000 (Siede Wasser Reaktor) is the latest boiling water reactor model developed by AREVA, but the Group has yet to receive any orders for it. Positioned in the medium-capacity market, the SWR 1000's electrical output is from 1,000 to 1,250 MWe. By making significant use of existing technology and with lower maintenance, not to mention a 60-year service life, this new generation of reactors is helping to bring down the price of power. Waste volumes are reduced by optimizing burnup. Passive security systems further improve overall reactor safety, especially in the case of a reactor meltdown.

The Business Unit's activity is not capital-intensive; it is more comparable to an engineering department. Nonetheless, significant guarantees are required to cover reactor performance commitments, and there is growing reliance on partnerships with local engineering firms and constant attention to updating skills.

The Plants Business Unit spent nearly 4% of its sales revenue on Research and Development. This work, done by the engineering units and through partnerships with research organizations, covers all of the technologies fundamental to light water reactors and future reactor concepts, as well as the development and validation of process design and nuclear safety modeling tools and related methods, control of hydraulic and thermo-mechanical events, and materials performance.

4.5.1.4. Manufacturing capabilities

The Plants Business Unit's primary assets are engineering resources in:

- France,
- Germany,
- the United States, and
- personnel on temporary assignment with customers worldwide.

The Plants Business Unit also has independent research and testing capabilities that use the highest level of technology, with

facilities at its technical centers in Germany and France. The Business Unit strives to pool its engineering staff and to develop international project platforms.

4.5.1.5. Market and competitive position

The uncommitted market on which the Business Unit may compete (i.e. consisting of signatory countries of the Non-Proliferation Treaty) represents approximately €1.8 billion per year. The Plants Business Unit is the market leader for activities relating to the design of nuclear steam supply systems (NSSS) for which it is the original equipment manufacturer. The control systems and electrical systems market segments are growing.

In non-recurring operations, such as the expansion or replacement of existing generating capacity, AREVA is the only western reactor constructor to have received orders for new reactors since 1999. Its competitors are BNFL-Westinghouse in the United Kingdom, General Electric in the United States, FAE in Russia and AECL in Canada.

4.5.1.6. Operations and highlights

For non-recurring operations, 2004 was an important year.

- France:

EDF ordered a first-of-a-kind French EPR for its Flamanville site (FA3), making its decision after a public involvement process that included a national energy debate in 2003, which paved the way for framework energy legislation passed in its first reading in 2004.

EDF is therefore now able to contract for design, manufacturing and construction work on FA3. The first contract for engineering and component supply for the nuclear steam supply system is expected in 2005. AREVA should receive the contract to supply the nuclear steam supply system and the FA3 control system.

- Finland:

The turnkey Olkiluoto 3 project under which AREVA and Siemens are to build a 1,600 MWe EPR for TVO is progressing swiftly, mobilizing about 600 engineers in France and Germany. The site excavation work, which is the customer's responsibility, was done in 2004 and is continuing into early 2005. The AREVA-Siemens construction office opened in October 2004. The Finnish authorities issued the construction permit in February 2005, and the first concrete should be poured during in the spring of 2005.

- China:

In the final year of the tenth Chinese five-year plan, China has reaffirmed its commitment to nuclear power. Decisions have been announced to supplement the existing second generation

Ling Ao and Qinshan sites with reactors using the same technology as in the existing units.

The Business Unit plans to participate in the project to expand the Ling Ao 3 and 4 sites, also known as Ling Ao Phase II and, to a lesser extent, in the Qinshan Phase II project for two units. The Chinese want to use as many local firms as possible, however, limiting the scope of work available. The Business Unit teamed with Siemens to bid on the supply of the complete control system for the reactors.

However, the stakes are highest for a turnkey tender offer for four third-generation nuclear islands at the Sanmen site in Zhejiang province and at the Yangjiang site in Guangdong province, and for the associated technology transfer. The technology ultimately selected by China should serve as a basis for development of the Chinese nuclear program, while fostering the creation of local players. With demand for nuclear power as big as China itself, 32,000 MWe are to be added by 2020 to the 8,500 MWe currently in service or under construction, according to Chinese government statements. Encouraged by the Finnish decision and EDF's announcement, the Business Unit proposed the EPR reactor for this tender offer.

- United States:

In 2004, AREVA analyzed how the EPR could be adapted to the needs of the U.S. market. The study concluded that it would be worthwhile to begin the process of licensing this technology in the United States. The purpose of this undertaking is to be in a position to respond to the upturn in demand for nuclear power in the United States by the next decade.

- Other countries:

Bulgaria expressed an interest in completing the Russian-designed VVER unit in Belene. The Business Unit has teamed with Atomstroyexport, a Russian designer, to submit a bid in response to an upcoming call for tender.

To prepare for these awards and prospects, a plan to strengthen the Business Unit's human resources was implemented in 2003, resulting in the hiring of almost 200 engineers in France and Germany. This plan significantly lowered the age pyramid, such that the percentage of employees under age 45 rose from 48% to 57% from 2001 to 2004, while increasing mobility inside the Group and subcontracting. This new context was also used to advantage to strengthen ongoing interaction among personnel based in France, Germany and the United States, thereby revitalizing the sharing and dissemination of skills.

Recurring business also remained high worldwide. This type of business includes a very wide range of services, as illustrated by the examples below.

- France
 - EDF awards a contract to a team led by the Business Unit for the turnkey installation of sump filters on eight 900 MWe units.
- Germany:
 - AREVA continued to supply services to the 19 reactors in operation: safety analysis, sump repairs at the PWR units, and renovation of control systems for several reactors (Philippsburg 2, Neckarwestheim 2).
 - Operational testing of the FRM II research reactor at Munich University was successfully completed. At this point, the customer's acceptance of the facility depends only on the close-out of final technical reservations.
- United States:
 - The Business Unit continued to expand its services to operators, sometimes becoming the preferred partner. This was the case at Comanche Peak, where the operator may have the Business Unit carry out all of the modifications on the unit.
- Sweden:
 - The new regulatory safety requirements known as SKIF 2004:2 will necessitate upgrades to the existing units. For the operators, this will be an opportunity to increase capacity or extend service life to shorten the payback for upgrades made necessary by these new requirements. Discussions are under way with the operators.
- Bulgaria:
 - The contract to modernize units 5 and 6 of the Kozloduy plant continued to progress satisfactorily. Scheduled safety upgrades, among others, were successfully implemented during the annual outage of unit 6, which started up again on schedule on November 26, 2004.
- United Kingdom:
 - British Energy chose the team headed by the Business Unit to assist in the organization and engineering of modifications to be carried out on all 14 of its advanced gas-cooled reactors (AGR) and its single PWR unit.

4.5.1.7. Outlook and development goals

For recurring operations, the outlook is still good due to the utilities' determination to optimize reactor reliability and availability, extend service life, and enhance performance, particularly in the

United States. The Business Unit's objective is to support its recurring operations, mainly by adjusting its offer to its customers' new needs and by improving its methods and working tools.

For non-recurring operations, the Business Unit's objective is to enhance its position as leader for new reactor construction projects. With the French decision coming less than one year after Finland's decision, with the expected acceleration of China's nuclear program, with the initiatives in the U.S. nuclear industry, with growing public and political awareness of the effects of global warming, and with the volatility in the price of hydrocarbons, the Business Unit's long-term prospects look good.

4.5.2. Equipment Business Unit

4.5.2.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	242	217	224
Workforce at year-end	1,787 people	1,583 people	1,565 people

4.5.2.2. Businesses

The Equipment Business Unit focuses primarily on manufacturing:

- It designs and manufactures heavy components for the nuclear island (reactor vessels, steam generators, pressurizers, etc.).
- It designs and manufactures reactor coolant pump sets and control rod drive mechanisms (systems that regulate the nuclear reaction inside the reactor core). The Business Unit has worked for many years on optimizing control rod drive mechanisms for EDF, thereby acquiring recognized expertise and a strong competitive advantage in this area.

The Equipment Business Unit also has non-nuclear electromechanical operations in the design and manufacture of motors and electrical alternators for wind turbines. Additionally, the Business Unit provides services and maintenance associated with this equipment.

4.5.2.3. Manufacturing capabilities

The Chalon-Saint-Marcel plant in France manufactures the nuclear steam supply system (NSSS) and is exclusively dedicated to nuclear equipment. Since opening in 1975, the Chalon plant has produced all of the heavy components for the 900 MWe to 1,450 MWe units in the French nuclear program and has delivered more than 520 heavy components – reactor vessels, closure heads, steam generators and pressurizers – to customers around the world. The plant has reached its maximum capacity and has embarked on a capital spending program to increase capacity while expanding its subcontracting.

The Jeumont plant in northern France manufactures nuclear and non-nuclear equipment. In nuclear equipment, Jeumont specializes in the manufacture of mechanical components for the nuclear island and of replacement parts for critical equipment, such as primary reactor coolant pumps and control rod drive mechanisms, and in related services.

In its non-nuclear work, the Jeumont plant manufactures and sells electrical generators and engines for industrial and marine use. In addition to manufacturing this new equipment, the plant does a substantial business in services to the electromechanical industry. Sarelem, a subsidiary near Nantes, France, repairs and maintains low-power engines and generators for non-nuclear applications.

Jeumont also developed an innovative concept for direct-thrust, variable-speed wind turbines. Beginning this year, operations in this area are limited mainly to maintaining the wind turbines in service.

Somanu, a subsidiary in Maubeuge, France, operates a workshop to decontaminate nuclear power plant equipment before repairing them.

The Equipment Business Unit uses two main categories of suppliers in the nuclear field: tube-makers for steam generator tubing and steel companies for heavy components made of forged steel parts. These procurements are the most critical from a technical standpoint, as component quality and performance depend on them, and the most substantial in terms of added value and cost. There is only a handful of steam generator tubing manufacturers. For the Western market, there are three: Sandvik in Sweden, Valinox in France, and Sumitomo in Japan.

Because they have insufficient capacity to meet demand for the coming years, these three suppliers tend to regulate the steam generator market. In this context, the Saint-Marcel plant has entered into alliances with two of them by reserving capacity for the coming years. There are also very few forging companies capable of meeting the quality standards of the nuclear industry. Most of them are concentrated in Europe: Fomas in Italy and Creusot Forges in France, Doosan in South Korea and JSW in Japan. The Equipment Business Unit has also diversified its sources in this procurement segment, using JSW's capabilities in Japan for the heaviest components and developing a new relationship with Creusot Forges in 2003 and Fomas in 2004.

4.5.2.4. Market and competitive position

Heavy nuclear equipment

The heavy nuclear equipment market served by the Saint-Marcel plant is a global market in which supply outstrips demand.

There are five competitors: Doosan and MHI in Asia, Ensa and Camozzi (formerly Ansaldo) in Europe, and Babcock & Wilcox in North America. The Business Unit is one of the world leaders in this market.

In the past few years, the market has remained limited essentially to the replacement of heavy components, in particular in the United States, which has the largest and oldest nuclear generating capacity in the world and is gradually extending the service life of reactors in operation. It should be noted that the U.S. market is different from the European market in the diversity of requests from U.S. utilities. Appropriate responses are required, incorporating not just the supply of heavy components for very different models, such as those of Westinghouse, Babcock & Wilcox, Combustion Engineering, etc., but also their integration and installation in the existing plant, sometimes with capacity increases.

In this context, the synergies between the services of the Saint-Marcel plant and those of the U.S.-based engineering and services staff are key to bringing the global solutions expected by the utilities and are an important discriminator in terms of the competition.

The Saint-Marcel plant became the leader in the U.S. market in 2002 and even more so in 2003 (source: NRC 2004), with close to half of all steam generator replacement contracts and reactor vessel head replacements. This lead ebbed in 2004, partly because AREVA sought to raise margins on heavy components in this market, and partly because of the dollar's persistent slide against the euro, which hurts the competitiveness of products from the Saint-Marcel plant in the United States.

More recently, the market has moved towards building new plants, including the construction of an EPR in Olkiluoto, Finland and the expansion of the Chinese nuclear program. The market trend is the same in France, where EDF announced that it will build an EPR at Flamanville. There are also component replacement opportunities in Brazil and South Africa. Conversely, the markets of former eastern block countries and Japan are still difficult to access.

Other nuclear equipment

The Jeumont plant's share of the French market for primary reactor coolant pump sets and control rod drive mechanisms is 80-100% (source: AREVA), despite BNFL-Westinghouse's recent arrival on this market.

The market is oriented towards the supply of replacement parts and equipment maintenance services, which is also within the areas of competence of the Jeumont plant. The plant's main competitor in this market is BNFL-Westinghouse, especially in the United States. The Japanese company MHI is also a powerful challenger. Opportunities arising from the resumption in new power plant construction in Europe and China are beneficial for components manufactured by Jeumont.

Overall, the Business Unit's market has grown considerably due to reactor life extension projects and the beginning of new plant construction. This trend coincides with more exacting demands from customers, stiffer competition, and price pressures accentuated by the fall of the dollar. In addition, the Business Unit must deal with tensions in the raw materials market.

Non-nuclear equipment

The electromechanical business is still highly competitive. AREVA estimates that it has 5 -10% of the world market for medium-capacity generators (10 to 60 MWe), depending on the year, with powerful competitors such as GE (also a customer), FKI (UK), ABB and Alstom mostly offering a complete generator-turbine platform.

In the maintenance market, Jeumont and its subsidiaries control around 25% of the French market. Alstom is the main competitor for servicing EDF's large turbine generators. In submarine propulsion, AREVA estimates that it has roughly one third of the world market via shipyards customers such as DCN (France), Izar (Spain) and Kockums (Sweden). The main competitor in this area is Siemens.

For wind turbines, the European market continues to be the largest, despite a significant slowdown since 2003. Today, six manufacturers have 85% of the market. They are mainly from Germany and Denmark, such as Vestas, Neg Micon, Siemens-Bonus and Enercon. Jeumont's presence is limited to the French market only, which is still undeveloped compared with the rest of Europe. AREVA is now reconsidering its products and services in this area.

4.5.2.5. Operations and highlights

For Equipment, 2004 was a year of contrasts in terms of activity, with a heavy workload for nuclear and a workload that was slightly below normal for electromagnetics.

Nuclear equipment

The Saint-Marcel plant continued to ramp up operations to perform its many current contracts for U.S. utilities while continuing to supply EDF, its biggest customer. The plant made

an on-time delivery to the Prairie Island plant of its first two steam generators for the U.S. market and delivered reactor vessel heads to the Davis Besse and Turkey Point plants in Arkansas.

In marketing and sales, the Business Unit received two orders from the U.S. to replace pressurizers at the Millstone and Saint-Lucie plants, giving it an estimated 50% market share for this type of component in 2004. Elsewhere in the U.S., the Business Unit changed the reactor vessel head at DC Cook and supplied and installed the control rod drive mechanisms. This order is especially important in that it gives the Business Unit its first reference for a new design of the integrated reactor vessel head/mechanisms assembly. In the international market, there were successes in hydraulics in the United States, Korea, Spain and Brazil, where two-steam generators were ordered for the Angra plant.

The Chinese market continues to grow considerably. Several joint ventures were negotiated with local companies to manufacture nuclear island components to take advantage of a program to expand nuclear generating capacity in China.

Non-nuclear equipment

The situation is more difficult in Electromechanical equipment, both in marketing/sales and in terms of workload. Business was poor for new machinery; though this was somewhat offset by adequate growth in services, services alone are insufficient to support Jeumont's electromechanical business.

In light of this situation, in 2004 the business was structured around a strong "services base" by combining Jeumont's resources with those of its subsidiary Sarelem, making it possible to offer an expanded range of services, from small-capacity machinery to generators for nuclear power plants.

In the export market, the Jeumont plant received its first order to supply a reactor coolant pump set for a plant in the United States, opening the door to the large hydraulic equipment market in North America.

In wind turbines, after turbine production ceased in 2003, efforts turned to improving the reliability of units in operation. The Group is also continuing negotiations to enter into a joint venture with an industrial partner to market wind turbines in France and in Europe.

4.5.2.6. Outlook and development goals

Nuclear operations

The year 2005 should be characterized by ongoing strong growth in operations. In marketing and sales, maintaining relations with

an EDF more open to competition, the implementation of the first joint venture in China and a strong presence in the replacement market in the United States are fundamental objectives.

In production, the main challenge will be the Saint Marcel plant, where the plan to increase capacity should continue. Plant activity should be boosted by one-third over 2004 levels in the long run. More extensive use of partial or total subcontracting for some components will be necessary to carry out the workload. In this context of strong growth, the plant's first objective will be enhanced industrial productivity and the successful integration of its newly hired employees.

At Jeumont, nuclear operations are also experiencing very buoyant growth, particularly on the international level, with reactor vessel head replacements at Turkey Point 3 in the United States, including the supply of control rod mechanisms, and at Daya Bay 1 in China.

Heavy component fabrication for the EPR in Olkiluoto, Finland, will significantly stimulate activity at both plants. Saint-Marcel is in charge of manufacturing the steam generators and the pressurizer and is also responsible for supervising the subcontract for the reactor vessel and internals. The Jeumont plant will begin fabricating the hydraulic equipment and the control rod mechanisms.

Both plants will also be heavily involved in the fabrication of heavy components, such as steam generators and reactor vessels, and of hydraulics in partnership with Chinese firms, giving the Business Unit an opportunity to take part in the development of the Chinese nuclear program.

Non-nuclear operations

Given the highly competitive environment and poor outlook for growth in the market for new generators, the business development strategy based on electromechanical services, which are more lucrative and for which the Business Unit's expertise is increasingly recognized, will be maintained.

In addition, the establishment of an industrial partnership in wind turbines, if it comes to pass, should give the Business Unit access to high-capacity machines in line with current European requirements.

4.5.3. Nuclear Services Business Unit

4.5.3.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	696	763	664
Workforce at year-end	3,012 people	3,043 people	2,711 people

4.5.3.2. Businesses

The Nuclear Services Business Unit offers services enabling utilities to extend the service life of their plants and to improve availability and productivity while maintaining a high level of safety:

- **Outage services:** These are recurring maintenance operations for which the Nuclear Services Business Unit coordinates and integrates various servicing and inspection operations to reduce outage times. A scheduled outage, which must be kept as brief as possible, may require teams of more than 1,000 people, some of whom are Nuclear Services Business Unit employees, while others are subcontractors and still others the customer's subcontractors. In this case, the Nuclear Services Business Unit's mission can be to coordinate all co-contractor operations and activities.
- **Non-destructive inspections:** These are safety inspections of major equipment required by regulation. The Nuclear Services Business Unit is the world leader in reactor vessel and steam generator inspections, with a wide range of inspection services for all types of operating reactors.
- **Decontamination and chemical cleaning:** These operations are performed to reduce radiation exposure during repairs and servicing.
- **Engineering services and upgrades:** These services bring into play designer/constructor skills and project experience from the Reactors and Equipment Business Units.
- **Primary component services:** These include repairs, upgrades and replacement of heavy components in the NSSS.
- **Services for reactor control systems and electrical systems.**
- **Offsite servicing of contaminated components:** Performed in hot workshops in Europe and the United States.

4.5.3.3. Capabilities

By definition, the Nuclear Services Business Unit provides services to customers that operate nuclear power stations. The Business Unit has all of the resources it needs to develop and certify the processes and tooling it uses to carry out these services.

In addition, the Business Unit has access to the above mentioned hot workshops⁽¹⁾ (in Europe and in the United States) for offsite maintenance, and to two facilities dedicated to personnel readiness and training: Cetic in France, co-owned by EDF and Framatome-ANP, and another facility in the United States.

Staff is regionally based – mainly in France, Germany and the United States – for proximity to the customer and to provide customized service. The services business is highly variable from one year to the next. In particular, the Business Unit has to adapt to seasonal outage schedules, to a strong trend towards reducing their duration, and to optimization of regional electricity demand.

The Business Unit has to adjust accordingly by concentrating a maximum number of services into a minimum amount of time and thus cope with peak periods that can be extremely intense. The Group meets this challenge with its own highly qualified human resources and has also signed partnership agreements with a variety of suppliers. These suppliers and service providers are certified in terms of quality and technical capability to ensure compliance with the basic requirements for this type of work.

4.5.3.4. Market and competitive position

The potential market for the Nuclear Services Business Unit consists of PWR, BWR, Candu and VVER type reactors.

Outages are scheduled for these reactors every 12 to 24 months for servicing and maintenance, or to replace heavy components when required. Each scheduled outage generates a market of a few million to tens of millions of euros.

AREVA estimates the worldwide nuclear services market at around €3 billion per year for PWRs and BWRs alone, divided equally among Europe, the Western Hemisphere and Asia.

Three major players control about 45% of this market, according to AREVA's estimates: with around 25% of the world market for nuclear services, including the U.S. market, AREVA is the leader, ahead of BNFL-Westinghouse and General Electric.

The largest competitor for the remaining 55% is Mitsubishi Heavy Industries; primarily positioned in the Japanese market, it has entered overseas markets in recent years and is seeking to expand its services operations to Europe. Next in line are powerful local companies, such as Hitachi and Toshiba in Japan or KPS in South Korea, and numerous small, specialized architect-engineering firms, maintenance companies and component suppliers.

AREVA's Nuclear Services Business Unit offers the largest portfolio of skills in the world to service PWR and BWR type reactors and takes advantage of a strong position in France's installed nuclear

generating capacity, internationally recognized for quality. U.S. utilities account for half of all of the Business Unit's activity.

Barriers to market entry vary according to activity; the advantage of being a plant's original equipment manufacturer (OEM) increases with the degree of complexity of services provided. Key market drivers are the aging of the world's plants, the construction of new reactors, and the deregulation of the electricity market, accompanied by price pressures. Moreover, the Business Unit's customers are moving to introduce competition into a growing percentage of their business; the Business Unit has responded by making innovative offers on the technical, contractual and industrial level.

4.5.3.5. Operations and highlights

Generally speaking, the trend towards multi-year contracts and the increase in unscheduled requests from customers continues.

In France, several operations to replace heavy components were carried out successfully in 2004: Tricastin 4 steam generators were replaced and the Tricastin 3 and Saint-Laurent 1 reactor vessel heads were replaced. Scheduled outage services also increased considerably, with several scheduled ten-year maintenance outages and the continuation of integrated services programs.

The Business Unit was a member of the team that won a contract from EDF in April 2005 for the replacement of 18 steam generators at six units, with one unit being optional.

In November 2004, a major contract was signed with EDF to provide integrated reactor vessel services for about twenty units per year over a period of four years. The contract illustrates the tendency – seen around the world – for utilities to combine services into packages, thus reducing the number of interfaces, lowering costs and shortening servicing times.

In Germany, the preference for global, multi-year solutions was confirmed among domestic customers, resulting in continued brisk business despite the local market's downward trend.

In the United States, business was brisk. Plant outage business was down and the peak periods were even more intense than in previous years. On the other hand, several heavy component replacements took place, including the Prairie Island 1 steam generators and the Turkey Point 3 vessel head, both of which are manufactured by the Equipment Business Unit. An "Alliancing"⁽²⁾ type contract was concluded with Constellation, once again showing that U.S. operators wish to enter into long-term partnerships.

(1) A hot workshop is a specialized workshop in which contaminated components can be cleaned, maintained and repaired, avoiding schedule limitations for plant outages.

(2) Alliancing is a partnership between customer and supplier, generally over several years, combining numerous and varied activities. This combination optimizes prices, benefitting the customer and ensuring a significant workload and good visibility for the supplier.

In China, the acquisition of 35% of the shares in Shenzhen Nuclear Engineering (SNE), which specializes in nuclear maintenance operations for Chinese power plants, was officially registered by the Chinese administration.

In Spain, the acquisition of Tecnimarse gives the Business Unit a local base to provide better service to its customers in that country.

In South Africa, the Business Unit continued to develop business with its local partner Lesedi, in which it is a shareholder, and participated in the implementation of a safety upgrade project known as "CP1 Alignment" in cooperation with the Plants Business Unit.

Business was brisk in many other countries as well, including the vessel head replacement at Ringhals 4 in Sweden, outage activities at the Goesgen unit in Switzerland, integrated maintenance services during the Angra 2 outage in Brazil, and outage activities at Krsko in Slovenia.

4.5.3.6. Outlook and development goals

The Nuclear Services Business Unit is now the world leader in its field, including the United States. It will pursue growth through several actions, described below.

- It will develop new, multi-year, integrated and innovative solutions to continue to enhance the way it responds to the technical and economic concerns of its customers. The Business Unit hopes to win a five-year contract for maintenance services from Eskom, a South-African utility, following an international tender offer.
- It will strengthen its positions in export markets by developing local partnerships, such as the one in China with SNE (acquired for 35% in 2004), in South Africa with Lesedi (45%), in Spain with Tecnimarse (acquired at 100% in 2004), and soon with other local industrial platforms.
- It will strengthen its technological leadership and capacity for innovation in the medium to long term, as these are key success factors in a fiercely competitive market.

4.5.4. Technicatome Business Unit

4.5.4.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	316	299	234
Workforce at year-end	2,259 people	2,053 people	1,945 people

4.5.4.2. Businesses

Energy and propulsion

The Technicatome Business Unit's core business is engineering, designing, manufacturing and maintaining nuclear reactors for naval propulsion and related testing capabilities. This business meets stringent safety and reliability requirements.

The markets for these services are nuclear-powered ships, production and testing facilities, and guided transport. They require mastery of key methodologies and technologies, such as systems architecture, project management, digital safety controls, safety analysis, thermohydraulics and neutronics, acoustics and vibrations, and integrated logistical support. For more than 30 years, nuclear reactors designed by Technicatome have been powering the French Navy's submarines and aircraft carriers for all of their operating missions.

Technicatome also provides propulsion-related services and systems, such as operating control systems, and acoustic discretion for facilities, systems and components. Technicatome has unique experience as a designer and technical operator for the CEA. Beyond designing nuclear steam supply systems, the Business Unit supports the reactor operator by providing services, maintenance, and training in its customers' facilities: in-service support and operation of qualification reactors, training, and testing, all for the purpose of preventing technological and human risks at several levels, including validation of onboard reactors before sea duty, full-scale testing of innovations, endurance tests, predictive maintenance, and operator training.

Recent technological advances leading to the emergence of alternative technologies offer promising growth prospects. The Helion fuel cell, for example, has had significant success and in 2004 cleared an important technological hurdle with its new 20kW module, which delivers four times more nominal electrical capacity than the preceding generation while cutting weight and volume in half.

Engineering of complex systems

With reliable technology focused mainly on security issues, friction and noise, the Technicatome Business Unit has been diversifying its business for more than ten years, primarily in the installation of digital safety systems in metro rail cars that ensure passenger safety for RATP, the operator of the Paris metro, and in the engineering of large scientific equipment.

The Technicatome Business Unit has recognized and proven know-how in the engineering of complex systems and in the design and manufacture of safe electronic systems and equipment, both on-board and on land. These systems ensure the safety, comfort, reliability and availability of highly safe

installations in the manufacturing, nuclear power, passenger transport and freight transport sectors.

Technicatome has successfully ensured its place in this market, which demands performance levels approaching those of the nuclear industry in terms of safety and availability, by offering:

- Automated monitoring systems for guided transport;
- Safety monitoring systems for train conductors;
- Operating parameter recorders, commonly called “black boxes,” to record operating events;
- Control systems to open and shut subway doors; and
- Satellite tracking systems for trains.

In 2004, national defense projects accounted for about 55% of the Business Unit’s sales revenue, while civilian nuclear power and manufacturing business, including transportation, industrial applications and the environment, make up around 45%.

4.5.4.3. Manufacturing capabilities

Technicatome has three major plant and engineering sites in France, mainly in Saclay and Aix-en-Provence, as well as manufacturing capabilities in Cadarache.

4.5.4.4. Market and competitive position

Technicatome works essentially in France in the defense, large scientific instruments, manufacturing, guided transport and aerospace industries.

There are very few international business opportunities in naval nuclear propulsion due to national security issues. The main customers are the CEA, the *Délégation Générale de l’Armement* (French armaments agency) and the DCN naval shipyards, where orders are subject to arbitrary budget decisions by the government. In civilian nuclear markets and the transportation, manufacturing and environmental industries, the CEA, EADS and the RATP account for the largest percentage of sales revenue.

The Business Unit’s competitors in this field are conventional hardware and systems engineering firms.

4.5.4.5. Operations and highlights

Key events in 2004 are listed below.

- Significant progress was made on the RES test reactor project, which will provide land-based support to new naval propulsion reactors on nuclear Barracuda-type attack submarines. The start of reactor module construction and the filling of the pool module canals with water confirmed that Technicatome’s teams are capable of meeting deadlines and budgets while managing a construction project with many contractors and considerable constraints.

- Technicatome posted new successes in its core business, nuclear propulsion, after winning fixed-price contracts to manage servicing and maintenance operations, including management of the transfer to shore of the reactors from the *Perle* and *Améthyste*, two nuclear attack submarines, for scheduled servicing.
- Business in digital safety systems for rail and urban transport grew considerably, including abroad. For example, in 2004, the Technicatome Business Unit won the contract to supply ground signaling safety equipment for the new light rail system in the city of Clermont-Ferrand. In the guided transport market, RATP chose Technicatome following a European tender to design and build the portion of the Ouragan Program dedicated to the MF 2000 project, a new automated onboard steering system for [121] metro rail cars.
- Orders and contracts in manufacturing and in the engineering of large scientific measurement systems were up sharply. Technicatome continues to provide technical support to the Laser Megajoule project (LMJ) for the CEA. For Airbus Industrie customer, Technicatome has committed to meeting schedule and performance objectives for the A380, whose final assembly station was designed, built and commissioned in time to receive the first airplane in May 2004.

After completing the final preparations and in particular the sea testing of the nuclear propulsion reactor for the *Vigilant* submarine in Cherbourg, Technicatome operated the submarine until its acceptance by the French Navy in November 2004. This was the third reactor for the *Triomphant* class of submarine designed and developed by Technicatome and confirms the company’s role as project manager for nuclear naval reactors.

4.5.4.6. Outlook and development goals

The development prospects for energy and propulsion operations suggest growing sales over the coming years. Moreover, the defense budget law confirmed the French government’s commitment to major programs such as the *Barracuda* program. As a result, the fourth nuclear submarine missile-launcher and the *Megajoule* laser should contribute to the relative stability of revenue in this sector.

The Technicatome Business Unit continues to focus on several strong areas for growth: supplementing the AREVA group’s commercial platform as a designer and supplier of advanced power systems and equipment for naval propulsion and bringing highly safe and reliable solutions to environmental protection and transportation.

The Business Unit will also continue to maintain a strong presence in the engineering of large scientific instruments (*Jules Horowitz* reactor, *Megajoule* laser and *ITER*) and of large and complex industrial facilities, and in the management of servicing and maintenance operations.

4.5.5. Nuclear Measurement Business Unit

4.5.5.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	157	149	164
Workforce at year-end	1,078 people	1,092 people	1,089 people

4.5.5.2. Businesses

The Nuclear Measurement Business Units designs, manufactures and markets equipment and systems to detect and measure radioactivity, monitor nuclear facilities, characterize waste and for radiation protection. It also provides related services. Its products and services meet customer requirements for nuclear safety, industrial safety and monitoring of their production operations. In this respect, the Nuclear Measurement Business Unit plays an important role in the central issue of sustainable development for the AREVA group and for its main customers, which include nuclear operators, research laboratories, the medical sector and government services.

4.5.5.3. Manufacturing capabilities

The Business Unit has a combination of equipment design, manufacturing and sales capabilities through five main marketing subsidiaries and some thirty offices on five continents.

In terms of manufacturing, the Business Unit is currently optimizing its operations worldwide by globalizing its production facilities in Europe and North America.

4.5.5.4. Market and competitive position

The nuclear measurement market (excluding the Homeland Security program in the United States) is a global niche market worth an estimated €700 million per year. With a 25% market share in 2004, largely the work of U.S. subsidiary Canberra, the Nuclear Measurement Business Unit is the market leader. The Business Unit operates in North America, the world's largest market (46% of 2004 sales); in Europe (26%, excluding France); in France (13%); in Asia (12%); and elsewhere around the globe (3%).

Generally, the customers for nuclear measurements are nuclear power stations, nuclear fuel fabrication and treatment facilities, radiological chemistry and environmental laboratories, scientific research laboratories and the medical sector.

In addition to these customers, the Business Unit also serves public and private organizations charged with radiation

monitoring at national borders and emergency response teams. The response team customer category is growing, especially through the Department of Homeland Security program in the United States. That program involves setting up radiation detection systems at U.S. borders and in certain sensitive countries and equipping emergency response teams with radiation detection and civil defense systems.

The major competitors in this market are Eberline, MGP of France and Ortec, which have a combined market share of 30%. The other 45% of the market is divided among some one hundred minor players.

4.5.5.5. Operations and highlights

The year was marked by considerable business for defense customers, the good performance of the services sector and the marketing of new spectroscopy and radiation protection products such as the iSolo product for spectroscopy, new radiation protection probes, and others.

In 2004, the Business Unit deployed a new matrix-based worldwide organization to integrate the product lines, with each remaining responsible for their strategy and profitability.

4.5.5.6. Outlook and development goals

Market volume is growing moderately, not including potential Homeland Security business.

The Business Unit's objective for 2005 and the coming years is to successfully convert niche activities into an industrial enterprise serving customers worldwide, mainly by developing the sectors of sensors, radiation protection (the Homeland Security and homeland defense markets in the United States), surveillance to support the evolving needs of the IAEA and the U.S. DOE, and waste characterization to support **Back End** Division projects.

4.5.6. Consulting and Information Systems Business Unit

4.5.6.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	133	137	126
Workforce at year-end	1,954 people	2,388 people	2,189 people

4.5.6.2. Businesses

The Consulting and Information Systems Business Unit, under the name of Euriware and its subsidiaries, is active in three interrelated fields in 2004 :

- Information systems integration and optimization, for around 41% of sales;
- Supply chain, information systems and enterprise management consulting aimed at enhancing overall business performance, for around 10% of sales; and
- “Evolutionary” facilities management (see Glossary), for more than 49% of the Business Unit’s sales.

A majority of the Business Unit’s contracts are recurring, particularly in MIS outsourcing, and more than 70% of its contracts are for periods ranging from three to five years.

In addition to the consolidated sales revenue mentioned above, the Business Unit recognized €95 million in intercompany sales revenue in 2004 from the management of the Group’s information systems (IS) and its industrial information systems.

4.5.6.3. Organization and capabilities

The Consulting and Information Systems Business Unit is organized into two main functional units:

- Fifteen operating entities throughout France, some of which are repositories of know-how in a particular area of expertise; and
- Three service centers in France that provide hosting services and offer operations and remote management of systems and networks.

Internationally, the Business Unit entered into strategic, targeted partnerships with manufacturers, software publishers, operators and consulting firms to manage projects in Europe, the United States and Asia.

4.5.6.4. Market and competitive position

The Business Unit is active in France’s information technology (IT) market, which represented in €21 billion in 2004 (source: Syntec).

The Consulting and Information Systems Business Unit is a recognized French player, primarily in industrial information systems. The Business Unit competes with the main industrial software and systems management firms, including IBM Global Services, Cap Gemini and Atos Origin.

4.5.6.5. Operations and highlights

Eurodoc, a subsidiary specializing in document management, which accounted for 11% of the Business Unit’s sales revenue in 2003, was sold in January 2004.

In 2004, the consulting, integration and MIS outsourcing markets posted limited growth due to greater competitive pressures and low sales prices.

Many commercial contracts were signed, mainly in the area of Enterprise Resource Planning (ERP), and more particularly for SAP systems for Fichet Bauche, Arkopharma and Allibert. The design of a new information system for MAAF also boosted the Business Unit’s growth in the consulting field.

With regard to certification programs, an important milestone was reached in 2004 when Euriware received ISO 9001-2000 certification for all of its businesses and sites.

4.5.6.6. Outlook and development goals

The French software and information technology market is expected to grow by 4-6% in 2005, according to forecasts by Syntec Informatique. Price pressures for services should remain strong in 2005.

The Business Unit’s medium-term strategy is to continue to develop its three main businesses, i.e. evolutionary IS management, systems integration and consulting, using a streamlined and consistent approach to services and centering its position on its strong expertise. The Business Unit also wants to expand its international business.

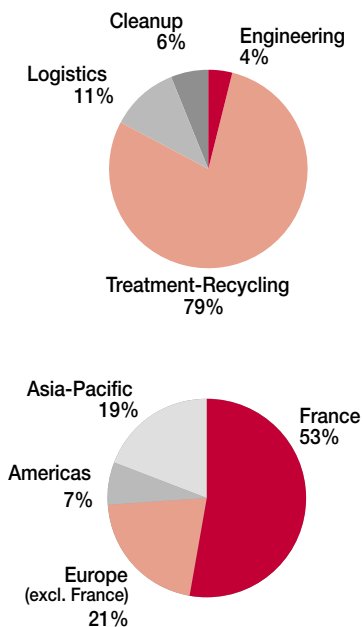
Security management is a business that sets it apart from its competitors, and growth in this business is a priority.

» 4.6. Back End Division

Key data

(in millions of euros)	2004	2003	2002
Sales revenue	1,946	2,023	2,088
Operating income	177	155	235
Workforce at year-end	10,697 people	10,542 people	10,719 people

2004 sales revenue by Business Unit and region



Overview

The Back End Division offers back-end solutions to manage used fuel.

Every year, nuclear power programs worldwide generate a current treatment capacity of around 6,500 MTHM of used fuel; this is equivalent to the amount of fresh fuel loaded in the reactors. The total worldwide inventory is around 120,000 MTHM of used fuel at the end of 2004.

The Back End Division, which accounted for 18% of AREVA group sales in 2004, includes operations for the treatment and recycling of fuel after it has been used in nuclear power plants and related operations:

- The Treatment and Recycling Business Units recover marketable uranium and plutonium from used fuel. This material is recycled in nuclear reactors as Mox or UO₂ fuel (see Glossary).
- The Logistics Business Unit designs and manufactures casks to transport and/or store nuclear materials, and transports them.

- The Cleanup Business Unit provides nuclear cleanup services and site logistics.
- The Engineering Business Unit designs and builds facilities for the front end and the back end of the fuel cycle.

The Division has an important technology transfer program, particularly with Japan for the sister plant of La Hague in Rokkasho Mura. Other recycling technology transfers for Mox fuel are under consideration in Japan and in the United States.

In line with AREVA's commitment to sustainable development and environmental protection, the Group has developed advanced technologies to treat the materials and recycle 96% of the used fuel, reduce final waste volumes and package the waste for disposal. AREVA also offers solutions for used fuel storage without treatment.

The Group is the world leader in both the “once-through” and the “closed” fuel cycle markets. Utilities may choose either option to manage their used fuel:

- In the once-through fuel cycle approach, used fuel is not recycled; it is stored in pools or in dry storage systems at sites designed for that purpose. Storage solutions available in the market allow utilities to manage their used fuel for several decades. The final disposal of this fuel is a long-term challenge that is most often resolved through national nuclear waste management programs.
- The closed cycle is based on the fact that the used fuel contains a large amount of recyclable materials. These materials can still produce a significant amount of energy. The solution is to treat the used fuel to separate uranium and plutonium, which are recyclable, from final waste, which represents only about 4% by volume of the used fuel. The goal of the Treatment and Recycling Business Units is to extract value from the used fuel. The closed fuel cycle involves a long-term commitment: once unloaded from a reactor, the used fuel will undergo a treatment cycle lasting some ten years before recovered materials are reloaded in a reactor as Mox fuel.

Markets for both fuel cycles are protected by major barriers to entry. Both fuel cycles require advanced technologies, and the closed fuel cycle is extremely capital-intensive.

According to an OECD report of April 1994, the total costs of both fuel cycles are essentially identical⁽¹⁾ and represent a relatively small percentage – about 6% – of the total cost to generate electricity.

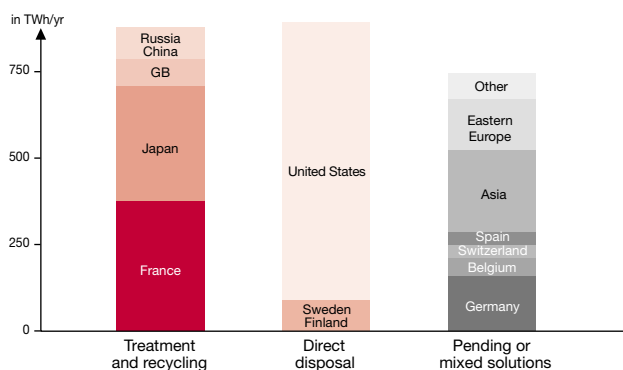
(1) Closed cycle costs include credits corresponding to the value of the uranium and plutonium recovered during treatment.

The treatment and recycling businesses have excellent visibility due to the duration of the processing cycle, which starts with the unloading of the fuel from the reactor and lasts about 10 years. Through long-term relationships with large customers, AREVA's backlog amounts to approximately four years of sales revenue. In France, EDF has committed in principle to the treatment of its used fuel for the post-2007 period, with the specific terms and conditions now being negotiated. AREVA has also formed long-term partnerships with foreign customers, creating value with the Group's technologies.

The processes developed and implemented by the Group in the "closed" cycle have now been demonstrated. Production maturity has been achieved and this fuel cycle option has been validated. The Group intends to promote this approach to the fuel cycle with signatory countries of the Nuclear Non-Proliferation Treaty and with their utilities. AREVA also intends to improve the efficiency of its operations and the competitiveness of this solution.

Choosing the closed fuel cycle is a matter of national policy. As shown in the chart below, France, Japan, Great Britain, Russia and China have chosen this solution. The United States, Finland and Sweden have chosen the once-through approach to the fuel cycle. AREVA's policy is to satisfy local market requirements by adapting its offering country by country. Countries that have chosen interim or mixed solutions represent growth opportunities for the Treatment and Recycling business units.

Used fuel management programs, by country



Source: AREVA.

AREVA's technological advance in Treatment and Recycling positions the company very favorably to take advantage of the potential development of this option as a preferred solution for

the back end of the fuel cycle. The business units spend approximately 4% of their sales revenue on R&D to maintain their technological leadership and optimize their production facilities.

Strategy and Outlook

The division's goal is to maintain its position as the world leader in the "once-through" fuel cycle as well as in the "closed" fuel cycle. AREVA's strategy has three main objectives, as developed below.

- Develop the used fuel treatment and recycling business.**
 The Group has assured visibility, with a large volume of business through 2015, based on its contracts with EDF. The Group is working to develop and extend the current backlog.
- Capitalize on its closed cycle technologies in markets worldwide.** AREVA intends to market its back-end technologies in close cooperation with the authorities in charge of this matter. The AREVA group already has two major references in this regard.
 - In Japan, a major technology transfer program has been in place with the division's Japanese partners and customers since 1987. The technologies marketed as part of this program have been used by Japan Nuclear fuel Limited (JNFL) to build a used fuel treatment plant in Rokkasho Mura, Japan. The plant, scheduled to start up in 2006, has a capacity of about 200 TWh/year, which is less than is needed to treat all of the used fuel currently unloaded from Japanese reactors. AREVA wishes to continue its relationship with JNFL by providing assistance during the startup of the Rokkasho Mura plant.
 - The United States has historically chosen a "once-through" policy for the fuel cycle. However, this decision is open to review under the National Energy Policy. The **Back End** Division plans to contribute to the debate on the back end of the fuel cycle. In addition, the Group's treatment and recycling technologies form the basis of the "Mox for peace" project, which involves building a Mox fabrication plant in the United States for the US Department of Energy (DOE), to recycle plutonium recovered from the dismantling of US strategic weapons into fuel.
- Strengthen the division's leadership position in the used fuel storage market,** particularly in the United States, where the Group is already the leader in storage systems, with a market share of more than 50%. Design studies continue for a used fuel unloading facility at the future disposal site at Yucca Mountain.
- Market products and services related to the transportation of fuel and nuclear materials.**

4.6.1. Treatment and Recycling Business Units

4.6.1.1. Key data

(in millions of euros)	2004	2003	2002
Sales revenue	1,541	1,561	1,648
Workforce at year-end	6,209 people	6,023 people	6,161 people

4.6.1.2. Businesses

The Back End Division treats and recycles used nuclear power reactor fuel.

Treatment consists of separating recyclable uranium and plutonium from final waste (see Glossary), including fuel assembly structural components and fission products, through a series of physical and chemical operations.

Recycling consists of recovering energy materials, i.e. uranium and plutonium, during used fuel treatment, and recycling them into nuclear reactors as Mox or UO₂ fuel. AREVA is the leading player in treatment and recycling technologies. and has been the world's largest manufacturer of Mox fuel for several years.

In line with its commitment to sustainable development and environmental protection, AREVA has developed advanced technologies to separate and recycle reusable materials contained in used fuel representing 96% of its content. These operations:

- Conserve natural resources by recycling recovered uranium and plutonium into fresh fuel, and
- Reduce non-recyclable waste volumes generated by nuclear power plants.

The Treatment and Recycling Business Units also decommission facilities at the end of their life cycle.

AREVA provides processing services only. The materials processed, including the uranium, plutonium and fission products, remain the property of the customers.

4.6.1.3. Manufacturing capabilities

Treatment

Most of the Treatment Business Unit's operations are conducted at two production sites: the La Hague site in northern France and the Marcoule site in southern France.

La Hague site

The La Hague site treats used nuclear fuel from nuclear power reactors and test reactors. When used fuel is unloaded from the reactor, it contains non-reusable waste consisting of fission products and minor actinides (4%) as well as reusable uranium (95%) and plutonium (1%). Treatment consists of separating the uranium, plutonium and fission products.

- The uranium is purified to make it suitable for reuse and concentrated in the form of liquid uranyl nitrate. It can then be converted into an oxide and reused to make fresh fuel (see Front End Division - Chemistry Business Unit).
- The plutonium is purified for reuse and packaged in sealed containers in oxide form. It can then be mixed with uranium oxide to make fresh Mox fuel.
- The fission products, which contain most of the used fuel's radioactivity, are calcined and incorporated into an inert glass matrix that is poured into universal stainless steel canisters (CSD-V canisters). The metal structural components of the fuel are compacted and also placed in universal, stainless steel canisters (CSD-C canisters). These canisters are returned to the original owner of the fuel for final disposal by the latter.

The La Hague plant has two production lines: UP₂ and UP₃, which have a combined treatment capacity corresponding to 450 TWh/yr of electricity.

Marcoule site

France's first treatment plant, UP1, ceased operations in late September 1997. Cleanup of the UP1 plant began in 1998 and will extend through 2040. Three separate programs are in place:

- Decommissioning (*MAD* program): This program began in 1998 and involves in-depth cleanup of the facilities to a radiological level enabling safe and cost-effective dismantling operations.
- Mapping and Dismantling (*DEM* program): Contaminated equipment is dismantled. All standing structures will be cleaned up until nuclear waste areas can be returned to non-nuclear status and classified as conventional waste areas. From that point on, the facilities are not considered nuclear facilities but as environmentally regulated facilities.
- Waste retrieval and packaging (*RCD* program): This program pertains to waste generated in the early days of site operations that have been in storage since then. Operations began in 2000 with the startup of two facilities for bitumen drum retrieval. The waste will be retrieved, sorted, processed if necessary and repackaged.

Recycling

The Recycling Business Unit has two production facilities in France and one subcontractor in Belgium, Belgonucléaire.

Melox plant

The Melox plant in southern France provides large-scale fabrication of Mox fuel assemblies from mixed uranium and plutonium oxides for use in nuclear generating stations around the world. The plant entered service in 1995 and had already achieved its nominal production level by 1997. It is the world leader in Mox production. In September 2003, the French government authorized AREVA to raise annual plant production to 145 MTHM. This facilitated the transition of French Mox production to the Melox plant following the shutdown of commercial operations at the Cadarache plant in late July 2003.

Cadarache plant

On July 16, 2003, the COGEMA-Cadarache plant in the Bouches du Rhône area of southern France fabricated its last Mox fuel rods for customers in Germany. At the end of 2004, as part of the Eurofab project, the plant made pellets and fuel rods from US defense plutonium for the fabrication of four Mox fuel assemblies.

Today, site operations include applied research and development activities and operations to recycle production scrap into fuel rods. Site cleanup and restoration began in 2003. Facility dismantling is scheduled for 2013.

Belgonucléaire – Dessel plant

To supplement production from Melox and Cadarache, AREVA has a long-term contract with Belgonucléaire that sets aside a portion of that company's production capacity at its plant in Dessel, Belgium, through 2006.

4.6.1.4. Market and competitive position

The world market for used fuel treatment and recycling is extremely concentrated. Barriers to entry include the large amounts of capital expenditure required, technical constraints, and licensing requirements.

The market's main characteristics are:

- an industry with a limited number of suppliers of treatment and recycling facilities, including AREVA, which is the only one to offer large-capacity facilities;
- a high level of technological expertise;
- extremely high development costs for replacement technologies;
- capital-intensive operations;
- environmental regulations and barriers; and
- a limited number of customers, and long-term contracts that are often large in scope.

With a current treatment capacity corresponding to 450 TWh/yr of electric power generation, the COGEMA La Hague plant is the world's largest used fuel treatment facility. The AREVA group controls two-thirds of the worldwide market. This installed capacity and vast experience rank the AREVA group number one worldwide in treatment. Britain's BNFL and Russia's FAE (Rosatom) are the next largest producers.

Worldwide treatment capacities and production in 2004

	Installed capacity		Production in 2004		Cumulative production	
	(MTiHM/year)*	TWh**	(MTiHM/year)	TWh	(MTiHM/year)	TWh
La Hague (France)	1,700	450	1 100	350	~ 20,000	~ 5,000
Sellafield (United-Kingdom)	900	250	600	170	5,800	
Tcheliabinsk (Russia)	400	100	150	NC	3,700	
Subtotal for 2004	3,000	800	1 850	-	~ 30,000	~ 7,500
Rokkasho-Mura (Japan) starting in 2006	800	200	0	0	0	0
Total à partir de 2006 (au plus tôt)	3,800	1,000	-	-	-	-

* MTiHM/year) = metric tons irradiated heavy metal / on year

** TWh = 10⁹ KWh

Sources: AREVA, World Nuclear Association, AIEA, BNFL, JNFL.

In 2004, about 160 metric tons of Mox containing 11 metric tons of plutonium were produced around the world. Worldwide nominal Mox fuel fabrication capacity is currently on the order of 300 metric tons/year, representing usage of 20 metric tons of plutonium.

Worldwide treatment capacities

<i>(in metric tons/yr)</i>	Installed capacity	Production	
		2004	Cumulative
AREVA-Cadarache (France)	shut down	2 ^(a)	345
AREVA-Melox ^(b) (France)	145	122	885
Belgonucléaire-Dessel (Belgium)	40	38	610
BNFL/Sellafield (United Kingdom)	120	2 ^(c)	20 ^(c)
Total in 2004	305	164	1,860
J-Mox (Japan)	100 ^(d)		
Total	405		

(a) Production of four demonstration Mox fuel assemblies for the United States.

(b) Melox plant – Nominal capacity: 195 MTHM. Licensed capacity in 2004: 145 MTHM.

(c) AREVA estimate.

(d) Plant in the design stage.

Source: AREVA.

With a current licensed recycling capacity of 145 MTHM per year, the Melox plant is the largest Mox fuel fabrication plant in the world. AREVA holds approximately 90% of the world market, about 20% of which is subcontracted to Belgonucléaire for fabrication. This installed capacity and vast experience rank the AREVA group number one worldwide in Mox recycling. The next largest players are Belgonucléaire, using its own production capacities, representing approximately 10% of the market, and Britain's BNFL, which produced a few metric tons of Mox fuel. AREVA has submitted an application to the safety authorities to add new production capacity at the Melox plant (see below).

Sales revenue for the Treatment and Recycling Business Units in 2004 was split among France (55%), Asia (21%), Germany (17%), the rest of Europe (6%), and the United States (1%).

4.6.1.5. Operations and highlights

The principal contracts awarded to the Treatment and Recycling business units in 2004 are:

- On August 24, 2004, AREVA and EDF executed a €4 billion contract covering the 2001-2007 production period. Under this contract, EDF commits to deliver an average of 850 metric tons of fuel for treatment each year (see paragraph 4.9).
- In 2004, additional contracts were signed with the CEA and with foreign customers, including RWE, NOK and EPZ, contributing €1.375 billion to the backlog.

Treatment

AREVA returned waste to the customers in the form of canisters of vitrified waste or "glass" according to schedule. The one-thousandth

canister of vitrified waste was shipped to Japan in 2004. The first return shipment to the Netherlands was also made in 2004. More than one half of the total number of canisters to be returned to the countries of origin under agreements between AREVA and its customers had been shipped as of the end of 2004.

Used Mox fuel was treated at the La Hague UP2 production plant for the first time in 2004. Ten metric tons of Mox fuel were treated during this first campaign.

The La Hague site hosted many distinguished visitors in 2004, including the Deputy Prime Minister of China. This very important visit is a sign of China's commitment to a responsible approach to used fuel management. AREVA is currently competing to supply a vitrification plant to China.

EDF, CEA and AREVA, variously customers and operators of the Marcoule site in past years, have contractual commitments to fund the site's decommissioning. In 2004, decommissioning operations were organized and an agreement was signed among all three entities. From now on, CEA is responsible for all dismantling and waste retrieval operations at Marcoule, in exchange for the payment of a final settlement by each of AREVA and EDF.

The professional expertise of the La Hague and Marcoule staffs and their dedication to environmental protection and technological innovation was recognized. The Marcoule site passed a first audit under ISO 14001. The American Nuclear Society presented the La Hague site with the Nuclear Historical Landmark Award in recognition of its contribution to the development of nuclear power around the world and for the technological advances made at the site.

In April 2004, AREVA completed the performance of its main contract to provide assistance to Japan Nuclear Fuel Limited (JNFL) relating to the start-up of operations at the Rokkasho Mura treatment plant. Since 2002, seven training and mentoring programs were completed by AREVA. The success of the program, involving the future operators of La Hague's sister plant at Rokkasho Mura, scheduled to start operations in 2006, has strengthened the cooperation between France and Japan. Approximately 100 Japanese operators were trained at La Hague.

Recycling

Melox plant

In 2004, the Melox plant fabricated several different types of Mox fuel for its utility customers in France and Germany, thus confirming its position as the world leader in the Mox fuel market.

On September 1, 2004, AREVA submitted an application to the relevant French ministries to raise annual Mox fuel production at

the Melox plant to 195 MTHM. The application is consistent with AREVA's decision to focus all Mox fuel fabrication operations on the Melox plant with the goal of improving economic performance.

The first milestone occurred in September 2003, when Melox received a license to increase annual production capacity to 145 MTHM. This enabled replacement of operations at the Cadarache site, where all standard Mox fuel fabrication for customers was discontinued in July 2003.

Cadarache plant

In July 2003, AREVA discontinued all commercial Mox fuel fabrication at the Cadarache site. Since then, the site has fabricated fuel rods to recycle scrap material from previous operations. In addition, since mid 2003, the site has been implementing a small-scale program to develop methods for equipment cleanup and disassembly.

As part of the Eurofab program, the site also received authorization to fabricate fuel rods for four Mox fuel assemblies for the United States. These assemblies, made with US defense plutonium, will be used to validate the fuel's performance in US civilian reactors. Fuel fabrication began during the second half of 2004, as soon as the 140 kilograms of US plutonium arrived at Cadarache. The rods were subsequently assembled in the AREVA group's Melox plant and returned to the United States at the end of 2005.

Technology transfer

Eurofab operations, which lasted a few months, supported implementation of the nuclear non-proliferation commitments of the United States and the Russian Federation. The United States and Russia selected AREVA for its technology and expertise in plutonium recycling and Mox fabrication. To implement their disarmament commitments, both countries have decided to recycle a total of 34 metric tons of surplus defense plutonium into Mox fuel to be loaded into civilian nuclear reactors. Both countries are planning to build a Mox fuel fabrication plant. In the United States, the US government decided to build a Mox fabrication plant at the Savannah River site in South Carolina. AREVA will participate in this project through the Duke-COGEMA-Stone & Webster team (DCS).

4.6.1.6. Outlook and development goals

Over the mid to long-term, the La Hague plant will continue to treat used fuel from EDF reactors (corresponding to approximately 280 TWh of electric power per year through 2007, i.e. 850 MTHM, with negotiations in progress for the post-2007 period) and from its European customers (Germany, Switzerland, Netherlands, etc.), corresponding to an annual production of 360 TWh/yr of used fuel (around 1,200 MTHM).

The program to train JNFL operators of the Rokkasho Mura treatment plant in Japan was also completed in 2004. Cooperation with JNFL could continue in the same framework beyond 2005. Joint discussions are underway to extend the partnership and provide assistance to JNFL when plant operations begin in 2006, according to the current schedule.

In addition, return shipments of vitrified waste to foreign customers will continue apace. More than two thirds of the vitrified waste to be returned to Japan has already been shipped.

Some countries, including Italy and Spain, have announced their decisions to either phase out their nuclear programs or to suspend new program development. However, this does not rule out the possibility that these countries will decide to treat their used fuel, thereby creating fuel treatment opportunities.

Used fuel transportation will be prohibited in Germany starting in June 2005. Used fuel treatment and recycling will continue for used fuel already stored in the pools at the La Hague site.

In recycling, Mox fuel production for EDF will continue under current contracts at the rate of approximately 100 MTHM through 2007, with higher quantities thereafter. EDF is planning to load Mox fuel in 24 reactors, compared with 20 reactors currently.

By 2005, the Melox plant should produce 140 MTHM for EDF and German customers. Once the Japanese Mox program resumes, as it is expected to do in 2006, Melox capacity should gradually rise to around 195 MTHM, as needed, over the coming years.

Melox produced the first Mox fuel for Japanese utilities in 1999. This fuel was to be used in 16 to 20 Japanese reactors. The Japanese Mox program is currently suspended, but could resume in the future.

The Treatment and Recycling Business Units plan to continue technology transfer programs in the United States and in Japan. In particular, the establishment of a Mox fuel fabrication industry is under consideration in Japan as part of the J-Mox program.

4.6.2. Logistics Business Unit

4.6.2.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	222	243	200
Workforce at year-end	816 people	914 people	843 people

4.6.2.2. Businesses

The Logistics Business Unit operates in two main areas:

- design and management of fabrication of casks and other

specialized equipment to transport and/or store nuclear materials from the front end and back end of the fuel cycle; and

- organization of nuclear materials transportation and often management of the transportation fleet.

4.6.2.3. Manufacturing capabilities

In keeping with the international nature of its business, the Logistics Business Unit has offices in three major regions:

- in Europe, mainly through COGEMA Logistics and its subsidiaries, which together provide most of the Business Unit's know-how, transportation casks and transportation services;
- in the United States, where it has two subsidiaries specializing in cask design and fabrication and nuclear materials transportation management; and
- in Japan, where it specializes in engineering, transportation management and at-reactor cask management.

4.6.2.4. Market and competitive position

The business of nuclear materials transportation and of the design of nuclear materials transportation and/or storage casks is characterized by:

- the wide variety and large number of materials involved;
- the global nature of the market;
- a stringent, ever-changing regulatory framework specific to each transport mode and to each country; and
- public acceptance concerns.

The Business Unit's sales revenue for 2004 was divided among North America (approximately 32%), France (29%), Asia (18%), Germany, where used fuel transportation will be prohibited starting in June 2005 (9%), and other European countries (12%).

The Logistics Business Unit operates in a market centered on the requirements of electric utility operators of nuclear power reactors and on those of nuclear industries such as mining or enrichment. To a lesser extent, the market includes the requirements of national nuclear research centers/laboratories and research/test reactors.

Storage capacity requirements and the type and volume of materials transported vary from one country to the next, depending on installed nuclear generating capacity, the availability of fuel cycle facilities, and the back-end option chosen by the utilities:

- In Europe, most nuclear utilities, including EDF in France, call on the Logistics Business Unit to transport their nuclear materials, from natural uranium to final waste. Political decisions concerning the back end of the fuel cycle (once-through cycle or undecided) have created a major market for used fuel storage. In that regard, the Logistics Business Unit has particularly strong positions in Belgium, Switzerland and Germany.

- In the United States, utilities do not presently recycle used fuel from their power plants. The US government had committed to taking title to the fuel by 1998 for final disposal, but the repository is not expected to be available until the end of the decade. In the meantime, the utilities have a growing need for dry storage capacity at the reactor sites. The US affiliates of the Logistics Business Unit are leaders in this market. Later, when the final repository becomes available, there will be substantial demand for used fuel shipment to that facility.
- In Asia, the Group's strongest presence is in Japan, which has opted for the treatment and recycling of its used fuel. Today, the country's used fuel is treated in France and in the United Kingdom. Mox fuel and vitrified waste are routinely shipped from Europe to Japan. This market will decrease when the Rokkasho Mura plant starts operating in Japan.

The Logistics Business Unit is the world leader in both of its businesses and the only commercial entity to operate in every stage of the nuclear cycle on an international level. AREVA's main competitors in the various market segments, i.e. shipping, brokerage, transportation systems, casks and equipment, and licensing, are:

- in Europe: NCS, BNFL, RSB, GNS, NAC and Holtec;
- in the United States: TLI, Eldow, RSB, Holtec and NAC;
- in Asia: NFT, MHI, HZ, Mitsui, Hitachi, Toshiba, NAC, Holtec and GNS.

4.6.2.5. Operations and highlights

In shipping, 2004 saw an increase in the number of used fuel shipments in France (195 casks for EDF) and a sharp but anticipated drop in the shipment of used fuel from Germany (28 shipments, compared with 65 in 2003). As anticipated, Mox fuel and vitrified waste shipping remained stable.

In 2004 and 2005, the Logistics Business Unit coordinated the shipment of US defense plutonium under the Eurofab program. This operation was part of the Recycling Business Unit's program to fabricate four fuel assemblies in Cadarache and at the Melox plant, both in southern France.

Also in the United States, the Business Unit is involved in a contract awarded to the Group by Bechtel relating to the design and construction of surface facilities for used fuel storage at Yucca Mountain, Nevada, the final waste disposal site under construction in the United States (see Engineering Business Unit).

The first return shipment of vitrified waste from La Hague to the Netherlands also took place in 2004.

In used fuel storage systems, business was particularly strong in the United States, where 53 storage systems were delivered in 2004. Opportunities in the onsite storage of used fuel have firmed up, including discussions with Constellation for the supply of storage systems for all five of its units.

4.6.2.6. Outlook and development goals

The Logistics Business Unit is pursuing two key objectives:

- to be a world-class player in its sector in the three leading markets of Europe, North America and the Far East; and
- to bolster its world leadership position in transportation and storage for the front end and back end of the nuclear fuel cycle.

In Europe, this strategy means strengthening AREVA's already strong position in the storage market and developing shipping services for the front end of the cycle (UF6 and fresh fuel) and for research/test reactors.

In North America, the Business Unit plans to maintain its leadership position in storage and to be involved in future shipments to Yucca Mountain.

In Asia, the objectives are to conquer market share in storage and to expand to the intercontinental transportation market for the front end.

4.6.3. Cleanup Business Unit

4.6.3.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	110	111	100
Workforce at year-end	2,750 people	2,724 people	2,556 people

4.6.3.2. Businesses

The Business Unit is a provider of local services to nuclear facility operators, as described below.

- Management and operating services on behalf of customers, including nuclear waste collection, processing and packaging, in particular for low-level and medium-level waste. In cooperation with other AREVA Business Units, the Cleanup Business Unit is involved in the cleanup and dismantling of nuclear facilities following shutdown.
- Management and performance of construction site logistics or support services at nuclear facilities and sites so that contractors can perform their work in compliance with all applicable nuclear safety, industrial safety and radiation protection regulations.
- Special maintenance services, mechanical services, equipment handling, handling operations in nuclear facilities, and radioactive cleanup.
- Consulting services to help nuclear facility owners and operators choose workable solutions for servicing and operations, and design and management of innovative solutions for first-of-a-kind operations or operations requiring outside partnerships.
- Radiation protection and nuclear measurement services.

- Training for operations in a nuclear environment and skills management support to contractors.

The Cleanup Business Unit operates mostly in France, providing services to EDF and other fuel cycle companies such as Socodei, Andra and the CEA.

4.6.3.3. Capabilities

The majority of the Business Unit's operations involve workers who are deployed domestically and, more importantly, at customer sites. In addition, there is a partnership program in place at each site where the Business Unit has operations to control costs and risks. Each year, the Cleanup Business Unit makes a significant investment in training to strengthen staff expertise.

The Business Unit uses most of the techniques available to process low- and medium-level waste and effluent, to reduce their volume, and to package them safely. The Business Unit has patented two processes to decontaminate lead and mercury, demonstrating its inventiveness in resolving customer problems.

The Cleanup Business Unit operates an environmentally regulated facility, Triade, to maintain machinery and equipment used in controlled areas, recertify equipment, and process low-level waste for the Business Unit or for customers. The Business Unit also makes facilities available to customers, allowing them to maintain their equipment in a secure environment.

4.6.3.4. Market and competitive position

The Cleanup Business Unit's market is located almost exclusively in France and amounts to approximately €290 million per year. The market has grown only slightly in the past four years, but is expected to rise significantly going forward as new nuclear facility decommissioning projects arise.

The Cleanup Business Unit is the French leader in this market, with a market share of close to 40%. The main competitor is Onet, followed by the Suez group. Other competitors include Bouygues and Vinci, which focus principally on dismantling projects.

This fierce competition puts heavy pressure on prices and this applies to all customers. To counter this, the Business Unit works constantly to improve productivity.

4.6.3.5. Operations and highlights

Major developments for 2004 include the implementation of a new business process for the Business Unit's services to provide accountability and global solutions. In addition, a new system has been established to assess tender offers and review proposals. The objective is to rank projects by profitability, to control manpower

levels and to develop a culture of risk management so as to limit technical, marketing and financial exposure.

The main events for the year are set forth below by product line:

- The Business Unit submitted the technical and financial provisions of a first offer for global on-site assistance services to EDF. These are being negotiated and work should begin in 2005. The Business Unit is expected to have a commitment for the next six years.
- Major contracts were renewed with the following customers:
 - a three-year contract with Andra for its low- and medium-level waste management facility for short-lived radioactive waste located in eastern France;
 - a contract through December 31, 2005 with Socodei, acting as operator of the Centraco plant, with an expanded scope of work and additional responsibilities for the Business Unit, consistent with a growing trend towards outsourcing in this market.
- The Cleanup Business Unit developed decontamination processes for mercury and lead waste, for which there had been no treatment process previously. The Business Unit also demonstrated the performance of a decontamination gel to clean up glove boxes used to handle plutonium. This project was commissioned by Fluor Hanford, as operator of the Hanford site's Plutonium Finishing Plant (PFP), in the state of Washington in the United States.

4.6.3.6. Outlook and development goals

The French market is expected to grow in the coming years, reflecting the increasing focus on radioactive cleanup and, most likely, increased outsourcing of waste management and site management operations. The demand for global services is favorable for the largest contractors, including AREVA's Cleanup Business Unit. Over time, this trend should lead to a concentration of business among the largest players.

The Cleanup Business Unit can take advantage of the growing market to select projects carefully, with rewards commensurate to risk, while strengthening its added technical value.

4.6.4. Engineering Business Unit

Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	73	107	139
Workforce at year-end	922 people	881 people	1,159 people

4.6.4.2. Businesses

The Engineering Business Unit provides engineering services to worldwide nuclear operators for the design and construction of new facilities and for modifications to and optimization of

existing facilities. It also provides operating support in areas such as safety analysis and engineering calculations. In addition to providing project management and support services to AREVA's major engineering and construction projects, the Business Unit offers services to customers outside the AREVA group.

The Engineering Business Unit operates primarily in the front end and back end of the nuclear fuel cycle, with services encompassing every stage in the plant life cycle. The Engineering Business Unit provides four types of services to meet customers' global needs:

- Process engineering: development and industrial application of processes developed by the CEA and COGEMA;
- Engineering for construction: design and construction of commercial nuclear facilities;
- Engineering services: operator support for upgrades and modifications to existing facilities;
- Engineering for decommissioning: project management for decommissioning operations following final facility shutdown.

The Business Unit's expertise and the processes it has developed for nuclear fuel cycle facilities translate into unique added value and operating experience for its customers.

Through its operating units in France and the United States, the Engineering Business Unit conducts business in every country with a nuclear power program. The Engineering Business Unit partners, directly or indirectly, with nuclear facility operators in France and worldwide. The United States accounts for 69% of the Business Unit's sales revenue, with Japan contributing 9%, France 9%, and other countries in which the Business Unit operates representing 13%.

The nuclear fuel cycle is currently characterized by a high proportion of engineering studies and a relative decline in equipment supply. Key selection criteria for customers in search of engineering services are cost-effectiveness, proven processes and technologies, and superior safety and technical performance.

In the back end of the fuel cycle, some of the Engineering Business Unit's operations are performed under long-term transnational agreements for technology transfer in key fields.

4.6.4.3. Capabilities

The Engineering Business Unit consists mainly of design and engineering personnel based in France (three locations) and in the United States, and advance teams at construction sites, particularly at the Rokkasho Mura site in Japan. The Business Unit also has a development and testing facility in northern France.

4.6.4.4. Market and competitive position

The Engineering Business Unit's key markets are the front end of the nuclear fuel cycle (uranium chemistry and enrichment) and the back end of the fuel cycle (used fuel treatment, waste management and decommissioning). The Business Unit supports the Treatment and Recycling Business Units in major projects to transfer technology to foreign customers.

In France, the AREVA group continues to be the Engineering Business Unit's primary market. Internationally, the Business Unit has been active in Asia (Japan, South Korea, etc.), North America and Europe for many years, whether for major projects of general strategic interest to the Group or for more focused projects.

In addition to providing its expertise to many of the Group's Business Units, the Engineering Business Unit's main customers are the CEA, EDF and Andra in France; JNFL in Japan; the DOE in the US; AECL in Canada; and the Nuclear Decommissioning Agency in the United Kingdom. Competition is plentiful, although region-specific. The main competitors are:

- in France: Thalès Ingénierie and Comex (Onet group), as well as local engineering firms;
- in Europe: BNFL and RWE Nukem;
- in the United States: Bechtel, Fluor Daniel, Washington group Inc., Jacobs;
- in Japan: MHI, Toshiba, Hitachi and JGC.

4.6.4.5. Operations and highlights

In the United States, the Engineering Business Unit is continuing design efforts for the construction of the future US Mox fuel fabrication plant, which will recycle defense plutonium (see Treatment and Recycling Business Units). In Russia, where a parallel plant is to be built, the Business Unit is preparing the project baseline.

Sales revenue was down in 2004, mainly due to a lower level of activity for the project to build a Mox fuel fabrication plant in Russia and to the drop in the US dollar.

The Engineering Business Unit is involved in the design of a facility to unload used fuel at the future waste repository at Yucca Mountain, Nevada, in the United States.

The Business Unit is providing assistance for chemical testing of JNFL's used fuel treatment facility at Rokkasho Mura.

In France, the Engineering Business Unit is involved in the project to build the Georges Besse II centrifugation enrichment plant in Pierrelatte. With a team of over 50 people, the Business Unit is the prime contractor in charge of construction. It has already delivered the preliminary and detailed designs for the plant, including the process, nuclear safety, civil engineering and facility design studies.

4.6.4.6. Outlook and development goals

The Engineering Business Unit will work to increase its cost-competitiveness while pursuing its ongoing cost-reduction programs in order to compete in its markets. The strategic objective is to become AREVA's main vehicle for nuclear fuel cycle technology transfers worldwide, particularly in the United States, China and Russia.

The Business Unit will focus on waste management in particular, including development of the cold crucible vitrification technology to process a wide range of wastes. The unit will also develop its facility decommissioning business.

» 4.7. Transmission & Distribution Division

Key data

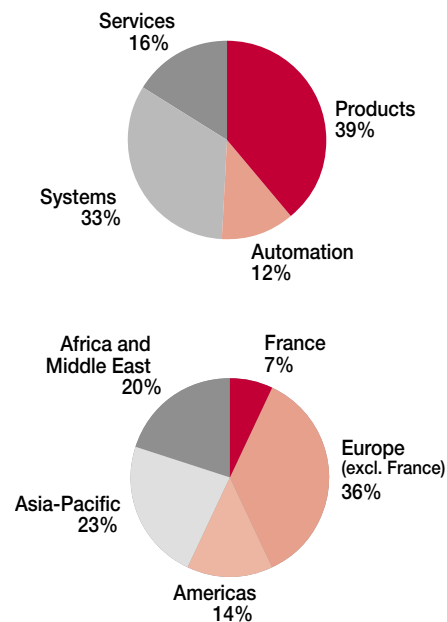
The T&D Division acquisition became effective on January 9, 2004.

(in millions of euros)	2004 ⁽¹⁾	2003 ⁽¹⁾⁽²⁾
Sales revenue	3,186	2,877
Operating income	31	28
Workforce at year-end	21,816 people	21,329 people

(1) Scope of consolidation without India and Pakistan.

(2) Unaudited reconstructed data

2004 sales revenue by Business Unit⁽³⁾ and region



(3) Sales made by the Products, Services and Automation Business Units through the Systems Business Unit are booked in that Business Unit.

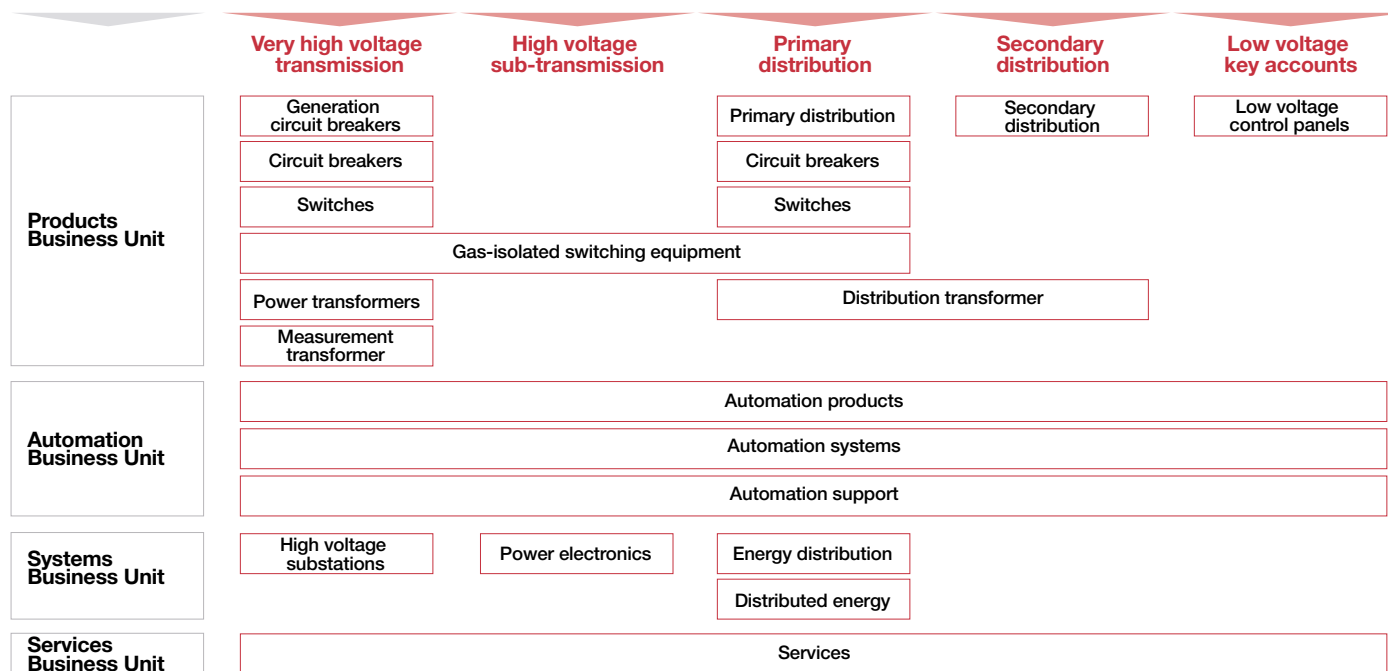
Overview

The T&D Division, which represented 29% of AREVA's sales in 2004, manufactures, installs and maintains equipment and systems for the medium and high voltage markets. Its products are used to transmit and distribute electricity from the power plant to the final user. They also ensure distribution reliability, quality and safety and efficient network operations through real-time information management. High-quality services are provided to support the products and systems sold throughout their life cycle.

The Transmission & Distribution Division includes four Business Units:

- the Products Business Unit designs and manufactures medium and high voltage products;
- the Systems Business Units supplies turnkey transmission and distribution projects;
- the Automation Business Unit manufactures and installs solutions for real-time power grid control and operation;

T&D Division of Business Units and product lines



Source: AREVA.

Strategy and outlook

AREVA's T&D Division is in a position to strengthen its market share and take advantage of growth opportunities.

Demand is growing in the Division's markets due to:

- rapid grid development in emerging countries such as China and India;
- the capital investment required for older grids in developed countries (Europe, the United States);

- the Services Business Unit/International Sales and Services Country Organization (ISSCO) markets the division's products, systems, automation and services. It also provides maintenance services.

The T&D Division was ranked third worldwide in the T&D market in 2004, based on sales revenue. The Division is ranked second in the electric utility market segment. The Division's recognized expertise and the support it receives from the AREVA group bolsters this position.

In particular, the Division is:

- the world leader in market management and grid management software,
- ranked second worldwide in high voltage products, and
- ranked third worldwide in medium voltage products.

(Source: AREVA, based on estimates validated by publicly available information).

The T&D Division is the second largest player in the European market.

- grid interconnection and management to meet the challenges of deregulation.

The T&D Division has key expertise and the technologies required by the market, a strong manufacturing base and an understanding of the business that customers recognize and appreciate.

When T&D was acquired in early 2004, AREVA designated a new management team and conducted a strategic review of

the business, which was experiencing a decline in profitability as competitors reorganized aggressively. The strategic review culminated in the preparation of an action plan to achieve more than €400 million in annual cost savings by the year 2007. The plan has four main facets:

- Purchasing, equal to more than 50% of the Division's sales revenue, is expected to contribute 30% to cost savings;
- Process improvements to increase productivity, with a 30% contribution to anticipated cost savings;
- Relocation of manufacturing capacities to regions experiencing high growth in products and services, for approximately 25% of the anticipated cost savings; and
- Improved product and services portfolio management, representing approximately 15% of the anticipated cost savings.

Several measures have already been implemented in 2004:

- Improved management controls focusing on performance;
- Implementation of a new purchasing organization;
- Raw materials supply contracts with an appropriate hedging program;
- Disposals of non-strategic assets, including telecommunications and electricity services in New Zealand and Australia;
- Employee involvement in an operating performance improvement plan consisting of more than 500 specific tasks;
- Launching of a project to adjust manufacturing capacities in Europe, discussed with labor; and
- The inauguration of two new sites in China.

The Division has two main objectives: to complete tasks initiated in 2004 aimed at reaching a level of profitability consistent with that of the most efficient players in the market by 2007; and to accelerate development in high-growth regions. In particular, the Division will dedicate resources for growth to China, where the outlook is most favorable.

Market and competitive position

Market segmentation

AREVA's estimate of the total worldwide T&D market is € 38 billion per year. Market size by segment is as follows (in billions of euros per year):

• Products	20
• Systems (not including €3 billion in sales of products integrated into turnkey systems)	8
• Services	6
• Automation	4

The market for the Products Business Unit represents over half of the T&D market. This market is stable, with growth in medium

voltage niches. The Systems market is fueled by growing demand in power electronics for high voltage direct current lines and interconnections. The Services Business Unit is benefiting from rising demand for high-value-added services, supplementing the offering of the Products and Systems Business Units. In the Automation Business Unit's market, growth in digital systems and associated services is in sharp contrast with the erosion in the price of the systems' product components.

AREVA estimates the market for transmission and distribution as follows (in billions of euros per year):

• Transmission	13
• Distribution	25

Power transmission involves the transport of electricity over long distances from power plants at voltages ranging from 52 kV to 800 kV. Transmission market demand originates almost entirely with integrated power generating companies and power transmission utilities. A few industrial sites that use large quantities of electricity, such as aluminum producers, are connected directly to the transmission grid.

Distribution involves delivering electricity to local power distribution networks at voltages ranging from 1kV to 52 kV. In this market, customers of the Products and Systems Business Unit include electric utilities, industrial users and the service sector. Other players include installers and integrators, but they do not have manufacturing capabilities. The demand for distribution products and systems comes from electric utilities (45%) and industrial and service sector customers (55%).

Customers

The T&D Division has approximately 30,000 customers in 160 countries.

The Division has a sales network in 100 countries; it maintains and coordinates customer relations for all of the Division's products, systems and services. The sales force of 1,200 associates is divided among 12 regions.

The Division's customers belong to one of five main categories:

- Integrated power companies that manage the entire process of electricity generation, transmission and distribution, from the power plant to the final user;
- Transmission companies spawned by deregulation and the split between power generation, transmission and distribution operations;
- Distribution companies that deliver power to the end-user, which may be privately owned or controlled by local administrations (e.g. cities, etc.);
- Large industrial power users that need the T&D Division's expertise to connect their sites;

- Infrastructure owners and operators, such as airports and railroad systems, which rely on the Division's experience with turnkey power projects.

Growth engines

The T&D market is powered by several growth engines:

- Power grid expansion: significant investment is required to transport increasing quantities of energy to meet user demand, particularly in China and in India, where economic growth and demographics are fueling demand;
- Grid interconnection: large infrastructure projects will ensure safety and reliability during power transmission from the generating station to areas of demand;
- Transition to digital systems: grid operations are increasingly automated to respond to growing power markets, meet supply quality and reliability requirements, and integrate decentralized power generation from sources such as wind turbines or biomass;
- Aging infrastructure replacement: a significant portion of the capital invested is dedicated to replacing aging infrastructure, particularly in Europe and the United States;
- Deregulation: the development of competition in the marketplace stimulates capital investment in electric grids, once allowable rates are governed by reasonably clear and stable regulations, which generally occurs after a transition period;
- Renewable energy sources and Flexible Alternative Current Transmission Systems ("FACTS"): these technologies help electric grids cope with the increasing burden created by the need to optimize electric power supply transmission, distribution and quality.

These different factors combine to provide a solid and recurrent base for the T&D market.

Market trend

These baseline growth engines should contribute to the future development of the T&D market to the same extent as in the recent past. Since 2002, the T&D market has been increasing in value by almost 4% per year. However, over a longer period, since 2000 for instance, the annual rate of increase is less than 2% in value. The T&D market therefore appears to be relatively stable, with cyclical fluctuations and upward adjustment periods reflecting waves of investment.

With respect to the electric power market, reform of regulatory frameworks and decision-making processes for large infrastructure projects is continuing to run out of steam in most regions. As a result, power grid investment is lagging, despite the need to adapt and upgrade aging grids repeatedly beset by blackouts.

This first obstacle is compounded by the dollar's weakness against the euro and by product standardization, which is exacerbating competition among large manufacturers. Price pressures are made worse by the emergence of new low-cost manufacturers, which are expanding their operations from manufacturing bases in China, India, Korea, Turkey and Eastern Europe while capturing new customers locally and sometimes globally. Confronted with this transformation, the market's largest players have entered a phase of intense competition and consolidation.

AREVA's assessment of market conditions is cautious and carefully thought out. The recent weakness in prices and delays in construction projects through lack of funding call for productivity improvements to maintain the Division's competitiveness and increase its profitability. Growth opportunities are within reach for nimble players poised for action.

Three major players dominate the T&D market: AREVA T&D, ABB and Siemens, which together controlled approximately 40% of the world market in 2003. Other competitors have neither a complete offering nor a global presence. Schneider Electric operates in the medium voltage market, in addition to its low voltage core business. Japanese, Korean and Chinese players are focusing on specific geographic markets, while US manufacturers are confining themselves to their medium voltage business as defined by ANSI standards. Many local players operate in medium voltage or various niche markets (digital systems, services, etc.), in particular middle market companies such as electric panel assemblers and installers.

Regionally, most of the growth opportunities are in Asia and the Middle East:

- Europe represents 27% of the market. Grid upgrades and interconnection requirements are particularly substantial in Western Europe, but implementation is limited by environmental constraints. Russia could become an important market once deregulation of the electric power supply system has been completed.
- The Western Hemisphere represents 26% of the market. North America is a market of opportunity, but a deficient regulatory environment acts as an obstacle to the significant investments required to modernize the electric power supply system.
- The Pacific Asia region represents 33% of the market. China has the best potential for growth in all segments of the T&D market. India is an emerging market with particularly strong prospects in distribution and high voltage systems.
- Africa and the Middle East represent 14% of the market. Major transmission projects for interconnection will be a source of growth, replacing the currently high demand for medium voltage.

4.7.1. Products Business Unit

4.7.1.1. Key data

<i>(in millions of euros)</i>	2004	% of Division
Sales revenue	1,234	39
Workforce at year-end	11,807 people	54 people

4.7.1.2. Businesses

The Products Business Unit designs, manufactures and supplies a complete range of high and medium voltage products to route electric power from the power plant to the final user:

- High voltage equipment to transform and dispatch electric power over long-distance transmission systems;
- Medium voltage equipment, smaller in size, which performs the same operations closer to the market for the power.

These products increase or decrease voltage, isolate or connect circuits, and measure power quantity or voltage in real time.

It should be noted that the products manufactured by the Business Unit, especially transformers, contain raw materials such as copper, steel and aluminum accounting for 7% of their cost; increased prices for these commodities can have a negative impact on the Business Unit's financial performance.

4.7.1.3. Manufacturing capabilities

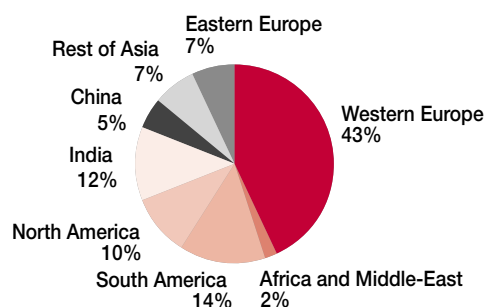
Under the new organization for the T&D Division, set up in 2004, the Products Business Unit's operating structure is comprised of ten product lines. This allows each product line to focus on its own marketing, technical and production challenges while promoting standardization of product lines and reengineering of manufacturing models.

The Products Business Unit manages 58 sites, including:

- manufacturing and assembly sites, located close to larger markets;
- sites for final product adjustments, located near the customers.

These sites are located in 26 countries:

Products Business Unit sites as of December 31, 2004



4.7.1.4. Operations and highlights

In 2004, efforts focused on major capital investment projects in high-growth countries, including the following:

- China: AREVA T&D increased production capacity at the Shanghai power transformer manufacturing plant; a new high and medium voltage equipment manufacturing plant was built in Suzhu.
- France: production capacity was increased at the Lattes vacuum tube manufacturing plant, while production was discontinued in the UK in 2001 and is scheduled to be stopped in Germany in 2005;
- Mexico: the Tzayuca high voltage equipment manufacturing plant was expanded to include medium voltage.

Technology advances were achieved in several product lines; in particular:

- Production began of the new F35 high voltage shielded substation, designed according to eco-design principles;
- The performance of the FKG generator circuit breaker was enhanced;
- The PIX standardized medium voltage equipment line for the power distribution and industrial markets was expanded.

In addition, the Products Business Unit was awarded a contract to deliver generator circuit breakers for the Shanwei and Wushashan power plants in China.

In May 2004, the European Commission launched an investigation of AREVA T&D SA and AREVA T&D Holding SA France concerning alleged anticompetitive practices in the field of GIS insulated switchgears. No "notice of grievance" had been issued against these two Group companies as of the date of this annual report (see paragraph 4.14.4.2.).

4.7.2. Systems Business Unit

4.7.2.1. Key data

<i>(in millions of euros)</i>	2004	% of Division
Sales revenue	1,047	33
Workforce at year-end	2,024 people	9 people

4.7.2.2. Businesses

The Systems Business Unit designs turnkey projects for the transmission and distribution of electric power from the power plant to the final user.

Drawing on substation engineering expertise and project management know-how, the Business Unit integrates T&D equipment – transformers, medium and high voltage equipment, protection and monitoring systems, telecommunications and services – and provides solutions tailored to the specific electric grid of each of T&D Division customer.

The Systems Business Unit offers:

- turnkey medium and high voltage substations;
- power electronics for direct-current substations and systems to increase grid capacity and quality (FACTS and HVDC);
- decentralized energy projects, such as connecting wind farms to the grid.

To succeed, the Systems Business Unit draws on technology and applications expertise, on a keen understanding of the technical and economic challenges facing its customers, and on partnerships with suppliers.

4.7.2.3. Capabilities

The Systems Business Unit has 19 sites in Europe, the Western Hemisphere, Asia, the Middle East and Africa. Local teams are comprised of engineers and project managers with excellent knowledge of the market and the necessary level of competitiveness.

4.7.2.4. Operations and highlights

The Systems Business Unit was recently awarded a contract to design, manufacture and install the first offshore high voltage substation near Barrows (UK). The Business Unit is in charge of overall engineering for the project to connect the offshore wind farm to the national power grid. This project represents not only one of the first 132 kV wind farms in the United Kingdom, but also one of very few high voltage offshore substations in the world.

As part of the Business Unit's major accounts operations, a "Solutions" project team trained with National Grid Transco (NGT) in the United States. The objective was to transform relations between the power transmission company and the power supplier with respect to turnkey projects. By adopting a transparent approach from the beginning of project definition, combined with risk management and improved EHS performance, the project can be delivered faster and the number of engineering hours required can be reduced. As a result of this cooperation, the Systems Business Unit has already implemented four projects following this new approach.

A contract was recently signed with Dubai Electricity and Water Authority (DEWA) for the construction of a 400 kV GIS substation at Jebel Ali'L'. When it is connected to the grid in 2005, the 'L' station will be a major element of DEWA's electric power supply system.

The Systems Business Unit won an important contract to upgrade the power supply system to the West Coast Main Line, one of the most widely used rail lines in Great Britain. The Business Unit offered a compact prefabricated substation solution, which is particularly well suited for rail infrastructure projects.

4.7.3. Automation Business Unit

4.7.3.1. Key data

<i>(in millions of euros)</i>	2004	% of Division
Sales revenue	384	12
Workforce at year-end	2,346 people	11 people

4.7.3.2. Businesses

The Automation Business Unit's three global product lines provide solutions for real-time automation of T&D systems:

- automation products, including electronic protection equipment to detect T&D equipment failures and send protection commands, and equipment to measure electric signals or transmit information;
- power management systems to automate substations, remotely operate an entire T&D system and ensure the efficiency of power market operations;
- support services to maintain digital infrastructure in perfect working order, renovate automation systems and train operators.

The Automation Business Unit's offering centers on embedded electronics technology for automation products and real-time information systems for automation systems. The unit's four main areas of expertise are: integration of real-time information systems, design and manufacturing of embedded automation modules, development of power management application software and related support services.

4.7.3.3. Manufacturing capabilities

The Business Unit operates three centers of excellence for Research & Development, including one in the United States and two in Europe; six assembly centers for automation products, including a joint venture with a Chinese partner; and 13 engineering centers for management and integration of automation and information system projects, including a back-office center in India.

The Automation Business Unit also operates two manufacturing sites in India with more than 1,000 employees. The competency of those sites covers the entire products portfolio of the Business Unit.

4.7.3.4. Operations and highlights

The Automation Business Unit was established in 2003. In 2004, it focused on business processes:

- continuous improvement based on Six Sigma management methods;
- reorganization of "Systems" operations, including manpower reduction in Western Europe and North America, offset by resource development in Asia and the Middle East;
- development and marketing of a new control system for substations (PACiS) integrating the latest communication standards.

On the Sales and Marketing front, the Automation Business Unit confirmed its leadership position in the teleoperation and management systems market, with new contracts in Serbia, Scotland, France, Ethiopia, South Africa and the United States.

In technology, the Business Unit entered into a series of partnerships, including an agreement with Microsoft to develop advanced teleoperation architectures.

In 2004, the Business Unit settled a lawsuit brought by ABB regarding knowledge transfer in connection with employees hired in the United States.

4.7.4. Business Unit Services/ISSCO

4.7.4.1. Key data

<i>(in millions of euros)</i>	2004	% of Division
Sales revenue	521	16
Workforce at year-end	5,639 people	26 people

4.7.4.2. Businesses

The Services Business Unit/ISSCO includes two major businesses:

- a cost center, which manages sales and marketing for all T&D Division products and services; and
- a customer support business, including equipment maintenance services.

The Services Business Unit/ISSCO provides high-quality grid infrastructure maintenance services to customers to support products and services throughout their life cycle. In addition to traditional service contracts for maintenance, repair and equipment/substation revamping, the Business Unit offers solutions that are more global in nature, including long-term guarantees of facility performance.

To carry out this mission successfully, the Business Unit secures resources near the customers and draws on knowledge of existing facilities and technical expertise as a product manufacturer. Older transmission and distribution equipment, placed in service several decades ago, is now obsolete; the Business Unit is well positioned to capitalize on this market, which represents a potentially large source of revenue.

4.7.4.3. Capabilities

Business unit teams in 18 countries are based close to the customers. A series of cross-cutting knowledge sharing programs ensure that Services Business Unit/ISSCO personnel maintain their technical expertise in AREVA T&D products and services. For instance, the R&D department launched a program to facilitate diagnostics, with a view to compiling lessons learned and transferring knowledge to the Business Unit's new international operations.

4.7.4.4. Operations and highlights

In 2004, the Business Unit focused on areas with added value for T&D systems and products. Following a review of the Business Unit's portfolio of activities, the telecommunications and electric services businesses in New Zealand and Australia were sold; the agreement was signed at the end of December 2004 and the transaction closed in 2005.

To support the sale of new products on high-growth markets, the Services Business Unit/ISSCO assigned personnel to the new sites in Suzhu, China, and Tizayuca, Mexico. In addition, the unit has begun deploying resources in Russia and in Southeast Asia.

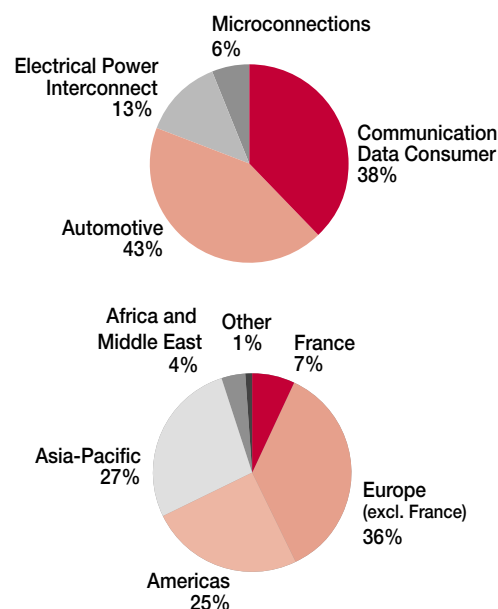
Last but not least, new contracts were signed in 2004, including a study to optimize distribution systems in Delhi and Bombay; substation maintenance contracts in Brazil, Kuwait, Singapore and Canada; and revamping contracts for transformers with EON in Germany.

>> 4.8. Connectors Division

Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	1,289	1,338	1,560
Operating income (loss) before restructuring costs	86	21	(136)
Operating income	80	(114)	(406)
Workforce at year-end	12,160 people	12,211 people	14,015 people

2004 sales revenue by Business Unit and region



Overview

The Connectors Division contributed 11.6% to AREVA group sales in 2004. The Division is organized into four Business Units that design and manufacture connectors for:

- the communications, data, and consumer sector (CDC Business Unit);
- the automotive market (Automotive Business Unit);
- the electrical equipment market (Electrical Power Interconnect, or EPI, Business Unit); and
- the flexible circuitry markets, in particular smart cards (Microconnections Business Unit).

The Connectors business is defined as the combination of technologies and processes needed to design and manufacture passive components called “connectors” that are used to transmit electrical or optical signals from a cable to a piece of electrical or electronic equipment or from one printed circuit board to another.

The Connectors Division makes several billion electrical contacts a year that typically sell for one to four euro cents.

Several hundred million cover squeeze-ons are manufactured annually and are either sold directly to electronic equipment manufacturers (PCs, telecommunication systems, embedded automotive electronics), or to cable and systems assembly subcontractors. These connectors or connector parts are sold at prices ranging from a few tenths of a euro to several euros each.

The Division's operations are marked by constant technological change, such as the miniaturization of electronic equipment, higher signal transmission speeds, and the requirement for systems reliability in often demanding environmental conditions.

The various segments of the connectors market can fluctuate widely on an individual basis. Over a long period of time, the overall market increase is around 5 to 6%.

In response to changes in the sector (growth in some regions, automatic decline in some markets, price erosion, etc.), the Division has initiated a thorough restructuring of its operations since 2002. With the restructuring plan, its financial position is in recovery, as demonstrated by:

- repositioning in the most dynamic market segments by eliminating some non-core activities;
- reduction in the number of production sites from more than 60 sites in 2001, to about 30 sites located in the Western Hemisphere, Europe and the Pacific-Asia region, with the Division's products distributed in some 80 countries;
- streamlining of the Division's line of products and services; and

- an increase in the proportion of the workforce in low-cost countries, which rose from 19.5% at the end of 2001 to 43% at the end of 2004.

The Connectors Division is ranked third in the sector worldwide, behind Tyco and Molex, with strong positions in telecommunications and automotive, and leadership positions in niche markets such as automobile airbags and smart cards. The market, estimated at about \$33 billion in 2004 (source: Bishop Report, February 2005), is divided up among more than a thousand players.

Strategy and outlook

Demand is shifting, with a strong trend towards Asia, where the large electrical and electronic equipment manufacturers are increasingly present. The largest players can decide at any time to boost their competitive edge by moving production there, and are generally followed by their competitors and smaller players.

The Division will pursue its restructuring plan to achieve its objective of profitability levels comparable with those of its leading competitors in the sector, with the goal of being in the top three worldwide in the CDC, automotive and microconnections markets.

To do this, the Division plans to:

- concentrate on market segments and niche markets with high growth potential,
- focus on the largest customers,
- reduce business volatility by diversifying its customer base in markets with different cycles,
- replenish the product line while streamlining the product offering,
- increase the use of distribution for smaller customers
- ultimately base more than 50% of its workforce in low-cost countries.

The Connectors Division will use its high level of Research and Development as a growth engine. Connector markets are characterized by rapid change, making innovation and new product development vital. By sustaining R&D activity at a high level during the down cycle, the Division aims to achieve new product sales equal to 30% of its total sales in three years' time.

4.8.1. Communications Data Consumer Business Unit (CDC)

4.8.1.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	488	533	616
Workforce at year-end	5,837 people	6,003 people	6,824 people

4.8.1.2. Businesses

The Communications Data Consumer (CDC) Business Unit designs, manufactures and supplies card-to-card, card-to-cable, and input-output connectors for electronic applications in the communications, data, consumer, healthcare and industrial markets.

The following table shows sales in the four main segments:

2004 sales of the Communications Data Consumer Business Unit

<i>Segments</i>	<i>In % of 2004 sales</i>
Telecommunications (switching & routing, transmission systems, cable and wireless access, local telephone networks)	40%
Information technology (PCs, servers, storage devices, peripherals)	35%
Consumer products (mobile/cell phones, DVD/CD players, video games TV decoders, VCRs, modems)	15%
Industrial and medical electronics (instrumentation and control)	10%

Source: AREVA.

4.8.1.3. Manufacturing capabilities

The Business Unit's production plants span three continents, with two in Europe, two in North America and six in Asia.

As its main customers continue to locate their production bases at low-cost sites in Asia, the CDC Business Unit has followed, manufacturing more than 60% of its products in that region.

Plastic resins, copper alloys and precious metals account for the majority of raw materials purchased by the CDC Business Unit.

Rising prices for copper and gold in 2004 were partially offset by more efficient use of materials and other initiatives to reduce product costs.

4.8.1.4. Market and competitive position

The CDC Business Unit is a market leader in electronics applications and is ranked third in the telecommunications segment.

After three years of decline, the telecommunications market regained positive growth on a healthier footing.

The Business Unit has three types of customers:

- large end-users in telecommunications (Ericsson, Lucent, Nokia, Alcatel), in information technology (Dell, IBM, HP-Compaq, Intel, etc.), and in the consumer and industrial markets (Motorola, Samsung, Siemens);
- electronics subcontractors (Solelectron, Flextronics, Sanmina, etc.); and
- electronics distributors (Arrow, Avnet, TTI, etc.).

4.8.1.5. Operations and highlights

Recovery continued in the CDC Business Unit (computers, communications, consumer electronics) through:

- redeployment of the telecommunications market, where growth has halted, towards the computer and consumer products markets and, in Europe, the industrial and medical segments;
- the pursuit and finalization of industrial restructuring in Europe;
- simplification of the product offering and the customer base (focusing on strategic customers), and redefinition of the role of distribution.

The Business Unit conducted an aggressive product development plan to penetrate the computer market, timed to coincide with favorable conditions created by the arrival of new microprocessors and the demand for faster data transmission capability (DSL programs, third generation mobile/cell phones, new 64-bit Intel processors).

In particular, the Business Unit succeeded in gaining entry to major customers in the data servers and storage systems market (IBM, HP-Compaq, Sun, Dell) for their new platforms, now under development.

The new connectors standards for PC applications were introduced to the market, causing a 30% increase in the Business Unit's sales in this segment.

4.8.1.6. Outlook and development goals

The trend is still towards increasingly smaller, faster, and cheaper interconnection solutions. Electronic component costs should continue to decrease, and connector builders need to offer targeted solutions for their systems integrator customers. Equipment manufacturers are lowering costs by shortening their lists of electronics suppliers, outsourcing manufacturing and supply to the Electronic Manufacturing Service (EMS) sector, relocating production to China and using standardized components.

The CDC Business Unit will benefit from these trends over the long-term, since equipment manufacturers and EMS suppliers are partnering with international connector companies offering competitive prices, global production sites, and state-of-the-art technology.

The integrated communication systems boom in the automotive market is another growth factor for the Business Unit. The CDC Business Unit's strong synergy with the Automotive Business Unit should help it to win new markets. Technological advances have been made, especially as regards switching to very low voltage

signals shielded from internal and external electromagnetic interference.

Growth in emerging countries, particularly China, is still rapid but unstable.

Over the long-term, the Business Unit's market could grow steadily through improvement of technological performance and the combined actions of the consumer, multimedia and data transmission sectors, which will continue to stimulate new product development.

4.8.2. Automotive Business Unit

4.8.2.1. Key data

(in millions of euros)	2004	2003	2002
Sales revenue	553	542	531
Workforce at year-end	4,378 people	4,091 people	3,782 people

4.8.2.2. Businesses

The Automotive Business Unit designs, manufactures and supplies interconnection components for the majority of an automobile's electrical and electronic applications.

Towards the end of the 1990s, automotive connectors gradually became one of the key components in a car's electrical and electronic systems. Today, the average vehicle contains several electronic control units containing some 30 microprocessors. At the same time, the number of contact points has increased from a few hundred per car to more than a thousand, representing two to four kilometers (around 1.25 to 2.5 miles) of cable, depending on the model.

The market segments in which the Automotive Business Unit operates may be summarized as follows:

- the Electrical Distribution Systems (EDS) segment relies on standards that are defined mainly by the carmakers. This segment represents about 50% of the Business Unit's sales. EDS is experiencing limited growth, but is a key segment due to the access it provides for the Business Unit's other product lines.
- the Electronic Control Unit (ECU) segment includes connectors for electronic control units and sensors.
- the Safety Restraint Systems (SRS) segment consists of connectors for airbags and seat belt pretensioners. It is a rapidly growing market due to the rising number of safety applications in all classes of vehicles.

4.8.2.3. Manufacturing capabilities

The Automotive Business Unit serves the world's major carmakers through its presence in the world's leading regions, including numerous dedicated production sites:

- six plants in Europe, located in France, Germany, Austria, Italy, Ireland and Hungary;
- three plants in North America, located in Canada, the United States and Mexico;
- one plant in South America, located in Brazil;
- two plants in Asia, located in South Korea and China, which also supply the Japanese market.

In each region, the production sites control key processes needed to design and manufacture automotive connectors. They also have access to the latest techniques in the fields of industrial process control, automated visual control and robotics. In particular, the Automotive Business Unit has developed advanced skills in the following industrial business lines:

- high-speed contact cutting;
- precision molding;
- assembly of automatic, semi-automatic and manual components; and
- overmolding of plastic and metal subassemblies.

4.8.2.4. Market and competitive position

The global automotive connectors market is estimated at €6.5 billion per year (source: Bishop Connector Industries Forecast). The Automotive Business Unit is ranked fourth worldwide and second in Europe. Its share of the world market is about 9% and was on the rise in 2004. It is also the world leader in the SRS segment.

Automotive Business Unit customers include manufacturers of electrical wiring harnesses for automobiles; equipment manufacturers; suppliers of systems, modules, ECUs and sensors; and carmakers, which play a key role by defining their own connector standards and choosing their preferred suppliers.

The automotive connectors market is one of constant technological change, mainly due to more stringent requirements for safety, comfort, reliability and communications.

The auto market has traditionally grown in value at an average rate of 2% per year over the past 30 years. Despite steadily decreasing prices (about 2%-3% per year in recent years), demand for automotive connectors continues to rise moderately, but faster than the vehicle market itself, due to the increasing numbers of connectors per car. The Business Unit is well positioned in the most rapidly growing segments, such as connectors for airbags, for electronic control units and for multimedia applications.

4.8.2.5. Operations and highlights

Business continued to grow for the Automotive Business Unit as it:

- strengthened its leadership in the global airbags market by introducing new products and maintaining its competitive position in an increasingly competitive market;
- developed automotive bundles in the connectors market by:
 - acquiring a position in the miniature connectors market with a new line of contacts;
 - pursuing its international deployment, with wins in North America at Ford and GM and initial contacts at Hyundai in Korea, where the Business Unit opened a new development center close to that of the constructor;
- redefined a strategy aimed at restoring profitability in the electronic modules market by selling low-margin subcontracting operations in Germany (Albstadt) and the United States (Brecksville) and by refocusing on high added-value products to complement the Business Unit's other products;
- pursued industrial redeployment to improve competitiveness by transferring operations and expanding sites in Hungary, Mexico, China and India;
- continued efforts begun two years ago to improve the Business Unit's quality and service processes, thus strengthening its position with regard to major customers. In 2004, Valeo designated the Business Unit as a (Valeo Integrated Partner), or VIP.

4.8.2.6. Outlook and development goals

According to J. D. Power-LMC, world automotive production should increase by about 5.2% in 2005. One third of this growth would come from Europe and North America and two-thirds from Asia (China and Korea) and emerging markets (Eastern Europe, the Mercosur countries, etc.).

This distribution of automotive growth confirms the validity of the Business Unit's globalization strategy and strengthened presence in Asia, which the unit will continue to pursue.

Specifically, the Business Unit will develop new manufacturing sites in China and a center of competence in Korea. It will selectively pursue transfers from Europe and North America to low-cost countries.

As new vehicle platforms are developed, the Business Unit will pursue its strategy of close partnerships with carmakers and their main equipment manufacturers.

4.8.3. Electrical Power Interconnect Business Unit (EPI)

4.8.3.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	165	165	200
Workforce at year-end	1,581 people	1,570 people	1,641 people

4.8.3.2. Businesses

The connectors and installation tools manufactured by the EPI Business Unit are different from other FCI connectors insofar as they are used more for the distribution of high-intensity and/or high voltage and medium voltage current, and not for signal transmission. The EPI Business Unit's connectors are large, usually weighing as much as several kilograms, and mostly made of metal.

Large power companies use them to generate, transmit and distribution power. Some of the other main customers are industrial maintenance or construction companies and telecommunications equipment manufacturers.

The basis for the EPI Business Unit's product platform was developed more than 20 years ago. Customer expectations are more about reliability, quality and service than new technologies. The connectors must withstand a temperature of 200°C on the power lines, but also icing, snow, storms and other types of environmental stress.

The demand for electrical products is driven by power consumption and infrastructure expansion. The EPI Business Unit is a global supplier that markets its products mainly under the brand names Burndy®, Malico™ and Saae™. These products are recognized worldwide and meet the many standards for installation and electrical performance around the globe.

4.8.3.3. Manufacturing capabilities

The Business Unit has three sites in Europe, five in the Western Hemisphere, and three in Asia. Aluminum, copper and steel are the main raw materials used in these plants.

Transferring manufacturing lines from Europe and the United States to lower-cost production sites is an ongoing process. The most important restructuring in France has now been completed.

In India, the EPI Business Unit's Design Center has been optimized to reduce design schedules for new products.

4.8.3.4. Market and competitive position

Demand for electrical products is driven by infrastructure expansion and replacement. Following the rebound of world electricity consumption in 2003, several regions showed a decline in utilization in 2004. Only in the last two quarters, did the expected return to normal growth levels occur.

While growth fluctuated in industrialized countries, most developing countries experienced strong growth, resulting in a proportional rise in foreign investment.

The EPI Business Unit estimates that it is the fourth largest supplier in a global market that is estimated at more than €4 billion.

The Business Unit's customers are highly diversified and spread out all over the world. Its main customers are distributors, most notably Graybar, Wesco and GE Supply.

4.8.3.5. Operations and highlights

Now under new management, the EPI Business Unit began revising its strategy and industrial organization extensively to restore profitability as quickly as possible. Action taken includes:

- the closing of industrial sites and redeployment of production subject to stiff competition to countries with low labor costs (Mexico, Brazil, India, China);
- the pooling of interests with AREVA T&D in the electricity transmission and distribution market to facilitate identification of new programs; and
- expansion of the product offering by developing connectors for Composite Technology Corporation's (CTC) promising carbon core cable technology for the energy industry.

4.8.3.6. Outlook and development goals

The EPI Business Unit should continue to be solicited for major electricity transmission projects in Asia and South America. The strategic decision to move manufacturing capabilities to low labor-cost countries drove sales up for the EPI Business Unit in various price-sensitive markets. This trend should continue.

In 2005, the EPI Business Unit should benefit from the restructuring completed in Europe and North America, and refocus its resources to implement growth plans in all regions. The moderate expansion expected in its main markets, new product launches, and the planned development of distribution channels should also help the Business Unit improve its economic performance.

The EPI Business Unit will also rely more on its Design Center in India to improve time-to-market and reduce development costs. The new revamped and automated foundry in Toluca, Mexico

will be a low-cost, high-volume production site to meet customer needs throughout the Western Hemisphere.

4.8.4. Microconnections Business Unit

4.8.4.1. Key data

<i>(in millions of euros)</i>	2004	2003	2002
Sales revenue	83	58	61
Workforce at year-end	364 people	296 people	286 people

4.8.4.2. Businesses

The Microconnections Business Unit manufactures more than two billion microcircuits per year. These microcircuits connect with memories or microprocessors on smart cards, including telephone cards, SIM cards for mobile/cell phones, check/credit cards, and the fast-growing markets of access control, tracking and identification cards.

The Microconnections Business Unit is the world leader in smart card circuitry, supplying customized products to the majority of the world's smart card module manufacturers. In this field, the Group is the worldwide leader.

High density interconnect flex circuitry and Radio Frequency Identification Devices (RFID) are key sectors for new business. Through these products, the Business Unit has successfully diversified, developing operations in contactless applications and circuitry for the clockmaking industry and ink cartridges.

4.8.4.3. Manufacturing capabilities

The design of flexible circuitry requires expertise with a variety of technologies, which the Business Unit has been acquiring for more than 20 years. The Microconnections Business Unit holds several patents for key technologies, including etching of high-density flex circuits and manufacturing of antennas for RFID applications.

The Business Unit has two manufacturing sites, one in France and one in Singapore.

4.8.4.4. Market and competitive position

The Microconnections Business Unit estimates its market share of the high density flexible circuitry field at around 8%. It is a leader in smart card applications.

This market is a particularly cyclical one; the trend is towards mid-term growth, but short-term variations can be significant.

The Microconnections Business Unit's customers are manufacturers of smart cards and integrated circuitry for the cards, and large micropackaged systems manufacturers. Its main customers in the

card field are Axalto, Gemplus, Infineon, Oberthur Card Systems, Philips and STMicroelectronics.

Non-card business was also supported by the growth of market share in clockmaking and the growth of contactless products.

4.8.4.5. Operations and highlights

In 2004, the market experienced strong growth that was linked mainly to the boom in wireless telephony, notably in China. Prepaid phone card usage continued to decline as cell phone usage continued to rise. The markets for the other fields, banking and security applications, are growing steadily.

In the years to come, double-digit volume growth is expected in the smart card market. Microprocessor boards will drive the upsurge.

Non-card business (contactless, clockmaking) also experienced significant growth in 2004; this was partly due to the booming markets, but also to the Business Unit's higher market share.

In line with its goal to secure its world leadership position in the sector and to take advantage of the growth potential in Asian markets, the Business Unit started up its second manufacturing plant in Singapore in 2004. Ramp-up has been accelerated and will be completed by mid-2005. The new unit will help to secure supply for all customers and improve service to Asian customers by offering a local interface.

4.8.4.6. Outlook and development goals

Several countries are initiating smart card projects in some cities or for secure identification card projects, creating opportunities for growth. Large-scale testing is set to begin in 2005. In the smart cards market, short-term growth will continue to come from the more traditional segments.

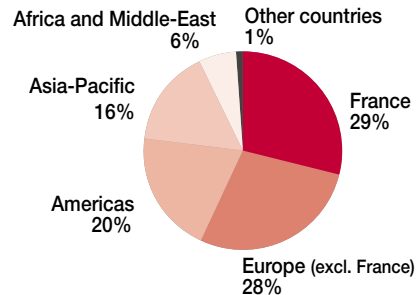
The Business Unit is developing and certifying new products that will significantly diversify its product portfolio in the coming years. Product roll-out began in 2003-2004 and will be accelerated in 2005-2006.

Outside of its traditional smart card market, the Business Unit continues to develop new flex (flexible film) operations for the micropackaging, clockmaking and contactless industries. Future business will come primarily from flexible microcircuitry for high-density interconnection systems and from radio frequency identification systems (RFID).

» 4.9. AREVA customers and suppliers

4.9.1. AREVA customers

2004 sales revenue by region



The majority of AREVA's customers are large electric utilities; public entities, such as publicly-owned electric power supply systems or agencies in charge of the back end of the nuclear fuel cycle; and major industrial companies.

Geographically, the majority of its customers are located in Europe, the United States and Japan. The Group is also present in new emerging markets (China, Brazil, etc.), mainly through its T&D Division and, to a lesser extent, through its nuclear businesses.

EDF, the CEA, Duke, E-On, EnBW, Entergy, JNFL, RWE, Suez and Vattenfall are among the Group's largest customers. Together, they account for approximately 37% of AREVA's consolidated sales. The Group's five largest customers account for approximately 30% of AREVA's consolidated sales. The largest customer, EDF, represents less than 20% of the Group's consolidated sales revenue.

Energy divisions

AREVA has set up a group-level International & Marketing department, which is responsible for recommending a commercial strategy to corporate management. This department is supported by an international sales network, the AREVA group marketing staff, and the key account managers. The key account managers are tasked with fostering long-term relationships with the Group's main customers as part of the customer action plan approved by the Executive Committee, which covers all of the Group's marketing and sales activities. Overall, key accounts represent about half of the sales revenue of the Nuclear and T&D divisions.

Each Business Unit has a dedicated sales force that implements strategies and action plans approved by the Executive Committee. The sales teams are extremely qualified in their respective businesses and ensure that their Business Units respond rapidly to changes in their markets. Global offerings are provided by project teams working under the supervision of the marketing and sales departments of the various subsidiaries and the International & Marketing department.

Nuclear

In the nuclear businesses, the number of customers is small, with the Group's ten largest customers representing approximately 60% of AREVA's nuclear businesses. The scope of the transactions is usually large: contracts can amount to several hundred million euros. EDF is the Nuclear Division's single largest customer, accounting for approximately 30% of all nuclear business sales revenue. Customers are well diversified geographically, despite the strong presence of French and European customers, which represent approximately 67% of sales revenue in the nuclear businesses.

The major contracts signed with EDF (mainly with the Mining, Enrichment, Treatment and Recycling Business Units) are usually based on fixed prices that are not indexed to changes in the prices of raw materials or services concerned (uranium, conversion, and enrichment). Sometimes, however, contracts do contain indexation clauses.

For example, the contract signed in August 2004 for the 2001-2007 period provided for the transport and treatment of an average of 850 metric tons per year of used fuel from EDF's power plants and the packaging of the corresponding waste, with a flat-rate payment per ton processed that is revised monthly according to an escalation formula. On this basis, the contract should produce sales revenue of €4 billion over the 2001-2007 period.

Other types of contracts with EDF and other customers vary, depending on the type of business and range from medium- to long-term commitments (uranium sales, enrichment services, reactors, fuel treatment services, etc.) to shorter-term contracts (standard equipment, reactor services, etc.).

In line with market practices, customers are granted a certain number of guarantees relating to performance, late delivery, failure to deliver, etc., especially when the company supplies reactors or heavy equipment. These guarantees can represent very large sums. The Group's policy, however, is to limit the size of these guarantees (and penalties) to a portion of the contract value. AREVA is also careful to exclude indirect or consequential damages, such as

operating losses incurred by a customer as a result of the failure of a product or a service (see paragraph 4.14.3.4. on the risks linked to those guarantees, and paragraph 5.1.8.1.).

T&D

In contrast to the businesses of the Nuclear Division, the customer base for the businesses of the T&D Division is very broad – T&D services about 30,000 customers – while the size of the contracts is usually a few million euros. The Division's ten largest customers represent approximately 5% of its sales revenue.

The commercial organization of the T&D Division is centralized through an international sales network (ISSCO) present in 100 countries, ensuring the continuity and coordination of commercial relations across the Division's entire offering. The sales force is organized into twelve regions and has a headcount of about 1,200.

A program was adopted in 2004 to coordinate the management of accounts, enabling the Division to develop preferred, long-term relationships with world-class customers that are leaders in their markets, including EDF in France, National Grid Transco in the U.K., Hydro Quebec in Canada and E-On in Germany. The new approach is consistent with the Group's overall business strategy and calls for the Division to work with the customers to anticipate future developments in electric power supply systems.

The Division's main customers, by category, are:

- Integrated electric utilities: Steg in Tunisia, Dewa in Dubai, Wapda in Pakistan, Egat in Thailand, Vattenfall in Sweden, CFE in Mexico, Eletrobras in Brazil and Gecol in Libya;
- Transmission companies set up in the wake of deregulation: NGT in the U.K., Transelec in the US, RTE in France and State Grid Corporation in China;
- Large companies that are major consumers of electricity: Arcelor, Chevron, Aluar, Alba, Volkswagen and Wal-Mart.

Connectors Division

The Connectors Division has a diversified customer base, with its ten largest customers contributing approximately 30% of the Division's sales revenue.

The Communication Data Consumer Business Unit is present in the Telecom, IT, Consumer electronics and Industrial electronics markets. In the Telecom market, its main customers include original equipment manufacturers (OEMs), such as Ericsson, Lucent, Nokia, Alcatel, NEC and Cisco; and electronics manufacturing services companies (EMS), such as Solectron, Flextronics, Celestica, Sanmina and Jabil. In the IT market, the Division's largest customers are Dell, IBM, HP-Compaq, Intel, Samsung, Seagate,

Western Digital and Hitachi. In Electronics, customers include Motorola, Samsung, Siemens, Philips, Thomson, Nokia, Schneider, Alstom and ABB.

The Automotive Business Unit's customers include electrical distribution systems manufacturers, such as Delphi, Yazaki, Lear and Valeo; major parts manufacturers, such as Bosch, Siemens, TRW and Dephi; and automobile manufacturers, such as BMW, Daimler-Chrysler, Fiat, Ford, General Motors, PSA, Renault/Nissan and Volkswagen.

The Electrical Power Interconnect Business Unit's main customers include players in the wholesale distribution market, such as Graybar, Wesco, Tokyo Electric Power and CED (United States). The main end-users of EPI products are key players in global electric power generation markets.

Customers of the Division's Microconnections Business Unit include manufacturers of smart cards, such as Axalto, Gemplus, Infineon, Oberthur Card Systems, Philips and STMicroelectronics.

4.9.2. AREVA suppliers

AREVA has no particular dependence on any supplier, apart from EDF, which supplies electricity to its enrichment business under contract (see paragraph 4.4.3.5.). In certain businesses, however, the Group operates with a limited number of suppliers, described in the sections on the relevant Business Units.

» 4.10. Human resources

The details of the company's human resources are described in the human resources report in Chapter 5.

» 4.11. Sustainable development and continuous improvement

The purpose of sustainable development is to meet the needs of the present without jeopardizing the ability of future generations to satisfy their own needs. It is one of the keystones of AREVA's business strategy. It is implemented through a continuous improvement approach, with three strategic objectives: to sustain profitable growth, to be socially responsible and to protect the environment.

Sustainable development is one of the Group's core values and is included in the Values Charter, which was inspired by the principles of the U.N. Global Compact on Sustainable Development and the OECD Principles of Corporate Governance.

These goals translate into ten commitments that are implemented throughout the Group as part of the AREVA Way Continuous improvement process.

- Economic performance: ensure the Group's sustainability through long-term profitable growth.
- Innovation: develop and harness best-in-breed technologies to anticipate customer needs and increase cost-competitiveness while complying with nuclear safety, industrial safety and environmental protection requirements.
- Customer satisfaction: be receptive to customer needs, have ready solutions, support their growth, increase and measure their satisfaction.
- Employee empowerment: promote professional development for Group employees and ensure the quality of their work conditions.
- Governance: manage the Group's operations responsibly and report on them faithfully and regularly to all stakeholders, including shareholders, labor organizations and employees.
- Dialogue and consensus-building: build relationships based on trust with those who have a stake in the Group's operations.
- Community involvement: participate in the economic and social development of the communities in which the Group is established.
- Environmental protection: minimize the environmental impacts of the Group's operations by reducing natural resource consumption, controlling releases and optimizing waste management.
- Risk management and prevention: set up an organization and resources to identify, prevent and manage the technological, human and financial risks associated with the Group's operations.
- Continuous improvement: mobilize every level of the Group's organization, under the leadership of the Executive Committee, to ensure steady progress on its sustainable development commitments.

AREVA Way is an integral part of the Group's management processes. It is based on a model that serves as a basis for self-assessments of entity performance with respect to the Group's ten sustainable development commitments and is used to define the corresponding performance improvement plans. The results are reported to corporate management during strategy and budget meetings to establish improvement goals and allocate resources, which are reflected in the budgets.

The Sustainable Development and Continuous Improvement department provides leadership for this process within the Group. It takes into account policies and actions taken by the company in risk prevention (see paragraph 4.14.2.3.), labor relations (see Human Resources report, Chapter 5) and environmental protection (see Environmental report, Chapter 5).

A total of 179 entities had implemented AREVA Way by the end of 2004, four of which were involved for the second year in a row. These entities represent 91% of the Group's employees in the

Nuclear business, 84% in the **Transmission & Distribution** business, and 92% in the **Connectors** business. In each region where the Group operates production and manufacturing facilities, excluding gold mines, a minimum of 79% of the Group's employees took part in this program.

The self-assessment model defines four levels of performance:

- Levels 1 and 2 correspond to the organization and methodical and open-ended implementation of performance improvement actions;
- Level 3 is reached when significant performance improvement results are achieved and reflects the quality of interactions with local stakeholders;
- Level 4 is awarded for perpetuating performance improvements and sharing them transparently with stakeholders.

The self-assessment model is thus a tool for assessing continuous improvement and management processes. Strict conformity with laws and regulations is a prerequisite for level 1 performance. The Internal Audit department provides leadership for a self-audit process to confirm performance. To improve coordination of the process, a second facet relating to performance confirmation has been added to the model and will rely on the self-audit process managed by the Internal Audit department.

The results of the first self-assessments show that Employee Involvement, Customer Satisfaction and Governance are the commitments for which performance improvement is most noticeable.

More improvement is needed in Dialogue and Consensus-building, as well as Community Involvement, where efforts to build bridges with stakeholders must be strengthened and activities must be more organized.

» 4.12. Capital spending programs

The trend in capital expenditure is discussed in chapter 5, (paragraph 5.1.6. Cash flow).

AREVA's strategy has always been to invest heavily and consistently to ensure long-term growth. Sustainable development principles, shareholder value and profitability are integral components of this strategy.

As the world leader in its nuclear power businesses, AREVA plans to develop, first through internal growth, but also through a selective approach to acquisitions. The objectives of the strategy are to strengthen its positions locally, especially in North America, to accelerate its international growth, to anticipate customer requirements, and to ensure that it has the best available technology in the market.

2004

Gross investment in tangible and intangible assets was up significantly, going from €365 million in 2003 to €519 million in 2004. Disposals of tangible and intangible assets increased from €29 million in 2003 to €105 million in 2005, in particular due to the sale of an office building in Lyon (France) in 2004.

Net investment in tangible and intangible assets thus went from €336 million in 2003 to €486 million in 2004. This increase reflects the consolidation of the **Transmission & Distribution** business (T&D) at the beginning of 2004, which generated capital expenditures of €57 million for the year. In the **Nuclear** business, capital expenditures grew significantly in the **front end**, with mine startups in Canada (Cigar Lake) and Kazakhstan (Katco), the program to replace the Georges-Besse enrichment plant with a new plant using centrifuge enrichment technology (Georges-Besse II project), and facility upgrades in the fuel plants. In the **Connectors** business, net capital expenditures were also up, going from €62 million in 2003 to €71 million in 2004.

Investments in long-term financial assets, net of disposals, were also up sharply, from a resource, i.e. net divestment, of €7 million in 2003 to an investment flow of €739 million in 2004. This increase reflects for the most part the 2004 acquisition of Alstom's transmission and distribution business for €913 million, excluding the cash position acquired. In addition, AREVA disposed of certain mining assets, which contributed €66 million, [ajouter virgule] and collected payments for assets sold in 2002.

2003

Gross investment in tangible and intangible assets was down significantly, going from €430 million in 2002 to €365 million in 2003. Disposals of tangible and intangible assets went from €230 million in 2002 to €29 million in 2003, reflecting the sale in 2002 of major real property assets, in particular the AREVA Tower in La Défense-Paris (France). [ajouter phrase]

Net investment in tangible and intangible assets were down sharply, going from €430 million in 2002 to €365 million in 2003. In nuclear power, net investments were down from €371 million in 2002 to €269 million in 2003, reflecting the planned completion of capital projects in the **Back End** Division, giving the Group a completely revamped and optimized production plant. Net capital expenditure (Capex) was up in all other nuclear divisions. In **Connectors**, net investments fell from €88 million to €62 million from 2002 to 2003, in accordance with the restructuring plan.

Disposals of tangible and intangible assets decreased from €230 million in 2002 to €29 million in 2003. Major real property assets had been sold in 2002, in particular the AREVA Tower in Paris La Défense.

Investment in long-term financial assets, net of disposals, generated a resource, i.e. divestment, of €7 million in 2003, compared with Capex of €213 million in 2002. Net 2003 investment includes:

- the sale of the **Connectors** Division's Military/Aerospace & Industrial business in April 2003;
- the first down-payment, in the amount of €150 million, on a 50% participating interest in the Enrichment Technology Company (ETC) to gain access to centrifuge technology for uranium enrichment.

2002

In 2002, gross investment in tangible and intangible assets was €430 million, compared with €560 million in 2001. Disposals of tangible and intangible assets increased from €1 million in 2001 to €230 million in 2002, reflecting the sale of certain real property assets, including the former Framatome Tower, since renamed the AREVA Tower.

Net investment in tangible and intangible assets was €483 million in 2002, compared with €560 million in 2001. In the nuclear business, net investment remained stable at €371 million in 2002, compared with €364 million in 2001. Spending focused on maintaining existing production facilities in good working order and top safety condition. Due to weakness in the telecommunications market, the **Connectors** Division cut back severely on capital spending, from €210 million in 2001 to €88 million in 2002.

Net investment in long-term financial assets amounted to €213 million in 2002, compared with €232 million in 2001. The main financial investments in 2002 were:

- the acquisition of Duke Engineering & Services in the US in April 2002 to strengthen AREVA's position in nuclear engineering and services in the United States;
- the acquisition of Sagem and Coficem shares in June 2002; and
- the sale of Sovaklé shares in early 2002.

Outlook

In the years to come, AREVA plans to increase its investment in tangible and intangible assets in the nuclear business, particularly in the **Front End** Division. For example, close to €1.8 billion could be invested during the 2005-2009 period, with ramp-up during the 2005-2007 period. These investments would be required both for growth and to maintain current production capacities. The program includes:

- Development of new mines in Kazakhstan and Canada, with production ramp-up during the 2006-2010 period to increase nominal production capacity by 4,000 metric tons of uranium per year.

- Replacement of the Georges-Besse uranium enrichment plant, which uses a gaseous enrichment process, by a new plant (Georges-Besse II) using centrifuge enrichment technology (see paragraph 4.4.3.). That investment is estimated at €2.5 billion during the 2005-2017 period, excluding acquisition of the ETC shares (see below).
- Increased uranium conversion capacity to meet anticipated demand.
- Upgrades at the fuel fabrication plants, particularly in Romans, France.

In the other **Nuclear** divisions, i.e. **Reactors & Services** and **Back End**, Capex is expected to remain relatively stable compared with 2004.

In the **Transmission & Distribution** and **Connectors** divisions, capital expenditures corresponded to so-called "maintenance" programs in 2004, and are essentially recurring expenses.

With regard to long-term investment in financial assets, a €150 million advance down-payment was paid to acquire 50% of ETC, which designs and fabricates centrifuges (see paragraph 4.4.3.). The balance due on the acquisition price, i.e. €350 million, is payable when the agreement between AREVA and Urenco comes into effect (see paragraph 4.4.3.5.).

➤ 4.13. Research and development programs, intellectual property and trademarks

4.13.1. Research and development

4.13.1.1. Key data

	2004	2003	2002
Research and Development expenses	€402 M	€286 M	€332 M
- Nuclear share	51%	70%	65%
- T&D share	30%	-	-
- Connectors share	19%	30%	35%
Number of patent applications	214	152	192

AREVA spent 3.6% of its sales revenue on research and development in 2004, slightly more than in 2003. Resources dedicated to nuclear research and development were stable.

The increase in R&D spending reflects the consolidation of the **Transmission & Distribution** Division into AREVA, with a budget of €115 million for 2004. Despite difficult market conditions, the **Connectors** Division maintained a significant though slightly reduced level of expenditure.

4.13.1.2. Overall organization of research and development

The AREVA group sets the pace for the global competition in terms of technology, with dynamic programs to harness advanced technologies and integrate them into its products and services. Ever since the first industrial applications for nuclear energy, AREVA has worked continuously to build up considerable intellectual assets, maintain its strong technological lead and bolster its international positions. AREVA has pooled research and innovation functions as a group to tap into the synergies resulting from its establishment and to protect and multiply its technology assets. By functioning in integrated mode, AREVA is able to consolidate best practices from throughout the Group and thus boost R&D effectiveness in areas as wide-ranging as technology management, knowledge and know-how management, intellectual asset protection, innovation, and leadership for a portfolio of research and development projects.

AREVA's Research and Innovation department establishes Group-level programs such as research and development action plans, project portfolio management, technical expertise and technological excellence management, and intellectual property management. The Research and Innovation department also fuels innovation throughout the Group.

For example, the third annual AREVA Innovation Awards were handed down at the Group's first annual convention of technical experts, held in January 2005. The winners, chosen from among many who applied, were:

- An ultra-compact and highly energy-efficient transmitter developed by Elta, a Technicatome subsidiary, that allows continuous and accurate satellite tracking of objects moving on the earth's surface and can periodically transmit information on the ambient environment;
- A Tint-Teflon coating that is a new surface treatment used for the **Connectors** Division's automotive connectors, which reduces friction by half and therefore the effort required to insert the connectors;
- The Non-Conventional Instrument Transformer (NCIT) developed by AREVA T&D, an advanced measurement system for voltage and currents based on advanced optical and hybrid sensor technology that is very compact, features digital output and reduces costs while improving measurement performance;
- The Dual Channel Digital Turbine Controller (TRABI) developed by Framatome-ANP GmbH, a new concept that optimizes reactor turbine performance under both peak and off-peak operating conditions;
- The BWR Refuel Cavity Work Platform developed by Framatome-ANP Inc., a platform introduced into a reactor to perform inspection, maintenance and repair tasks simultaneously, resulting in significant time savings during scheduled outages;

- A new design for a fluoride electrolyzer anode designed by COGEMA-Comurhex that reduces corrosion.

The Research and Innovation department has avoided the pitfalls of the overly centralized organization in carrying out its mission. The very diversity of the Group's operations calls instead for incentivizing research and development initiatives in the field and overseeing local developments, and for an intentionally limited number of corporate decision-making units. These units are closely aligned with the strategic and technological orientations of AREVA affiliates and divisions.

4.13.1.3. Partnerships

30 years of technological achievement and commercial successes going beyond France's borders have positioned AREVA as a world leader in the nuclear industry. In addition to our historically solid presence in Europe, AREVA has strongholds in the Americas and in Asia. Scientific and technical partnerships reflecting our international dimension will be a cornerstone of our continued growth.

AREVA already has a large network of partnerships with the world's leading research laboratories. In France, these include the CEA research centers at Saclay, Cadarache and Marcoule; EDF's Research and Development laboratories; the CNRS national scientific research center; and the School of Chemistry in Paris. In Germany, our partners include the University of Zittau and the Karlsruhe research center. In the United States, AREVA is working with the Massachusetts Institute of Technology and the universities of Florida, Texas and Idaho. In China, Tsinghua-Beijing University is a partner, while in Russia AREVA is working with the Kurchatov research center, among others.

A good example of cooperation is the Generation IV Initiative. The goal of that initiative is to develop fourth-generation nuclear reactors capable of replacing current reactor designs by 2030. As part of this program, the world's finest nuclear Research and Development teams are studying cutting-edge reactor concepts representing potentially major technological breakthroughs. For mid-term industrial applications in the 2015 timeframe, AREVA is focusing more particularly on high temperature reactors (HTR) and very high temperature reactors (VHTR).

Partnerships in R&D are not confined solely to the nuclear businesses, but extend to the Group's other businesses as well.

Among the most important partnership agreements, the agreement concluded between Framatome-ANP, the CEA and EDF in 2002 stands out. The agreement runs until January 1, 2006, but can be extended for a further five years. The contract allows any of the parties to withdraw in the event of a change of control or the sale of a large portion of capital that would significantly alter the nature

of the relationship between the parties or their positions within the European nuclear power sector.

In addition, COGEMA and the CEA signed a memorandum of understanding to collaborate in the nuclear fuel cycle field for ten-year period starting on January 1, 2004. The memorandum of understanding includes a “change of control” clause similar to that in the contract described in the paragraph above.

In each of these partnerships, the rights to research results are divided in proportion to the funding brought by the companies and the CEA. A partial payment by one of the parties would give that party the right to use the research for its own account.

4.13.1.4. Future directions in technology Nuclear Power

AREVA's Research and Development programs are anchored in meeting customer requirements. They focus on increasing safety, reducing operating costs, minimizing final waste volumes and conserving natural resources.

Optimizing the front end of the fuel cycle

Demand for uranium could grow significantly with the end of stockpiling and the HEU program (see **Front End Division**). Uranium mining projects are under development in Kazakhstan, one of the most promising countries in terms of uranium reserves. The projects use, among others, an innovative technique called in situ leaching whereby a solution is injected underground through the drill shaft and then recovered by pumping along with the dissolved uranium. The uranium is then extracted and concentrated using a conventional process. The initial results have confirmed the feasibility of this technique, and large industrial-scale operations have been launched. Studies have also begun to modernize tools to convert concentrates before enrichment and to increase production capacity to meet the growing demands of the market.

Optimizing the economic performance of reactors and fuel

Boosting nuclear fuel performance: Rather than resting on its laurels, the **Front End Division** is conducting far-reaching and innovative programs on cladding materials, fuel pellet microstructure and the thermal hydraulics of fuel assemblies. Performance improvements in burn-up (i.e. the amount of energy delivered in the reactor per ton of fresh fuel loaded) and maneuverability are being made while scrupulously complying with the very high fuel reliability standards required to maintain reactor availability.

Enhancing fuel and reactor design tools: AREVA invests considerable effort in its modeling tools and codes to optimize fuel

and reactor reload management even further and to increase reactor capacity via major plant modifications during scheduled outages.

Understanding and anticipating aging phenomena: AREVA teams are conducting important research and development programs with the CEA and EDF to anticipate and improve knowledge on irradiated materials aging. This level of preparedness will help increase reactor service life beyond the 30 to 40 years for which the reactors were designed. Every year gained in so doing, translates into substantial savings for utility customers.

Offering innovative digital control systems: Control system products and programs offering a high level of safety are being integrated into the Group's new reactors, such as the EPR, as well as into existing reactors. The result is enhanced operations and availability, more capacity, and greater ability to respond to variations in load demand from the electricity grid. For example, the **Reactors & Services Division** recently revamped the Neckar 2 power reactor in Germany; the resulting control system improvements are helping to cut down on maintenance costs.

Developing high-performance solutions for the back end of the fuel cycle

Taking advantage of “burn-up credits”: The **Back End Division**, the CEA and French nuclear safety institute IRSN have embarked on a major program to develop and qualify Cristal™, new nuclear safety and criticality software for burn-up credit calculations that factors in the reactivity margins of the fission products in used fuel. The advantage of these margin gains is twofold: more used fuel storage in reactor pools and treatment facilities, and more efficient used fuel transport.

Increasing the range of fuels that can be treated at La Hague: In the field of research and test reactor (RTR) fuel treatment, 2004 marked the end of a long R&D program. Chemical process aspects of the program were developed in partnership with the CEA, while technology development was carried out at the HRB equipment development and testing facility in Beaumont, France. The process was deployed on a production scale at the COGEMA-La Hague plant following conclusive performance testing. The facilities are scheduled to start up in the first half of 2005. This is a new technique that is unique in the world.

Improving used fuel transport and storage: The **Back End Division** is developing new materials – resins, radiation shielding, impact limiters – for the design of innovative shipping casks and even more efficient integrated storage solutions that accommodate the evolving characteristics of used fuels. The latest such solution is the TN 106 shipping cask for RTR fuel. This first-of-a-kind licensed modular shipping cask can be manufactured so that the cask length matches the size of the different RTR fuels.

Optimizing fuel treatment and reducing final waste volumes: The 30 years of industrial research and development that have gone into the La Hague production site have made it the reference in used fuel treatment today. This “third generation” plant mirrors reactor development. AREVA continues to perform research and to adjust the plant’s operating parameters to the evolving characteristics of used fuel, such as higher burn-ups, and to accommodate research and testing reactor fuel.

Decreasing liquid effluent and solid waste during cleanup and dismantling operations: In partnership with the CEA, a decontamination reagent as effective as soda was tested on hot facilities (extraction units). The reagent is of particular interest since it can be incorporated into vitrified fission products after pre-treatment and vitrified without increasing waste volumes or reducing glass quality, which is not the case with soda.

Planning for next-generation reactors and related fuel cycle facilities

Long-term research essential to maintaining a technological lead is ongoing:

- Developing new gas-cooled reactors: in addition to the existing portfolio of advanced products – N4 and EPR in the PWR category, SWR1000 in the BWR category – AREVA is in the planning stage for a new family of highly innovative and potentially cost-competitive reactors.

The Antares project (AREVA New Technology based on Advanced gas-cooled Reactors for Energy Supply), a continuation of R&D efforts and preliminary studies of past years, was launched in 2004. The aim is to develop a conceptual design for a new type of commercial reactor to generate electricity and supply heat for applications such as hydrogen production. The project is based on the concept of a very high temperature reactor cooled by gas (helium).

R&D work paralleling this project continued, and test batches of the fuel needed for this concept were made in the laboratory in partnership with the CEA. In addition, active technical involvement has positioned AREVA to be a potential player in the US Department of Energy’s future Next Generation Nuclear Plant (NGNP).

The high-temperature reactor (HTR) and very high-temperature reactor (VHTR) can supply heat directly to industrial and chemical processes (400-1,000°C) in addition to generating electric power. In the longer term, they can be used for the large-scale production of hydrogen without emitting greenhouse gases. These projects are being conducted cooperatively and in an international framework.

- Participating in the Generation IV initiative: The **Reactors & Services** Division is also conducting assessments of advanced technologies for other reactor types under the international research and development initiative known as Generation IV. Most of these reactor concepts are based on fast neutron spectra, which ensure the availability of energy resources for several centuries and pave the way to even greater reduction of final radioactive waste volumes. These concepts offer an effective and sustainable answer to the energy and environmental challenges of the future, but are not expected to be viable until the 2040 timeframe.
- Designing the fuel cycle facilities of the future: The fuels of the future for reactors such as the HTR could be very different from those of today. The **Front End** Division is conducting research on large-scale, cost-competitive fabrication processes for these fuels. To optimize back end operations, AREVA is assessing new handling systems for these fuels, made with innovative materials.

In collaboration with the CEA, AREVA is conducting research on advanced treatment technologies in connection with research mandated by the 1991 Bataille law on nuclear waste management. The goal is to design the fuel cycle facilities needed to support fourth generation reactors. Operating experience from AREVA facilities is an essential foundation for the definition of these research programs.

An emerging technology

Helion, a subsidiary of Technicatome, developed the first French 20 KWe fuel cell core, one year after the launch of the Helps 5 KWe core that won AREVA an innovation prize. The level of power achieved, combined with significant gains in terms of mass and volume density, opens up opportunities in backup units and anaerobic markets.

Transmission & Distribution

Research in this Division is very important because of the short cycles compared to the nuclear businesses. R&D is a key factor for competitive positioning. The Division spent 3.6% of its sales revenue on R&D in 2004. The main areas of research area are described below.

Power systems and equipment, including transformation and electrical current interruption (alternating current)

Today, the market demands transformers that have increased load capacity, and that deal with transitional operating conditions caused by short circuits and power surges. They must also provide reliable service and represent the best trade-off between technical performance and cost. In the field of current limitation,

the key to success lies in using a common interruption technology platform to streamline products. Good progress has already been made on the development of products and solutions for new markets. Geographic expansion in the United States means meeting ANSI standards, while in China and other fast-growing markets, compliance with local specifications is required.

Direct-current power electronics

This is certainly the most promising technology for the future of T&D's applications. It is evolving at a rapid rate, both in terms of the technology offered and in terms of its economics.

Optimizing existing power supply systems by increasing their capacity and then by improving sharing and allocation opportunities are both potential new applications for FACTS (Flexible Alternating Current Transmission Systems) in numerous already existing configurations. In addition, AREVA T&D is involved in several European research programs investigating materials that will be used in future power electronics applications.

Information systems and digital controls

Data processing has become an essential function in the quest to optimize the management and growth of the fast-paced electricity market. SCADA software (Supervisory Control And Data Acquisition) as well as asset management and energy trading software can deal in real time with total and available generation and transmission capacities, as well as with the delivery and pricing of energy transactions on the spot markets at times of peak demand. Integrated information and telecommunication systems must be able to manage these functions as well as new developments down the line.

The considerable changes in electronic technology over the past ten years have led to the widespread use of digitalization for intelligent electronic components (IED) and data exchange. A pilot facility incorporating a variety of IEDs already exists and is providing a full-scale demonstration of the complete integration of all of the automated equipment of a substation, and of communications between them via the IEC 61 850 standard.

Connectors

R&D programs in the **Connectors** Division aim to increase signal transmission quality and speed by addressing signal integrity, electromagnetic radiation from the environment and the connector's use in the system to make a better connector. This means constant awareness of changes in the architecture of customer systems. The Division spent 5.8% of its sales revenue on R&D in 2004.

Another path for R&D is to develop increasingly small connections in response to the reduction of space allocations and the increase in the number of connection points. This requires work on a variety of processes and technologies, including micro-molding, miniature slicing, careful selection of coatings and the development of new materials.

As transmission throughput and miniaturization increase, connectors have to meet higher reliability standards to tolerate increasingly demanding operating environments in terms of temperature and vibration. The Division's commitment to sustainable development has led to new solutions for the ergonomics of interconnecting connectors and to eliminate lead from coatings and halogens from plastics to the greatest possible extent.

Substantial effort is being expended on optimizing manufacturing processes to continue improving product competitiveness and quality. This research uses diagnostic tools and closed-loop monitoring of the processes.

Lastly, the use of modeling and simulation methods is on the rise to reduce product development costs and time. A system to track and share product and process data (Product Data Management) is also being introduced. Partnerships with manufacturing companies and universities have been established. The purpose: to acquire new technologies and speed up their integration within FCI.

Product development projects in 2004 were as follows:

- The Airmax™ high-speed, high-density board connector for telecom applications was launched, and new application opportunities in defense and aerospace have been identified;
- A new flex-to-flex connection was developed for car seat safety and comfort in partnership with one of the leaders in automotive technology and will be used in several car modules;
- The AWS Quicksleeve power connector was developed for rapid and durable repair of high voltage lines, allowing quick response to emergencies such as storms;
- Flat antennae for cordless radio connections were developed for use in passports and electronic passes containing biometric information, thus meeting a requirement of the American and European markets;
- A new composite coating consisting of metal and organic nano-particles was developed to reduce the insertion effort for electroplated connectors and is being integrated into new products.

4.13.2. Intellectual property and trademarks

Intellectual property, licenses, patents, trademarks and technical expertise in general play an important part in the Group's daily operations and thus in the production and protection of AREVA products, services and technology. Protecting knowledge and unique know-how requires a comprehensive system for developing and managing AREVA's intellectual assets in each Business Unit. This is also the key to negotiating successful technology transfer and process license agreements, now standard practice for large-scale international projects in the energy and connector industries.

Building a unified technology culture and asset base also means laying down principles that can be accepted by all Group entities. This involves defining a clear-cut set of rules for sharing innovative and mature technologies among the group's entities, with the goal being to ensure optimum use and valuation while establishing equitable compensation mechanisms.

Considering the strategic importance of adequately protecting the AREVA group's intellectual assets, in 2004 efforts focused on pooling resources and strengthening the intellectual property role of the Group's entities. The AREVA group has a portfolio of nearly 15,000 patents. In 2004, the AREVA group submitted 214 patent applications, including 98 from FCI, 66 from Framatome -ANP, 29 from AREVA T&D, 18 from COGEMA and 3 from Technicatome.

AREVA's intellectual property program covers every aspect of the Group's intellectual property portfolio, irrespective of their eligibility for patent protection. To meet the specific needs of each Business Unit, various methods are used to protect the Group's know-how and technology.

For instance, patents are not necessarily an answer for protecting large system designs, such as nuclear reactors, where most of the body of knowledge is integrated into codes that are essentially useless without the experimental data bases that validate them. This process creates entry barriers for new competitors and reduces the advantage of protection through numerous and costly patents that provide only a relatively modest increase in the level of protection.

Engineering know-how is generally contained in process manuals delivered to customers at the same time as the facilities. Naturally, customers are not allowed to divulge the knowledge contained

in these process manuals to third parties. However, some key elements of process and equipment may be patented. More than 100 patents protect processes used at La Hague, many of whose numerous technologies have been exported to Japan. Measurement and monitoring equipment, such as nuclear detection equipment, non-destructive testing equipment and control systems, use innovative technology that is usually patented. In nuclear technology, inventions to improve radiation protection or to reduce radiation exposure during maintenance and repair operations on site contribute to AREVA's competitive advantage, particularly in the cleanup business, in logistics and in Decommissioning. These technologies may not be systematically patented when sufficiently effective protection can be achieved through confidentiality agreements or limitations on the dissemination of operating procedures.

In Connectors, design and manufacturing technologies are key discriminators for a competitive advantage. All inventions are systematically protected. Because the product life cycle is relatively short, attempts to violate patent protections are monitored and quick action is taken to defend intellectual property rights.

The choice of a unifying name for the Group's entities was a crucial issue when the Group was established and has now crystallized with the "AREVA" name. This name is the property of the holding company, whose legal name remains *Société des participations du Commissariat à l'Energie Atomique*.

"AREVA" is a registered trademark in France and in more than 70 other countries. The holding company closely monitors use of the brand name, trademark and domain names, and takes legal action in the event of infringement of its rights to this essential component of its image and intellectual assets. At the end of 2004, nearly all of the applications relating to the nuclear businesses and connectors received final registration under the AREVA trademark.

The unifying nature of the AREVA name means that, in practice, each subsidiary now operates under the name AREVA. Older trademarks and domain names, such as COGEMA, still appear next to the AREVA name and continue to be managed by the first-tier subsidiaries, which have their own portfolios of trademarks and domain names.

The acquisition of Alstom T&D in January 2004 modifies the scope, organization and management of the AREVA group's intellectual property.

Alstom T&D has a new legal name, AREVA T&D, which has been given to all of its subsidiaries. This launched a new wave of filings for the AREVA brand name in countries where T&D is active but AREVA was not yet established, and in new product classes specific to T&D operations.

» 4.14. Risk and insurance

4.14.1. Overall organization of risk management

4.14.1.1. Organization of Risk Management and Insurance department

AREVA has a group-wide policy for financial hedging and insurance aimed at preventing and reducing the consequences of certain potential events on its earnings. The Group has an operational risk management program to identify, prevent and protect itself from risk and a financial risk management program consisting of on-market transfer and self insurance to mutualize risk.

AREVA's Risk Management and Insurance department implements the risk management policy laid out by the Group's Executive Board. The department establishes methodologies to ensure consistent treatment of risk among the subsidiaries and promotes the use and exchange of best practices. The Risk Management and Insurance department assesses and covers risk at the Group level, in particular by implementing comprehensive, worldwide programs to insure risks, with financing transferred to the insurance market.

The Risk Management and Insurance department includes a risk function and an insurance function within each subsidiary, which work alongside the functional departments and Business Units. Together, they establish shared principles, implement the action plan of the Risk Management and Insurance department in their respective companies, and draw up the necessary summaries and reports to each subsidiary's management.

4.14.1.2. Risk mapping

The Group mapped its risks when it was established in 2001. The risk map is updated each year as part of AREVA's corporate risk management program, which is founded on risk identification and, more importantly, on appropriate prevention and/or protection measures determined at the operating unit level and at the functional department level.

To implement the risk management initiative, AREVA's Risk Management and Insurance department establishes a common

set of methodological tools and management criteria; it designates a risk management and insurance coordinator within each Business Unit and, as applicable, within each sector and functional department to ensure a seamless organization; and it provides the necessary training to use the tools, roll out the initiative and follow up on action plans. The risk maps are presented every year to the management committee of the entities and to the executive committees of the first-tier subsidiaries, and subsequently to the AREVA Executive Committee. The risk maps are also presented to AREVA's Audit Committee.

AREVA T&D risks are in the process of being mapped.

The Group's multi-year audit plan builds on risk mapping results, which are updated annually. Ongoing follow-up is ensured by the Audit department through regular audits of the Group's affiliates as well as of the Risk Management and Insurance department.

4.14.1.3. Risk management

The concept of risk applies as much to the operations of each of the Group's entities (control of normal operating risks affecting performance, based on prior decisions, and affecting specific situations) as to the achievement of their goals and business strategy (taking a risk from which a profit is expected).

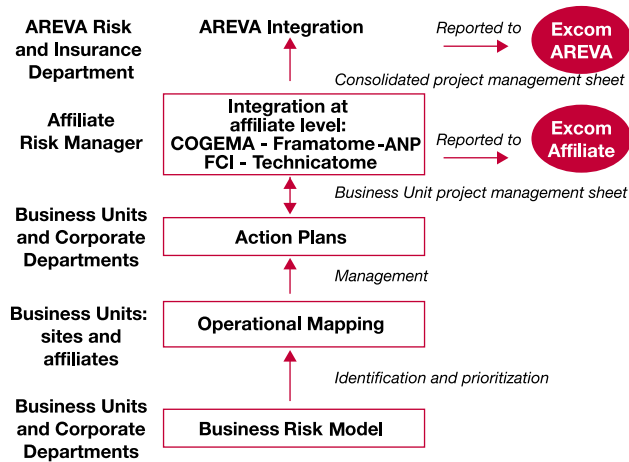
In both cases, risk management arises from a shared methodology, starting with risk analysis. The objective is to manage the risk, from cradle to grave.

To do this, the Business Units establish "operational roadmaps", which serve as a basis for proposing and carrying out "action plans".

Managing normal risk entails:

- An ongoing documented process of risk identification, analysis, ranking, optimization, funding and monitoring;
- A broad program covering all of the Group's activities, both operational (manufacturing, sales, projects, services, etc.) and functional (finance, legal, contractual, organizational, human resources, etc.);
- Contributing to resource optimization and cost reduction; and
- Developing business continuity and emergency management plans.

Risk management process of the AREVA group



The first step in Risk management is to identify and formulate the risk, as illustrated in the figure above. To this end, the Group has drawn up a Business Risk Model (BRM) for use by its Business Units. Working from a limited number of typical risks or families of risk (BRM risk), the model indexes all of the foreseeable or unexpected situations or events that could have an impact on employee safety, the financial performance of the Business Unit, those of the subsidiary or even of the Group, and its corporate image. Each BRM risk encompasses a single set of issues.

The BRM can be enhanced based on best practices and lessons learned.

Using the BRM as a starting point, each Business Unit establishes an operational risk map that graphically illustrates the severity of its risks and the level of management at any given moment. The Business Unit can then define criteria for appropriate action plans to reduce each risk and render any residual risk acceptable to the Group.

The Business Units are thus responsible for analyzing, ranking and managing their risks by implementing action plans using appropriate means.

Each subsidiary's Risk Management department, each within its own area of expertise, provides its management with a picture of risks for the entire Business Unit and how the Business Unit is managing them. Each subsidiary's Executive Committee is then informed of the status of action plans and decides which risks affect the Group's strategic objectives. This approach is being deployed throughout the Group.

The Group is particularly concerned with accountability in risk management. This concern is primarily addressed through active participation in the local information commissions (CLI) set up at all of the Group's large risk-prone sites; through publication of environmental monitoring results by the main sites; and, more generally, through implementation of AREVA's Nuclear Safety Charter and of the Group's sustainable development initiative.

4.14.2. Managing risk related to the Group's nuclear operations

By regulation, production facilities operated by AREVA are classified into various categories by level of risk and quantity of nuclear materials.

In addition to preventing and countering malicious acts and implementing public safety measures in the event of an accident, ensuring facility safety means:

- protecting workers, members of the public and the environment from the harmful effects of radiation (radiation protection); and
- preventing accidents and/or limiting their impacts (nuclear safety).

4.14.2.1. Regulations applicable to the Group's nuclear facilities in France and abroad

General regulations

Group operations are subject to constantly changing national and international regulations that are becoming increasingly stringent in the areas of nuclear and environmental safety. The Group considers itself to be in overall compliance with these regulations. The licensed nuclear facilities (INB, see Glossary) and related facilities of the AREVA group are presented in the table in paragraph 4.14.2.2.

The International Atomic Energy Agency (IAEA) and the European Commission have each established their own international system for nuclear materials safeguards. Other international agreements, adopted under the umbrella of the IAEA, govern nuclear safety in the facilities. These agreements include the Convention on Nuclear Safety (CNS) and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

With respect to the European Union, the provisions of the Euratom Treaty and its implementing regulations have reinforced the aspects relating to nuclear materials safeguards and to the establishment of unified rules for radiation protection of the public and workers and for the transport of radioactive waste.

In France, the licensed nuclear facilities operated by the Group are subject to the provisions of Decree 63-1228 of December 11, 1963, as amended, establishing a specific program for licensed nuclear facilities (INB); by those of Decree 95-540 of May 4, 1995 relating to liquid and gaseous effluents from and water usage by INBs; and by implementing regulations. This legal framework strictly regulates the construction, operation, shut-down and decommissioning of nuclear facilities through the issuance of specific licenses, and governs in particular nuclear safety and quality assurance, environmental protection, and the monitoring of radioactive and non-radioactive releases.

Similar provisions govern licensed nuclear defense facilities in France (INBS) operated by the Group (see Decree n°2001-592 of July 5, 2001, regarding safety and radiation protection for defense facilities and operations). However, the laws and regulations governing those facilities have been adapted to protect classified national defense information.

Licensed nuclear facilities are subject to strict monitoring by the French Nuclear Safety Authority ASN (*Autorité de sûreté nucléaire*). This entity comprises, on the one hand, a Central Administrative Directorate in charge of Nuclear Safety and radiation protection (DGSNR), overseen, in matters of nuclear safety, by the ministers of Industry, the Environment and Sustainable Development and, on the other hand, in matters of radiation protection, by autonomous government departments (DRIRE, DRASS and DDASS) overseen by the minister of Health. The ASN is in charge of technical and regulatory inspections relative to nuclear safety and radiation protection. Operations abroad are subject to the same type of stringent inspection procedures by, for example, the Nuclear Regulatory Commission (NRC) in the United States.

Licensed nuclear defense facilities (INBS) are monitored by the DSND, a Nuclear Safety and Radiation Protection Delegation for defense-related operations and facilities, which reports to the ministers of Defense and Industry.

In addition, some of the Group's French operations are governed by regulations pertaining to facilities that are classified for environmental protection (see the provisions of articles L. 511-1 et seq. of the French Environmental Code, and Decree n° 77-1133 of September 21, 1977, as amended, implementing Law n° 76-663 of July 19, 1976 pertaining to facilities classified for environmental protection), and are therefore subject to specific design and operation requirements concerning risk management and environmental protection.

The Group is also subject to regulations pertaining to the radiation protection of employees, subcontractors and the public, which are enforced through a system of exposure limits set by the French Labor and Health Codes.

Other international and national legislation and regulations govern nuclear materials safeguards and controls, in particular the October 28, 1979 Convention on the Physical Protection of Nuclear Material, articles L.1333-1 through L.1333-14 of the French Defense Code, and Decree n° 81-512 of May 12, 1981 pertaining to the protection and monitoring of nuclear materials; regulations on the transportation of radioactive materials, including ADR, RID and ADNDR (see Glossary); and Council directive 92/3 Euratom of February 3, 1992 pertaining to the monitoring and control of radioactive waste transfers between member States and the waste's entry into and exit from the Community (see also the Section on "Regulations governing radioactive waste" below).

Similar regulations provide for strict oversight of the facilities and facility operations by the appropriate authorities in countries in which the Group operates nuclear facilities, including Belgium, Germany and the United States.

Regulations governing decommissioning obligations

In this annual report, decommissioning obligations include any and all obligations connected with the shut-down and dismantling of nuclear facilities and the management of the related nuclear waste (see Glossary).

The accounting treatment for decommissioning obligations is explained in Note 22 of the notes to the consolidated financial statements.

Regulations governing decommissioning operations

In France, decommissioning operations are governed by a legal framework that largely stems from the above-mentioned decree of December 11, 1963 pertaining to nuclear facilities. More recently, a DGSNR memorandum dated February 3, 2003 specified the terms of the decree's article 6 ter on facility shut-down and dismantling operations. Also, the September 5, 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, adopted under the auspices of the IAEA, contains provisions regarding the decommissioning of nuclear facilities.

As the operating license holder, the operator of a nuclear facility is the legal entity in charge of facility operations and, therefore, of decommissioning procedures.

The operator must inform the DGSNR of its intention to shut down a licensed nuclear facility definitively, of the status chosen for the shut-down facility, and of the decommissioning operations to be implemented. The decision authorizing decommissioning and specifying related procedures is made by decree pursuant to conditions stipulated in the above-mentioned legislation. The operator is in charge of the decommissioning schedule and process for the facility it operates, subject to the inspection of the DGSNR. The DGSNR validates each stage of the decommissioning process.

The decommissioning process may take several decades, depending on the facility, and includes work stages as well as monitoring stages when there are practically no operations. Decommissioning involves a series of operations, from the shut-down of the nuclear facility to the administrative decision to release the site, at which time it can generally be put to new industrial use. The decommissioning of licensed nuclear facilities is based on three different technical levels, as defined by the IAEA in 1980:

- *Stage 1 (storage with surveillance)*: radioactive materials required for or resulting from operations are removed and circuits are drained and rinsed. The first containment barrier is preserved intact, access to the interior of the buildings is monitored, and the facility is monitored continuously and tested periodically;
- *Stage 2 (restricted site release)*: the facility is decontaminated more thoroughly; highly radioactive areas are sealed off; containment barriers are reinforced if necessary; most of the equipment is taken out of service, except for necessary monitoring equipment; and certain areas of the facility may become available for other uses;
- *Stage 3 (unrestricted site release)*: the site is released totally and unconditionally.

The level of decommissioning depends, in particular, on how the site will be subsequently used.

In the United States, Germany and Belgium, where the Group operates four nuclear facilities, decommissioning regulations are based on principles that are largely similar to those of France.

Regulations governing radioactive waste

Waste generated by nuclear operations or by the decommissioning of licensed nuclear facilities is regulated in France by framework legislation on waste (articles L. 541-1

et seq. of the French Environmental Code) and, due to their radioactivity, by special provisions. At the international level, waste is primarily regulated by the September 5, 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

The producer or holder of waste generated by nuclear power operations or dismantling operations has an obligation to process and dispose of such waste (articles L. 541-2 of the French Environmental Code). Radioactive waste from licensed nuclear facilities (INBs) is also subject to the provisions of the order dated December 31, 1999, establishing technical regulations to prevent and limit hazards and impacts outside the INBs. In particular, the order requires producers of such waste to prepare a “waste study” that is subject to approval by DGSNR (the Nuclear Safety Authority), and to set up a zoning system to identify various waste disposition methods and to ensure waste traceability.

High level radioactive waste (HLW) is subject to the provisions of articles L. 542-1 to L. 542-14 of the French Environmental Code, which set forth principles applicable to research on processing and disposal solutions for this type of waste, in particular deep geologic disposal solutions. The French Government must present the French Parliament with a global assessment of the research before December 30, 2006, along with draft legislation authorizing the creation of a high level waste disposal facility as appropriate.

4.1.4.2.2. Nuclear safety in the Group's nuclear facilities

Definition

Nuclear safety encompasses every phase of the cycle, including site selection, facility design, construction, start-up, operation, shut-down and decommissioning. It also applies to nuclear materials transportation. Nuclear safety is based on technical design bases and on operating procedures.

These design bases and procedures are designed to:

- ensure normal facility operations,
- prevent incidents and accidents, and
- limit their consequences.

The first objective of any nuclear facility safety measure is to prevent the dissemination of radioactive substances under all circumstances and to minimize the impacts of radiation on the public and the environment.

Organization

Nuclear safety is an absolute priority for AREVA. This commitment is based on AREVA's prime responsibility as an operator and translates into rules applicable to the entire Group:

- a system of clearly defined responsibilities,
- a support structure skilled in nuclear safety, and
- an organization that can be adapted to emergency management.

These organizational principles have been described in a Nuclear Safety Charter whose purpose is to set forth the Group's commitments in the field of nuclear safety and radiation

protection so as to ensure that this requirement is met throughout the life cycle of the facilities.

To maximize nuclear safety, AREVA also established a corps of nuclear safety inspectors.

General Inspectorate and Nuclear Safety department

The Executive Board created a General Inspectorate and Nuclear Safety department in 2001 headed by a General Inspector. Its mission is twofold:

- Inspection: six inspectors with previous operating responsibilities monitor the facilities independently of the operator. They can ask that a facility be shut down. They report to the Executive Board.
- Technical expertise: eight nuclear safety specialists coordinate a network of expertise on specific site issues such as waste, fire hazards and radiation protection.

Licensed nuclear facilities of the AREVA group

AREVA's main licensed nuclear facilities (INB under the French acronym) are:

Location	Business Unit	Description
Front End Division		
Romans, France	Fuel	Fuel fabrication
Dessel, Belgium	Fuel	Natural uranium fuel and Mox fuel fabrication
Lingen, Germany	Fuel	Fuel fabrication / Storage of uranium hexafluoride (UF ₆) cylinders
Richland, USA	Fuel	Fuel fabrication
Lynchburg, USA	Fuel	Fuel fabrication
Miramas, France	Chemistry	Depleted uranium storage (storage emptied)
Pierrelatte, France	Chemistry	Preparation of UF ₆
Pierrelatte, France	Chemistry	Conversion of uranyl nitrate into uranium sesquioxide
Pierrelatte, France	Enrichment	Georges-Besse plant – Isotopic separation of uranium by gaseous diffusion
Pierrelatte, France	Enrichment	Uranium decontamination and recovery
Pierrelatte, France	Chemistry	Conversion of enriched uranium-bearing materials
Reactors & Services Division		
Maubeuge, France	Equipment	Fuel fabrication (undergoing final shut-down)
Back End Division		
Veurey, France	Treatment	Experimental facilities
Veurey, France	Treatment	Uranium oxide pellet manufacturing facility
La Hague, France	Treatment	Irradiated fuel treatment plant and liquid/solid effluent treatment station
Marcoule, France	Recycling	Melox – Mox fuel fabrication
Marcoule, France	Treatment	Irradiated fuel treatment plant undergoing dismantling

AREVA does not operate any nuclear power plants. Its operations consist of supplying, converting and treating nuclear materials.

4.14.2.3. Nuclear risk management and prevention

The guidelines for facility risk management are listed below:

- Identifying risks

The list of risks is developed from long experience in nuclear safety analysis and is submitted to the nuclear safety authorities as part of the licensing process applicable to the facilities.

- Designing facilities for risk management

The facilities are designed to confine radioactive materials by introducing a series of barriers between the materials and the environment.

- Demonstrating risk management

It must be demonstrated that facility and equipment designs meet the objectives set by the safety authorities.

Several types of nuclear safety-related risks are identified and their consequences are systematically analyzed and evaluated as part of the licensing process for facility operations, based in particular on the items presented below:

Nuclear risk

Nuclear risk corresponds to events characteristic of radioactive materials.

Radioactive materials dispersion that can result in contamination

Uncontained radioactive materials can disperse and lead to human and environmental contamination.

To control this risk, the first priority is to prevent the dispersion of radioactive materials in any form whatsoever (solid, liquid, gaseous) and under all operating conditions (normal or accidental).

Facilities are designed with "containment systems" that prevent the dispersion of radioactive materials. For example, the radioactive materials are surrounded by a series of barriers at varying levels of negative pressure, which channel air from the outside towards the secondary containment system and then the primary containment system. This cleans the air in each containment system. Contaminating elements are filtered before the air is released from the facilities.

The efficacy of these containment systems is verified before facility start-up and is periodically checked to keep them in working order. Considerable effort went into designing maintenance operations that could be performed without breaching the integrity of the containment system. The design concept was based on the use of special systems for replacement operations.

Ionizing radiation

If a person comes into the path of ionizing radiation emitted by radioactive materials, there is a risk of external exposure.

The effect of radiation on the human body is expressed in millisieverts (mSv). In the European Union, the maximum annual dose authorized by regulations is 1 mSv per year for the general public and 20 millisieverts per year for nuclear workers. In the United States, the limit is 1 millisieverts per year for the public and 50 millisieverts per year for nuclear workers.

The Group's goal is to adhere to the European Union standard of 20 millisieverts per year for all workers and subcontractors, including operations outside of the European Community.

The main protection measures are as follows:

- For fixed radiation sources, standard work stations are defined with corresponding maximum exposures. The maximum acceptable exposure decreases in inverse proportion to the estimated duration of the work performed. Shielding is installed to limit radiation and to comply with authorized dose limits.
- For mobile radiation sources, the shielding for casks allowed on public roadways is defined in the transportation regulations. Work stations are designed to minimize the time spent by personnel or the presence of the source, and include additional shielding.

The Group is also dedicated to complying with the ALARA principle (As Low As Reasonably Achievable), which holds that any reasonable technical or organizational action will be taken to reduce exposure to radiation. The radiation protection departments continually verify compliance with this principle.

Every nuclear worker and operator is monitored closely, both medically and radiologically. Their knowledge is maintained at the requisite level through regular training programs.

Average radiation doses for Group employees were significantly below the European Union dose limit for employees of 20 millisieverts per year, at 1.41 millisieverts in 2003 and 1.37 millisieverts in 2004, demonstrating good radiation protection performance as a result of the practices outlined above.

Criticality

The criticality risk is the risk of an uncontrolled chain reaction with a brief and intense emission of neutrons. This risk, should it occur, would result in irradiation of workers or individuals located near the event, causing lesions proportional in seriousness to the intensity of the radiation received.

This risk is factored into the design of any facility that will receive fissile materials.

In this case, risk prevention is based on limiting the factors leading to uncontrolled chain reactions through “criticality control modes”. The control mode most suited to the process – limitation of the mass, volume or geometry of equipment containing the materials – is used.

In the facility’s most radioactive areas, shielding is installed for normal operations; it drastically reduces the impacts of a potential criticality accident on workers. For other situations, preventive measures are sometimes supplemented with the installation of a detection and measurement network and alarm system for criticality accidents.

During transportation, nuclear safety and criticality are monitored under both normal and accidental operating conditions. Regulations stipulate rules for storage during transit, particularly in terms of the criticality risk.

Radiolysis

Radiolysis is the radiation-induced decomposition of a chemical compound into hydrogen. Measures are taken to prevent a potential explosion of the hydrogen that could result in the dispersion of radioactive materials.

In normal operating mode, facilities are designed to limit hydrogen concentrations to less than half of the lower flammability limit by flushing the equipment with air. If there is a loss of normal flushing capacity, causing concentrations to rise to the limit value within a few hours or tens of hours, a backup system comes on line.

Thermal releases

Matter absorbs the energy released by intense radiation, which can lead to a temperature increase. The energy is removed to control the temperature increase and to prevent the dispersion of radioactive materials. Cooling is provided by redundant cooling systems with heat exchangers and ventilation systems.

Non-nuclear risks of internal origin

Events associated with facility operations and the presence of personnel give rise to non-nuclear risks. These events are common to any industrial operation. Since such incidents could affect equipment important to nuclear safety, strong prevention measures are taken in the nuclear industry. The causes of these events can be controlled and their consequences minimized.

Handling

Handling equipment consists of lifting, transfer and positioning equipment.

The main failures include the breakdown of lifting equipment, poorly secured loads, collision with an obstacle and derailment of a transfer mechanism. The consequences may be direct, such as the loss of load integrity, or indirect, and cause a containment failure or the destruction of equipment containing radioactive materials.

In this case, risk management involves analyzing failure modes for process equipment used to transfer loads containing radioactive materials and for maintenance handling equipment. It also means establishing stringent rules to prevent risk (equipment design, preventive maintenance, inspections, operator certification, etc.).

Limiting the consequences of a handling failure means limiting transport height, designing objects that withstand a fall, strengthening loads and dissipating energy.

Fire

Fire can cause the loss of certain process or shielding functions, with potential radiological consequences.

The potential consequences include contamination due to failure of the containment barriers, irradiation due to destruction of radiation shielding, and a criticality accident.

Risk prevention consists of preventing the simultaneous presence of flammable materials, fuel and a source of ignition in the same location.

In the event of a fire, safety functions are protected by compartmentalizing work areas to limit fire propagation, using fire-retardant materials, insulating ventilation systems, and installing a remotely-operable fire extinction system in each sector. In addition, firefighters must be able to intervene within a short interval of time to prevent radiological impacts outside the buildings.

Internal explosion

The risk of explosion is linked either to the use of reagents or to the occurrence of chemical reactions.

An explosion could result in the deterioration of the primary containment system, causing the dispersion of radioactive products outside the primary containment system. The secondary containment system is designed to collect any products that may have been released.

Prevention is based on measures to prevent conditions conducive to an explosive reaction, including limiting the temperature of flammable products used in the process, limiting the concentration of products that may cause an explosive reaction

through proper ventilation, eliminating traces of reagents before any new processing step is undertaken, and controlling the quantity of reagents present in each facility.

Use of chemical reagents (characteristics of UF₆)

To address the potential impacts of chemical reagent use on plant personnel and the environment, prevention and monitoring are based on principles already applied to other types of risk (e.g. explosion and fire), combined with principles relating to external explosion and radioactive materials dispersion.

The use of reagents in a process can create additional risk by bringing incompatible products into contact with each other. A chemical product can be hazardous, either through direct contact or by inhaling its fumes.

These characteristics must be taken into account in the packaging, storage and use of reagents, and in worker protection.

Characteristics of UF₆

Uranium is handled in the chemical form of UF₆, which is a solid at normal temperatures and pressures, and gaseous when heated. UF₆ can react when it comes into contact with water vapor in the air, forming uranium oxide and hydrofluoric acid, an element that is highly toxic to humans and animals.

Considering the quantities handled at the production sites, the risks inherent in UF₆ were factored into the design of the facilities (dual containment barrier, automated monitoring of high-risk areas, etc.).

Use of electricity

Risk prevention related to the use of electricity is based on facility compliance with prescribed industry standards, compliance with maintenance instructions and procedures, and periodic facility inspections.

Use of pressure vessels

The prevention of pressure spikes is based on compliance with industry regulations for accessible equipment and on additional requirements for inaccessible equipment. Impacts are minimized through leak detection, feed interruption and personnel evacuation.

Internal flooding

The internal flooding risk derives from the presence of fluids inside the facilities. Leak rates are limited by design. The deterioration of seals, corrosion and overflows are potential sources of leaks.

The main radiological risk following flooding is criticality. For areas in which it can occur, this risk is factored into the design and operation of the facilities.

Non-nuclear risks of external origin

Non-nuclear risks of external origin are specific to the facility's environment. Unlike risks of internal origin, it is not always possible to act on the causes of these events; safety is based primarily on controlling the consequences.

A non-nuclear event of external origin may have direct or indirect radiological consequences.

Earthquakes

Earthquakes can cause damage that could disable nuclear safety systems.

The risk of an earthquake affecting facilities in which nuclear materials are handled is incorporated into the design of the equipment, systems and facilities based on the "design basis earthquake". The risk analysis consists of demonstrating that damage affecting the nuclear safety of the facility is unlikely to occur. The design basis and risk analyses are included in the safety analysis report for the facility, which is approved by the competent safety authorities.

An assessment of the impacts of an earthquake has been performed for all of AREVA's nuclear facilities, in accordance with applicable standards and regulations.

Airplane crashes

This risk concerns the crash of an airplane, or part of an airplane, on a facility. It is a function of the type and number of aircraft that could reach the site without being detected and of the surface area of sensitive areas in each facility.

The key features of the sites are that:

- they are located away from controlled airspace,
- they are located away from operating areas for defense equipment, and
- there is no nearby airport.

Safety studies factoring in airspace use, type of flights, known crash statistics and even deliberate attack are carried out to prevent this risk and limit its consequences.

Special measures are taken to protect nuclear facilities from terrorism; these measures have been strengthened under the national security plan known as *Vigipirate*.

For security reasons, these measures may not be disclosed to the public.

Adverse meteorological conditions

Most equipment is located inside sturdy buildings. Weather conditions have very little impact on their operation.

Advance warning is given for any threatening weather conditions, and instructions are in place for each facility on additional measures to be taken, such as increased monitoring or other specific action.

External flooding

Some sites are located in areas where the flood risk exceeds the one thousand year flood level. The unusual flooding of the fall of 2002 had a limited impact on the Group's French facilities. Nonetheless, an action plan was implemented in 2002 to reduce the remaining risk even further.

Other nuclear safety items

In addition to the various types of risk identified above, nuclear safety also applies to nuclear materials transportation and to the non-proliferation of those materials.

Nuclear materials transportation

Radioactive materials are transported on public thoroughfares. Like other nuclear operations, these shipments are subject to the "defense in depth" concept to protect the general public and the environment from radiation hazards during transportation. This concept consists of establishing a series of barriers between the radioactive materials and the environment, including physical safety systems, but also procedures, technical and administrative controls, and other measures. The design of the transport cask is the main component of this safety system. As with any nuclear operation, transportation is governed by stringent international regulations.

According to the regulations, the cask must ensure nuclear materials containment and provide radiation shielding under both normal and accidental operating conditions. When fissile materials are transported, the cask must also maintain sub-critical conditions. The regulatory requirements for casks apply to design, manufacturing and inspections during operations and maintenance. The larger the amount of radioactivity it contains, the stronger the cask must be.

It is AREVA's objective to ensure the highest level of nuclear and industrial safety during transportation. The Group's civil liability is covered through insurance, as described in paragraph 4.14.6.1.

Non-proliferation and protection of nuclear materials

Proliferation is the diversion of nuclear materials by third parties for non-peaceful purposes.

Non-proliferation is the common goal of all of the signatory countries of international agreements on this subject, in particular the Treaty on the Non-Proliferation of Nuclear Weapons of July 1, 1968. Non-proliferation requirements relate to the physical protection of nuclear materials per the Convention on the Physical Protection of Nuclear Material; to safeguards controls per the Euratom treaty, which established a nuclear material accounting system; and to inspection by the IAEA and Euratom. Compliance with these requirements is regularly verified, primarily by inspectors from the IAEA and Euratom.

To meet these requirements, AREVA has instituted measures designed to know, at all times, the amount, type, use and location of materials held at any given time by the Group's entities.

AREVA prepares reports requested by the European Commission and/or the IAEA to verify the origin and quantity of nuclear materials in the nuclear operator's possession. The record shows that these reports have always been approved by the competent national and international organizations with which they are filed.

4.14.2.4. Safety in Group facilities subject to "Seveso" laws in France

The Group operates eight sites regulated under "Seveso" laws, which implement European directive 96/82/EC of December 9, 1996 pertaining to the management of risks related to major accidents involving dangerous substances, as modified (the so-called "Seveso II" directive). The regulations apply to facilities that may present a significant risk to public health and safety or to the environment. Four of these eight sites, treated as "upper tier establishments" under the Seveso classification system, are subject to specific procedures. Those sites are operated by COGEMA (Pierrelatte site), Comurhex (Pierrelatte and Malvési sites) and Cezus (Jarrie site).

In accordance with regulatory requirements, all four sites have set up a plan to prevent major accidents of this type and to limit their impacts on individuals and on the environment. A safety management system governing the organization, procedures, products and other resources was set up to improve risk management.

Similarly, hazard studies have been performed. The studies are updated every five years and are the foundation of processes to minimize risk from the outset, control urban development, establish emergency management plans and inform the public. Hazard studies must include an analysis of the risks associated with the site in the event of deviation from operating parameters and demonstrate measures to reduce the potential occurrence and impacts of an accident, based on the best technologies available at reasonable cost. These documents have been

submitted to the regulatory authorities or are available for their review. The regulatory agency generally requests clarifications and additional information concerning these reports, and reputable independent experts may be asked to render an opinion on all or part of a document.

AREVA has launched a multi-year plan to strengthen risk prevention and manage the consequences of any major hypothetical accident. As part of the AREVA continuous improvement process, the relevance, reliability and “stand-alone” quality of safety barriers are reviewed on a regular basis. Performance improvement indicators are regularly monitored to prevent deviations. In addition, AREVA kicked off a program at the end of 2004 to harmonize procedures throughout the Group, capitalize on lessons learned and improve information on best practices.

With respect to insurance, COGEMA, Comurhex and Cezus are covered by the civil liability policy taken out by the AREVA group (see paragraph 4.14.6.). The level of coverage is based on quantification of reasonably expected risk and guarantees available in the insurance market.

With respect to compensation in the event of an industrial accident for which COGEMA, Comurhex or Cezus may be held liable, a management procedure is being developed with the underwriters of AREVA’s civil liability insurance program.

4.14.3. Risk factors

The Group may be exposed to risks other than those described below. Unidentified risks or risks that the Group considers to be insignificant may also affect its business. Any of these risks may have a significant detrimental impact on the Group’s business or financial position.

4.14.3.1. Risks related to the Nuclear divisions Through its nuclear operations, the Group is exposed to substantial liability risk and to potentially significant supplemental operating expenses.

The Group’s nuclear operations cover every stage of the nuclear cycle, including (i) uranium supply and processing, (ii) uranium enrichment, (iii) fuel fabrication, (iv) reactor design, construction, maintenance and performance improvement, (v) treatment of used fuel and recycling of reusable materials, (vi) waste packaging and storage, and (vii) logistics and transportation associated with these operations.

Though the Group has put in place strategies and procedures to control risk commensurate with the high standards for nuclear operations, the very nature of those operations involves risk. As a result, the Group may have substantial liability as the result

of, in particular, incidents and accidents; security breaches; acts of malice or terrorism; airplane crashes; natural disasters, such as floods or earthquakes; equipment malfunctions; and malfunctions in the storage, handling, processing and packaging of nuclear materials and substances (see paragraph 4.14.2.3.). Such events could have serious consequences, particularly due to radioactive contamination and/or irradiation of the environment, of individuals working for the Group or of the general public, as well as a significant negative impact on the Group’s operations and financial position.

The Group’s operations also involve processes that use various toxic chemical compounds in significant quantities and radioactive materials such as uranium hexafluoride (UF₆). The transportation of nuclear materials by sea, train, road and air, which is handled by the Group’s logistics Business Unit, also entails specific risks, including potential environmental contamination resulting from transportation accidents. In addition, some of the plants of the chemistry and enrichment Business Units are located in areas subject to flooding, particularly those in the Rhone valley. The Group does not always control the factors that influence the severity of a potential accident involving one of the Group’s plants or affecting the transportation of materials; those factors include the type of radioactive materials dispersed in the environment, the rapidity of corrective actions and weather conditions. The occurrence of one or more of these events could have a significant negative impact on the Group’s operations and financial position (see paragraph 4.14.6. on coverage and insurance).

Changes in existing or future regulations, particularly environmental, health or nuclear safety regulations, and modifications to the Group’s permits and licenses, could result in new compliance obligations or operating conditions for the Group, with a potential increase in costs or expenses.

The Group’s operations require permits and operating licenses subject to local regulations. In particular, these operations require licenses relating to production capacities and effluent releases to the environment. The Group must operate within the limits set in the operating permits and in applicable legislation and regulations, especially with respect to environmental protection, worker protection, health and nuclear safety. The Group can be subject to sanctions, mainly administrative sanctions, in the event of an incident requiring an investigation, or of excessive deviation in actual facility conditions in relation to regulatory requirements or operating permits and licenses. Such sanctions include but are not limited to temporary suspension of an operating permit or license, or orders to comply with regulations or to restore normal operating conditions. In addition, damage to

the environment, to public health or to occupational safety, or nonconformities in operating conditions at Group facilities could result in liabilities with regard to third parties and government agencies.

Moreover, new national or international standards, or a strengthening of or change in legislation or regulations, particularly in areas such as environmental protection, health and industrial safety or nuclear safety, could require that group facilities be brought into compliance, which could have a significant negative impact on the Group's operations or financial position.

In addition, the Group's current or future applications for permits or licenses to modify or expand industrial operations could be denied, thus limiting AREVA's development, particularly with respect to Mox fuel fabrication at the Melox plant.

The Group must bear the full or partial cost of nuclear facility decommissioning, mine site reclamation and remediation of plant sites at the end of operations. Provisions have been recorded to cover the estimated costs, but actual costs could be significantly different.

As an operator of nuclear facilities as well as industrial facilities covered by legislation on environmentally regulated sites, the Group is legally obligated to stabilize, dismantle or remediate its facilities after shut-down, in whole or in part, and to manage the products resulting from these operations (see paragraph 4.14.2.1.). As a mine operator, it must also provide for closure, remediation or reclamation at the end of the operating period.

Future expenses relating to decommissioning obligations at nuclear facilities and to remediation of regulated industrial facilities and mines have been identified, and special provisions have been recorded to cover decommissioning obligations in the amount of €8,258 million, including €3,948 million for AREVA's share of said expenses. The provisions and their accounting methods are explained in Notes 10, 13 and 22 of the notes to the consolidated financial statements. Under the International Financial Reporting Standards (IFRS) coming into effect on January 1, 2005, and based on the discounted value of expenses associated with decommissioning obligations, the provisions amount to €2,317 million, as outlined in paragraph 5.1.9.3.

The Group considers that it has recorded all of the provisions required to cover all of the expenses that could reasonably be estimated as of December 31, 2004 relating to the decommissioning of its nuclear facilities and to the remediation of its industrial sites. These provisions are based on estimates of future costs developed by the Group taking into account, by definition, a series of assumptions (see note 22 of the notes to

the consolidated financial statements). However, it is not possible to affirm with certainty that the provisions currently recorded will be sufficient to cover the Group's obligations. Actual costs borne by the Group could be higher than initially estimated, especially due to changing legislation and regulations applicable to nuclear operations and environmental protection, to their interpretation by the courts, and to the growing body of scientific and technical knowledge. These costs also depend on regulatory decisions concerning, in particular, dismantling methods, and on the choice and cost of solutions for the final disposal of certain types of radioactive waste. AREVA's cost estimates for these solutions differ from the estimates prepared by Andra (see Note 22 of the notes to the consolidated financial statements). It is therefore possible that these future obligations and potential expenses or potential additional future liability of a nuclear or environmental nature could have a significant negative impact on the Group's financial position.

Third parties are responsible for a portion of the decommissioning costs. COGEMA and EDF are currently negotiating to define legal and financial terms for the transfer to the Group of EDF's share of dismantling obligations concerning facilities shut down at the UP₂ 400 plant or in operation at the UP₂ 800 and UP₃ plants at La Hague. Elements concerning the updated base cost estimate for the dismantling of those facilities and the respective share of decommissioning expenses to be funded by each party were already documented in a July 2003 statement of joint conclusions accepted by both EDF and COGEMA. These negotiations could conclude with a lump-sum payment settling all of EDF's obligations. The negotiations also concern the retrieval and packaging of waste at the La Hague and Saint-Laurent-des-Eaux sites. Discussions continued in 2004, but the terms of an overall agreement had not been finalized by the filing date of this report. It is difficult to predict the outcome of these negotiations. Though AREVA does not anticipate a significant impact on its financial statements or financial position, the cost ultimately to be borne by the Group may exceed the amount currently contemplated in the provisions.

Used fuel treatment contracts call for the final waste and residues from those operations to be allocated to and retrieved by the original waste generator. However, as the holder of the nuclear waste generated by its customers, AREVA could remain liable if a customer defaults or files for bankruptcy. For waste of foreign origin stored at La Hague, international agreements provide for all waste to be returned to the country of origin, while the provisions of Article L. 542-2 of the French Environmental Code, issued pursuant to the law of December 30, 1991, prohibit the final disposal of imported radioactive waste in France. Despite these rules, the Group could be exposed to the risk of having to store this waste.

Should any of these risks become a reality, this could have a significant negative impact on the Group's financial position.

The Group is exposed to the risk that assets held to fund decommissioning expenses could be insufficient to cover its obligations.

At December 31, 2004, the Group held a portfolio of financial assets to fund its future decommissioning obligations estimated at €2,398 million. At December 31, 2004, 25% of the portfolio was comprised of mutual funds invested in bonds and money market instruments. The largest share of the portfolio, representing 75%, was invested in European equities through direct investment in publicly traded French companies or through mutual funds invested in European equities. Taking into account assets and liabilities corresponding to settlement payments to be made to or received from the CEA and the valuation of the portfolio, the net available value of the financial assets in the portfolio was estimated at €2,293 million at December 31, 2004.

Considering the intrinsic volatility of equity markets, the value of the portfolio could decrease and/or provide a return insufficient to fund the Group's potential decommissioning obligations. Under such circumstances, the Group would have to rely on other financial resources to cover these obligations, with a potentially significant negative impact on the Group's financial position and earnings.

The change in portfolio value resulting from fluctuations in equity and/or interest rate markets is as follows:

	Portfolio value: impact from fluctuations in equity and interest rate markets	Portfolio market value (excluding income tax on unrealized gains)
Low		
- 10% on equities	(180)	
+ 100 basis points on rates	(10)	
	(190)	2,208
Reference	2,398	
High		
+ 10% on equities	180	
- 100 basis points on rates	10	
	190	2,588

The provisions corresponding to the Group's share of decommissioning expenses, discounted at the predetermined rate of 3%, net of inflation (see paragraph 5.1.9), represented €2,317 million at December 31, 2004. This amount should be compared with the net available value of portfolio assets, estimated at €2,293 million at that same date. The Group would have to record additional provisions if the discounted value of future expenses relating to decommissioning obligations were to increase,

in particular if the discounting rate were to be reduced, with a potential negative impact on the Group's earnings and financial position.

Some of the Group's operations are sensitive to policy decisions in certain countries, especially as regards energy.

The risk of energy policy changes in certain countries, mainly under the influence of pressure groups or in the aftermath of events that give the nuclear industry a negative public image (incidents or accidents, violations of non-proliferation rules), cannot be ruled out. This could have a significant negative impact on the Group's financial position. For example, in 2002, Germany adopted a law to phase out nuclear power; Belgium followed with a similar law in 2003. In Belgium, the law provides that nuclear power generation cease by 2025. In Germany, nuclear power generation would cease in 2025, based on an average reactor life of 32 years. If other countries were to adopt similar legislation, this could have a significant negative impact on the Group's operations.

The Group also operates in countries, such as France, where a policy decision could delay or at least have a negative impact on certain projects, particularly those for defense programs. In Canada, for instance, the Group is confronted with political opposition concerning the issuance of licenses and permits required to operate mining projects as planned. Either of these events could have a significant negative impact on the Group's financial position.

The construction of an EPR in Finland is vital for AREVA. Potential difficulties in its implementation could have a negative impact on development prospects for this type of reactor.

In December 2003, AREVA signed a contract with TVO to build the first third-generation European pressurized reactor (EPR) in the world. Potential difficulties in implementation of the reactor, which constitutes the first of a series, could limit development prospects for this type of reactor and have a significant negative impact on the Group's operations and financial position.

The Group is exposed to the risk of non-renewal or termination of its mining concessions.

AREVA's mining operations involve concessions received, or partnerships formed, under legal systems specific to each country. For instance, the average term of a concession is approximately 20 years in Niger and in Canada. Despite the relatively long terms of these concessions or contracts, the Group is exposed to a risk of non-renewal or termination, which could have a significant negative impact on the Group's operations and financial position.

Uranium reserve indications by the Group are just estimates; there is no guarantee that mining operations will yield the same results.

The Group's uranium reserves and resources are just an estimate developed by the Group using geological and economic assumptions. The Group could modify these estimates to reflect a change in evaluation methods or geological assumptions, and/or a change in economic conditions (see paragraph 4.4.1.4.). It is impossible to guarantee that the projected quantities of uranium will be produced or that AREVA will receive the expected price for the ore. There is no assurance that other resources will be available. Moreover, uranium price fluctuations, production cost increases, and declining mining rates and mill yields can impact the profitability of reserves and require their adjustment.

Ratification of a quadri-partite treaty modifying the Almelo treaty is required for AREVA to gain access to the centrifuge technology for uranium enrichment.

On November 24, 2003, AREVA signed an agreement with Urenco and its shareholders to acquire joint control of ETC, a company that controls the centrifuge technology for uranium enrichment, and to gain access to that technology, which has been used by Urenco for several years. The technology should enable the Group to build a new uranium enrichment plant known as the Georges-Besse II plant to replace its existing Georges-Besse plant. That plant uses the diffusion enrichment process, which is a more expensive process for a new facility. The older plant was commissioned in 1979 and is now fully depreciated; it is slated to be shut down around 2012 and will be dismantled.

The agreement with Urenco and its shareholders closed in November 2003 and is subject to two conditions precedent: (i) the signature, ratification and entry into force no later than December 31, 2005 of a quadri-partite treaty by the governments of France, Germany, the United Kingdom and the Netherlands modifying the Almelo treaty, enabling AREVA to take a participating interest in ETC as a supplier of sensitive equipment and technology; and (ii) the formal authorization by the committee to be established under the treaty mentioned above to implement the agreement. The process for the signature and ratification of the treaty is a complex one. If both conditions precedent are not met, AREVA will have to find other means to replace the gaseous diffusion process currently in use. There is no assurance that AREVA could replace this technology under similar or satisfactory conditions.

The Group made a significant investment to gain access to centrifuge enrichment technology to build its future enrichment plant, but the expected return on this investment cannot be guaranteed, especially if its implementation is delayed.

The acquisition of the technology and the construction of the Georges-Besse II plant are expected to cost approximately €3 billion. The plant will have a production capacity of 7.5 million SWU and is expected to be fully operational around 2017-2018. AREVA cannot be certain that revenue from the new plant's operations will be sufficient to cover operating expenses, depreciation and amortization, or that the anticipated rate of return will be achieved, particularly if the competitive environment of the enrichment market changes, in particular because of changes in the implementation of the Corfu declaration by the Euratom Supply Agency (see paragraph 4.4.3.4.).

Though the Group is gaining access to already operational technology, it cannot guarantee that the Georges-Besse II plant will be available on the scheduled date, which could have a significant negative impact on the Group's financial position. Also, the anticipated return on investment might not be achieved if the technology were to prove to be obsolete or if the Group overestimated its value.

Price volatility in uranium supply, conversion and enrichment could have a significant negative impact on the Group's financial position.

Though AREVA operates mostly as a provider of processing services for uranium that is usually owned by its customers, it remains exposed to price risk for uranium in its mining operations and to price risk for uranium conversion and enrichment services. Prices for natural uranium and for conversion and enrichment have fluctuated historically. Price levels depend on factors that are beyond the Group's control, including demand for nuclear power, economic and political conditions in countries that produce or purchase nuclear materials and used fuel treatment services, and sales of surplus civilian and defense inventories (including materials from surplus nuclear weapons). These countries include Canada, the United States, Russia and other CIS republics, as well as some African nations and Australia.

A decrease in the price of various materials and services, including natural uranium and conversion and enrichment services, with price levels remaining below production costs on a long-term basis, could have a negative impact on AREVA's mining operations and uranium transformation operations, including conversion and enrichment.

Legal restrictions specific to certain Group operations could have a significant negative impact on its financial position.

Some of the Group's operations are subject to specific confidentiality restrictions or may be classified, such as defense programs involving the Technicatome Business Unit or other defense research programs. Those restrictions could limit or prevent the transfer of information to persons not subject to the same restrictions. Furthermore, the restrictions could limit or

even prevent the development of those operations. In addition, some operations, particularly those of Eurodif, are subject to special tax provisions whose modification could have a negative impact on the Group's financial position.

4.14.3.2. Risks in the Transmission & Distribution Division

AREVA's acquisition of the Transmission & Distribution Division is a source of significant expenses. AREVA received a limited guarantee on the pre-acquisition operations of the T&D Division.

On January 9, 2004, AREVA closed the deal to acquire Alstom's power transmission and distribution operations. The final price for the transaction, after the acquisition audit, was €913 million, plus €140 million corresponding to the Division's cash position. The Division was fully consolidated in 2004; it contributed more than €3 billion in sales revenue, or approximately 29% of the Group's consolidated sales revenue. After completing the acquisition, AREVA launched a three-year optimization plan in mid-2004 (see paragraph 4.7.). Under the plan, total restructuring expenses for 2004 come to €142 million. In the years to come, optimization of the T&D Division will require significant funding. Potential difficulties in optimizing the T&D Division could have a major negative impact on AREVA's business or financial position.

In addition, T&D operations in Pakistan have not yet been fully transferred, mainly because of minority shareholders (the selling price being held in escrow). If these operations are not transferred, this could have a significant negative impact on the T&D Division's development in these regions.

The contract to acquire Alstom's power transmission and distribution operations includes guarantees for certain types of risk originating before AREVA's acquisition of the business. Some of these guarantees are limited in duration or are capped. In addition to guarantees given to AREVA for risks related to product defects or performance on certain contracts, Alstom has given the following guarantees: (i) a guarantee on liabilities, capped at €175 million and subject to a €19 million deductible, for damages resulting from misrepresentation, as well as other damages or asset shortfalls; (ii) guarantees regarding disputes (see paragraph 4.14.4.); (iii) a guarantee for environmental liabilities (for which AREVA is currently conducting an environmental audit of the T&D sites), expiring in 2014, capped at €250 million and subject to a €12 million deductible; and (iv) an unlimited guarantee expiring in 2024 for risks resulting from employee exposure to asbestos. It is conceivable that liabilities borne by AREVA could exceed the caps indicated above, or that AREVA might not receive compensation for its losses, particularly in the event of a successful challenge by Alstom, or if AREVA has difficulty enforcing its rights under the guarantees of liabilities

given to it by Alstom, all of which could result in a significant increase in expenses, with a significant negative impact on AREVA's financial condition.

4.14.3.3. Risks related to the Connectors Division

The Connectors Division's operations and financial performance depend primarily on the telecommunications and automotive sectors.

The connectors business is highly dependent on the telecommunications and automotive sectors, which represented 41% and 43% of sales in 2004 respectively.

Any economic downturn in these sectors could have a significant negative impact on connectors sales and, consequently, on the Group's financial position.

Due to the rapid pace of change in the electronics industry, the Group's growth in this sector depends on the success of its technological inventions.

The Connectors Division is highly dependent on the Group's ability to anticipate technology trends and to develop and market products that satisfy demand in an environment characterized by increasingly short product life cycles.

Though the Division develops new products continually to anticipate market demand, it is conceivable that those products could no longer meet customer expectations, which could have a significant negative impact on the Group's operations and financial position.

The Group is exposed to a product recall risk should a connector fail, particularly in the automotive sector.

The failure of a connector could cause a recall of the products delivered, with a significant negative impact on AREVA's financial condition.

4.14.3.4. Risks related to the Group's overall business

The loss of one of the Group's main customers, a reduction in their purchases, or an erosion of contract terms and conditions could have a significant negative impact on the Group's financial position.

The Group is dependant on a key customer, EDF, which represents less than 20% of its consolidated sales revenue.

The Group's ten largest customers, including EDF, represented approximately 37% of its consolidated sales revenue in 2004, while the five largest customers represented approximately 30%. The loss of any of these customers, and the corresponding decrease in sales, could have a negative impact on the Group's operations and financial position.

The contract concluded between the **Back End** Division and EDF expires in 2007. Though it has been established in principle that the contract will be renewed through 2015, the commercial terms for the contract renewal are still being negotiated and could be less favorable than the current terms. Other contracts to be negotiated in the years to come could be less favorable than contracts currently in place. Since 2002, EDF has gradually opened its procurement program to other suppliers, with which contracts have already been signed, particularly in the nuclear fuel business. This trend could force the Group to adjust its production capacities, considering EDF's size as a customer, and have a significant negative impact on the Group's financial position.

Deregulation of the electricity market and competition from other energy sources could hinder the development of nuclear power and result in a concomitant decrease in demand for the Group's products and services.

Ongoing deregulation of the electricity market could impact the Group's nuclear businesses. Deregulation may lead to lower prices for electricity and for products and services related to the generation, transmission and distribution of electricity and/or to lower investment in the nuclear power sector. Additionally, nuclear power is competing with other energy sources, particularly oil, natural gas, coal, hydropower and wind energy. These energy sources could become more attractive and cause demand for nuclear-generated electricity to diminish. Such a risk, should it materialize, could have a significant negative impact on the Group's financial position.

The Group provides complex products and services that sometimes require special guarantees and additional support, which may result in unanticipated expenses.

The Group provides services and designs, manufactures and markets a broad range of products with a high unit value used in major projects, including the design and construction of nuclear reactors and heavy equipment. It maintains reactors and extends their service life, and also designs and manufactures electricity transmission and distribution equipment, particularly transformers. Occasionally, final adjustments may be required, products may need to be modified after manufacturing has begun or after customers have placed them in service, or services to be provided may have to be adapted. These adjustments, modifications and additional services could trigger unexpected costs for the Group. Though AREVA has set up a rigorous management control system and a system to control product and service quality and standards, these unanticipated expenses could have a significant negative impact on AREVA's business or financial position.

When the Group sells certain products, such as nuclear steam supply systems, or concludes service contracts, customers sometimes demand schedule or performance guarantees, or penalties for not meeting them. Pursuant to such commitments, the Group might have to repair products delivered or correct services provided in the event of faulty design or performance. In most instances, the guarantees provided in the Group's contracts are limited in duration and capped in value, and do not provide for consequential or indirect damages. However, the Group could occasionally give guarantees exceeding those limits, particularly in competitive markets. The Group's contracts sometimes include clauses allowing a customer to terminate a contract or reject the equipment if contract clauses concerning schedule or performance have not been met; difficulties concerning products or services delivered by the Group and covered under such clauses could thus trigger unanticipated expenses.

Contract performance difficulties, and the financial consequences outlined above, could also affect the Group's reputation with existing or potential customers, particularly in the nuclear business, resulting in a significant negative impact on the Group's operations.

An industrial breakdown or a work stoppage in the Group's plants could delay or stop the flow of its products or services

As a plant operator, the Group is exposed to the risk that an industrial breakdown could cause a delay or interrupt the flow of supplies or services. In each of its businesses, the Group's plants are highly interdependent and interconnected. A breakdown or production stoppage in one plant could affect the entire nuclear fuel production cycle and stop the flow of supplies or services. Contracts between the Group and its customers include a certain number of guarantees that can trigger penalties for delays. These guarantees could enter into play as a result of an industrial breakdown or work stoppage. Though the Group implements measures to limit the impact of a potential breakdown and has covered its exposure through business interruption insurance, as described in paragraph 4.14.6.1., a major event could still occur and have a significant negative impact on the Group's financial position.

The Group enters into long-term contracts that could limit its opportunity to take advantage of improving conditions in certain markets, or result in lower profitability than anticipated.

The Group sometimes concludes long-term contracts, in which prices are adjusted based on general indices rather than current market prices for certain raw materials or services. This type of contract could prevent the Group from taking advantage of price

increases for those products or services; this is the case for certain natural uranium sales contracts, in particular, or for conversion or enrichment services.

In addition, the profitability of certain long-term contracts in which the Group commits to providing deliverables at a fixed price, adjusted based only on general indices, could be affected by certain elements that cannot be charged to customers, including unanticipated increases for certain types of costs, technical difficulties, subcontractor default or systemic failures within the Group. The performance of this type of contract could, therefore, reduce the Group's anticipated earnings, or even cause an overall operating loss, with a significant negative impact on the Group's financial position.

The Group is exposed to a payment collection risk for products and services.

The Group is exposed to a risk of default by customers for the payment of its products and services. Except when customers deposit funds to cover the Group's expenses during the contract implementation phase, the Group is exposed to the risk of a customer's inability to accept delivery or to the risk of default on payments during delivery. In such instances, the Group may not be able to recover expenses incurred for the project or attain the operating margins contemplated when the contract was concluded.

The Group controls this risk by verifying customer solvency and requesting a prepayment or other forms of secured payments from customers presenting a certain level of credit risk. Though the Group endeavors to control credit risk, it is impossible to guarantee that all risk has been eliminated.

The Group cannot ensure that it will be successful in integrating or achieving the expected synergies and cost reductions from its strategic alliances, restructuring, and mergers and acquisitions.

The Group was or is involved in a variety of acquisitions, strategic alliances and joint ventures. Though the Group anticipates that its acquisitions, strategic alliances and joint ventures strengthen or will strengthen its position, a certain level of risk is inherent in these transactions, particularly the risk of overvalued acquisitions; insufficient guarantees of assets and liabilities; underestimated operating costs and other costs; disagreements with partners (particularly in joint ventures); potential integration difficulties with personnel, operations, technologies or products; lack of performance on initial objectives; or third-party challenges to these strategic alliances or mergers and acquisitions, based on their impact on those parties' competitive positions (see paragraph 4.14.4.2. regarding the concern expressed by Alstom).

The occurrence of events of this nature could have a negative impact on the Group's operations and financial position.

In addition, minority interests in the capital of certain AREVA subsidiaries, such as Framatome-ANP, Eurodif and Technicatome (see paragraph 3.7.2.), could limit the Group's ability to operate without restriction.

The Group's businesses are active in international markets in which intense competition could affect its financial position.

The Group's products and services are sold in international markets characterized by intense competition on price, financial terms, product/service quality and the capacity for innovation. In some businesses, the Group is competing against powerful entities that are larger than the Group or have access to more resources. Moreover, within the scope of the Group's operations, our competitors can make decisions influenced by extraneous, non-market-driven considerations or have access to financing at advantageous terms, all of which could have a negative impact on the Group's operations or financial position.

The Group's connectors business is also confronted with strong competition, and new products must be developed and brought to market quickly to capture available market segments. The Group's competitive position in the connectors market is highly dependent on its ability to adapt to shifts in the market and to reduce its manufacturing costs for high-quality products, whether existing or new.

A decrease in the supply of certain strategic components or an increase in the cost of electricity could have a negative impact on the Group's production costs.

Some of the Group's nuclear operations, such as uranium chemistry, enrichment and fuel fabrication, require large supplies of specific raw materials and semi-finished products (commodities, zircon ore). Some operations, such as uranium enrichment, use large quantities of electricity. Electricity is supplied in large part by the Group's largest customer, EDF, whose electricity supply contract with the enrichment business expires at the end of 2005.

AREVA T&D has a large requirement for raw materials, particularly magnetic sheet metal. The Division could be confronted with supply shortfalls due to the limited number of suppliers in the market. In addition, the T&D Division is sensitive to raw material price fluctuations. A big increase in prices could have a significant negative impact on the Division's financial position.

The **Connectors** Division uses copper and gold; these commodities have organized markets and supply is reliable. However, the Group is exposed to potential price fluctuations. Moreover, certain suppliers of semi-finished products used in component manufacturing have a quasi-monopoly, which can weaken the supply chain.

For all of these businesses, a shortage of raw materials or semi-finished products could translate into a slow-down production or even, in some specific instances, production stoppage, which would have a significant negative impact on those businesses and on the Group's financial position.

Political risk specific to certain countries in which the Group does business could affect its operations and financial position.

AREVA is an international group with energy and connectors operations in many countries, including countries with varying degrees of political instability. The Group's mining operations, for example, are located in countries such as Niger and Kazakhstan (uranium) and in the Sudan and Côte d'Ivoire (gold), where political change could affect those operations. Political instability can lead to civil unrest, expropriations, nationalizations, changes in legal or tax standards, monetary restrictions, and renegotiation or cancellation of agreements, leases, mining permits and other agreements.

For example, in 2003, mining operations were suspended in Côte d'Ivoire due to civil unrest in that country.

Natural catastrophes inherent in certain regions in which the Group operates could affect AREVA's business and financial position.

The location of certain of AREVA's sites in areas exposed to natural catastrophes, such as earthquakes or flooding, could weaken the Group's production capacity and have a significant negative impact on AREVA's operations and financial position.

For instance, some of the **T&D** Division's sites are located in areas of Turkey where earthquakes cannot be ruled out.

Occupational disease, in particular from exposure to asbestos or radiation, cannot be ruled out.

AREVA believes that it fundamentally complies with legal and regulatory provisions pertaining to health and safety in every country in which it operates, and it has taken measures to ensure the health and safety of its own personnel and subcontractor personnel (see Human Resources report in chapter 5 and information on nuclear risk prevention and management in paragraph 4.14.2.3.). However, by definition, the risk of

occupational disease cannot be eliminated. Such illnesses could cause legal proceedings against the Group and, when applicable, result in payments for damages and interest, which can prove to be significant in certain countries, such as the United States.

A limited number of claims for occupational diseases due to asbestos exposure have been made to the Group in France to date. In addition, 16 proceedings have been filed against the Group in France for gross negligence on the part of an employer in connection with such exposure. Three proceedings have also been filed against the Group in France for gross negligence on the part of an employer in connection with radiation exposure.

Sales revenue may fluctuate significantly from one period to the next due to the nature of the Group's businesses.

The nature of the Group's operations, particularly in the energy business (due to the irregularity of orders), can result in the uneven distribution of sales revenue throughout the year and from one year to the next. While the Energy business has a backlog of several years of orders, the unique features of the Group's operations can complicate, or render moot, comparisons between periods.

The French State holds the majority of AREVA's share capital and voting rights, directly or indirectly. Like any majority shareholder, it has the power to control AREVA's strategy and to make most of the decisions in General Meetings of the Shareholders.

The French State holds, directly or indirectly, around 94% of AREVA's issued shares and 98% of its voting rights.

Like any majority shareholder, the French State has the power to make most of the decisions falling under the purview of the General Meetings of Shareholders, including decisions regarding elections of members of the Supervisory Board and decisions regarding dividend distributions (see also paragraph 3.1.2. on the establishing order for AREVA).

4.14.4. Disputes and legal proceedings

4.14.4.1. Tax disputes

In 2003 and 2004, the French tax administration performed an audit of AREVA's consolidated taxable income for the years 2000 and 2001. That audit is now over and its definitive financial consequences have been recorded in the financial statements.

4.14.4.2. Other disputes

The Group is involved in a number of disputes, with a potentially significant negative impact on AREVA's business and financial

position. See Note 30 of the notes to the consolidated financial statements.

In the normal course of business, the Group is involved in a number of disputes, which may be grouped into three main categories: (i) challenges concerning administrative permits and licenses, generally filed by opponents to nuclear power, and claims alleging environmental damage; (ii) allegations of anti-competitive practices; and (iii) tort cases for alleged failures of certain products or equipment. The Group may be subject to the payment of direct and/or consequential damages and fines, or may reach settlements, with a potentially significant negative impact on AREVA's business or financial position. These disputes can result in significant litigation expenses for the Group. In addition, disputes initiated by opponents to nuclear power may be reported in the media, with an impact on the Group's image and consequences that extends beyond the financial effects, which are often limited.

Provisions are recorded to cover expenses that could result from these disputes, based on a case-by-case analysis. The provisions for litigation totaled €27 million at December 31, 2004, in view of the fact that certain items discussed in this section have not yet resulted in litigation, particularly the ISF2 case. In cases of that kind, the provisions are included in the provisions for contract performance. Please refer to Note 22 of the notes to the consolidated financial statements.

In addition, certain disputes concerning damages or injury are covered under Group insurance policies or other forms of guarantee.

AREVA is not aware of any dispute, arbitration or exceptional event that had or may have a significant negative impact on its financial position and business, except as disclosed below.

USEC (dispute involving COGEMA)

Following complaints filed in December 2000 against Urenco and Eurodif by the United States Enrichment Corporation (USEC), a competitor of the Group in the uranium enrichment sector, the US Department of Commerce (DOC) ordered that countervailing duties be temporarily levied for alleged dumping and illegal subsidies on enriched uranium exported to the United States from Europe, beginning in mid-2001. To guarantee payment of these countervailing duties, Eurodif had deposited a total of \$162 million with the US Customs Service as of December 31, 2004.

Urenco and Eurodif have challenged these penalties in an administrative proceeding filed with the DOC and a judicial proceeding filed with the US Court of International Trade (CIT).

In the administrative proceedings, Eurodif asked the DOC to revise the countervailing duties paid in 2001, 2002 and 2003.

An administrative decision revising these duties was notified in July and December 2004 for 2001 and 2002 duties, and in February 2005 for 2004 duties. The revision significantly reduced the level of the countervailing duties compared with the provisional amount.

In the judicial proceedings, the US Court of Appeals for the Federal Circuit issued a decision on the merits on March 3, 2005, validating Eurodif's legal analysis, by which uranium enrichment is a service and was not, as such, subject to the anti-dumping law, which concerns only products. The Court also confirmed that services rendered by Eurodif to EDF are not subject to the law on "subsidies", since compensation paid by a foreign government entity for uranium enrichment services cannot be considered as a subsidy. The Court's decision should bring to an end to the current proceedings and to the protective measures implemented by the DOC in matters of dumping and illegal subsidies. The Court's decision can be appealed. Security deposits paid by Eurodif will be refunded if challenges to the Court's decision are rejected.

ISF2 case involving Framatome-ANP

The ISF2 contract covers the design and construction of an Interim Storage Facility n°2 (ISF2), a packaging and dry storage facility for used fuel assemblies from the operation of reactors n°1, 2 and 3 of the Tchernobyl nuclear power plant. Approximately 22,000 fuel assemblies are stored at the site today. The contract was concluded on July 7, 1999 between a "Provider", comprised of a group of companies including Framatome-ANP, acting as lead manager, and the State Special Enterprise Tchernobyl (Ukraine), as "Owner-Operator", assisted by a Project Management Unit, or PMU.

The contract is funded entirely by G8 donor countries through the European Bank for Reconstruction and Development (EBRD) in the framework of a treaty with Ukraine.

The contract is not related to the serious accident that occurred at the site's n°4 reactor in 1986.

The major issue is the delayed notification of the inaccurate and unreliable nature of the initial technical data provided by the Owner-Operator. As a result, substantial changes to the design of the facility contemplated in the ISF2 contract are required, at a time when civil works are almost completed.

In view of the foregoing, Framatome-ANP should submit an additional claim to fund the significant additional costs to be incurred and requested a schedule extension. In addition to submitting this claim, the Group recorded significant provisions to cover its obligations under the contract.

No legal proceedings have been initiated at this stage, since technical discussions on necessary facility modifications are still ongoing. On July 17, 2004, a Memorandum of Understanding was signed by the Provider, the Owner-Operator and the PMU, demonstrating the parties' willingness to cooperate. In any event, a contract amendment will be necessary to complete the project. Finalizing such an amendment is a complex process involving not only the parties to the contracts, but also the donor countries that are funding the project through the EBRD, the safety authorities in Ukraine, France and Germany, and the PMU.

Challenges to licenses and permits

A number of licenses and permits authorizing the Group to operate its businesses have been challenged by third parties. These challenges are routine and reflect the specific nature of the Group's businesses. AREVA considers that its rebuttal arguments are solid, though all risk of cancellation of these licenses and permits cannot be ruled out.

1) Authorizations for operations at the La Hague site

- **COGEMA vs. Greenpeace France, Crilan and Réseau Sortir du nucléaire** – Request for nullification of the decrees of January 10, 2003 authorizing modifications to facilities at the La Hague site (STE3, UP2-800 and UP3-A) – The request targeted the decree authorizing modifications to the STE3 licensed nuclear facility; it was denied by the *Conseil d'État* (highest administrative court) in its ruling of July 28, 2004. Decisions regarding other facilities are pending.
- **COGEMA vs. Greenpeace France, Crilan and Réseau Sortir du nucléaire** – Request for nullification of the interministerial order of January 10, 2003 modifying effluent release limits at the La Hague sites. The case is under review by the Administrative Court of Caen.
- **COGEMA vs. Greenpeace – ANSTO case** – Civil action on the merits by Greenpeace to prohibit treatment at La Hague of used materials test reactor (MTR) fuel from Australia. Greenpeace's claim, denied in first instance by the *Tribunal de Grande Instance* of Cherbourg (district court), is under appeal.

2) Other licenses and permits

- **McClean mine (Canada)** – On September 23, 2002, the Federal Court of Canada, ruling on a claim submitted by the Inter-Church Uranium Educational Cooperative Committee (ICUCEC), voided the permit to operate the McClean uranium mine. On appeal by COGEMA Inc., the Federal Court of Appeals of Canada has quashed the decision rendered in first instance. The ICUCEC appealed to the Supreme Court of Canada, which rejected its appeal in its decision of March 24, 2005.

Environmental disputes

- **COGEMA vs. Association Sources et Rivières du Limousin and Association France Nature Environnement** – Two associations have filed a complaint based on alleged waste dumping and damage to fish life near the Bessines mine sites (Crouzille mining Division). The case is on the docket of the *Tribunal correctionnel* (lower criminal court) of Limoges for a hearing at the end of the first quarter of 2005.
- **Comurhex vs. Prud'homie de Bages Port La Nouvelle and others** – A fishermen's association is suing Comurhex for damages for economic losses resulting from the depletion of fishing resources in Bages pond due to the addition of nitrates.
- **Horn Rapids vs. Yakama Indian Nation** – The Yakama Indian Nation has filed claims against two U.S. federal agencies for, among others, alleged pollution of the water table with trichloroethane in the state of Washington, where Framatome-ANP operates its Richland site. If the pollution did occur, it would have been isolated and without major risk for the environment. The concentration levels of the product have already decline to levels that are in compliance with drinking water regulations.

Disputes involving AREVA T&D

A number of disputes and pre-litigation claims involving Alstom's T&D Division at the time of its acquisition by AREVA are covered under a specific guarantee included in the contract to acquire Alstom's T&D Division (the "Acquisition Contract"). Alstom has agreed to indemnify AREVA, fully or partially, for any and all financial consequences that may result from 35 disputes listed in the Acquisition Contract, taking into account provisions, insurance coverage and tax consequences (see paragraph 4.14.3.2.).

In addition, as provided in the Acquisition Contract, AREVA has notified Alstom of other pre-litigation claims, potential fines or litigation risks that came to light after the Acquisition Contract was executed. It is AREVA's position that any loss resulting from these events should be covered under the guarantee of liabilities included in the Acquisition Contract (see also paragraph 4.14.3.2. regarding the risks associated with said guarantee), which includes provisions requiring Alstom to indemnify AREVA against losses not covered by insurance or a specific provision.

The main events that took place after execution of the Acquisition Contract are listed below.

European Commission investigation pertaining to anti-competitive practices in the market for gas-insulated switchgears

In May 2004, the European Commission launched an investigation into practices that may be subject to regulations

prohibiting concerted action in the market for gas-insulated switchgear (electrical equipment that is a major component of substations).

Though the Commission has not yet issued a notice of grievance against AREVA, it may institute formal proceedings. If after these proceedings the Commission concludes that concerted anti-competitive actions were taken, the Commission could, in theory, levy a fine of up to 10% of the sales revenue recorded by the company involved in the year preceding the decision. The amount of the fine is based on complex legal considerations which take into account, in particular, the sales revenue used as a basis for the fine and whether it is assessed against AREVA in full or in part. This investigation has triggered other investigations by anti-trust authorities in Hungary, New Zealand, Australia, Mexico and Turkey, though the investigation by Turkish authorities had been suspended as of the date of this report.

AREVA and Alstom are working together, particularly with respect to proceedings at the European Commission level, to ensure the best possible outcome for this case. It is AREVA's position that the financial consequences of the case should be covered under the guarantee of liabilities provided by Alstom.

In addition, though the Group has taken every measure considered necessary to ensure compliance with competition laws, it cannot be ruled out that the European Commission will want to initiate other investigations concerning the T&D Division.

Administrative sanctions against AREVA T&D SA de CV

AREVA T&D SA de CV, a Mexican subsidiary of AREVA T&D, has been barred from participating in government calls for tender in Mexico for a two-year period to sanction it for allegations of anti-competitive practices originating in contracts signed several years ago with a government-owned operator of electric power plants. Under those contracts, commissions were paid to a consultant who allegedly forwarded part of the funds to government employees. A stay of the decision has been granted to AREVA. Despite the stay of the prohibition, government orders to AREVA T&D SA de CV were affected by this situation, though the company's sales revenue for 2004 exceeded 2003 levels. A decision on the merits issued on March 12, 2005 granted AREVA T&D SA de CV's request for cancellation of the abovementioned prohibition. This decision can still be appealed. Any decision on appeal that might prohibit AREVA T&D SA de CV from participating in public tenders in Mexico would have a significant negative impact on AREVA T&D's development in Mexico.

Ling Ao

AREVA T&D delivered seven power transformers to DMNC, the utility that operates the Ling Ao nuclear plant. Provisional acceptance was granted in August and November 2002. Starting in April 2003, a series of malfunctions were noticed in the transformers. Assessment and repair campaigns – some at the Ling Ao site itself, others at the AREVA T&D plant in Shanghai – are under way and are scheduled to continue throughout 2005. The cost of the repairs is estimated at €4 million to €11 million, depending on the number of transformers found to be defective. AREVA T&D is in the process of assessing the insurance coverage that might be available if the defects are confirmed.

Concern expressed by Alstom

Alstom has expressed a concern to AREVA regarding the potential consequences of certain provisions of AREVA's strategic alliance with Siemens through Framatome-ANP. According to Alstom, these provisions could restrict Alstom's access to the market for conventional islands and certain aspects of control systems for nuclear power plants. The Group believes it has solid arguments to present in response to this concern.

AREVA is not aware of any dispute, arbitration or exceptional event that had or may have in a recent past a significant negative impact on the financial position, the result, the business and the patrimony of the company and the Group.

4.14.5. Market risks

A single software application manages the entire chain of the Cash Management department, including the conclusion of transactions by the trading room, their recording, confirmation and accounting. This process applies to all types of transactions: foreign exchange, centralized cash management, inter-company loans and borrowings, bank financing and investments in financial assets.

Currency risk: Foreign exchange volatility, especially euro/dollar exchange rates, can affect the Group's long-term financial performance.

The main currency used by the Group is the euro. Sales outside the euro zone represented about 43% of the Group's sales revenue in 2004. Fluctuations in the exchange rate between the euro and the US dollar constitute the main foreign currency risk. The Group generated 17% of its 2004 sales revenue in North America. As a uranium producer in Canada, AREVA is also exposed to variations in Canadian dollar/U.S. dollar exchange rates, since sales prices are established in U.S. dollars. Exposure to other currencies, including the Swiss franc, the pound sterling, the yen, and Middle Eastern and Southeast Asian currencies, is limited and mostly concerns the T&D Division.

The Group's currency risk policy is to hedge foreign exchange risk on transactions, whether certain or potential, during the call for tender phase. Risk is hedged using financial derivatives and special insurance contracts (see Note 28 of the notes to the consolidated financial statements). Balance sheet risk related to loans and advances made to a company of the Group in a currency other than the lending company's accounting currency is also hedged to limit the impact on the Group's consolidated net income.

In 2004, the value of the euro in relation to the U.S. dollar increased by an average of 10% compared with 2003, and by almost 8% based on year-end exchange rates. The impact of foreign currency fluctuations on the Group's operating income in 2004 was more than €25 million, up from €5 million in 2003, or 4% and less than 2% of operating income respectively for those two years. Over the medium to long term, a further decrease in the value of the U.S. dollar could have a negative impact on the Group's operating income and consolidated net income.

Foreign currency risk, like risk for raw materials traded in commodities markets, is managed by the parent company for most AREVA group companies, or is managed directly by certain companies when required by specific agreements or local regulations, after concurrence with the parent company.

Group policy in this area, which is approved by the Executive committee, includes procedures regarding transactions by the Group's currency traders and procedures to verify exposure with banking counterparties. Group management is informed of the positions and results on a weekly and monthly basis.

A staff of 31 employees in the Finance department manages and monitors foreign currency exposure, interest rate risk, assets funding decommissioning expenses, and funding of employee benefit obligations.

Outlook for the divisions

- **Front End Division:** For deliveries to be made in the next 12 to 18 months, the Division is essentially hedged for exposure to the U.S. dollar, the world reference currency for natural uranium and for uranium conversion and enrichment services. The Division automatically reduces its exposure through its mining operations in the dollar zone (Canada), but it still has to cover US/Canadian dollar cross rates. The dollar margin resulting from Canadian production sold in US dollars was not specifically covered at December 31, 2004.
- **Reactors & Services Division:** the Division is essentially protected against the U.S. dollar risk. In services and engineering, most billings in dollars also have a cost base in dollars. The resulting margins are not normally specifically

covered. Specific insurance coverage is usually acquired to hedge the risk associated with sales of heavy components (steam generators, reactor vessel heads), for which manufacturing costs are incurred in euros while sales are denominated in US dollars.

- **Back End Division:** The Division's exposure to foreign exchange risk is minimal. Most sales outside the euro zone are denominated in euros.
- **T&D Division:** The Division's exposure involves a number of currencies. T&D positions are hedged on a case-by-case basis.
- **Connectors Division:** Specific hedges were acquired on a case-by-case basis in 2004.

(in millions of euros)	Impact of fluctuations in USD exchange rate (+/- 10 cents) on AREVA's operating income (2004)	
	After management	
	+10 cents	-10 cents
Nuclear divisions	+10	(10)
T&D Division	+1	(1)
Connectors Division	+2	(2)
AREVA group total	+13	(13)

Rate risk: The Group is potentially exposed to changes in interest rates on its debt and investments.

Depending on market conditions, the Group uses a variety of financial instruments to allocate its investments and debt between fixed rate and variable rate instruments. These instruments consist mainly of swap contracts used in debt and cash investment management, and short-term futures used to manage medium-term investments (see Note 28 of the notes to the consolidated financial statements).

Rate risk management is entirely centralized in the parent company, which consolidates the subsidiaries' cash surpluses or requirements on a daily basis and arranges external or internal financing as appropriate, except as otherwise required by regulations or specific circumstances. The Group's policy is subject to approval by the Executive Committee and includes procedures for transactions by the Group's financial market desk and procedures to control risk (instruments, counterparts, credit and positions). Off balance sheet income is covered by framework "FBF" or "ISDA" agreements and is tracked separately. Group management is informed of positions and results on a monthly basis.

The following table summarizes the Group's rate risk exposure before and after off balance sheet management transactions. The Group has little exposure to rate hikes overall. A 1% increase in long-term rates would cause a decrease in the market value of the portfolio by about €2 million. Inversely, if short-term rates

were to increase by 1%, financial income would increase by about €2 million.

Schedule of the Group's assets and debt at 12/31/2004*

(in millions of euros)	< 1 year	>1 and < 5 years	> 5 years
Financial assets**	1,061	100	83
including fixed rate assets	3	100	83
including variable rate assets***	1,058	0	0
(Debt)	(262)	(434)	(247)
including fixed rate debt	(38)	(70)	(23)
including variable rate debt	(224)	(364)	(224)
Net assets before management transaction	799	(334)	(164)
share exposed to fixed rates	(35)	30	60
share exposed to variable rates	834	(364)	(224)
Off Balance Sheet management transaction			
on debt via swaps of fixed rate exposure	110	0	0
on debt via swap of variable rate exposure	(110)	0	0
on assets via Futures exposure to fixed rates	0	(33)	(34)
Exposure after management transaction			
to fixed rates	(145)	3	26
to variable rates	944	(364)	(224)
Indicative sensitivity on fixed rate share			
Impact on net financial income of a 1% increase in rates	n/s	n/s	(2)

* Nominal vs. variable in euros

** Cash and cash equivalents excluding shares

*** Maturities < 3 months are treated at the variable rate

Risk on equities: the Group has substantial investments in listed equities and is exposed to financial market fluctuations.

AREVA holds publicly traded shares that are exposed to the volatility inherent to equity markets.

The Group has four types of investments in publicly traded securities:

- Investments consolidated under the equity method: these equities consist mainly of STMicroelectronics and Eramet (see Note 12 of the notes to the consolidated financial statements).
- Equities held in the portfolio of financial assets earmarked for future cleanup and decommissioning expenses (see Note 13 of the notes to the consolidated financial statements).
- Other long-term notes and investments: this heading concerns AREVA's 17.4% equity stake in Sagem (see Note 13 of the notes to the consolidated financial statements).

- Listed equities and other marketable securities held as short-term investments. The description of these securities may be found in Note 17 of the notes to the consolidated financial Statements.

The impact of share price fluctuations on the value of listed equities held by the Group is as follow:

(in millions of euros)	Market value 12/31/2004	Impact from +/- 10 % fluctuation
Equity in net assets of affiliates		
STMicroelectronics	1,425	+/-143
Eramet	447	+/-45
Equities in portfolio of assets earmarked to fund decommissioning expenses	1,810	+/-181
French equities and mutual funds invested in European equities		
Other long-term notes and investments	483	+/-48
Sagem		
Cash and marketable securities	579	+/-58
Total + SG + Alcatel + Assystem + others		

The risk on shares accounted for under the equity method, on other financial assets, or on shares held as short-term investments is not hedged against declining stock prices.

The risk on shares held in the asset portfolio to fund decommissioning expenses is an integral component of AREVA's asset management program, which includes equities to increase long-term returns as part of a program to allocate assets among bonds and equities. Half of the exposure is managed through dedicated mutual funds invested in European stocks, with management guidelines including tracking variances compared with an index.

Liquidity risk:

In light of the negative net debt position enjoyed by the Group (see Notes 17 and 23 to the notes to the consolidated financial statements), AREVA had no liquidity risk as of the date of publication of this document.

Certain financial agreements concluded by the Group include covenants that the Group would not be able to satisfy if its financial position were to deteriorate.

As a general rule, the credit terms granted to the Group are independent of the French State's majority control in AREVA. However, almost all of the Group's lines of credit include a provision requiring that the borrowing subsidiary, or the Group

company that guarantees the loan in the case of syndicated lines of credit, remain a subsidiary of AREVA, which must itself remain 51% held by the French State.

The Group's capacity to maintain and obtain financing depends to a large extent on its financial performance. As indicated in the table presented in Note 23 of the notes to the consolidated financial statements, certain financial commitments undertaken by the Group include covenants requiring the Group to meet pre-established ratios.

AREVA and FCI have access to an unused \$600 million (€441 million) financing arrangement that can be drawn upon until April 18, 2005 at the latest. Under this line of credit arrangement, AREVA has agreed to meet a net debt/EBITDA ratio of three or less, calculated twice yearly based on the Group's consolidated financial statements at the half-year mark and at year-end. AREVA had no net debt on its balance sheet at December 31, 2004; the ratio has therefore been met.

In addition, an early repayment clause applies if the French State does not hold, directly or indirectly, 51% of the borrowing companies' capital and voting rights.

At December 31, 2004, COGEMA Resources, Inc. was using a CAD255 million (€155 million) line of credit in effect until November 2006. This line of credit requires that the following ratios be met, based on its corporate financial statements:

- total non-Group debt/(equity + shareholders' advances) ≤ (less than or equal to) 100%
- consolidated cash flow + interest due (Group and non-Group) + change in intra-Group debt / financial expense ≥ (greater than or equal to) 1.5
- adjusted working capital requirement ≥ (greater than or equal to) CAD10 million (Canadian dollars)

The ratios above were met with a sufficient margin of safety at December 31, 2004. However, any significant change in the Group's financial position could prevent it from meeting these ratios in the future.

The Group is exposed to credit risk linked to its use of derivatives to manage certain types of exposure

The Group uses several types of financial derivatives to manage exposure to foreign exchange, commodity prices and certain listed securities, or to manage interest rate risk on its debt and protect its financial investments. The Group primarily uses forward buy/sell contracts and derivative products, such as futures or options, to cover this risk. These transactions create exposure to the risk of default by the counterparty when the instruments are not traded on a financial market.

This risk is controlled by establishing limits for each financial institution based on credit ratings.

4.14.6. Risk coverage and insurance

Coverage concerning ongoing disputes is described in paragraph 4.14.4.2.

No provisions have been recorded to cover other risk factors. They are subject to thorough review pursuant to the Group's risk management procedures and are examined during the risk mapping process carried out each year (see paragraph 4.14.1.2.). Some of these risk factors, were they to materialize, could be covered by one or several of the insurance policies subscribed by the Group as part of its insurance programs.

In fact, to mitigate the consequences of potential events on its operations and financial position, AREVA transfers risk to insurance and reinsurance companies worldwide. These insurers are world-class entities and are well regarded in international markets. For example, AREVA has acquired insurance coverage relating to operating risk, civil liability, and other risks and liabilities concerning its nuclear and non-nuclear operations, with coverage limits varying according to the type of risk.

AREVA's Risk Management and Insurance department is in charge of insurance for the entire Group. This department:

- submits solutions to the Executive Board, either to retain the risk and finance it internally or to transfer it to the insurance market;
- negotiates, sets up and manages global insurance programs for the Group worldwide and reports to the Executive Board on actions carried out and costs incurred;
- settles claims for the subsidiaries involved.

4.14.6.1. Special coverage relating to nuclear facility operations

Nuclear liability insurance

Legal framework

International nuclear liability law is based on a series of principles that override the mechanisms of general liability law. The operator of the nuclear facility that caused the damage is solely responsible. This is known as the liability channeling principle. Liability is objective, i.e. no-fault, with few exemptions. The operator of a nuclear facility is therefore required to compensate the victims for the bodily harm and property damage they have suffered. The operator is required to maintain a form of financial guarantee, generally insurance, to cover its total liability. This principle of channeling liability to the operator includes, as a counterpart, a certain limitation of liability. On the other hand, the liability channeling principle guarantees rapid compensation to the victims, who do not have to prove that the operator or its subcontractors were at fault, since this rule overrides general law.

This rule of exception is established in international treaties, including the Paris Convention on Third Party Liability in the Field of Nuclear Energy of July 29, 1960, as amended, and the Brussels Supplementary Convention of January 31, 1963, as amended, which are transposed into national law (in France, Law n° 68-943 of October 30, 1968, as amended). In the United States, the Price Anderson Act established a similar rule of exception.

Every country in which AREVA operates nuclear facilities is subject to one of these legal constructions.

The principles of the Conventions applicable in countries in which AREVA operates nuclear facilities are described hereunder.

1 - The Paris Convention and the Brussels Supplementary Convention

Fundamental principles established by the Paris Convention

- Nature of liability – Liability lies solely and exclusively with the legal operator of the nuclear facility at which the substances causing the damage are held or from which they issue.
- Responsible person – The nuclear facility operator is the person designated or recognized by the competent governmental authority. If the accident occurs during transport, the person responsible is the shipping operator and not the shipper, up to the point where the receiving operator assumes liability under the terms of a written contract or has taken delivery of the radioactive substances.
- Exemptions – The operator is not liable for damages caused by a nuclear accident if the accident is directly attributable to armed conflict, hostilities, acts of civil war, insurrection or natural disasters of exceptional proportions.
- Limitations of liability – The operator's liability is limited both as to total amount and duration.

For example, France has set a maximum liability amount of €91.5 million per nuclear accident in a facility and €22.9 million per accident during transport and in facilities with limited risk. The statute of limitations to submit a claim is three years from the time the victim became aware of the damage; however, a claim may not be submitted more than ten years after the date of the accident.

- Financial guarantee – To ensure that funds will be available to compensate the victims, the Convention stipulates that the operator is required to have and to maintain an insurance policy or other financial security approved by the government of the country in which the facility is located and in the amount of the operator's liability, as set by the Convention. Currently, insurance is the most commonly used form of financial guarantee. For example, Article 7 of the French law requires each operator to have and to maintain insurance or

other financial security up to the limit of the amount of the operator's liability per accident. The minister of Economy and Finance must approve this financial security.

The oligopolistic position of insurers offering nuclear risk coverage translates into the relative stability of the premiums.

The Brussels Supplementary Convention

- This convention sets the amount of liability assumed by the party countries to the convention when damages exceed the nuclear operator's liability limits. The additional compensation from public funds must first come from the country in which the facility is located, and then from the community of all the countries signing the Supplementary agreement.
- For example, should an accident occur in a licensed nuclear facility in France, the French State would assume liability beyond €91.5 million and up to a limit of €228.6 million. Thereafter, the community of Signatory States to the Brussels Supplementary Convention would assume liability for the amount in excess of €228.6 million, up to a limit of €381.1 million.

Revisions to the Paris and Brussels Conventions

The protocols to amend the Paris Convention and the Brussels Supplementary Convention were signed on February 12, 2004 by representatives of the Signatory States. However, the amended conventions are not yet in force, as the protocols must first be ratified by the different contracting parties (France, Great Britain, Belgium, Germany, etc.) and then transposed into national law in each signatory State.

The main amendments increase all three tiers of indemnity. Thus, the nuclear operator's liability would increase from €91.5 million to €700 million per nuclear accident in any given facility (€70 million in a reduced-risk facility). The limit of liability during transport would increase from €22.9 million to €80 million per accident.

The State in which the nuclear facility responsible for the damage is located would cover the €700 million to €1.2 billion tier. The other contracting States would cover the €1.2 billion to €1.5 billion tier. A mechanism to increase these limits would apply as new countries ratify the Conventions.

When these protocols enter into effect, the statute of limitations for claims will increase to 30 years as of the date of the accident for physical damages, and ten years for other damages. In all instances, the victim must submit a claim within three years of the date he or she became aware of the damage.

2 – Price Anderson Act

In the United States, the Price Anderson Act (PAA) channels claims for indemnification to the nuclear operators. Only facilities

located in the United States regulated by the Nuclear Regulatory Commission (NRC) and facilities owned by the Department of Energy (DOE) are covered by the PAA. All other facilities are subject to ordinary law.

Under the PAA, the nuclear operator bears all of the financial consequences with regard to the victims, no matter who the responsible party might be. For accidents during the transport of materials belonging to the DOE, only the DOE will indemnify the victims, even if the carrier is at fault and could therefore be considered liable (economic channeling principle).

Accordingly, two different types of situations may arise, depending on whether the party (1) operates a facility regulated by the NRC, or (2) operates as a DOE contractor:

(1) Only nuclear power plants with a nominal capacity of 100 MWe or more and certain research and test reactors are required to have financial protection. The PAA indemnification process provides access to up to \$9.7 billion in protection under a two-tier system:

- the first tier corresponds to insurance (or similar financial protection) acquired by the nuclear power plant operator in the private nuclear insurance market for \$300 million in coverage;
- the second tier corresponds to an NRC-managed fund financed by premiums paid by the nuclear operators, which provides secondary coverage of \$95.8 million per nuclear reactor at the operator's site and is activated when first tier protection (\$300 million, as indicated above) is insufficient. The fund stands at \$9.4 billion today.

If these two lines were to prove insufficient to cover third party damages, the U.S. Congress would have to provide for additional indemnification.

For example, the operator of a four-reactor nuclear plant must acquire \$300 million in primary insurance protection, which is supplemented by 4x \$95.8 million in NRC secondary coverage. The total protection for the plant would thus represent \$683.2 million.

Fuel fabrication plants and used fuel treatment facilities are not subject to the PAA system and have no legal obligation to acquire insurance. However, these facilities procure insurance from the market for the maximum amount allowed by the market at the time of the subscription.

(2) When DOE contractors are responsible for a nuclear accident, DOE indemnifies the victims up to the maximum legal limit per civilian nuclear power plant accident in the United States, i.e. \$9.7 billion, without calling on the private insurance market. If a nuclear accident occurs outside the United States, in particular during transport, indemnification is limited to \$100m

and only covers accidents involving materials belonging to the US government.

Description of insurance acquired by the Group

The Group's potential liability for its licensed nuclear facilities in France and abroad and for its transportation operations is covered by special insurance policies defined by the laws of the countries in which the facilities are located and by international Conventions (Paris Convention, Brussels Convention, etc.). Two policies are in effect in France, one in Germany, one in Belgium and two in the United States. These special insurance policies for nuclear operators comply with the conventions, including their liability limits. The insurance policies are reinsured by the nuclear insurance pools of various countries, including Assuratome in France, DKV in Germany, Syban in Belgium and ANI in the United States.

Property and business interruption insurance for the nuclear process

Due to the nature of the potential damage to the facilities, this type of insurance is available only through pools or specialized mutual insurance companies capable of providing the necessary coverage. The limits of coverage for this type of insurance are based on the estimated replacement value or on an estimate of the maximum possible loss (MPL). The coverage period for some complex facilities can exceed €1 billion.

Mining operations and AREVA's U.S. and Belgian sites are not covered by property and business interruption guarantees for the nuclear process, and are covered by self-insurance.

4.14.6.2. Insurance for non-nuclear operations

Liability of officers and directors

The purpose of coverage for officers and directors is threefold: firstly, it provides liability coverage for the financial risk incurred by Group officers and directors due to damage suffered by third parties as a result of professional errors or misconduct in the course of business; secondly, it reimburses Group companies that are legally allowed to indemnify officers and directors for claims submitted against those individuals; and thirdly, it covers civil or criminal defense expenses incurred by officers and directors as a result of claims based on professional errors or misconduct.

The policies usually exclude coverage of claims based on intentional misconduct by an officer or director, or on personal gain (financial or otherwise) to which a director or officer was not entitled. Fines and penalties levied against officers and directors are also excluded, as well as claims for losses due to pollution, asbestos or toxic mold. Finally, officers and directors

liability insurance policies exclude claims based on the purchase of securities or assets of any company at an inadequate price.

Civil liability

The Group is covered by a “worldwide” civil liability plan with limits appropriate to its size and operations. The plan covers:

- operator liability, covering company operations and services performed at customer sites;
- product liability, covering the post-delivery period; and
- professional liability (“Errors and Omissions”), covering financial consequences resulting from damages associated with intellectual services performed by the Group for its own account or on behalf of a third party.

Liability insurance is also procured for environmental damage, damage to property held on behalf of third parties and for product recall expenses.

The program covers financial consequences from the civil liability incurred by Group entities in the course of their operations as a result of bodily injury or damage to the property of third parties, including consequential damages, except when operating nuclear facilities. Certain events not usually covered by insurance, such as landslides, damage from asbestos, or damage caused by computer viruses, are also excluded. Liability insurance limits vary based on a reasonable assessment of the risks to which the Group is exposed, as identified by the Business Units and the Risk and Insurance department, in particular during the risk mapping process, and also based on the capabilities of the insurance market.

AREVA multi-line

Since January 2005, the Group has acquired a comprehensive AREVA multi-line policy combining “property and business interruption coverage” and “all-risk installation and testing” coverage. The policy covers all of the Group’s facilities worldwide, except for mines and nuclear sites. The policy covers damage to production assets and business interruption, as well as risk associated with equipment installation and testing activities at customers’ sites. The policy limits vary from €50 million to €300 million, based on replacement values and the maximum possible loss. Business interruption coverage is limited to 12 to 24 months.

4.14.6.3. Other insurance

The Group is eligible for Coface type coverage for some large export contracts from France, such as the construction of a nuclear power plant. In addition, the Group has insurance policies covering auto liability and work-related accidents that comply with the legal requirements of each of the countries in which AREVA subsidiaries are located.

4.14.6.4. Outlook and trends in 2005

The premiums for policies renewed in 2004 were essentially unchanged, or slightly lower for certain policies. The total cost for nuclear and non-nuclear risk insurance in 2005 is estimated to be approximately one percent of the Group’s 2004 consolidated sales revenue.

The main objective on January 1, 2005, was to merge all AREVA T&D coverage with other AREVA coverage. This operation did not entail any material increase in Group insurance budgets.

To prepare for new nuclear liability insurance requirements included in revised international conventions, AREVA partnered with other European nuclear facility operators to establish Elini (European Liability Insurance for the Nuclear Industry), a mutual insurance company that provides the additional capacity required in the insurance market.

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Chapter 5

Assets - Financial position -
Financial performance

» 5.1. Analysis of and comments on the financial position and performance of the Group

The following comments are based on financial information for fiscal years 2004, 2003 and 2002 and must be read in conjunction with AREVA's historical consolidation financial statements for the years ended December 31, 2004, 2003 and 2002. These comments have been drafted based on the Group consolidated financial statements prepared in accordance with French GAAP.

5.1.1. Overview

5.1.1.1. Activity trends

AREVA group is a global leader in the provision of CO₂-free power generation solutions and electricity distribution. The AREVA group's main activity is energy. The Group is the global leader in nuclear power generation solutions and number three worldwide for electricity transmission and Distribution. It is the only Group present at all stages of the nuclear cycle. Group customers include some of the largest utilities in the world, with which AREVA works under medium and long-term contracts. The Group has over 70,000 employees and is present in close to 40 countries.

Group sales totaled €11,109 million in 2004 compared to €8,255 million in 2003 and €8,265 million in 2002, representing an increase of 34.6% in 2004. 2004 growth is primarily attributable to the acquisition of the **Transmission & Distribution (T&D) Division** at the beginning of the year. Like-for-like (comparable consolidation scope and foreign exchange rates), sales growth is 4.1%. Energy activities accounted for 88% of sales in 2004, with 23% realized by the **Front End Division**, 19% by the **Reactors & Services Division**, 17% by the **Back End Division** and 29% by the **T&D Division**. The **Connectors Division** generated 12% of sales in 2004.

The Group is present in all regions offering attractive growth perspectives for the development of nuclear energy and electricity transmission and distribution. The Group realized 43% of 2004 sales outside the euro zone, with 17% of 2004 sales realized in North America where the Group is present in all energy businesses.

Group contracts and in particular those covering the entire nuclear cycle, produce a significant backlog totaling approximately €20 billion at the end of 2004. 74% of the backlog relates to nuclear activities, with contracts with an

average term of less than 4 years. The high level of the backlog demonstrates the repeat nature of business and the visibility which the Group enjoys over its activities.

2004 operating income is up significantly, thanks to the successful turn-around of the **Connectors Division** and the good performance of nuclear activities, which reported an operating margin of 8.8% of sales, up over one percentage point on 2003. The operating margin of the **T&D Division** is low, but the deterioration recorded before restructuring has been reversed.

2004 consolidated net income is €428 million, up 10% on 2003, thanks to good operating performance and the absence of T&D restructuring costs (taken to net equity). This increase reflects the positive trend enjoyed since the creation of AREVA in September 2001 (average annualized growth of 33.5% between 2002 and 2004), supported by a marked change in the net income structure and an increasing contribution from operating activities.

Operating cash flow generated by the Group in 2004 totaled €763 million, compared to €940 million in 2003 and €618 million in 2002. Nuclear activities generated operating cash flow of €803 million in 2004, compared to €997 million in 2003. In addition, nuclear net operating capital expenditure increased €86 million to €354 million in 2004, with the launch of a major capital expenditure cycle, notably in the **Front End Division**. The **T&D Division** consumed €12 million of operating cash flow in 2004 as a result of outflows attributable to restructuring measures of €58 million. The **Connectors Division** enjoyed a return to positive operating cash flow, generating €54 million in 2004 compared to cash flow consumption of €24 million in 2003, representing an improvement of €78 million.

The Group enjoys a solid financial structure with a net cash position at the end of 2004 of €689 million, compared to €1,236 million at the end of 2003, primarily due to the acquisition of T&D for a consideration (excluding the net cash of the entities acquired) of €913 million.

As an operator of nuclear facilities, the Group has a legal obligation to decommission its facilities when they are shut down permanently. These end-of-life-cycle obligations will generate expenditure over the period 2005 to 2060 based on facility shut-down dates and are provided in AREVA's balance sheet. The Group has earmarked a financial portfolio to meet these obligations. The assets contained in this portfolio are monetized each year in the amount of Group end-of-life-cycle

operation funding flows. The portfolio balance continues to produce a financial return. The hedging policy and movements in end-of-life-cycle obligations are presented in section 5.1.7.5.

5.1.1.2. Key characteristics of AREVA's business model

AREVA's business model is characterized by the specific features of the different Business Units making up each stage of the nuclear cycle and those relating to the electricity transmission and distribution and connectors businesses. The Group's nuclear activities are carried out by three divisions, the **Front End**, **Reactors & Services** and **Back End** divisions, each of which comprise several Business Units.

Sales revenue for contracts to be executed within at least two different accounting periods is booked based on their percentage of completion.

Income from these contracts is also booked based on the percentage of completion at closing.

The **Front End** Division operates under long-term contracts and has a backlog covering an average duration of three years (four years for the Mining Business Unit), including standard indexation clauses. As such, pressure on natural uranium prices had little impact on this activity, given the structure of uranium supplies and a backlog including primarily firm prices at levels predating the price increase in 2003. The activities of the **Front End** Division have substantial capital employed requirements, necessitating investment levels which are considerable but which support operations over a long period of time. Investment in the exploration and development of uranium resources and the renewal/modernization of industrial facilities is scheduled for the period 2005-2015.

The **Reactors & Services** Division is characterized by repeat business (services and engineering) carried out under long-term or regularly renewed contracts. A significant portion of the Division's activity is carried out in America and, as such, is sensitive to fluctuations in the euro/US dollar exchange rate. This is particularly true for the Equipment Business Unit, as its industrial facilities are located in France and its costs are denominated in European currencies. In addition, this Division enjoys a favorable outlook with regards to the development of one-off business, notably linked to the modernization of the

existing nuclear pool. The nature of the goods and services sold by the principal Business Units of the **Reactors & Services** Division leads the Group to grant guarantees for significant amounts.

The **Back End** Division operates under long-term contracts with a limited number of customers. The backlog represents four years of sales. The Division has negative working capital requirements due to customer advances received under old contracts to fund non-current assets. The consumption of these advances impacts operating cash flows (in particular via changes in working capital requirements) as and when the corresponding sales are recognized.

The **T&D** Division operates under shorter contracts than the nuclear sector in a more cyclical market. The business model is that of an industrial activity with global geographical exposure and growth areas in developing countries (primarily China and India⁽¹⁾). The Division should also benefit in coming years from positive fall-out from the optimization plan launched mid-2004.

The **Connectors** Division is subject to market volatility, in the same way as other high-tech companies. The business model is also that of an industrial activity but with a diversified customer base focused on target market segments (automotive, CDC, EPI, etc.) and significant research and development activities.

5.1.2. Key figures

The key figures for fiscal year 2004 and prior years are presented in accordance with French GAAP. The consolidated financial statements will be prepared in accordance with IFRS from fiscal year 2005.

The Group purchased Alstom's Transmission & Distribution business in 2004. Fiscal year 2003 and prior year data do not, therefore, reflect a comparable Group structure. For comparison purposes, a "2003 Pro forma, unaudited" column including 2003 figures for the **T&D** Division has been included. The determination of these figures is explained in Note 2.1.1.1. to the 2004 consolidated financial statements.

All amounts are expressed in millions of euros, unless otherwise stated. Due to rounding adjustments, certain totals may be strictly accurate.

(1) The scope of T&D excludes India and Pakistan, as these activities had not yet been transferred from Alstom to AREVA at the end of 2004.

5.1.2.1. Three-year consolidated financial highlights

<i>(in millions of euros, except workforce)</i>	2004	2003 Pro form unaudited*	2003	2002
Income Statement				
Sales	11,109	11,132	8,255	8,265
Operating income	613	370	342	180
Net financial income	117	299	334	587
Minority interests	131	20	20	83
Consolidated net income	428	306	389	240
EBITDA**	1,049	n.a.	976	1,150
Cash flow statement				
Cash from operating activities	938	n.a.	1,218	907
Cash used in investing activities	(1,153)	n.a.	(329)	(484)
Cash used in financing activities	(273)	n.a.	(1,967)	(190)
Increase/(decrease) in net cash	(339)	n.a.	(645)	1,250
Other				
Capital employed	5,897	n.a.	4,905	5,536
Shareholders' equity	4,241	n.a.	4,113	4,020
Net cash position and cash equivalents	689	n.a.	1,236	731
Workforce				
Workforce at year-end	70,069	n.a.	48,011	50,147

* The consolidated income statement for the year ended December 31, 2003 was reconstituted a posteriori to demonstrate the theoretical impact of the acquisition of T&D, had it taken place on January 1, 2003. This results in:

- Application of the same technical adjustments applied to the 2004 financial statements (asset revaluations, amortization of goodwill and cancellation of the impact of restructuring expenses);
- Elimination of certain 2003 non-recurring income and expense items as identified by due diligence procedures performed by AREVA at the beginning of 2004; and
- Correction of the 2003 net financial expense, to adjust investment income for the financing of the AREVA T&D acquisition.

** EBITDA is defined in section 5.1.6.2. EBITDA was calculated in 2004 and 2003 excluding the impact of cash flows relating to end-of-life-cycle obligations, which are presented separately from operating flows. These cash flows were less material in 2002 and, as such, are not presented separately from operating flows. 2002 flows correspond to reported amounts.

5.1.2.2. Information by Division and region

INFORMATION BY DIVISION

2004

<i>(in millions of euros, except workforce)</i>	Front End	Reactors & Services	Back End	T&D ⁽¹⁾	Energy	Connectors	Corporate and other operations	Total Group
Income Statement								
Contribution to consolidated sales**	2,524	2,146	1,946	3,186	9,802	1,289	18	11,109
Operating income	314	90	177	31	612	80	(79)	613
Cash flow statement								
EBITDA**	466	133	394	19	1,012	113	(77)	1,049
Net operating capex	(196)	(59)	(98)	(57)	(410)	(71)	(4)	(486)
Net proceeds from the sale of tangible and intangible assets	1	4	8	0	13	0	0	13
Change in WCR*	(159)	10	298	26	175	12	0	188
Operating cash flow*	112	88	603	(12)	791	54	(82)	763
Other								
Capital employed*	2,184	670	(132)	1,330	4,052	1,318	527	5,897
Workforce	10,952	14,066	10,697	21,816	57,531	12,160	378	70,069

2003 <i>(in millions of euros, except workforce)</i>	Front End	Reactors & Services	Back End	Energy	Connectors	Corporate and other operations	Total Group
Income Statement							
Contribution to consolidated sales**	2,683	2,124	2,023	6,830	1,338	87	8,255
Operating income	316	52	155	523	(114)	(67)	342
Cash flow statement							
EBITDA**	418	88	503	1,008	25	(57)	976
Net operating capex	(126)	(67)	(75)	(268)	(62)	(6)	(336)
Net proceeds from the sale of tangible and intangible assets	0	3	7	10	2	0	12
Change in WCR*	49	123	75	247	11	31	289
Operating cash flow*	341	147	509	997	(24)	(33)	940
Other							
Capital employed (3)	2,000	721	282	3,003	1,407	495	4,905
Workforce	9,719	13,251	10,542	33,512	12,211	2,288	48,011
2002 <i>(in millions of euros, except workforce)</i>							
Income Statement							
Contribution to consolidated sales*	2,562	1,932	2,088	6,581	1,560	124	8,265
Operating income	319	64	236	619	(406)	(33)	180
Cash flow statement							
EBITDA**	425	87	756	1,268	(26)	(92)	1,150
Net operating capex	(93)	(49)	(228)	(370)	(88)	(25)	(483)
Net proceeds from the sale of tangible and intangible assets*	(1)	(1)	23	21	2	0	23
Change in WCR*	113	34	(280)	(133)	86	(25)	(72)
Operating cash flow*	445	71	271	787	(26)	(143)	618
Other							
Capital employed*	1,955	906	504	3,365	1,719	453	5,536
Workforce	9,536	13,549	10,719	33,804	14,015	2,328	50,147

* T&D division 2004 operating income does not take into account restructuring costs of €142 million included in goodwill. In 2003, as in 2004, the impact of these costs was cancelled in the unaudited pro forma income statement to enable comparison with 2004 operating income. The T&D consolidation scope excludes India and Pakistan, as these activities had not yet been transferred from Alstom to AREVA at the end of 2004.

** The "contribution" to consolidated sales is equal to gross sales net of inter-company sales.

** EBITDA, changes in working capital requirements, operating cash flow and capital employed are defined in section 5.1.6.2. and 5.1.7.2.

** EBITDA was calculated in 2004 and 2003 excluding the impact of cash flows relating to end-of-cycle obligations, which are presented separately from operating flows. Such cash flows were less material in 2002 and, as such, are not presented separately from operating flows. 2002 flows correspond to reported amounts.

* In 2003, the Group transferred certain general and administrative expenses previously recorded in Corporate and other activities to the Energy Division. 2002 figures were adjusted for comparison purposes. This adjustment had a negative impact on 2002 net sales of the Corporate and other operations Division of €5 million, transferred (rounded amounts) - €2 million to Front End sales, - €2 million to Reactor & Services sales and - €1 million to Back End sales. The impact on 2002 operating income of the Corporate and other operations Division was negative €29 million, transferred (rounded amounts) - €14 million to the Front End Division, - €17 million to the Reactors & Services Division and + €2 million to the Back End Division. These account transfers did not impact consolidated net sales and operating income published by the Group.

INFORMATION BY GEOGRAPHICAL REGION

Net sales by destination	December 31, (in millions of euros)			Change (in %)	
	2004	2003*	2002*	2004	2003
France	3,231	3,029	3,242	6.7	(6.6)
Front End	1,051	1,083	1,081	(3.0)	0.2
Reactors & Services	844	849	817	(0.6)	3.9
Back End	1,027	983	1,139	4.5	(13.7)
T&D **	208	-	-	-	-
Connectors	95	113	197	(15.9)	(42.6)
Corporate and other operations	6	1	7	500	(85.7)
Europe (excluding France)	3,117	2,010	1,646	55.1	22.1
Front End	557	697	584	(20.1)	19.3
Reactors & Services	530	470	385	12.8	22.1
Back End	403	355	259	13.5	37.1
T&D **	1 156	-	-	-	-
Connectors	470	477	414	(1.5)	15.2
Corporate and other operations	1	11	5	(90.9)	120.0
Americas	2,196	1,795	1,703	22.3	5.4
Front End	623	588	592	6.0	(0.7)
Reactors & Services	658	695	489	(5.3)	42.1
Back End	138	118	127	16.9	(7.1)
T&D **	448	-	-	-	-
Connectors	319	338	411	(5.6)	(17.8)
Corporate and other operations	10	56	84	(82.1)	(33.3)
Asia Pacific	1,787	1,323	1,350	35.1	(2.0)
Front End	252	290	281	(13.1)	3.2
Reactors & Services	91	91	118	0	(22.9)
Back End	377	566	555	(33.4)	2.0
T&D **	716	-	-	-	-
Connectors	350	360	387	(2.8)	(7.0)
Corporate and other operations	1	16	9	(93.8)	77.8
Africa and the Middle East	763	95	-	703.2	-
Front End	41	24	-	70.8	-
Reactors & Services	23	18	-	27.8	-
Back End	1	-	-	-	-
T&D **	649	-	-	-	-
Connectors	49	49	-	0.0	-
Corporate and other operations	-	4	-	(100)	-
Other countries	15	3	324	400.0	(99.1)
Total	11,109	8,255	8,265	34.6	(0.1)

* The breakdown by geographical region differs from that presented in the 2002 and 2003 published financial statements, in order to improve the comparability of figures since the integration of T&D. In particular, sales realized in Africa and the Middle East, previously included in "Other countries", are now presented separately.

** The consolidation scope excludes India and Pakistan, as these activities had not yet been transferred from Alstom to AREVA at the end of 2004.

Please refer to Section 5.2 for a detailed breakdown of Group employees by geographical region.

5.1.3. Comparability of the financial statements

5.1.3.1. Comparable accounting data

General principles

In addition to the discussion and analysis of results reported in the consolidated financial statements, the Group also presents sales information on a “comparable basis” over successive periods, excluding the impact of changes in:

- consolidation scope,
- exchange rates,
- accounting policies and methods.

The Group provides this additional information to order to assess the organic growth of its business. Nonetheless, this information does not enable an assessment of activity in accordance with French GAAP. Excluding exceptions (e.g. material inability to reconstitute figures), changes in “comparable” sales figures are calculated as follows: the consolidation scope, exchange rates and accounting policies and methods of the prior year are adjusted to reflect the consolidation scope, exchange rates and accounting policies and methods of the current year.

For example:

- In order to compare 2004 and 2003 sales, T&D 2003 sales (consolidated for the first time in 2004, reconstituted, unaudited for 2003) are added to 2003 consolidated sales.
- In order to compare 2003 and 2002 consolidated sales:
 - The sales contribution generated in 2002 by the Military/Aerospace Industry business sold in April 2003 must be deducted from 2002 sales,
 - Sales generated by this business in 2003 prior to its disposal must be deducted from 2003 sales.
- When comparing 2004 and 2003 sales, the Group calculates what 2003 sales of the different businesses would have been applying 2004 average exchange rates.

Estimated impact of changes in consolidation scope, exchange rate and accounting policies on sales of the last three years

The following table presents the estimated impact of changes in exchange rate, consolidation scope and accounting policies and methods in 2004 compared with 2003 and in 2003 compared with 2002.

The main impacts are discussed in Section 5.1.3.2.

Comparison of fiscal year ended December 31, 2004 and fiscal year ended December 31, 2003

	2004			2003				
	Sales	Impact of changes in consolidation scope	Pro forma sales for calculation purposes	Sales	Impact of exchange rate movements	Impact of changes in consolidation scope	Harmonization of accounting policies	Pro forma sales for calculation purposes
Energy	9,802	-	9,802	6,830	(169)	2,897	(124)	9,434
Front End	2,524		2,524	2,683	(73)	29	-	2,639
Reactors & Services	2,146	-	2,146	2,124	(57)	(9)	(11)	2,047
Back End	1,946	-	1,946	2,023	(11)	-	(113)*	1,899
T&D	3,186	-	3,186	-	(28)	2,877	-	2,849
Connectors	1,289	(13)	1,276	1,338	(46)	(94)	-	1,198
Corporate and other operations	18	-	18	87	(4)	(57)	-	27
Total Group	11,109	(13)	11,096	8,255	(218)	2,747	(124)	10,659

* Partially attributable to the harmonization at the beginning of 2003 of criteria for measuring percentage completion for revenue recognition purposes within the Back End Division and partially attributable to the accounting treatment of the commercialization of Mox fuel.

Comparison of fiscal year ended December 31, 2003 and fiscal year ended December 31, 2002

	2003			2002				
	Sales	Impact of changes in consolidation scope	Pro forma sales for calculation purposes	Sales	Impact of exchange rate movements	Impact of changes in consolidation scope	Harmonization of accounting policies	Pro forma sales for calculation purposes
Energy	6,830	-	6,830	6,582	(256)	57	7	6,391
Front End	2,683	-	2,683	2,562	(146)	16	-	2,432
Reactors & Services	2,124	-	2,124	1,933	(104)	47	-	1,876
Back End	2,023	-	2,023	2,088	(6)	(6)	7	2,083
T&D	-	-	-	-	-	-	-	-
Connectors	1,338	(83)	1,255	1,560	(120)	(213)	-	1,227
Corporate and other operations	88	(10)	78	123	-	(41)	-	82
Total Group	8,255	(93)	8,162	8,265	(376)	(196)	7	7,700

5.1.3.2. Factors potentially impacting the comparability of the financial statements

Changes in the consolidation scope

Group sales for the years ended December 31, 2004, 2003 and 2002 were materially impacted by the following acquisitions and divestments. Other minor changes in the scope of consolidation are described in Note 2 to the consolidated financial statements.

Energy

Acquisition of Alstom's

Transmission & Distribution business

On January 9, 2004, the Group finalized the acquisition of Alstom's Transmission & Distribution ("T&D") business for an initial consideration of €950 million (enterprise value), subject to price adjustments concerning certain operating and balance sheet items relating to fiscal year 2003. Based on the conclusions of the expert jointly appointed by the two parties (i) the enterprise value of T&D was reduced to €913 million, and (ii) the net cash balance transferred was valued at €140 million. All payments were settled by the Group in 2004.

The results of T&D operations were consolidated by AREVA from January 1, 2004.

For comparison purposes, the Group estimated T&D sales for the year ended December 31, 2003 at €2,877 million (€2,849 million at 2004 exchange rates). The figures presented are reconstituted data produced *a posteriori* and have not been audited.

Key T&D figures for the years ended December 31, 2004 and 2003 produced in this way are as follows:

	December 31 (in millions of euros)		Change (in %) 2004
	2004 ⁽¹⁾	2003 ⁽¹⁾⁽²⁾	
Sales	3,186	2,877	10.7
Operating income ⁽³⁾	31	28	n.m.

(1) The consolidation scope excludes India and Pakistan, as these activities had not yet been transferred from Alstom to AREVA at the end of 2004.

(2) Reconstituted figures produced *a posteriori* and not audited. See Section 5.1.5.4.

(3) Restructuring costs of €142 million in 2004 are included in T&D goodwill in accordance with French GAAP. As in 2004, the impact of these costs on the 2003 unaudited *pro forma* income statement has been cancelled.

Mining companies

AREVA increased its stake in Katco (a Kazakhstan mining company) from 45% to 51% as of April 30, 2004. Katco was equity-accounted up to April 30, 2004 and is fully consolidated from May 1, 2004. The goodwill generated by the acquisition of this additional stake is not material.

Cominak (a Niger mining company) and AMC (a Sudanese mining company) previously equity-accounted, are consolidated using the proportionate method from January 1, 2004 to reflect AREVA's joint control over these companies.

Acquisition of Duke Engineering & Services

In April 2002, the Group purchased Duke Engineering & Services (DE&S) in the United States, which operates in the nuclear services and engineering sector. DE&S operating results are consolidated by the Group from May 2002. DE&S' contribution to Group sales totaled €174 million in 2002. 2001 sales totaled \$280 million. DE&S had approximately 1,250 employees when it joined the AREVA Group.

Connectors

Divestment of the Military/Aerospace Industry (MAI) Business Unit

On April 30, 2003, the Connectors Division (FCI) sold the Military/Aerospace Industry Business Unit. This divestment demonstrated the Group's desire to focus on those businesses where it is a market leader. In 2002, the MAI Business Unit reported consolidated sales of €149 million and had 1,200 employees. Prior to divestment, it realized sales of €40 million in 2003.

Divestment of the Cable & Assembly business

On May 8, 2003, the Connectors Division (FCI) sold its Cable & Assembly industrial assets to Sanmina-SCI. 2003 first half sales of this entity prior to divestment, included in the Communications Data Consumer Business Unit, totaled €43 million. Equivalent annual sales of this entity total €50 million, calculated based on 2003 sales realized prior to divestment.

Corporate and other operations

Divestment of Packinox

On December 17, 2003, the Group sold Packinox to its management. Packinox owns an original heat exchange technology used in chemical procedures in the petrochemical industry. 2003 sales of this entity, based in Chalon-sur-Saône, totaled €36 million prior to divestment.

Divestment of EMA and Comilog

On July 1, 2004, AREVA sold its stakes in EMA and Comilog. These companies were equity-accounted up to June 30, 2004.

Consolidation of the investment company holding the perpetual subordinated notes (TSDI)

Effective as of January 1, 2004, as required by the Financial Security Act, Lilly Financial Corporation Limited, the investment firm holding the perpetual subordinated bonds and the guarantee deposit, is consolidated in Group financial statements (see Note 1.1 to the consolidated financial statements).

Consolidation of the UCITS controlled by the Group

The UCITS controlled by the Group, comprising equity and interest rate mutual funds, are recorded in long-term investments, as in prior years (see Note 1.7 to the consolidated financial statements). The Group elected to apply the exemption offered by the CNC's official statement of February 8, 2005 concerning UCITS, authorizing the non-consolidation of UCITS controlled by commercial companies.

Changes in foreign exchange rates

The Group's foreign exchange policy is presented in Chapter 4, Section 4.14.5.

The Group realized approximately 43% of 2004 consolidated sales outside the Euro zone, compared to approximately 40% in 2003 and 2002. The principal foreign exchange exposure concerns fluctuations in the euro/U.S. dollar exchange rate. 17% of 2004 sales were realized in North America, compared to 21% in 2003 and 2002. As a uranium producer in Canada, the Group is also sensitive to fluctuations in the parity of the Canadian and U.S. dollar in which uranium prices are denominated. Exposure to other currencies (primarily the Swiss franc, pounds sterling, yen and South-East Asian and Middle East currencies), mainly as a result of T&D activities, is secondary in nature.

The strength of the euro against the U.S. dollar appreciated by an average of 10% in 2004 on 2003, and close to 8% on a sliding year-end rate basis. The impact of exchange rate movements on consolidated operating income is estimated at negative €218 million in 2004 and negative €376 million in 2003.

Changes in financial statement presentation

The following changes in financial statement presentation impacted certain Group key figures for the years ended December 31, 2004, 2003 and 2002.

2004

- In order to improve the clarity of the financial statements, charges to and reversals of provisions for losses to completion, previously recorded in Other operating income and expenses, are recorded in Cost of sales in 2004. Provision reversals recorded at gross margin level as of December 31, 2004 totaled €30 million. Losses to completion had a negative impact of €28 million in 2003 and a nil impact in 2002.
- The consolidation as of January 1, 2004 of Lilly Financial Corporation Limited, the investment firm holding the perpetual subordinated bonds and the guarantee deposit, resulted in the removal from the balance sheet of the perpetual subordinated debt (€215 million) recorded in Other equity and the guarantee deposit (€180 million) recorded under Long-term investments, with the net amount as of January 1, 2004 of €38 million transferred to Borrowings.

2003

In 2003, the Group transferred certain general and administrative expenses previously recorded in Corporate and other activities to the Energy Division. 2002 figures were adjusted for comparison purposes. This adjustment had a negative impact on 2002 net sales of the Corporate and other operations Division of €5 million,

transferred (rounded amounts) - €2 million to Front End sales, - €2 million to Reactor & Services sales and - €1 million to Back End sales. The impact on 2002 operating income of the **Corporate and other operations** Division was negative €29 million, transferred (rounded amounts) - €14 million to the **Front End** Division, - €17 million to the **Reactors & Services** Division and + €2 million to the **Back End** Division. These account transfers did not impact consolidated net sales and operating income published by the Group.

The presentation of the balance sheet underwent three changes during 2003:

- The provision for expenses to be incurred was reversed in full and a corresponding charge was recorded in Tangible assets depreciation. This provision, recorded in respect of contracts which provide for the financing of capex by customers over a contractual period less than the asset depreciation period, corresponded, in effect, to residual depreciation in respect of

the financed assets. The provision totaled €962 million as of December 31, 2002.

- To improve the clarity of the balance sheet, all portfolio assets earmarked to cover end-of-life cycle obligations, including liquid assets and interest rate mutual funds previously recorded in Cash and marketable securities, were combined within a single item, Financial assets earmarked for facility decommissioning. As of December 31, 2003, Financial assets earmarked for facility decommissioning, included cash of €576 million.
- Interest-bearing advances from customers were transferred to Borrowings. These advances totaled €382 million as of December 31, 2002 and €416 million as of December 31, 2003.

These account transfers did not impact net income or shareholders' equity.

Other changes to financial statement presentation are described in Note 1.1. to the consolidated financial statements.

5.1.4. Comparison of 2004, 2003 and 2002 Group consolidated income statement

	December 31 (in millions of euros)			Change (in %)	
	2004	2003	2002	2004	2003
Backlog	19,820	n.a.	n.a.	-	-
Sales	11,109	8,255	8,265	34.6	(0.1)
Cost of sales	(8,347)	(6,138)	(6,129)	36.0	0.1
Gross margin	2,762	2,117	2,136	30.5	(0.9)
Research and development expenses	(402)	(285)	(332)	41.1	(14.2)
Sales and marketing, general and administrative expenses	(1,389)	(939)	(1,008)	47.9	(6.8)
Other operating income and expenses	(358)	(551)	(616)	(35.0)	(10.6)
Operating income	613	342	180	79.2	90.0
Financial income	117	334	587	(65.0)	(43.1)
Income before tax and exceptional items	730	676	767	8.0	(11.9)
Exceptional items	46	135	289	(65.9)	(53.3)
Income tax	(209)	(184)	(220)	13.6	(16.4)
Net income of consolidated businesses	567	627	836	(9.6)	(25.0)
Share in net income of equity affiliates	131	20	83	555	(75.9)
Net income before goodwill amortization	698	647	919	7.9	(29.6)
Goodwill amortization	(152)	(174)	(593)	(12.6)	(70.7)
Net income before minority interests	546	473	326	15.4	45.1
Minority interests	(118)	(84)	(86)	40.5	(2.3)
Consolidated net income	428	389	240	10.0	62.1

Backlog

The backlog is valued based on firm orders, excluding unconfirmed options, assessed according to the economic conditions as of December 31 of the year under consideration. Foreign currency orders that are hedged are valued at the hedge exchange rate. Foreign currency orders that are not hedged are valued at the exchange rate as of December 31 of the year under consideration.

Long-term contracts in progress as of December 31 of the year under consideration and accounted for using the percentage of completion method, are included in the backlog in the amount corresponding to the difference between forecast contract sales on completion and sales already recognized on the contract. As such, contractual indexation and price review assumptions taken into account by the company in assessing forecast sales on completion are included in the backlog.

Sales

The following table breaks down Group sales by Division for the years ended December 31, 2004, 2003 and 2002:

	December 31 (in millions of euros)				Change (in %)		
	2004	2003	2002	2003/2004	2003/2004 on a like- for-like basis	2002/ 2003	2002/2003 on a like- for like basis
Front End	2,524	2,683	2,562	(5.9)	(4.3)	4.7	10.3
Reactors & Services	2,146	2,124	1,933	1.0	4.8	9.9	13.2
Back End	1,946	2,023	2,088	(3.8)	2.5	(3.1)	(2.8)
Nuclear operations	6,616	6,830	6,583	(3.1)	0.5	3.8	6.9
T&D	3,186	-	-	-	11.8*	-	-
Connectors	1,289	1,338	1,560	(3.7)	6.5	(14.2)	2.3
Holding companies and other operations	18	88	123	(79.5)	(33.6)	(28.9)	(5.7)
Sales	11,109	8,255	8,265	34.6	4.1	(0.1)	6.0

* For comparison purposes, the Group has valued T&D sales for the year ended December 31, 2003 at €2,877 million. This reconstituted data is unaudited.

2004 - 2003

AREVA Group sales totaled €11,109 million for 2004, up 34.6% on 2003 sales of €8,255 million. This marked growth was primarily due to the integration of the **T&D** Division at the beginning of January 2004 in the Group consolidated financial statements.

On a like-for-like basis, Group sales increased by 4.1% in 2004 compared to 2003.

Nuclear operation sales were stable, with a 0.5% increase on a like-for-like basis compared to 2003, with contrasting trends between Divisions. The **Reactors & Services** and **Back End** divisions reported sales growth of 4.8% and 2.5%, respectively, offset by a 4.3% fall in **Front End** Division sales.

As this indicator was only implemented at consolidated level in 2004, the Group has not published comparative figures for 2003 and 2002.

The Group backlog stands at €19,820 million as of December 31, 2004 and represents almost two years of 2004 sales.

The nuclear operations backlog stands at €17,325 million as of December 31, 2004 and represents more than two and a half years of 2004 sales. The **T&D** Division backlog stands at €2,322 million, more than eight months of 2004 sales. Finally, the **Connectors** Division backlog stands at €173 million as of December 31, 2004, just over one and a half months of sales, in line with the sector average.

The **T&D** Division reported sales growth of 11.8% on a like-for-like basis compared to 2003, spurred by a dynamic market (+ 6%) and the initial benefits of the optimization plan.

Connectors Division sales rose 6.5% on a like-for-like basis in 2004, with the restructuring plan enabling the Division to benefit from growth in the market.

Exchange rate movements, particularly in the euro/U.S. dollar parity, had a negative impact on sales of all operations of - €218 million

The integration of T&D operations helped reduce France's, and therefore Europe's, share of Group sales (29.1% in 2004 compared to 36.7% in 2003). In addition, the Group strengthened

its business volume in Asia and North and South America, and developed a significant presence in Africa and the Middle East.

The share of nuclear operation sales realized in the America region was relatively stable compared to 2003 with a 1.3% increase. The 24% decrease in the Asia Pacific share was primarily attributable to the **Back End** Division.

Sales and the relative contribution of each region for 2003 and 2004 are as follows:

<i>(in millions of euros)</i>	2004		2003	
France	3,231	29.1%	3,029	36.7%
Europe (excluding France)	3,117	28.1%	2,010	24.3%
Americas	2,196	19.8%	1,795	21.7%
Asia Pacific	1,787	16.1%	1,323	16.0%
Africa and the Middle East	763	6.9%	95	1.2%
Other countries	15	0.1%	3	0.0%
Total	11,109	100%	8,255	100%

2003 - 2002

Group sales in 2003 were stable compared to 2002, at €8,255 million, compared to €8,265 million in 2002, representing a decline of 0.1%. This relative stability stemmed from a 3.8% increase in nuclear operations, which were particularly high, and a 14.2% decrease in Connectors activities related to the disposal of the MAI and Cable & Assembly activities and the negative impact of the euro/U.S. dollar exchange rate on this Division of €120 million.

On a like-for-like basis, Group sales increased 6% in 2003 compared to 2002:

- At €6,830 million, nuclear operations reported growth of 6.9% in 2003 on a like-for-like basis. The **Front End and Reactors & Services** divisions had a solid year with like-for-like growth of 10.3% and 13.2%, respectively.

Gross margin

The following table presents the Group gross margin for the years ended December 31, 2004, 2003 and 2002:

	December 31 <i>(in millions of euros)</i>			Change <i>(in %)</i>	
	2004	2003	2002	2004	2003
Gross margin <i>(in millions of euros)</i>	2,762	2,117	2,136	30.5	(0.9)
Gross margin (% of sales)	24.9%	25.6%	25.8%	(0.7) point	(0.2) point

- The **Connectors** Division reported growth of 2.3% in 2003 on a like-for-like basis, due to substantial activity in the fourth quarter of 2003 (increase of 8.1% on a constant Group structure and exchange rate basis compared to the third quarter of 2003 and 3.1% on a constant Group structure and exchange rate basis compared to the fourth quarter of 2002).

2003 sales recorded in the "Corporate and other operations" heading consist of Packinox sales recorded before the company was sold and the non-strategic operations of Duke Engineering & Services, acquired in 2002. The reported change on 2002 was primarily due to the discontinuation of the Group's real estate operations, which were sold at the end of 2002.

Exchange rate movements, in particular in the euro/U.S. dollar, had a negative impact on all activities of €376 million.

Sales by region tended towards a more international spread in 2003, primarily due to 13.3% growth in Europe (excluding France), including 17.2% for nuclear operations.

<i>(in millions of euros)</i>	2003		2002	
France	3,029	36.7%	3,242	39.2%
Europe (excluding France)	2,010	24.3%	1,774	21.5%
Americas	1,795	21.7%	1,774	21.5%
Asia Pacific	1,323	16.0%	1,359	16.4%
Africa and Middle East	95	1.2%	74	0.9%
Other countries	3	0.0%	42	0.5%
Total	8,255	100%	8,265	100%

A detailed breakdown of sales by Division is presented in Section 5.1.5.

2004 - 2003

The Group gross margin amounted to €2,762 million in 2004 (i.e. 24.9% of sales) compared to €2,117 millions in 2003 (i.e. 25.6% of sales), representing an increase of 30.5%. The higher consolidated gross margin is mainly attributable to the newly consolidated **T&D Division**, which generated a gross margin of €655 million in 2004, i.e. 20.6% of its sales. Nuclear operations generated a stable gross margin of €1,734 million, compared to €1,732 million in 2003, despite a decline in sales. The gross margin rate for nuclear operations rose 0.8 points, to 26.2% in 2004 from 25.4% in 2003, primarily due to greater productivity in the Fuel Business Unit. Conversely, the gross margin rate as a percentage of sales of the **T&D Division** stood at 20.6%, which diluted the Group gross margin rate. The **Connectors Division** maintained its gross margin, which declined from €354 million in 2003 to €350 million in 2004, despite a sales drop. The operating margin rate of the **Connectors Division** thus stood at 27.2% in 2004 compared to 26.5% in 2003, representing an increase of 0.7 points.

2003 - 2002

The Group gross margin amounted to €2,117 million in 2003 (25.6% of sales) compared to €2,136 million in 2002 (25.8% of sales), representing a decline of 0.9%. The slight decrease in the 2003 consolidated gross margin as a percentage of sales compared to 2002 is explained by the lower gross margin of nuclear operations, which decreased 1.3 points. This decline in the gross margin rate was primarily due to the harmonization of sales recognition methods using the percentage of completion method in the **Back End Division** (see Section 5.1.3.1.) and pressure on fuel prices. Conversely, the **Connectors Division** recorded an upturn in its gross margin of 7.5 points, directly related to the impact of its cost-cutting plans.

Research and development expenses

Research and development expenses comprise exploration costs and pre-mining expenses not capitalized, research and development expenditure funded by the Group and expenses paid by customers not relating to a specific project.

In addition to the costs recorded in Research and Development expenses, the Group incurs the following R&D expenditure:

- Research studies and expenditure relating to specific projects rebilled to customers (pursuant to contractual terms and conditions), recorded in Cost of sales;
- Specific exploration costs and pre-mining expenses capitalized during the period in Intangible assets. Costs are capitalized when they relate to a specific project which, at the year end, has a high chance of technical success and commercial profitability.

Together these R&D costs represent the “Total Group Research and Development Effort”. This information seeks to provide a comprehensive picture of total Group R&D investment in a fiscal year.

<i>(in millions of euros)</i>	Year ended December 31		
	2004	2003	2002
Research and development expenses	402	285	332
As a % of sales	3.6%	3.5%	4.0%
Nuclear operations	51%	70%	65%
T&D Division	30%	n.a.	n.a.
Connectors Division	19%	30%	35%
Total effort	559	n.a.	n.a.
Number of patents filed	214	152	192

2004 - 2003

Group R&D expenses represented approximately 3.6% of sales in 2004 (€402 million), up slightly in percentage terms on the 2003 figure of 3.5% (€285 million).

The increase in the absolute value of R&D expenses is essentially due to the integration of T&D activities within the Group consolidation scope in 2004. The expense level of this Division, as a percentage of sales, is similar to that of the Group.

For nuclear operations, R&D totaled €206 million, i.e. 3.1% of sales in 2004 and €199 million, i.e. 2.9% of sales in 2003. Work carried out in 2004 primarily focused on assessing new procedures for recycling treated uranium, boosting nuclear fuel performance, research into the economic performance of reactors (via improvements in the performance of reactor heavy components, design and calculation tools and developing a new generation of safety control systems) and adapting and optimizing treatment processes taking into account the changing nature of fuels to be treated. In the longer term, AREVA is actively preparing a new generation of reactors, which form part of the solutions planned as part of the “Generation IV” international R&D initiative.

In the **T&D Division**, R&D expenditure totaled €121 million in 2004, i.e. 3.8% of **T&D sales**. Expenditure was directed at improving the performance of electric power systems and equipment, and the development of digital controls and information systems for monitoring electricity grids.

In the **Connectors Division**, R&D expenditure totaled €75 million in 2004, i.e. 5.8% of Division sales, compared to €86 million in 2003, i.e. 6.4% of Division sales. Expenditure was directed at technologies enabling high product differentiation to meet demands for the miniaturization, increased signal transmission

speed and environmental concerns, by working notably on the integrity of signals transmitted at very high speeds, metalizing plastics, 42 volt connectors for automobiles, models, simulations and lead-free coatings.

Sustained efforts by all Divisions to renew the product range associated with process improvements, resulted in R&D expenditure equal to 5.8% of sales; the aim is to maintain the **Connectors** Division among the best in the industry and strengthen its leadership position in its target markets and in particular those offering high growth potential: IT servers, data storage systems, automobile onboard multi-media equipment, cards and labels, IT peripherals, etc.

2003 - 2002

Group research and development expenditure represented approximately 3.5% of sales in 2003 (€285 million), compared to 4% of sales in 2002 (€332 million).

For nuclear operations, R&D efforts remained relatively stable totaling €199 million in 2003, some 2.9% of 2003 sales, compared to €213 million in 2002, some 3.2% of 2002 sales. The R&D program primarily focused on enhancing fuel performance and reactor economic performance through work on control system aging and digitalization. In the **Back End** Division, resources were devoted to optimizing technical and economic solutions for used fuel.

Despite difficult market conditions, the **Connectors** Division maintained R&D expenditure at 6.4% of Division sales, (€86 million), compared to 7.7% of Division sales (€120 million) in 2002. Improvements in industrial productivity in this sector necessitated significant development work, primarily focused on optimizing manufacturing processes. Research of a more fundamental nature involved large-scale, narrowly targeted technology development to increase data transmission speeds, including research on new coating materials, expanded bandwidths and multi-point contacts.

Total Group Research & Development efforts

In addition to R&D expenses of €402 million recorded in the 2004 financial statements, the Group estimates additional R&D expenditure at €157 million under customer contracts, included in Cost of sales. This expenditure concerns nuclear operations exclusively. After inclusion of this expenditure, total Group R&D efforts amounted to €559 million in 2004, some 5% of Group sales and 5.7% for nuclear operations.

Sales, marketing, general and administrative expenses

2004 - 2003

Group sales, marketing, general and administrative expenses totaled €1,389 million in 2004, compared to €939 million in 2003, representing an increase of 47.9% in 2004. This jump in absolute terms was primarily due to the integration of the **T&D** Division at the beginning of 2004, which incurred sales, marketing, general and administrative expenses of €505 million in 2004. Excluding the **T&D** Division, sales, marketing, general and administrative expenses rose 1.3%.

Sales and marketing expenses totaled €602 million in 2004, compared to €352 million in 2003, a rise of 71% in 2004. They represented 5.4% of sales in 2004 compared to 4.3% in 2003. This increase was primarily due to the inclusion of **T&D** Division sales and marketing expenses of €275 million in 2004, representing 8.6% of Division sales. Excluding the **T&D** Division, Group sales and marketing expenses dropped 7% on 2004 and represent 4.1% of 2004 sales, compared to 4.3% in 2003. This decrease is due to the particularly high level of expenditure in 2003, when substantial efforts were necessary to prepare the **EPR Finland** bid and for the negotiation of the corresponding contract.

General and administrative expenses totaled €787 million in 2004, compared to €587 million in 2003, a rise of 34% in 2004. They represented 7.1% of sales in 2004, unchanged on 2003. This increase was primarily due to the inclusion of **T&D** Division general and administrative expenses of €230 million in 2004. Excluding the **T&D** Division, general and administrative expenses fell back 5.1% on 2003, mainly thanks to the impact of cost reduction measures implemented by the **Connectors** Division. Excluding the **T&D** Division, general and administrative expenses represented 7.0% of sales in 2004, compared to 7.1% in 2003.

2003 - 2002

Group sales, marketing, general and administrative expenses totaled €939 million in 2003, compared to €1,008 million in 2002, representing a fall of 6.8% in 2003.

Sales and marketing expenses totaled €352 million in 2003 compared to €384 million in 2002, a drop of 8.3% in 2003. They represented 4.3% of sales in 2003, compared to 4.6% in 2002, a fall of 0.3 points in 2003. The decrease in 2003 year-on-year was mainly the result of restructuring at the **Connectors** Division, which reported a drop in sales and marketing expenses of €46 million. Nuclear operations reported an increase of 6% in sales and marketing expenses in 2003, year-on-year, primarily associated with the “**EPR Finland**” contract.

General and administrative expenses totaled €587 million in 2004, compared to €624 million in 2002, a drop of 6% in 2003. They represented 7.1% of sales in 2003, compared to 7.5% in 2002, a fall of 0.4 points in 2003. The decrease in 2003, year-on-year, was also primarily due to cost reduction measures in the Connectors Division. Excluding this Division, general and administrative expenses reported a fall of 2.8% in 2003, year-on-year.

Other operating income and expenses

Other operating income and expenses primarily include income and expenses relating to:

- restructuring operations
- depreciation and amortization of non-current assets not allocated to contracts;
- end-of-life-cycle obligations;
- pensions.

2004 - 2003

Other operating income and expenses totaled €358 million in 2004, compared to €551 million in 2003, a drop of 35.2% in 2004.

Operating income

The following table presents a breakdown of Group operating income by Division for the years ended December 31, 2004, 2003 and 2002:

	Year ended December 31 (in millions of euros)			Change (in %)	
	2004	2003	2002	2004	2003
Front End	314	316	319	(0,6)	(0,9)
As a % of sales	12,4%	11,8%	12,5%		
Reactors and Services	90	52	64	73,1	(18,7)
As a % of sales	4,2%	2,4%	3,3%		
Back End	177	155	236	14,2	(34,3)
As a % of sales	9,1%	7,7%	11,3%		
Nuclear activities	581	523	619	11,1	(15,5)
As a % of sales	8,8%	7,7%	9,4%		
T&D	31	-	-	-	-
As a % of sales	1,0%				
Connectors	80	(114)	(406)	n.s.	n.s.
As a % of sales	6,2%	- 8,5%	- 26,0%		
Corporate & other operations	(79)	(67)	(33)	n.s.	n.s.
Operating income	613	342	180	79,2%	90%
As a % of sales	5,5%	4,1%	2,2%	1,4 point	1,9 point

The decrease in 2004, year-on-year, was mainly due to:

- a fall in restructuring costs, in particular in the Connectors Division. Restructuring costs Group-wide totaled €74 million in 2004, compared to €217 million in 2003, representing a drop of €143 million. It should, however, be noted that restructuring costs of €142 million relating to the T&D Division were included in goodwill.
- one-off charges to contract provisions of €37 million in 2003, notably in respect of a service contract in Ukraine (ISF2).

2003 - 2002

Other operating income and expenses totaled €551 million in 2003, compared to €616 million in 2002, a fall of 10.6% in 2003.

The decrease between 2002 and 2003 was primarily due to:

- a reduction in restructuring costs, in particular in the Connectors Division where restructuring costs decreased €135 million between 2002 and 2003 from €270 million to €135 million. For the Group as a whole, restructuring costs totaled €217 million in 2003, compared to €345 million in 2002, a drop of €128 million.
- partially offset by one-off charges to contract provisions of €37 million in 2003.

2004 - 2003

Group operating income totaled €613 million in 2004, compared to €342 million in 2003, a jump of 79.2% in 2004. The operating margin was 5.5% in 2004 compared to 4.1% in 2003, representing an increase of 1.4 points. 2004 Group operating income does not include restructuring costs of €142 million relating to the **T&D Division**, included in goodwill.

Nuclear operations reported operating income of €581 million in 2004, compared to €523 million in 2003, a rise of 11.1%. The operating margin improved 1.1 points from 7.7% in 2003 to 8.8% in 2004. This increase in the operating income of nuclear operations was mainly attributable to the **Reactors & Services** and **Back End** divisions, as detailed in Sections 5.1.5.2. and 5.1.5.3.

The **T&D Division** reported operating income of €31 million in 2004, representing a stable operating margin of 1%.

The **Connectors** Division reported operating income of €80 million in 2004, compared to an operating loss of €114 million in 2003, representing an improvement of €194 million in 2004 attributable to lower restructuring costs and cost reduction measures. The operating margin improved 14.7 points, from negative 8.5% in 2003 to 6.2% in 2004.

2003 - 2002

Group operating income totaled €342 million in 2003, compared to €180 million in 2002, a jump of 90% in 2003. The operating margin was 4.1% in 2003 compared to 2.2% in 2002, representing an increase of 1.9 points in 2004.

Nuclear operations reported operating income of €523 million in 2003, down 15.5% on 2002 operating income of €619 million. The operating margin was 7.7% in 2003, compared to 9.4% in 2002. The fall in 2003 was mainly attributable to the **Back End** Division which benefited from one-off positive impacts in 2002 and a major provision recorded in 2003 by the **Reactors & Services** Division in respect of a service contract.

The **Connectors** Division reported an operating loss of €114 million in 2003, compared to €406 million in 2002,

an improvement of €292 million. The operating margin was negative 8.5% in 2003, compared to negative 26% in 2002, representing an improvement of 17.5 points in 2003. Substantial restructuring costs were recorded in both periods of €135 million in 2003 and €270 million in 2002. Before restructuring costs, net operating income of the **Connectors** Division was €21 million in 2003, compared to a net loss of €136 million in 2002, an improvement of €157 million. The margin rate before restructuring costs was 1.6% in 2003 compared to negative 8.7% in 2002, an improvement of 10.3 points.

A detailed breakdown of operating income by Division is presented in Section 5.1.5.

Operating income before restructuring costs

Group operating income before restructuring costs for 2004 and 2003 excludes one-off restructuring costs of €74 million in 2004 and €217 million in 2003. Moreover, in 2004, Group operating income before restructuring costs does not include restructuring costs of €142 million in respect of the **T&D Division**, included in goodwill.

2004 - 2003

Group operating income before restructuring costs totaled €687 million in 2004, compared to €559 million in 2003, representing an increase of 23% in 2004. The operating margin was 6.2% in 2004, compared to 6.8% in 2003, a decrease of 0.6 points. This fall was mainly due to the dilutive impact on the margin rate of the integration of the **T&D Division**, partially offset by an increase in the operating margin of nuclear operations and the **Connectors** Division in 2004.

2003 - 2002

Group operating income before restructuring costs totaled €559 million in 2003, compared to €525 million in 2002, representing an increase of 6.4% in 2003. The operating margin was 6.8% in 2003, compared to 6.4% in 2002, a rise of 0.4 points. This improvement was mainly due to a 10.3 points increase in the margin rate of the **Connectors** Division, partially offset by a fall in the margin rate of nuclear operations.

Financial income

The following table presents Group financial income for the years ended December 31, 2004, 2003 and 2002.

<i>(in millions of euros)</i>	2004	December 31 2003	2002
Income (expenses) unrelated to end-of-life-cycle portfolio			
Investment income	53	99	97
Interest expense on loans, lines of credit and interest-bearing customer advances	(30)	(55)	(87)
Net foreign exchange gain (loss)	(2)	(10)	1
Net gain (loss) on sales of securities	41	288	689
Dividends received	30	32	57
Provisions on securities	7	39	(46)
Other financial income (expenses)	(49)	(35)	(89)
Sub-total	50	358	621
Income (expenses) related to end-of-life-cycle portfolio			
Net gain (loss) on sales of securities	21	83	22
Dividends received	29	33	31
Impairment of securities	62	(101)	(57)
Interest under the Marcoule protocol	(20)	-	-
Provision for end-of-life-cycle obligations inflation adjustment	(25)	(39)	(30)
Sub-total	67	(24)	(34)
Total	117	334	587

2004 - 2003

Financial income totaled €117 million in 2004 compared to €334 million in 2003, a fall of 64.7%. Financial income excluding the portfolio earmarked for end-of-life-cycle obligations reported a drop of 86% in 2004, from €358 million in 2003 to €50 million in 2004.

The fall in financial income, excluding the portfolio earmarked for end-of-life-cycle obligations, was mainly due to:

- fewer sales of securities. In 2003, the Group sold 3.2 million Total shares, generating a pre-tax capital gain of €288 million. In 2004, the Group sold 382,500 Total shares, generating a pre-tax capital gain of €37 million,
- 2004 investment income of only €53 million, compared to 2003 investment income of €99 million. This drop was due to a much lower average cash and cash equivalents position in 2004 than in 2003 (see section 5.1.6, cash flow).

Financial income from the portfolio earmarked for end-of-life-cycle obligations totaled €67 million in 2004, compared to a financial expense of €24 million in 2003, representing an improvement of €91 million. This increase followed a net reversal of security impairment provisions of €62 million in line with movements in the portfolio profile and the improved

performance of equity markets in 2004, compared with a net charge to provisions of €101 million in 2003. Conversely, net gains on the sale of securities decreased in 2004 to €21 million from €83 million in 2003. In 2003, net gains on the sale of securities held in the portfolio earmarked for end-of-life-cycle obligations included the capital gain realized on the merger-absorption of Coficem by Sagem of €79 million.

2003 - 2002

Financial income totaled €334 million in 2003 compared to €587 million in 2002, representing a drop of 43%.

Financial income, excluding the portfolio earmarked for end-of-life-cycle obligations, fell 42% in 2003, from €621 million in 2002 to €358 million in 2003. This decrease was mainly due to:

- lower capital gains on the sale of securities. The Group sold 7 million Total shares in 2002, generating a pre-tax capital gain of €689 million. This approach was continued in 2003 with the sale of 3.2 million Total shares, generating a pre-tax capital gain of €288 million.
- an improvement in the financial markets leading to a net reversal of security impairment provisions of €39 million, compared with a net charge to provisions of €47 million in 2002, following the market recovery in 2003.

Exceptional items

2004 - 2003

Exceptional items dropped 65.9% in 2004 to €46 million from €135 million in 2003.

2004 exceptional items mainly consist of the capital gain realized on the sale of the Group building in Lyon of €45 million.

2003 - 2002

Exceptional items dropped 53.3% in 2003 to €135 million from €289 million in 2002.

2003 exceptional items mainly consist of:

- the capital gain realized on the sale of the Military/Aerospace Industry Business Unit by the Connectors Division of €65 million,
- the capital gain realized on the sale of Assystem shares contributed to the Brime Technologie Public Exchange Offer, based on the proposed parity, of €47 million.

Substantial non-core assets were also sold in 2002: the sale of Sovaklé, the Group real estate subsidiary and the AREVA Tower (previously known as the Framatome Tower) generated a pre-tax capital gain of €293 million.

Income tax

2004 - 2003

The 2004 income tax expense is €209 million, compared to €184 million in 2003, a rise of 13.6%. The Group's effective tax rate in 2004 is 26.9%, up 4.2 points on the 2003 effective tax rate of 22.7%.

This increase in 2004, despite taxable income of only €776 million, less than 2003 taxable income of €811 million, is due to the structure of this income. 2003 taxable income included capital gains of €288 million taxable at a reduced rate, compared to capital gains of only €41 million in 2004. The majority of 2004 taxable income was realized by operating activities, which are generally taxed at the standard rate.

2003 - 2002

The 2003 income tax expense is €184 million, compared to €220 million in 2002, a fall of 16.4%. The Group's effective tax rate in 2003 is 22.7%, up 1.9 points on the 2002 effective rate of 20.8%.

The decrease in the 2003 tax charge on 2002 is mainly due to the fall in taxable income from €1,056 million in 2002 to €811 million in 2003.

Share in net income of equity affiliates

<i>(in millions of euros)</i>	Year ended December 31		
	2004	2003	2002
STMicroelectronics	74	34	75
Eramet group	46	(13)	(7)
Other	11	0	14
Total	131	21	82

The two main participating interests equity-accounted in the consolidated financial statements are STMicroelectronics and Eramet. The other equity-accounted participating interests are detailed in note 12 to the consolidated financial statements.

AREVA holds an investment of 11% in STMicroelectronics via FT1CI, a holding company owned jointly with France Telecom. This investment is reflected in the Group consolidated financial statements by:

- a 17.3% share in the net income of STMicroelectronics,
- France Telecom minority interests of 6.25%.

Group figures regarding its share in the net income of STMicroelectronics and Eramet may differ from figures published by these companies. These amounts are, in effect, based (i) on provisional results in the case of Eramet, and (ii) on U.S. GAAP figures adjusted to French GAAP and U.S. dollar amounts translated into euro by the Group, in the case of STMicroelectronics. The Group identifies any differences between Eramet provisional and published financial statements and includes them in the financial statements of the following period.

2004 - 2003

The Group share in the net income of equity affiliates totaled €131 million in 2004, compared to €21 million in 2003.

2003 - 2002

The Group share in the net income of equity affiliates totaled €21 million in 2003, compared to €82 million in 2002.

Goodwill amortization**2004 - 2003**

Goodwill amortization fell 12.6% in 2004 to €152 million from €174 million in 2003.

The decrease in 2004, despite the consolidation of the T&D Division and the first year of amortization of the corresponding goodwill, was due to the decrease in the number of Total shares sold in 2003. Sales of Total shares in 2003 led to an exceptional amortization charge of €70 million in respect of the goodwill recorded on the creation of AREVA⁽¹⁾. The exceptional goodwill amortization¹ recorded in 2004 in respect of sales of Total shares totaled €8 million. Goodwill amortization in respect of the T&D Division, consolidated as of January 1, 2004, totaled €32 million.

The Group did not record any goodwill impairment in respect of operating activities in 2004.

2003 - 2002

Goodwill amortization fell 70.6% in 2003 to €174 million from €593 million in 2002. Sales of Total shares led to the exceptional amortization of goodwill resulting from the creation of AREVA⁽¹⁾ of €70 million and €153 million in 2003 and 2002 respectively. Exceptional amortization of €275 million was also recorded in 2002 in respect of goodwill resulting from the acquisition of Berg by the Connectors Division in 1998. The Group did not record any goodwill impairment in respect of operating activities in 2003.

(1) This goodwill results from the establishment of the AREVA group following the contribution of COGEMA's participating interests other than those attached to its industrial operations, i.e. its participating interests in Framatome, Total, Eramet and Cogepac.

Net income before minority interests

Given the above, net income before minority interests was €546 million in 2004, compared to €473 million in 2003 and €326 million in 2002, representing an increase of 15.4% in 2004 and 45.1% in 2003.

Minority interests

<i>(in millions of euros)</i>	Year ended December 31		
	2004	2003	2002
Siemens' minority interest in Framatome ANP (34%)	54	37	56
France Telecom's minority interest in FT1CI (STMicroelectronics holding company)	19	16	11
Minority interests in Eurodif (40%)	37	24	18
Other	9	7	1
Total	118	84	86

Minority interests primarily comprise Siemens' 34% stake in Framatome-ANP, minority interests in the uranium enrichment company Eurodif (40%) and France Telecom' stake in FT1CI, representing 6.25% (2.92% from December 21, 2004) of STMicroelectronics in 2004, 2003 and 2002.

Net minority interests totaled €118 million in 2004, compared to €84 million in 2003 and €86 million in 2002, representing an increase of 40.5% in 2004, primarily attributable to the improvement in Framatome-ANP and Eurodif results and a decrease of 2.3% in 2003.

Consolidated net income

Consolidated net income totaled €428 million in 2004, compared to €389 million in 2003 and €240 million in 2002, representing an increase of 10% in 2004 and 62.1% in 2003.

5.1.5. Analysis by business Division and region for the years ended December 31, 2004, 2003 and 2002

5.1.5.1. Front End Division

	December 31 (in millions of euros)			Change (in %)			2003 Pro forma
	2004	2003	2002	2004	2004 Pro forma	2003	
Backlog	7,158	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sales	2,524	2,683	2,562	(5.9)	(4.3)	4.7	10.3
Mining	475	443	536	7.4	6.2	(17.4)	(8.1)
Chemistry	232	226	173	2.5	2.5	30.7	30.7
Enrichment	681	727	662	(6.3)	(2.8)	9.9	20.2
Fuel	1,136	1,284	1,189	(11.5)	(9.9)	8.0	9.7
Operating income	314	316	319	(0.6)	-	(0.9)	-
As a % of sales	12.4	11.8	12.4	+0.6 pt	-	(0.6) pt	-

Backlog

The **Front End** Division backlog stands at €7,158 million as of December 31, 2004 and represents 34 months of 2004 sales.

Sales

2004 - 2003

Front End Division sales fell 5.9% in 2004 to €2,524 million from €2,683 million in 2003. This decrease was primarily due to an 11.5% fall in Fuel Business Unit sales and a 6.3% fall in Enrichment Business Unit sales, partially offset by 7.4% growth in Mining Business Unit sales and 2.5% growth in Chemistry Business Unit sales. Exchange rate movements had a negative impact of €73 million on the Division as a whole. On a like-for-like basis, **Front End** Division sales fell 4.3% in 2004.

The Mining Business Unit reported sales of €475 million, up 7.4% on 2003 (6.2% on a like-for-like basis). Excluding trading operations, uranium volumes sold were stable on 2003, with an average selling price up 4%. Conversely, volumes sold by trading* operations increased significantly. The increase recorded by Gold operations, which represent less than 10% of sales but account for over one third of the increase in Mining Business Unit sales, is the result of an increase in the consolidation scope with the proportionate consolidation of AMC, previously equity-accounted.

The Chemistry Business Unit reported sales growth of 2.5% to €232 million, compared to €226 million in 2003. This reflected a high level of uranium conversion activity, with for the first time over 14,000 metric tons of UF₆ produced. Prices reported a slight increase of approximately 2% on 2003.

Enrichment Business Unit sales fell 6.3% (2.8% on a like-for-like basis, roughly in line with the downturn in volumes) to €681 million from €727 million in 2003. 2003 was marked by a level of activity much higher than that normally recorded, notably in Asia and North America. Technical difficulties encountered in Japan by a number of utilities led to numerous reactor shut-downs for safety inspection purposes in 2003, continuing into 2004. These shut-downs led to a significant fall in volumes sold in the Asia Pacific region. This fall was only partially offset by an increase in volumes sold in Europe (excluding France).

The Fuel Business Unit, which accounted for 45% of Division sales in 2004, reported sales of €1,136 million, down 11.5% on 2003 sales of €1,284 million (9.9% fall on a like-for-like basis). This drop was due to a decrease in sales volumes of both UO₂ and Mox fuel. All fuel types together, volumes sold in 2004 fell 7% on 2003. 2003 was marked by a high level of deliveries, notably to EDF, which, according to Group estimates, built-up its inventory of new fuel in 2003. Conversely, 2004 was marked by a weak level of activity, particularly in France and Germany, with sales volumes of uranium fuel in Europe reporting a 15.8% drop in 2004 compared to 2003. These fluctuations are the result of delivery schedules set by customers and were partially offset by a 24% increase in sales volume in the United States in 2004.

European-wide sales reported by the **Front End** Division as a whole fell 9.7% between 2003 and 2004. This fall was nonetheless partially offset by 6% sales growth in the Americas region.

2003 - 2002

Front End Division sales increased 4.7% in 2003 to €2,683 million from €2,562 million in 2002. This increase was primarily due to 9.9% growth in sales of Enrichment services and 8% growth in Fuel sales, partially offset by a 17.4% drop in Mining Business Unit sales. Exchange rate movements had a negative impact of €146 million on the Division as a whole. On a like-for-like basis, **Front End** Division sales rose 10.3% in 2003.

Mining Business Unit sales dropped 17.4% on a reported basis and 8.1% excluding exchange rates movements. Uranium delivery volumes were up, but the average sales price was lower than in 2002. Though the dollar-denominated uranium spot price gained 40% in 2003 (+20% when converted into euros), this had little impact on Division sales, as deliveries were made under long-term contracts. Trading operations declined, reflecting supply scarcities. The four-month shut-down of the McArthur mine in Canada did not have a notable impact on sales, as the Group was able to meet customer deliveries by running down uranium stocks.

Chemistry business sales rose 30.7%. This increase was primarily due to a volume effect, particularly for uranium conversion operations, thanks notably to the signature of new contracts with European utilities. The price effect over the period was not significant.

Enrichment Business Unit sales rose by 9.9% on a reported basis and by 20.2% on a like-for-like basis, reflecting brisk business and high volumes (up 27%) in France, Asia and the Americas.

Fuel Business Unit sales increased by 8% on a reported basis and by 9.7% on a like-for-like basis. In 2003, fuel sales reached an all-time high, thanks to the favorable combination of a positive price and volume effect. Lower volumes of uranium fuel, notably in France and the United States, were offset by Mox fuel deliveries.

European-wide sales reported by the **Front End** Division rose 6.8% between 2002 and 2003. This increase was nonetheless partially offset by a 1.2% fall in sales in the Americas region.

Operating income**2004 - 2003**

Operating income of the **Front End** Division remained stable in 2004 at €314 million, compared to €316 million in 2003. The operating margin improved 0.6 percentage points from 11.8% in 2003 to 12.4% in 2004.

The impact of prices on mining operations remains minimal for the moment. Positive volumes effects in the Mining and Chemistry Business Units were cancelled by the downturn observed by the Enrichment Business Unit after a particularly high level of activity in 2003.

Volumes sold by the Fuel Business Unit reported a temporary drop in 2004, due to delivery schedules for fuel replacements set by utility customers, while adaptation and productivity measures and a favorable product mix enabled operating income to be held at 2003 levels. In particular, efforts to obtain cross-classification of fuel production sites, enabling assemblies to be manufactured indifferently at several Group plants, and the commissioning of a production line combining all Fuel Business Unit best practices at the Lynchburg plant in the United States, were continued in 2004.

2003 - 2002

Operating income of the **Front End** Division fell slightly by 0.9% in 2003 to €316 million from €319 million in 2002. The operating margin fell back 0.6 percentage points to 11.8% in 2003 from 12.4% in 2002.

This near stability in 2003 was the net effect of a significant increase in operating income of the Enrichment Business Unit, in line with the particularly high-level of activity, offset by lower operating income of the Fuel Business Unit. The latter enjoyed a strong year in 2002 with the delivery of the first new fuel core for the start-up of the Ling Ao2 reactor in China and significant deliveries of fuel to EDF, generating a positive mix in terms of gross margin. In 2003, the temporary shut-down of the McArthur uranium mine in Canada had minimal impact on operating income of the Mining Business Unit, which was slightly higher than in 2003.

(1) See glossary definition.

5.1.5.2. Reactors & Services Division

	December 31 (in millions of euros)			Change (in %)			
	2004	2003	2002	2004	2004 Pro forma	2003	2003 Pro forma
Backlog	3,506	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.
Sales	2,146	2,124	1,933	1.0	4.8	9.9	13.2
Plants	582	539	484	8.1	10.6	11.4	9.3
Nuclear Services	696	763	664	(8.8)	(3.1)	14.9	22.4
Equipment	242	217	224	11.5	12.7	(3.2)	(0.1)
Technicatome	316	299	234	5.9	3.3	27.6	27.6
Nuclear measurement	157	149	164	5.6	11.5	(8.9)	3.0
Consulting and information systems	133	137	126	(2.9)	7.7	9.0	9.0
Mechanical systems	18	18	36	1.4	36.0	(49.4)	(49.4)
Operating income	90	52	64	73.1	-	(18.7)	-
As a % of sales	4.2	2.4	3.3	+1.8 pt	-	(0.9) pt	-

Backlog

The Reactors & Services Division backlog stands at €3,506 million as of December 31, 2004, and includes the Group's share in the "Olkiluoto 3" EPR project in Finland, which represents over half the Division's backlog. The Division's backlog represents nearly 20 months of 2004 sales.

Sales

2004 - 2003

Reactors & Services Division sales rose 1% in 2004 to €2,146 million from €2,124 million in 2003. This increase was primarily due to sales growth of 8.1% reported by the Plants Business Unit, which offset the 8.8% drop in sales of the Services Business Unit. Exchange rate movements had a negative impact of €57 million on the Division as a whole. On a like-for-like basis, Division sales rose 4.8% in 2004.

The Plants Business Unit reported sales of €582 million, up 8.1% on 2003 and 10.6% on a like-for-like basis. In 2003, the Reactors & Services Business Unit recorded the receipt of bonuses following delivery of final reactors by the Group, notably in China (Ling Ao 2), France (Civaux 2), and Brazil (Angra 2). These degressive bonuses, received during the first years of operation of the power plants, are paid when performance delivered equals or exceeds the technical performance provided for in the contract. Bonuses received in 2004 were less than those received in 2003, as would be expected. Sales growth in 2004 is mainly due to the launch of the "Olkiluoto 3" EPR project in Finland. In effect, the contract signed with the Finish utility TVO at the end of 2003 for the construction of an EPR reactor, did not generate any sales in 2003. This contract should primarily cover the period 2004 to 2009 (year of connection to the grid, i.e. connection and initial supply of electricity to the grid) and generate sales recognized

on a percentage completion basis. Sales generated by this contract in 2004 exceeded the fall in bonuses received following the delivery of reactors.

The Services Business Unit reported sales of €696 million, down 8.8% on 2003 and 3.1% on a like-for-like basis. A substantial portion of Services business is based in the United States. 2003 saw an increase in the activity base, notably in the United States, for the inspection and repair of reactor vessel heads and spare parts. 2004 was marked by downward pressure on prices from utilities and by a general move towards concentrating the number of scheduled outages in increasingly tight time periods, primarily in the U.S. market. Scheduled outages by U.S. utilities in 2004 were significantly lower than in 2003, when their number was particularly high. The fall in sales was nonetheless limited, due in particular to buoyant steam generator replacement activities.

The Equipment Business Unit reported sales growth of 11.5% in 2004 to €242 million, compared to €217 million in 2003 (sales growth of 12.7% on a like-for-like basis). This increase was mainly due to the supply by French Group plants of equipment to the U.S. market, relating in particular to investment in extending the operating life of power plants in the United States. Nonetheless, after three years of growth, the Business Unit's market penetration stabilized in the United States, mainly due to unfavorable movements in the euro/U.S. dollar exchange rate.

The remaining Division Business Units (Technicatome, Nuclear measurement, Consulting & Information systems and Mechanical services) reported sales of €624 million in 2004, up 3.5% on 2003 sales of €603 million (6.8% on a like-for-like basis), primarily due to growth in nuclear measurement and

Technicatome sales, where activity in respect of civil engineering (research reactor) and military (new generation submarine propulsion equipment) projects remained significant in 2004.

European-wide sales reported by the **Reactors & Services** Division increased 4.2% between 2003 and 2004. This increase was nonetheless partially offset by a 5.3% drop in sales in the Americas region, due to unfavorable movements in the euro/U.S. dollar exchange rate and the high level of Services Business Unit sales in 2003, a significant portion of which are realized in the United States.

2003 - 2002

Reactors & Services Division sales increased 9.9% in 2003 to €2,124 million from €1,933 million in 2002. This increase in 2003 was primarily due to sales growth of 11.4% reported by the Reactors Business Unit, 14.9% reported by the Services Business Unit, and 27.6% reported by the Technicatome Business Unit. Exchange rate movements had a negative impact of €104 million on the Division as a whole. On a like-for-like basis, **Reactors & Services** Division sales rose 13.2% in 2003. In the Plants Business Unit, sales rose 11.4% (9.3% like-for-like). Half of this increase came from final acceptance bonuses for recently delivered reactors in France (Civaux 2), China (Ling Ao 2) and Brazil (Angra 2). Business relating to existing operating reactors remained strong, especially in Bulgaria, France and Germany.

In the Services Business Unit, sales rose 14.9% (22.4% like-for-like). Sales were boosted by the U.S. market, where major inspection and maintenance programs generated substantial business in reactor repair and heavy component replacement (Sainte-Lucie, Prairie Island, Calaway, Salem, Arkansas, North Anna, Calvert Cliffs and Davis Besse). In Europe, however, business sagged as the number of scheduled outages and heavy component replacement programs declined.

Equipment Business Unit sales were stable on a like-for-like basis (fall of 3.2% on a reported basis). The downturn in sales in Europe was offset by strong demand in the U.S. market.

In the Technicatome Business Unit, nuclear propulsion sales rose 27.6% as work began on major contracts awarded in late 2002. The RJH research reactor for the French atomic energy commission (CEA) and next-generation submarine equipment boosted sales. Marine maintenance operations also recorded year-on-year growth.

The remaining Division Business Units (Nuclear Measurement, Consulting & Information systems and Mechanical services) reported a fall in sales of 6.7% to €304 million in 2003, compared to €326 million in 2002, primarily due to exchange rate movements (fall of 0.7% on a like-for-like basis, indicating relatively stable activity levels).

European-wide sales reported by the **Reactors & Services** Division increased 4.4% between 2002 and 2003, while sales in the Americas region increased 37.4%, primarily due to the high level of Service activities, a significant portion of which are realized in the United States.

Operating income

2004 - 2003

Operating income of the **Reactors & Services** Division jumped 73.1% in 2004 to €90 million from €52 million in 2003. The operating margin improved 1.8 percentage points to 4.2% in 2004 from 2.4% in 2003.

Operating income was impacted negatively by the normal reduction in final acceptance bonuses for recently delivered power plants: charges corresponding to sales recognized in respect of these bonuses are in effect very low and, as such, the operating margin is high.

The start-up of the Olkiluoto 3 project in Finland contributed only marginally to operating income, given the low operating margin rate provided under this contract for the construction of the first EPR reactor.

The improvement in the operating margin was primarily due to the reduced impact of the Services Business Unit contract in the Ukraine, which generated substantial charges to “contract” provisions in 2003 (see section 5.1.4. “Other operating income and expenses”), slightly lower restructuring costs than in 2003 and a substantial improvement in the gross margin of the Equipment Business Unit, attributable to a volume effect and a reduction in non-production costs.

2003 - 2002

Operating income of the **Reactors & Services** Division fell 18.7% in 2003 to €52 million from €64 million in 2002. The operating margin fell 0.9 percentage points to 2.4% in 2003 from 3.3% in 2002.

Most of the decrease is attributable to additional charges, mostly in the form of “contract” provisions, on a Services Business Unit contract in the Ukraine. As a result, the Group further strengthened its pricing procedures and performance tracking methods for major contracts. These temporary difficulties were partially offset in 2003 by contract bonuses awarded when the Angra 2 and Civaux 2 reactors achieved their performance objectives.

Adjusted for these exceptional events, operating income performance would have been more in line with sales growth for the **Reactors & Services** Division of 9.9% in 2003.

5.1.5.3. Back End Division

	December 31 (in millions of euros)			Change (in %)			
	2004	2003	2002	2004	2004 Pro forma	2003	2003 Pro forma
Backlog	6,661	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.
Sales	1,946	2,023	2,088	(3.8)	2.5	(3.1)	(2.8)
Treatment and recycling	1,541	1,561	1,648	(1.3)	6.5	(5.3)	(5.7)
Logistics	222	243	200	(8.6)	(6.7)	21.8	25.6
Engineering	73	107	139	(32.0)	(27.9)	(23.3)	(19.8)
Clean-up	110	111	100	(1.0)	(1.0)	11.8	11.8
Operating income	177	155	236	14.2	-	(34)	-
As a % of sales	9.1	7.7	11.3	+1.4 pt	-	(3.6)pt	

Backlog

The **Back End** Division backlog stands at €6,661 million as of December 31, 2004 and represents 3.5 years of 2004 sales. 2004 was marked by the official signature of a contract for the treatment of EDF used fuel, which was the subject of a Memorandum of Agreement in 2001 covering the period 2001 to 2007 and by the recording in the backlog of treatment and/or recycling contracts with other European utilities and notably RWE and EPZ.

Sales**2004 - 2003**

Back End Division sales fell 3.8% in 2004 to €1,946 million from €2,023 million in 2003. This fall was partially attributable to the harmonization at the beginning of 2003 of criteria for measuring percentage completion for revenue recognition purposes within the **Back End** Division and partially attributable to the accounting treatment of the commercialization of Mox fuel. The combination of these two factors had a positive impact on 2003 sales of €113 million. On a like-for-like basis sales rose 2.5%. This increase was mainly due to sales growth of 6.5% reported by the **Treatment and Recycling** Division, partially offset by a downturn in Logistic Business Unit sales of 6.7% and Engineering and Clean-up Business Unit sales of 14.5%. Exchange rate movements had a negative impact of €11 million on the Division as a whole.

The Treatment and Recycling Business Unit reported a 1.3% fall in sales in 2004 to €1,541 million. On a like-for-like basis, 2004 sales rose 6.5% on 2003. Fuel volumes treated at the La Hague plant reported a cyclical rise of over 6%. Mox fuel production activities at the Melox plant reported an increase of 10% on 2003. Finally, the last training program for future operators at the Japanese treatment plant Rokkasho-Mura with a view to its start-up, was held in the first half of 2004 for the customer JNFL. This contract, signed in 2001, contributed significantly to 2002, 2003 and 2004 sales.

The Logistics Business Unit reported an 8.6% drop in sales in 2004 to €222 million (6.7% on a like-for-like basis). The year was marked by the scheduled reduction in shipments of used fuel from Germany, scheduled to end in 2005. Finally, 2004 saw the trans-Atlantic shipping of U.S. military-grade plutonium. During the first half of 2005, this plutonium will be used in the production of four Mox assemblies, under the "Mox for peace" Eurofab project.

Sales of the Clean-up Business Unit remained stable over the period at €110 million in 2004, compared to €111 million in 2003. Conversely, the Engineering Business Unit reported a 31.8% drop in sales (27.9% on a like-for-like basis) to €73 million in 2004, compared to €107 million in 2003. 2004 was in effect negatively affected by a fall in activities relating to the Russian Mox project, the counterpart of the U.S. program for the demilitarization of excess military-grade plutonium and the reduced contribution of pre-start-up test projects at the Rokkasho-Mura Japanese treatment plant.

Sales realized by the **Back End** Division in the Asia/Pacific region dropped 33.4% in 2004. The fall in this region resulted from the completion, during the first half of 2004, of training programs for future operators at the Rokkasho-Mura treatment plant, organized on behalf of the Japanese customer, JNFL, and the reduced contribution of pre-start-up test projects at this plant. The drop was offset by an increase in sales in the Europe and Americas regions of 6.9% and 16.9% respectively in 2004.

2003 - 2002

Back End Division sales fell 3.1% in 2003 to €2,023 million from €2,087 million in 2002. This decrease was primarily due to a fall in Treatment and Recycling Business Unit sales of 5.3% and Engineering Business Unit sales of 23.3%, partially offset by an increase in Clean-up Business Unit sales of 11.8% and

Logistic Business Unit sales of 21.8%. Exchange rate movements had a negative impact of €6 million on the Division as a whole. On a like-for-like basis, Division sales decreased 2.8%.

Sales of the Treatment and Recycling Business Unit, which account for nearly 80% of total Division sales, fell 5.3% on 2002.

The Treatment business experienced modest volume growth in used fuel treated, but with a less favorable price mix than in 2002. In effect, the contribution to 2003 sales of treatment contracts signed prior to 2000, via which the construction of the major workshops at the La Hague plant were billed, was significantly lower than in 2002; the La Hague plant performed well throughout 2003. The partnership with JNFL to support start-up of the Rokkasho-Mura plant in Japan was active and strong throughout the year. Recycling Business Unit sales were stable year-on-year.

The Logistics Business Unit reported sales growth of 21.8% (25.6% on a like-for-like basis) as used fuel shipments increased significantly in Europe (notably for German customers) and Mox fuel shipping casks were delivered in Asia.

The remaining Back End Business Units (Engineering and Clean-up) reported a decrease in sales of 8.4% (6.3% on a like-for-like basis) to €218 million in 2003 compared to €239 million in 2002.

European-wide sales realized by the **Back End** Division fell 4.6% between 2002 and 2003. Similarly, Division sales in the Americas region fell 7.1% year-on-year.

Operating income

2004 - 2003

Operating income of the **Back End** Division increased 14.2% in 2004 to €177 million from €155 million in 2003. The operating margin rate improved 1.4 percentage points to 9.1% in 2004 from 7.7% in 2003. This apparent increase was primarily due to the harmonization of accounting methods in 2003 in the Recycling Business Unit, which had a negative impact on operating income in this year.

In 2004, the operating income of the Treatment business is down slightly on 2003. This decrease followed the completion during the first half of 2004 of the training programs for future

operators at the Japanese treatment plant, organized on behalf of the customer JNFL. The operating margin generated by technology transfer and/or know-how contracts is traditionally superior to that generated by treatment service contract. This fall was partially offset by a cyclical increase in production in 2004.

2003 - 2002

Operating income of the **Back End** Division fell 34% in 2003 to €155 million from €236 million in 2002. The operating margin rate fell 3.6 percentage points to 7.7% from 11.3% in 2002.

This decrease was mainly due to transitional, non-recurring events in the recycling business. Firstly, the harmonization of accounting methods in 2003 within the Recycling Business Unit had a negative impact on 2003 operating income. Secondly, in accordance with commitments given, Mox fuel commercial production operations were discontinued in Cadarache, France, and transferred to the Melox plant in 2003. Non-recurring provisions were recorded in 2003 to cover the shutdown of the Cadarache plant. Finally, Mox fuel production operations were suspended in 2002 at the request of customers, due to difficulties encountered by Japanese utilities. These events generated non-recurring revenue for the Recycling Business Unit in 2002.

5.1.5.4. Transmission & Distribution Division

The figures presented below for the year ended December 31, 2003 have been reconstituted a posteriori and have not been audited. As such, had they been consolidated and audited in 2003, these figures may have been different. The figures have been subject to period adjustments (the financial statements of the **T&D** Division entities were previously prepared to March 31), consolidation scope adjustments (exclusion of activities in India and Pakistan as they had not yet been transferred from Alstom to AREVA by the end of 2004), adjustments to ensure application of Group accounting policies and adjustments to take account of certain 2004 valuations of purchased assets and liabilities, performed to produce figures comparable with 2004 published amounts. As such, these figures are not directly reconcilable with those published by the Group in its 2003 annual report.

The contribution to consolidated sales of the **T&D** Division, after adjustment for inter-BU sales, is not available for 2003. As such, changes in sales of the **T&D** Business Units between 2003 and 2004 are calculated on a gross basis.

	December 31 (in millions of euros)			Change (in %)	
	2004 contribution	2004	2003 Pro forma unaudited	2004	2004 Pro forma
Backlog	2,322	2,322	n.a.	-	-
Sales	3,186	3,186	2,877	10.7	11.8
Products	1,234	1,613	1,503	7.2	n.a.
Systems and Projects	1,047	1,058	715	48	n.a.
Automation	384	444	436	1.8	n.a.
Services	521	603	590	2.5	n.a.
Inter BU sales		(532)	(367)	44.9	n.a.
Operating income before restructuring costs	31	31	28	14.3	n.a.
Operating income*	31	31	28	14.3	n.a.
As a % of sales	1.0%	1.0%	1.0%	0 point	n.a.

* Restructuring costs of €142 million in 2004 are included in T&D goodwill in accordance with French GAAP. As in 2004, the impact of these costs on the 2003 unaudited pro forma income statement has been cancelled.

Backlog

The T&D Division backlog stands at €2,322 million as of December 31, 2004 and represents over 8 months of 2004 sales. The T&D Division reported a marked upturn in orders recorded of 13.8% in 2004, to €3.3 billion from €2.9 billion in 2003.

Sales

T&D Division sales increased 10.7% in 2004 to €3,186 million from €2,877 million in 2003 (pro forma). Exchange rate movements had a negative impact of €28 million on sales for the period. On a like-for-like basis, T&D Division sales increased 11.8% on 2003, which was a difficult year due to the position of the Alstom Group and the progressive fall in orders recorded by the T&D Division during 2003.

The Division as a whole enjoyed a positive volume effect of €407 million for the year (+14.1% compared with 2003 sales), offset by a negative price effect of €71 million (2.5% based on 2003 sales).

The Products Business Unit reported sales growth of 8.1% in 2004, on a constant exchange rate basis. Pressure on prices was just under 2%⁽¹⁾ in 2004. Sales growth remained strong in the Middle East and the Asia-Pacific region, notably following the start-up in 2004 of a manufacturing plant in Suzhou, China producing high and medium voltage products. Conversely, demand was weak in Western Europe. The product mix saw an increase in sales of transmission products (high voltage) and stable sales of distribution products (medium voltage).

The Systems Business Unit reported sales growth of 28.8% in 2004, on a like-for-like basis. This increase is mainly due to the

(1) Unaudited data.

signature of major transmission systems (high voltage) contracts, particularly in the Middle East, with a positive effect generated by sales of high voltage equipment supplied by the Products Business Unit. Pressure on prices in the Systems Business Unit was 4%⁽¹⁾ in 2004. Distribution sales (medium voltage) remained stable, in line with the general listlessness of the European market in 2004.

The Automation Business Unit reported a 3.2% increase in sales, on a like-for-like basis, in line with growth in the global market.

The Services Business Unit reported sales growth of 4%, on a like-for-like basis. This growth is partially attributable to telecom services in Australia and New-Zealand. The sale of these activities, which do not form part of our core businesses, was finalized at the beginning of 2005.

Sales between Business Units totaled €532 million in 2004 and primarily comprised the sale of supplies by the Products Business Unit to the Systems Business Unit.

In geographical terms, sales growth was most notable in the Africa and Middle East (+65%), and Asia (+28%, including +40% in China) regions, with Europe reporting more modest growth (+1.4%), in line with 2004 trends in the European market.

Operating income

Operating income of the T&D Division remained stable in 2004 at €31 million, compared to €28 million in 2003 (unaudited, pro forma, historical data). The operating margin rate was 1% in 2004, unchanged on 2003. This stability was the combined

result of a positive volume effect of €57 million and downward pressure on prices of €71 million, over 2% of sales. Exchange rate movements and increases in commodity prices had a negative impact of €20 million on the Division as a whole. Production costs, particularly in the Products Business Unit,

are sensitive to fluctuations in the price of copper, which increased significantly in 2004. Finally, restructuring measures implemented in 2004 enabled a €40 million increase in operating income in 2004, thanks in particular to the launch of a global purchasing policy and structure.

5.1.5.5. Connectors Division

	December 31 (in millions of euros)				Change (in %)		
	2004	2003	2002	2004	2004 Pro forma	2003	2003 Pro forma
	Backlog	173	n.a.	n.a.	n.a.	n.a.	n.a.
Sales	1,289	1,338	1,560	(3.6)	6.5	(14.2)	2.3
Communications Data Consumer	488	533	616	(8.4)	3.5	(13.5)	2.6
Automotive	554	542	531	2.2	5.3	2.1	6.7
Electrical Power Interconnect	165	165	200	0.2	6.2	(17.6)	(6.9)
Military/ Aerospace Industry	-	40	149	-	-	(73.2)	-
Microconnections	83	58	61	42.2	42.2	(4.9)	(4.3)
Corporate costs not allocated	-	-	3.8	-	-	-	-
Operating income	80	(114)	(406)	170	-	71.9	-
As a % of sales	6.2	(8.5)	(26)	+14.7 pt	-	+17.5 pt	

Backlog

The **Connectors** Division backlog stands at €173 million as of December 31, 2004 and represents approximately one and a half months of 2004 sales.

Sales

2004 - 2003

Connectors Division sales fell 3.6% in 2004 to €1,289 million from €1,338 million in 2003. This year-on-year decrease was primarily due to the sale in 2003 of the Military/Aerospace Industry Business Unit and Cable & Assembly activities.

On a like-for-like basis, **Connectors** Division sales increased 6.5% in a market characterized by renewed volume growth, offset by constant pressure on prices. This increase was primarily due to 3.5% growth in the Communications Data Consumer Business Unit, 5.3% growth in the Automotive Business Unit, 6.2% growth in the Electrical Power Interconnect (EPI) Business Unit and 42.2% growth in the Microconnection Business Unit. Exchange rate movements had a negative impact of €46 million on the Division as a whole. Over 40% of **Connectors** Division sales are U.S. dollar denominated and, as such, the Division is relatively exposed to exchange rate fluctuations.

The Communications Data Consumer Business Unit reported an 8.4% fall in sales in 2004 to €488 million from €533 million in 2003. This decrease was mainly due to the sale of Cable & Assembly activities. On a like-for-like basis sales increased

3.5% in 2004. Activity slowed down in the second half of the year (sales of €231 million, compared to first half sales of €257 million), as its main customers ran down inventory levels. 2004 was marked by a net increase in the proportion of sales attributable to new products (products launched on the market during the last three years). This was achieved as a result of sustained research and development activities, particularly in the IT and consumer electronics sectors.

With sales of €554 million in 2004, the Automotive Business Unit reports growth of 2.2% and 5.3% on a like-for-like basis. This year-on-year increase is primarily due to 14% growth in Asia, with the automobile markets remaining listless in Europe and the United States. On a commercial level, 2004 was marked by new business wins with General Motors, BMW and Hyundai.

The Electrical Power Interconnect (EPI) Business Unit reported sales of €165 million in 2004, stable on 2003 published figures and up 6.2% on a like-for-like basis. Pressure on prices remained constant, notably due to the globalization of competition. Sales remained lackluster in Europe, but increased in the United States where the reorganization of the sales force produced new contract wins. This volume growth was, however, masked by unfavorable exchange rate movements.

Thanks to a recovery in the smart card market, the Microconnections Business Unit reported sales growth of 42.2% in

2004 to €83 million. The Group further strengthened its position in this market segment in 2004. The start-up of the Business Unit's second plant, located in Singapore, contributed to this good performance. The Group however notes that this market is particularly cyclical and while it enjoys a medium-term growth outlook, short-term fluctuations can be significant. In geographical terms, sales reported by the Division fell 4.2% between 2003 and 2004 in Europe, 5.6% in the Americas region (notably impacted by euro/U.S. dollar exchange rate movements) and 2.8% in the Asia-Pacific region.

2003 - 2002

Connectors Division sales fell 14.2% in 2003 to €1,338 million in 2003, compared to €1,560 million in 2002. This reduction was primarily due to the sale in 2003 of the Military/Aerospace Industry Business Unit and Cable & Assembly activities. Exchange rate movements had a negative impact of €120 million. On a like-for-like basis, sales were up for the first time since 2000 (+2.3%), reflecting strong fourth quarter growth in the Communications Data Consumer Business Unit (8.1% like-for-like compared with the third quarter of 2003).

Communications Data Consumer Business Unit sales fell 13.5% in 2003. This decrease was mainly due to the sale of Cable & Assembly activities. Exchange rate movements had a negative impact of €67 million. On a like-for-like basis, sales edged up 2.6% in 2003, reflecting the fourth quarter recovery in the telecommunication market. On a like-for-like basis, 2003 fourth quarter sales rose 10.7% period-on-period in this market segment.

Automotive Business Unit sales rose 2.1% in 2003 (6.7% on a like-for-like basis). This increase reflects the aggressive manner in which the Business Unit markets its services and the resulting rising market shares with its key customers, especially PSA and Daimler Chrysler.

The EPI Business Unit, on the other hand, sagged 17.6% over the year (6.9% on a like-for-like basis). This decrease was due to weak European and American electrical power transmission markets in particular.

European-wide sales reported a downturn of 3.4% between 2002 and 2003. Similarly, **Connectors** Division sales in the Americas region fell back 17.8% over the same period.

Operating income

2004 - 2003

The **Connectors** Division enjoyed a return to profitability after restructuring costs in 2004. Operating income totaled €80 million in 2004 compared to an operating loss of €114 million in 2003, representing an improvement of €194 million. The operating margin rate was 6.2% in 2004, including 0.1% (€12 million) in respect of a non-recurring item (successful legal action against an Asian competitor for illegal infringement), compared to negative 8.5% in 2003. This improvement was primarily attributable to the impact of cost reduction programs, which generated additional operating income of €92 million. 2004 also enjoyed a favorable product mix (as well as a favorable impact on the margin rate due to an increase in volumes).

Commodity price increases, and particularly increases in the price of copper, had a negative impact on 2004 operating income of €15 million. Finally, restructuring costs were €129 million lower in 2004 than 2003 (€135 million), following completion of the major restructuring programs launched in 2001.

2003 - 2002

Despite significantly lower sales, operating income before restructuring costs for the **Connectors** Division was back in the black in 2003, at €21 million, compared with a €136 million loss in 2002. The Division also slashed its restructuring costs from €270 million in 2002 to €135 million in 2003. The operating loss, including restructuring costs, was divided by 3.5, falling from €406 million in 2002 to €114 million in 2003.

The improvement in operating income before restructuring costs is explained by a combination of cost reductions and productivity gains which contributed €209 million to the bottom line. Economies of scale due to higher volumes offset the negative impact of downward pressure on prices.

5.1.5.6. Corporate and other operations

	December 31 (in millions of euros)			Change (in %)			
	2004	2003	2002	2004	2004 Pro forma	2003	2003 Pro forma
Sales	18	87	124	(79.3)	(33.6)	(29.8)	(5.7)
Operating income	(79)	(67)	(33)	(17.9)	-	(103)	-
As a % of sales	N/M	N/M	N/M	-	-	-	-

Sales

Sales reported in the heading “Corporate and other operations” mainly comprise:

- Sales realized by non-core entities targeted for sale, such as Packinox sold at the end of 2003; and
- Rental income from Group real estate assets, such as the rental of office space in the AREVA Tower (formerly known as the Framatome Tower), prior to its sale in 2002.

Sales have, therefore, fallen steadily over the last three years.

2004 - 2003

Sales of the **Corporate and other operations** Division slumped 79.3% in 2004 to €18 million from €87 million in 2003. This decrease year-on-year was primarily due to the sale of Packinox at the end of 2003. On a like-for-like basis sales fell 33.6%.

2003 - 2002

Sales of the **Corporate and other operations** Division fell 29.8% in 2003 (5.7% on a like-for-like basis), to €87 million from €124 million in 2002. This decrease year-on-year was mainly due to the sale of certain non-core activities of Duke Engineering & Services.

Operating income

The operating loss reported in this heading represents:

- The operating income (loss) of non-core entities targeted for sale; and
- Head office costs not allocated to operating activities.

2004 - 2003

The **Corporate and other operations** Division reported an operating loss of €79 million in 2004, representing a 17.9% increase on the operating loss of €67 million reported in 2003. This increased loss was mainly due to changes in consolidation scope with the sale of Packinox at the end of 2003 and increased marketing costs, following the launch of a major worldwide television and press advertising campaign in 2004, aimed at strengthening public awareness of the AREVA brand.

2003 - 2002

The **Corporate and other operations** Division reported an operating loss of €67 million in 2003, representing a 103% increase on the operating loss of €33 million reported in 2002.

5.1.6. Cash flow statement

The observations below analyze movements in consolidated cash flows as presented in the Consolidated cash flow statement (see Section 5.1.6.1), followed by an analysis of “operating cash flow” (see Section 5.1.6.2). Cash flow from operating activities, as presented in the consolidated cash flow statement, include cash flows from:

- operating and investing activities of Group nuclear, connectors and T&D businesses;
- expenses in respect of end-of-life-cycle operations incurred on-site and for permanent waste disposal, flows relating to the financial asset portfolio earmarked for end-of-life-cycle operations and flows resulting from the signature of agreements with third-parties (notably with CEA for end-of-life-cycle operations), covering the funding by such parties of a portion of end-of-life-cycle operations;
- other flows, that is non-operating flows not relating to end-of-life-cycle obligations and primarily corresponding to financing flows (including flows relating to external growth transactions), exceptional flows and tax flows.

“Operating cash flows” generally correspond to the first of these three categories. In the Group’s opinion, the indicator “Operating cash flow” measures its ability to generate the financial resources necessary to its development and the continuation of its activities in the long-term. Operating cash flow is presented in Section 5.1.6.2.

5.1.6.1. Consolidated cash flow statement

The simplified consolidated cash flow statement is presented below:

	December 31 (in millions of euros)			Change (in %)	
	2004	2003	2002	2003/2004	2002/2003
Cash flow from operations	581	839	1,011	(30.8)	(17)
Change in working capital requirements	357	379	(104)	(5.8)	n.a.
Cash from operating activities	938	1,218	907	(23)	34.3
Cash used in investing activities	(1,153)	(329)	(484)	(250.5)	32.0
Cash used in financing activities	(273)	(1,967)	(190)	86.1	(935.3)
Decrease (increase) in marketable securities	133	621	995	(78.6)	(37.6)
Impact of foreign exchange movements	16	(12)	23	n.a.	n.a.
Cash and cash equivalent account transfers	-	(176)	-	n.a.	n.a.
Increase (decrease) in net cash	(339)	(645)	1,250	47.4	n.a.
Net cash at the beginning of the year	1,284	1,929	680	(33.4)	183.7
Net cash at the end of the year	945	1,284	1,929	(26.4)	(33.4)

Cash from operating activities

2004 - 2003

Net cash from operating activities totaled €938 million in 2004 compared to €1,218 million in 2003, representing a drop of €280 million, or 23% in 2004. The decrease recorded in 2004 reflects a fall of €258 million in cash flow from operations, from €839 million in 2003 to €581 million in 2004. This was mainly due to the settlement of 50% of the full and final payment due to CEA by AREVA of €215 million, following signature of an agreement in December 2004 by the two parties covering the decommissioning of the Marcoule site (see section 5.1.7.4).

Changes in working capital requirements totaled €357 million in 2004 compared to €379 million in 2003. This relative stability hides a less favorable trend in operating working capital requirements (as defined in section 5.1.6.2.) in 2004. Changes in operating working capital requirements generated net cash of €189 million in 2004 compared to €289 million in 2003. This fall of €100 million in 2004 is analyzed in section 5.1.6.4., Operating cash flow. This reduced contribution in 2004 was offset by a significant increase in non-operating working capital requirements, in cash terms, corresponding to full and final settlements payable and receivable by the Group (net receivable of €105 million) pursuant to agreements signed with CEA in December 2004 covering the decommissioning of the Marcoule, Cadarache and La Hague sites (see section 5.1.7.5.).

2003 - 2002

Cash from operating activities totaled €1,218 million in 2003, compared to €907 million in 2002, representing an increase of €311 million or 34.3% in 2003, attributable to:

- a €172 million reduction in cash flow from operations from €1,011 million in 2002, to €839 million in 2003. This decrease mainly reflects the fall in EBITDA as described in section 5.1.6.3.
- a highly favorable change in working capital requirements, representing a cash inflow of €379 million in 2003 compared to a cash outflow of €104 million in 2002. This significant improvement in working capital requirements in 2003 was primarily due to the receipt of substantial customer advances, as described in section 5.1.6.3.

Cash used in investing activities

2004 - 2003

Cash used in investing activities, net of divestments, totaled €1,153 million in 2004 compared to €329 million in 2003, representing an increase of €824 million in 2004.

This increase in investment flows in 2004 was due to:

- a substantial increase in financial investments net of divestments. In 2003, this balance showed a net divestment of €7 million. In 2004, financial investments net of divestments totaled €739 million, representing an increase of €746 million in 2004. During the year, the Group purchased the Transmission & Distribution business for a consideration (excluding the net cash of entities acquired) of €913 million and sold investments in equity affiliates in the mining sector for €66 million. Finally, €69 million was received in 2004 following settlement of the balancing amount due on the sale of Sovaklé, a real-estate subsidiary inherited from CEA in 2002, the sale in April 2003 of the Military/Aerospace Industry Business Unit by the Connectors Division and net

sales of portfolio financial assets earmarked for end-of-life-cycle obligations.

- a higher level of operating capex in 2004 than 2003. Purchases of tangible and intangible assets, net of disposals, totaled €486 million in 2004, compared to €336 million in 2003 representing an increase of €150 million in 2004. As explained in section 5.1.6.3., Operating cash flows, this increase was mainly due to the integration of the **Transmission & Distribution Division** and a higher level of capital expenditure in the **Front End Division**.

2003 - 2002

Cash used in investing activities, net of divestments, totaled €329 million in 2003 compared to €484 million in 2002, representing a decrease of €155 million or 32% in 2003.

This decrease in cash used in 2003 was due to:

- a reduction in financial investments, net of divestments, from a net investment of €213 million in 2002 to a net divestment of €7 million in 2003. The net financial divestment in 2003 includes the sale in April 2003 of the Military/Aerospace Industry Business Unit and settlement of the first down payment on the acquisition of a 50% stake in Enrichment Technology Company (ETC), in order to obtain access to centrifuge uranium enrichment technology. In 2002, net financial investments primarily comprised the acquisition of Duke Engineering & Services in the United States in April 2002, the acquisition of Sagem and Coficem shares in June 2002 as part of management of the portfolio earmarked to fund the decommissioning of Group nuclear facilities and the sale of Sovaklé shares at the beginning of 2002;
- a lower level of operating capex in 2003 than in 2002. Purchases of tangible and intangible assets, net of disposals, totaled €483 million in 2002 compared to €336 million in 2003, representing a fall of €147 million in 2003. As explained in Section 5.1.6.3., Operating cash flow, this decrease was primarily due to a reduction in capital expenditure by the **Back End Division** following the completion in 2002 of construction of the last major workshops at the La Hague treatment plant.

Cash used in financing activities

2004 - 2003

Cash used in financing activities totaled €273 million in 2004 compared to €1,967 million in 2003, representing a decrease of €1,694 million in 2004.

In 2004, cash used in financing activities almost exclusively comprised dividends paid in respect of 2003 of €285 million, including €65 million paid to minority shareholders in

subsidiaries. In 2003, in addition to dividends paid in respect of 2002, the Group repaid FCI borrowings of approximately €1,800 million (**Connectors Division**).

2003 - 2002

Cash used in financing activities totaled €1,967 million in 2003, compared to €190 million in 2002.

The substantial increase between 2002 and 2003 in consolidated cash used in financing activities was primarily due to the repayment in 2003 of FCI borrowings (**Connectors Division**) of approximately €1,800 million as of December 31, 2002, after a recapitalization of €1,300 million (eliminated on consolidation). In addition, dividends paid in 2003 in respect of 2002 totaled €297 million, slightly up on the dividends paid in 2002 in respect of 2001 of €262 million.

Other cash items and net cash at the end of the year

2004 - 2003

In 2004, other items impacting Group cash (purchase and sale of marketable securities, exchange rate movements, cash and cash equivalent account transfers) generated net cash of €148 million, compared to €433 million in 2003, representing a decrease of €285 million. This reduction was mainly due to:

- a decrease in sales of marketable securities. The Group sold 382,500 Total shares in 2003 compared to 3.2 million Total shares in 2003. The net cash generated by the sale of these shares in 2003 exceeded that generated by sales in 2004 by €376 million.
- the transfer of liquid assets of €176 million held in the portfolio earmarked for end-of-life-cycle obligations from Cash and cash equivalents to Other long-term investments (see Note 1.1 to the consolidated financial statements).

Net cash at the end of 2004 totaled €945 million.

2003 - 2002

In 2003, other items impacting Group cash (marketable securities, exchange rate movements, account transfers) generated net cash of €433 million, compared to €1,018 million in 2002, during which a considerably greater number of marketable securities (Total) were sold than in 2003. Given the above and opening net cash at the beginning of 2002 of €680 million, the net cash balance was €1,929 million at the end of 2002 and €1,284 million at the end of 2003.

5.1.6.2. Reconciliation of the consolidated financial statements and operating cash flow

As indicated above, the Group analyzes cash flows from operating activities separately from flows relating to end-of-life-cycle operations and other cash flows. This analysis of operating flows is based on a number of definitions which seek to identify these flows by excluding others. The definitions adopted by the Group for the analysis of its operating cash flows are presented below. A certain number of these indicators are not French GAAP indicators. A non-GAAP financial indicator is a quantified measurement of Group past or future financial performance, financial position or change in cash and cash equivalents which excludes amounts, or is subject to adjustments which result in the exclusion of amounts, which are included in the nearest indicator calculated and presented in accordance with generally accepted accounting practice governing the consolidated income statement, balance sheet and cash flow statement or which include amounts, or is subject to adjustments which result in the inclusion of amounts, which are excluded from the closest directly comparable indicator calculated and presented in this way. The accounting principles referred to are French GAAP.

The Group provides these indicators in addition to the financial results prepared in accordance with French GAAP. In the Group's opinion, they provide a consistent basis for year-on-year comparisons and the information is useful to understanding the underlying performance of the Group. They do not represent an alternative to French GAAP.

These indicators are defined below:

Operating working capital requirements (OWCR)

Operating working capital requirements represent all current assets and liabilities directly relating to operations, that is:

- inventories and work-in-process,
- trade accounts receivable and related accounts,
- advances paid,
- other accounts receivable, accrued income and prepaid expenses,
- less: trade accounts payable and related accounts and trade advances and prepayments (excluding interest-bearing advances) (see Sections 5.1.6.4. and 5.1.7.7.) other than operating liabilities, accrued expenses and deferred income.

OWCR does not include non-operating receivables and payables, notably company tax liabilities, amounts receivable on the sale of non-current assets and liabilities in respect of the purchase of non-current assets.

The table on the following page presents the movement in operating WCR.

Earnings before income tax, depreciation and amortization (EBITDA)

EBITDA is equal to operating income before deduction of the net charge to depreciation, amortization and provisions (excluding provisions for the write-down of current assets), included in operating income.

From 2004, EBITDA is adjusted to exclude costs associated with nuclear facility end-of-life cycle obligations (decommissioning, waste recovery and packaging) performed during the year, including, in 2004, amounts paid to or received from third parties in the respect.

Total operating cash flow

Total operating cash flow represents the cash flows generated by operating activities. It is determined as follows:

- EBITDA, excluding end-of-life-cycle obligations,
- plus capital losses or minus capital gains realized on the sale of tangible or intangible assets recorded in operating income,
- plus the decrease or minus the increase in operating working capital requirements between the beginning and the end of the year (excluding the impact of account transfers, exchange rate movements and changes in consolidation scope),
- less purchases of tangible and intangible assets, net of changes in fixed asset supplier accounts,
- plus sales of tangible and intangible assets included in operating income, net of movements in fixed asset receivable accounts,
- plus advances received from customers during the year to fund non-current assets.

End-of-life cycle obligation flows

End-of-life-cycle obligation flows include all cash flows relating to end-of-life-cycle obligations and assets earmarked to fund such obligations. They comprise:

- revenue from the portfolio of assets earmarked to fund end-of-life-cycle obligations,
- plus cash from the sale of earmarked assets,
- less purchases of earmarked assets,
- less expenses incurred in respect of end-of-life -cycle obligations during the year,
- plus amounts received in respect of facility decommissioning,
- less amounts paid in respect of facility decommissioning.

The following table distinguishes operating cash flows from the other cash flows presented in the consolidated cash flow statement.

As end-of-life-cycle obligation cash flows were adjusted in 2003 and 2004, the Group has chose to present them separately.

The information necessary to the presentation of this reconciliation for 2002 is not available.

<i>in millions of euros</i>	Operating		End-of-life-cycle obligations*		Other**		Total	
	2004	2003	2004	2003	2004	2003	2004	2003
EBITDA(I)	1,049	976	-	-	-	-	-	-
Net gain on the sale of operating non-current assets (II)	12	12	-	-	-	-	-	-
Cash flow from operations (I+II)	1,060	988	(319)	(6)	(160)	(143)	581	839
Change in working capital requirements (III)	188	289	121	0	47	90	357	379
Cash from operating activities (I+II+III)	1,249	1,277	(198)	(6)	(113)	(53)	938	1,218
Cash used in investing activities, net of disposals (IV)	(486)	(336)	37	0	(704)	7	(1,153)	(329)
Cash flow (I + II + III + IV)	763	940	(161)	(6)	(817)	(46)	(215)	889

* Includes expenses in respect of end-of-life-cycle operations incurred on-site and for permanent waste disposal, flows relating to the financial asset portfolio earmarked for end-of-life-cycle operations and flows resulting from the signature of agreements with third-parties (notably with CEA for end-of-life-cycle operations), covering the funding by such parties of a portion of end-of-life-cycle operations.

** That is non-operating flows not relating to end-of-life-cycle obligations and primarily corresponding to financing flows (including flows relating to external growth transactions), exceptional flows and tax flows.

5.1.6.3 Operating cash flow by Division

<i>in millions of euros</i>	Front End	Reactors & Services	Back End	T&D	Connectors	Corporate and other operations	Group
EBITDA*							
2004	466	133	394	19	113	(77)	1,049
2003	417	87	503	n.a.	25	(57)	976
2002	426	87	756	n.a.	(26)	(92)	1,150
Change in operating WCR**							
2004	(159)	11	298	27	12	(1)	188
2003	50	123	75	n.a.	11	31	289
2002	113	34	(281)	n.a.	86	(25)	(73)
Net operating capex							
2004	(196)	(59)	(98)	(57)	(71)	(4)	(486)
2003	(126)	(67)	(76)	n.a.	(62)	(6)	(336)
2002	(93)	(49)	(229)	n.a.	(88)	(25)	(483)
Gains/(losses) on disposals							
2004	0	4	8	0	0	0	12
2003	0	2	7	n.a.	2	0	11
2002	(1)	(1)	23	n.a.	2	0	23
Operating cash flow***							
2004	112	88	603	(12)	54	(82)	763
2003	341	147	509	n.a.	(24)	(33)	940
2002	445	71	271	n.a.	(26)	(143)	618

* EBITDA is defined in Section 5.1.6.2. EBITDA was calculated in 2004 and 2003 excluding the impact of cash flows relating to end-of-life-cycle obligations, which are presented separately from operating flows. These flows were less material in 2002 and as such were not presented separately from operating flows. 2002 flows correspond to reported amounts.

** Operating working capital requirements is defined in Section 5.1.6.2.

*** Operating cash flow is defined in Section 5.1.6.2.

Front End Division

2004 - 2003

Front End Division operating cash flows totaled €112 million in 2004 compared to €340 million in 2003, down 67% despite an increase in EBITDA. 2004 was marked by negative working capital requirements. Inventories and work-in-process levels were built up again by the Mining and Enrichment Business Units in 2004, while 2003 saw the run-down of uranium inventories in order to continue deliveries to customers during the flooding of the McArthur mine in Canada, which led to operations being shut-down for four months. In addition, consistent with Group strategic objectives and market trends, operating capex increased significantly in 2004. The Front End Division notably invested heavily in the Mining Business Unit, with the Katco, Cigar Lake and McArthur projects. Capital expenditure was also incurred in preparation for the construction of the future George-Besse II enrichment plant and in order to optimize the fuel manufacture plant in Romans, France.

2003 - 2002

Front End operating cash flows totaled €340 million in 2003, compared to €445 million in 2002, representing a fall of 23.6% in 2003. With a slight downturn in EBITDA on 2002, 2003 was primarily marked by a less favorable change in working capital requirements than in 2002, mainly due to year-end factors and substantial capex by the Mining and Chemistry Business Units in particular.

Reactors & Services Division

2004 - 2003

Reactors & Services Division operating cash flow totaled €88 million compared to €147 million in 2003, representing a fall of 40.1%. Division EBITDA improved significantly, in particular in the Services Business Unit. Conversely, the change in working capital requirements is less favorable than in 2003, mainly due to a move towards tightening financing and payment terms and conditions by customers. Capex remained relatively stable over the period.

2003 - 2002

Reactors & Services Division operating cash flow totaled €147 million in 2003 compared to €71 million in 2002, representing a jump of 107% in 2003, despite stable EBITDA. This rise was mainly due to a favorable change in working capital requirements, as a result of trade receivables cut-off in the Reactors Business Unit (invoicing in 2002 of substantial amounts settled in 2003).

Back End Division

The **Back End** Division Treatment Business Unit, excluding activities relating to the transfer of technology and know-how, is characterized by the existence of two major types of contract: recent contracts and “old” contracts. Old contracts provide for the invoicing of non-current assets necessary to the performance of Treatment services and the invoicing of treatment services rendered. All customer payments under these old contracts had been received at the end of 2002 and the cash relating to future sales to be recognized, pro rata to volumes treated, was recorded in customer advances. As a result, the capex funding portion of these “old” contracts is also included in EBITDA without impacting cash flows generated by operations: as the corresponding cash is received in the form of customer advances, it is consumed and released by way of a change in operating WCR as sales revenue is recognized. It is therefore appropriate to analyze EBITDA and the change in operating WCR separately, as a negative change in the former, is generally offset, in cash flow terms, by a change in the latter of the same amount and vice versa.

2004 - 2003

Back End Division operating cash flow totaled €603 million in 2004, compared to €509 million in 2003, representing a rise of 18.5%. Operating cash flow levels were exceptionally high in 2003 and 2004, due to the receipt of significant customer advances in these years. As such, the change in operating WCR was quite unusual in 2004 at €298 million.

2003 - 2002

Back End Division operating cash flow totaled €509 million in 2003, compared to €271 million in 2002, representing a jump of 87.8% in 2003. While EBITDA was much lower in 2003 than in 2002, this did not have a significant impact on cash generated by operations. In effect, the drop was due to the progressive extinction of “old” treatment contracts.

The substantial increase in operating cash flow in 2003 was mainly due to the receipt of significant advances from customers under new treatment contracts, and to a lesser extent to a drop in net capex in 2003, following completion of

the major **Back End** Division investment projects (ACC and R4 workshops at La Hague).

T&D Division**2004 - 2003**

Operating cash flow of the **T&D** Division, integrated at the beginning of 2004, was negative €12 million. This negative contribution was the result of modest EBITDA of €15 million and restructuring cost outflows of €58 million. Conversely, WCR management was optimized and capex was kept under control at €57 million, a reasonable level for this type of business.

Connectors Division**2004 - 2003**

Connectors Division operating cash flow totaled €54 million, compared to negative €24 million in 2003, representing an increase of €78 million. This marked improvement was achieved through a significant increase in EBITDA, in particular in the Communications Data Consumer Business Unit where capacity and fixed costs were optimized. Cash outflows in respect of restructuring measures remained high at €65 million, although lower than in 2003 when they totaled €91 million. Capital expenditure, net of disposals, increased following completion in 2004 of major restructuring programs, resulting in a reduction in sales of operating assets.

2003 - 2002

The **Connectors** Division enjoyed a return to positive operating cash flow in 2003, reporting a figure of €67 million before restructuring outflows. **Connectors** Division EBITDA, before restructuring costs, totaled €118 million (8.8% of sales) reflecting improvements in operating profitability. Net capital expenditure totaled negative €62 million, down on 2002 due to the low level of demand. Cash outflows in respect of restructuring measures totaled €91 million in 2003.

Group**2004 - 2003**

Given the above, and after inclusion of Corporate and other operation cash flows, up in 2004 mainly due to the major advertising campaign undertaken during the year, Group operating cash flows totaled €763 million in 2004, down 18.8% on 2003 operating cash flows of €940 million, which were exceptionally high.

2003 - 2002

Given the above, and after inclusion of corporate cash flows, down in 2003 compared to 2002, Group operating cash flows totaled €940 million in 2003, compared to €618 million in 2002, representing an increase of 52.1% in 2003.

5.1.6.4. Cash movements

The net cash position currently published by AREVA Group comprises:

- cash and cash equivalents and risk-free marketable securities with an initial maturity of three months or less and current accounts;
- plus: other marketable securities (equity and risk-free marketable securities with an initial maturity of more than three months);
- less: borrowings.

Starting with the cash position presented at the bottom of the consolidated cash flow statement, the following table presents the adjusted cash position and the net cash position, after deduction of borrowings.

(in millions of euros)	December 31,		
	2004	2003	2002
Cash position published in the consolidated Cash flow statement	945	1,284	1,926
Bank overdrafts	98	71	116
Non-trade current accounts	12	12	28
Marketable securities maturing in more than 3 months	578	669	1,260
Cash position per the balance sheet	1,633	2,036	3,330
Borrowings	943	800	2,217
Interest-bearing customer advances	Included in borrowings	Included in borrowings	382
Adjusted net cash position	689	1,236	731

Borrowings comprise the following accounts:

(in millions of euros)	December 31,		
	2004	2003	2002
Bond issues	3	4	2
Interest-bearing advances	449	416	-
Loans from financial institutions	235	248	2,001
Short-term bank facilities	98	71	116
Other borrowings*	158	61	98
Total borrowings	943	800	2,217
* Including finance leases.	49	13	15

The French State's majority shareholding in AREVA does not, in general, impact the loan terms and conditions granted to the Group.

Certain Group financial commitments include covenants requiring compliance with predetermined financial ratios. As of December 31, 2004, all such ratios were met with a satisfactory margin of security (see Note 23 to the consolidated financial statements).

2004 - 2003

The Group consolidated cash position as of December 31, 2004 totaled €1,633 million, compared to €2,036 million as of December 31, 2003. Group borrowings totaled €943 million at the end of 2004, compared to €800 million at the end of 2003. The majority of borrowings are indexed to floating rates (see Note 23 to the consolidated financial statements). The Group net cash position as of December 31, 2004 is, therefore €689 million, compared to €1,236 million as of December 31, 2003, representing a fall of 44.3%. This net cash balance does not include post-tax unrealized capital gains on Group financial securities. As of December 31, 2004, such post-tax unrealized capital gains totaled €195 million, compared to €194 million as of December 31, 2003.

2003 - 2002

The cash balance per the balance sheet was €2,036 million as of December 31, 2003, compared to €3,330 million as of December 31, 2002. Group borrowings (excluding interest-bearing customer advances) were reduced from €2,217 million at the end of 2002 to €384 million at the end of 2003, to which €416 million of interest-bearing customer advances recorded in borrowings in the consolidated financial statements since 2003 must be added, giving total borrowings of €800 million. The drop in borrowings between 2002 and 2003 was mainly due to the repayment of FCI borrowings (**Connectors Division**) of nearly €1,800 million as of December 31, 2002. The majority of borrowings are indexed to floating rates.

The Group net cash position as of December 31, 2003 is, therefore €1,236 million, compared to €731 million as of December 31, 2002, representing an improvement of 69.1%. This net cash balance does not include post-tax unrealized

capital gains on Group financial securities. As of December 31, 2003, such post-tax unrealized capital gains totaled €151 million, compared to €320 million as of December 31, 2002.

5.1.7. Balance sheet items

5.1.7.1. Summary consolidated balance sheet

Assets

<i>(in millions of euros)</i>	As of December 31		
	2004	2003	2002
Non-current assets	15,782	19,094	20,149
Goodwill	1,718	1,265	1,537
Tangible and intangible assets	4,309	3,929	5,157
Equity affiliates	1,240	1,492	1,652
Other long-term investments	862	1,065	453
End-of-life-cycle assets	5,372	9,109	9,223
Portfolio earmarked for end-of-life-cycle obligations	2,281	2,234	2,127
Working capital requirements	(969)	(1,051)	(604)
Net cash	689	1,236	731
Total Assets	15,502	19,279	20,276

Liabilities & Shareholders' equity

<i>(in millions of euros)</i>	As of December 31		
	2004	2003	2002
Shareholders' equity	4,241	4,113	4,020
Perpetual subordinated debt	0	215	215
Minority interests	776	959	988
Provisions for end-of-life-cycle obligations	8,258	12,316	12,283
Other provisions	2,227	1,676	2,770
Total Liabilities & Shareholders' equity	15,502	19,279	20,276

5.1.7.2. Capital employed and ROACE (Return On Average Capital Employed)

Return on average capital employed (ROACE) is an internal and external indicator measuring profitability, used to assess Group performance. In the Group's opinion, this performance indicator measures the long-term productivity of Group capital. ROACE is not a French GAAP indicator, which should be taken into account when comparing it with indicators used by other companies.

Return on average capital employed (ROACE) represents the after-tax return on capital employed by the company for its operating requirements.

ROACE is equal to the ratio of:
$$\frac{\text{net operating income}}{\text{average capital employed}}$$

- Net operating income is equal to operating income less the corresponding pro forma income tax charge derived by multiplying operating income by the tax rate applicable to the Group under the global consolidated tax regime, or the specific tax rates applicable to certain subsidiaries subject to specific regimes

- Capital employed comprises the following:

- net non-current assets,
- gross goodwill (other than goodwill relating to equity affiliates or allocated to Total shares), net of impairment losses recorded as a result of impairment tests,
- inventories, trade receivables and other operating receivables,
- less customer advances, trade payables and other operating liabilities.

Average capital employed is equal to:

Capital employed at the end of the period + capital employed at the beginning of the period

2

A reconciliation of these indicators with the closest comparable financial indicators is presented below:

<i>(in millions of euros)</i>	December 31		
	2004	2003	2002
Intangible assets, net	608	482	510
Gross goodwill as reported in the notes to the consolidated financial statements	4,012	3,520	3,818
Goodwill included in capital employed	2,770	2,186	2,345
Tangible assets, net	3,697	3,444	3,686
Advances to fund non-current assets	(1,092)	(1,167)	(1,206)
Operating working capital requirements excluding advances to fund non-current assets	(86)	(40)	201
Total capital employed	5,897	4,905	5,536
Average capital employed over the period	6,151*	5,220	6,028

* Average capital employed in 2004 is calculated by adding back the pro forma impact of T&D; pro forma T&D capital employed as of December 31, 2003 is €1,244 million.

ROACE

The following table presents a breakdown of Group ROACE by fiscal year and business:

<i>(in millions of euros)</i>	December 31		
	2004	2003	2002
Average capital employed			
Energy	4,591	3,497	3,796
Connectors	1,362	1,563	2,032
Corporate and other operations	198	161	199
Total Group	6,153	5,220	6,028
Net operating income			
Energy	418	365	440
Connectors	52	<0	<0
Corporate and other operations	<0	<0	<0
Total Group	419	248	138

ROACE

<i>(in %)</i>	2004	2003	2002
Energy	9.1	10.4	11.6
<i>including nuclear operations</i>	<i>12.5</i>	<i>10.4</i>	<i>11.6</i>
Connectors	3.8	n.a.	n.a.
Corporate and other operations	n.a.	n.a.	n.a.
Total Group	6.8	4.7	2.3

Group ROACE totaled 6.8% in 2004, 4.7% in 2003 and 2.3% in 2002. This increase in 2004 was primarily due to 79% growth in operating income from €342 million to €612 million, offset by an increase in capital employed of over 15%. This increase in capital employed mainly resulted from the integration of T&D, which represents average capital employed of €1,415 million (including tangible and intangible assets and goodwill) as of December 31, 2004.

The ROACE for nuclear operations totaled 12.5% in 2004 compared to 10.4% in 2003, an improvement of 2 percentage points. This increase was mainly due to the rise in the net income of nuclear operations over the period.

The significant increase between 2002 and 2003 at Group level was mainly due to the combined impact of a substantial rise in Group operating income and a fall in capital employed, notably via a reduction in operating WCR of over €240 million and the marked reduction in the level of tangible assets in the **Connectors** Division, as a result of the restructuring plan and the corresponding decrease in production capacity.

5.1.7.3. Goodwill

General principle

Goodwill is considered a long-lived asset and is amortized over its estimated life determined at acquisition. The estimated life is determined by AREVA based on the period over which the assets are expected to generate economic benefit. Goodwill amortization may be adjusted based on differences identified between the initial forecast business plan and actual results for the period.

The goodwill balance increased significantly between 2003 and 2004 following the integration of the **T&D** Division, which generated goodwill of €641 million.

Goodwill movements as of December 31, 2004 are as follows:

<i>(in millions of euros)</i>	2004 Opening balance	Acquisitions/ disposals	Amortization charge	Currency translation and other	2004 Closing balance
Gross value	3,520	643		(151)	4,012
Depletion, amortization and provisions	(2,255)		(152)	113	(2,294)
Net book value	1,265	643	(152)	(38)	1,718

5.1.7.4. Perpetual subordinated debt

Effective as of January 1, 2004, as required by the Financial Security Act, the investment firm holding the Lilly Financial Corporation Limited perpetual subordinated bonds and the guarantee deposit is consolidated in AREVA's financial statements. As a result, the perpetual subordinated debt (€215 million) recorded in other equity and the guarantee deposit (€180 million) recorded under Long-term investments have disappeared from the consolidated balance sheet, with the net amount as of January 1, 2004 of €36 million transferred to Borrowings (see Note 1.1 to the consolidated financial statements).

5.1.7.5. End-of-life-cycle obligations

Estimation, recording and funding of end-of-life-cycle obligations

As a nuclear operator, the AREVA Group has a legal obligation to secure and decommission its facilities when they are shut down permanently. The Group must also package, in accordance with prevailing standards, the various radioactive waste types generated by decommissioning operations and operating activities, which could not be processed on line. Group facilities primarily concerned by decommissioning operations are: in the front end of the fuel cycle, the Eurodif enrichment plant in Pierrelatte (Georges-Besse I) and fuel plants and at the back end of the fuel cycle, the treatment plants at La Hague and the Mox fuel fabrication plants at Melox and Cadarache. Like any nuclear operator, the Group is occasionally responsible for the facilities that it operates but does not own, such as the CEA facilities at Pierrelatte.

For certain activities, essentially used fuel treatment services, customers have agreed to fund a portion of the cost related to decommissioning operations and to the disposal of final waste, of which they remain the owners. These contractual arrangements have the effect of transferring the financial impact of decommissioning and waste disposal from the Group to third parties. The expenses relating to these commitments will be incurred between 2005 and 2060, based on forecast facility shut-down and the scheduling of operations.

The Group records a provision covering total end-of-life-cycle obligations in respect of all facilities in operation and shut-down and waste packaging obligations, including obligations to be funded by third parties. This is offset by decommissioning assets in two parts: the portion of end-of-life-cycle obligations to be funded by the Group and the portion of these obligations to be funded by third parties. The portion to be funded by third parties is equal to the third-party share of obligations.

Each year, the Group records a depreciation charge in operating income in respect of its share of end-of-life-cycle assets. This depreciation charge is calculated on a straight-line basis over the life of the facilities. When decommissioning operations commence, AREVA's share of end-of-life-cycle assets is fully depreciated. The third-party share of end-of-life-cycle assets is equivalent to a future Group receivable: when the decommissioning operations are carried out, the costs incumbent on third parties will be rebilled, unless they have been the subject of a full and final payment in the event of early settlement by the third party. The provision (AREVA and third-party share) is reversed as and when the operations are carried out. Provision reversals and end-of-life-cycle costs are recorded in operating income. Any difference between costs incurred in the period and the corresponding provision reversal is recorded as an increase or decrease in operating income. Amendments to estimates, whether positive or negative, are taken into account in the provision, using the projected benefit method. Provision movements result in:

- An adjustment to the third-party asset share in line with the third-party share in the provision;
- An adjustment to the Group share and a proportional increase/decrease in the depreciation charge in respect of AREVA's share of end-of-life-cycle assets recorded in operating income.

In cash flow terms, future outflows corresponding to the Group's share in the provision are globally covered by an earmarked financial asset portfolio. The Group regularly confirms that the market value of this portfolio is approximately equal to the discounted present value of these future outflows. Until December 31, 2003, the portfolio earmarked for end-of-

life-cycle obligations was fully invested in European equities, via direct and indirect holdings in publicly traded French companies and in independently managed European equity funds. Since December 31, 2003, shares have been removed from the portfolio and replaced with dedicated bond funds and liquid assets. As of December 31, 2004, the portfolio consisted over three fourths of French⁽¹⁾ and European equities, with the rest of the portfolio invested in interest rate funds. A provision is recorded where necessary, in line with changes in the value in use of securities, determined using a multi-criteria approach for securities held directly and based on net asset values for mutual funds.

Valuation of end-of-life cycle obligations

End-of-life-cycle obligations are estimated facility by facility, based by necessity on assessments and assumptions, changes in which could significantly impact the financial position of the Group. These estimates are notably based on the following:

- Group decommissioning activities correspond to the following end state: civil engineering infrastructures cleaned-up on site, with all nuclear waste areas reclassified as conventional waste areas. This corresponds to a decommissioning level between levels 2 and 3 of the International Atomic Energy Agency (IAEA) scale, currently under review.
- Costs are estimated based on the cost price of ultimate decommissioning operations, without discounting.
- The subsidiary, SGN, an engineering firm that served as prime contractor for the construction of the majority of the Group's treatment and recycling facilities, was deemed the most qualified to select methods to decommission these facilities and prepared detailed end-of-life-cycle obligation and waste management cost estimates. Eurodif prepared the decommissioning cost estimates for the enrichment business. Actual costs may prove greater or less than the amounts estimated.
- Estimates are revised each year to take inflation into account. Changes in estimates are recorded on the income statement. The impact of inflation is recorded under financial income and expenses when a special portfolio of assets has been set up to cover end-of-life-cycle obligations. Otherwise, they are recorded in operating income.
- Cost estimates will be updated if and when legislation changes or substantial technological developments can be anticipated. In any event, the Group aims to update its estimates at least once every six years.

Waste retrieval and packaging valuations are based on technical assumptions and a performance schedule.

(1) Suez, AGF, Michelin, Saint Gobain, Schneider.

Costs are estimated based on summary draft engineering studies covering the investment necessary for waste retrieval and an internal appraisal of waste retrieval and packaging operating costs.

Permanent waste disposal assumptions

In the absence of firm supplier commitments for permanent waste disposal, waste retrieval and packaging, provisions for waste owned by the Group were based on technical and financial assumptions determined by it. Permanent waste disposal plans (high and medium grade long-lived waste under the French waste classification system) will eventually be decided under programs established by Law No. 91-1381, now incorporated in Article L.542-1 et seq. of the French Environment Law Code.

Uncertainties surrounding the cost of permanent waste disposal, waste retrieval and packaging are as follows:

- the key features of the French national program for the disposal of high and medium grade long-lived waste have not yet been established. The government is to present an evaluation report to Parliament in 2006 on research done on these waste types, accompanied by proposed legislation authorizing, where appropriate, the development of a deep repository for high-grade, long-lived waste.
- cost estimates vary depending on the approach envisaged and the type of waste stored. The valuation performed by the French National Agency for the Management of Radioactive Waste, Andra, in 1996, assuming total treatment of used fuel produced by existing nuclear facilities, presented an estimated cost of €14.7 billion under 2003 economic conditions. AREVA's share, currently set at 5% or approximately €735 million based on the Andra estimate, could vary depending on volumes produced by the Group and those produced by other producers. The Group waste disposal provision is based on a cost approximately 30% lower than this estimate, that is approximately €220 million. Indeed, the Group's own comparative analyses of international waste disposal rates offered by existing repositories for these same types of waste indicate that Andra's estimates are generally very high.
- the split between medium and high-grade long-lived waste of the cost of a potential deep repository could also impact AREVA's share of such costs.
- the start-up date of industrial commissioning and the operating life of the facility are not yet known precisely.

Under the aegis of the French government's Department for Energy and Raw Materials, a working group was formed in 2004 bringing together representatives of the Budget and

Treasury Departments, Andra, EDF, AREVA and CEA. The aim of this working group was to obtain agreement on the main assumptions, the calculation methodology and the inclusion of

uncertainties in the determination of benchmark costs for a deep geological repository.

Balance sheet position

For further information, the following table summarizes the various AREVA balance sheet accounts recording end-of-life-cycle operations.

Assets

(in millions of euros)	December 31		
	2004	2003	2002
End-of-life-cycle assets	5,372	9,109	9,223
- AREVA share	1,063	1,118	1,194
- third-party share	4,309	7,991	8,029
Long-term financial portfolio*	2,281	2,234	2,127

* Net book values.

End-of-life-cycle provisions and assets are presented above in accordance with French GAAP and as such, the amounts are not discounted. On adoption of IFRS, the provisions and assets will be discounted and total €2,317 million for the Group as of December 31, 2004. Discounting assumptions and the impact thereof are presented in Section 5.1.9.3.

Breakdown of end-of-life-cycle provisions at the end of 2004 by facility

(in %)	December 31	
	2004	2003
La Hague	57	50
Marcoule	4*	15*
Eurodif	12	11
Melox and Cadarache	16	9
Other	11	15
Total (AREVA share)	100	100

* The marked reduction in the share attributable to the Marcoule site follows the signature of an agreement with CEA in December 2004, as described in the section entitled "Provision movements in 2004".

Breakdown of end-of-life-cycle provisions, Group share, at the end of 2004 by expense type

(in millions of euros)	12/31/2004
End-of-life-cycle obligations	3,147
Waste recovery and packaging	801
Total (AREVA share)	3,948

Provision movements in 2004

Movements in provisions to be funded by AREVA are presented below and summarized in a table at the end of the section.

Liabilities & Shareholders' equity

(in millions of euros)	December 31		
	2004	2003	2002
End-of-life-cycle provisions	8,258	12,316	12,283
- funded by AREVA	3,948	4,325	4,254
- funded by third parties	4,309	7,991	8,029

Revised cost-estimates for back-end decommissioning

In 2004, the Group completed the update of decommissioning cost estimates for the Melox plant in Marcoule and the UP2 400 and UP2800-UP3 plants in La Hague. These new estimates were prepared using a Group model. This model and the corresponding software are Veritas-certified. The revised estimates confirmed preceding valuations with a total overall variance of less than 5% in absolute values. These new estimates have been taken into account in the 2004 financial statements.

Simplification of end-of-life-cycle responsibilities at back-end sites

Following the approach launched in 2002 by EDF, CEA and AREVA, with the approval of the French State, 2004 saw the signature of an initial series of agreements clarifying the responsibilities of each player at the Marcoule, La Hague and Cadarache sites:

Marcoule site

CEA, EDF and COGEMA signed a memorandum of understanding in December 2004 concerning Marcoule and covering the transfer to CEA of project management and funding responsibilities for site clean-up operations, effective December 1, 2004. This memorandum of understanding does not encompass the cost of permanent waste disposal, retrieval and packaging.

This memorandum of understanding provides for a full and final payment by the Group covering its share in funding CEA end-of-life-cycle obligations. This commitment of €427 million, provided in the financial statements at the end of 2003, was paid 50% at the end of 2004 and 50% at the beginning of

2005, by deduction from financial assets earmarked for end-of-life cycle obligations.

The Group no longer has any financial commitment in respect of the Marcoule site, other than the cost of deep repository storage. In accordance with the agreements which provide for the transfer of nuclear operator status to CEA, the provision of €3,945 million recorded at the end of 2003 and the corresponding third-party asset share were reversed in 2004.

Cadarache and La Hague sites

An agreement between CEA and COGEMA, signed in December 2004, provides for a full and final payment by CEA to COGEMA, in consideration for the transfer of full responsibility for the cost of cleaning-up the Cadarache Mox fuel production workshop, which ceased commercial production in July 2003, and the Elan 2 B workshop in La Hague, the sole remaining workshop owned by CEA in La Hague.

At the end of 2004, COGEMA recorded a provision covering 100% of the cost estimate for clean-up operations, representing an additional charge to provisions of €120 million. The Group also recorded a receivable from CEA in the amount attributable to it, i.e. €110 million before discounting.

La Hague waste retrieval and packaging operations

Certain waste produced by old used fuel treatment contracts could not be processed on-site as the support packaging workshops were not yet available. Such waste must, therefore, be retrieved and packaged in accordance with procedures and technical options approved by the French Nuclear Safety Authority. Certain of these options are still under review.

In 2004, the Group undertook an in-depth review of this account and chose to record the portion of these operations funded by third parties as contracts. In effect, they form part of packaging optimization services regularly provided by the La Hague plant to its customers. The customers continue to own the packaged waste and must bear the cost of permanent disposal. As such, as of December 31, following CEA's contractual commitment formalized by the agreement of December 2004, CEA's share in the funding of these operations will be treated as follows: the payment by CEA will be recorded in advances on receipt and released to Sales as and when services are performed. EDF's share will be treated in the same way once an agreement has been signed between the parties.

EDF/COGEMA negotiations

EDF and COGEMA embarked on framework agreement negotiations to establish:

Firstly:

- the legal and financial terms of a transfer to COGEMA of EDF's current financial obligations with respect to decommissioning operations at the La Hague site (including, conceivably, a full and final payment to settle EDF's long-term commitment). Nonetheless, an agreement was signed between the parties, at the end of September 2003, setting their respective shares in the funding of decommissioning operations at the La Hague site;
- the financial participation of EDF and COGEMA covering their respective waste retrieval and packaging obligations at the La Hague and Saint-Laurent-des-Eaux sites;

Secondly:

- the financial terms of the future used fuel treatment contract beyond 2007.

Given the comprehensive nature of these negotiations, AREVA maintained in its 2004 financial statements, in respect of these decommissioning costs, the shares used at the 2003 year end. Based on available appraisal details, the financial statements and financial position of the Group should not be materially affected. Negotiations are still in progress; EDF requested the extension of the scope of negotiations to include front-end supply contracts.

Overall movements in end-of-life-cycle provisions and assets

Given the above, total provisions for end-of-life-cycle operations decreased from €12,316 million at the end of 2003 to €8,258 million at the end of 2004. This fall was mainly due to the reversal of provisions of €3,945 million in respect of the Marcoule site, as discussed above.

Provisions to be funded by third parties (customers) and the matching third-party share of end-of-life-cycle assets, fell from €7,991 million at the end of 2003 to €4,309 million at the end of 2004, and now primarily concern the La Hague site.

Provisions to be funded by the Group fell from €4,325 million at the end of 2003 to €3,948 million at the end of 2004. As a result, AREVA's share in end-of-life-cycle assets, net of depreciation, decreased from €1,118 million at the end of 2003 to €1,063 million at the end of 2004. These net assets will continue to be depreciated over the duration of the corresponding facilities.

Movements in the financial portfolio earmarked for end-of-life-cycle obligations in 2004.

Change of financial portfolio in 2004

As of December 31, 2004, the portfolio was comprised 41% of French equity⁽¹⁾, 35% of European equity and 20% of interest rate mutual funds. Approximately 4% of resources as of December 31, 2004 were awaiting investment. The Group's future investment policy will progressively focus on reducing exposure as certain expense deadlines approach.

The pre-tax market value of the portfolio as of December 31, 2004 was €2,298 million. Taking into account the net payable of €105 million due to CEA pursuant to settlement of the full and final amount, the net book value of available financial assets is €2,193 million, compared to €2,187 million as of December 31, 2003. This value can be compared with the discounted present value of the Group's share in the provision (€3,948 million) of €2,317⁽²⁾ million. Financial assets therefore fully cover discounted end-of-life-cycle provisions.

Summary table of movements in 2004

<i>(in millions of euros)</i>	12/31/2003	"Marcoule" Agreements	Facilities taken-over by the Group	Other	12/31/2004	12/31/2004 under IFRS
AREVA's share in liabilities	4,325	(442)	120	(55)	3,948	2,317
	12/31/2003	"Marcoule" Agreements	Facilities taken-over by the Group	Fund performance	Net charge/ reversal	12/31/2004
Assets earmarked for end of life-cycle obligations*	2,187	(427)	110	280	145	2,293

* Market value

5.1.7.6. Other provisions

Pensions and other employee benefits

The Group finances or provides for pensions and other severance payments on retirement in several forms, covering potentially all employees who meet the necessary criteria. Statistical data and other parameters which seek to assess changes in the population are used to value expenditure and provisions relating to future retirements. These parameters include estimates concerning discounting rates, asset return and rate of salary increase, which the Group assesses based on certain criteria.

The actuaries appointed to perform these calculations also use subjective indices such as attrition and mortality rates when estimating these calculation components.

Actuarial assumptions can differ significantly depending on the market, the economy, the level of the attrition rate and changes to life expectancy. These changes could have a material

impact on valuations currently recorded in respect of pension amounts and the assessment of associated obligations.

Group companies, in accordance with laws and practices prevailing in the various countries where they operate, may pay retirement bonuses to their retiring employees, based on their compensation and seniority. Early retirement pensions are sometimes due in France and in Germany, while complementary pensions may contractually guarantee a given level of income to certain employees.

In some companies, these obligations are covered in whole or in part by insurance policies or external retirement funds. In such cases, the obligations and the plan assets are valued independently. The difference between the obligation and the assets is either a funding surplus or deficit. A provision is recorded in the event of a deficit and an asset is recorded in the event of a surplus, subject to specific conditions.

(1) Suez, AGF, Michelin, Saint Gobain, Schneider.

(2) This represents the Group's share in provisions of €3,948 million, adjusted for annual inflation of 2% and discounted using an annual rate of 5%.

	December 31 (<i>in millions of euros</i>)			Change (<i>in %</i>)
	2004	2003	2002	2004/2003
Present value of the obligation	2,304	1,773	1,474	29.9
Fair value of plan assets	(874)	(851)	(813)	2.7
Net present value of the obligation	1,430	922	661	55.1
Unrecognized actuarial gains and losses	(487)	(214)	(46)	127.6
Unrecognized past service cost	(151)	(159)	(99)	(5)
Net provision	792	549	516	44.3

As of December 31, 2004, the present value of Group employee-related pension obligations totaled €2,304 million compared to €1,773 million as of December 31, 2003, representing an increase of 30%. This rise was due to:

- Firstly, the integration of **Transmission & Distribution Division** employees in 2004 in the amount of €189 million,
- A reduction in the discount rate applied from 5.5% last year to 4.5%; this change impacted the present value of obligations by more than €254 million (see Note 21 to the consolidated financial statements),
- Service costs for the period representing €220 million net of payments made of €115 million.

Plan assets covering these obligations had a market value of €874 million as of December 31, 2004, compared to €851 million as of December 31, 2003, representing an increase of 2.7%.

As such, the net present value of the obligation is €1,430 million as of December 31, 2004 compared to €922 million as of December 31, 2003, representing an increase of 55.1%.

Contingency provisions

Provision movements were as follows:

<i>(in millions of euros)</i>	December 31 (<i>in millions of euros</i>)			Change (<i>in %</i>)
	2004	2003	2002	2004/2003
Provisions for contingencies on contracts	29	22	224	27
Provisions for losses to completion	87	99	91	(12)
Provisions for litigation	27	10	17	170
Provisions for losses and exchange rate	-	-	2	-
Provisions for environmental risk	8	-	14	-
Provisions for tax risk	26	27	21	-
Provisions for customer warranties	220	119	12	85
Provisions for work-in-process	-	-	15	-
Provisions for fines and penalties	20	3	-	567
Other provisions	89	62	40	44
Total	506	342	436	48

The net present value of the obligation includes actuarial gains and losses (resulting from changes in the difference between calculation assumptions and the actual value of parameters impacting the calculation), in this case actuarial losses and past service costs (mainly relating to the so-called "Fillon" Act) not recognized in the balance sheet. These amounts must, therefore, be deducted from the net present value of the obligation in order to determine the provision to be recorded in the balance sheet. Unrecognized actuarial losses increased 127.6% from €214 million as of December 31, 2003 to €487 million as of December 31, 2004. This increase was mainly due to the change in the discount rate. Unrecognized past service costs remained relatively stable over the period.

Given the above, the net provision recorded in the balance sheet totaled €792 million as of December 31, 2004 compared to €549 million as of December 31, 2003, representing an increase of 44.3%.

The increase in contingency provisions is attributable €240 million to the T&D Division and notably provisions for customer warranties.

Provisions for contract completion

As of December 31, 2004, these provisions cover future expenses on contracts considered closed out of €436 million, compared to €430 million as of December 31, 2003 and €410 million as of December 31, 2002. These provisions correspond to additional services that must be rendered under contract, after margins on the activity have already been recognized using the company's accounting method.

As of December 31, 2002, Loss provisions included Provisions for expenses to be incurred of €962 million. These provisions correspond to depreciation on assets allocated to and funded under certain sales contracts when the depreciation period exceeds the duration of the contract. These provisions have been transferred to depreciation, as detailed in Section 5.1.3.2.

(in millions of euros)	December 31		
	2004	2003	2002
Provision for contract completion	436	430	410
Provision for expenses to be incurred	0	0	962
Total	436	430	1,372

5.1.7.7. Customer advances

In the course of certain of its business activities, the Group receives advances from customers. The main businesses concerned are the supply of nuclear fuel, the treatment and recycling of Nuclear Fuel and Systems design and supply in the Transmission & Distribution Division.

As detailed in Section 5.1.6.3., up to 2000 the treatment and recycling Business Units received advances from customers to fund capital expenditure. As for standard advances, these advances are repaid by deduction from sales generated by the related contracts.

The following table summarizes customer advances recorded in the balance sheet at the end of the last three years, distinguishing between trade advances and prepayments and advances and prepayments invested in non-current assets. Only non interest-bearing advances included in WCR are presented in this table. Interest-bearing advances are recorded in Borrowings since 2003.

(in millions of euros)	December 31		
	2004	2003	2002
Trade advances and prepayments	3,234	2,448	2,860
Customer advances and prepayments invested in non-current assets	1,092	1,167	1,206
Total	4,326	3,615	4,066

Customer advances and prepayments invested in non-current assets totaled €1,092 million as of December 31, 2004, compared to €1,167 million as of December 31, 2003, a fall of 6.4%. These advances invested in non-current assets primarily concern treatment and recycling facilities in the Back End Division. They will be consumed via changes in operating working capital requirements as sales are recognized in respect of the contracts which gave rise to their payment that is on a relatively straight-line basis between 2005 and the current forecast termination date for corresponding contracts, i.e. 2015.

Trade advances and prepayments totaled €3,234 million as of December 31, 2004, compared to €2,448 million as of December 31, 2003, an increase of 32.1%. The level of trade advances and prepayments can vary significantly from one period to the next. Back End Division activities, which account for the majority of trade advances and prepayments, are characterized by a limited number of customers and contracts of proportionally high individual amounts, which can generate substantial advances. In this Division, upcoming years should be marked negatively by the consumption of advances received in recent years, certain of which are of a non-recurring nature and positively by the receipt of advances in respect of the recovery and packaging of old waste which is the responsibility of CEA and EDF at the La Hague plant (see Note 22 to the consolidated financial statements).

The net change in Group operating working capital requirements will, therefore, be the result of changes in customer advances and prepayments invested in non-current assets and trade advances and prepayments.

5.1.8. Off-balance sheet commitments

AREVA group off-balance sheet commitments are presented by economic purpose: operating commitments, financing commitments and other commitments. This breakdown has been adopted for both commitments given and received. A third type of commitment, reciprocal commitments, is also identified. These correspond to commitments accepted by the Group where a third-party guarantee is received in return.

Off-balance sheet commitments

December 31 (in millions of euros)	2003	2004	Maturity < 1 year	Maturity 1 to 5 years	Maturity > 5 years
Commitments given	1,522	2,430	778	1,254	398
Operating commitments given	583	2,131	638	1,114	378
Financing commitments given	224	51	19	23	9
Other commitments given	715	247	120	116	11
Commitments received	46	701	44	369	289
Operating commitments received	12	250	28	190	33
Financing commitments received	14	15	8	2	5
Other commitments received	20	436	8	177	251
Reciprocal commitments	1,981	1,004	936	17	51
Authorized credit lines not drawn	622	557	531	11	15
Security call or put options	1,338	388	388	0	0
Other reciprocal commitments	21	59	17	6	36

5.1.8.1. Commitments given

Commitments given total €2,430 at the end of 2004, compared to €1,522 million at the end of 2003, an increase of 59.7%. The integration of the **Transmission & Distribution** Division accounts for practically the entire increase of €908 million on 2003. The increase in commitments given primarily concerns contract guarantees; the issue of this type of guarantee represents an inherent part of the T&D Division's activity.

Operating commitments represent 88% of commitments given at the end of 2004. The **T&D** Division accounts for over two-thirds of these commitments. Other commitments solely concern nuclear activities, with the weight of the **Connectors** Division negligible compared to that of the Group's other activities. Two thirds of operating commitments given are performance guarantees. Other guarantees are given at various stages over the term of contracts, from bid guarantees to after-sales warranties, as well as current operating activities not under contract. These guarantees are detailed in Note 29 to the consolidated financial statements.

The Group gave a parent company guarantee to the customer TVO covering the total commitment under the EPR reactor contract in Finland and received from Siemens a guarantee in the amount of its share. The net commitment given by the Group of between €1.5 and €2 billion is not included in the summary table. A value range for this commitment has been presented by the Group due to the confidential nature of this information.

5.1.8.2. Commitments received

Commitments received total €701 million at the end of 2004, compared to €46 million at the end of 2003. The €655 million increase on 2003 is primarily due to environmental and general vendor warranties received from Alstom on the acquisition of the **Transmission & Distribution** Division at the beginning of 2004, recorded in Other commitments received. Operating commitments represent over two thirds of commitments received at the end of 2004 and must be considered in conjunction with operating commitments given, as the Group does not offset commitments given and received.

5.1.8.3. Reciprocal commitments

Reciprocal commitments total €1,004 million at the end of 2004 compared to €1,981 million at the end of 2003. This decrease is primarily due to the removal of the €950 million commitment to purchase the Alstom T&D Division, following completion of this transaction.

5.1.8.4. AREVA – Siemens shareholders' agreement

The shareholders' agreement signed in 2001 between Framatome S.A. (absorbed in 2001 by AREVA) and Siemens A.G., provides for the exercise of a put option (by Siemens A.G. in respect of Framatome-ANP shares held by it) and a call option (by AREVA in respect of Framatome-ANP shares held by Siemens A.G.) under the following terms and conditions. Firstly, the put and call options may only be exercised after a period of "deadlock" defined by the shareholders' agreement and resulting, in particular, from the inability to take certain

decisions (such as the closure of a site, amendment to the bylaws, etc.) or failure by Siemens to approve the financial statements during two fiscal periods. The shareholders' agreement provides that after a period of 11 years, that is from 2012, the parties will be free to end the shareholders' agreement, cancel the options or exercise the put and call options giving a three-year period of notice.

Under the terms of the agreement and failing agreement between the parties, the price of the shares purchased following the exercise of the aforementioned put or call options will be determined according to expert opinion, based on the procedures laid down in the agreement.

A valuation of this commitment is currently being carried out and, as such, no amount concerning this shareholders' agreement is included in the summary table presented previously.

Further information on this shareholders' agreement is presented in Section 3.7.2.

5.1.9. IFRS transition

Pursuant to European Regulation 1606/2002 of July 19, 2002, the AREVA consolidated financial statements for the year ending December 31, 2005 and thereafter will be prepared in accordance with international accounting standards (IAS and IFRS) applicable as of December 31, 2005 and approved by the European Union. The first published financial statements prepared in accordance with IAS/IFRS will be the 2005 financial statements, accompanied by pro forma comparative 2004 financial statements prepared in accordance with the same accounting standards, with the exception of IAS 32, IAS 39 and IFRS 4, adopted with effect from January 1, 2005.

With a view to the publication of these comparative financial statements for fiscal year 2005 and in accordance with the AMF recommendation concerning financial communications during the transition period, AREVA Group has prepared 2004 financial information on the transition to IAS/IFRS, presenting for preliminary financial information purposes, the expected quantified impact of IFRS adoption on:

- The balance sheet as of January 1, 2004; the definitive impact of transition on shareholders' equity will be recorded as of this date on the publication of the 2005 consolidated financial statements (the impact of adoption of IAS 32, IAS 39 and IFRS 4 will be recorded in shareholders' equity as of January 1, 2005);
- The balance sheet as of December 31, 2004 and the 2004 income statement and cash flow statement.

This information on the expected quantified impact of IFRS transition has been prepared by adjusting 2004 data for standards and interpretations which AREVA Group considers it should adopt for the publication of the comparative consolidated financial statements as of December 31, 2005. The preparation basis for this 2004 financial information described in the notes is therefore the result of:

- IFRS standards and interpretations whose adoption is mandatory as of December 31, 2005, as currently known;
- IFRS standards and interpretations whose adoption is mandatory after 2005 but which the Group has decided to adopt early;
- The options chosen and the exemptions applied are those which the Group is most likely to adopt in the preparation of its first IFRS consolidated financial statements in 2005.

In addition, the potential impact of IFRS adoption on the shareholders' equity of STMicroelectronics, an equity affiliate, has not been communicated to the Group and has not been able to be estimated or audited by the statutory auditors. Based on the Group's knowledge of the financial statements of the company prepared in accordance with U.S. GAAP, the primarily potential impact will concern accounting for research and development expenditure.

Furthermore, given the acquisition of AREVA T&D on January 9, 2004, the Group has only prepared a limited appraisal of the impact of IFRS adoption on this subsidiary. No material impacts other than those detailed in Section 5.1.9.3. have been identified.

For all the above reasons, it is possible that the audited opening balance sheet presented herebelow will differ from the opening balance sheet effectively in for the preparation of the 2005 consolidated financial statements.

This information was examined by the Supervisory Board on March 8, 2005 and was the subject of a due diligence audit by the statutory auditors, within the framework of their verification of the 2004 management report.

5.1.9.1. Selected options and policies for the preparation of the first Group financial statements under IFRS

IFRS 1 (First Time Adoption of International Financial Reporting Standards) authorizes, on an optional basis, several exceptions to the general rule of retrospective application of the standards. AREVA has elected to apply the following options:

Business combinations

AREVA applies the provisions of IFRS 3 from January 1, 2004 and has not adjusted business combinations prior to this date.

Valuation of tangible and intangible assets

AREVA has not elected to restate tangible and intangible assets at fair value in the opening balance sheet; as such, tangible and intangible assets remain recorded at depreciated or amortized cost accordingly.

Employee benefits

AREVA has elected to record in shareholders' equity as of January 1, 2004, all actuarial gains and losses not recognized in the balance sheet as of December 31, 2003. The quantified impact of application of this method is presented in Section 5.1.9.3. below. AREVA has also elected to continue to apply the current corridor method to gains and losses resulting from changes in assumption after January 1, 2004 concerning pension and similar obligations.

Nuclear facility end-of-life-cycle obligations

AREVA provides for end-of-life-cycle obligations in accordance with IAS 37 and records end-of-life-cycle assets comprising two portions: the portion funded by AREVA (End-of-life-cycle assets - AREVA share) and the portion funded by customers (End-of-life-cycle assets - Third-party share).

AREVA has elected to apply the exemption offered by the amendments to IFRS 1, following publication of IFRIC Interpretation 1 (Changes in Existing Decommissioning, Restoration and Similar Liabilities). This interpretation provides that end-of-life-cycle assets are recalculated at initial discounted present value and depreciated on a straight-line basis from the facility start-up date to its estimated shut-down date. In this respect, the Group's share of end-of-life-cycle assets has been valued as of January 1, 2004 by discounting estimated future cash flows back to the start-up date of the facilities concerned and then depreciating this value from the start-up date to January 1, 2004, pro rata to the estimated period of use at this date. The quantified impact of application of this method is presented in section 5.1.9.3. below.

IAS 32 and IAS 39

AREVA has not elected for early adoption as of January 1, 2004 of IAS 32 and IAS 39 concerning financial instruments. As such, financial assets and liabilities are valued in accordance with French GAAP in the IFRS Pro forma balance sheets as of January 1 and December 31, 2004; AREVA has nonetheless elected to present these balance sheets in accordance with IFRS.

5.1.9.2. Impact of IFRS adoption on the presentation of the balance sheet and the income statement

Presentation of the balance sheet

Current and non-current assets and liabilities

The structure of the balance sheet is essentially modified by the distinction between current and non-current assets and current and non-current liabilities.

Current assets and liabilities are those with a maturity of less than or equal to one year or which relate to the operating cycle of the company.

Headings presented separately

IAS 1 requires the presentation of certain headings in specific sections of the balance sheet, including:

- Deferred tax assets and liabilities (in non-current assets and non-current liabilities respectively);
- Current tax receivables and liabilities (in current assets and current liabilities respectively);
- Pension plan assets (in non-current assets).

In addition, goodwill relating to equity affiliates must be recorded in "Equity affiliates".

Breakdown of changes impacting the presentation of the balance sheet

- Purchased goodwill is transferred from "Intangible assets" to "Goodwill".
- Goodwill relating to equity affiliates is transferred from "Goodwill" to "Equity affiliates".

As such, the heading "Goodwill" solely comprises goodwill relating to consolidated companies. The heading "Equity affiliates" represents the Group's share in the shareholders' equity of the companies concerned, plus the goodwill relating to these affiliates.

- The heading "Long-term investments" is broken down into several headings:
 - "Pension fund assets" consists solely of the surplus assets funding retirement and pension commitments of certain group subsidiaries.
 - receivables and deposits maturing in one year or less is presented in current financial assets.

In addition, in order to facilitate the reading of the balance sheet, AREVA has chosen to present all financial assets earmarked for end-of-life-cycle obligations in a separate non-current asset heading called "Assets earmarked for end-of-life cycle obligations".

The heading "Other accounts receivable" is broken down into several headings:

- Deferred tax assets;
- Current tax assets;
- Other operating receivables;
- Other non-operating receivables.

The heading "Cash and marketable securities" is broken down into two headings:

- Cash and cash equivalents, comprising cash balances, financial current accounts and risk-free marketable securities with an initial maturity of less than three months;
- Other current financial assets comprising the remaining marketable securities and the current portion of loans, receivables and deposits maturing in one year or less.

The heading "Perpetual subordinated debt" is transferred to Borrowings.

Provisions for contingencies and losses are split between "Current provisions" and Non-current provisions.

Nonetheless, in order to facilitate the reading of the balance sheet, AREVA has chosen to present all provisions for employee benefits (pensions and other benefits) and all provisions for end-of-life cycle obligations as non-current provisions. The portion of these provisions maturing in less than one year will be disclosed in the Notes to the consolidated financial statements.

By exception, the IFRS pro forma balance sheet as of January 1, 2004 presents the provisions relating to Marcoule end-of-life-cycle obligations in current provisions, due to the signature of an agreement covering the payment of a full and final amount, effective January 1, 2004. Similarly, end-of-life-cycle assets in respect of Marcoule are presented in current assets. In addition, all provisions relating to the operating cycle (provisions for litigation, customer warranties, etc.) are recorded in current provision.

- The heading "Borrowings" is split between "Borrowings – due within one year" and "Borrowings – due after one year" depending on maturity.
- Trade advances and prepayments concern the operating cycle and, as such, are recorded as current liabilities. Customer advances and prepayments invested in non-current assets are treated in the same way, as they are released by offset against sales realized with the customers who granted them.
- The heading "Other liabilities" is broken down into several headings :
Deferred tax liabilities, current tax liabilities, other operating liabilities, other non-operating liabilities.

The following tables present the account transfers impacting the presentation of the balance sheets as of January 1, 2004 and December 31, 2004.

Balance sheet as of January 1, 2004, in IFRS format

The new IFRS balance sheet headings are presented in italics

ASSETS <i>(in millions of euros)</i>	Published French GAAP balance 2003 sheet as of December 31, 2003	IFRS account transfers	French GAAP balance sheet as of January 1, 2004, adjusted for IFRS format	Explanatory notes
Non-current assets	19,094	(3,629)	15,465	
Goodwill, net	1,265	(91)	1,174	1 - 2
Intangible assets	482	(13)	469	1
Tangible assets	3,447	1,118	4,565	
<i>Of which: End-of-life-cycle assets (Group share)</i>	NA	1,118	1,118	3
Decommissioning assets	9,109	(9,109)	NA	3
<i>End-of-life-cycle assets (third-party share)</i>	NA	4,491	4,491	3
<i>Assets earmarked for end-of-life-cycle obligations</i>	NA	2,234	2,234	4
Equity affiliates	1,492	104	1,596	2
Other long-term investments	3,299	(3,299)	NA	4
<i>Other non-current financial assets</i>	NA	601	601	4
<i>Pension fund assets</i>	NA	42	42	4
<i>Deferred tax assets</i>	NA	293	293	5
Current assets	7,097	3,629	10,726	
<i>Marcoule end-of-life-cycle assets</i>	NA	3,500	3,500	3
Inventories and work-in-process	1,619	0	1,619	
Trade accounts receivable and related accounts	2,234	0	2,234	
Other accounts receivable	1,208	(1,208)	NA	5
<i>Other operating receivables</i>	NA	782	782	5
<i>Current tax - asset</i>	NA	133	133	5
<i>Other non-operating receivables</i>	NA	0	0	5
Cash and marketable securities	2,036	(2,036)	NA	6
<i>Cash and cash equivalents</i>	NA	1,367	1,367	6
<i>Other current financial assets</i>	NA	1,091	1,091	4 - 6
Total Assets	26,191	0	26,191	

(1) Transfer of purchased goodwill to "Goodwill".

(2) Transfer of goodwill relating to equity affiliates to "Equity affiliates".

(3) Transfer of decommissioning assets to the new headings "End-of-life-cycle assets (Group share)", "End of-life-cycle assets (third-party share)" and "Marcoule end-of-life-cycle assets" (special heading used as of January 1, 2004 only).

(4) Transfer of "Other long-term investments" to four new headings: "Assets earmarked for end-of-life-cycle obligations", "Pension fund assets", "Other non-current financial assets" and "Other current financial assets".

(5) Transfer of "Other receivables" to four new headings "Deferred tax assets", "Other operating receivables", "Current tax - asset" and "Other non-operating receivables".

(6) Transfer of "Cash and marketable securities" to two new headings: "Cash and cash equivalents" and "Other current financial assets"

NA: Not applicable; heading not used in the standards base under consideration.

Balance sheet as of January 1, 2004, in IFRS format (continued)

The new IFRS balance sheet headings are presented in italics

LIABILITIES AND SHAREHOLDERS' EQUITY <i>(in millions of euros)</i>	Published French GAAP balance sheet as of December 31, 2003	IFRS account transfers	French GAAP balance sheet as of January 1, 2004, adjusted for IFRS format	Explanatory notes
Shareholders' equity and minority interests	5,072	0	5,072	
Share capital	1,347	0	1,347	
Consolidated premiums and reserves	2,414	389	2,803	7
Currency translation reserves	(37)	0	(37)	
Consolidated net income – current year	389	(389)	0	7
Minority interests	959	0	959	
Perpetual subordinated debt	215	(215)	NA	8
Non-current liabilities	14,792	(4,633)	10,159	
Pensions and retirement obligations (Employee benefits) ...	609	0	609	
Provisions for contingencies and losses	13,383	(13,383)	NA	9
<i>Provisions for end-of-life-cycle obligations</i>	NA	8,371	8,371	9
<i>Other non-current provisions</i>	NA	69	69	9
Borrowings	800	(800)	NA	10
<i>Borrowings – due after one year</i>	NA	851	851	8 - 10
<i>Deferred tax liabilities</i>	NA	259	259	11
Current liabilities	6,112	4,848	10,960	
<i>Provisions for Marcoule end-of-life-cycle obligations</i> ⁽⁷⁾ ...	NA	3,945	3,945	9
<i>Other current provisions</i>	NA	993	993	9
<i>Negative goodwill</i>	NA	5	5	9
<i>Borrowings - due within one year (9)</i>	NA	164	164	10
Advances and prepayments	3,615	0	3,615	
Trade accounts payable and related accounts	1,009	0	1,009	
Other liabilities	1,488	(1,488)	NA	11
<i>Other operating liabilities</i>	NA	1,158	1,158	11
<i>Current tax - liability</i>	NA	71	71	11
<i>Other non-operating liabilities</i>	NA	0	0	11
Total Liabilities and Shareholders' Equity	26,191	0	26,191	

(7) Transfer of 2003 net income to consolidated reserves in order to present the balance sheet as of January 1, 2004 in accordance with IFRS.

(8) Transfer of "Perpetual subordinated notes" to "Borrowings – due after one year".

(9) Transfer of "Provisions for contingencies and losses" to five new headings: "Provisions for end-of-life-cycle obligations", "Other non-current provisions", "Negative goodwill", "Other current provisions" and "Provisions for Marcoule end-of-life-cycle obligations" (special heading used as of January 1, 2004 only).

(10) Transfer of "Borrowings" to two new headings: "Borrowings – due after one year" and "Borrowings – due within one year".

(11) Transfer of "Other liabilities" to four new headings "Deferred tax liabilities", "Other operating liabilities", "Current tax – liability" and "Other non-operating liabilities".

NA: Not applicable; heading not used in the standards base under consideration

Balance sheet as of December 31, 2004, in IFRS format

The new IFRS balance sheet headings are presented in italics

ASSETS <i>(in millions of euros)</i>	Published French GAAP balance sheet as of December 31, 2004	IFRS account transfers	French GAAP balance sheet as of December 31, 2004, adjusted for IFRS format	Explanatory notes
Non-current assets	15,782	485	16,267	
Goodwill, net	1,718	(62)	1,656	1 - 2
Intangible assets	608	(12)	596	1
Tangible assets	3,701	1,060	4,761	
<i>Of which: End-of-life-cycle assets (Group share)</i>	NA	1,060	1,060	3
Decommissioning assets	5,372	(5,372)	NA	3
<i>End-of-life-cycle assets (third-party share)</i>	NA	4,312	4,312	3
<i>Assets earmarked for end-of-life-cycle obligations</i>	NA	2,281	2,281	4
Equity affiliates	1,240	74	1,314	2
Other long-term investments	3,143	(3,143)	NA	4
<i>Other non-current financial assets</i>	NA	823	823	4
<i>Pension fund assets</i>	NA	32	32	4
<i>Deferred tax assets</i>	NA	492	492	5
Current assets	8,877	(485)	8,392	
<i>Marcoule end-of-life-cycle assets</i>	NA	0	0	3
Inventories and work-in-process	2,088	0	2,088	
Trade accounts receivable and related accounts	3,288	0	3,288	
Other accounts receivable	1,869	(1,869)	NA	5
<i>Other operating receivables</i>	NA	857	857	5
<i>Current tax - asset</i>	NA	116	116	5
<i>Other non-operating receivables</i>	NA	404	404	5
Cash and marketable securities	1,632	(1,632)	NA	6
<i>Cash and cash equivalents</i>	NA	1,054	1,054	6
<i>Other current financial assets</i>	NA	585	585	4 - 6
Total Assets	24,659	0	24,659	

(1) Transfer of purchased goodwill to "Goodwill".

(2) Transfer of goodwill relating to equity affiliates to "Equity affiliates".

(3) Transfer of decommissioning assets to the new headings "End-of-life-cycle assets (Group share)", "End-of-life-cycle assets (third-party share)" and "Marcoule end-of-life-cycle assets" (special heading used as of January 1, 2004 only).

(4) Transfer of "Other long-term investments" to four new headings: "Assets earmarked for end-of-life-cycle obligations", "Pension fund assets", "Other non-current financial assets" and "Other current financial assets".

(5) Transfer of "Other receivables" to four new headings "Deferred tax assets", "Other operating receivables", "Current tax - asset" and "Other non-operating receivables".

(6) Transfer of "Cash and marketable securities" to two new headings: "Cash and cash equivalents" and "Other current financial assets".

NA : non applicable ; rubrique non utilisée dans le référentiel considéré.

Balance sheet as of December 31, 2004, in IFRS format (continued)

The new IFRS balance sheet heading are presented in italics.

LIABILITIES AND SHAREHOLDERS' EQUITY <i>(in millions of euros)</i>	Published French GAAP balance sheet as of December 31, 2004	IFRS account transfers	French GAAP balance sheet as of December 31, 2004, adjusted for IFRS format	Explanatory notes
<i>Shareholders' equity and minority interest</i>	5,017	0	5,017	
Share capital	1,347	0	1,347	
Consolidated premiums and reserves	2,583	0	2,583	
Currency translation reserves	(117)	0	(117)	
Consolidated net income – current year	428	0	428	
Minority interests	776	0	776	
Perpetual subordinated debt	0	0	NA	
<i>Non-current liabilities</i>	11,428	(1,104)	10,324	
Pensions and retirement obligations (Employee benefits) . . .	853	0	853	
Provisions for contingencies and losses	9,632	(9,632)	NA	7
<i>Provisions for end-of-life-cycle obligations</i>	NA	8,258	8,258	7
<i>Other non-current provisions</i>	NA	134	134	7
Borrowings	943	(943)	NA	8
<i>Borrowings – due after one year</i>	NA	744	744	8
<i>Deferred tax liabilities</i>	NA	335	335	9
<i>Current liabilities</i>	8,214	1,104	9,318	
<i>Provisions for Marcoule end-of-life-cycle obligation</i> ⁽⁷⁾	NA	0	0	7
<i>Other current provisions</i>	NA	1,238	1,238	7
<i>Negative goodwill</i>	NA	2	2	7
<i>Borrowings - due within one year</i> ⁽⁸⁾	NA	199	199	8
Advances and prepayments	4,326	0	4,326	
Trade accounts payable and related accounts	1,688	0	1,688	
Other liabilities	2,200	(2,200)	NA	9
<i>Other operating liabilities</i>	NA	1,430	1,430	9
<i>Current tax - liability</i>	NA	91	91	9
<i>Other non-operating liabilities</i>	NA	344	344	9
Total Liabilities and Shareholders' Equity	24,659	0	24,659	

(7) Transfer of "Provisions for contingencies and losses" to five new headings: "Provisions for end-of-life-cycle obligations", "Other non-current provisions", "Negative goodwill", "Other current provisions" and "Provisions for Marcoule end-of-life-cycle obligations" (special heading used as of January 1, 2004 only).

(8) Transfer of "Borrowings" to two new headings: "Borrowings – due after one year" and "Borrowings – due within one year".

(9) Transfer of "Other liabilities" to four new headings "Deferred tax liabilities", "Other operating liabilities", "Current tax – liability" and "Other non-operating liabilities".

NA: Not applicable; heading not used in the standards base under consideration

Presentation of the Income statement

AREVA has chosen to adopt the model proposed by the CNC in its recommendation of October 27, 2004. In addition, the Group retains the presentation of operating expenses by function.

The main changes to the presentation of the income statement are as follows:

- The “exceptional items” account is removed; exceptional items are transferred to operating income or other income statement accounts depending on their nature.
- The sub-total “Current operating income” is created within operating income. Non-current operating items include:
 - Goodwill impairment losses;
 - Restructuring costs and employee early retirement plans;
 - Impairment losses and gains and losses realized on the sale of tangible and intangible non-current assets; gains and losses on the deconsolidation of subsidiaries and other changes in consolidation scope (excluding gains or losses on the sale of activity segments presented separately).
- Costs of nuclear facility end-of-life-cycle obligations currently included in “Other operating income and expenses” are transferred to “Cost of sales” under IFRS.
- Employee benefit costs (pensions and other benefits) currently included in “Other operating income and expenses” are split into two categories:
 - The provision discount reversal, net of the return on plan assets, is recorded in Financial income;
 - The current service cost is split between the different operating expense items by destination: “Cost of sales”, “Research and development expenses”, “Sales and marketing expenses” and “General and administrative expenses”.
- Financial income is split into two categories.
 - Net borrowing costs, comprising:
 - Gross borrowings costs (interest on borrowings),
 - Income from cash and cash equivalents.
 - Other financial income and expenses, notably comprising:
 - Income from financial assets other than cash and cash equivalents,
 - Gains or losses on the sale of financial assets,
 - The discount reversal of provisions for employee benefits, net of the return on plan assets,
 - The discount reversal for provisions for end-of-life-cycle obligations, net of the discount reversal for decommissioning assets funded by third parties.
- “Goodwill amortization” is removed in accordance with IFRS 3 which prohibits the amortization of goodwill in favor of the performance of impairment tests. Impairment losses recognized as a result of these tests are recorded, where applicable, in non-current operating income items.

In accordance with IAS 36, AREVA performs impairment tests in respect of cash-generating units (CGU) to which goodwill is allocated. The CGUs correspond to Business Units (BU), with the exception of the Mining BU which comprises a “Gold” CGU and a “Uranium” CGU, by geographical region. Impairment tests are performed by applying the methodology recommended by IAS 36: the recoverable amount of a CGU is the higher of (a) its fair value less costs to sell and (b) its value in use, determined using the discounted estimated future cash flow method.

The accounts transfers impacting the presentation of the 2004 income statement are presented in Section 5.1.9.6.

5.1.9.3. Impact of first-time adoption of IFRS Provisions for end-of-life-cycle obligations and end-of-life-cycle assets

Overview of the accounting policy previously adopted by AREVA (CRC Regulation No. 2000-06)

- Forecast costs in respect of end-of-life-cycle obligations relating to a facility are provided in full from start-up;
- An equivalent amount is recorded in assets under “End-of-life-cycle assets”, which comprises two components:
 - The Group share (recorded in “End-of-life-cycle assets - Group share), depreciated over the useful life of the facility. The annual depreciation charge is recorded in operating income under “Other operating income and expenses”;
 - The third-party share (recorded in “End-of-life-cycle assets - third-party share), which represents a future receivable valued using an allocation key which splits funding obligations between AREVA and the third-parties concerned.
- Provisions for end-of-life-cycle obligations and end-of-life-cycle assets are not discounted, but are increased each year to reflect inflation.

Adoption of IFRS (IAS 3 7, IAS 16 and IFRIC 1)

- End-of-life-cycle provisions are discounted by applying an inflation and a discount rate determined based on the economic situation of the country in which the facility concerned is located, to estimated future cash flows by maturity.

For facilities located in France, AREVA has adopted an inflation rate of 2% and a discount rate of 5%, representing an effective rate of 3%.

- The inflation rate of 2% reflects market expectations and the long-term objectives of the European Central Bank;
- The effective rate of 3% corresponds to the 3-year rolling average of French 10-year Treasury bonds indexed to inflation, interpolated to the average duration of end-of-life-cycle expenditure, i.e. 2.8% plus a credit margin.

- Cash flows relating to the decommissioning of the UP2-800 and UP3 plants in La Hague are expected to be incurred between 2040 and 2060, assuming the operation of these facilities until 2025.

A risk premium of 3% has been allocated to the fraction of the provision covering the storage of long-lived waste, reducing the effective discount rate to 0%.

The level of the provision recorded in the accounts is sufficient to cover the discounted present value of the highest deep repository cost estimate applicable in France.

- The share of end-of-life-cycle assets corresponding to funding expected from third parties has been discounted in exactly the same way as the related provisions.

As of January 1, 2004

(in millions of euros)	End-of-life-cycle assets*			Provisions for end-of-life-cycle obligations*		
	Value before discounting	Discounted value	Difference	Discounted value	Value before discounting	Difference
Third-party share	4,491	2,115	(2,376)	4,491	2,115	(2,376)
Group share	1,118	171	(947)	3,880	2,215	(1,665)
Total	5,609	2,286	(3,323)	8,371	4,330	(4,041)

* excluding assets and liabilities concerning Marcoule, recorded in current assets and liabilities.

Discounting resulted in a decrease of €4,041 million in provisions for end-of-life-cycle obligations and of €3,323 million in end-of-life-cycle assets.

The discounting of end-of-life-cycle assets and provisions for end-of-life-cycle obligations therefore had a **positive net impact on AREVA pre-tax consolidated shareholders' equity of €718 million** as of December 31, 2004.

As of December 31, 2004

(in millions of euros)	End-of-life-cycle assets and CEA receivable*			Provisions for end-of-life-cycle operations*		
	Value before discounting	Discounted value	Difference	Discounted value	Value before discounting	Difference
Third-party share	4,312	2,015	(2,297)	4,312	2,015	(2,297)
Group share	1,060	162	(898)	3,946	2,317	(1,629)
CEA receivable	128	110	(18)			
Total	5,500	2,287	(3,213)	8,258	4,332	(3,926)

* Receivable resulting from agreements signed with CEA in 2004 concerning the decommissioning of Caradache and the La Hague workshop.

Discounting resulted in a decrease of €3,926 million in provisions for end-of-life-cycle obligations and of €3,213 million in end-of-life-cycle assets.

The discounting of end-of-life-cycle assets and provisions for end-of-life-cycle obligations therefore had a **positive net impact on AREVA pre-tax consolidated shareholders' equity of €713 million** as of December 31, 2004.

The Group share of end-of-life-cycle assets as of January 1, 2004 has been valued by applying the exemption authorized by IFRIC Interpretation 1: estimated future cash flows have been adjusted for an inflation rate of 2% and discounted back to the start-up date of the facilities concerned at a rate of 5%. This value has then been depreciated from the start-up date to December 31, 2003, pro rata to the estimated period of use at the IFRS transition date.

- Provisions for end-of-life-cycle obligations in respect of the Marcoule plant and the corresponding assets were the subject of an agreement in December 2004 concerning the payment of a full and final amount to CEA and, as such, were not discounted in the IFRS balance sheet as of January 1, 2004.

Impact on the balance sheets as of January 1, 2004 and December 31, 2004

The impact on end-of-life-cycle assets and provisions for end-of-life-cycle obligations is as follows:

Impacts on the 2004 Income statement

Impact on operating income

The decrease in AREVA's share of end-of-life-cycle assets results in a substantial reduction in the annual depreciation charge in respect of these assets, which in turn generates an improvement in operating income under IFRS of €68 million in 2004. This improvement in operating income under IFRS is of a recurring nature.

Impact on financial income

The reverse discounting of provisions for end-of-life-cycle obligations and the third-party share in end-of-life-cycle assets is recorded in "Other operating income and expenses", generating a reduction in financial income under IFRS of €69 million for 2004. This decrease in financial income under IFRS is of a recurring nature. The above amount should increase by 5% annually, assuming a constant base and discount rate.

It should be noted that the similarity between the quantified impacts in 2004 on operating income (+ €68 million) and financial income (- €69 million) is a simple coincidence and does not reflect a transfer between income statement accounts.

Employee benefits

Overview of the accounting policy previously adopted by AREVA (CNC Recommendation No. 2003-R.01)

The Group records the entire amount of its commitments for pensions, early retirement, severance pay, medical insurance, job-related awards, accident and disability insurance and related obligations, whether for active personnel or for retired personnel, in the accounts in accordance with CNC Recommendation No. 2003-R.01 of April 1, 2003, regarding accounting and valuation rules for pension obligations and similar benefits.

Payments by the Group under defined contribution plans are recorded as expenses of the period to which they relate.

In the case of defined benefit plans, benefit costs are estimated using the projected unit credit method. Under this method, accrued pension benefits are allocated among service periods based on the plan vesting formula. If service in subsequent years results in accrued benefit levels that are substantially higher than during previous years, the company must allocate the accrued benefits on a straight-line basis.

The amount of future benefit payments to employees is determined based on salary trend assumptions, retirement age and mortality and discounted to present value based on interest rates for long-term bonds of AAA issuers.

Post-January 1, 2001 actuarial gains and losses are spread, using the corridor method, over the average expected remaining working life of personnel taking part in these plans for the portion exceeding the largest of the following values by more than 10%:

- present value of the commitment on the closing date for benefits determined as of the end-of-period date,
- fair value of plan assets at the period-end.

The cost of plan changes is spread over the vesting period.

Adoption of IFRS (IAS 19 and exemption provided for in IFRS 1)

The accounting policy previously adopted by AREVA complies with IAS 19.

However, as indicated in Section 5.1.9.1. above, AREVA has elected to apply the exemption offered by IFRS 1 on first-time adoption of IFRS and has opted to record in shareholders' equity as of January 1, 2004, all differences existing at this date between funding assets and liabilities relating to the Group's various employee benefit regimes, with the exception of past services costs not corresponding to vested rights of beneficiaries.

In addition, AREVA continued to apply the current corridor method in respect of gains and losses arising as a result of changes in assumptions after January 1, 2004 concerning pension obligations and similar benefits.

Impact on the balance sheets as of January 1, 2004 and December 31, 2004

- The recognition of actuarial gains and losses generates:
 - an increase in the provision for employee benefits of €190 million; and
 - a decrease in pension fund assets of €25 million.
 Representing a cumulative negative impact on AREVA pre-tax consolidated shareholders' equity of €215 million as of January 1, 2004.
- The IFRS pro forma balance sheet as of December 31, 2004 presents:
 - an increase in the provision for employee benefits of €179 million; and
 - a decrease in pension fund assets of €22 million.

Representing a cumulative negative impact on AREVA pre-tax consolidated shareholders' equity of €201 million as of December 31, 2004.

Impact on the 2004 income statement

Income statement impacts are of two types:

- The amortization of actuarial gains and losses arising before January 1, 2004 is no longer applicable under IFRS as these gains and losses have been recorded in the balance sheet as of January 1, 2004, generating an improvement in operating income under IFRS of €8 million for 2004. This improvement in operating income is of a recurring nature.
- The reverse discounting of the provision for employee benefits, net of the return on plan assets, is presented under IFRS in "Other financial income and expenses", generating an improvement in operating income and a reduction in financial income under IFRS of identical amounts; in effect this represents an account transfer between two income statement items.

In 2004, the improvement in operating income and the reduction in financial income under IFRS as a result of this account transfer is €58 million. While this account transfer is of a recurring nature, its amount may vary from one year to the next, notably as a result of changes in the return on plan assets and in discount rates used.

Valuation and amortization of goodwill

Overview of accounting policy previously adopted by AREVA (CRC Regulation No. 1999-02)

Restructuring costs incurred by a purchased company

Under the previous accounting policy, restructuring costs incurred by a purchased company during the 12-month period following the date of purchase are, under certain conditions, considered an additional component of the purchase consideration; as such they are not recorded in the consolidated income statement of the purchaser but increase the goodwill balance.

Goodwill amortization

Goodwill is amortized over a period reflecting the business of the company purchased, subject to a maximum of 20 years. Negative goodwill is released to income over a maximum of five years.

Adoption of IFRS (IFRS 3 and exemption provided for in IFRS 1)

Business combinations prior to January 1, 2004 are not adjusted

As indicated in Section 5.1.9.1. above, AREVA applies the provisions of IFRS 3 from January 1, 2004 and, as such, has not restated business combinations prior to this date.

Restructuring costs of the purchased company

IFRS 3 prohibits the recording of restructuring costs incurred in respect of a purchased company as an additional component of the purchase consideration, with the sole exception of costs meeting the restructuring provision criteria laid down in IAS 37 as of the purchase date.

Other restructuring costs in respect of the purchased company are recorded in the operating income statement in accordance with IAS 37 criteria.

Contingent liabilities

IFRS 3 requires the recording of provisions to cover the contingent liabilities of companies purchased, with the corresponding entry recorded in goodwill. The liabilities concerned are those liabilities which do not meet the normal criteria for the recording of provisions laid down in IAS 37.

Goodwill amortization

IFRS 3 prohibits the recurring amortization of goodwill; it requires companies to perform systematic annual impairment tests on cash generating units to which goodwill is allocated, applying the methodology laid down in IAS 36.

Goodwill impairment losses identified by these tests are recorded in the income statement and are definitive.

In addition, negative goodwill is recorded in full as a profit in the year in which the company is purchased and is not spread.

Inalienability of goodwill

The purchasing company has a period of 12 months following the purchase date to finalize the valuation of assets and liabilities purchased and determine the goodwill balance (subject to subsequent adjustments to the purchase consideration).

The goodwill balance cannot be changed after this 12-month period. IFRS 3 does, however, provide for one exception to this general rule: if the potential benefit of income tax loss carried-forwards or other deferred tax assets did not satisfy the criteria for separate recognition at the purchase date, but subsequently does, the carrying amount of the goodwill must be reduced to the amount which would have been recorded if the deferred tax asset had been recognized at the purchase date. This reduction in the value of goodwill is recorded as an expense.

Impact on the balance sheet as of January 1, 2004

Negative goodwill is cancelled, generating a positive impact on consolidated shareholders' equity of €5 million as of January 1, 2004.

In addition, for practical reasons linked to the complexity of impairment tests, AREVA decided to cancel positive goodwill balances of minimal amounts; this generated a negative impact on consolidated shareholders' equity of €22 million as of January 1, 2004

Impact on the valuation of AREVA- Transmission & Distribution (T&D) goodwill 2004 restructuring costs

Restructuring costs incurred and provided by AREVA T&D as of December 31, 2004 total €142 million. As indicated above, these costs are treated under French GAAP as a component of the acquisition price and as such increase the goodwill balance in this amount, net of the corresponding deferred tax, i.e. €87 million.

The allocation to goodwill of restructuring costs incurred or provided in respect of a purchased entity is prohibited under IFRS. These costs must be expensed in the Income Statement. The AREVA T&D goodwill balance is therefore reduced by €87 million under IFRS.

As a result, 2004 operating income under IFRS is €142 million lower and the tax charge is reduced by €55 million. The net impact on 2004 net income under IFRS is therefore negative €87 million.

Contingent liabilities

Contingent liability provisions were recorded in the AREVA T&D acquisition balance sheet in the amount of €16 million. These provisions primarily concern contingent liabilities in respect of customer warranties and the cost of cleaning up industrial sites.

Goodwill was increased in this amount, after deduction of the corresponding deferred tax, representing a net impact of €11 million.

Summary of impacts on AREVA T&D goodwill

The T&D goodwill is reduced by €76 million under IFRS before 2004 amortization:

(in millions of euros)

2004 restructuring costs	(142)
Corresponding deferred tax	55
Contingent liabilities	16
Corresponding deferred tax	5
Net impact	76

Impact on the 2004 income statement

Goodwill amortization

Under French GAAP, the 2004 amortization charge was €152 million, including:

- Impairment losses of €8 million in respect of businesses included in a current acquisition.

Under IFRS, these impairment losses are recorded in operating income, generating a reduction in operating income under IFRS of €8 million. This is a one-off, non-recurring impact.

- €9 million cancellation of AREVA goodwill in respect of Total shares sold in 2004.

Under IFRS, this charge is transferred to "Other financial income and expenses", generating a decrease in financial income of €9 million. This is a non-recurring impact due to the adoption of IAS 39 from January 1, 2005.

- Recurring amortization charge of €135 million in respect of AREVA Group goodwill. As indicated above, goodwill is not amortized under IFRS. This charge is therefore cancelled, generating an improvement of €135 million in 2004 net income under IFRS. This is a recurring impact.
- In accordance with the requirements of IFRS 3, AREVA performed impairment tests in respect of all cash-generating units to which goodwill has been allocated. These tests were performed in accordance with the methodology laid down in IAS 36 "Impairment of assets". No impairment losses were recognized as of December 31, 2004 as a result of these tests.

AREVA T&D restructuring costs

DAs indicated above, the allocation to goodwill of restructuring costs incurred in respect of an entity purchased is prohibited under IFRS. As such, 2004 operating income under IFRS is reduced by €142 million and the tax charge is reduced by €55 million. The net impact on 2004 net income is therefore negative €87 million.

Deferred tax

A deferred tax asset not recorded at the time of a previous acquisition was recorded in income in the French GAAP December 31, 2004 financial statements in the amount of €22 million, via a reduction in the tax charge for the period.

Under IFRS the corresponding goodwill is canceled in an equivalent amount generating an increase in the 2004 tax charge under IFRS of €22 million. This is a one-off, non-recurring impact.

Consolidation of special purpose entities

Overview of the accounting policy previously adopted by AREVA (CRC Regulation No. 1999-02 and Financial Security Act)

Until December 31, 2003 inclusive, French GAAP did not permit the consolidation of special purpose entities in which the consolidating company did not hold any shares.

The consolidation of such entities became mandatory in French GAAP consolidated financial statements from January 1, 2004 pursuant to the Financial Security Act. As such, Lilly Financial Corporation Limited, the investment firm holding the perpetual subordinated bonds and the related guarantee deposit, is consolidated in AREVA's French GAAP consolidated financial statements for the year ended December 31, 2004. As a result, the perpetual subordinated debt (€215 million) recorded in other equity and the guarantee deposit (€180 million) recorded under Long-term investments have disappeared from the consolidated balance sheet, with the net amount as of January 1, 2004 of €36 million reclassified as Borrowings.

Adoption of IFRS (IAS 27 and SIC 12)

IAS 27 and SIC 12 require the consolidation of special purpose entities. This standard and the interpretation are applicable as of January 1, 2004.

Impact on the balance sheet as of January 1, 2004

Under IFRS, Lilly is consolidated in the balance sheet as of January 1, 2004.

The consolidation of Lilly as of January 1, 2004 does not, however, impact AREVA consolidated shareholders' equity at this date. It generates a reduction of equal amount (€180 million) in "Other non-current financial assets" and "Borrowings – due after one year".

Adoption of IAS 27 and SIC 12 also does not impact the 2004 income statement or the balance sheet as of December 31, 2004, as Lilly is consolidated under French GAAP at this date.

Consolidation of UCITS controlled by AREVA

Overview of the accounting policy previously adopted by AREVA (CNC official statement of February 8, 2005)

AREVA elected to apply the option made available by the official statement issued by the French National Accounting Institute (*Conseil National de la Comptabilité*, "CNC") on February 8, 2005, authorizing the non-consolidation of UCITS controlled by commercial companies as of December 31, 2004, as AREVA satisfies all the conditions laid down in this official statement:

- The UCITS does not trade directly or indirectly in financial instruments issued by the investor.
- None of the financial investments made by the UCITS are strategic to the investor.
- The investor receives no benefits and bears no risk, directly or indirectly, other than those normally associated with UCITS investments and in proportion to its holding (e.g. transactions under non-market conditions).
- The UCITS has no indebtedness or contingent liabilities other than those resulting from normal trading.

The UCITS controlled by AREVA, comprising equity and interest rate mutual funds, are therefore recorded as of December 31, 2004 under French GAAP, in "Long-term investments", as in prior years.

Adoption of IFRS

The Group does not expect the consolidation of controlled UCITS to be required under IFRS. As such, AREVA has chosen not to consolidate controlled UCITS in its pro forma financial statements as of January 1 and December 31, 2004. In effect, the consolidation of controlled UCITS involves significant application difficulties.

AREVA has, nonetheless, carried out simulations which indicate that the consolidation of controlled UCITS would not have a material impact on consolidated shareholders' equity as of January 1 and December 31, 2004, or on the 2004 income statement.

Accounting for inventories and commitments relating to uranium trading activities

Overview of the accounting policy previously adopted by AREVA

Uranium trading activity inventories are valued at acquisition cost, using the weighted-average cost method.

Provisions are recorded in respect of unrealized losses on contractual commitments to customers and suppliers of this activity; unrealized gains are not recognized.

Adoption of IFRS (IAS 2)

Pending adoption of IAS 39 from January 1, 2005, which will change the method of accounting for contractual commitments to uranium trading activity customers and suppliers, AREVA has elected to apply the following options in the IFRS pro forma financial statements as of January 1 and December 31, 2004:

- Valuation of uranium trading activity inventories at the lower of the year-end spot rate and the expected realizable value based on contractual commitments given and received;
- Cancellation of provisions recorded under French GAAP as of December 31, 2004, in so far as the net unrealized gains and losses position shows an overall unrealized gain.

Impact on 2004 financial statements

As of January 1, 2004: €9 million adjustment to uranium inventories (positive impact on consolidated shareholders' equity as of the transition date).

As of December 31, 2004: €11 million adjustment to uranium inventories and cancellation of the provisions for unrealized losses of €3 million.

In the 2004 income statement: €5 million increase in 2004 operating income. This impact is of a recurring nature, but the amount is likely to vary significantly from one year to the next and could also become negative.

Deferred tax**Overview of the accounting policy previously adopted by AREVA**

Deferred taxes are determined for each tax entity on the basis of differences between consolidated book value and tax value of assets and liabilities according to the liability method of tax allocation.

Temporary net taxable differences generate a deferred tax liability. Deferred tax assets are recognized in respect of deductible net temporary differences and unused tax losses and tax credits in the amount future offset is considered probable. Deferred tax assets are analyzed case by case based on mid-range income projections of three to five years.

Adoption of IFRS (IAS12)

Adoption of IAS 12 does not have a material impact on the valuation and recording of deferred tax by AREVA Group, with the exception of the following:

- AREVA does not record a deferred tax liability in its French GAAP financial statements in respect of timing differences relating to the perpetual subordinated bonds, as these timing differences are unlikely to reverse before an extremely long time, if at all, given the perpetual legal nature of these bonds.

- Under IFRS, a deferred tax liability must be recorded in respect of all taxable timing differences and deferred tax assets and liabilities cannot be discounted.

- The impact on the AREVA IFRS pro forma financial statements is as follows:

- As of January 1, 2004: recording of a deferred tax liability of €22 million (negative impact on shareholders' equity as of this date);
- As of December 31, 2004: the deferred tax liability is increased to €30 million;
- On the 2004 income statement: the tax charge is increased by €8 million. AREVA estimates an impact of €4 million per year until 2007.

Impact of the adoption of other IFRS on deferred tax

The most significant IFRS tax adjustments correspond to the recording of deferred tax on all IFRS adjustments which create timing differences between the book and tax values of assets and liabilities, and notably those relating to end-of-life cycle obligations and employee benefits.

Impact on the balance sheet as of January 1, 2004

These adjustments generate an increase in the deferred tax liability of €225 million as of January 1, 2004 (€137 million increase in deferred tax liabilities and €88 million decrease in deferred tax assets).

The high effective tax rate obtained by comparing this amount of €225 million to the corresponding tax base of approximately €500 million, is due to the fact that certain subsidiaries with negative IFRS adjustments to shareholders' equity do not recognize a deferred tax asset at the standard rate:

- because they have tax losses carried forward; or
- because they are liable to a reduced tax rate (e.g. Eurodif).

Including the adjustment relating to the perpetual subordinated notes, deferred tax has a **negative impact of €247 million on AREVA consolidated shareholders' equity as of January 1, 2004 under IFRS.**

Impact on the balance sheet as of December 31, 2004

After taking account of operations during 2004, the adjustments relating to the acquisition of AREVA T&D and the cancellation of the tax credit relating to the provision reversal deducted from goodwill, **deferred tax has a negative impact of €234 million on AREVA consolidated shareholders' equity as of December 31, 2004.**

Impact on the 2004 income statement

Including the impact of the adjustment relating to the perpetual subordinated notes and the adjustments detailed above, the 2004 deferred tax charge is reduced by €39 million under IFRS. This impact is of a non-recurring nature.

Other standards not materially impacting the IFRS pro forma 2004 financial statements but which could have a material impact in future years

Certain standards do not have a material impact on the IFRS pro forma AREVA 2004 consolidated financial statements, but could have an impact on the financial statements in future years.

The standards primarily include, but are not limited to, the following:

Capitalization of research and development expenditure (IAS 38)

IAS 38 “Intangible assets” requires the capitalization of development costs within intangible assets when the following six criteria are satisfied simultaneously:

- the technical feasibility of completing the project has been demonstrated;
- the company has the intention to complete the intangible asset and use or sell it;
- the company has the ability to use or sell the intangible asset;
- the company can demonstrate how the intangible asset will generate probable future economic benefits (existence of a market, or, if it is to be used internally, the usefulness of the intangible asset, etc.),

- adequate technical, financial and other resources are available to complete the project; and
- the company is able to measure the expenditure attributable to the intangible asset during its development reliably.

AREVA group did not identify any past or present research and development projects as of January 1 or December 31, 2004 which satisfy all the criteria laid down in IAS 38, resulting in the recognition of an intangible asset.

This standards could, nonetheless, have a material impact for the Group in future years.

Accounting for benefits granted to employees under employee share-ownership plans (IFRS 2)

IFRS 2 “Share-based payment” requires the recording in the income statement of benefits granted to employees under stock option or employee share-ownership programs.

This standard could impact the AREVA consolidated financial statements in future years should such programs be implemented.

Summary of the impact of IFRS adoption

The following table summarizes the impact of IFRS adoption:

- on AREVA consolidated shareholders’ equity as of January 1, 2004, the IFRS transition date;
- on the AREVA 2004 consolidated income statement;
- on AREVA consolidated shareholders’ equity as of December 31, 2004.

Summary of the impact of IFRS adoption on AREVA consolidated shareholders' equity as of January 1, 2004 and December 31, 2004 and on the AREVA 2004 consolidated income statement

<i>(in millions of euros)</i>	Total AREVA shareholders' equity as of 01/01/04	Operating income	Financial income	Exceptional items
Published Group share (French GAAP)	4,113			
Published minority interests (French GAAP)	959			
Total (French GAAP)	5,072	613	117	46
Discounting of end-of-life-cycle obligations (§ 5.1.9.3.)	718	68	(69)	
Employee benefits (§ 5.1.9.3.)	(215)	66	(58)	
Deferred tax (§ 5.1.9.3.)	(247)			
Goodwill, net (§ 5.1.9.3.)	(17)	(8)	(9)	
T&D restructuring costs (§ 5.1.9.3.)		(142)		
Valuation of uranium trading inventories (§ 5.1.9.3.)	9	2		
Provisions other than end-of-life-cycle provisions	(1)			
Equity affiliates	1			3
Account transfer from exceptional income to Operating income		39		(39)
Account transfer from exceptional income to current tax charge				(10)
Other adjustments (non-current assets, inventories, trade receivables deferred charges, etc.)	(4)	2	1	
Total impact of IFRS adjustments	244	27	(135)	(46)
Including: Group share	295			
Minority interests	(51)			
Group share under IFRS	4,408			
Minority interests under IFRS	908			
Total under IFRS	5,316	640	(18)	-

* See § 5.1.9.3. "Impact of IFRS on AREVA T&D goodwill".

** See § 5.1.9.3. "Reversal of deferred tax provision recorded in respect of a previous acquisition".

*** French GAAP: dividends, change in consolidation scope and currency translation reserves; IFRS adjustments: currency translation reserves, other.

Income tax	Share in net income of equity affiliates	Goodwill amort.	2004 Net income	T&D Op. BS*	Goodwill deferred tax account transfers**	Other movements***	Total AREVA shareholders equity as of 12/312004
			428			(300)	4,241
			118			(301)	776
(209)	131	(152)	546			(601)	5,017
			(1)			(4)	713
			8			6	(201)
39			39	(50)	22	2	(234)
		132	115	(76)	(22)	(6)	(6)
			(142)	142			
			2				11
				(16)		4	(13)
	(3)	20	20				21
10							
			3			3	2
49	(3)	152	44			2	293
			23				323
			21				(30)
			451			(295)	4,564
			139			(301)	746
(160)	128		590			558	5,310

5.1.9.4. Impact of first-time adoption of IAS 32 and IAS 39 as of January 1, 2005

As indicated in Section 5.1.9.1, AREVA has elected for deferred adoption as of January 1, 2005 of IAS 32 and IAS 39 in respect of financial and equity instruments.

Based on the current stage of work undertaken by the Project Committee set-up to prepare adoption of these standards, expected impacts are mainly as follows:

Valuation of portfolio securities (long-term portfolio investments and marketable securities) at fair value

Long-term portfolio investments and marketable securities will be valued based on stock market values or net asset values as of December 31, 2004.

Any differences with respect to net book value under French GAAP will have the following matching entries:

- an “available shareholders’ equity” account in the case of securities classified as “available-for-sale”, with the exception of permanent impairments in the value of these securities which will be deducted from consolidated reserves;
- consolidated reserves in the case of securities classified as “held for trading”, with subsequent changes in value taken to financial income.

The allocation of portfolio securities to the “available for sale” and “held for trading” categories is not yet finalized. The Group nonetheless intends to classify all assets earmarked for end-of-life-cycle obligations as “available for sale”, in order to limit the income statement volatility induced by IAS 39.

Put option held by Framatome-ANP SAS minority shareholders

In accordance with IAS 32, the unconditional put option, whose value will be determined by independent experts, available to Siemens from 2012 concerning its shares in Framatome-ANP, which represent 34% of the share capital of this company, will be recognized as a liability.

This liability will be equal to 34% of the fair value of Framatome-ANP, determined using the discounted cash flow method.

Pending an pronouncement by the IASB in this respect, an uncertainty remains concerning the accounting treatment of the difference between the amount of this liability and the net book value of the corresponding minority interests, as well as the accounting treatment of subsequent changes in this liability. If a decision has not been issued at the time of preparation of the June 30, 2005 interim financial statements, AREVA intends to record this difference as additional goodwill as of January 1, 2005. Subsequent changes in the value of this liability will generate matching changes in goodwill.

Other material impacts identified concerning fiscal year 2005

IAS 32 requires the deduction of treasury shares held by ST Microelectronics from its shareholder’s equity. As a result, the value of ST Microelectronics securities equity-accounted will be reduced by the amount of these shares pro rata to AREVA’s percentage control.

From fiscal year 2005, sales of the uranium trading business will be offset against corresponding purchases. Income from this business will consist solely of the commercial margin.

The application of IAS 39 to derivatives and notably foreign exchange, interest rate and commodity hedging instruments and the items hedged (liabilities, receivables, etc.) should not, according to company estimates, have a material impact on shareholders’ equity or results, given the hedging relationship documentation procedures implemented. Nonetheless, in certain cases IAS 39 requires embedded derivatives to be accounted for separately from the host contract; adoption of this standard could result in such adjustments.

5.1.9.5. Impact of IFRS adoption on the cash flow statement and financial indicators: net cash, ROACE

Impact of IFRS adoption on the cash flow statement (CFS)

IFRS adoption, with the exception of IAS 32 and IAS 39, does not have a material impact on the AREVA Group 2004 CFS :

- The cash definition used in the CFS remains unchanged; it includes liquid assets and risk-free marketable securities with an initial maturity of less than 3 months and is net of bank overdrafts.
- The amounts of cash flows from (or used in) operating, financing and investing activities remain unchanged.
- Cash flow from operations is practically unchanged (difference of €4 million); with the exception of consolidated net income which is €44 million greater under IFRS, the only material changes comprise adjustments with offsetting impacts in the different CFS headings and concerning depreciation and amortization of tangible and intangible assets, goodwill amortization and charges to provisions for contingencies and losses.

The IFRS pro forma consolidated CFS is presented in Section 5.1.9.9. below.

Definition of net cash and net indebtedness

The net cash balance currently communicated by AREVA group comprises:

- Cash and cash equivalents and risk-free marketable securities with an initial maturity of less than or equal to three months;
- Plus other marketable securities (equity securities and risk-free securities with an initial maturity of more than three months);
- Less: borrowings

In its recommendation dated October 27, 2004 on the presentation of financial statements under IFRS, the French National Accounting Institute, the CNC, presented a different definition of net cash. According to this definition, net cash (or net indebtedness) comprises:

- Cash and cash equivalents and risk-free marketable securities with an initial maturity of less than or equal to three months;
- Less: borrowings

Other marketable securities are excluded from this definition. Under this new definition, AREVA Group net cash is reduced by the amount of "Other marketable securities", i.e. €673 million as of January 1, 2004 and €578 million as of December 31, 2004.

Return on Average Capital Employed (ROACE)

Definition of ROACE

ROACE is equal to the ratio of: $\frac{\text{net operating income}}{\text{average capital employed}}$

- Net operating income is equal to operating income less the corresponding income tax charge derived by multiplying operating income by the tax rate applicable to the Group under the global consolidated tax regime, or the specific tax rates applicable to certain subsidiaries subject to special regimes
- Capital employed comprises the following:
 - net non-current assets (excluding end-of-life cycle assets (Group share)),
 - gross goodwill (other than goodwill relating to equity affiliates or allocated to Total shares), net of impairment losses recorded as a result of impairment tests
 - inventories, trade receivables and other operating receivables,
 - less customer advances, trade payables and other operating liabilities.

Average capital employed is equal to:

$$\frac{\text{Capital employed at the end of the period} + \text{capital employed at the beginning of the period}}{2}$$

2

Impact of IFRS adoption on ROACE

ROACE under IFRS is improved by the fact that a number of adjustments impact both the ratio numerator (net operating income) and denominator (average capital employed).

- Net operating income is structurally higher under IFRS compared to French GAAP (excluding circumstances specific to a given period) as a result of adjustments impacting expenses and concerning end-of-life cycle obligations and employee benefits.

The increase in 2004 operating income under IFRS is €32 million, it being noted that this amount includes non-recurring items decreasing this net impact.

- Capital employed is structurally lower under IFRS compared to French GAAP as a result of the goodwill adjustment as of January 1, 2004.

The concept of “net” and “gross” goodwill does not exist under IFRS. In accordance with IFRS 3, goodwill is not subject to recurring amortization. However, when an impairment loss is recognized it is deducted directly from the goodwill balance.

As such, the net book value of goodwill in the AREVA consolidated balance sheet as of December 31, 2003 under French GAAP, becomes the new goodwill “gross value” as of January 1, 2004 under IFRS.

This results in a decrease in capital employed of approximately €1.1 billion, corresponding to cumulated goodwill amortization as of December 31, 2003 (excluding goodwill in respect of Total shares and equity affiliates and exceptional write-downs).

Impact on 2004 ROACE

ROACE is “mechanically” improved as a result of the increase in operating income and the decrease in capital employed.

2004 ROACE is 9.2% under IFRS compared to 6.8% under French GAAP, representing an improvement of 2.4 points.

5.1.9.6. 2004 Income Statement adjusted in line with IFRS presentation format and standards

The new IFRS balance sheet headings are presented in italics

<i>(in millions of euros)</i>	Published French GAAP 2004 income Statement	IFRS format account transfers	IFRS adjustments	Total account transfers and adjustments	French GAAP 2004 income Statement in IFRS format	Explanatory notes
Sales	11,109	0	0	0	11 109	
<i>Other operating income</i>	0	8	0	8	8	1
Cost of sales	(8,347)	(8)	(139)	(147)	(8,494)	1
Gross margin	2,762	0	(139)	(139)	2,623	
Research and development expenses	(402)	0	0	0	(402)	
Sales and marketing expenses	(602)	0	0	0	(602)	
General and administrative expenses	(787)	0	0	0	(787)	
Other operating income and expenses	(358)	126	221	347	(11)	2 - 6
Current operating income	613	126	82	208	821	
<i>Goodwill impairment losses</i>	0	(9)	0	(9)	(9)	4 - 7
<i>Restructuring and CATS-CASA early retirement costs</i>	0	(68)	(142)	(210)	(210)	2 - 4
<i>Other non-current income and expenses</i>	0	38	0	38	38	3 - 4 - 5
Operating income	613	87	(60)	27	640	
<i>Income from cash and cash equivalents</i>	48	0	0	0	48	
<i>Gross borrowing costs</i>	(30)	0	0	0	(30)	
Net borrowings costs	18	0	0	0	18	
<i>Other financial income and expenses</i>	99	(66)	(69)	(135)	(36)	6 - 8
Financial income	117	(66)	(69)	(135)	(18)	
Exceptional items	46	(46)	0	(46)	0	3
Income tax	(209)	11	38	49	(160)	3
Net income of consolidated businesses	567	(14)	(91)	(105)	462	
Share in net income of equity affiliates	131	(3)	0	(3)	128	3
Goodwill amortization	(152)	17	135	152	0	7 - 8
Net income before minority interests	546	0	44	44	590	
Minority interests	(118)	0	(21)	(21)	(139)	
Consolidated net income	428	0	23	23	451	

(1) Transfer of royalty and other income from "Cost of sales" to the new heading "Other operating income": €8 million.

(2) Transfer of restructuring and CATS-CASA early retirement costs from "Other operating income and expenses" to a specific new heading within non-current operating items: €68 million.

(3) Transfer of exceptional items to operating income (€38 million), income tax (€11 million) and share in net income of equity affiliates (-€3 million).

(4) New heading making up "Non-current operating items".

(5) Other non-current income and expense items include gains and losses on the sale of tangible and intangible assets, impairment of tangible and intangible assets and the net income from deconsolidation of companies and other changes in consolidation scope.

(6) Transfer of the reverse discounting of pension provisions from operating income to financial income: €58 million.

(7) Transfer of goodwill amortization corresponding to impairment losses: €9 million.

(8) Transfer to financial income of goodwill amortization allocated to marketable securities sold in 2004: €8 million.

5.1.9.7. IFRS Pro forma balance sheet as of January 1, 2004

ASSETS <i>(in millions of euros)</i>	French GAAP balance sheet as of December 31, 2003, restated in IFRS format	IFRS adjustments	IFRS Pro forma balance sheet as of January 1, 2004
non-current assets	15,465	(3,636)	11,829
Goodwill, net of consolidated companies	1,174	(22)	1,152
Intangible assets	469	0	469
Tangible assets	4,565	(946)	3,619
<i>of which, End-of-life-cycle assets (Group share)</i>	<i>1,118</i>	<i>(947)</i>	<i>171</i>
End-of-life-cycle assets (third-party share)	4,491	(2,376)	2,115
Assets earmarked for end-of-life-cycle obligations	2,234	0	2,234
Equity affiliates ⁽¹⁾	1,596	1	1,597
Other non-current financial assets ^{(2) (A)}	601	(180)	421
Pension fund assets	42	(25)	17
Deferred tax assets	293	(88)	205
Current assets	10,726	6	10,732
Marcoule end-of-life-cycle assets ⁽³⁾	3,500	0	3,500
Inventories and work-in-process	1,619	8	1,627
Trade accounts receivable and related accounts	2,234	0	2,234
Other operating receivables	782	(2)	780
Current tax – asset	133	0	133
Other non-operating receivables	0	0	0
Cash and cash equivalents ^{(4) (A)}	1,367	0	1,367
Other current financial assets ^{(5) (A)}	1,091	0	1,091
Total Assets	26,191	(3,630)	22,561

(1) Including net goodwill relating to equity affiliates.

(2) Long-term portfolio investments and non-current portion (maturing after one year) of financial loans and receivables.

(3) Assets and liabilities in respect of Marcoule decommissioning obligations covered by the agreement with CEA.

(4) Liquid assets and risk-free marketable securities with an initial maturity of less than three months.

(5) Other marketable securities (673) and current portion (maturing in one year or less) of financial loans and receivables (418).

(A) As IAS 32 and IAS 39 are applicable from January 1, 2005, financial assets and liabilities are stated in accordance with French GAAP in the IFRS pro forma balance sheet as of January 1, 2004.

IFRS Pro forma balance sheet as of January 1, 2004 (continued)

LIABILITIES AND SHAREHOLDERS' EQUITY <i>(in millions of euros)</i>	French GAAP balance sheet as of December 31, 2003, restated in IFRS format	IFRS adjustments	IFRS Pro forma balance sheet as of January 1, 2004
Shareholders' equity and minority interests	5,072	244	5,316
Share capital	1,347	0	1,347
Consolidated premiums and reserves ⁽⁶⁾	2,803	295	3,098
Currency translation reserves	(37)	0	(37)
Minority interests	959	(51)	908
Non-current liabilities	10,159	(3,868)	6,291
Employee benefits	609	190	799
Provisions for end-of-life-cycle obligations	8,371	(4,041)	4,330
Other non-current provisions ⁽⁷⁾	69	4	73
Borrowings – due after one year ⁽⁸⁾	851	(180)	671
Deferred tax liabilities	259	159	418
Current liabilities	10,960	(6)	10,954
Provisions for Marcoule end-of-life-cycle obligations ⁽⁹⁾	3,945	0	3,945
Other current provisions	993	(3)	990
Negative goodwill	5	(5)	0
Borrowings - due within one year ⁽⁹⁾	164	0	164
Advances and prepayments	3,615	0	3,615
Trade accounts payable and related accounts	1,009	0	1,009
Other operating liabilities	1,158	2	1,160
Current tax – liability	71	0	71
Other non-operating liabilities	0	0	0
Total liabilities and shareholders' equity	26,191	(3,630)	22,561

(6) Including 2003 consolidated net income.

(7) Provisions for reconstitution of mines and clean-up of equipment and industrial sites.

(8) Borrowings maturing after one year.

(9) Bank overdrafts and borrowings maturing in one year or less.

NET CASH <i>(in millions of euros)</i>	Net cash - current definition	Difference	Net cash - new definition
Cash and cash equivalents and non-trade current accounts	1,367	0	1,367
Marketable securities maturing in more than three months	673	(673)	0
Borrowings – due within and after one year	(835)	0	(835)
Net cash	1,205	(673)	532

5.1.9.8. IFRS pro forma balance sheet as of December 31, 2004

ASSETS*(in millions of euros)*

	French GAAP balance sheet as of December 31, 2004, restated in IFRS format	IFRS adjustments	IFRS Pro forma balance sheet as of December 31, 2004
Non-current assets	16,267	(3,222)	13,045
Goodwill, net	1,656	(8)	1,648
Intangible assets	596	0	596
Tangible assets	4,761	(896)	3,865
<i>of which: End-of-life-cycle assets (Group share)</i>	<i>1,060</i>	<i>(898)</i>	<i>162</i>
End-of-life-cycle assets (third-party share)	4,312	(2,297)	2,015
Assets earmarked for end-of-life-cycle obligations	2,281	0	2,281
Equity affiliates ⁽¹⁾	1,314	21	1,335
Other non-current financial assets ^{(2) (A)}	823	0	823
Pension fund assets	32	(22)	10
Deferred tax assets	492	(20)	472
Current assets	8,392	(7)	8,385
Marcoule end-of-life-cycle asset	0	0	0
Inventories and work-in-process	2,088	10	2,098
Trade accounts receivable and related accounts	3,288	2	3,290
Other operating receivables	857	(1)	856
Current tax – asset	116	0	116
Other non-operating receivables	404	(18)	386
Cash and cash equivalents ^{(3) (A)}	1,054	0	1,054
Other current financial assets ^{(4) (A)}	585	0	585
Total Assets	24,659	(3,229)	21,430

*(1) Including goodwill relating to equity affiliates.**(2) Long-term portfolio investments and non-current portion (maturing after one year) of financial loans and receivables.**(3) Liquid assets and risk-free marketable securities with an initial maturity of less than three months.**(4) Other marketable securities (578) and current portion (maturing in one year or less) of financial loans and receivables (7).**(A) As IAS 32 and IAS 39 are applicable from January 1, 2005, financial assets and liabilities are stated in accordance with French GAAP in the IFRS pro forma balance sheet as of December 31, 2004.*

IFRS pro forma balance sheet as of December 31, 2004 (continued)

**LIABILITIES
AND SHAREHOLDERS' EQUITY***(in millions of euros)*

	French GAAP balance sheet as of December 31, 2004, restated in IFRS format	IFRS adjustments	IFRS Pro forma balance sheet as of December 31, 2004
Shareholders' equity and minority interests	5,017	293	5,310
Share capital	1,347	0	1,347
Consolidated premiums and reserves	2,583	298	2,881
Currency translation reserves	(117)	2	(115)
Consolidated net income - current year	428	23	451
Minority interests	776	(30)	746
Non-current liabilities	10,324	(3,527)	6,797
Employee benefits	853	179	1,032
Provisions for end-of-life-cycle obligations	8,258	(3,926)	4,332
Other non-current provisions ⁽⁵⁾	134	6	140
Borrowings – due after one year ⁽⁶⁾	744	0	744
Deferred tax liabilities	335	214	549
Current liabilities	9,318	5	9,323
Provisions for Marcoule end-of-life-cycle obligations	0	0	0
Other current provisions	1,238	7	1,245
Negative goodwill	2	(2)	0
Borrowings - due within one year ⁽⁷⁾	199	0	199
Advances and prepayments	4,326	0	4,326
Trade accounts payable and related accounts	1,688	0	1,688
Other operating liabilities	1,430	0	1,430
Current tax – liability	91	0	91
Other non-operating liabilities	344	0	344
Total liabilities and shareholders' equity	24,659	(3,229)	21,430

*(5) Provisions for reconstitution of mines and clean-up of equipment and industrial sites.**(6) Borrowings maturing after one year**(7) Bank overdrafts and borrowings maturing in one year or less.***NET CASH***(in millions of euros)*

	Net cash - current definition	Difference	Net cash - new definition
Cash and cash equivalents and non-trade current accounts	1,054	0	1,054
Marketable securities maturing in more than three months	578	(578)	0
Borrowings – due within and after one year	(943)	0	(943)
Net cash	689	(578)	111

5.1.9.9. 2004 IFRS pro forma cash flow statement

*(in millions of euros)***Cash flow from operating activities**

	2004 French GAAP	IFRS adjustments	2004 IFRS
Consolidated net income	428	23	451
Minority interests	118	21	139
Net income before minority interests	546	44	590
Loss(income) of equity affiliates, net of dividends	(105)	4	(101)
Net amortization, depreciation and provisions for non-current assets and marketable securities maturing in more than three months	614	(200)	414
Net goodwill amortization	152	(143)	9
Net provisions for contingencies and losses	(561)	313	(248)
Loss/(gain) on disposals of non-current assets and marketable securities maturing in more than three months	(107)	8	(99)
Other non-cash items	42	(22)	20
Cash flow from operations	581	4	585
Change in working capital requirements	357	(4)	353
Cash from operating activities	938		938
Cash used in investing activities	(1,153)		(1,153)
Cash used in financing activities	(273)		(273)
Increase/(decrease) in net cash	(339)		(339)
Net cash at the beginning of the year	1,284		1,284
Cash at the end of the year	1,054		1,054
Reclassification of non-trade current accounts	(11)		(11)
Less bank credit balances	(98)		(98)
Net cash at the end of the year	945		945

“Net cash” for the purposes of the Cash flow statement comprises:

- cash and cash equivalents and non-trade current accounts;
- risk-free marketable securities with an initial maturity of less than three months;
- less bank overdrafts.

5.1.9.10. IFRS pro forma change in consolidated shareholders' equity

<i>(in millions of euros)</i>	Number of shares and investment certificates outstanding	Share capital	Consolidated premiums and reserves	Currency translation reserves	Total share- holders' equity	Minority interests
French GAAP						
As of December 31, 2003	35,442,701	1,347	2,803	(37)	4,113	959
2004 Net income	-	-	428	-	428	117
Dividends paid	-	-	(220)	-	(220)	(65)
Changes in consolidated Group	-	-	-	-	-	(240)
Changes in accounting method and other adjustments	-	-	-	-	-	-
Currency translation adjustment	-	-	-	(80)	(80)	5
As of December 31, 2004	35,442,701	1,347	3,011	(117)	4,241	776
IFRS						
As of January 1, 2004	35,442,701	1,347	3,098	(37)	4,408	908
2004 Net income	-	-	451	-	451	139
Dividends paid	-	-	(220)	-	(220)	(65)
Changes in consolidated Group	-	-	-	-	-	(240)
Changes in accounting method and other adjustments	-	-	-	-	-	-
Currency translation adjustment	-	-	3	(78)	(75)	5
As of December 31, 2004	35,442,701	1,347	3,332	(115)	4,564	746

5.1.10. Outlook for 2005

See Section 7.

» 5.2. Human Resources report 2004

5.2.1. Key data

1. EMPLOYEES ⁽¹⁾	2003	2004
By Division		
Front End	9,719	10,952
Reactors & Services	13,251	14,066
Back End	10,542	10,697
Connectors	12,211	12,160
Transmission & Distribution	-	21,816
Other operations and Corporate	2,288	378
Total	48,011	70,069
By region		
France	29,198	34,128
Europe (excluding France)	5,873	14,094
Western Hemisphere	8,498	11,763
Africa	867	1,726
Asia Pacific	3,575	8,358
Total	48,011	70,069
By category		
Engineers and managers	27%	31%
Technical and administrative personnel	44%	39%
Skilled workers	29%	30%
2. LABOR DATA		
Women executives	4.48%	5.45%
Women managers	17.58%	16.14%
Women in non-management positions	22.33%	22.82%
Percentage of employees who have received training at least once during the year	66.68%	71.31%
Handicapped personnel (excluding USA)	1.68%	2.04%
Absenteeism rate	0.04	0.04
3. OCCUPATIONAL SAFETY AND RADIATION PROTECTION DATA		
Average employee dose from radiation exposure (mSv)	1.41 ⁽²⁾	1.37
Average subcontractor dose from radiation exposure (mSv)	0.45	0.37
Frequency rate of accidents with lost time (excluding commuting accidents)	8.01	7.64
Severity rate of accidents with lost time (excluding commuting accidents)	0.28	0.23

(1) Employees on the rolls at the end of the reporting period in accordance with the scope of consolidation of the Group.

(2) This figure was updated in 2004.

NB: see "Sustainable development facts and figures 2004" for a full description of the Group's labor data.

5.2.2. Changes in number of employees and human resources data

5.2.2.1. Change in number of employees

AREVA's Human Resources department is dedicated to improving data collection and employee management processes worldwide. To achieve this goal, the HR department established a monthly reporting system in 2004. Additional investments in dedicated information systems are planned for 2005. At the end of December 2004, the reporting system was reconciled with the Group's scope of consolidation.

The AREVA group had 70,069 employees at the end of 2004, up 46% from the previous year. This increase reflects, for the most part, the integration of employees in the **Transmission & Distribution** Division in 2004. The number of employees was relatively stable on a like-for-like basis. However, the distribution of employees changed in the **Connectors** Division as a result of the plan to optimize production facilities and hire junior workers.

• Changes by socio-professional category

The consolidation of the Transmission and Distribution business had an impact on the distribution of employees by socio-professional category: the percentage of engineers and managers increased from 27% of all employees in 2003 to 31% in 2004. The percentage of technical and administrative employees decreased from 44% to 39%, while the percentage of skilled workers remained stable.

• Changes by region

The Transmission & Distribution Division has a strong presence in the Asia Pacific region. AREVA's acquisition of the T&D Division not only increased the number of countries in which the Group operates, it also increased the number of employees in several regions. This is particularly the case in Asia Pacific, where the number of Group employees rose by around 5,000 people. The number of employees was also up significantly in Germany, with 2,000 additional people.

5.2.2.2. Changes in demographic profiles and health data

• Changes in demographic profiles

The number of women executives progressed favorably, with a gain of almost a full percentage point recorded in 2004. The percentage of women in executive positions rose from 4.48% in 2003 to 5.45% in 2004.

The Group also encouraged integration of handicapped personnel, who represented 2.04% of the consolidated workforce in 2004, compared with 1.68% in 2003.

• Changes in occupational safety and radiation protection data

- AREVA exercises effective radiation protection management
The average radiation dose to employees and subcontractors was 1.41 mSv and 0.45 mSv respectively in 2003, and 1.37 mSv and 0.37 mSv respectively in 2004. The maximum allowable dose per employee is 20 mSv per year in the European Union and 50 mSv per year in the United States.

Employees still subject to doses exceeding 20 mSv/year are found in significant numbers only in nuclear services in the United States. There, the number of employees subject to doses exceeding 20 mSv/year is declining and the maximum doses received are much lower than the allowable dose of 50 mSv/year. A plan is in progress to transfer methods developed in France with French utility EDF to the United States. In Niger, doses slightly in excess of this level had been recorded in mid-2004, but the situation has been corrected since then.

- Industrial accidents

The accident frequency rate for the AREVA group decreased from 8.01 in 2003 to 7.64 in 2004, while the accident severity rate decreased from 0.28 to 0.23. The Group's accident frequency rate is much lower than the average for the French industry, which is 25.4 (see section 5.2.4.3).

5.2.3. Supporting the Group's development through Human Resources programs

5.2.3.1. Meeting a series of major challenges

- Strengthening the Group's corporate culture by sharing common values and practices;
- Increasing the Group's international leadership by facilitating recruitment, talent development and mobility;
- Developing an innovative and responsible human resources policy.

These objectives are consistent with AREVA's sustainable development values and the AREVA Way business model, which the Human Resources department promotes throughout the Group (see section 4.11).

5.2.3.2. The corporate Human Resources department is organized to achieve the Group's strategic objectives

• Organization

The Human Resources department is headed by the director of corporate Human Resources, who sits on AREVA's Executive Board. Human resources management is organized by subsidiary. The missions are distributed among AREVA, its subsidiaries and the Group's business units.

• Directors of Human Resources of AREVA's subsidiaries

The director of corporate Human Resources is assisted by the directors of Human Resources of AREVA's first-tier subsidiaries, i.e. AREVA T&D, COGEMA, Framatome-ANP and FCI, who are fully accountable for human resources management in their respective subsidiaries and ensure implementation of the Group's human resources policy.

• Regional directors of Human Resources

To support the Group's international business development objectives, regional Human Resources departments have been established for the North American and Asia Pacific regions.

• AREVA's corporate Human Resources organization is anchored in four key areas

- Career development

This activity involves defining and leading programs to evaluate and develop the careers of Group managers on a worldwide basis.

- Employment practices

This department is in charge of defining and coordinating the Group's employment practices, in liaison with the network of heads of employee relations in the subsidiaries.

- Strategic studies and human resources policy

This department prepares studies on any subject affecting the Group's human resources. It also manages the Group's human resources information systems and reporting tools.

- Management communications

In close and constant liaison with the Corporate Communications and Sustainable Development departments, this department leads the HR network in preparing materials and procedures to implement corporate culture-building program.

• Shared services

An HR center of competence was created in France. It offers shared services to the subsidiaries in areas such as junior manager recruitment, mobility and payroll management.

5.2.4. 2004 review

5.2.4.1. Supporting the Group's growth by strengthening its corporate culture

• Sharing values and adopting a common management style

- The Values Charter

The Values Charter is a shared benchmark for all of the Group's employees, who agree to be answerable for its principles. The Charter allows employees to perform their missions fully aware of their rights and duties to the company and its stakeholders. The Charter embodies seven values: customer satisfaction, profitability, responsibility, integrity, excellence, sincerity and partnership.

- The AREVA leadership model

Established in 2003 by the AREVA executive committee, the leadership model outlines the skills and conduct expected of an AREVA manager.

This benchmark is used in the development centers, where future leaders are trained. In 2004, it provided the basis for a performance evaluation tool that was applied to all Group managers in 2005.

- Self assessment by the Human Relations department

Sustainable development is integrated operationally and practically in the company's production and management processes through AREVA Way (see section 4.11).

Employee relations, employment management, training and employee involvement are the main aspects covered in this process, under the general theme of social responsibility.

The corporate Human Resources department launched its self-assessment initiative at the end of 2004 to measure its service performance and optimize human resources management. Supplementing the self-assessments made by the operating entities, this process will facilitate diagnosis, objectives definition and budget planning for the corporate HR department, in a manner consistent with the Group's sustainable development goals.

- AREVA University: a tool for a shared corporate culture

In addition to developing management expertise, the main focus of AREVA University is the commitment to AREVA's core values and corporate culture.

This mission is all the more crucial today in light of AREVA's international expansion. To develop its programs, the University relies on the Values Charter, sustainable development and continuous improvement principles, and the leadership model.

- Management Days: sharing the strategy

Since 2002, the AREVA Management Days have served as a platform to launch the year's objectives and share information on the main projects in progress.

In 2004, 250 Group executives participated in this program.

- **Increasing the use of in-house opinion surveys**

In-house opinion surveys are a practice shared by all of the Group's companies. They are generally conducted every two years.

A common survey model is offered to provide consistent and comparable results spanning AREVA, its businesses and its operating units. The survey was designed so that the subsidiaries can tailor the model to suit their own situations. In keeping with AREVA's policy on sustainable development and continuous improvement, the questionnaire follows each of the ten commitments of the AREVA Way initiative.

After a series of COGEMA surveys in 2003, Framatome-ANP launched an internal survey in 2004 using the Group's common survey model. The main objectives of the questionnaire, sent to all personnel early in early 2005, were to get an accurate and up-to-date measurement of employee expectations and to assess the impact of actions taken following the previous survey. Initial results were presented to management in the first quarter of 2005.

At AREVA T&D, employee opinion surveys are used as an organizational tool for management. With this goal in mind, each unit can use the Group's opinion survey model and decide when and how often to use it, based on the unit's management objectives or current conditions.

- **Successfully integrating new operations: 2004 was the year of T&D's integration**

The Transmission & Distribution Division employs 21,816 people in 30 countries.

Immediately after acquiring the Transmission & Distribution business, AREVA conducted a strategic review to assess the magnitude of the challenges facing the Division.

In addition to taking action to optimize purchasing, the Division's organization and the commercial platform, AREVA presented its review on the reorganization and restructuring of the T&D business to various bodies in the countries in question.

5.2.4.2. Facilitating recruitment and talent development to increase the Group's international leadership

- **A recruitment program that anticipates AREVA's international development**

To support the strong growth of the nuclear business, particular emphasis was given to refreshing skills and transferring know-how.

- Structuring and optimizing processes at the Group level

In September 2004, AREVA announced the creation of a skills sharing Group to pool recruitment efforts in France and strengthen the bridges between the Group's various businesses.

AREVA's policy of integrating new talent is also supported by the establishment of AREVA's campus management program, which translates into the participation of all subsidiaries in school forums and recruitment fairs.

A shared e-recruiting system was also launched in 2004. This system was developed initially to cover France, Germany and the United States. It will be gradually extended to all other regions in which AREVA has operations. The system will be used to post job openings online and to share applicant databases, organized by business and region, among those involved in recruitment. Another goal is to improve the management of the in-house job market while making job openings more transparent to Group employees.

- Providing support to meet business-specific recruitment challenges

Areas of expertise and customer expectations change by business line and have very different cycles. To operate efficiently, it is necessary to anticipate new needs and reconcile the various requirements.

Examples

- ***Framatome-ANP: new talents for new markets***

New talent was hired to satisfy needs for new product development or for new areas of expertise linked to turnkey construction projects. A total of 240 engineers and managers were recruited, particularly in the Reactors business unit, which initiated a plan to strengthen human resources as early as 2001. In France, the recruiting effort was expanded to include applicants from various walks of life in Europe, America and Asia Pacific.

To satisfy the needs of the Saint Marcel plant, where the workload has doubled in four years, AREVA mounted an ambitious recruitment plan involving 145 jobs, more than 20% of which were filled internally.

• **COGEMA developed “Resources”, a recruitment and mentoring program for young managers**

In 2004, COGEMA recruited some 800 employees, including 275 managers.

To facilitate the replenishment of the population of engineers and managers, COGEMA launched Resources, a program that involves new hires and engineers with just three or four years of experience. In 2004, some 30 young graduates from the top schools became part of the program and were assigned a mentor from senior management. This program, which focuses especially on the integration process, is now recognized as a benchmark for excellence in integrating talent throughout the AREVA group.

• **For FCI, the most important needs are in Asia, particularly China and India**

FCI increased its workforce to support its growing business in Asia, most notably in China, India, and Malaysia. Nearly 1,000 employees were recruited, including some 250 managers, for all departments combined: production, quality, logistics, sales, engineering and finance. Numerous programs were conducted involving local recruiting, relations with local schools and universities, as well as internal mobility and expatriation of European and American managers.

In addition, headcounts at plants in Hungary and Mexico were also increased to manage the product lines transferred from the United States and Western Europe.

• **A common AREVA program for performance management**

In 2004, AREVA laid the foundations for a talent development program, initially concerning all engineers and managers. The Group developed a comprehensive career management process and tools for all of the Group’s businesses, in every region of the world.

This HR performance management system was built around the involvement of three parties: the employee, his or her manager, and the Group’s Human Resources personnel. Skills management is tailored to fit the three major career paths that are crucial to the Group’s growth: Manager, Project Manager, and Expert.

- Objective

The objective is to provide the Group with processes and management practices to identify and manage talented indi-

viduals who will contribute to meeting AREVA’s future challenges. With this process, Group employees can see where their career development prospects are; it gives each employee the means to develop his or her potential while contributing to the economic success of the Group.

Facilitating mobility is one of the best means of ensuring the success of this process. This entails helping employees, who manage their own career development, advance within a broad range of possibilities encompassing countries, businesses and responsibilities.

- Clear career management principles, shared by all

Every year, a series of individual and collective exchanges takes place at every level of the organization, whether Business Unit, country, subsidiary, Group or department. These exchanges consist of annual performance reviews, personnel reviews and career committees. This process also offers each employee an opportunity to provide feedback to his or her supervisor.

- A Group-wide process

The talent development process consists of the following steps:

- Definition of the position
- Annual interview
- Annual personnel review, a collective review that focuses both on the organization, including organizational planning and resource management, and on the individual
- Annual analysis of individual compensation components, both fixed and variable

A shared database was established at the end of 2004 to support this process with respect to executive management employees. It will be expanded to include all managers in 2005.

All of the Group’s subsidiaries have already implemented similar processes, particularly within Framatome and FCI, where management succession charts were established to prepare for the future.

- Position grading process

The AREVA group uses a management position grading system.

This evaluation process is used to establish equivalencies between positions and ensure consistent and fair levels of compensation within the organization and from an employment market perspective. The grading system will be fully deployed for management positions at the AREVA level in 2005.

The method is based on an assessment of each position's contribution to meeting the company's strategic objectives. It identifies career paths and grades the various positions within each path.

• **Effective measures to support skills development**

- AREVA University: providing support for individual career development

AREVA University offers a program that is common to all of the Group's businesses.

The University's objective is to meet employees' vocational expectations in a constructive and innovative manner while providing them with support via a solid career development program. One of its missions is to identify and anticipate emerging needs. To this end, the University will implement a new organizational structure in 2005 based on three drivers: management, businesses, and continuous improvement.

AREVA University's various programs were developed on an ad hoc basis, like the College of Plant Managers and the College of Site Managers, or by consolidating training programs developed in the Group's subsidiaries, such as the "finance for non-financiers" program, which FCI initially developed.

The organization is designed to be tailored to reflect the strategic objectives of the Group and of the corporate Human Resources department, in particular by region.

Additional programs are being developed for various operations when business or regional characteristics justify such an approach. For example, COGEMA organized management development sessions, while T&D focused on "the energy path" and Framatome-ANP on risk management.

- An organized program to manage and capitalize on expertise
Developing its experts' scientific skills is a key component of AREVA's overall performance. It is essential to maintain and increase the high level of technical expertise available in the AREVA group while anticipating changes in the age pyramid. Since T&D was acquired, the expertise network has grown to some 630 experts, most of whom hold line positions within the AREVA group.

• **2004 was the year for defining and deploying the expertise strategy**

Scientific and technical expertise is assigned one of three possible grades, depending on its contribution to achieving the Group's strategic objectives and the manner in which the expert interprets, applies and passes on this expertise. The Research and Innovation department (DRI) and the Human Resources departments of the Group and its subsidiaries col-

laborate on identifying and selecting scientific and technical experts as part of a special process conducted every two years.

• **A number of operating networks were introduced this year**

Expertise networks spanning the various subsidiaries have been formed within the College of Experts, which includes all AREVA experts, to cover topics of common interest.

The networks remain in close contact with the scientific community and academia, where they represent the Group.

A first annual convention of experts was held in January 2005.

• **Fostering professional mobility**

Mobility helps meet the need for skills connected with market demand and corporate change; it is a driver for improvement that provides many benefits: it helps to replenish and share know-how, multiply career opportunities, and develop an international corporate culture. It also provides satisfactory professional solutions to employees whose jobs are threatened by reduced workloads or technological change.

In 2004, there were more than 1,500 transfers within the Group; one third of them took place in France.

In France, a Mobility Committee comprised of AREVA's key Human Resources managers meets regularly to review and facilitate employee transfers within the Group. All employees receive a personal copy of a quarterly journal on mobility opportunities. Within the Group and elsewhere, the mobility process will most likely speed up, driven by ongoing expansion projects, especially the European Pressurized Reactor (EPR) in Finland, the construction of the Mox plant in the United States, and mineral exploration operations.

AREVA employs 430 expatriates in about 50 countries, representing over 300 job transfers in 2004. At Framatome-ANP, engineers and managers are actively participating in the process, thereby encouraging the exchange of good practices.

5.2.4.3. Developing innovative and responsible employment practices

AREVA's approach is based on a willingness to professionalize dialogue with labor at every level of the company and to identify topics of discussion in advance. This applies to both specialists and line managers.

The approach is also based on the principles of honesty and transparency.

Building good dialogue with labor is based on close collaboration among the Group's Human Resources managers, labor leaders and management personnel, who are enlisted to help anticipate and prepare for decisions affecting employment. Working together in this manner supports development of the Group's contractual commitments with employee-representation bodies. In view of their effectiveness, the first agreements signed appear to have lived up to employee expectations.

• **Strengthening dialogue with labor throughout the Group**

- In Europe

AREVA's European Works Council was established under an agreement signed on December 3, 2003 for the purpose of developing Group-wide employment practices reflecting labor concerns that are not country specific. It is a framework for information and dialogue. AREVA decided to go beyond the European directive by including Switzerland and Turkey to sit on the council as observers.

Two European Group Committees met in 2004 and one in March 2005.

Some 35 members representing 15 countries gathered for the meetings. The goal is to hold two meetings annually, during which information on subjects under its authority – the economic, commercial, industrial and social life of the Group – is provided. Extraordinary meetings may also be held, depending on current events and needs.

In addition to the European Group Committee meetings, the committee officers meet several times a year, mainly to optimize the functioning of the European Group Committee itself.

- A constructive approach to building a framework for the Group's operations

In this regard, the Group entered into several agreements in 2004 and early 2005, including:

- an agreement on mobility principles, in January 2004;
- an agreement on negotiation, in April 2004;
- an agreement on manpower planning by line of work in France, in January 2005; and
- a memorandum of understanding on the AREVA group employee savings plan, in February 2005.

Two European Group Committees met in 2004 and one in March 2005.

- Many other collective bargaining agreements within the subsidiaries are proof of the company's commitment to constructive dialogue between labor and management

- Agreements on working hours at FCI, Technicatome and Framatome-ANP.

- Agreements on insurance benefits and supplemental medical insurance at COGEMA and Technicatome.

- Incentive remuneration agreements at COGEMA, FCI and Technicatome.

- Equal opportunity agreement at Framatome-ANP SAS.

- Agreement on labor/management dialogue at Framatome-ANP SAS, setting forth the joint intention of promoting dialogue between labor and management by providing new functional and communications resources.

- T&D agreement on employment and skills management planning.

- T&D agreement on retirement planning.

• **Planning for and supporting restructuring**

In matters of restructuring, the Group supports the principle of solidarity to minimize the impact of commercially motivated decisions on jobs as it operates in increasingly competitive markets.

This approach entails negotiating with labor on job preservation solutions to plan for and put into practice.

- Working with local players to protect local employment markets

A network of contact persons spanning 14 of the Group's sites was created in France in 2004 and focuses especially on the Nord-Cotentin and Saône-et-Loire regions.

• **Redevelopment of the Pontarlier site (FCI)**

Through this redevelopment project, six local companies were attracted to the existing site (18,000 m², or about 21,000 yd²) to replace FCI.

• **Integrating AREVA T&D**

Preliminary contacts and studies are under way to reorganize the Petit-Quevilly, Macon, Chatenoy, Villeurbanne and Saint-Ouen sites.

- FCI was successfully restructured in 2004

The restructuring plan implemented by FCI in 2002 and 2003 in France and the United States has come to an end. In 2003, implementing agreements were signed for each of the French sites concerned – in Pontarlier, in the Sarthe department and in Besançon – and for the FCI Electric France division. In 2004, the different plans were put into practice. The results were very positive at year-end 2004, since 95% of the employees concerned were reassigned.

Mobility was favored over any other measure. Nearly 160 employees were transferred elsewhere in the Group during the employment plan period in 2003 and 2004.

- Reorganizing the T&D Division

Possibilities for the reorganization and restructuring of the T&D Division were reviewed and the results presented in December 2004 to the European Works Council of AREVA, the Central Works Council of T&D France, and the relevant organizations in the countries involved.

A three-year reorganization plan was announced to return the Division to a competitive position.

AREVA T&D's executive management made a commitment to labor to offer an individual solution to each person who might be affected by these developments.

A second European Works Council meeting on the plan took place in early 2005.

A comprehensive negotiated approach will be proposed to the labor organizations to provide further details on actions contemplated and discuss measures to mitigate the impact on employees.

• Ensuring the health and safety of Group and subcontractor personnel

- Occupational safety

For AREVA, protecting employees and subcontractor personnel who work at the sites is a top priority.

In 2004, the Group formalized its policy and commitments with regard to occupational safety. AREVA's objective is to reduce accidents to zero.

To this end, AREVA is committed to a clearly defined occupational safety organization at each site. Because occupational safety is integral to AREVA's businesses, it is factored into facility design and ensured throughout its operating life. Safety is also a criterion in subcontractor selection. All personnel receive specific training.

Accident prevention and the continuous improvement initiative are necessary. Measures are taken to prevent any type of accident, and all accidents are subject to analysis. To identify and correct risk-prone behavior, each work station will undergo a risk analysis in 2005. Each production and manufacturing plant conducts safety inspections in which the operators involved take part.

An occupational safety management system applies throughout the Group. The goal is to have the system operating at each site before year-end 2005.

The target for year-end 2006 is an accident frequency rate of less than five, compared with 7.64 in 2004, and an accident severity rate of less than 0.2, compared with 0.23 in 2004.

An external audit was started in 2004 to help specify the performance improvement activities to be undertaken. By mid-2005, the audit will concern every one of the Group's industrial sites as well as its main service sites.

- Maintaining a high level of radiation protection

AREVA continued to pursue implementation of new French regulations on radiation protection. These regulations set the basic standards for protecting the public and workers from the health hazards of radiation, and for informing the public about applicable health protection measures and about what to do in case of a radiological emergency.

In 2004, the Group distributed a handbook for applying the new provisions on protecting workers from radiation hazards. The handbook has helped to harmonize the Group's practices to comply with the new regulatory requirements.

AREVA created a radioactive source management network to provide information on regulatory changes and on measures taken to comply with them.

A Health and Radiation Protection convention was held in France, providing an opportunity for the Group's different sites to share their experience.

The Group's General Inspectorate also carried out radiation protection inspections at the sites. No major malfunctions were noted in 2004.

In compliance with the recommendations of the International Commission on Radiological Protection (ICRP), the Group has set an objective of reducing the maximum dose employees are likely to receive in Group facilities to less than 20 mSv/year. The Group also plans to comply with that limit in the course of its business with other nuclear operators, even in countries where regulations are less strict, such as Niger or the United States.

- Health

At AREVA, a thorough knowledge of the working conditions at each site is used to ensure the best possible medical monitoring of employees, with particular emphasis on analysis, research and coordination among the different medical services.

In November 2004, the Group drew up a set of medical recommendations underpinning its policy for breathable air quality in personal protection equipment.

5.2.4.4. Employee shareholding, profit-sharing plans and incentive remuneration

The plans for employee shareholding, profit-sharing and incentive remuneration are also described in section 6.3.

• Involving employees in the Group's financial performance

- Simplifying the employee savings plan

To simplify the existing employee savings plans and to optimize management costs and fund performance, the Human Resources department of AREVA launched two requests for proposals in 2004. The first request for proposal was to select a single custodian. The second RFP was issued to choose fund managers for each of the main classes of assets.

The new AREVA group savings plan was set up at year-end 2004. All of the Group's majority-owned French subsidiaries, whether held directly or indirectly, will be able to join the plan. The employee savings plan, managed by a single custodian, can receive funds from the subsidiaries' incentive remuneration and profit-sharing plans. Employees will be able to choose investment vehicles with the best performance for investment of plan funds.

- Incentive remuneration and profit-sharing plans

Various incentive remuneration and profit-sharing agreements are in effect in companies throughout the Group. The aim is to allow employees to benefit from their collective performance at the level of each individual while strengthening the bond of trust between employees and the company. This program also gives Group employees favorable income tax and payroll tax treatment.

In 2004, the Group paid out a total of 67 million euros in respect of commitments for 2003.

Under these agreements, employees receive incentive remuneration and/or profit-sharing bonuses when pre-set objectives have been reached.

In incentive remuneration agreements, the chosen performance criteria are usually linked to:

- quantitative results, such as operating income, sales revenue, or current operating income;
- productivity gains;
- cost reductions; and/or
- qualitative results based on performance improvement objectives specific to each company.

➤ 5.3. Environmental report

Nuclear risk management is a major goal in the actions AREVA deploys at the Group level. Its importance as an issue and its specific features warrant a specific program, procedures, and resources, as described in section 4.14.2.

AREVA's diverse businesses and the wide-range of cultures and regulations in countries in which the Group operates cover a number of environmental issues. Through the Group's environmental policy and relations with stakeholders, supplemented by specific measures for nuclear risk prevention and management, AREVA is able to take all of these issues into account.

5.3.1. Environmental policy

AREVA's environmental policy applies to every entity of the Group, in France as well as abroad. It is implemented depending on specific local characteristics. The policy is based on six commitments:

• Managing

Ensuring compliance with regulatory requirements in every country in which the Group operates and deploying Environmental Management Systems (EMS) for all operations.

• Preventing Risk

Developing monitoring and assessment procedures to prevent chemical and biological risks in the environment, and standardizing methods of assessing radiological impacts.

• Innovating

Deploying an eco-design initiative that integrates environmental impact minimization into product, service, process and infrastructure design.

• Improving environmental performance

Improving environmental performance on a like-for-like basis (constant consolidation scope and operations) by reducing:

- materials and energy consumption and uses of other resources found in natural environments;
- atmospheric releases and releases in aquatic environments, and
- final waste.

• Preserving the land

Managing land use by planning for the future reuse of the site and the preservation of ecosystems.

• Measuring and reporting

Harmonizing and expanding environmental reporting to include

stakeholders at all sites with significant environmental aspects (SEA sites).

This program is implemented through the AREVA Way process (see section 4.11) by quantifying objectives and updating them annually based on risk mapping efforts (see section 4.14.1), stakeholder expectations, good internal and external practices, environmental reporting, and dialogue with the operating entities.

To focus activities, the corresponding action plans are specific to the significance of the site's risk. A total of 111 different sites in 28 countries have been classified as sites with significant environmental aspects, including 15 licensed nuclear facilities, four high-threshold Seveso sites, four low-threshold Seveso sites, four uranium mining complexes, and sites subject to licensing or the equivalent.

The action plans are organized around three key tasks:

- **environmental management:**
 - of the sites: ISO 14001 certification of SEA sites;
 - of the products and services, through eco-design.
- **risk reduction:**
 - chronic risks: polluted soils and environmental health risks;
 - Seveso and nuclear risks.
- **performance improvement:**
 - minimizing water use;
 - conserving energy;
 - reducing emissions and releases, in particular direct emissions of greenhouse gases;
 - reducing final waste volumes.

Progress is tracked by the AREVA Environment Committee, which meets monthly. Monitoring tools include:

- the scorecard for deploying AREVA's environmental policy;
- analysis of entity performance objectives charts and action plans on topic 6, "Environmental Protection", as part of the AREVA Way continuous improvement process; and
- environmental data and indicators from the sustainable development reporting system, for which the protocol was revised in 2004 and a suitable software tool developed and rolled out Group-wide to improve data reliability.

In 2004, the program and related objectives were extended to the **Transmission & Distribution Division**.

5.3.1.1 Environmental management at the sites

Environmental management systems

AREVA's goal is to implement environmental management systems (EMS) at all sites and to secure ISO 14001 or equivalent certification for sites with significant environmental aspects before the end of 2006.

In 2004, 15 new sites were certified:

FCI: Barcelona, Juarez, Mantes-La-Jolie, Lincoln, Mattighoffen.

Framatome-ANP: Maubeuge, Saint-Marcel, Chalon-sur-Saône.

T&D: Sydney, Kassel, San Fernando de Henares, Aix-les-Bains, Montrouge, Jakarta Pulogadung, Stafford Lichfield.

2004 report

	Front End division	Reactors & Services division	Back End division	Connectors division	T&D division	Total
Number of SEA sites	25	8	5	32	41	111
ISO 14001	19	4	4	22	17	66
% of sites certified	76%	50%	80%	69%	41%	59%
% of nuclear sites certified	67%	50%	100%	/	/	73%

AREVA's services site in Lyon is also ISO 14001 certified, and certification was renewed in 2004.

Training and raising awareness

AREVA seeks to strengthen personnel training and to raise awareness within its entities concerning environmental responsibilities, particularly as regards energy conservation and the reduction of greenhouse gas (GHG) emissions.

Eco-efficiency tools to raise awareness were developed in French and English. The emphasis is on behavior, based on a collective eco-attitude concept that consists of promoting environmentally responsible behavior among employees.

Topical meetings for training and sharing good practices were organized with the in-house Energy Conservation, Radioactive Waste and Eco-design networks.

These meetings afford an opportunity for the Group's different entities to share good practices in key environmental areas, in particular energy conservation, eco-design and risk prevention, with special emphasis on emerging risks, most notably the risk of Legionnaires' disease.

Monitoring of regulations

The Group's corporate legal department sends a monthly newsletter in electronic format on nuclear and environmental law to all users.

Environmental spending

This indicator was added to the sustainable development and continuous improvement reporting protocol in 2004 and is applicable in France. The indicator is based on the definition of environmental spending appearing in the annual statistical survey put out by SESSI, the Ministry of Economy, Finance and Industry's department of industrial studies and statistics. The consolidated Group invested 82 million euros in the environment in France in 2004.

In 2004, the Mining business unit spent 12 million euros to reclaim mine sites the world over.

Provisions and guarantees related to decommissioning obligations and environmental hazards

The provisions for environmental risks, including reclamation of mine sites, decommissioning of nuclear facilities, radioactive waste retrieval and packaging, non-nuclear cleanup, and site cleanup and restoration, amounted to €8,258 million at December 31, 2004, of which €3,948 million are payable by AREVA (see note 22 of the Notes to the Consolidated Financial Statements).

Environmental penalties

This indicator was added to the sustainable development and continuous improvement reporting protocol in 2004. The Group paid no fines in 2004 in respect of environmental court orders.

5.3.1.2. Using eco-design for the environmental management of products

A day of training on eco-design was held in late 2003 at the *Université de technologie* in Troyes, France, and the center for interdisciplinary research and studies on sustainable development (*Centre de recherches et d'études interdisciplinaires sur le développement durable*). In 2004, the **Transmission & Distribution** division developed a new self-assessment model for eco-design and carried out 11 self-assessment audits. Work targeting transformers was also presented at the Pollutec trade fair.

The Fuel business unit produced the "Green Code" report, which aims for greater inclusion of environmental factors in product design.

The Connectors business continued its "Lead Free" project in 2004 aimed at substituting other materials for lead. The project went through qualification and testing to make the first lead-free products available by January 2005. The project represents an overall investment of about €6 million.

5.3.2. Environmental risk management and prevention

The actions described below supplement the more targeted actions implemented in the field of nuclear safety, described in section 4.14.2.

5.3.2.1. Monitoring of the environment and of releases

In addition to the monitoring performed by government agencies, AREVA devotes considerable resources to the monitoring of releases and to environmental monitoring.

With respect to the monitoring of releases, those resources are deployed against a backdrop of considerable regulatory change, particularly with the establishment of the European Pollutant Emission Register (EPER), the European Union Framework Directive on Water, and the EU Directive on Greenhouse Gases (GHG).

With respect to the Group's environmental monitoring, specialized personnel regularly sample and analyze various receptor environments at each site, i.e. air, water, soil, fauna and flora. Five of the Group's laboratories have applied for a license under the French Order of October 17, 2003 establishing a national system for measuring radioactivity in the environment.

5.3.2.2. Radiological impacts from the sites

The radiological impacts of nuclear sites on the most exposed members of adjacent populations (reference groups) are measured by an exposure indicator, the "additional effective dose", expressed in millisieverts per year (mSv/yr). Radiological impacts are calculated for each nuclear site based on radioactive releases from the site and an analysis of potential exposure pathways to the affected public.

For example, the radio-ecological group (*groupe radio-écologique du Nord-Cotentin*) consisting of French and international experts and representatives of non-governmental organizations (NGOs) worked on the radiological impact assessment model for the La Hague site. This highly complex assessment model factors in various types of radiation (alpha, beta-gamma, neutrons), the three potential pathways (external exposure, ingestion and inhalation) and the specific behavior of each radionuclide in the human body. Independent experts conducted epidemiological studies to supplement the model and directly assess the health effects of radioactive releases on exposed members of the public. All of the studies conducted over the past 20 years have concluded that the site has a very low impact, with the total annual impact being equivalent to one day of exposure to naturally occurring radiation in the Nord-Cotentin region of France.

AREVA regularly and with complete transparency issues the results of environmental sampling and analysis performed under the oversight of the safety authorities via monthly publications and on its websites. In France, the Local Information Commissions (*Commissions locales d'informations, CLI*) set up by the government in the vicinity of major energy facilities, including nuclear sites, facilitate direct interaction with the local community. AREVA provides them with all necessary information.

The actions taken have led to substantial reductions in radioactive releases over the past 30 years. For example, the radiological impact of La Hague was divided by five, despite the considerable increase in tons of fuel treated. The Group had already moved in 1999 to limit the radiological impacts to 0.03 mSv/yr; the level actually achieved in 2004 was less than 0.0082 mSv. This paved the way for compliance with more stringent regulatory standards in the European Union, which were transposed into French law, and which set the limit for impacts on members of the public at 1 mSv/yr. That level is less than the average exposure to naturally occurring radiation in France, which is 2.4 mSv/yr, and to that of other countries around the world, which range from 1 to 10 mSv/yr, according to the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR).

Nevertheless, the Group continued its research into the feasibility of further reductions in radioactive releases from the La Hague plant, in particular in connection with the new order concerning that plant, and research and development continued in 2004.

As part of its continuous improvement initiative, the Group set several other objectives:

- harmonizing radiological impact assessment models among all of its major nuclear sites by the end of 2005;
- implementing measures to limit the impacts of external radiation at the site boundary to 1 mSv/yr by the end of 2005 (extreme theoretical scenario in which an individual stays at the site boundary for an entire year without interruption, i.e. 8,760 hours). If acceptable solutions in the spirit of the ALARA principle are not found (see section 4.14.2.3), compliance with the 1 mSv/yr limit must be demonstrated using more realistic exposure scenarios.

With regard to this last objective, storage areas and site fences were rehabilitated in 2003 and 2004 and this will continue as necessary in 2005 at COGEMA-Pierrelatte and Comurhex-Malvési. At COGEMA-Marcoule, waste retrieval continued in the north area of the site to comply with the site boundary limit.

To confirm the 2005 data, increased monitoring via monthly and quarterly dosimetry measurements is in effect. At Miramas, the last containers of depleted uranium oxide were transferred by rail to the Pierrelatte site, resulting in zero additional exposure at the site boundary. The corresponding decommissioning process for the facility is set to begin.

5.3.2.3. Maintaining a high level of nuclear safety and risk management (see section 4.14.2.)

In nuclear safety, COGEMA's General Inspectorate expanded the work of inspection and experience-sharing begun in 2001 to all of AREVA's nuclear facilities in 2004. As a management tool for nuclear safety, the General Inspectorate supports the Group's commitment to exemplary conduct in this area.

Above and beyond a mere review of facility compliance with applicable requirements, the General Inspectorate analyzes the work processes of operating units, existing safety systems and their mode of operation. The analysis identifies potential deficiencies and recognizes good practices that should be broadly implemented. These lessons learned help build a shared culture among the Group's industrial operators and facilitate assessment of the safety culture of its operating teams.

Since 2001, the General Inspectorate has carried out 110 inspections, including 21 in 2004. The inspections focused mainly on the following themes:

- radiological monitoring at controlled area exits;
- controlling risks associated with maintenance, repairs, and modifications;
- managing hexafluoride (UF₆) cylinders; and
- ensuring the containment of contaminating materials.

In each case, the inspections performed in 2004 demonstrated that the entities involved had organizations and practices in place to ensure that safety requirements are correctly recognized and applied, which is a strength.

The Group identified areas for improvement, in particular the need to refocus the responsibilities of various players at the right level, especially facility managers. AREVA instituted procedures to enable monitoring of operator commitments and their implementation.

Of the 81 events reported in 2004, 66 were level 0 events on the International Nuclear Event Scale (INES), 14 were level 1 events, and one was a level 2 event. This last event involved an operator who was contaminated during maintenance opera-

tions at the Melox site; it was initially reported as a level 0 event pending test results, then was reclassified as a level 2 when the results came in.

Analyzing the overall event typology shows how important it is to plan maintenance operations and special operations through efforts such as preliminary analysis, instructions and interface management. The human factor also needs to be managed during such operations.

The Executive Board approved a Nuclear Safety Charter reflecting the priority assigned to achieving a very high level of safety and to make sure that the programs of all units are perfectly in line with these priorities. The charter specifies the Group's commitments in terms of organization, implementation methods and transparency.

5.3.2.4. Preventing eco-health risks

The AREVA group's focus on the health of the public, its personnel and its subcontractors' personnel prompted it to develop an eco-health risk culture (health effects linked to non-radioactive releases) that it hopes will extend beyond its regulatory obligations.

The objective is to update risk reduction objectives for releases and environmental hazards for the most sensitive sites by adding a health hazards assessment section to site environmental analyses. In 2004, 10 sites had carried out such an assessment.

In late 2002, AREVA developed an in-house manual for Legionnaire's disease prevention and risk management. In 2004, a survey counted 122 water cooling towers in the consolidated Group, excluding the T&D Division. The Group distributed the manual for Legionnaire's disease to each of those sites, and is now extending this activity to include the T&D business. The FCI-Besançon site budgeted a €340,000 investment to replace its water cooling towers with an air-air cooling process that eliminates the risk of Legionnaire's disease.

5.3.2.5. Managing risks linked to the use of hazardous chemicals (see section 4.14.2.4)

The Group operates eight Seveso-regulated sites (European Directive 96/82/CE of December 9, 1996) that could present important drawbacks for public health and safety.

Four of these sites are high-threshold Seveso sites subject to public easements.

Site	Number of Seveso-regulated facilities at the site	Details on the Seveso-regulated facility	AS nomenclature heading / classification threshold
COGEMA-Pierrelatte	122*	Storage of 320 MT of HF	1111.2.a / 20 MT
Comurhex-Malvési	23	Storage of 180 MT of HF	1111.2.a / 20 MT
Comurhex-Pierrelatte	34	Storage of 310 MT of potassium bifluoride	1111.2.a / 20 MT
		Storage of 101 MT of HF	1111.2.a / 20 MT
Cezus-Jarrie	21	Storage 2,950 MT of environmentally hazardous materials (cumulative rule)	1173-1 / 2000 MT

* Including 59 Pyralene-filled transformers

In accordance with regulatory requirements, technical documentation for these facilities – major accident prevention programs, occupational safety management systems, hazards studies – is submitted to the competent administration, which may call for revisions, additional studies or independent appraisals.

AREVA strengthened its Environmental Department in 2004 by recruiting a Seveso risk specialist and creating a task force to harmonize risk assessment procedures for high-threshold Seveso sites. Such procedures include risk analyses, criticality grids, and equivalent rating and allowance rules. The task force also defines a comprehensive Group strategy for managing potential risk and, more specifically, for managing Seveso technological risks. In addition, Comurhex meets yearly with British, Canadian and U.S. producers to exchange ideas on these topics.

In 2004, improving safety at the Seveso-regulated facilities involved incorporating the requirements of the Law of July 30, 2003 on technological and natural risks by:

- continued updating of hazards studies;
- completion of studies to optimize safety perimeters, with the Comurhex-Malvési in France's Languedoc-Roussillon region serving as a pilot site; and
- participation in the first local information and consultation commissions (*Comités locaux d'information et de concertation*, CLIC).

5.3.2.6. Soil management

In the area of soil management, one of the goals of AREVA's environmental policy is to carry out a simplified risk assessment (SRA) or its equivalent before year-end 2006 on 100% of its plant sites with significant environmental aspects, excluding licensed nuclear facilities (INB) and mine sites that already have the necessary statistics due to regulations or their own operating requirements. In 2004, the entire **Transmission & Distribution** division was assessed. The process for the Connectors division is more than 50% complete, with the goal of 100% set for year-end 2006.

Moreover, after site closure, the residual environmental impacts of former operations are reduced through rehabilitation and reclamation programs, and by long-term environmental monitoring.

The Mining Business Unit set up a specific body for monitoring former mine sites in France and abroad, called the CESAAM (*Centre d'études et de surveillance des anciens sites miniers*).

Example

After five years of studies and reports, the Canadian Nuclear Safety Commission finally granted COGEMA Resources, Inc. a license in July 2004 for the reclamation of the Cluff Lake mine. The site also received ISO 14001 certification.

The Group finished work on the Mounana site in Gabon in 2004 and carried out radiological inspections on the air and water which showed a return to initial conditions. An IAEA (see Glossary) assessment mission is planned for 2005.

The ponds at the Richland site in the United States are undergoing a resorption program. The program went as planned in 2004 and should be completed in 2005.

5.3.2.7. Protecting and restoring ecosystems

Monitoring and preserving biodiversity is a special concern for AREVA. Its study of plant and animal life at the site begins with the design phase and continues throughout facility operations and into site rehabilitation. Special care is devoted to adapting species introduced or reintroduced during reclamation to the local biotope. At the Lodève mine site in France, for example, AREVA did a detailed analysis of local flora and studied various options for landscape rehabilitation. The resulting data were put on a CD-ROM that was made available to all local representatives, including elected officials and schools.

In 2003, to gain more knowledge of how La Hague plant operations affect biodiversity, the Group commissioned Canadian firm Sénes Consultants to assess the impacts of radioactive

sea releases from the plant on local flora and fauna. Their report was examined by a council of national and international experts, including the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), the International Atomic Energy Agency (IAEA), the European Fasset research program, the French radiation protection and nuclear safety institute IRSN (*Institut de radioprotection et de sûreté nucléaire*), along with other European research institutes.

Their deliberations, which were completely transparent, concluded that “the estimated dose rates to marine flora and fauna attributable to sea releases of radioactivity from the La Hague plant are low and, generally speaking, much lower than the reference values above which, based on current knowledge,

harmful and measurable effects on marine flora and fauna populations would be expected.”

As an extension of this research, a study on a species of fish (*Pleuronectes platessa*) living in the waters of the Nord-Cotentin region, commissioned by IRSN from the Laboratory of Radioecology and Eco-toxicology, confirmed these results.

The La Hague site has also been providing support for more than five years to a group studying cetaceans of the Cotentin Peninsula. The group has a network of regional observers of these marine mammals and leads activities to inform and raise awareness among professionals and the general public. The cetacean study group has observed 150 dolphins off the tip of La Hague.

5.3.3. Environmental performance improvement

Key data

	AREVA 2004		AREVA 2003*		AREVA 2002	
	Data	Area covered**	Data	Area covered**	Data	Area covered**
Consumption						
Quantity of energy consumed (MWh), excluding Eurodif	3,180,638	97%	3,145,701	100%	2,753,989	100%
Quantity of water consumed (m ³), excluding Eurodif and Marcoule cooling water	26,601,163	99%	27,904,011	100%	29,586,879	100%
Consumption of plastics (MT)	15,155	100%	15,766	100%	15,464	100%
Consumption of copper and copper alloys (MT)	28,210	100%	17,889	100%	8,453	100%
Consumption of hazardous chemicals						
Nitric acid (MT)	17,330	100%	17,865	100%	15,790	100%
Sulfuric acid (MT)	87,457	100%	78,370	100%	81,415	100%
Hydrofluoric acid (MT)	7,663	100%	7,407	100%	6,816	100%
Ammonia (MT)	4,832	100%	4,852	100%	3,811	100%
Chlorine (MT)	8,181	100%	7,550	100%	7,886	100%
Chlorinated solvents (MT)	222	94%	129	100%	85	100%
Waste						
Quantity of hazardous industrial waste (HIW) (MT)	23,304	98%	18,109	98%	20,054	94%
Quantity of ordinary industrial waste (OIW) (MT)	77,363	98%	48,427	98%	22,674	94%
Quantity of inert waste (MT)	9,244	98%	/	/	/	/
HIW: % recycled	32%	98%	49%	98%	53%	94%
CIW: % recycled	44%	98%				
Process sludge (MT)	70,347	/	/	/	/	/
Sludge from cooling water treatment (MT)	10,621	/	/	/	/	/
Releases						
Total nitrogen releases into aquatic environments (MT)	930	84%	1,102	100%	854	100%
Aqueous releases of copper (kg)	68	98%	502	100%	561	100%
Aqueous releases of chromium (kg)	94	97%	163	100%	398	100%
Aqueous releases of lead (kg)	43	98%	48	100%	102	100%
Aqueous releases of uranium (kg)	2,011	76%	2,380	100%	2,262	91%
Direct greenhouse gases (MTe CO ₂)	994,686	100%	843,053	100%	438,616	100%
Toxic gas releases: volatile organic compounds (Kg VOC)	965,016	98%	531,823	100%	36,523	100%
Releases of acidifying gases (MTe SO ₂)	1,947	89%	2,165	99%	2,115	100%
Releases of ozone-depleting gases (kge CFC 11)	3,283	98%	13,262	89%	5,387	100%
Nuclear Risk						
Dose impact from the Hague site (mSv)	0.0082	100%	0.0082	100%	0.007	100%
Number of INES events	Level 0: 66 Level 1: 14 Level 2: 1		Level 0: 51 Level 1: 18 Level 2: 1		Level 0: 57 Level 1: 17 Level 2: 0	

Source: AREVA

* Corrected 2003 data covering the T&D scope

** The scope for 2002 applies only to the production sites. It includes office sites larger than 1000m² in 2003 and 2004. The coverage rate is measured in relation to the number of employees.

NB: see "Sustainable development Facts and Figures 2004" for a full description of the Group's environmental data.

5.3.3.1. Energy management

Eurodif's George Besse plant, where uranium is enriched using the gaseous diffusion process, accounts for about 90% of the Group's total electricity purchases. The Group is preparing to phase in the centrifugation process to replace plant capacity in the medium term, as this technology consumes 50 times less electric power than gaseous diffusion (see section 4.4.3.5.). In 2004, the project was submitted to the French national commission for public debate (Commission nationale du débat public, CNDP), which decided to set up a steering commission for the public debate. The debate took place from September 1, 2004 to October 22, 2004. A report was drawn up, and the president of the CNDP made an assessment that was published on December 9, 2004. The assessment came to no decision on the background issue, but noted that the debate took place in a satisfactory manner.

Total 2004 energy consumption amounted to 3,180 GWh, excluding the Eurodif process, of which 387 GWh came from integration of the electricity Transmission & Distribution business. Energy consumption for 2004 remained stable, while production rose by 4.1% on a like-for-like basis.

Example

After Eurodif, the La Hague plant is the biggest energy consumer. Today it is a pilot for the energy consumption reduction program. An extensive awareness-raising campaign in 2003 was followed by projects to optimize industrial consumption for facility ventilation; the production of compressed air, steam and hot water; and cooling tower operation. From 2003 to 2004, AREVA saw a nearly 7% decrease in energy consumption.

One of the Group's main office sites, located in Lyon and with a staff of about 1,000 employees, reduced its energy consumption by 8% in 2004, compared with 2003.

The COGEMA-Pierrelatte site developed an innovative steering and awareness-raising tool to monitor month-to-month variations in electricity consumption by operation of the site's various units. The software, called Ecowatt, is connected to a network of electric meters and displays units that are on target, ahead or behind in achieving consumption reduction targets on a color-coded site plan.

The other Group sites have methodological tools enabling them to participate in the energy management initiative:

- eco-efficiency awareness-raising kit for employees, including transparencies, posters, memento and quiz;
- guidelines for developing an energy conservation plan.

Employees involved with energy conservation have formed a network to exchange information on good practices on a regular basis. The AREVA group has launched action plans at many sites that include actions such as energy diagnostics, optimization of facility operations, and renovations aimed at energy efficiency.

To develop a system suited to energy issues in the services sector, the Group developed and distributed methods for assessing the energy efficiency of its buildings. The system was put into effect in the last quarter of 2004 for surface areas of greater than 1,000 m² (about 10,800 ft²).

Renewable energies

AREVA T&D Systems offers customers solutions for the decentralized distribution of energy from low-CO₂-emitting sources, such as wind energy, solar power, biomass, co-generation and tri-generation. Its eight sites are located in Europe, South America and Australia.

AREVA T&D Systems' main references are:

- the grid connections for the Barrow offshore wind farm in the United-Kingdom;
- the construction of a 6MW biomass power plant for Satyamaharshi in India's Andra Pradesh region, and
- the construction of a 31MW cogeneration plant for AMD Microprocessor in Dresden, Germany.

In addition, AREVA T&D has just won a contract to build two dendrothermal plants in Brazil.

5.3.3.2. Water usage

Of the 161 million cubic meters (about 211 million cubic yards) of water tapped by AREVA, roughly 135 million m³ are taken from the Rhône River to cool facilities at the Marcoule and Tricastin sites.

Excluding cooling for the Célestin and Eurodif reactors, the Group consumed 26.6 million m³ of water in 2004. Though there was a significant increase in operations, and notably mining operations, this means a decrease of 1.3 million m³ compared to the 2003 data, corrected to reflect the integration of T&D operations.

AREVA is taking steps to improve its management of the water cycle, particularly at the production sites, so that less water is tapped from the natural environment. This requires detailed knowledge of water consumption patterns and actual costs associated with managing the water cycle, as well as a substantial effort by site personnel and subcontractors. These steps translate into improved process and system

management, equipment and facility modifications, and even new technologies. They also mean raising personnel and subcontractor awareness (eco-attitude) to promote water recycling and reuse and to prevent unnecessary consumption.

Example:

- Analyzing the water consumption patterns and seeking out leaks at the Marcoule site enabled identification of major areas for improvement. The Group was also able to validate a methodology being adapted for AREVA facilities at Tricastin in 2004. Implementing the method resulted in a decrease of more than 24% in water usage at the COGEMA-Marcoule site from 2003 to 2004, representing water savings of 1.5 million m³, and of more than 12% at the COGEMA-Pierrelatte site, saving 381,000 m³.
- In 2003, water usage at the COGEMA-Marcoule pilot site dropped by 16% compared with 2002, for a savings of 1.3 million m³.
- Since 1998, the Group has optimized its water usage by increasing the recycle rate, changing the technology and optimizing operating procedures at the Cezus-Ugine site. This has resulted in about a 60% reduction in tapped water. In 2004, efforts focused on quench and process water. Once again, the Group was able to decrease water usage by 25 % from 2003 to 2004.

In 2004, the eco-efficiency awareness kit distributed to all of the Group's sites served as a reminder to employees of the steps to be taken to use less water.

5.3.3.3. Consumption of materials

AREVA is not a big consumer of materials. Nonetheless, the Group is continuing to reduce its consumption of chemicals with major identified direct or indirect impacts using environmental analysis tools (life cycle analysis, health hazards assessment), primarily by recycling internally. AREVA is also reducing its consumption of key materials identified through environmental accounting:

- Copper: 28,210 MT
- Plastics: 15,155 MT

Integration of the T&D business resulted in a sharp increase in the amount of copper used, with 15,979 MT consumed in 2004.

The Group purchased 222 MT of chlorinated solvents, mainly for the Eurodif and FCI-Mantes-la-Jolie sites.

5.3.3.4. Waste

AREVA improved its reporting protocol for sustainable development in 2004 for better analysis of waste categories, especially inert waste, and their respective processing methods. The protocol now also includes waste from normal facility operations and waste from exceptional operations, such as a jobsite, a dismantling operation or removal of waste from storage at the site.

Conventional waste

Waste produced in 2004 included:

- 23,304 MT of hazardous industrial waste (HIW), 71% of which came from normal operations;
- 77,363 MT of ordinary industrial waste (OIW), of which 70% came from normal operations and 26% came from exceptional OIW from mining operations; and
- 9,212 MT of inert waste (IW).

For the scope corresponding to this data, the percentages of recycled material are:

- 32.3% for HIW; and
- 44.8% for OIW, with values of up to 95.5% for the FCI-Turin site and 85% for the COGEMA-Pierrelatte site following the establishment of a system of collection by waste category.

Programs for final waste reduction are ongoing in all of the Group's facilities to:

- minimize and control waste generation at the source;
- encourage sorting by placing bins for waste segregation at the Melox and Tricastin sites, or by creating in-house waste sorting plants at the COGEMA-La Hague and COGEMA-Marcoule sites;
- prioritize waste recycling and reuse by selecting the most suitable processing methods; and
- improve processing and packaging of non-reusable waste.

To improve the thoroughness of reporting, sludge was taken into account, whether it came from processing or from cooling water treatment. Process sludge amounted to 70,347 MT, while sludge from cooling water treatment amounted to 10,621 MT.

PCBs and PCTs

PCBs (polychlorinated biphenyls) and PCTs (polychlorinated terphenyls) are toxic chemicals that were used to manufacture and operate electrical distribution equipment. AREVA's subsidiaries began to eradicate them several years before European directive 96/59 of September 16, 1996 set a 2010 date for their elimination. AREVA has made a commitment to phase out the remaining equipment under a plan approved by the Ministry of Ecology and Sustainable Development and included in the national plan approved by decree on February 26, 2003.

In July 2004, the first progress report for the plan was presented to the PCB/PCT Commission presided by the Ministry of Ecology and Sustainable Development. In 2004, 105 transformers containing these materials were eliminated, out of a total of 915.

Radioactive waste

Waste generated by nuclear operations is classified according to two criteria:

- the intensity of the radioactivity it contains (very low-, low-, medium- and high-level waste);
- its half-life, i.e. the time during which the initial radioactivity of the waste is reduced by half (short-lived waste has a half-life of less than 30 years; long-lived waste has a half-life of more than 30 years).

Each type of waste requires a specific management method.

Very low-level waste (VLLW) is stored at the storage center operated by ANDRA at Morvilliers, France.

Low- and medium-level, short-lived waste (LLW/MLW-SL) is disposed of in two near-surface disposal facilities, also operated by ANDRA: the Centre de la Manche at Beaumont-Hague, and the Centre de l'Aube at Soulaines, both in France.

For medium-level, long-lived waste (MLW-LL) and high-level waste (HLW), research is being carried out pursuant to the "Bataille" Law of 1991 (articles L. 542-1 et seq. of the French Environmental Code), which defined three areas for research concerning the management of this waste: (1) separation and transmutation of long-lived radioactive elements; (2) disposal in deep geologic formations, in particular through the construction of underground research laboratories; and (3) packaging and long-term surface storage.

The French Government will send an overall assessment report on this research to the French Parliament before December 30, 2006, accompanied, as the case may be, by draft legislation authorizing the construction of a disposal center for high-level, long-lived waste.

The Group's operations generate waste such as dry plant waste, ion exchange resins and sludge, and sometimes waste from facility decommissioning operations. This waste represents no more than a few percentage points in terms of radioactive content and is only a slight fraction of the total radioactive waste generated by nuclear power.

From year to year, the AREVA Group works on reducing the volumes of this waste. The Group is studying relevant indicators

to report more comprehensively and succinctly on improvements made in that area.

AREVA has also continued to refine its initiative for the comprehensive management of legacy waste and stored materials at Group sites through the systematic use of computerized inventory tools, by embarking on legacy waste retrieval and packaging, and by planning the management of waste from facility decommissioning.

Andra, the national waste management agency (*Agence nationale pour la gestion des déchets radioactifs*) is conducting an exhaustive inventory of radioactive waste in France. The inventory may be consulted on its website, www.areva.com. It provides comprehensive available information on radioactive waste in inventory in France, including waste held at the Group's sites.

The Group also contributes to the responsible management of radioactive waste from nuclear power generation by offering solutions for its safe storage, processing, packaging and transport. "Group-held" waste as opposed to "Group-generated" waste, as defined in Article L. 541-2 of the French Environmental Law Code, consists mainly of high-level waste (HLW) belonging to AREVA's electric utility customers. This waste is returned to the customer at the end of the used fuel treatment process.

For French utility EDF (Electricité de France), the service AREVA offers also includes the interim storage of radioactive waste in suitable and safe facilities until the conditions for their long-term management have been defined by law. EDF remains the owner of the waste. AREVA is responsible for holding it, within the limits of the provisions relating to nuclear liability stipulated in Law no. 68-943 of October 30, 1968, as amended, on liability in the nuclear energy field.

The other waste, which is directly removable, consists of low- and very low-level waste that is sent to the disposal site routinely and does not represent significant inventories at the Group's sites.

Waste from used fuel belonging to foreign customers is returned to the customer as soon as this is technically possible, in compliance with Article L. 542-2 of the French Environmental Law Code.

Example: Waste management software was deployed for the Cogema-Pierrelatte effluent treatment facility; it tracks waste from the point of collection through its delivery to a licensed disposal facility.

Example: Deploying the GDAF management software at the La Hague site for unpackaged waste in storage in the facilities. Setting up a computerized inventory tool for special waste at the SICN site, the COGEMA-Marcoule site, and others.

Example: The SICN-Veurey and SICN-Annecy sites received certificates of acceptance to the very low-level waste disposal facility for 13 consignments of various waste types.

5.3.3.5. Releases in water

The nuclear fuel cycle typically processes small quantities of materials. Relatively small quantities of reagents are used for uranium mining and chemistry and for used fuel treatment. However, the Chemistry and Treatment business units release significant quantities of certain chemicals, particularly nitrogen, with 930 MT of total nitrogen released in 2004 and 1,102 released in 2003. These chemicals are subject to reduction programs as part of AREVA's continuous improvement initiative.

The French plant sites release about two metric tons of uranium into aquatic environments each year (2.4 MT in 2003). By way of comparison, the Rhône River alone carries along around 80 MT of natural uranium.

In the **Connectors** Division, improvements to production processes have significantly reduced effluent concentrations at site effluent treatment stations. Together with its stakeholders, including customers, competitors and suppliers, the **Connectors** Division has also launched a far-reaching "lead-free" project to eliminate its use of lead in connectors.

Capital spending projects have been undertaken at some sites to improve the treatment of aqueous releases:

- the Cezus-Jarrie site in France built two purification stations, for an investment of €2 million, to reduce liquid releases to one-tenth their current volumes within three years;
- the Cezus-Paimbœuf site installed a recycling station for spent fluoronitric acid, and investment in "clean" technologies has already been budgeted. Together, these measures represent an investment of €1.25 million over three years, and will pay off with 70% acid recovery.

Example

FCI's Ishioka site in Japan succeeded in completely eliminating methylene chloride (14.3 MT in 2003) by substituting less harmful solvents for this chemical.

The FCI site in Scarborough, Canada, reduced its ammonium bifluoride, nitric acid and sulfuric acid releases by around 75% from 2003 to 2004 by eliminating aluminum acid etching.

5.3.3.6 Releases in the air

The AREVA group's operations cause certain gas emissions that, though limited, contribute to global warming, depletion of the ozone layer and atmospheric pollution. These are primarily

- direct emissions of greenhouse gases (GHG) associated with the burning of fossil fuels and certain gaseous emissions (SF_6) from chemical operations and electrical equipment manufacturing;
- indirect emissions associated with electricity consumption and gas emissions such as volatile organic compounds (VOCs), acid gases, and ozone-depleting gases.

Greenhouse gases

AREVA conducted an inventory of facilities concerned by the application of European Directive 2003/87/CE of January 1, 2005 establishing a greenhouse gas emission quota trading system. Three of the Group's sites are affected due to combustion facilities exceeding 20 MW: the La Hague, Marcoule, and Comurhex-Malvési sites. The Group does not anticipate any difficulties in implementing these quotas, which will have a very limited economic impact. Therefore, the Group does not plan to participate in any significant way in the quota market.

Direct greenhouse gas emissions for the AREVA group in 2004 were about 995,000 metric tons, of which 36% are linked to fossil fuels, 32% to sulfur hexafluoride (SF_6), and 27% to nitrous oxide (N_2O).

The increase compared with 2003 was due to improved reporting, in particular for N_2O and coolants. Nitrous oxide (N_2O), in particular, one of the gases covered by the Kyoto Protocol, has a high overall heating coefficient (296). The Chemistry business unit improved its measurement of N_2O emissions for conversion operations, which went from 17 to 899 metric tons.

There are two sources of SF_6 emissions:

- The treatment used to eliminate traces of fluorine in the fluorination process off-gas, which contributes some 110,000 metric tons of CO_2 equivalent per year. Various solutions for eliminating SF_6 emissions were considered. In the end, the solution now being worked out in detail consists of directing flows from the fluorine vents to the secondary fluorination stage in the UF6 production unit. The vented fluorine to be neutralized will be recovered to produce UF6 rather than destroyed in a special facility.
- The use of SF_6 to manufacture electrical equipment for insulation and to interrupt electrical arcing, which contributes about 210,000 metric tons of CO_2 equivalent per year. An eco-design approach for products was used to minimize SF_6 releases steadily, whether during equipment manufacturing or during their use, through the end of their useful life.

Volatile organic compounds

The 81% increase in VOC emissions compared with 2003 is linked to better reporting, particularly in the Mining business unit, which accounts for 64% of AREVA's total emissions. The FCI site at Mantes la Jolie is the largest producer in the Connectors division and represents 6% of AREVA's emissions. The business unit invested €3.4 million to reduce its VOC emissions by 80% in 2005.

Ozone-depleting gases

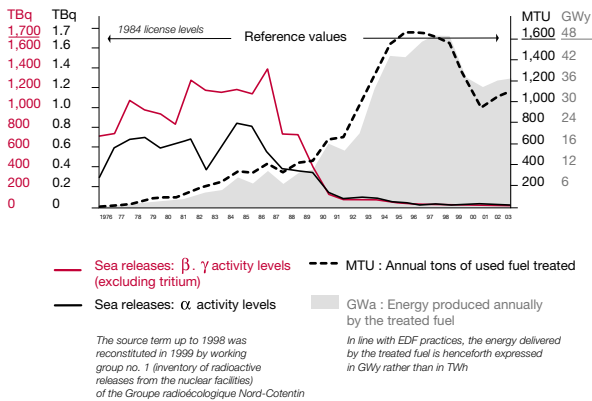
Ozone-depleting gas emissions amounted to 3,283 kg equivalent of CFC11, less than in 2002, when the scope of consolidation did not include the T&D Division. The COGEMA-La Hague site reduced its emissions by 99.7% from 2002 to 2003. The high figure for 2003 related to statistics from the CMA mine site in Côte d'Ivoire, which was closed after completion of site reclamation work.

5.3.3.7. Radioactive releases

The radiological impact of the Group's operations on the most exposed members of the public ("reference groups") is assessed at less than 1 mSv/person/year, the European regulatory limit. This impact takes liquid and gaseous releases into account as well as the effect of direct radiation.

An example of AREVA's continuous improvement initiative as regards radioactive releases is given in the following diagram for La Hague:

Liquid radioactive releases: 1976-2003 period



Since 1997, French nuclear sites have published and publicly distributed annual environmental reports in which radioactive releases and trends are described in great detail.

In connection with the new license for the La Hague plant, AREVA, working closely with the safety authorities, continued to conduct research and development to validate the feasibility of further reductions in radioactive and chemical releases from La Hague.

5.3.3.8. Odor and noise pollution

Having taken the necessary action in 2003, this is no longer identified as a critical item within the Group.

5.3.4. Strengthening relations with external stakeholders

The Group's commitment to the sustainable development initiative is giving a new dimension to its relations with stakeholders by making dialogue and consensus-building a key building block of the Group's social responsibility.

"Dialogue and consensus-building" is both a commitment and one of the ten principles of the AREVA Way self-assessment model. What is meant by this commitment goes beyond communication or simply providing information. It means listening to stakeholders, i.e. the individuals or groups of individuals who are concerned by the Group's operations, to gain a better understanding of their expectations and to take them into account as part of a continuous improvement process.

With this in mind, the Group initiated two processes, one at the Group level, and the other at the site level.

5.3.4.1. Consensus-building at the corporate level

At the corporate level, AREVA launched a process based on mutual openness between its strategic and line departments and a panel of stakeholders. This consensus-building initiative was conducted in 2004 under the direction of Comité 21, the French committee for the environment and sustainable development (*Comité français pour l'environnement et le développement durable*). Comité 21 is a non-profit organization formed in 1994 with 300 members organized into core groups: companies,

local governments, associations, key figures and ex officio members involved in sustainable development, public institutions, and the media. Comité 21 is well-known in France as a facilitator in the area of sustainable development.

The panel consists of representatives from environmental, humanitarian and North/South development NGOs (non-governmental organizations); from the economic sector and union groups; and from international institutions. The initiative consists of taking note of the panel's analyses and expectations and enhancing AREVA's own studies and deliberations on sustainable development strategy for better identification of areas for improvement.

The consensus-building process followed a strict procedure structured around a certain number of rules designed to ensure, in particular, that the debate remained calm and confidential. Comité 21 alone is in charge of relations with stakeholders, of drafting and sending reports on dialogue sessions, and of summarizing the outcome. AREVA is committed to answering all questions.

At the first session, which took place in September 2004, stakeholders were able to present their observations and questions. At the second session, in February 2005, AREVA responded. Comité 21 will draw up a summary, to be made public in 2005.

5.3.4.2. Mapping local stakeholders

For AREVA Group sites, a structured initiative was launched to map the sites' external stakeholders at year-end 2003. The objective was to expand the dialogue strategy in-house and to facilitate the development of relations between the Group's sites and the players in their environment.

Part of this initiative was to develop guidelines that provide local managers with an operational tool that will help them:

- identify their stakeholders and stakeholder expectations more clearly;
- focus their initiative on strategic stakes and stakeholders;
- define areas for improvement and priorities for managing their relations with external stakeholders, and
- measure and assess their actions in that area.

The guidelines were created and tested in 2004 at several pilot sites, including COGEMA-La Hague and COGEMA-Bessines in

France, Framatome-Lingen in Germany, and Framatome-Richland in the United States. Some 40 external stakeholders were consulted around these sites.

Starting in 2005, the methodology will be gradually extended to the Group's other sites.

5.3.4.3. AREVA's sponsorship and partnership programs

AREVA listens to civil society. The Group seeks to establish constructive relationships with stakeholders such as associations, discussion forums and international organizations. Its sponsorship and partnership activities reflect the Group's commitment to corporate social responsibility, one of the pillars of sustainable development.

The role of the sponsorship and partnership committee goes beyond the standard review of applications; it ensures implementation of a consistent sponsorship strategy, based on defined themes that must correspond to AREVA's goals in terms of image and values.

AREVA seeks to include employees in these programs. The Group carried out an in-house survey in 2003 and 2004 to help define their expectations and decide together on key directions for the sponsorship and partnership programs.

Two key directions were clearly identified:

- Making knowledge more accessible, and
- North-South development.

AREVA has chosen to support actions that are compatible with these two goals and are connected with the Group's identity, either in terms of its businesses or in terms of geographic proximity.

At the cultural level, and in France, the Group has been concentrating for several years on promoting Asian art, most notably by supporting the Guimet Museum in Paris.

The sponsorship and partnership committee now wants to strengthen activities in those two areas, extend the policy to all Group entities internationally, and systematically include the Group's employees.

AREVA will establish a corporate foundation in 2005 to develop this strategy and ensure the greatest possible clarity, both internally and externally.

» 5.4. Consolidated financial statements

5.4.1. Statutory Auditors' report on the consolidated financial statements for the year ended December 31, 2004

This is a free translation into English of the statutory auditors' reports issued in the French language and is provided solely for the convenience of English speaking readers. The statutory auditors' report includes for the information of the reader, as required under French law in any auditor's report, whether qualified or not, explanatory paragraphs separate from and presented below the audit opinion discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account caption or on information taken outside of the consolidated financial statements. Such report, together with the statutory auditors report addressing financial reporting in the Chairman of the Supervisory Board's report on internal control, should be read in conjunction and construed in accordance with French law and auditing professional standards applicable in France.

To the Shareholders,

In accordance with our appointment as auditors by your Annual General Meeting, we have audited the accompanying consolidated financial statements of AREVA (*Société des Participations du Commissariat à l'Energie Atomique*) for the year ended December 31, 2004.

The consolidated financial statements have been approved by the Executive Board. Our role is to express an opinion on these financial statements, based on our audit.

Opinion on the consolidated financial statements

We conducted our audit in accordance with professional standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement.

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements give a true and fair view of the financial position and the assets and liabilities of the Group as of December 31, 2004 and the results of its operations for the year then ended in accordance with accounting principles generally accepted in France.

Without qualifying our opinion, we draw your attention to the following two points:

- Note 1.1 of the notes to the financial statements which describes the changes in presentation of the provisions for losses to completion, the non-consolidation of UCITS controlled by AREVA and the consolidation of the entity holding the perpetual subordinated bonds.
- Note 22 of the notes to the financial statements mentioning the uncertainties concerning the assessment of costs relating to waste storage and the share to be borne by EDF in the back-end of the cycle.

Justification of assessments

Pursuant to the provisions of Article L.225-235 of the French Commercial Code governing the justification of our assessments, we draw your attention to the following:

- Provisions for the decommissioning of nuclear facilities and waste retrieval, recorded on the balance sheet in the amount of €8,258 million, were measured in accordance with the accounting policies and methods and valuation terms and conditions described in Notes 1.26 and 22 of the notes to the financial statements. As a balancing entry to these provisions, the Group recognized a decommissioning asset in the net amount of €5,372 million. As indicated in Note 1.5 of the notes to the financial statements, this asset corresponds to the share to be financed partly by third parties and partly by the Group, which is depreciated over the useful life of the relevant facilities.

As part of our procedures, we reviewed the estimates of the decommissioning liabilities and the share to be financed by third parties by assessing the reasonableness of the assumptions adopted by taking into account, in particular, changes in the estimates and the negotiations currently underway with EDF. This review led to the identification of an uncertainty relating to the assessment of costs relating to waste storage and, in the absence of finalized negotiations as of December 31, 2004, to the share to be borne by EDF in the back-end of the cycle. This uncertainty is subject to an observation in this report.

With respect to accounting policies, the provisions for decommissioning and waste retrieval, for which payments will occur in the

long-term, and the corresponding share to be financed by third parties, are not discounted as is currently authorized under French GAAP.

- The heading, “Long-term investments” includes the financial assets earmarked for facility decommissioning for a net amount of €2,281 million, for which the management objectives are set forth in Note 13 of the notes to the financial statements. These financial assets, which are mainly comprised of directly-held securities and shares in mutual investment funds, are subject to regular valuation, for which the principles are described in Note 1.7 of the notes to the financial statements according to their classification. As part of our procedures, we assessed the correct and constant application of the valuation methods and their reasonableness in the specific context of this long-term portfolio.
- Your company recognizes income from long-term contracts in accordance with the policies and terms and conditions described in Note 1.17 of the notes to the financial statements. In accordance with the professional standard applicable to accounting estimates and based on the accounting information available, our procedures consisted in assessing the data and assumptions made by management, in particular, the level of risk arising from these contracts used as a basis to estimate the profits or losses on contract completion and their changes, reviewing the calculations performed and comparing the accounting estimates in prior periods with actual corresponding figures and to review Management’s procedures for approving these estimates. We assessed the reasonableness of these estimates.
- Goodwill, recorded on the balance sheet for a net amount of €1,718 million as of December 31, 2004, was subject to impairment tests performed in accordance with the conditions described in Note 1.8 and Note 8 of the notes to the financial statements. We reviewed the conditions under which these tests were performed based on the discounting of future cash flows of the relevant activities and assessed the consistency of the assumptions adopted with the forecast data resulting from the strategic plans prepared by the Group.
- The acquisition agreement of Alstom’s T&D division includes general and specific warranty clauses. The terms and conditions for triggering these warranties, which could have an impact on the acquisition price and the coverage of certain risks mentioned in the notes to the financial statements, are described in Note 2.1.1 and Note 30 of the notes to the financial statements. Our procedures consisted in understanding the risks likely to be covered by these warranties and to assess the terms and conditions of their implementation.
- The report of the Chairman of the Supervisory Board on the internal control procedures relating to the preparation and treatment of financial and accounting information mentions the conditions for including the activities of the T&D division in the AREVA Group’s internal control measures. In the context of this integration, our audit approach was adapted and consisted, notably, in increasing the scope of T&D entities which we reviewed.
- With respect to risks and litigation, we assessed the procedures currently used by your Group to identify, assess and reflect the accounting impact of such risks and litigation under satisfactory conditions. We also ensured ourselves that any possible uncertainties identified at the time we performed our procedures, were described appropriately in the notes to the financial statements, specifically Note 30.

As part of our procedures, we assessed the reasonableness of these estimates. It should be noted that since estimates are by nature uncertain, actual information may sometimes differ significantly from estimates.

These assessments were performed as part of our audit approach for the consolidated financial statements taken as a whole and contributed to the expression of the unqualified opinion in the first part of this report.

Specific procedures

We have also verified, in accordance with professional standards applicable in France, the financial information contained in the Group Management Report. We have no comment to make as to the fair presentation of this information or its consistency with the consolidated financial statements.

Neuilly sur Seine, La Défense and Paris, April 15, 2005

The Statutory Auditors

Deloitte & Associés

Pascal Colin Jean-Paul Picard

Mazars & Guérard

Thierry Blanchetier Michel Rosse

Salustro Reydel

Denis Marangé Hubert Luneau

5.4.2. Consolidated income statement

(in millions of euros)

	Notes	2004	2003	2002
Sales		11,109	8,255	8,265
Cost of sales		(8,347)	(6,138)	(6,129)
Gross margin		2,762	2,117	2,136
Research and development expenses		(402)	(285)	(332)
Sales and marketing expenses		(602)	(352)	(384)
General and administrative expenses		(787)	(587)	(624)
Other operating income and expenses	3	(358)	(551)	(616)
Operating income*		613	342	180
Financial income	5	117	334	587
Income before tax and exceptional items		730	676	767
Exceptional items	6	46	135	289
Income tax	7	(209)	(184)	(220)
Net income of consolidated businesses		567	627	836
Share in net income of equity affiliates	12	131	20	83
Net income before goodwill amortization		698	647	919
Goodwill amortization	8	(152)	(174)	(593)
Net income before minority interests		546	473	326
Minority interests		(118)	(84)	(86)
Consolidated net income		428	389	240
Average number of outstanding shares		35,442,701	35,442,701	35,442,701
Earnings per share (in euros)		12.07	10.97	6.77
Diluted earnings per share		12.07	10.97	6.77

(*) *Current operating income*

5.4.3. Consolidated balance sheet

ASSETS

(in millions of euros as of December 31)

	Notes	2004	2003	2002
Non-current assets				
Goodwill, net	8	1,718	1,265	1,537
Intangible assets, net	9	608	482	510
Decommissioning assets	10	5,372	9,109	9,223
Tangible assets, net	11	3,701	3,447	4,647
Equity affiliates	12	1,240	1,492	1,652
Long-term investments	13	3,143	3,299	2,580
Total non-current assets		15,782	19,094	20,149
Current assets				
Inventories and work-in-process	14	2,088	1,619	1,960
Trade accounts receivable and related accounts	15	3,288	2,234	2,552
Other accounts receivable	16	1,869	1,208	1,400
Cash and marketable securities	17	1,632	2,036	3,302
Total current assets		8,877	7,097	9,214
Total assets		24,659	26,191	29,363

LIABILITIES AND SHAREHOLDERS' EQUITY

(in millions of euros as of December 31)

	Notes	2004	2003	2002
Share capital		1,347	1,347	1,347
Consolidated premiums and reserves		2,583	2,414	2,333
Currency translation reserves		(117)	(37)	100
Consolidated net income – Current year		428	389	240
Total shareholders' equity	18	4,241	4,113	4,020
Perpetual subordinated debt	19		215	215
Minority interests	20	776	959	988
Pensions and retirement obligations	21	853	609	568
Provisions for contingencies and losses	22	9,632	13,383	14,485
Borrowings	23	943	800	2,217
Advances and prepayments on non-current assets	24	4,326	3,615	4,066
Trade accounts payable and related accounts		1,688	1,009	1,056
Other liabilities	25	2,200	1,488	1,748
Total liabilities and shareholders' equity		24,659	26,191	29,363

5.4.4. Consolidated cash flow statement

(in millions of euros)

	Notes	2004	2003	2002
Cash flow from operating activities				
Consolidated net income		428	389	240
Minority interests		118	84	86
Net income before minority interests		546	473	326
Loss/(income) of equity affiliates, net of dividends		(105)	9	(55)
Net amortization, depreciation and provisions for non-current assets and marketable securities maturing in more than 3 months		614	721	786
Net goodwill amortization		152	176	594
Net provisions for contingencies and losses		(561)	(65)	331
Loss/(gain) on disposals of non-current assets and marketable securities maturing in more than 3 months		(107)	(494)	(977)
Other non-cash items		42	19	6
Cash flow from operations		581	839	1,011
Change in working capital requirements*	26	357	379	(104)
Cash from operating activities		938	1,218	907
Cash flow used in investing activities				
Investment in tangible and intangible assets		(519)	(365)	(430)
Investment in long-term investments		(1,431)	(277)	(475)
Change in customer prepayments financing non-current assets			0	(71)
Disposals of tangible and intangible assets		105	29	230
Disposals of long-term investments		692	284	262
Cash used in investing activities*		(1,153)	(329)	(484)
Cash flow used in financing activities				
Capital contributions received				
Dividends paid		(285)	(297)	(262)
Increase/(decrease) in borrowings**		12	(1,670)	72
Cash used in financing activities		(273)	(1,967)	(190)
Decrease/(increase) in marketable securities maturing in less than 3 months		133	621	995
Impact of foreign exchange movements		16	(12)	23
Reclassification of cash and cash equivalents			(176)	
Increase/(decrease) in net cash		(339)	(645)	1,250
Cash at the beginning of the year		1,367	2,045	1,715
Less: non-trade current accounts***		(12)		
Less: bank overdrafts		(71)	(116)	(216)
Less: reclassification of marketable securities				(819)
Net cash at the beginning of the year	17	1,284	1,929	680
Cash at the end of the year		1,054	1,367	2,045
Reclassification of non-trade current accounts****		(11)	(12)	
Less: bank overdrafts		(98)	(71)	(116)
Net cash at the end of the year	17	945	1,284	1,929

* The deployment of customer advances on non-current assets, recorded as "Increase in non-current assets" in previous years, is recorded as a change in working capital requirements since December 31, 2003. Customer advances and prepayments deployed in 2002 totaled €71 million.

** Interest-bearing customer advances and prepayments are considered "Borrowings" since December 31, 2003. Prior to this they were recorded as advances.

*** Non-trade current accounts are recorded in cash since December 31, 2003. Prior to this, they were recorded in "Other receivables and debt".

5.4.5. Change in consolidated shareholders' equity

<i>(in millions of euros)</i>	Number of shares and investment certificates outstanding	Share capital	Consolidated premiums and reserves	Currency translation reserves	Total share- holders' equity	Minority interests
As of December 31, 2001	35,442,701	1,347	2,569	271	4,187	1,004
2002 Net income			240		240	86
Dividends paid			(220)		(220)	(41)
Changes in consolidated Group						(24)
Changes in accounting method and other adjustments			(16)		(16)	
Currency translation adjustment				(171)	(171)	(37)
As of December 31, 2002	35,442,701	1,347	2,573	100	4,020	988
2003 Net income			389		389	84
Dividends paid			(220)		(220)	(77)
Changes in consolidated Group						(2)
Changes in accounting method and other adjustments*			61	(9)	52	
Currency translation adjustment				(128)	(128)	(34)
As of December 31, 2003	35,442,701	1,347	2,803	(37)	4,113	959
2004 Net income			428		428	117
Dividends paid			(220)		(220)	(65)
Changes in consolidated Group						(240)
Changes in accounting method and other adjustments						
Currency translation adjustment				(80)	(80)	5
As of December 31, 2004	35,442,701	1,347	3,011	(117)	4,241	776

* Other adjustments recorded in 2003 correspond to the reclassification of a tax debt (which no longer serves any purpose) previously recorded under "Other liabilities".

5.4.6. Data by division and region

DATA BY DIVISION

2004							
<i>(in millions of euros - except employee data)</i>	Front End	Reactors and Services	Back End	Transmission and Distribution	Connectors	Holding companies and other operations and consolidation entries	Total Group
Income							
Gross sales	2,599	2,308	2,123	3,186	1,289	(396)	11,109
Inter-division sales	(74)	(162)	(178)	-	-	414	-
Contribution to consolidated sales	2,524	2,146	1,946	3,186	1,289	18	11,109
Operating income	314	90	177	31	80	(79)	613
% of sales	12.4%	4.2%	9.1%	1.0%	6.2%	n.a.	5.5%
Other							
Non-current assets	2,135	515	9,061	1,096	656	2,320	15,782
Capital employed (*)	2,184	670	(132)	1,330	1,318	527	5,897
Employees	10,952	14,066	10,697	21,816	12,160	378	70,069

* Capital employed is determined as follows:

- net non-current assets

- plus gross goodwill (excluding goodwill in respect of equity affiliates), net of exceptional amortization recorded as a result of impairment tests

- plus operating working capital requirements

- less customer advances funding non-current assets.

2003

<i>(in millions of euros - except employee data)</i>	Front End	Reactors and Services	Back End	Sub-total Energy	Connectors	Holding companies and other operations and consolidation entries	Total Group
Income							
Gross sales	2,707	2,288	2,226	7,221	1,338	(304)	8,255
Inter-division sales	(24)	(164)	(203)	(391)	0	391	0
Contribution to consolidated sales	2,683	2,124	2,023	6,830	1,338	87	8,255
Operating income	316	52	155	523	(114)	(67)	342
% of sales	11.8%	2.4%	7.7%	7.7%	(8.5%)	n.a.	4.1%
Other							
Non-current assets	2,662	693	12,289	15,644	729	2,721	19,094
Capital employed (*)	2,000	721	282	3,003	1,407	495	4,905
Employees	9,719	13,251	10,542	33,512	12,211	2,288	48,011

2002

<i>(in millions of euros - except employee data)</i>	Front End	Reactors and Services	Back End	Sub-total Energy	Connectors	Holding companies and other operations and consolidation entries	Total Group
Income							
Inter-division sales	(24)	(143)	(185)	(352)	0	352	0
Contribution to consolidated sales	2,562	1,932	2,088	6,581	1,560	124	8,265
Operating income	319	64	236	619	(406)	(33)	180
% of sales	12.4 %	3.3 %	11.3 %	9.4 %	(26.0 %)	n.m.	2.2 %
Other							
Non-current assets	2,076	551	12,057	14,684	944	4,521	20,149
Capital employed (*)	1,955	906	504	3,365	1,719	453	5,536
Employees	9,536	13,549	10,719	33,804	14,015	2,328	50,147

DATA BY REGION

Net sales by destination

The Group reviewed the breakdown by geographical region following the acquisition of AREVA T&D. In particular, the region “Other countries” was split between “Africa and Middle East” and “Other countries”. The “Asia Pacific” region now includes India, New Zealand and Australia. For comparison purposes, the breakdown of 2003 sales by region was adjusted to take account of these new geographical regions.

2004								
<i>(in millions of euros - except employee data)</i>	Front End	Reactors and Services	Back End	Transmission and Distribution	Energy	Connectors	Holding companies and other operations and consolidation entries	Total Group
France	1,051	844	1,027	208	3,130	95	6	3,231
Europe (excl. France)	557	530	403	1,156	2,646	470	1	3,117
Americas	623	658	138	448	1,867	319	10	2,196
Asia Pacific	252	91	377	716	1,436	350	1	1,787
Africa and Middle East	41	23	1	649	714	49		763
Other countries				9	9	6		15
Total	2,524	2,146	1,946	3,186	9,802	1,289	18	11,109

2003 (new geographical regions)

<i>(in millions of euros)</i>	Front End	Reactors and Services	Back End	Energy	Connectors	Holding companies and other operations and consolidation entries	Total Group
France	1,083	849	983	2,915	113	1	3,029
Europe (excl. France)	697	470	355	1,522	477	11	2,010
Americas	588	695	118	1,401	338	56	1,795
Asia Pacific	290	91	566	947	360	16	1,323
Africa and Middle East	24	18	0	42	49	4	95
Other countries	1	1	1	3	0	0	3
Total	2,683	2,124	2,023	6,830	1,337	88	8,255

2003 (published)

<i>(in millions of euros)</i>	Front End	Reactors and Services	Back End	Energy	Connectors	Holding companies and other operations and consolidation entries	Total Group
France	1,083	849	983	2,915	113	1	3,029
Europe (excl. France)	697	469	355	1,521	462	11	1,994
Americas	588	649	118	1,355	305	53	1,713
Asia Pacific	291	93	566	950	378	20	1,348
Other countries	24	64	1	89	79	3	171
Total	2,683	2,124	2,023	6,830	1,337	88	8,255

2002

<i>(in millions of euros)</i>	Front End	Reactors and services	Back End	Energy	Connectors	Holding companies and other operations and consolidation entries	Total Group	2001 Total
France	1,081	817	1,139	3,033	197	7	3,242	4,194
Europe (excl. France)	584	385	259	1,227	414	5	1,646	1,837
Americas	592	489	127	1,208	411	84	1,703	1,383
Asia Pacific	281	118	555	954	387	9	1,350	1,122
Africa and Middle East								
Other countries	24	123	7	153	151	20	324	366
Total	2,562	1,932	2,087	6,575	1,560	125	8,265	8,902

Tangible assets

<i>(in millions of euros)</i>	Front End	Reactors and services	Back End	Transmission and distribution	Energy	Connectors	Other operations	Total
France	314	103	2,053	84	2,554	52	44	2,650
Europe (excl. France)	83	17		152	252	108	3	363
Americas	294	39	2	40	375	13	26	414
Asia Pacific				72	72	179		251
Africa and Middle East	23				23			23
Total	713	159	2,055	349	3,276	351	74	3,701

New geographical regions in 2003

<i>(in millions of euros)</i>	Front End	Reactors and services	Back End	Energy	Connectors	Other operations	Total	2002 Total
France	284	95	2,169	2,548	52	69	2,669	3,791
Europe (excl. France)	84	13	0	97	107	6	210	202
Americas	269	40	2	311	115	29	455	492
Asia Pacific	1			1	102		103	152
Africa and Middle East	10			10			10	10
Total	648	148	2,171	2,967	376	104	3,447	4,647

» 5.5. Notes to the consolidated financial statements

All amounts are stated in millions of euros unless otherwise indicated. Due to rounding adjustments, certain totals may be inexact.

Note 1. Accounting principles

AREVA's consolidated financial statements have been prepared in accordance with the accounting rules and methods applicable to consolidated financial statements approved by the Decision of June 22, 1999, approving Regulation No. 99-02, as amended by Regulation No. 2004-03, issued by the French Accounting Regulation Committee (*Comité de Réglementation Comptable*, "CRC"). The Group applies the preferred methods recommended by CRC Regulation No. 99-02.

The financial statements of companies consolidated by full or proportionate consolidation are restated in accordance with Group policies.

1.1. Changes in financial statement presentation

1.1.1. Changes in financial statement presentation – Fiscal year 2004

Provisions for losses to completion

In order to improve the clarity of the consolidated financial statements, provisions for losses to completion, previously recorded within "Other operating income and expenses", are recorded in "Cost of sales" in 2004. Provision reversals recorded at gross margin level as of December 31, 2004 totaled €30 million.

Losses to completion impacted 2002 and 2003 net income as follows:

(in millions of euros)	2004	2003	2002
Charges to/reversals of provisions for losses to completion	30	(28)	0

Impact of the Financial Security Act UCITS controlled by AREVA

AREVA elected to apply the option made available by the official statement issued by the French National Accounting Institute (*Conseil National de la Comptabilité*, "CNC") on February 8, 2005, authorizing the non-consolidation of UCITS controlled by commercial companies as of December 31, 2004, as AREVA satisfies all the conditions laid down in this official statement:

1 - The UCITS does not trade directly or indirectly in financial instruments issued by the investor.

2 - None of the financial investments made by the UCITS are strategic to the investor.

3 - The investor receives no benefits and bears no risk, directly or indirectly, other than those normally associated with UCITS investments and in proportion to its holding (e.g. transactions under non-market conditions).

4 - The UCITS has no indebtedness or contingent liabilities other than those resulting from normal trading.

The UCITS controlled by AREVA, comprising equity and interest rate mutual funds, are therefore recorded in "long-term investments", as in prior years (see Note 1.7).

Lilly Financial Corporation Limited perpetual subordinated bonds (TSDI)

Effective as of January 1, 2004, as required by the Financial Security Act, Lilly Financial Corporation Limited, the investment firm holding the perpetual subordinated bonds and the guarantee deposit, is consolidated in AREVA's financial statements. As a result, the perpetual subordinated debt (€215 million) recorded in other equity (see Note 19) and the guarantee deposit (€180 million) recorded under long-term investments (see Note 13) have disappeared from the consolidated balance sheet, with the net amount as of January 1, 2004 of €36 million reclassified as Borrowings (see Note 23).

1.1.2. Changes in financial statement presentation – Fiscal year 2003

The presentation of the balance sheet underwent three changes in 2003:

- Provisions for expenses to be incurred

In preparation for the transition to international accounting standards, Provisions for expenses to be incurred of €962 million as of December 31, 2002 were reversed in full and a corresponding charge was recorded in tangible assets depreciation (see Note 11) as of January 1, 2003. This provision, recorded in respect of contracts which provide for the financing of capex by customers over a contractual period less than the asset depreciation period, corresponded, in effect, to residual depreciation in respect of the financed assets.

- Financial assets earmarked for facility decommissioning

As a nuclear operator, the AREVA group has a legal obligation to secure and decommission its facilities when they are shut down permanently. The Group has earmarked some of its assets to meet this obligation, recorded as a provision for end-of-life-cycle operations in the balance sheet (see Note 22). As of December 31, 2003, the portfolio included €576 million in cash and cash equivalents, with €398 million in mutual funds (interest rate funds) and €178 million in liquid assets. For purposes of clarity,

AREVA decided to combine all assets earmarked for facility decommissioning, including rate funds and liquid assets, into a single item within other long-term investments (see Note 13).

- Interest-bearing advances from customers

On January 1, 2003, interest-bearing advances from customers of €382 million were reclassified as Borrowings to reflect more accurately their financial, interest-bearing nature. These advances totaled €416 million as of December 31, 2003 (see Note 23).

These reclassifications had no impact on the Group's net income or equity.

1.1.3. Changes in financial statement presentation – Fiscal year 2002

Accounting for end-of-life cycle operations (decommissioning of nuclear facilities, decontamination and waste retrieval) and decommissioning assets

Effective as of January 1, 2002, in compliance with CRC Regulation No. 2000/06, the Group modified its method of determining end-of-life-cycle provisions (covering facility decommissioning, decontamination and waste retrieval) for the nuclear facilities it operates. The total estimated cost of end-of-life cycle operations is now provided from the start-up of the facility including, where applicable, the portion to be funded by third parties. Under the former accounting method, the provision was limited to the portion of the cost to be borne by the Group, accrued over the projected life of the facility. The offsetting entry for this provision is recorded on the asset side of the balance sheet under “decommissioning assets”. This heading records the estimated future portion to be funded by the Group, depreciated over the projected life of the facility, and the portion to be funded by third parties, transferred to receivables when permitted by contractual conditions and as operations are performed, at the latest.

The amount of the provision is determined based on estimates, without discounting future costs. The impact of inflation is recorded on the balance sheet by increasing the provision for end-of-life-cycle operations, with the offsetting entry being recorded:

- under financial income (for Group companies having established a portfolio of long-term securities earmarked for decommissioning) or under operating income (for group companies that have not established such a portfolio) for current-year costs; and
- under “Decommissioning assets”, which are depreciated using the straight-line method over the remaining service life of the facilities (for the portion of decommissioning costs ultimately borne by the Group), for expenses to be incurred after the end of the fiscal year.

Application of this change in accounting method, which did not impact opening shareholders' equity, generated an increase as of January 1, 2002 in provisions for end-of-life-cycle operations of €8,918 million and the recording of “Decommissioning assets” in the same amount. In the income statement, the charge to provisions for end-of-life cycle operations was replaced by a depreciation charge in respect of decommissioning assets, determined in accordance with the same rules as previously applied and described above.

1.2. Consolidation method

The consolidated financial statements combine the financial statements as of December 31, 2004 of AREVA and the subsidiaries over which it has exclusive control or in which it exercises either joint control or significant influence over financial policy and management.

The companies controlled exclusively by AREVA are consolidated using the full consolidation method. The companies in which AREVA exercises joint control are consolidated using the proportionate consolidation method. The companies in which AREVA exercises a significant influence over financial policy and management are accounted for using the equity method.

The equity share of minority shareholders in consolidated subsidiaries, if negative, is covered in full by the Group, unless there is a specific agreement for such minority shareholders to contribute their share of the deficit, or when collection of such claim cannot reasonably be challenged.

1.3. Mergers, acquisitions and goodwill

The difference, on the acquisition date, between the acquisition cost of a company's shares and the fair value of corresponding assets and liabilities is recorded in goodwill where positive and “Provisions for contingencies and losses” where negative.

Within a maximum of one year from the date control is acquired, the Group may revise its allocation of initial consolidation differences between fair value adjustments and goodwill.

Goodwill for the Energy and Connectors businesses is amortized on a straight-line basis, based on the type of business, for periods of 20 years or less. Positive and negative goodwill balances of less than €1.5 million are amortized to income in the year of acquisition. Negative goodwill is recognized as income over a period not to exceed five years.

Goodwill is also subject to impairment tests that may result in exceptional amortization being recorded in accordance with computation methods explained in Note 1.8.

1.4. Intangible assets

Set-up expenses

These costs are fully amortized in the year in which they are incurred.

Research and Development expenses

Research and development costs that are not funded by third parties and development projects are recorded as expenses during the fiscal year in which they are incurred.

Research and development costs recorded as expenses and identified specifically on the income statement include payroll expenses, the cost of goods and services, royalties, fees and depreciation of non-current assets directly allocated to research and development activities.

Mineral exploration

Exploration costs, including geological work, are determined in accordance with the following rules. Exploration costs that do not relate to economically recoverable deposits are expensed during the year. Mining pre-development expenses relating to reserves presenting technical and economic characteristics that indicate a strong probability of profitable mining development are capitalized at year-end. Indirect costs, excluding overhead expenses, are included in the valuation of these costs. Capitalized pre-mining expenses are amortized in proportion to the number of tons mined from the reserves they helped to identify.

Other intangible assets

Software development expenses are capitalized and amortized over the software's estimated useful life. Software design expenses are expensed as incurred. Trademarks are not amortized. A provision for impairment is recorded when a trademark's present value is lower than its book value.

1.5. Decommissioning assets

In accordance with CRC Regulation No. 2000-06 pertaining to liabilities, the Group records a provision for end-of-life-cycle operations as described in Note 1.16. This is offset by decommissioning assets in two parts: the portion funded by the company, and the portion to be funded by our customers.

The share to be funded by customers is not depreciated. The Group's share, however, is depreciated on a straight-line basis over the life of the facilities concerned.

1.6. Tangible assets

Tangible assets appear on the balance sheet at their acquisition cost.

Depreciation of tangible assets is calculated using the most appropriate method for the asset category. Mining lands are depreciated over the life of the deposit; site layout and preparation expenses are depreciated over ten years; buildings over ten to 45 years; production facilities, equipment and tooling over five to ten years; general facilities and miscellaneous fixtures over ten to 20 years; and transportation equipment, office equipment, computer equipment and furniture over three to ten years.

The Group depreciates nuclear installations on a straight-line basis over the life of the facilities, determined on the basis of firm contracts to be performed by each facility, including reasonable expectations for contract renewals. Depreciation periods were determined based on contracts currently signed, and subject to the technical life of the plants under normal economic conditions; the depreciation periods for the main installations are:

- 2010 for the enrichment plant at Tricastin (Eurodif);
- 2015 for the used fuel treatment plant at La Hague (COGEMA);
- 2017 for the Mox recycling plant at Marcoule (Melox).

Depreciation periods may be revised if the time-line of the group's backlog changes significantly.

Fixed assets financed under lease arrangements appear on the assets side of the balance sheet when they are significant and are depreciated in the manner described above.

Assets financed by customers are depreciated over the term of the corresponding contract.

1.7. Long-term investments

Long-term investments primarily comprise equity interests in non-consolidated companies and long-term portfolio securities, including a significant portion earmarked to fund future facility decommissioning costs and waste retrieval (see Note 13). In order to improve the presentation of the financial statements, the Group records all decommissioning assets, including cash and interest-rate mutual funds, within a single heading in long-term investments (see Note 13).

All securities, whether earmarked or not, are valued at historical acquisition cost and written down to their period-end value, determined security by security, where appropriate.

Long-term portfolio investments include investments in marketable securities, whether directly held individual securities or mutual funds (equity and interest-rate funds), with a mid-to long-term holding objective.

AREVA elected to apply the exemption offered by the CNC's official statement of February 8, 2005 concerning UCITS, and has therefore not consolidated its UCITS as they satisfy the conditions laid down by the CNC (see Note 1.1.1).

The period-end value of long-term portfolio securities is determined as follows:

- Directly held individual securities: the period-end value is the higher of:
 - (a) the stock market price at the year-end, and
 - (b) the value-in-use of the share, which is the average of (1) market values established by a stable panel of outside financial analysts at the close of the fiscal year and (2) the mid-range value, taking into account the growth rate of future earnings, the stock market risk and the risk specific to the company in question. A provision is not booked for impairment until an impairment test has been performed based on the stock market value: if the average stock market value of a security for the six months preceding the end of the fiscal year is lower by more than 20% (or 30% in the case of high volatility), a provision is booked for impairment by comparing the period-end value as defined above with the book value.
- Securities held in mutual funds:
 - Equity funds: the period-end value is the higher of:
 - (a) the net asset value at the year-end, and
 - (b) the rolling average of its stock market net asset value over a period not exceeding 24 months preceding the year-end.
 - Interest rate funds: the period-end value is equal to the market value at the year-end.

1.8. Impairment of non-current assets

In accordance with CRC Regulation No. 2002-10, non-current assets (other than assets covering employee benefits and long-term investments) are subject to asset impairment tests, where there is internal or external indication of a potential loss in value.

A provision for impairment or a write-off is recorded when the book value of an asset is greater than its recoverable value. The recoverable value of an asset is the higher of its net sales value or its value in use. The value in use of an asset is the net present value of the estimated future cash flows expected from the continuous use of the asset plus, if applicable, its residual value at the end of its projected service life.

Provisions for impairment and asset write-offs are assessed based on the recoverable value of the cash-generating unit to which the asset belongs. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets; it includes goodwill attributable to it. Any impairment of the cash-generating unit is first assigned to the goodwill applied to that unit.

A provision for impairment recorded in previous fiscal years is reversed to income if, and only if, there has been a favorable change in the estimates used to determine the recoverable value of the asset since the last time a provision for impairment was recorded. A write-off of goodwill is irreversible.

1.9. Inventories and work-in-process

Inventories and work-in-process are valued at cost in the case of products and at acquisition cost for goods acquired for consideration. Where this cost exceeds the estimated net realizable value it is adjusted at each year-end by a write-down provision. Financial expenses and research and development costs are not taken into account in the valuation of inventories and work-in-process. The cost of research and development programs funded by customers but not yet invoiced is recorded in work-in-process.

1.10. Marketable securities

Marketable securities are valued at the lower of acquisition cost and period-end value. Where the year-end valuation shows an overall loss by class of security, a provision for impairment is recorded in the same amount. The period-end value of bonds, commercial paper and interest rate funds held in connection with the management of advances received on contracts is equal to the deal price on the last day of the fiscal year; the period-end value of other marketable securities is equal to the average stock market value for the last month of the fiscal year.

1.11. Perpetual subordinated debt

Up to December 31, 2003, the gross amount of the perpetual subordinated bond issue was recorded as "Perpetual subordinated debt" and kept at its historic value.

The amount of the deposit deducted from this issue and paid to an investment firm was recorded in "Other long-term investments". The increase in the value of this deposit during the year was recorded as financial income.

The company holding the perpetual subordinated bonds has been consolidated as of January 1, 2004 (see Note 2.1.1.2.).

1.12. Translation of foreign company financial statements

The financial statements of foreign companies are translated according to the following principles:

- balance sheet items are translated at year-end exchange rates, with the exception of equity components, which are kept at their historic rates;
- income statement transactions are translated at average annual exchange rates;
- currency translation differences in income and shareholders' equity are recorded directly as equity under the heading Currency translation reserves.

1.13. Translation of foreign currency denominated transactions and financial instruments

Unrealized currency gains and losses are recorded in income. When the foreign currency transactions are accompanied by parallel transactions to hedge the currency exchange rate fluctuation risk, the item hedged and the hedging instrument are recorded symmetrically. Currency gains and losses linked to foreign currency financing of long-term investments by foreign subsidiaries (bank loans or advances considered as shareholders' equity) are recorded in shareholders' equity.

Currency transactions on the financial markets are meant to hedge the currency risk generated by the group's businesses. As of the end of the year, all assets, liabilities and off-balance sheet items not subject to hedging and denominated in foreign currencies are valued at the official rate as of December 31. When forward currency transactions are intended to hedge long-term advances denominated in foreign currencies, the unrealized gains or losses calculated at the year-end for the hedge and the item hedged are recorded directly in income. Transactions concluded on the financial instrument forward market are used to manage the interest rate risk associated with the Group's investments. The floating rate six month interest on the perpetual subordinated bonds is partially hedged using rate swaps.

1.14. Deferred tax

AREVA has elected for tax treatment as a consolidated entity under Article 209, paragraph five of the French Tax Code since January 1, 1983. This tax status was renewed for the 2005 to 2007 period. The resulting tax is recorded under Income tax whether it is a tax expense or a tax credit.

Deferred taxes are determined for each tax entity on the basis of differences between consolidated book value and tax value of assets and liabilities according to the liability method of tax allocation.

Temporary net taxable differences generate a deferred tax liability.

Deferred tax assets are recognized in respect of deductible net temporary differences and unused tax losses and tax credits in the amount future offset is considered probable. Deferred tax assets are analyzed case by case based on mid-range income projections of 3 to 5 years.

1.15. Pensions and other employee benefits

The Group books the entire amount of its commitments for pensions, early retirement, severance pay, medical insurance, job-related awards, accident and disability insurance and related obligations, whether for active personnel or for retired personnel, in accordance with Recommendation No. 2003-R.01 of April 1, 2003 regarding accounting and valuation rules for pension obligations and similar benefits.

Payments by the Group under defined contribution plans are recorded as expenses of the period to which they relate.

In the case of defined benefit plans, benefit costs are estimated using the projected unit credit method. Under this method, accrued pension benefits are allocated among service periods based on the plan vesting formula. If service in subsequent years results in accrued benefit levels that are substantially higher than during previous years, the company must allocate the accrued benefits on a straight-line basis.

The amount of future benefit payments to employees is determined based on salary trend assumptions, retirement age and mortality and discounted to present value based on interest rates for long-term bonds of AAA issuers.

Post-January 1, 2001 actuarial gains and losses are spread over the average expected remaining working life of personnel taking part in these plans for the portion exceeding the largest of the following values by more than 10%:

- Present value of the commitment on the closing date for benefits determined as of the end-of-period date;
- Fair value of plan assets at the period-end.

The cost of plan changes is spread over the vesting period.

1.16. Provisions

A provision is recorded when the Group has an obligation towards a third party at the period-end and it is probable that a net outflow of resources will be required after the period-end to settle this obligation. A reasonably reliable estimate of this net outflow must be determined in order to record a provision.

The trigger point for the obligation is the damage caused to the third party and not notification of the dispute or the instigation of proceedings by the third party against the Company.

Pursuant to CRC Regulation No. 2000-06, the total estimated decommissioning cost of the nuclear installations operated by the Group, including any portion of the decommissioning cost funded by third parties, is fully provisioned upon startup of the facility, given that deterioration begins as soon as the facility enters service (see Note 22). The offsetting entry for this provision is recorded on the asset side of the balance sheet under “Decommissioning assets”.

The amount of the provision is determined based on estimates, without discounting future costs. The impact of inflation is recorded on the balance sheet by increasing the provision for end-of-life-cycle operations, with the offsetting entry being recorded:

- Under financial income (for Group companies having established a portfolio of long-term securities earmarked for decommissioning) or under operating income (for Group companies that have not established such a portfolio) for current-year costs; and
- Under “Decommissioning assets”, which are depreciated using the straight-line method over the remaining service life of the facilities (for the portion of decommissioning costs ultimately borne by the Group), for expenses to be incurred after the end of the fiscal year.

No provision is recorded for contingent liabilities corresponding to an obligation that is neither probable nor certain as of the period-end date. Potentially significant liabilities are disclosed in Note 30.

1.17. Revenue recognition

Sales revenue and net income from long-term contracts

In accordance with CNC Opinion No. 99.10 and CRC Regulation No. 99-08, AREVA uses the percentage of completion method to recognize sales and net income from long-term contracts.

Under this method, sales revenue from contracts performed over a minimum of two separate accounting periods is recognized proportionately to overall contract performance. The net income generated by these contracts is also recorded by applying the percentage of completion at the closing date.

When contract terms generate significant cash surpluses during all or part of the contract's performance, the resulting financial income is included in contract revenue.

When a contract is expected to generate a loss upon completion, the total projected loss is recorded immediately, after deduction of any already recognized partial loss, and a provision is set up accordingly.

Sales revenue other than from long-term contracts

Sales revenue from sales of products is recognized upon transfer of product ownership. Sales revenue from services is recognized when the services have been rendered to the customer.

1.18. Statement of cash flow

The Group uses the “indirect method” for presenting cash flows from operating activities.

Cash is comprised of cash and cash equivalents, available bank balances, short-term investments with an initial maturity of less than three months and current accounts.

Acquisitions or (disposals) of marketable securities maturing in more than three months correspond more to cash management decisions than to an investment strategy for the Group. They are therefore reflected as an (increase) or decrease in cash and cash equivalents, which determines the net change in cash position, rather than being included in the cash flow from investing activities.

1.19. Investment subsidies

Investment subsidies are included in income using the straight-line method, according to a schedule that is consistent with the depreciation period for each tangible asset subsidized.

Unamortized investment subsidies are recorded under “Other operating liabilities”.

1.20. Pro forma data and reconstituted historical data

To allow comparisons to be drawn and to gain a clearer understanding of changes in financial results, the Group establishes pro forma financial statements for the current and prior accounting periods when there are acquisitions or disposals resulting, for all operations, in a change in balance sheet, sales or operating income of more than 25% in a given fiscal year.

The pro forma financial statements are drawn up following three guidelines:

- Use of audited historical data;
- Restatement of financial (income) and expenses associated with the acquisition or (disposal) and amortization of valuation differences and goodwill;
- Use of the Group's normal accounting methods.

When an acquisition exceeds the threshold indicated above and in the absence of audited historical accounting data, the Group reconstitutes historical data after the event.

The pro forma statements and the reconstituted data do not necessarily represent the financial results that would have been recorded in the consolidated financial statements if the transactions had occurred on the indicated date, nor can they be used to forecast future consolidated financial results.

Note 2. Consolidation scope

2.1. Consolidated companies (french / foreign)

(number of companies)	2004		2003		2002	
	Foreign	French	Foreign	French	Foreign	French
Full consolidation	159	90	91	81	97	91
Equity method	4	8	8	10	8	11
Proportionate consolidation	12	0	6	3	6	2
Sub-total	175	98	105	94	111	104
Total	273		199		215	

2.1.1. Transactions in 2004

The main changes in the scope of consolidation during the year were as follows.

2.1.1.1. Acquisition of Alstom's Transmission and Distribution business

On January 9, 2004, having received all required European Commission and national antitrust authorizations, the AREVA group signed the final purchase agreement for Alstom's Transmission and Distribution operations.

T&D's business – electricity transmission and distribution – is an important component of the value chain in the electric energy industry. It connects electric power generators with end-users consisting of large and small businesses as well as individual consumers. The T&D market begins at the power plant outlet and ends at the point where individual and industrial users are connected to the grid. T&D supplies this market with electricity transformation equipment: transformers and grid connection equipment: circuit breakers and disconnectors often combined within "sub-stations". These major equipment items go hand in hand with measurement equipment, measurement transformers, automatic relays and grid operating systems, and grid safety equipment such as lightning arresters. T&D does not supply low value-added equipment, such as wires and electric towers. T&D also offers grid monitoring and management systems and a broad range of value-added services to electric operators.

Purchase price

A Sale and Purchase Agreement (SPA) was signed by AREVA and Alstom on September 25, 2003 for the purchase of Alstom's Transmission & Distribution (T&D) operations, with a closing date of January 9, 2004.

The purchase price for T&D operations was set by the SPA at 950 million euros. This enterprise value was subject to price adjustments concerning certain operating and balance sheet items relating to fiscal year 2003, as well as the cash balance transferred as of December 31, 2003.

As provided in the SPA, the two groups jointly called in an independent expert, KPMG, to determine these adjustments. The independent expert submitted his conclusions on December 23, 2004.

- the enterprise value after adjustment was reduced from €950 million to €913 million, representing a decrease of €37 million in the purchase price;
- the net cash position of the division at the end of 2003 was valued at €140 million.

Prior to the presentation of the independent expert's conclusions, AREVA settled the amount of €950 million (including €23 million still held in an escrow account pending the sale of the Indian and Pakistani subsidiaries). AREVA therefore made an additional payment to Alstom on December 29, 2004 of €103 million.

The total price paid by AREVA for the acquisition of the T&D operations was, therefore, €1,053 million, financed from Group shareholders' equity.

A certain number of matters relating to the completion of the transaction, as provided in the SPA, remain outstanding. In particular, the T&D operations of Alstom Ltd (India) (sales of approximately €100 million) have still not been transferred to AREVA T&D. T&D operations represent the majority of Alstom Ltd (India)'s activities. This company is listed on the Bombay Stock Exchange and is owned 66% by Alstom. Other entities of lesser importance (Pakistan) will be transferred to AREVA T&D during 2005.

As part of the creation of AREVA T&D, Alstom transferred 49% of the share capital of SPE Mexique. A contract for the retrocession of these shares was signed by AREVA T&D and Alstom. This contract contains condition precedents which have not been completed. Given the difficulties encountered in satisfying the conditions necessary for the sale of the SPE Mexique shares, Alstom and AREVA signed an agreement under which the risks and benefits relating to SPE Mexique are transferred to Alstom. As a result of this contract, SPE Mexique is not consolidated by AREVA in its financial statements.

Determination of the goodwill generated by the acquisition of AREVA T&D

The goodwill generated by this acquisition results from the difference between the purchase price paid to Alstom, plus the acquisition costs incurred by AREVA and the fair value of the net assets purchased, as of the acquisition date.

The purchase price was €1,053 million.

Valuation of company assets

The fair value of the net assets purchased was determined based on the valuations performed by the independent experts:

- The intangible assets of the company purchased, in particular patents and software, were valued;
- Real estate assets were appraised and the main industrial sites owned by AREVA T&D were valued at market value;
- A review was performed of production equipment and a large portion of such equipment was revalued based on market values and estimated useful lives.

In addition, the inventory and work-in-process of the company was valued at net realizable value, less selling costs and a normal margin.

Valuation of company liabilities

A review was performed of company liabilities and led to the recording in the opening balance sheet of a certain number of adjustments, notably:

- Pension provisions;
- Restructuring costs announced during the year;
- Provisions for specific risks;
- Provisions for environmental risk.

Following completion of these procedures, goodwill was valued at €641 million AREVA T&D allocated the goodwill resulting from the acquisition of AREVA T&D to the Systems, Automation and Services Business Units.

This goodwill was subject to an impairment test as presented in Note 1.8. The value in use was determined by discounting the future cash flows of the Business Units using an average discount rate of 9.6% and assuming an annual growth rate of 2.0% after 2007. This test did not lead to the recording of impairment. The goodwill is amortized over a period of 20 years.

Vendor warranties

The AREVA T&D purchase agreement includes two vendor warranties, one specific and one general.

The specific vendor warranty comprises several sub-warranties:

- A warranty covering environmental issues, with a trigger threshold of €12 million and a term of ten years;
- A tax warranty covering the periods open to inspection;
- A warranty covering pension fund issues;
- A warranty covering specific contracts or litigation in respect of which an autonomous comprehensive indemnity warranty has been granted by Alstom. This warranty expires March 31, 2006.

The general vendor warranty covers all problems not covered by the specific warranty described above. The general warranty has a trigger threshold of €19 million and a cap of €175 million.

Restructuring

A restructuring plan was set up by management bodies at the acquisition date and presented to the European Central Committee and the appropriate bodies in each of the countries concerned.

The components and major objectives of this plan are as follows:

- Cost reductions generated by adapting industrial resources to the geographical challenges of the T&D market,
- Cost reductions generated by operating performance improvements at all levels of the organization and, in particular, by a reduction in purchase costs and process improvements.

The cost reduction plan will have a significant impact in several European countries and, notably, France, Germany and the United Kingdom. The Group recorded a restructuring provision deducted from goodwill.

Events subsequent to the acquisition

Pursuant to the agreement of December 22, 2004, AREVA T&D and Transfield Services signed an agreement for the purchase of AREVA T&D's telecom and electrical services activities in Australia and New Zealand. The transaction value was set at approximately AUD193 million (€110 million). The transaction, subject to normal regulatory authorizations and conditions precedents, will come into effect in April 2005. These activities are consolidated in the AREVA group as of December 31, 2004. Divestment proceeds will not have a material impact on 2005 consolidated net income.

These activities concern outsourced engineering and maintenance services provided to owners of major infrastructures and industrial companies operating in the electricity, heavy industry, telecom and related infrastructure sectors. They are not part of AREVA T&D's core businesses. They employ approximately 1,900 individuals and generate sales of

NZD300 million (€160 million). Approximately 56% of sales are generated in New Zealand and 44% in Australia. AREVA T&D will ensure the continued high quality of services rendered to customers during the transition period.

Pro forma financial statements

The consolidated balance sheet as of December 31, 2003 of AREVA group, including the **Transmission & Distribution Division**, was prepared for comparative purposes, on the following basis:

- Consolidation of the **T&D Division** balance sheet as of December 31, 2003 (excluding India and Pakistan) in the AREVA consolidated financial statements;
- Application of asset and liability fair value adjustments, determined as described above in the section "Determination of the goodwill generated by the acquisition of AREVA T&D";
- Elimination of inter-company balances;
- Elimination of investments, resulting in the recognition in assets of the goodwill generated by this acquisition.

In addition, the acquisition of T&D led to an increase in Group off-balance sheet commitments in respect of guarantees and surety granted of €963 million.

Pro forma balance sheet

Assets <i>(in millions of euros)</i>	December 31, 2004	December 31, 2003 pro forma	December 31, 2003
Non-current assets			
Goodwill, net	1,718	1,905	1,265
Intangible assets, net	608	600	482
Decommissioning assets	5,372	9,109	9,109
Tangible assets	3,701	3,819	3,447
Equity affiliates	1,240	1,493	1,492
Other long-term investments	3,143	3,355	3,299
Total non-current assets	15,782	20,281	19,094
Current assets			
Inventories and work-in-process	2,088	2,131	1,619
Trade accounts receivable and related accounts	3,288	2,730	2,234
Other accounts receivable	1,869	2,079	1,208
Cash and marketable securities	1,632	1,301	2,036
Total current assets	8,877	8,240	7,097
Total assets	24,659	28,521	26,191

Liabilities and shareholders' equity*(in millions of euros)*

	December 31, 2004	December 31, 2003 pro forma	December 31, 2003
Share capital	1,347	1,347	1,347
Consolidated premiums and reserves	2,580	2,414	2,414
Currency translation reserves	(114)	(37)	(37)
Consolidated net income – Current year	428	389	389
Total shareholders' equity	4,241	4,113	4,113
Perpetual subordinated debt		215	215
Minority interests	776	974	959
Pensions and retirement obligations	853	779	609
Provisions for contingencies and losses	9,632	13,840	13,383
Borrowings	943	978	800
Advances and prepayments on non-current assets	4,326	3,993	3,615
Trade accounts payable and related accounts	1,688	1,634	1,009
Other liabilities	2,200	1,995	1,488
Total liabilities and shareholders' equity	24,659	28,522	26,191

Pro forma consolidated income statement

A pro forma historical consolidated income statement was also produced for the 12-month period from January 1, 2003 to December 31, 2003, by applying the same technical adjustments applied to the 2004 financial statements (asset revaluations, amortization of goodwill and cancellation of the impact of

restructuring expenses), eliminating certain 2003 non-recurring income and expense items as identified by due diligence procedures performed by AREVA at the beginning of 2004, and finally correcting the 2003 net financial expense, to adjust investment income for the financing of the AREVA T&D acquisition.

<i>(in millions of euros)</i>	December 31, 2004	December 31, 2003 pro forma	December 31, 2003
Sales	11,109	11,132	8,255
Cost of sales	(8,347)	(8,405)	(6,138)
Gross margin	2,762	2,727	2,117
Expenses excluding production costs	(2,149)	(2,357)	(1,775)
Operating income ^{(1) (2)}	613	370	342
Financial income	117	299	334
Income before tax and exceptional items	730	669	676
Exceptional items	46	135	135
Income tax	(209)	(224)	(184)
Net income of consolidated businesses	567	580	627
Income of equity affiliates	131	20	20
Net income before goodwill amortization	698	600	647
Goodwill amortization	(152)	(209)	(174)
Net income before minority interests	546	391	473
Minority interests	(118)	(85)	(84)
Consolidated net income	428	306	389
Average number of outstanding shares	35,442,701	35,442,701	35,442,701
Earnings per share	12.07	8.91	10.97
Diluted earnings per share	12.07	8.91	10.97

(1) Current operating income

(2) Restructuring charges totaled €137 million in 2003 compared to €142 million in 2004. The impacts of these restructuring charges in the income statement were cancelled in 2003 and 2004.

2.1.1.2. Lilly Financial Corporation Limited Perpetual Subordinated Bonds

Effective as of January 1, 2004, as required by the Financial Security Act, Lilly Financial Corporation Limited, the investment firm holding the perpetual subordinated bonds and the deposit, is consolidated in AREVA's financial statements (see Note 1.1).

2.1.1.3. Mining companies

AREVA increased its stake in Katco from 45% to 51% as of April 30, 2004. Katco was equity accounted up to April 30, 2004 and is fully consolidated from May 1, 2004. The goodwill generated by the acquisition of this additional stake is not material.

Cominak and AMC previously equity-accounted, are consolidated using the proportionate method from January 1, 2004 to reflect AREVA's joint control over these companies.

2.1.1.4. STMicroelectronics

Following the repurchase of its own shares by FT1CI, AREVA's stake in FT1CI increased from 63.8% to 79.0% in December 2004. This buyback transaction corresponded to the distribution of the proceeds from the sale of STMicroelectronics shares to France Telecom. As a result of this change, AREVA's percentage control over STMicroelectronics fell from 17.3% to 13.9%. The Group share remained unchanged.

2.1.1.5. EMA and Comilog

On July 1, 2004, AREVA sold its stakes in EMA and Comilog. These companies were equity accounted up to June 30, 2004.

2.1.1.6. Other changes in consolidation scope, not materially impacting the financial statements

AREVA increased its interest in O1DB Inc, Principia RD, Principia Marine and Open Cascade. These companies, which were proportionately consolidated as of December 31, 2003, are fully consolidated as from January 1, 2004.

AREVA sold its interest in Eurodoc on January 1, 2004. This divestment did not generate a material capital gain. Eurodoc contributed consolidated sales of €13 million for the year ended December 31, 2003.

AREVA sold its interest in Gemma in November 2004. Gemma sales for the year ended December 31, 2004 totaled €6 million.

The following companies entered into the scope of consolidation: AREVA Finance Gestion, TDI SA, PIC, Jeumont Eole, Interuranium Australia, Sodeprom, Tecnimarse, FCI Microconnections Asia, FCI connectors Trading and FCI expansion 2. They are all fully consolidated.

Signum was removed from the scope of consolidation from January 1, 2004. FCI SPV was liquidated.

Changes in corporate structure

DGI was absorbed by Euriware S.A. as of January 1, 2004. Incore Services and Visionic were absorbed by Framatome-ANP SAS as of January 1, 2004. Metravib was absorbed by O1 DB Acoustic as of January 1, 2004.

2.1.2. Transactions in 2003

AREVA group sold FCI's MAI division (Military/Aerospace Industry) on April 30, 2003. The gain on the sale before taxes was €65 million. The division reported sales of €149 million in 2002 and €40 million in the first half of 2003 up to the date of sale. The Cable & Assembly business, which was part of FCI's Communications Data Consumer Business Unit, was sold during the first half of 2003. Sales for the first half of 2003 up to the date of sale were €43 million.

AREVA group sold Packinox on December 17, 2003, which had 2003 sales of €36 million up to the date of sale.

The participating interest in Assystem was subject to a public exchange offering initiated by Brime and registered with the stock market authorities (AMF) on October 22, 2003. At the same time, the Assystem shareholders agreement was terminated. The participating interest in Assystem Brime is now recorded under "Marketable securities" (see Note 12).

The following new companies became part of the consolidated group: AREVA Inc, AREVA Korea and AREVA Japan. These directly owned subsidiaries of AREVA are fully consolidated. Transnuc Ltd TN Tokyo was consolidated as of January 1, 2003. Open Cascade and Uranium Disposition Services, LLC, are consolidated according to the proportionate consolidation method. Cortex, RJH and O1DB GmbH were fully consolidated as of January 1, 2003. These changes in the consolidated group had no significant impact on the financial statements.

Sytech and TasyS are no longer consolidated, considering their negligible contribution to the Group's business. The Group sold SCS.

Changes in corporate structure

Euriware SA absorbed Euriware PGI and Ifatec, two Group subsidiaries that were already consolidated. Framatome-ANP absorbed Nuclear Power International, a Group subsidiary that was already consolidated. O1db Acoustic et Vibration absorbed its subsidiaries CVI and Stel Diagnostic. Frarea absorbed Secori.

2.1.3. Transactions in 2002

AREVA group purchased Duke Engineering & Services (DE&S), a subsidiary of the U.S. utility Duke Energy. DE&S reported 2001 sales of \$280 million, primarily in the U.S. nuclear engineering and services sector. In 2002, DE&S contributed €190 million to AREVA consolidated sales.

COGEMA group subsidiaries in the United States were reorganized by moving the equity interests in the subsidiaries to a single structure, COGEMA, Inc. This reorganization sought to give the COGEMA group greater economic efficiency in the U.S. by creating synergies, both in terms of revenues from subsidiary operations and in terms of related costs. To accomplish this, COGEMA, Inc. took over SGN's shares in COGEMA Services, Inc. (100%), COGEMA's shares in Canberra, Inc. (100%), and COGEMA Logistics' shares in Transnuclear, Inc. (100%).

AREVA sold the real estate management company, Sovakle, in January 2002 for €122 million. Pragodata was sold for a symbolic euro. Atea Industrie S.A. was sold on January 25, 2002.

Euriware Group bought out the 48.96% minority interest in its subsidiary Axisse (henceforth Euriware PGI) and the 60% interest in DGI2000, becoming sole shareholder in each case. It bought a 4.26% minority interest in the subsidiary PEA Consulting then sold 10.66% to Geraco, becoming 65.32% shareholder (with 34.32% held by Geraco), that is a total interest in PEA Consulting of 99.64%. Gads sold its 20% stake in Gamma Assistance to STMILOG. COGEMA S.A. bought out the 30.59% minority interest in UG Germany.

Société des Mines d'Ity (SMI) was acquired for €12 million.

Changes in corporate structure

Rockridge merged with its parent company, ANP, Inc. CFC merged with its parent company, FBFC. Icmat merged with its parent company, Intercontrôle. Euriware Group merged with Antel Services. Conservatome merged with COGEMA Logistics. Gemma was created and acquired, by way of partial asset transfer, a portion of SICN's assets and liabilities. COGEMA sold its transportation operations to COGEMA Logistics by transferring all of its assets and liabilities.

2.2. Impact on the financial statements of changes in the consolidation scope and methods

The impact of changes in the consolidation scope and methods on sales and operating income for 2002, 2003 and 2004 is as follows:

Deconsolidated companies (in millions of euros)	2004	2003	2002
Sales	14	119	34
Operating income	(4)	0	0

Consolidated companies and change in method (in millions of euros)	2004	2003	2002
Sales	3,243	32	229
Operating income	34	1	11

The impact on sales of newly consolidated companies, either as a result of an acquisition or a move to full or proportionate consolidation, is presented below:

(in millions of euros)	2004	2003	2002
AMC	17		
AREVA T&D	3,186		
Cominak	12		
Jeumont Eole	1		
FCI Expansion 2	5		
FCI Microconnections Asia Pte	7		
TDI SA	2		
Technicatome (change in consolidation method)	12		
Tecnimarse	1		
Gemma (France)			7
SMI (Côte d'Ivoire)			18
SGT (USA)			14
DE Canada services Inc (Canada)			16
DE&S (USA)			174
AREVA Inc		2	
Transnuc Ltd		8	
Open Cascade		3	
Cortex		1	
RJH		12	
01db GmbH		0	
Uranium Disposition services		6	
Total	3,231	32	229

Note 3. Other operating income and expenses

<i>(in millions of euros)</i>	2004	2003	2002
Net gains/ (losses) on sales of non-financial non-current assets	(12)	(13)	(24)
Restructuring costs and CATS - CASA retirement plans	(74)	(217)	(345)
Other operating income and expenses	(272)	(321)	(247)
Total	(358)	(551)	(616)

In 2004, restructuring costs and CATS - CASA retirement plans comprised:

- €68 million in respect of the **Energy** Division, compared to €82 million in 2003 and €76 million in 2002,
- €6 million in respect of the **Connectors** Division, compared to €135 million in 2003 and €269 million in 2002.

In 2004, provisions for losses to completion were transferred to gross margin. €28 million was charged to these provisions in 2003. In 2004, other operating income and expenses primarily include decommissioning asset depreciation of €116 million.

In 2003, other operating income and expenses primarily include decommissioning asset depreciation of €120 million, pension and retirement benefit costs and charges to provisions of €71 million and contingency provisions on contracts of €37 million.

In 2002, other operating income and expenses primarily include a €153 million net charge to amortization associated with end-of-life-cycle operations.

Note 4. Other operating income data

<i>(in millions of euros)</i>	2004	2003	2002
Payroll expense	3,554*	2,504	2,728
Workforce at year-end	70,069*	48,011	50,147

* Including proportionately consolidated companies

<i>(in millions of euros)</i>	2004	2003	2002
Depreciation and amortization	612	660	787
Charges to provisions	(505)	(65)	331
(Gains) / losses on disposals of non-financial assets	12	13	24

Note 5. Financial income

<i>(in millions of euros)</i>	2004	2003	2002
Income/(expenses) related to decommissioning portfolio			
Net gain/(loss) on sales of securities	21	83	22
Dividends received	29	33	31
Impairment of securities	62	(101)	(57)
Interest under the Marcoule protocol	(20)	-	-
Decommissioning provision inflation adjustment	(25)	(39)	(30)
Sub-total	67	(24)	(34)
Income/(expenses) unrelated to decommissioning portfolio			
Investment income	53	99	97
Interest expense on loans and lines of credit	(30)	(55)	(87)
Net foreign exchange gain or loss	(2)	(10)	1
Net gain/(loss) on sales of securities	41	288	689
Dividends received	30	32	57
Provisions on securities	7	39	(46)
Other income/(loss) from financial activities	(49)	(35)	(89)
Sub-total	50	358	621
Total	117	334	587

In 2003, income from sales of securities earmarked to fund decommissioning included a gain on Sagem's takeover-merger of Coficem in the amount of €79.5 million.

In 2002, 2003 and 2004, gains on sales of securities unrelated to the decommissioning portfolio pertained to sales of Total shares.

Note 6. Exceptional items

In 2004, exceptional items mainly include the capital gain realized on the sale of the Lyon building of €45 million.

In 2003, exceptional items mainly include the gain on the sale of the MAI division of €65 million, a €20 million reversal of the provision for late payment penalties following the favorable outcome of litigation between the Group and the tax authorities concerning a 1999 dividend distribution, and the €47 million gain on the Brime Technologie public exchange offering for Assystem shares.

In 2002, exceptional items were primarily the €77 million gain on the sale of Sovakle and the €216 million gain on the sale of the Framatome Tower in the Paris area.

Note 7. Income tax**Analysis of income tax expense**

<i>(in millions of euros)</i>	2004	2003	2002
Current taxes - France	(87)	(121)	(184)
Current taxes - other countries	(91)	(30)	(50)
Total current taxes	(178)	(151)	(234)
Deferred taxes	(31)	(33)	14
Total	(209)	(184)	(220)

Reconciliation of income tax expense and income before taxes

<i>(in millions of euros)</i>	2004	2003	2002
Consolidated net income	427	389	240
Minority interests	118	84	86
Income of equity affiliates	(131)	(20)	(83)
Tax charge/(credit)	209	184	220
Income before tax	622	637	463
Theoretical tax credit / (expense)	(217)	(226)	(164)
Reconciliation			
Impact of income taxed abroad	(26)	12	12
Transactions taxed at a reduced rate	68	87	125
Permanent differences	(35)	(52)	(236)
Tax credits and other taxes	16	5	21
Increase/(decrease) in the provision for write-down of deferred tax assets	(31)	(10)	22
Actual tax credit / (expense)	(209)	(184)	(220)

The tax rates used in France are as follows:

Year	2004	2003	2002
Tax rate	34.93%	35.43%	35.43%

Break down of permanent differences *(in millions of euros)*

	2004	2003	2002
Goodwill amortization	(50)	(62)	(209)
Parent / subsidiary tax treatment and inter-company dividends	(3)	(12)	(10)
Non-deductible provisions	6	(9)	(10)
Other permanent differences	12	30	(7)
Total permanent differences	(35)	(52)	(236)

The Group's effective tax rate is as follows:

	2004	2003	2002
Operating income	613	342	180
Financial income	117	334	587
Exceptional items	46	135	289
Total income subject to tax	776	811	1,056
Tax expense	(209)	(184)	(220)
Effective tax rate	26.9%	22.7%	20.8%

Note 8. Goodwill

Movements in goodwill break down as follows as of December 31, 2004:

<i>(in millions of euros)</i>	Opening balance 2004	Acquisitions and disposals	Amortization charge	Currency translation and other	Closing balance 2004
Gross value	3,520	643		(151)	4,012
Depletion, amortization and provisions	(2,255)		(152)	113	(2,294)
Net book value	1,265	643	(152)	(38)	1,718

The acquisition of T&D generated goodwill of €641 million.

<i>(in millions of euros)</i>	Opening balance 2002	Acquisitions and disposals	Amortization	Currency translation and other	Closing balance 2002	Acquisitions and disposals	Amortization	Currency translation and other	Closing balance 2003
Gross value	4,069	77		(328)	3,818	2		(299)	3,520
Depletion, amortization and provisions	(1,874)		(594)	189	(2,280)		(176)	201	(2,255)
Net book value	2,195	77	(594)	(141)	1,538	2	(176)	(98)	1,265

Goodwill <i>(in millions of euros)</i>	Gross value December 31, 2004	Amortization December 31, 2004	Net Book Value December 31, 2004
Energy	1,453	(426)	1 027
ANP GmbH	204	(40)	164
Canberra	93	(19)	74
ANP USA	80	(29)	51
FBFC	111	(69)	42
Cezus	80	(52)	28
ANF GmbH	35	(7)	28
Jeumont SA	66	(53)	13
NDT GmbH	9	(2)	7
T&D	641	(32)	609
Other	134	(124)	10
Connectors	1,512	(1,266)	246
Berg	1,151	(923)	227
Other FCI	361	(342)	19
Holding companies and other operations	1,048	(602)	446
STMicroelectronics	147	(106)	41
AREVA	856	(484)	372
Eramet	44	(11)	33
Cilas	1	(1)	0
Total	4,012	(2,294)	1,718

The breakdown of goodwill, by company, into gross value and amortization as of December 31, 2003 is as follows:

Goodwill <i>(in millions of euros)</i>	Gross value December 31, 2003	Amortization December 31, 2003	Net Book Value December 31, 2003
Energy	831	(357)	474
ANP GmbH	202	(29)	173
Canberra	100	(15)	85
ANP USA	96	(27)	69
FBFC	111	(64)	47
Cezus	80	(48)	32
ANF GmbH	35	(5)	30
Jeumont SA	66	(48)	18
NDT GmbH	9	(1)	8
Other	131	(119)	12
Connectors	1,788	(1,434)	354
Berg	1,241	(978)	263
STMicroelectronics	183	(114)	69
Other FCI	364	(342)	22
Holding companies and other operations	901	(464)	438
AREVA	856	(454)	402
Eramet	44	(9)	35
Cilas	1	(1)	0
Total	3,520	(2,255)	1,265

The **Connectors** Division acquired a number of companies in recent years to achieve global stature in interconnection systems in the telecommunications and IT markets, including its 1998 acquisition of Berg in the United States.

With the bursting of the speculative bubble in late 2000 and the resulting upheaval in the telecommunications and media technologies market, which intensified in the second half of 2001 and continued in 2002, the Group decided to reassess the value in use of this business line in comparison to its acquisition price.

Since 2001, due to changing conditions in the telecommunications market in which FCI's Communications Data Consumer (CDC) business unit operates, AREVA verified the potential loss in value of all tangible and intangible assets of FCI's CDC Business Unit.

Applying methods used in prior years, AREVA estimated the value in use of the Communications Data Consumer business unit's assets as of December 31, 2004 and compared this with the net asset value of the Business Unit.

The value in use was estimated by discounting the unit's future cash flows after tax, excluding the impact of financing on the unit and including the impact of changes in the economic environment and of the business strategy developed for the unit at a rate of 11.1%. This rate is equivalent to a discount rate applied to pre-tax cash flows of 15.9%. The pre-tax discount rate was 14.6% in 2003 and 12.85% in 2002.

Future cash flows were established based on a mid-range plan developed within the CDC division and the **Automotive** Division. These plans assume an annual rate of growth in activity of 2.5% after 2007 (compared to 3.5% in 2003).

No exceptional amortization was recorded as of December 31, 2004 and December 31, 2003. The Group wrote off €730 million of Berg goodwill in 2001 and €275 million in 2002.

The Group also wrote off €8 million in goodwill in 2004, €70 million in 2003, and €163 million in 2002 resulting from the creation of AREVA due to asset disposals and impairments during those accounting periods.

Note 9. Intangible assets

Intangible assets primarily consist of pre-mining expenses.

2004

<i>(in millions of euros)</i>	NBV as of 12/31/2003	Additions	Disposals	Amortizations and provisions	Currency translation differences	Changes in consolidation scope and other changes	NBV as of 12/31/2004
Pre-mining expenses	278	36		(15)	(6)	26	319
Other	204	22	(1)	(66)	(3)	134	289
Total	482	58	(1)	(81)	(9)	160	608

The increase in pre-mining expenses as of December 31, 2004 is primarily attributable to the full consolidation of Katco as from May 1, 2004 and the proportionate consolidation of the mining companies, AMC and Cominak, previously equity accounted (Note 2).

As of December 31, 2004, other intangible assets primarily comprised software (€59 million), licenses and patents (€116 million) and trademarks (€24 million).

2003

<i>(in millions of euros)</i>	NBV as of 12/31/2002	Additions	Disposals	Amortizations and provisions	Currency translation differences	Changes in consolidation scope and other changes	NBV as of 12/31/2003
Pre-mining expenses	273	9		(10)	5	1	278
Other	237	24	(1)	(59)	(10)	15	204
Total	510	33	(1)	(69)	(5)	16	482

As of December 31, 2003, other intangible assets primarily comprised software (€57 million), licenses and patents (€29 million) and trademarks (€17 million).

Capitalized pre-mining expenses

<i>(in millions of euros)</i>	NBV as of 12/31/2003	Increase	Charges to and reversals of amortization	Currency translation differences	Other changes	NBV as of 12/31/2004
Uranium	265	31	(8)	(6)	23	305
Gold	13	5	(7)		3	14
Total	278	36	(15)	(6)	26	319

<i>(in millions of euros)</i>	NBV as of 12/31/2002	Increase	Charges to and reversals of amortization	Currency translation differences	Other changes	NBV as of 12/31/2003
Uranium	260	6	(7)	5	1	265
Gold	13	3	(3)			13
Total	273	9	(10)	5	1	278

Exploration expenses (included in pre-mining expenses in the income statement)

<i>(in millions of euros)</i>	2004	2003	2002
Uranium	13	10	10
Gold	3	2	5
Total	16	12	15

Note 10. Decommissioning assets

In accordance with CRC Regulation No. 2000-06 concerning liabilities (see Note 1), the Group provides the cost of decommissioning its nuclear facilities from the moment they start operating. Conversely, the Group records an asset representing its portion of such costs, amortized at the same rate as the underlying assets and, where appropriate, an asset representing the portion of such costs attributable to third parties, where funding is partially borne by third parties.

Given the material nature of costs to be borne by the Group, they are presented in a separate heading.

<i>(in millions of euros)</i>	Group share			Third-party share	Total 2004	2003	2002
	Gross value	Amortizations	Net value				
Decommissioning	1,617	(554)	1,063	3,668	4,731	6,349	6,492
Waste retrieval and packaging				642	642	2,760	2,731
Total	1,617	(554)	1,063	4,309	5,372	9,109	9,223

2004

<i>(in millions of euros)</i>	NBV as of 01/01/2004	Increase	Decrease	Charges to and reversals of amortizations and provisions	Other changes	NBV as of 12/31/2004
Group share	1,118	49		(113)	8	1,063
Third-party share	7,991	71	(3,741)	(3)	(8)	4,309
Total	9,109	120	(3,741)	(116)	0	5,372

2003

<i>(in millions of euros)</i>	NBV as of 01/01/2003	Increase	Decrease	Charges to and reversals of amortizations and provisions	Other changes	NBV as of 12/31/2003
Group share	1,194	51		(132)	5	1,118
Third-party share	8,029	147	(186)		1	7,991
Total	9,223	198	(186)	(132)	6	9,109

Net decommissioning assets totaled €5,372 million as of December 31, 2004, compared to €9,109 million as of December 31, 2003. The decrease in the third-party share follows the transfer to CEA of project management and funding of clean-up operations at the Marcoule site in accordance with the protocol signed by CEA, AREVA and EDF (see Note 22). The increase in assets is due to the adjustment for inflation and the decrease is due to amortization and expenses invoiced to third parties.

At the end of 2004, the third-party share of decommissioning costs primarily corresponds to expected EDF funding for the La Hague site and CEA-DAM funding for the Pierrelatte site.

Waste retrieval and packaging costs correspond to expected EDF funding of its share of obligations in respect of the La Hague site. These assets will be recovered in the event of signature of an agreement with EDF finalizing the terms and conditions of settlement (see Note 22). In effect, when waste retrieval and packaging services benefit from contractual commitments with third parties covering future costs, no liability or corresponding asset is recorded.

Note 11. Tangible assets

(in millions of euros)	12/31/2004			12/31/2003			12/31/2002		
	Gross value	Depreciation	Net book value	Gross value	Depreciation	Net book value	Gross value	Depreciation	Net book value
Land	238	(81)	157	195	(86)	109	203	(79)	125
Buildings	2,047	(1,259)	789	1,840	(1,149)	691	1,852	(1,111)	740
Plant, equipment and tooling	17,324	(15,035)	2,289	16,773	(14,557)	2,216	16,939	(13,450)	3,489
Other	848	(661)	188	684	(510)	174	691	(514)	177
Tangible assets in progress	277	-	277	391	(134)	257	236	(120)	116
Total	20,735	(17,035)	3,700	19,883	(16,436)	3,447	19,921	(15,274)	4,647

2004

(in millions of euros)	NBV as of 01/01/2004	Additions	Disposals	Depreciation and provisions	Currency translation adjustment	Change in consolidated Group	Other changes	NBV as of 12/31/2004
Land	109	1	(15)	(2)	(2)	61	4	157
Buildings	691	22	(31)	(82)	(10)	160	39	789
Plant, equipment and tooling	2,216	109	(16)	(328)	(14)	107	215	2,289
Other	174	47	(3)	(64)	(2)	48	(12)	188
Tangible assets in progress	257	275	(8)	-	(3)	23	(266)	277
Total	3,447	454	(73)	(476)	(30)	399	(20)	3,700

Changes in the consolidated Group include the entry into the scope of consolidation of T&D for €372 million.

2003

(in millions of euros)	NBV as of 01/01/2003	Additions	Disposals	Depreciation and provisions	Currency translation adjustment	Change in consolidated Group	Other changes*	NBV as of 12/31/2003
Land	125	2	(4)	(7)	(5)	(2)		109
Buildings	740	11	(8)	(73)	(23)	(9)	53	691
Plant, equipment and tooling	3,489	83	(22)	(308)	(24)	(17)	(986)	2,216
Other	177	26	(4)	(52)	(3)	2	28	174
Tangible assets in progress	116	209	(3)	(14)	(8)	(2)	(41)	257
Total	4,647	331	(41)	(454)	(63)	(28)	(946)	3,447

* Including reclassification of provisions for expenses to be incurred (€962 million) (see Note 1.1.).

2002

(in millions of euros)	NBV as of 01/01/2002	Additions	Disposals	Depreciation and provisions	Currency translation adjustment	Change in consolidated Group	Other changes	NBV as of 12/31/2002
Land	158	1	(8)	(4)	(9)	(11)	(2)	125
Buildings	863	18	(7)	(90)	(29)	(60)	45	740
Plant, equipment and tooling	3,009	79	(40)	(551)	(60)	1	1,050	3,489
Other	251	29	(15)	(68)	(5)	3	(18)	177
Tangible assets in progress	1,040	272	(13)	9	(10)	(2)	(1,179)	116
Total	5,321	399	(83)	(704)	(113)	(69)	(104)	4,647

In 2004, the net value of capitalized finance lease contracts was €40 million (€13 million in 2003, €13 million in 2002 and €19 million in 2001).

Note 12. Equity affiliates

The value of Group investments in equity affiliates totaled €1,240 million as of December 31, 2004 €1,492 million as of December 31, 2003, €1,652 million as of December 31, 2002). Dividends of €26.7 million were received in 2004 from equity affiliates (€29.7 million in 2003, €27.5 million in 2002).

(in millions of euros)	2004			2003			2002		
	% interest	Share of net income	Share of net equity	% interest	Share of net income	Share of net equity	% interest	Share of net income	Share of net equity
Assystem group*	-	-	-	-	1	-	38.6	5	34
Comilog**	-	(2)	-	7.7	(12)	15	7.7	1	27
AMC***	-	-	-	40	5	19	40	5	19
Timet Savoie	19.8	1	9	19.8	1	9	19.8	1	10
Cominak Niger***	-	-	-	34	2	10	34	1	8
Katco***	-	6	-	45	0	(7)	45	(3)	(6)
Socodei	49	3	7	49	3	4	49	4	1
Other Energy companies	-	3	13	-	0	11	-	(1)	9
STMicroelectronics****	13.9	74	943	17.3	34	1,144	17.3	75	1,230
Eramet	26.4	48	268	26.5	(14)	230	26.3	(1)	264
Eramet Manganèse Alliages**	-	(2)	-	30.5	1	57	30.5	(6)	56
Total		131	1,240		21	1,492		82	1,652

* The participating interest in Assystem has been recorded in marketable securities since 2003 (Note 17).

** Companies removed from consolidation scope: the interests in Comilog and Eramet Manganèse Alliage were sold on July 1, 2004 (Note 2).

*** Change in consolidation method in 2004 (Note 2).

**** As of December 31, 2004, the Group's percentage control of STMicroelectronics N.V. was 13.9% (17.3 % as of December 31, 2003) and its percentage interest was 10.97% (11.00% as of December 31, 2003), via the following companies:

- AREVA owns 79.0% of FT1CI (63.8% as of December 31, 2003),
- FT1CI owns 45.25% of STMicroelectronics Holding NV (50% as of December 31, 2003),
- STMicroelectronics Holding NV wholly owns STMicroelectronics Holding II B.V. (unchanged on December 31, 2003),
- STMicroelectronics Holding II B.V. owns 30.8% of STMicroelectronics N.V. (34.5% as of December 31, 2003).

AREVA, France Telecom and Finmeccanica, indirect shareholders in STMicroelectronics via their stake in ST Holding II BV., signed a shareholders' agreement in respect of STMicroelectronics. This agreement, renewed on March 17, 2004, establishes the rules governing relations between the parties and seeks to improve the liquidity of their indirect investments in the company and preserve a stable and balanced shareholders' base. It provides AREVA with significant influence over STMicroelectronics.

Note 13. Long-term investments

(in millions of euros)	12/31/2004			12/31/2003			12/31/2002	
	Gross	Provisions	Net	Gross	Provisions	Net	Gross	Net
Equity securities	159	(106)	54	145	(99)	45	137	34
Financial assets earmarked for facility decommissioning	2,377	(96)	2,281	2,393	(159)	2,234	2,184	2,127
Other long-term portfolio investments	380	-	380	380	-	380	-	-
Loans to non-consolidated investments	91	(48)	43	107	(45)	62	114	71
Loans, deposits and other accounts receivable	450	(64)	386	641	(64)	576	410	348
Total	3,457	(314)	3,143	3,666	(367)	3,299	2,845	2,580

Equity securities

The majority of this account corresponds to shares held by COGEMA in companies owning mineral deposits.

Financial assets earmarked for facility decommissioning

Securities portfolio (in millions of euros)	2004	2003	2002
Gross book value	2,377	2,215	2,184
Net book value	2,281	2,056	2,127
Market value excl. deferred taxes	2,398	2,009	1,809
Deferred taxes*	(19)	34	80
Cash and cash equivalents	0	178	0
Total net book value	2,281	2,234	2,127

* 2003 and 2002 tax credit.

Portfolio composition (in millions of euros)	2004	2003	2002
Net book value			
Listed shares	926	905	1,127
Unlisted shares	-	-	170
Equity Funds	772	753	831
Bond and short-term cash funds	584	398	-
Total	2,281	2,056	2,127

Portfolio composition (in millions of euros)	2004	2003	2002
Market value at 12/31			
Listed shares	977	829	954
Unlisted shares	-	-	164
Equity Funds	833	775	691
Bond and short-term cash funds	588	405	-
Total	2,398	2,009	1,809
Breakdown by location*			
Euro zone	1,972	1,638	1,403
Europe excl. euro zone	424	371	406
Other	1	-	-
Total	2,398	2,009	1,809

* Based on market value.

Purpose of portfolio earmarked for decommissioning

As a nuclear operator, the AREVA group has a legal obligation to secure and decommission its facilities when they are shut down permanently. AREVA must also sort and package waste and scrap from past operations or from decommissioning activities as required under regulations then in effect. The waste must ultimately be sent to a permanent disposal site (see Note 22).

To meet this obligation, the Group has deemed it necessary to set up a cash reserve covering future facility decommissioning and waste disposal expenses and has established a special portfolio to cover expenses connected with decommissioning obligations.

The portfolio composition is based on the timing of future expenditure, which will largely occur from 2015 through 2060, and currently consists 25% of interest rate products and 75% of equity, as they generally offer a higher average return over the long-term than other asset categories. The portfolio is invested in European equities, including direct or indirect holdings in publicly traded French companies and in independently managed European equity funds. The portfolio is managed with a long-term approach, involving stable investments. This approach does not preclude arbitrage between individual investments based on their prospects, nor does it prohibit the occasional use of derivatives to optimize the portfolio's return on its holdings. The composition of the portfolio is not meant to be permanent. Equities will be sold and bonds will be acquired several years before decommissioning spending begins.

AREVA relies on outside advisors to monitor portfolio management with a long-term approach and to ensure that the overall approach is consistent with the Group's objective. As from January 1, 2004, overall portfolio performance is benchmarked to the MSCI Equity Europe index for its equity component and to the FTSE euro zone Government Bond aggregate index for its interest rate component.

Listed shares

The portfolio of listed shares is as follows:

Company	Number of shares	Net book value as of December 31, 2004
Suez	22,795,000	435
AGF	845,017	47
Michelin	1,894,225	80
Saint Gobain	6,328,000	228
Schneider	2,220,782	136
Total listed shares		926

Fund management principles

Some of the financial assets earmarked to fund decommissioning expenses are managed by financial institutions investing in mutual funds earmarked for AREVA.

- Interest rate mutual funds

The fund managers must follow strict investment guidelines at all times, listed below:

1. Interest rate funds

Interest rate funds must invest:

- a minimum of 80% of their assets in euro denominated interest rate products;
- no more than 20% of their assets in interest rate products denominated in U.S. dollars or in non-euro zone European Union currencies. The foreign exchange risk must be hedged.

2. Risk evaluation

Investment in equities is not allowed. Each fund's sensitivity to interest rate fluctuations must be between a minimum of 0 and a maximum of 5. Average sensitivity as of December 31, 2004 was 2.16. The securities selected must be rated by Moody's and/or Standard & Poor's in accordance with the table below:

	Moody's	S&P
0 - 1 year	P1	A1
1 - 4 year	Aa3	AA-
4 - 7 years	Aa1	AA+
> 7 years	Aaa	AAA

3. Derivatives

Derivatives are only held to hedge existing positions. The sum of nominal commitments cannot exceed the value of mutual fund assets.

4. Fund valuation

The period-end value of interest rate funds is determined by marking-to-market the securities held by each fund on the last trading day of the year.

AREVA unrealized gains as of December 31, 2004 represented €4.2 million.

- Equity mutual funds

1. Composition of equity mutual funds

Some of the assets serving to fund future nuclear clean-up and decommissioning expenses are invested, with a long-term

objective, in equity mutual funds earmarked for AREVA. These funds are fully invested in equities, with at least 90% permanently invested in equity markets. A fund representing 2% of outstandings is invested in French securities. Funds holding the remaining 98% of outstandings are invested in securities of European Economic Area countries.

2. Risk evaluation

The performance of mutual funds invested in European securities, other than French securities, is benchmarked to the MSCI Europe ex France net dividend reinvested index. The performance of mutual funds invested in French securities is benchmarked to the MSCI France net dividend reinvested index. Performance tracking error for mutual funds as a whole is between 2 and 3 over the long-term. Fund trends therefore closely track the index.

3. Derivatives

Derivatives are only held to hedge existing positions. The sum of nominal commitments cannot exceed the value of mutual fund assets.

4. Fund valuation

In view of their long-term investment objective, these funds are valued at cost in AREVA's books or marked down to their period-end value when appropriate. The period-end value is defined as the higher of the arithmetic average of net asset values over the 24-month period preceding the year-end and the net asset value.

Position at the end of 2004

The portfolio's market value based on year-end closing prices is €2,398 million as of December 31, 2004. The market value net of deferred taxes is €2,379 millions as of December 31, 2004, compared to €2,221 million as of December 31, 2003.

As of December 31, 2004, the portfolio composition was designed to cover all obligations when decommissioning operations are performed.

1. Breakdown of funds earmarked for decommissioning

	Number of units	Unit value	Net asset value	Net book value
	December 31, 2004	(in euros)	of funds	(in millions of euros)
	December 31, 2004	December 31, 2004	(in millions of euros)	December 31, 2004
Earmarked equity funds			832.6	771.7
Earmarked equity funds Europe ex France 1	116,284	1,690.40	196.6	174.1
Earmarked equity funds Europe ex France 2	93,553	1,877.58	175.7	137.2
Earmarked equity funds Europe ex France 3	18,907	7,387.20	139.7	139.7
Earmarked equity funds Europe ex France 4	9,435	16,796.48	158.5	158.5
Earmarked equity funds Europe ex France 5	92,511	1,594.93	147.5	147.5
Earmarked equity funds France 6	2,204	6,666.73	14.7	14.7
Earmarked interest rate funds*			451.5	447.3
Earmarked bonds 1	3,501	21,829.34	76.4	75.6
Earmarked bonds 2	20,001	4,014.35	80.3	79.5
Earmarked bonds 3	2,107	43,575.82	91.8	90.9
Earmarked bonds 4	257,136	353.04	90.8	89.8
Earmarked bonds 5	19,992	4,113.29	82.2	81.6
Earmarked bonds 6	30,000	997.31	29.9	30.0

* Excluding short-term cash funds.

2. Breakdown of earmarked equity funds by sector

Sector	as a percentage of all funds
Energy	12
Utilities	5
Base materials-Chemicals	4
Industry	7
Non-cyclical consumer goods	10
Cyclical consumer goods	9
Health-Pharmaceuticals	9
Bank-Insurance	28
Information technology	4
Telecommunication services	12
Total including liquid assets	100

3. Major securities held by earmarked equity funds

No single security accounts for over 5% of total assets of earmarked equity funds.

Other long-term portfolio investments

This account includes Sagem shares held by the AREVA group with a net book value of €380 million as of December 31, 2004, unchanged on December 31, 2003. The market value of these shares is €483 million as of December 31, 2004, compared to €523 million as of December 31, 2003.

Following Sagem's merger-absorption of Coficem on December 19, 2003, the Sagem share capital reduction on October 21, 2004 and the receipt of double voting rights, AREVA held 21% of the share capital and 23.31% of voting rights as of December 31, 2004, through its subsidiary COGEMA.

On November 19, 2004, AREVA announced that it had exceeded the 20% voting rights threshold in respect of Sagem. In the same document addressed to the French Securities Regulator, the AMF, AREVA stated that it did not intend to take control of Sagem or further increase its shareholding above its current position, and that it had not requested any additional seats on the Sagem Supervisory Board.

In a shareholders' agreement signed on December 12, 2003, between Club Sagem, COGEMA and BNP Paribas, the parties declared that they were not acting in concert since they had no agreement to pursue a common policy regarding Sagem. COGEMA agreed to maintain ownership of Sagem shares received in connection with Coficem's merger for a minimum period of 20 months. After this period, and until the fifth anniversary of the signature of the shareholders' agreement, COGEMA and BNP Paribas are free to sell their shares on the market, subject to a preemptive right by the other parties to the shareholders' agreement, and have agreed not to tender their shares in any public

share-purchase offer unless such share purchase offer has been approved by Sagem's Supervisory Board.

On December 27, 2004, Sagem filed a Public Exchange Offer for Snecma shares, accompanied by a subsidiary Take-Over Bid to purchase such shares. AREVA does not hold any Snecma shares. Following completion of this transaction, estimated results of the public exchange and purchase offers produced by analysts indicate that AREVA will hold 7.4% of the share capital and 11.6% of the voting rights in Sagem.

Given the above, AREVA decided not to equity account its interest in Sagem and to continue to report it in "Other long-term portfolio investments".

Loans to participating interests, loans, deposits and other accounts receivable

Maturing within (in millions of euros)	Gross	Less than 1 year	1 to 5 years	More than 5 years
Loans to participating interests	91	21	32	38
Loans, deposits and other accounts receivable	450	235	164	51
Total	541	256	196	89

In 2004, Loans, deposits and other accounts receivable primarily include a €150 million down payment on the acquisition of a 50% interest in ETC and deposits of \$162 million (€123 million) with the U.S. Customs Service.

The decrease in deposits is mainly due to the consolidation of the company holding the perpetual subordinated bonds (Note 1.1) and, as such, the elimination of the corresponding deposit of €180 million (including interest).

In 2003, Loans, deposits and other accounts receivable primarily include a €150 million down payment on the acquisition of a 50% interest in ETC, the €180 million deposit (including interest) made in connection with a perpetual subordinated bond issue on November 15, 1991 (see Note 19), and deposits of €125 million with the US Customs Service.

Urenco

In 2003, the AREVA group decided to invest in the centrifuge uranium enrichment process. Consequently, AREVA entered into certain agreements with shareholders of Urenco, the owner of this technology, to acquire a 50% interest in ETC. The agreements also sought to obtain the right to use this technology and to

ensure the supply of the centrifuge cascades and related services necessary to the construction of the George Besse II facility. In 2003, AREVA made a €150 million down payment towards the total purchase price for the 50% interest in ETC and for the right to use the centrifuge enrichment technology.

Usec

In 2001, the United States Department of Commerce (DOC) ordered that countervailing duties be levied on enrichment services imported to the United States from France, Germany, the Netherlands and Great Britain. This action followed complaints submitted in December 2000 by the United States Enrichment Corporation (USEC) against Eurodif and Urenco for dumping and unfair subsidies. The level of countervailing duties applied to Eurodif exports to the United States led to €162 million being deposited with the US Customs Services at the end of 2004, recoverable once the case has been adjudicated. The USEC dispute is described in Note 30. This dispute and the amounts deposited with the US Customs Service are not provided as the Group is confident as to the positive outcome of this case.

Note 14. Inventories and work-in-process

(in millions of euros)	2004	2003	2002
Raw materials and other supplies	669	468	475
Goods in process	497	372	404
Services in process	498	381	638
Intermediate and finished products	756	629	724
Total gross value	2,420	1,849	2,242
Provisions for write-down	(332)	(230)	(282)
Total net value	2,088	1,619	1,960

The increase in inventories is primarily due to the acquisition of T&D (inventories of €513 million as of the acquisition date).

Note 15. Trade accounts receivable and related accounts

(in millions of euros)	2004	2003	2002
Gross value	3,357	2,275	2,593
Write-down	(69)	(41)	(41)
Net value	3,288	2,234	2,552

As of December 31, 2004, Trade accounts receivable and related accounts include €1,080 million (gross value) in respect of Transmission and Distribution activities.

Trade accounts receivable (gross value) mature as follows:

2004				
Maturing within (in millions of euros)	Gross	Less than	1 to 5	More than
		1 year	years	5 years
Gross value	3,357	3,032	277	48
Total	3,357	3,032	277	48

2003

Maturing within (in millions of euros)	Gross	Less than	1 to 5	More than
		1 year	years	5 years
Gross value	2,275	1,973	263	39
Total	2,275	1,973	263	39

Note 16. Other accounts receivable

(in millions of euros)	2004	2003	2002
Current accounts of non-consolidated companies	-	-	18
Taxes and social security taxes	341	336	379
Miscellaneous accounts receivable	788	371	496
Deferred tax assets	493	293	231
Other	247	207	276
Total	1,869	1,208	1,400

Current accounts of non-consolidated companies are now included in cash and cash equivalents (Note 17) due to their financial nature.

Deferred tax assets primarily relate to provisions for pensions and retirement benefits and provisions for contingencies and losses not allowable for tax purposes.

Miscellaneous accounts receivable include the CEA receivable in respect of the La Hague and Cadarache workshops (Note 22).

Note 17. Cash and marketable securities

(in millions of euros)	2004	2003	2002
Marketable securities (gross value)	1,367	1,968	3,115
Marketable securities (provisions)	(2)	(4)	(39)
Cash and current accounts	267	72	226
Net value as of December 31	1,632	2,036	3,302

As of December 31, 2004, current accounts net of provisions (€17 million) are reported as cash equivalents. They were included in other receivables as of December 31, 2002 (see Note 16).

Cash and marketable securities**2004**

<i>(in millions of euros)</i>	Number of securities	Gross book value	Net book value	Market value
Marketable securities (maturity > 3 months)				
Listed shares				
- Total	1,837,516	143	143	295
- Alcatel	2,597,435	27	27	30
- Société Générale	1,690,000	104	105	126
- Brime Assystem*	5,672,620	79	79	89
Other		226	225	229
Total marketable securities (maturity > 3 months)		580	578	769
Cash				
- Short-term investments (< 3 months)		787	787	788
- Cash and current accounts		270	267	270
Total cash and marketable securities (maturity < 3 months)		1,057	1,054	1,058
Net value as of December 31, 2004		1,637	1,632	1,827

* The net book value includes redeemable stock subscription warrants (BSAR).

As of December 31, 2004, short-term investments with maturities of less than three months when the investment was made consisted mostly of negotiable debt instruments and short-term cash mutual funds. Unrealized gains are estimated at €1.1 million as of December 31, 2004, compared to €0.6 million as of December 31, 2003 and €0.5 million as of December 31, 2002.

Marketable securities maturing in more than three months include:

- Shares held by AREVA in publicly traded companies, where no specific commitment has been received,
- Brime Assystem shares received as a result of the public exchange offer registered by Brime with the AMF on October 22, 2003, under which AREVA transferred its equity interest in Assystem to Brime Technologies (now renamed Assystem Brime). This interest was equity accounted as of December 31, 2002 (see Note 12). The Assystem Brime shares received by AREVA in consideration for the shares transferred represent 28.83% of the company's share capital. However, pursuant to this transaction and the concomitant termination of the shareholders' agreement, AREVA does not exercise significant influence over Assystem Brime, which is not a strategic investment for the Group. AREVA's interest in Assystem Brime is not therefore equity accounted, but recorded in marketable securities as of December 31, 2003 and 2004.

- Under "Other", bonds and negotiable mid-term debt instruments, some of which serve as security for expenses to be incurred under sales contracts for which customer down payments have been received, and balanced equity/bond funds.

The net book value of cash investments as of December 31, 2004 totaled €1,632 million. After deduction of €943 million in borrowings as of December 31, 2004 (see Note 23), net cash totaled €689 million, compared to €1,236 million as of December 31, 2003 and €731 million as of December 31, 2002 (2002 amounts are restated for interest-bearing advances from customers).

2003

<i>(in millions of euros)</i>	Number of securities	Gross book value	Net book value	Market value
Marketable securities (maturity > 3 months)				
Listed shares				
- Total	2,220,016	165	165	327
- Alcatel	2,597,435	27	27	27
- Société Générale	1,690,000	104	104	118
- Brime Assystem*	5,672,623	79	79	91
Other		298	294	299
Total marketable securities (maturity > 3 months)		673	669	862
Cash				
Short-term investments (< 3 months)		1,295	1,295	1,296
Cash and current accounts		74	72	72
Total cash and marketable securities (maturity < 3 months)		1,369	1,367	1,368
Net value as of December 31, 2003		2,043	2,036	2,230

* The net book value includes redeemable stock subscription warrants (BSAR).

As of December 31, 2003, cash, interest rate mutual funds and bond mutual funds with a net book value of €576 million were reclassified as financial assets earmarked to fund decommissioning expenses (see Notes 1.1. and 13).

2002

<i>(in millions of euros)</i>	Number of securities	Gross book value	Net book value	Market value
Marketable securities (maturity > 3 months)				
Listed shares*				
- Total	5,403,567	310	310	735
- Alcatel	2,597,435	27	13	11
- Société Générale	1,690,000	105	92	94
Other		857	845	859
Total marketable securities (maturity > 3 months)		1,299	1,260	1,699
Cash				
Short-term investments (< 3 months)		1,816	1,816	1,817
Cash and cash equivalents		226	226	226
Total cash and marketable securities (maturity < 3 months)		2,042	2,042	2,042
Net value as of December 31, 2002		3,341	3,302	3,741

* Titres des sociétés cotées classés au 31 décembre 2001 dans les "autres TIAP" (see Note 13).

Cash and cash equivalents as presented in the cash flow statement was determined as follows:

<i>(in millions of euros)</i>	12/31/2004	12/31/2003	12/31/2002
Cash and marketable securities	1,632	2,036	3,302
Less bank accounts in credit	(98)	(71)	(116)
Current accounts - liabilities	(11)	(12)	-
Marketable securities (maturity > 3 months)	(578)	(669)	(1,260)
Cash position reported in cash flow statement	945	1,284	1,926

Note 18. Shareholders' equity

Share capital

As of December 31, AREVA share capital was held as follows:

<i>Net book balance as of December 31</i>	2004	2003	2002
CEA	78.9%	78.9%	78.9%
French State	5.2%	5.2%	5.2%
CDC	3.6%	3.6%	3.6%
Erap	3.2%	3.2%	3.2%
Total	1%	1%	1%
Crédit Agricole Indosuez and employee shareholders	1.6%	1.6%	1.6%
EDF	2.5%	2.5%	2.5%
Holders of equity	96%	96%	96%
Holders of investment certificates	4%	4%	4%
Total	100 %	100 %	100 %

Currency translation reserves

Currency translation reserves represented negative €117 million in 2004, negative €37 million in 2003 and positive €100 million in 2002. Movements primarily reflect changes in the U.S. dollar exchange rate.

Stock option plan

AREVA does not have a stock option plan.

Earnings per share

The average number of shares and investment certificates used to calculate earnings per share in 2004 was 35,442,701 (including 1,429,108 investment certificates), unchanged on 2003 and 2002.

Note 19. Perpetual subordinated debt

Fiscal year 2004

The decrease in perpetual subordinated debt is due to the consolidation as of January 1, 2004 of the investment company

holding the perpetual subordinated debt and the related guarantee deposit (Note 1.1.).

Background

Framatome SA issued 250 perpetual subordinated bonds with a nominal value of \$1,000,000 each on November 15, 1991, which were subscribed directly by financial institutions. These bonds are redeemable only on the liquidation of the company, after other creditors have been fully compensated. However, the issuer has reserved the right to redeem all or part of the bonds in the event of extraordinary circumstances beyond its control during the first fifteen years.

These perpetual subordinated bonds, valued at the exchange rate prevailing on the date of issuance (\$1 = €0.85059), were recorded on the balance sheet as "Perpetual subordinated debt" and retained at historical book value.

The bond coupon, payable in perpetuity on a semi-annual basis, is equivalent to the 6-month Libor rate plus 0.70%.

A US \$76,085,000 deposit, deducted from the issue proceeds and paid to an investment firm, was recorded in "Other long-term investments" until December 31, 2003. In consideration for this deposit, the investment firm will pay AREVA, as of the sixteenth year following the perpetual subordinated bonds issue date, interest equal to the interest due by AREVA to the holders of the perpetual subordinated debt after fifteen years. The deposit is valued at the exchange rate prevailing on the perpetual subordinated bond issue date and is not repayable, except in the event of extraordinary circumstances. It was recorded as an asset at its historical value until December 31, 2003. Accrued interest on this deposit is credited to a financial income account.

Note 20. Minority interests

The largest minority interests are:

<i>(in millions of euros)</i>	12/31/2004	12/31/2003	12/31/2002
STMicroelectronics	214	441	455
Framatome-ANP	356	345	380
Eurodif	118	104	110
Other	88	69	43
Total	776	959	988

The decrease in STMicroelectronics minority interests corresponds to the sale of the shares held indirectly by France Telecom (see Notes 2.1. and 12).

Note 21. Pensions and other retirement obligations

Group companies, in accordance with laws and practices prevailing in the various countries where they operate, may pay retirement bonuses to their retiring employees, based on their compensation and seniority. Long-service jubilee payments and early retirement pensions are sometimes due in France and in Germany, while complementary pensions may contractually guarantee a given level of income to certain employees. Certain Group companies also grant other post-retirement benefits, such as the reimbursement of medical expenses. These defined benefit plans are recorded in accordance with the accounting method defined in Note 1.15.

Each year, independent actuaries determine the Group's obligations as of the year-end.

In some companies, these obligations are covered in whole or in part by insurance policies or external retirement funds. In such cases, the obligations and the covering assets are valued independently. The difference between the obligation and the assets is either a financing surplus or deficit. A provision is recorded in the event of a deficit and an asset is recorded in the event of a surplus, subject to specific conditions.

The Group signed a number of CATS - CASA early retirement plans in 2002 and 2003. As of December 31, 2004, 14 group companies had established CATS - CASA plans, in respect of which provisions of €151 million were recorded as of this date.

The main event in 2004 was the integration of the T&D Division into the AREVA group. As of December 31, 2004, the T&D Division represented obligations of €189 million, for plan assets of €16 million.

Balance sheet reconciliation

(in millions of euros)	12/31/2004	12/31/2003	12/31/2002
Total provisions for pensions and other employee benefits	853	609	568
Total pension scheme assets	(32)	(42)	(43)
Subsidiaries not evaluated	(29)	(18)	(9)
Total	792	549	516
Severance pay on retirement	156	103	96
Pension plan	99	(7)	6
Early retirement	374	308	220
Medical expenses	139	135	186
Long service jubilees	24	10	9

CATS, CASA and CASAIC plans are included in the early retirement plans.

The main actuarial assumptions used in determining the Group's obligations are as follows:

	2004	2003	2002
• Inflation	2%	2%	1.5%
• Discount rate			
- Euro zone	4.5%	5.5%	5.5%
- Dollar zone	6%	6.15%	7.25%
- CAD zone	6%	6%	N/A
• Average return on retirement assets:			
- Euro zone	5.5%	5.5%	5.5%
- Dollar zone	7.31%	7.84%	7.87%
- CAD zone	7.04%	7.5%	
• Annual social security ceiling increase (after inflation)	0.5%	0.5%	0.5%

- Mortality tables used:
 - Annuity tables for pension obligations,
 - TV 88-90 for one-time payments.
- Retirement age: 63 for management personnel, 61 for non-management personnel.
- Average employee attrition rate for each Group company at a declining rate reflecting age brackets.

Salary increase assumptions net of inflation (weighted average based on the number of employees in each company)

	Management personnel			Non-management personnel		
	2004*	2003	2002	2004*	2003	2002
< 30 years old	3.54%	2.69%	2.88%	2.06%	1.82%	1.58%
30 - 39 years old	2.70%	2.16%	2.16%	1.80%	1.62%	1.48%
40 - 49 years old	2.06%	1.68%	1.70%	1.55%	1.30%	1.22%
50 - 54 years old	1.70%	1.31%	1.40%	1.42%	1.13%	1.09%
55 years old and above	1.50%	1.08%	1.22%	1.26%	0.80%	0.73%

* The assumed rate of salary increase includes changes in consolidation scope.

Assumed rate of increase in medical expenses in the United States

Year	
2004	11%
2005	10%
2006	9%
2007	8.50%
2008	8%
2009	7.50%
2010	7%

Financial assets:**Europe**

Type of asset	2004	2003	2002
Cash	19%	9%	8%
Bonds	67%	82%	86%
Equity	11%	7%	6%
Property	3%	2%	1%

United states

Type of asset	2004	2003	2002
Cash	0%	5%	11%
Bonds	41%	46%	51%
Equity	58%	49%	37%
Property	0%	0%	1%

Effective rate of return on plan assets

Effective rate of return on plan assets	2004
Europe	5.69%
United States	8.71%

Net book value of pension obligations

As of December 31, 2004

	Severance pay on retirement	Pension plan		Early retirement		Medical expenses	Jubilees	Total	Total	Total
		Funded	Not funded	Funded	Not funded					
<i>(in millions of euros)</i>										
Present value of the obligation	270	554	201	707	352	196	24	1,531	773	2,304
Plan assets at fair value	(79)	(452)	0	(343)				(874)	-	(874)
Unrecognized actuarial gains and losses	(35)	(156)	(46)	(161)	(34)	(55)	-	(352)	(135)	(487)
Unrecognized past service cost	0	(2)	1	(120)	(27)	(2)	-	(123)	(28)	(151)
Limit on the recognition of plan assets	-									
Total net amount recognized	156	(57)	156	83	291	139	24	183	610	792

Expense recorded in 2004

<i>(in millions of euros)</i>	Severance pay on retirement	Pension plan	Early retirement	Medical expenses	Jubilees	Total
Current service cost		12	26	65	3	107
Interest cost		13	40	51	9	113
Expected return on plan assets		(5)	(29)	(19)	0	(52)
Amortization of actuarial gains and losses		(0)	8	9	1	18
Amortization of past service cost		0	0	12	0	13
Curtailment/Settlement		(2)	(2)	(7)	0	(8)
Net periodic benefit cost		17	43	111	13	190

As of December 31, 2003

	Severance pay on retirement	Pension plan		Early retirement		Medical expenses	Jubilees	Total	Total	Total
		Funded	Not funded	Funded	Not funded					
<i>(in millions of euros)</i>										
Present value of the obligation	173	498	85	540	306	161	10	1 211	562	1,773
Plan assets at fair value	(76)	(434)	0	(341)	-	-	-	(851)	-	(851)
Unrecognized actuarial gains and losses	8	(126)	(28)	(25)	(17)	(26)	0	(143)	(71)	(214)
Unrecognized past service cost	(2)	(3)	1	(123)	(32)	-	-	(128)	(31)	(159)
Total net amount recognized	103	(65)	58	51	257	135	10	89	460	549

As of December 31, 2002

<i>(in millions of euros)</i>	Severance pay on retirement	Pension plan	Early retirement	Related benefits	Total
Present value of the obligation	179	481	575	239	1,474
Plan assets at fair value	(76)	(399)	(324)	(14)	(813)
Unrecognized actuarial gains and losses	(3)	(31)	(4)	(8)	(46)
Unrecognized past service cost	(5)	(45)	(27)	(22)	(99)
Total net amount recognized	95	6	220	195	516

Total expense for the year**Expense recorded in 2003**

<i>(in millions of euros)</i>	Severance pay on retirement	Pension plan	Early retirement	Medical expenses	Jubilees	Total
Current service cost	10	24	87	3	1	125
Interest cost	10	33	37	8	0	88
Expected return on plan assets	(4)	(26)	(18)	0	0	(48)
Amortization of actuarial gains and losses	0	5	1	1	(1)	6
Amortization of past service cost	1	0	3	0	0	4
Curtailment/Settlement	(9)	(1)	38	1	(1)	28
Net periodic benefit cost	8	35	148	13	(1)	203

Expense recorded in 2002

<i>(in millions of euros)</i>	Severance pay on retirement	Pension commitments	Related benefits	Total
Current service cost	10	48	5	63
Interest cost	9	55	13	77
Expected return on plan assets	(1)	(46)	(1)	(48)
Amortization of actuarial gains and losses	-	1	1	2
Amortization of past service cost	1	4	-	5
Curtailment/Settlement	(7)	93	1	87
Net periodic benefit cost	12	155	19	186

Change in the provision

	2004	2003	2002
Provision movement:			
Opening balance	549	516	403
Currency difference	(5)	(13)	1
Change in Group structure	167	(25)	(2)
Net periodic benefit cost	190	203	186
Contributions/benefits paid	(109)	(132)	(72)
Net book balance as of December 31,	792	549	516

Note 22. Provisions for contingencies and losses

2004

<i>(in millions of euros)</i>	Opening balance	Charge	Utilization	Reversals (not utilized)	Account transfers, changes in consolidation scope and FOREX rate	Closing balance
Decommissioning of nuclear facilities	8,458	140	(1,735)	(7)	(42)	6,814
Waste retrieval	3,858	100	(2,286)	(82)	(146)	1,444
Decommissioning obligations	12,316	240	(4,021)	(89)	(188)	8,258
Restoration of mining sites and decommissioning of uranium processing plants	69	7	(23)	-	(1)	52
Site clean-up, reconstitution of other industrial sites and general clean-up	-	8	(1)	-	75	82
Contingency provisions	342	157	(151)	(89)	247	506
Restructuring and layoff plans	139	21	(61)	(17)	152	234
Provisions for contract completion	430	40	(81)	(4)	52	437
Other	87	34	(31)	(15)	(12)	63
Provisions excluding end-of-life-cycle obligations	1,067	267	(348)	(125)	513	1,374
Total provisions	13,383	507	(4,369)	(214)	325	9,632

Changes in consolidation scope primarily concern the acquisition of T&D for €456 million.

2003

<i>(in millions of euros)</i>	Opening balance	Charge	Utilization	Reversals (not utilized)	Account transfers, changes in consolidation scope and FOREX rate	Closing balance
Decommissioning of nuclear facilities	8,504	17	(209)	-	146	8,458
Waste retrieval	3,779	44	(31)	-	66	3,858
Decommissioning obligations	12,283	61	(240)	-	212	12,316
Restoration of mining sites and decommissioning of uranium processing plants	90	6	(24)	-	(3)	69
Contingency provisions	436	168	(124)	(31)	(108)	342
Restructuring and layoff plans	183	110	(138)	(14)	(2)	139
Contract performance risk	1,372	30	(63)	(12)	(897)	430
Other	120	20	(55)	(7)	9	87
Provisions excluding end-of-life-cycle obligations	2,202	334	(404)	(64)	1,001	1,067
Total provisions	14,485	395	(644)	(64)	(789)	13,383

2002

<i>(in millions of euros)</i>	Opening balance	Charge	Utilization	Reversals (not utilized)	Account transfers, changes in consolidation scope and FOREX rate	Closing balance
Decommissioning of nuclear facilities	1,759	6,850	(189)	(1)	85	8,504
Waste retrieval	1,000	2,766	(34)	-	47	3,779
Decommissioning obligations	2,759	9,616	(223)	(1)	132	12,283
Restoration of mining sites and decommissioning of uranium processing plants	112	14	(24)	-	(12)	90
Contingency provisions	479	159	(140)	(59)	(2)	436
Restructuring and layoff plans	183	140	(154)	(4)	18	183
Contract performance risk	1,384	189	(151)	-	(50)	1,372
Other	199	26	(33)	(2)	(70)	120
Provisions excluding end-of-life-cycle obligations	2,357	528	(502)	(65)	(116)	2,202
Total provisions	5,116	10,144	(725)	(66)	16	14,485

Decommissioning provisions

The table below summarizes the AREVA balance sheet accounts affected by the accounting treatment of decommissioning operations in 2004, 2003 and 2002.

<i>ASSETS (in millions of euros)</i>	12/31/2004	<i>LIABILITIES AND SHAREHOLDERS' EQUITY</i>	12/31/2004
Decommissioning assets (Note 10)	5,372	Decommissioning provisions	8,258
- AREVA share*	1,063	- funded by AREVA	3,948
- third-party share**	4,309	- funded by third parties**	4,309
Long-term financial portfolio*** (Note 13)	2,281		
<i>ASSETS (in millions of euros)</i>	12/31/2003	<i>LIABILITIES AND SHAREHOLDERS' EQUITY</i>	12/31/2003
Decommissioning assets (Note 10)	9,109	Decommissioning provisions	12,316
- AREVA share*	1,118	- funded by AREVA	4,325
- third-party share**	7,991	- funded by third parties**	7,991
Long-term financial portfolio*** (Note 13)	2,234		
<i>ASSETS</i>	12/31/2002	<i>LIABILITIES AND SHAREHOLDERS' EQUITY</i>	12/31/2002
Decommissioning assets (Note 10)	9,223	Decommissioning provisions	12,283
- AREVA share*	1,194	- funded by AREVA	4,254
- third-party share**	8,029	- funded by third parties**	8,029
Long-term financial portfolio*** (Note 13)	2,127		

* Amount of total provision to be funded by AREVA, still subject to amortization.

** Amount of total provision to be funded by third-parties.

*** Portfolio of financial assets earmarked to finance AREVA's share of the total provision.

Nature of commitments

As a nuclear operator, the AREVA group has a legal obligation to secure and decommission its facilities when they are shut down permanently. The Group must also package, in accordance with prevailing standards, the various waste types generated by operating activities, which could not be processed on line. Group facilities subject to these obligations include facilities in the front end of the fuel cycle, in particular Eurodif's enrichment plant in Pierrelatte, but they are predominantly facilities at the back end of the fuel cycle, including the treatment plants at Marcoule and La Hague and the uranium/plutonium (Mox) fuel fabrication plants. Lastly, like any nuclear operator, the Group is responsible for the facilities that it operates but does not own, such as the CEA facilities at Pierrelatte.

Under certain circumstances, essentially in the case of used fuel treatment services, customers have agreed to fund a portion of the cost related to decommissioning operations and to the disposal of final waste, of which they remain the owners. These contractual arrangements have the effect of transferring the financial impact of decommissioning and waste disposal from the Group to third parties.

The expenses relating to these commitments will be incurred between 2005 and 2060, based on forecast facility shut-down and the scheduling of operations.

Determination of decommissioning provisions

Decommissioning provision

Decommissioning obligations are calculated facility by facility as follows:

Group decommissioning activities correspond to the following end state: civil engineering infrastructures cleaned-up on site, with all nuclear waste areas reclassified as conventional waste areas. This corresponds to a decommissioning level between levels 2 and 3 of the International Atomic Energy Agency (IAEA) scale, currently under review.

SGN, an engineering firm that served as prime contractor for the construction of the majority of the Group's treatment and recycling facilities, was deemed the most qualified to select methods to decommission these facilities and prepared detailed decommissioning and waste management cost estimates. Eurodif prepared the decommissioning cost estimates for the enrichment business.

Estimates are revised each year to take inflation into account. Changes in estimates are recorded on the income statement. The impact of inflation is recorded under financial income and

expenses when a special portfolio of assets has been set up to cover the decommissioning cost.

Cost estimates will be updated if and when legislation changes or substantial technological developments can be anticipated. In any event, the Group has decided to update its estimates at least once every six years.

Waste retrieval and packaging

Valuations are based on technical assumptions and a performance schedule.

Costs are estimated based on summary draft engineering studies covering the investment necessary for waste retrieval and an internal appraisal of waste retrieval and packaging operating costs.

Permanent waste disposal, waste retrieval and packaging

In the absence of firm supplier commitments for permanent waste disposal, waste retrieval and packaging, provisions for waste owned by the Group were based on technical and financial assumptions determined by it. Permanent waste disposal plans (high and medium grade long-lived waste under the French waste classification system) will eventually be decided under programs established by law No. 91-1381, now incorporated in article L. 542-1 et seq. of the French environment law Code.

Uncertainties surrounding the cost of permanent waste disposal, waste retrieval and packaging are as follows:

- the key features of the French national program for the disposal of high and medium grade long-lived waste have not yet been established. The government is to present an evaluation report to Parliament in 2006 on research done on these waste types, accompanied by proposed legislation authorizing, where appropriate, the development of a deep repository for high-grade, long-lived waste.
- cost estimates vary depending on the approach envisaged and the type of waste stored. The valuation performed by Andra in 1996, assuming total treatment of used fuel produced by existing nuclear facilities, presented an estimated cost of €14.7 billion under 2003 economic conditions. The Group waste disposal provision is based on a cost approximately 30% lower than this estimate. The Group's own comparative analyses of international waste disposal rates offered by existing repositories for these same types of waste indicate that Andra's estimates are generally very high. The Group decided not to discount these provisions. The provision recorded in the financial statements is sufficient to cover the discounted value of the highest cost scenario for deep repository storage applicable in France.

- AREVA's share of such costs is currently 5% but could change in line with volumes produced by the Group compared with volumes produced by other producers.
- the split between medium and high-grade long-lived waste of the cost of a potential deep repository could also impact AREVA's share of such costs.
- the start-up date of industrial commissioning and the operating life of the facility are not yet known precisely.

Under the aegis of the French government's Department for Energy and Raw Materials, a working group was formed in 2004 bringing together representatives of the Budget and Treasury Departments, Andra, EDF, AREVA and CEA. The aim of this working group was to obtain agreement on the main assumptions, the calculation methodology and the inclusion of uncertainties in the determination of benchmark costs for a deep geological repository.

2003/2004 changes

Revised cost estimates for back-end decommissioning

In 2004, the Group completed the review of decommissioning cost estimates for the Melox, UP2 400 and UP2800-UP3 plants in La Hague. These new estimates were prepared using the Véritas-certified ETE-Eval model. They integrate updated techno-economic data, thereby benefiting from experience. The revised estimates confirmed preceding valuations with a total overall variance of less than 5% in absolute values. These new estimates have been taken into account in the 2004 financial statements.

Simplification of clean-up responsibilities at back-end sites

Following the approach launched in 2002 by EDF, CEA and AREVA, with the approval of the French State, 2004 saw the signature of a number of agreements clarifying the responsibilities of each player at the Marcoule, La Hague and Cadarache sites:

Marcoule

CEA, EDF and COGEMA signed a memorandum of understanding in December 2004 concerning Marcoule and covering the transfer to CEA of project management and funding responsibilities for site clean-up operations, effective December 1, 2004. This memorandum of understanding does not encompass the cost of permanent waste disposal, retrieval and packaging.

This protocol provides for a full and final payment by EDF and COGEMA covering their respective shares in the cost of decommissioning CEA. COGEMA's commitment under

January 2004 economic conditions of €427 million, provided in the financial statements at the end of 2003, was paid 50% at the end of 2004 and 50% at the beginning of 2005, by deduction from financial assets earmarked for end-of-life cycle obligations (long-term portfolio securities).

As COGEMA no longer has any financial commitment in respect of the Marcoule site, other than the cost of deep repository storage which remains provided, and as the agreements provide for the transfer of nuclear operator status to CEA, the provision of €3,945 million recorded at the end of 2003 and the corresponding third-party asset share were reversed in 2004. Given administrative time periods, the transfer of nuclear operator status should become effective in 2005.

Cadarache

An agreement between CEA and COGEMA, signed in December 2004, provides for a full and final balancing payment by CEA to COGEMA, in consideration for the transfer of full responsibility for the cost of cleaning-up the Cadarache Mox fuel production workshop. This workshop ceased commercial production in July 2003. At the end of 2004, COGEMA recorded a provision covering 100% of the cost estimate for clean-up operations (compared to 62% previously) and recorded a receivable from CEA for the amount attributable to it.

La Hague

An agreement between CEA and COGEMA, signed in December 2004, provides for a full and final balancing payment by CEA to COGEMA, in consideration for the transfer of full responsibility for the cost of cleaning-up the Elan 2 B workshop in La Hague, which was the sole remaining workshop owned by CEA in La Hague. At the end of 2004, COGEMA recorded a provision covering 100% of the cost estimate for clean-up operations and recorded a corresponding receivable from CEA.

In addition, this agreement defines contractually CEA's commitment to fund its share of waste retrieval and packaging costs in respect of waste produced by former treatment contracts.

La Hague waste retrieval and packaging operations

Certain waste produced by old used fuel treatment contracts could not be processed on-site as the support packaging workshops were not yet available. Such waste must, therefore, be retrieved and packaged in accordance with procedures and technical options approved by Safety authorities. Certain of these options are still under review.

The Group undertook an in-depth review of this account in 2004 with a review of the cost estimate to include:

- the extension of the contractual scope of services requested by EDF pursuant to ongoing negotiations (inclusion of certain waste produced by the REP contract terminated at the end of 2001),
- the results of summary preliminary estimates which refined the cost of technical options under development,
- with an update to the respective shares of CEA and EDF in the funding of these operations based on the CEA agreement and to the technical scope currently under negotiation with EDF.

The Group records the portion of these operations funded by third parties in the same way as other contracts. In effect, they form part of packaging optimization services regularly provided by the La Hague plant to its customers. The customers continue to own the packaged waste and must bear the cost of permanent disposal. As such, following CEA's contractual commitment formalized by the agreement of December 2004, CEA's share in the funding of these operations is not included in the provision and corresponding third-party assets as of December 31, 2004. The payment by CEA will be recorded in advances on receipt and released to sales as and when services are performed. EDF's share will be treated in the same way once an agreement has been signed between the parties.

EDF/COGEMA negotiations

EDF and COGEMA embarked on framework agreement negotiations to establish,

Firstly:

- the legal and financial terms of a transfer to COGEMA of EDF's current financial obligations with respect to decommissioning operations at the La Hague site (including, conceivably, a full and final payment to settle EDF's long-term commitment). Nonetheless, an agreement was signed between the parties at the end of September 2003 setting their respective shares in the funding of decommissioning operations at the La Hague site.
- the financial participation of EDF and COGEMA covering their respective waste retrieval and packaging obligations at the La Hague and Saint-Laurent-des-Eaux sites;

Secondly:

- the financial terms of the future used fuel treatment contract beyond 2007.

Given the comprehensive nature of these negotiations, AREVA maintained in its 2004 financial statements, in respect of these decommissioning costs, the shares used at the 2003 year-end. Based on available appraisal details, the financial statements and financial position of the Group should not be materially affected. Negotiations are still in progress; EDF requested the extension of the scope of negotiations to include front-end supply contracts.

Funding of decommissioning and waste retrieval expenses

AREVA has set aside a portion of its cash holdings to fund future decommissioning and waste retrieval operations through a special financial portfolio recorded on the balance sheet under "Other long-term investments" (see Note 13).

Contingency provisions

As of December 31, 2004, contingency provisions were as follows:

<i>(in millions of euros)</i>	2004	2003	2002
Provisions for contingencies on contracts	29	22	224
Provisions for losses to completion	87	99	91
Provisions for litigation	27	10	17
Provisions for losses and exchange rate	-	-	2
Provisions for environmental risk	8	-	14
Provisions for tax risk	26	27	21
Provisions for customer warranties	220	119	12
Provisions for work-in-process	-	-	15
Provisions for fines and penalties	20	3	-
Other provisions	89	62	40
Total	506	342	436

€240 million of the increase in contingency provisions is attributable to T&D.

Restructuring and layoffs

Provisions for restructuring totaled €234 million in 2004 (€139 million in 2003, €183 million in 2002). The provisions include €173 million for layoff plans and €60 million for site closures and related expenses.

These provisions, including a forecast layoff plan spending schedule and the personnel involved, are indicated below:

Company	Site closures and related costs	Layoff plans	Forecast layoff plan spending schedule			Estimated workforce
			2005	2006	2007	
<i>(in millions of euros)</i>						
Framatome-ANP	1	1	1	-	-	21
AREVA T&D	58	96	67	20	9	2,240
COGEMA	1	11	2	5	4	151
FCI	-	65	36	28	1	336
Total	60	173	106	53	14	2,748

Layoff provisions are generally recorded when plans are submitted to employee representatives. Layoff plans may concern total or gradual activity terminations, changes in employee assignments or, to a lesser extent, negotiated departures.

Provisions for contract completion

These provisions, covering future expenses on contracts considered closed out, represented €436 million as of December 31, 2004, compared to €430 million as of December 31, 2003 and €410 million as of December 31, 2002. These provisions correspond to additional services, such as waste storage or treatment, that must be rendered under contract, after margins on the activity have already been recognized using the company's accounting method.

As of December 31, 2002, loss provisions included provisions for expenses to be incurred of €962 million. These provisions correspond to depreciation on assets purchased by the Group and funded under certain sales contracts, when the depreciation period exceeds the term of the contract. These provisions have been transferred to depreciation.

<i>(in millions of euros)</i>	2004	2003	2002
Provision for contract completion	436	430	410
Provision for expenses to be incurred	-	-	962
Total	436	430	1,372

Note 23. Borrowings

<i>(in millions of euros)</i>	2004	2003	2002
Bond issues (in French francs)	3	4	2
Interest-bearing advances	449	416	
Loans from financial institutions	235	248	2,001
Short-term bank facilities	98	71	116
Other borrowings*	158	61	98
Total	943	800	2,217

** including finance leases: 49 13 15

Borrowings include the borrowings of Lilly Financial Corporation Ltd (Note 1.1). Interest-bearing advances have been considered borrowings since December 31, 2003 (Note 24).

Borrowings by maturity, by currency and by type of interest rate:

<i>(in millions of euros)</i>	2004	2003	2002
Borrowings maturing in less than one year	262	164	1,092
Borrowings maturing in one to five years	434	483	1,118
Borrowings maturing in more than five years	247	153	7
Total	943	800	2,217

<i>(in millions of euros)</i>	2004	2003	2002
Euro	600	569	1,334
US dollar	51	8	653
Borrowings denominated in other currencies	293	223	230
Total	943	800	2,217

<i>(in millions of euros)</i>	2004	2003	2002
Fixed rate borrowings	131	173	494
Floating rate borrowings	812	627	1,723
Total	943	800	2,217

Major loans

Unless they have been swapped, floating rate loans are linked to Libor or Euribor.

<i>(in millions of euros)</i>	2004
COGEMA	
Floating rate loan 2000/2006 (CAD 255 million)	155
6% interest only loan 2000/2007 (CAD 54 million)	38
Framapar	
1997/2005 loan	14

Guarantees and covenants

No assets have been pledged to secure any loans or borrowings, except for assets financed under lease arrangements.

Covenants

Certain loan agreements to finance Group subsidiaries such as CRI Canada include covenants such as:

- Gearing ratios at Group level, calculated on the basis of Group equity or cash flow. These types of ratios did not apply at the 2004 year-end as the Group maintained a positive cash position.
- Debt service. None of these ratios approach the thresholds included in the agreements.

Note 24. Advances and prepayments

<i>(in millions of euros)</i>	2004	2003	2002
Trade advances and prepayments	3,234	2,448	2,860
Customer advances and prepayments invested in non-current assets	1,092	1,167	1,206
Total	4,326	3,615	4,066

This account comprises non-interest bearing operating and capex advances received from customers pursuant to contractual commitments. The advances are reimbursed by deduction from sales invoiced under these contracts, which primarily concern sales of fuel, used fuel treatment and recycling services and AREVA T&D's Systems activity. As of December 31, 2003 and 2004, inter-bearing advances are recorded in Borrowings.

Only advances and prepayments effectively collected are recorded as a liability.

Customer advances and prepayments invested in non-current assets comprise amounts received from customers and used to finance non-current assets allocated to the performance of long-term contracts to which they have subscribed, running until 2015.

Trade advances and prepayments comprise amounts received from customers under contracts which do not provide for any material non-current asset financing. In the case of long-term contracts, the amount recorded in the balance sheet represents the balance net of advances and prepayments received and sales invoiced or recognized on a percentage completion basis; it also includes interest income calculated on cash surpluses generated by these advances and prepayments, the amount of which is determined on an individual contract basis.

The increase in advances and prepayments as of December 31, 2004 is attributable to advances and prepayments received by T&D as of December 31, 2004 of €541 million.

Note 25. Other liabilities

<i>(in millions of euros)</i>	2004	2003	2002
Taxes and social security liabilities	1,026	812	1,081
Deferred tax liabilities	335	259	146
Other liabilities	838	418	521
Total	2,200	1,488	1,748

The acquisition of T&D generated an increase in other liabilities of €506 million.

Deferred tax liabilities reflect, for the most part, the impact of tax-driven provisions (accelerated depreciation) recorded in France by certain AREVA companies.

Other liabilities include the balancing payment due to CEA (see Note 22) of €212 million.

Note 26. Cash from operating activities

Change in working capital requirements

<i>(in millions of euros)</i>	2004	2003	2002
Change in inventories and work-in-process	(12)	258	59
Change in accounts receivable and other receivables	(248)	235	(7)
Change in accounts payable and other liabilities	380	(13)	(789)
Change in advances and prepayments received	276	(103)	579
Change in advances and prepayments made	(39)	2	53
Total	357	379	(104)

Note 27. Related party transactions

The consolidated financial statements include normal business transactions with companies in which the Group may have non-consolidated participating interests or with companies consolidated under the equity method or with shareholders holding more than 5% of AREVA's equity.

	2004	
<i>(in millions of euros)</i>	CEA	STMicroelectronics
Loans (including short-term loans) to non-consolidated companies	-	-
Guarantees given to unconsolidated companies	-	-
Sales	495	-
Purchases (including €427 million CEA payment)	485	46

<i>(in millions of euros)</i>	2003	
	CEA	STMicroelectronics
Loans (including short-term loans) to non-consolidated companies	-	-
Guarantees given to unconsolidated companies	-	-
Sales	343	-
Purchases	75	24

<i>(in millions of euros)</i>	2002	
	CEA	STMicroelectronics
Loans (including short-term loans) to non-consolidated companies	-	-
Guarantees given to unconsolidated companies	-	-
Sales	303	-
Purchases	57	49

Note 28. Financial instruments

General objectives and counterparty risk management

The Group uses derivatives to manage its exposure to currency and interest rate risks, fluctuations in commodity prices and changes in the price of certain publicly traded securities. Excluding specific situations (notably comprehensive foreign exchange hedges during offer periods), these instruments are generally considered hedges of Group assets, liabilities and specific commitments.

The Group controls the counterparty risk associated with these instruments by centralizing the commitments and by implementing a series of procedures that specify the limits and characteristics of the counterparty for each type of instrument.

Management of interest rate risks and commodity price risk is centralized by the parent exposure directly implement their strategy in conjunction with the parent company company. Foreign exchange risk is also usually managed by the parent company on behalf of the subsidiaries. The few subsidiaries that manage their foreign exchange.

Foreign exchange risk management

AREVA trades currencies on forward markets and uses derivative products to hedge or manage:

- the foreign exchange risk exposure of subsidiaries engaged in international trade as a result of firm commitments or highly probable future cash flows. For certain contracts, the trade risk in the offer stage is hedged by highly specific insurance contracts (e.g. Coface contracts) or on a comprehensive basis within the Group. Firm commitments are systematically hedged when they incept. Other exposure may be identified through an annual or multi-annual budget, in which case the risk hedged corresponds to a certain percentage of the estimated budget. Risks are hedged for a maximum period of three years.
- the balance sheet exposure on loans to subsidiaries made in currencies other than reporting currency.

Foreign currency cash positions are managed using currency swaps.

Interest rate risk management

The Group uses several types of financial instruments, in line with market conditions, to allocate its debt between fixed rate and floating rate obligations and to manage its investment portfolio. The Group primarily uses swaps for debt management and cash management purposes. Interest rate futures are used to manage medium-term investments.

Commodity risk management

The Group uses financial instruments, including futures, commodity swaps and options, to reduce its exposure to commodity price volatility for commodities used in manufacturing, especially copper and gold, and to hedge its sales as a producer, especially for COGEMA's gold mining subsidiaries. All hedging activities are budget-based.

Equity risk management

To manage its long-term investment positions, the Group may elect to use puts and calls backed by equities held in the portfolio. No such transaction was pending as of December 31, 2004.

Market value of financial instruments

The market value of financial instruments was provided by counterparty banks and financial institutions or calculated using standard methods based on market conditions at the year-end.

Breakdown of forex hedges by exposure type

<i>(in millions of euros)</i>	USD for EUR	CAD for EUR	GBP for EUR	JPY for EUR	USD for EUR	CHF for EUR	NZD for EUR	Others	Total
Balance sheet exposure	(344)	(156)	(32)	(2)	-	-	(110)	-	(644)
Trade exposure									
- Highly probable commitments (budget)	(139)	(13)	-	-	(111)	-	-	-	(263)
- Firm commitments	(543)	23	(12)	(22)	-	49	0	(56)	(561)
Total	(1,026)	(146)	(44)	(23)	(111)	49	(110)	(56)	(1,467.5)

Notional amounts of contracts by maturity date as of December 31, 2004

<i>(in millions of euros)</i>	2005	2006	2007	2008	2009	> 5 years	Total	Market Value Value (difference)
FOREIGN EXCHANGE INSTRUMENTS								
Currency swaps - Borrower								
US dollars for euros	528	36	13	5	4	1	587	34
Canadian dollars for euros	158						158	1
Yen for euros	34						34	0
US dollars for canadian dollars	8						8	1
Pounds sterling for euros	54						54	0
Other currencies	51	1					52	1
Currency swaps - Lender								
US dollars for euros	130	11					141	(9)
Canadian dollars for euros	45	1	3				50	0
US dollars for canadian dollars	6						6	0
Swiss francs for euros	27	3					30	0
Pounds sterling for euros	27						27	0
Yen for euros	3						3	0
Other currencies	19	2					20	0
Forward transactions - Buyer								
US dollars for euros	61	13	2	1	0		76	(8)
US dollars for canadian dollars	10						10	0
Yen for euros	9	5					14	(1)
Swiss francs for euros	57	10					67	0
Pounds sterling for euros	33	6					39	(1)
Other currencies	39	2	1	1			43	(1)
Forward transactions - Seller								
US dollars for euros	240	109	22	2			373	42
US dollars for euros (Coface*)	217	20	8	7			252	54
US dollars for australian dollars	79	40					119	13
Yen for euros	3	3	1				7	1
Swiss francs for euros	27	21					48	0
Pounds sterling for euros	36	0					37	1
Pounds sterling for euros (Coface*)	15						15	0
NZ dollars for euros	110						110	0
Other currencies	50	5	2	0	0	0	58	3
Currency options								
Calls - buyer								
Euros for US dollars	1						1	0
Pounds sterling for canadian dollars	10						10	0
Calls - seller								
Euros for US dollars								
Puts - Seller								
Euros for pounds sterling	4						4	
Euros for US dollars	8						8	0
Collars								
US dollars for euros	22						22	7

* Including all Coface contracts, whether or not in effect.

Notional amounts in foreign currency have been translated into euros based on year-end closing exchange rates, except for currency swaps.

Notional amounts of contracts by maturity date as of December 31, 2003

<i>(in millions of euros)</i>	<i>Fixed rate</i>	2005	2006	2007	2008	2009	> 5 years	Total	Market value (difference)
INTEREST RATE INSTRUMENTS									
Interest rate swaps fixed payer									
US dollar 2.535% - 3.92%		110	7					117	0
Interest rate swaps - fixed receiver									
Euro*				38					9
US dollar			132					1,321	7

* Floating-rate payer swap in CAD (currency swap).

Notional amounts of contracts by maturity date as of December 31, 2003

<i>(in millions of euros)</i>	2005	2006	2007	2008	2009	> 5 years	Total
COMMODITIES AND EQUITIES							
Commodities							
Gold							
Forward transactions - buyer	17.1						17.1
Forward transactions - seller		25.8					25.8
Options - buyer CALL							
Copper							
Forward transactions - buyer	14.0						14.0
Options - buyer CALL	7.6						7.6
Options - buyer PUT							
Silver							
Forward transactions - buyer			0.3				0.3
Options - buyer CALL							
Options - buyer PUT							
Stock derivatives							
Puts and calls							
Equity swaps							

Note 29. Commitments given or received

AREVA has established a procedure to identify and confirm off-balance sheet items disclosed in these notes. This procedure includes a definition of the main categories of commitments and their evaluation methods. It also includes a method to collect and control the data, relying largely on confirmations from third parties.

Off-balance sheet commitments

<i>(in millions of euros)</i>	12/31/2003	12/31/2004	Maturity < 1 year	Maturity 1 to 5 years	Maturity > 5 years
COMMITMENTS GIVEN	1,522	2,430	778	1,254	398
Operating commitments given	583	2,131	638	1,114	378
Contract guarantees given	582	1,992	557	1,091	344
Bid guarantees	-	43	25	16	3
Performance guarantees	-	1,417	288	870	260
Guarantees covering the repayment of advances	-	25	18	7	0
Guarantees dispensing guarantee retentions	-	92	16	52	24
After-sales warranties	-	94	58	28	7
Other contract guarantees	-	321	153	118	50
Other operating guarantees	1	139	81	24	35
Financing commitments given	224	51	19	23	9
Comfort letters	38	5	1	0	4
Endorsements	106	1	0	1	0
Guarantees and surety	56	36	11	21	4
Pledges	6	1	1	0	0
Mortgages	19	4	4	0	0
Other financing commitments	0	4	1	2	1
Other commitments given	715	247	120	116	11
Financial recovery clauses	2	7	0	1	6
Vendor warranties	116	66	14	51	0
Subsidies subject to contingent repayment	1	6	1	2	3
Discounted notes not yet matured	0	5	5	0	0
Other commitments given	597	164	100	62	2
COMMITMENTS RECEIVED	46	701	44	369	289
Operating commitments received	12	250	28	190	33
Contract guarantees received	12	250	28	190	33
Financing commitments received	14	15	8	2	5
Personal/corporate and asset-backed guarantees	14	15	8	2	5
Other commitments received	20	436	8	177	251
Vendor warranties	0	426	0	176	250
Financial recovery clauses	1	0	0	0	0
Other commitments received	18	10	8	2	0
RECIPROCAL COMMITMENTS	1,981	1,004	936	17	51
Authorized credit lines not drawn	622	557	531	11	15
Major capex orders	18	12	12	0	0
Documentary credit	1	38	4	0	34
Security call or put options	1,338	388	388	0	0
Security piggyback arrangements	0	0	0	0	0
Other reciprocal commitments	2	8	1	6	1

AREVA Group's off-balance sheet commitments are presented by economic purpose: operating commitments, financing commitments and other commitments. This breakdown has been adopted for both commitments given and received. A third type of commitment, reciprocal commitments, is also identified. These correspond to commitments accepted by the Group where a third-party guarantee is received in return.

Commitments given

Commitments given are up €908 million compared to 2003. This increase primarily concerns contract guarantees and is attributable to the integration of the **Transmission & Distribution** Division; the issue of guarantees represents an inherent part of this division's activity.

Operating commitments represent 88% of commitments given. Two-thirds of such guarantees are performance guarantees.

The Group gave a parent company guarantee to the customer TVO in the amount of its total commitment under the EPR reactor contract in Finland and received from Siemens a guarantee in the amount of its share. The net commitment given by the Group of between €1.5 and €2 billion is not included in the summary table.

Commitments received

Commitments received are up €655 million compared to 2003. This increase is primarily due to environmental and general vendor warranties received by Alstom on the acquisition of the **Transmission & Distribution** Division.

Reciprocal commitments

Reciprocal commitments are stable on 2003. This was the result of a scissor effect comprising an increase resulting from the collection, in 2004, of reciprocal multi-year firm purchase and sale commitments and the removal of the commitment to purchase the Alstom T&D Division, following completion of this transaction.

Other commitments

The Framépargne employee stock fund included in the AREVA group savings plan owns 306,810 shares of the company. These shares are not publicly traded and, as provided by the law on employee savings plans, the fund benefits from a liquidity guarantee. This guarantee was given by an independent financial institution and expires on December 31, 2005. Subsequently, to allow this commitment to come into effect, the company gave a value guarantee covering the same period. This guarantee concerns 253,765 shares sold by Framépargne. A €18.0 million provision was recorded in this

respect as of December 31, 2004. The company estimates the commitment in respect of the residual guarantee at €6.2 million as of December 31, 2004.

AREVA gave a commitment to the shareholders of Urenco to acquire a 50% participating interest in the British company ETC. This commitment represents a maximum of €388.3 million, in addition to the €150 million paid on the date of signature of the memorandum of agreement and recorded in the balance sheet under other long term investments (see Note 13). This commitment was revised using the Euribor rate as settlement will occur after December 31, 2004 and by December 31, 2005, at the latest. A number of guarantees and conditions precedent apply to this commitment.

- approval by European antitrust authorities,
- approval by the German, the Netherlands, United Kingdom and French governments.

Approval was received from European antitrust authorities in October 2004.

Shareholders' agreements

• AREVA–Siemens shareholders' agreement

The shareholders' agreement signed in 2001 between Framatome SA (absorbed in 2001 by AREVA) and Siemens, provides for the exercise of a put option (by Siemens in respect of Framatome-ANP shares held by it) and a call option (by Framatome-ANP in respect of Framatome-ANP shares held by Siemens) under the following terms and conditions.

Firstly, the put and call options may only be exercised after a period of "deadlock" defined by the shareholders' agreement and resulting, in particular, from the inability to make certain decisions (such as the closure of a site, amendment to the bylaws, etc.) or failure by Siemens to approve the financial statements during two fiscal periods. The shareholders' agreement provides that after a period of 11 years, i.e., from 2012, the parties will be free to exercise the put and call options without any pre-conditions.

Siemens will be free to exercise a put option enabling it to sell all its shares to AREVA, based on an expert opinion, and AREVA will be free to exercise a call option enabling it to buy all Framatome-ANP shares held by Siemens, based on an expert opinion.

• AREVA–STMicroelectronics shareholders' agreement

The STMicroelectronics shareholders' agreement includes anti take-over provisions involving the issue of preferred shares to its signatories. These procedures may only be triggered by a signatory of the shareholders' agreement, after which they apply to all signatories.

• In the second half of 2004, Synatom, a subsidiary of Electrabel with an 11% minority interest in Eurodif, announced its intention to sell this interest to COGEMA. A college of three experts was appointed by the parties to value Eurodif. On conclusion of this valuation, which should be completed in the first half of 2005, Synatom will be entitled to sell its interest to COGEMA at the price determined by the college of experts. If Synatom does not exercise this option, COGEMA will be entitled to purchase Synatom's minority interest in Eurodif at the same price.

Note 30. Disputes and contingent liabilities

Tax disputes

During 2003 and 2004, the French tax authorities conducted an audit of consolidated income reported by the AREVA group for fiscal years 2000 and 2001. This audit has now been completed and the definitive financial implications are recorded in the financial statements.

Legal proceedings filed by the associations *Sources et Rivières du Limousin* and *France Nature Environnement*

On November 3, 2004, the French Supreme Court rejected the appeal filed by COGEMA following the decision rendered by the Limoges Court of Appeal Investigation Chamber on March 25, 2004. COGEMA was referred to the Court of Summary Jurisdiction, which will consider the facts and the charges facing COGEMA of dumping waste and damage to fish wildlife. COGEMA must prove that it has always complied with regulations guaranteeing the absence of any health risk to the population and wildlife. The associations *Sources et Rivières du Limousin* and *France Nature Environnement* filed legal proceedings in 1999 for the pollution of various lakes, streams and rivers in Haute Vienne.

Exelon

During the first half of 2003, Exelon, a Framatome-ANP Inc. customer, submitted a claim concerning nuclear fuel under warranty.

Exelon, having observed leaking fuel rods in a few assemblies charged in its reactors, for which technical origin and responsibility have still to be determined, decided unilaterally:

- to suspend the contract "for cause",
- to unload the assemblies ahead of schedule, along with other assemblies of the same type present in one of its reactors and considered suspect and plans to take the same steps with regards to two other reactors.

The warranty claim for "burn-up guarantee not met" is being contested by Framatome-ANP.

A commercial agreement involving the return of the fuel rods and an extension of the suspended contract was signed on August 28, 2004, bringing an end to this customer dispute.

ISF2

The ISF2 project concerns the construction of a dry storage unit for nuclear fuel (RBMK) in Ukraine.

In May 2004, the customer wrote to Framatome-ANP advising it that the condition of the assemblies did not comply with the contractual documents. Without prejudicing the contractual positions of either party and independent of commercial and financial negotiations pending, a memorandum of understanding was signed on July 17, 2004 by the three parties: Framatome-ANP, a representative of the customer (PMU) and the nuclear plant, demonstrating clearly their desire to cooperate in order to achieve completion of the project.

At the customer's request, Framatome-ANP drafted a technical solution taking into account the possibility that the customer may not be able to establish the actual state of fuel assemblies (contractual responsibility of the customer).

In November 2004, this solution was presented to donating countries in the presence of all interested parties (EBRD, Framatome-ANP, Customer, Ukrainian Safety Authorities).

From a legal standpoint, the experts confirm that were legal proceedings to be filed in this respect, the probability of Framatome-ANP winning the case is high.

The final decision of the donating countries remains subject to prior approval by the Ukrainian Safety Authorities of the proposed solution. Technical discussions will continue during the first half of 2005 and the decision of the Ukrainian Safety Authorities will not be issued until the actual position of the fuel assemblies is clearly established by the customer.

Pending determination of this position, Framatome-ANP updated the contract margin assessment parameters to take account of customer requests concerning fuel diameter, certain agreed modifications and additional remuneration reasonably expected.

Mc Clean

On September 23, 2002, the Federal Court of Canada, ruling on a claim filed by the Inter-Church Uranium Committee Educational Cooperative (ICUCEC) against the nuclear safety authority for violating the licensing process, canceled the permit to operate the McClean uranium mine and mill issued by the Atomic Energy Control Board (AECB) in 1999. The Canadian Nuclear Safety Commission (CNSC), which replaced

the AECB, and COGEMA Resources Inc. have appealed this decision and requested the right to continue operations at McClean pending a decision on their appeal. On November 7, 2002, a judge designated by the Federal Court of Appeal of Canada granted the Group's request for a stay on the lower court decision. On June 4, 2004, the Federal Court of Appeal of Canada validated the permit to operate the Mc Clean mine. The plaintiff appealed this decision in September 2004.

USEC litigation

The United States Department of Commerce (DOC) ordered that countervailing duties be levied on enrichment services imported to the United States from France, Germany, the Netherlands and Great Britain. This action followed complaints submitted in December 2001 by the United States Enrichment Corporation (USEC) against Eurodif and Urenco for dumping and unfair subsidies. The level of countervailing duties applied to Eurodif exports to the United States led to €162 million being deposited with the U.S. Customs Services at the end of 2004, recoverable once the case has been adjudicated.

The Eurodif defense is based on administrative proceedings before the US Department of Commerce and a legal proceeding before the US Court of International Trade (CIT):

- In February 2003, Eurodif asked the DOC to revise provisional countervailing duties paid in 2001 and 2002. The definitive administrative decisions concerning the revision of these duties were notified in July and September 2004. The level of countervailing duties, after revision, was reduced by approximately 80% compared with provisional duties. Provisional duties paid in respect of 2003 are currently being revised.
- In April 2002, Eurodif instigated appeal proceedings before the US Court of International Trade (CIT).

The CIT issued favorable decisions in March 2003 and September 2003, supporting Eurodif's legal analysis. Following these decisions, the US Court of Appeal for the Federal Circuit (CAFC) was seized at the beginning of 2004 and a decision is expected in 2005 on the application of dumping and unfair subsidy procedures to uranium enrichment services. A favorable decision by the CAFC would cancel the administrative procedure implemented by the US Department of Commerce.

This dispute and the amounts deposited with the US Customs Service are not provided as the Group is confident as to the positive outcome of this case.

Investigations in progress

An investigation carried out by the European Commission into alleged anti-competition practices between GIS suppliers, highlighted practices completely unknown to AREVA at the time of acquisition. AREVA cooperated fully with the Commission in establishing the facts. The Commission has not yet issued a "notice of grievances" against AREVA, which does not know the legal nature of the facts concerned. AREVA associated Alstom in all activities before the Commission, as it considers that a claim may be valid under the vendor warranties granted by Alstom.

This investigation led to investigations by antitrust authorities in Hungary, New Zealand, Australia and Mexico. AREVA wishes to eradicate all anti-competition practices identified and has had various discussions with the Commission on actions taken to ensure such eradication. AREVA is currently implementing a compliance program within all its activities.

Administrative sanctions taken against a Mexican subsidiary of AREVA T&D

Proceedings have been instigated by Mexican authorities against a subsidiary of AREVA T&D for illegal anti-competition practices which could lead to this company not being allowed to bid for public contracts. AREVA successfully initiated an action to suspend application of the decision. The final decision should be issued shortly. As the facts currently under investigation pre-date the acquisition of T&D by AREVA, they should not be attributed to AREVA, which furthermore holds vendor warranties granted by Alstom.

Note 31. Subsequent events

A CASA early retirement agreement was signed by AREVA T&D on January 17, 2005. This agreement concerns 82 employees in France. An amendment to this agreement is currently under negotiation with labor representatives to extend it to cover 406 employees meeting the age criteria provided in this agreement.

On March 3, 2005, the US Court of Appeal for the Federal Circuit (CAFC) confirmed that COGEMA/Eurodif sales constitute enrichment services, rendering illegal under US law the anti-dumping and subsidy protection measures implemented since 2001 by the US Department of Commerce. This decision should bring an end to all procedures currently underway.

Note 32. Scope of consolidation

FC: full consolidation

PC: proportionate consolidation

EM: equity method

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
NUCLEAR						
Front End Division						
AMC	Sudan		PC	40	EM	40
ANF GmbH Advanced Nuclear Fuels - 49811 Lingen	Germany		FC	66	FC	66
Cerca SA - 92400 Courbevoie	France	572 205 433	FC	66	FC	66
Cezus SA - 92400 Courbevoie	France	71 500 763	FC	66	FC	66
Cie de française de Mokta (CFM) 78140 Vélizy-Villacoublay	France	552 112 716	FC	100	FC	100
Cie Française de Mines et Métaux (CFMN) 78140 Vélizy-Villacoublay	France	300 574 894	FC	100	FC	100
Cigar Lake	Canada		PC	37	PC	37
CMA	Côte d'Ivoire		FC	90	FC	90
COGEMA Australia - Sydney - NSW 2000	Australia		FC	100	FC	100
COGEMA Minerals Corporation (COMIN) - 82604 Mills NY	USA		FC	100	FC	100
Cominak - Niamey	Niger		PC	34	EM	34
Cominor	France	422 123 984	FC	100	FC	100
Comurhex - 78140 Vélizy-Villacoublay	France	712 007 962	FC	100	FC	100
CRI CAN	Canada		FC	100	FC	100
CRI USA	USA		FC	100	FC	100
Eurodif Production - 26700 Pierrelatte	France	307 146 472	FC	59.65	FC	59.65
Eurodif SA - 78140 Vélizy-Villacoublay	France	723 001 889	FC	59.65	FC	59.65
FBFC SNC - 92400 Courbevoie	France	300 521 754	FC	66	FC	66
FBFC International SA - 1000 Bruxelles	Belgium		FC	66	FC	66
Fragema GIE ME - 69006 Lyon	France	338 344 658	FC	66	FC	66
Frog's leg	Australia		PC	51	PC	51
Interuranium Australia	Australia		FC	100	-	-
Katco	Kazakhstan		FC	51	EM	45
Le Bourneix (SMB) - 78140 Vélizy-Villacoublay	France	323 097 899	FC	100	FC	100
McArthur	Canada		PC	30	PC	30
McClellan	Canada		PC	70	PC	70
Midwest	Canada		PC	70	PC	70
Mineraus	Australia		FC	100	FC	100
Mines de Jouac (SMJ) - 78140 Vélizy-Villacoublay	France	303 697 924	FC	100	FC	100
MUL	Canada		FC	100	FC	100
PMC USA	U.S.A.		FC	100	FC	100
SET (Société d'Enrichissement du Tricastin) 4, rue Paul-Dautier - Vélizy-Villacoublay	France	440 252 666	FC	100	-	-
SMI	Côte d'Ivoire		FC	51	FC	51
Socatri	France	302 639 927	FC	59.65	FC	59.65
Sofidif	France	303 587 216	FC	60	FC	60
Somaïr - Niamey	Niger		FC	63.40	FC	63.40
Timet Savoie SA - 95023 Cergy-Pontoise	France	408 579 084	EM	19.80	EM	19.80
Urangesellschaft - 60486 Frankfurt	Germany		FC	100	FC	100

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
Urangesellschaft USA	USA		FC	100	FC	100
Uranium Disposition Services LLC	USA		PC	31.68	PC	31.68
White Foil	Australia		PC	51	PC	51
Reactors and Services Division						
Canberra Eurisys SA	France	384 449 773	FC	100	FC	100
Canberra CO (APTEC Instruments Ltd)	Canada		FC	100	FC	100
Canberra Dover Inc.	USA		FC	100	FC	100
Canberra Eurisys Maintenance SA	France	322 522 681	FC	99.98	FC	99.98
Canberra Inc.	USA		FC	100	FC	100
Canberra Eurisys Benelux	Belgium		FC	100	FC	100
Canberra Eurisys Gmbh	Germany		FC	100	FC	100
Canberra Industrie Inc	USA		FC	100	FC	100
CNSV	Belgium		FC	100	FC	100
Canberra Harwell	UK		FC	100	FC	100
Canberra Aquila	USA		FC	100	FC	100
MCS	USA		FC	55	FC	55
OAK Ridge	USA		FC	100	FC	100
Canberra Japan	Japan		FC	100	FC	100
Euriware SA	France	320 585 110	FC	100	FC	100
Geraco	France	432 125 664	FC	100	FC	100
Groupe Euriware	France	378 566 343	FC	100	FC	100
PEA Consulting	France	592 029 128	FC	100	FC	100
SICN	France	325 720 209	FC	100	FC	100
Mécagest	France	350 357 596	FC	100	FC	100
Mécachimie	France	304 864 036	FC	100	FC	100
Sofinel	France	312 664 824	EM	29.70	EM	29.70
NNS SNC - 69006 Lyon	France	333 824 530	FC	39.60	FC	39.60
Jeumont SA - 92400 Courbevoie	France	341 805 836	FC	66	FC	66
Sarelem SA - 92400 Courbevoie	France	319 606 091	FC	66	FC	66
Somanu SA - 92400 Courbevoie	France	328 946 231	FC	66.17	FC	66.17
Jeumont EOLE-Tour AREVA, 1 place de la Coupole - 92400 Courbevoie	France	410 343 669	FC	66	-	-
Cte-Ndt SA - 94583 Rungis	France	308 548 742	FC	66	FC	66
Framex South Africa - 8000 Cape Town	South Africa		FC	66	FC	65.92
Intercontrole SA - 94583 Rungis	France	305 254 526	FC	66	FC	66
LNS	South Africa		EM	29.70	EM	29.70
NDT Gmbh	Germany		FC	66	FC	66
SGT - LTD	USA		PC	33	PC	33
FANP Canada Ltd - Services	Canada		FC	66	FC	66
Technimarse	Spain		FC	66	-	-
01DdB Métravib - 69670 Limonest	France	409 869 708	FC	82.27	FC	74.43
01DB Italia	Italy		PC	41.14	PC	37.21
01DB Brésil	Brazil		FC	51.01	PC	46.15
Aesse	Italy		PC	41,14	PC	37.21
01DBINC	USA		FC	82.27	PC	37.21
Technicatome SA - 91190 Gif-sur-Yvette	France	772 045 879	FC	83.58	FC	83.58
ELTA	France	388 919 177	FC	55.15	FC	55.15
Technoplus Industries -13170 Les Pennes-Mirabeau	France	338 296 478	FC	83.58	FC	83.58

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
Principia RD - 83507 La Seyne-sur-Mer	France	320 786 171	FC	52.66	PC	20.89
Isis Mpp - 31084 Toulouse	France	325 517 621	FC	71.64	FC	71.64
Principia Marine	France	384 408 993	FC	26.85	PC	10.66
Axylia	France	380 094 235	FC	83.58	FC	83.58
Helion	France	435 050 737	FC	83.58	FC	83.58
Corys Tess 38000 Grenoble	France	413 851 924	EM	28.42	EM	28.42
RJH	France	448 727 859	FC	69	FC	69
Open Cascade	France	420 919 805	FC	52.66	PC	20.90
01dB GmbH	Germany		FC	53.47	FC	48.37
Cortex	Germany		FC	82.33	FC	74.43
DGI 2000	France	331 813 378	-	Merger	FC	100
Eurodoc	France	349 617 084		Divestment	FC	100
Euriware Group	France	318 132 040	-	Merger	FC	100
At Industrie	France	379 385 982	-	Merger	FC	100
Gemma	France	332 201 664		Divestment	FC	100
Signum	South Africa			Deconsolidated	EM	32.34
Incore Services SA - 44472 Carquefou	France	872 802 848		Merger	FC	66
Visionic SA - 45600 Sully-sur-Loire	France	326 382 900		Merger	FC	66
Metravib - 69670 Limonest	France	400 660 577	-	Merger	FC	74.39
Back End Division						
Cie Nucléaire de services (CNS)	France	401 649 363	FC	51	FC	51
COGEMA Engineering	USA		FC	100	FC	100
COGEMA Logistics	France	602 039 299	FC	100	FC	100
ESI	France	400 013 629	FC	53.65	FC	53.65
Eurisys Corporation (Cogema Services)	USA			Merger	FC	100
GADS	France	420 952 194	FC	67.06	FC	67.06
Gamma Assistance	France	350 322 293	FC	67.06	FC	67.06
Gie Commox	France	331 102 624	FC	100	FC	100
Lemaréchal	France	323 266 460	FC	100	FC	100
Mainco	France	350 130 167	FC	100	FC	100
Melox 78140 Vélizy-Villacoublay	France	378 783 237	FC	100	FC	100
MSIS	France	327 492 336	FC	67.06	FC	67.06
NHC - 20814 Bestheda Maryland (Numatec Hanforf Cop)	USA		FC	100	FC	100
Polinorsud	France	343 008 231	FC	67.06	FC	67.06
RTC	France	331 055 947	FC	67.06	FC	67.06
Séchaud et Metz - 92260 Fontenay-aux-Roses	France	652 030 677	EM	34	EM	34
SGN - 78 180 Montigny-le-Bretonneux	France	612 016 956	FC	100	FC	100
Socodei - 95613 Eragny-sur-Oise	France	380 303 107	EM	49	EM	49
Sogéfibre - 78180 Montigny-le-Bretonneux	France	351 543 004	FC	100	FC	100
STMI	France	672 008 489	FC	67.06	FC	67.06
STMILOG	France	388 398 059	FC	67.06	FC	67.06
Transnuc LTD (TN Tokyo)	Japan		FC	100	FC	100
Transnucléaire US	USA	—	FC	100	FC	100
Trihom	France	378 649 040	FC	44.26	FC	44.26
Valfibre - 50700 Valognes	France	950 619 890	FC	99.90	FC	99.90
Nuclear legal entities covering several divisions						
Fanp SAS - 92400 Courbevois	France	428 764 500	FC	66	FC	66
Fanp, Inc. - Corporate	USA		FC	66	FC	66

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
ANP GmbH, 91058 Erlangen	Germany		FC	66	FC	66
COGEMA SA	France	305 207 169	FC	100	FC	100
COGEMA Allemagne	Germany		FC	100	FC	100
COGEMA Inc.	USA		FC	100	FC	100
FUSA (Framatome USA Inc.)	USA		FC	66	FC	66
T&D Division						
AREVA T&D Egypt S.A.E	Egypt		FC	100	-	-
AREVA T&D Parafoudres SA	France	424 783 645	FC	100	-	-
AREVA T&D AB	Sweden		FC	100	-	-
AREVA T&D AG	Switzerland		FC	100	-	-
AREVA T&D Algeria SPA	Algeria		FC	100	-	-
AREVA T&D AS	Norway		FC	100	-	-
AREVA T&D Australia Ltd	Australia		FC	100	-	-
AREVA T&D Austria AG	Austria		FC	100	-	-
AREVA T&D Beijing Switchgear Co. Ltd	China		FC	100	-	-
AREVA T&D Belgium SA	Belgium		FC	100	-	-
AREVA T&D Canada Inc.	Canada		FC	100	-	-
AREVA T&D Chile SA	Chile		FC	100	-	-
AREVA T&D de Energia Ltda	Brazil		FC	100	-	-
AREVA T&D EBT SA	France	389 191 412	FC	100	-	-
AREVA T&D Energietechnik GmbH	Germany		FC	100	-	-
AREVA T&D Enerji Endustrisi A.S	Turkey		FC	100	-	-
AREVA T&D FIR S.P.A	Italy		FC	100	-	-
AREVA T&D Hellas A.E.	Greece		FC	100	-	-
AREVA T&D Holding SA	France	449 834 308	FC	100	-	-
AREVA T&D Hungaria Kft	Hungary		FC	100	-	-
AREVA T&D HVDC India Ltd	UK		FC	100	-	-
AREVA T&D Inc.	USA		FC	100	-	-
AREVA T&D International Egyth for electricity SAE	Egypt		FC	100	-	-
AREVA T&D Italy Spa	Italy		FC	100	-	-
AREVA T&D Japan KK	Japan		FC	100	-	-
AREVA T&D Kazakhstan LLP	Kazakhstan		FC	100	-	-
AREVA T&D Long & Crawford Ltd	UK		FC	100	-	-
AREVA T&D Ltd China	China		FC	100	-	-
AREVA T&D Ltd Thailand	Thailand		FC	49	-	-
AREVA T&D Malaysia Sdn Bhd	Malaysia		FC	100	-	-
AREVA T&D Maroc	Morocco		FC	100	-	-
AREVA T&D Middle East FZE	Arabia		FC	100	-	-
AREVA T&D Nederland BV	Netherlands		FC	100	-	-
AREVA T&D Power Electronics Ltd Int	UK		FC	100	-	-
AREVA T&D Protection & Controle SA	France	343 074 142	FC	100	-	-
AREVA T&D Pte Ltd	Korea		FC	100	-	-
AREVA T&D SA	France	389 191 800	FC	100	-	-
AREVA T&D SA (Poland)	Poland		FC	100	-	-
AREVA T&D SA Colombia	Colombia		FC	100	-	-
AREVA T&D SA de CV	Mexico		FC	100	-	-
AREVA T&D SA Spain	Spain		FC	100	-	-
AREVA T&D Sachsenwerk GmbH	Germany		FC	100	-	-

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
AREVA T&D Schorch Transformatoren GmbH	Germany		FC	100	-	-
AREVA T&D Sénégal	Senegal		FC	100	-	-
AREVA T&D Service Auckland New-Zealand	New-Zealand		FC	100	-	-
AREVA T&D Shanghai Power Automat. Co Ltd	China		FC	59	-	-
AREVA T&D Shanghai Transformer Co Ltd	China		FC	52	-	-
AREVA T&D Spa	Italy		FC	100	-	-
AREVA T&D SPR International Ltd	UK		FC	100	-	-
AREVA T&D Suzhou High Voltage Switch Co	China		FC	80	-	-
AREVA T&D Sverdlovsky Electromechanic Plant	Russia		FC	98.37	-	-
AREVA T&D Transformateurs de Mesure SA	France	343 074 092	FC	100	-	-
AREVA T&D UK Ltd	UK		FC	100	-	-
AREVA T&D Vakuumschalttechnik GmbH	Germany		FC	100	-	-
AREVA T&D Venezuela SA	Venezuela		FC	100	-	-
Laboratoire Oksman-Seraphin	France	321 735 789	FC	100	-	-
P. T. Alstom Distribution	Indonesia		FC	100	-	-
PRO RMK Banglore India	India		FC	100	-	-
PT Alstom Transmission Indonesia	Indonesia		FC	100	-	-
PT Unelec indonesia	Indonesia		FC	67.65	-	-
Suzhou AREVA T&D Switchgear Ltd SPA	China		FC	58	-	-
SYS PCA Buenos Aires Argentina	Argentina		FC	100	-	-
Connectors Division						
Berg UK Ltd, Dunstable	U.K.		FC	100	FC	100
FCI Asia Technology Pte Ltd Singapore 049908	Singapore		FC	100	FC	100
FCI Automotive France SA – 28230 Epernon	France	775 678 980	FC	100	FC	99.95
FCI Electronics Mexico S de RL de CV - Chihuahua, Mexico	Mexico		FC	100	FC	100
FCI Trésorerie SA – 78000 Versailles	France	393 476 783	FC	100	FC	100
FCI Americas International Holding Inc., Manchester, NH 03109	USA		FC	100	FC	100
FCI Americas Technology Inc., Manchester, NH 16830	USA		FC	100	FC	100
FCI Américas, Inc. Manchester, NH 16831	USA		FC	100	FC	100
FCI Asia Pte Ltd - Singapore 049908	Singapore		FC	100	FC	100
FCI Austria GmbH – A 5230 Mattighoffen	Austria		FC	100	FC	100
FCI Automotive Deutschland GmbH - 90411 Nürnberg	Germany		FC	100	FC	100
FCI Belgium NV – 2800 Mechelen	Belgium		FC	100	FC	100
FCI Besançon SA - 25000 Besançon	France	388 636 896	FC	100	FC	99.95
FCI Brasil Ltda - CEP 04901-020 São Paulo	Brazil		FC	100	FC	100
FCI Canada Inc. – Scarborough Ontario M1P 2G9	Canada		FC	100	FC	100
FCI Connectors Australia Pty Ltd Smithfield NSW 2164	Australia		FC	100	FC	100
FCI Connectors España SA - 08635 San Esteve de Sesrovires	Spain		FC	100	FC	100
FCI Connectors Hong Kong Ltd, Tsimshatsui, Kowloon	China		FC	100	FC	100
FCI Connectors Malaysia Sdn Bhd– 47400 Petaling Jaya, Selangor	Malaysia		FC	100	FC	100
FCI Connectors Trading (Shanghai) Co, Ltd	China		FC	100	-	-
FCI Connectors UK Ltd - LU5 4TS Dunstable	UK		FC	100	FC	100
FCI Connectors UK Ltd, Dunstable	UK		FC	100	FC	100
FCI Deutschland GMBH - 65824 Schwalbach	Germany		FC	100	FC	100

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
FCI Dongguan Co. Ltd - Shatian Town, Dongguan City	China		FC	100	FC	100
FCI Electrique France SA - 27000 Evreux	France	775 596 679	FC	100	FC	100
FCI Expansion 2 SA - 78000 Versailles	France	440 251 312	FC	100	-	-
FCI Finland OY - 02270 Espoo	Finland		FC	100	FC	100
FCI Hertogenbosch BV - 5213JG's - Hertogenbosch	Netherlands		FC	100	FC	100
FCI Holland Holding BV, 5213JG's - Hertogenbosch	Netherlands		FC	100	FC	100
FCI Hungary KFT - 2800 Tatabanya	Hungary		FC	100	FC	100
FCI Ireland BV- 5222 AV's - Hertogenbosch	Netherlands		FC	100	FC	100
FCI Italia SpA - 10156 Torino	Italy		FC	100	FC	100
FCI Japan KK - Shinagawa-ku Tokyo	Japan		FC	93.60	FC	93.60
FCI Katrineholm AB – 64122 Katrineholm	Sweden		FC	100	FC	100
FCI Korea Ltd - Kyungju-si	Korea		FC	100	FC	100
FCI Mechelen NV - B 2800 Malines	Belgium		FC	100	FC	100
FCI Microconnections SA – 78200 Mantes-la-Jolie	France	335 187 696	FC	100	FC	99.95
FCI Microconnections Asia Pte Ltd - Singapore 049908	Singapore		FC	100	-	-
FCI Nantong Ltd - Jaingsu Province, PRC	China		FC	100	FC	100
FCI Nederland BV - 2908 LJ Capelle A/D IJssel	Netherlands		FC	100	FC	100
FCI OEN Connectors Ltd Ltd - 682 019, Cochin	India		FC	67.83	FC	62.84
FCI Pontarlier SA - 78000 - Versailles	France	383 703 808	FC	100	FC	100
FCI PRC Ltd - Tsimshatsui Kowloon Hong-Kong	China		FC	100	FC	100
FCI Quingdao Co. Ltd - Shangdong 266101 PRC	China		FC	100	FC	100
FCI Schweiz AG – 6340 Baar	Switzerland		FC	100	FC	100
FCI Scotland Ltd - Glasgow G33 4JD	UK		FC	100	FC	100
FCI Singapore Pte Ltd – Singapore 049908	Korea		FC	100	FC	100
FCI Connectors Sweden AB S-10074 Stockholm	Sweden		FC	100	FC	100
FCI Taiwan Ltd, Chungli - Taoyuan	Thailand		FC	100	FC	100
FCI Technology & Services Ltd, Cochin, Kerala	India		FC	100	FC	100
FCI USA, Inc.- Etters (Valley Green) PA 17319	USA		FC	100	FC	100
FCI Europe - 78000 Versailles	France	421 188 426	FC	100	FC	100
FCI France SA - 78000 Versailles	France	552 056 533	FC	100	FC	99.95
FCI SA - 78000 Versailles	France	349 566 240	FC	100	FC	100
Framatome Connectors Mexico SA de CV - Toluca, C.P 50200	Mexico		FC	100	FC	100
Société Rhénane de Participation SA - 78000 Versailles	France	318 099 306	FC	100	FC	99.95
FCI SPV, Inc. - Manchester, NH 03301	USA			Liquidation	FC	100
Holding companies and other operations - Investments						
AREVA SA 75009 Paris	France	712 054 923	FC	100	FC	100
AREVA Finance Gestion 75009 Paris	France	421 356 593	FC	100	-	-
AREVA Inc.	USA		FC	100	FC	100
AREVA Japan	Japan		FC	100	FC	100
AREVA Korea	Korea		FC	100	FC	100
Cedec - 75015 Paris	France	394 329 841	FC	90.14	FC	90.14
Cere SA - 92400 Courbevoie	France	330 956 871	FC	100	FC	100
Cilas	France	669 802 167	EM	37	EM	37
Cogerap	France	328 171 004	FC	100	FC	100
Comilog	France	592 017 750		-Divestment	EM	7.65
DE-SE Framatome ANP De&S Hanford, Inc.	USA		FC	66	FC	66
Eramet	France	632 045 381	EM	26.42	EM	26.50
EMA	France	423 464 577		-Divestment	EM	30.50

Company name, Legal form, Corporate office	Country	Business reg. no.	2004		2003	
			Method	% Interest	Method	% Interest
FIPT SA - 92400 Courbevoie	France	351 737 051	FC	100	FC	100
Framapar SA - 92400 Courbevoie	France	410 343 669	FC	100	FC	100
Framatome-ANP Blakey Staffing Solution	Canada		FC	66	FC	66
Framatome-ANP DE&S Inc. Argentine Branch	Argentina		FC	66	FC	66
Framatome-ANP DE&S Srl	Peru		FC	66	FC	66
Framatome-ANP DE&S Srltda	Peru			Dissolved	FC	66
Framatome-ANP DE&SR, Inc.	Canada		FC	66	FC	66
Framatome-ANP DE&S	Czech Republic		FC	66	FC	66
FRAREA - 92400 Courbevoie	France	381 484 955	FC	100	FC	100
FT1CI	France	385 129 036	FC	78.99	FC	63.77
Lilly Financial Corporation limited	Cayman Islands		FC	100	-	-
PIC	USA		FC	100	-	-
SEPI SA - 1211 Genève	Switzerland		FC	100	FC	100
Sodeprom 2 rue Paul Dautier 78140 Vélizy-Villacoublay	France	328 223 706	FC	100	-	-
Sofradir	France	334 835 709	EM	20	EM	20
STMicroelectronics	Netherlands		EM	10.97	EM	11
STMicroelectronics Holding II BV	Netherlands		EM	35.66	EM	30.99
STMicroelectronics Holding NV	Netherlands		EM	35.66	EM	30.99
TDI SA	Switzerland		FC	100	-	-
Teknassur – Luxembourg	Luxembourg		FC	100	FC	100

» 5.6. AREVA SA financial statements

5.6.1. Statutory auditors' report on the financial statements for the year ended December 31, 2004

This is a free translation into English of the statutory auditors' reports issued in the French language and is provided solely for the convenience of English speaking readers. The statutory auditors' report includes for the information of the reader, as required under French law in any auditor's report, whether qualified or not, explanatory paragraphs separate from and presented below the audit opinion discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account caption or on information taken outside of the financial statements. Such report, together with the statutory auditors report addressing financial reporting in the Chairman of the Supervisory Board of Directors report on internal control, should be read in conjunction and construed in accordance with French law and French auditing professional standards.

In accordance with our appointment as statutory auditors at your Annual General Meeting, we hereby report to you for the year ended December 31, 2004 on:

- the audit of the accompanying financial statements of AREVA (*Société des Participations du Commissariat à l'Energie Atomique*),
- the justification of our assessments; and
- the specific procedures and disclosures required by law.

These financial statements have been approved by the Executive Board. Our role is to express an opinion on these financial statements, based on our audit.

Opinion on the financial statements

We conducted our audit in accordance with professional standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements give a true and fair view of the financial position and the assets and liabilities of the Company as at December 31, 2004 and the results of its operations for the year then ended in accordance with rules and accounting principles generally accepted in France.

Justification of our assessments

Pursuant to the provisions of Article L.225-235 of the French Commercial Code governing the justification of our assessments, we draw your attention to the following:

Participating interests were valued in accordance with the accounting methods described in the note "Accounting principles, rules and methods – Long-term investments" in the notes to the financial statements. As part of our procedures, we reviewed the appropriateness of these accounting methods as well as the reasonableness of the assumptions adopted and the resulting valuations.

These assessments were performed as part of our audit approach for the financial statements taken as a whole and therefore contribute to the expression of the unqualified opinion in the first part of this report.

Specific procedures and disclosures

We have also performed the other procedures required by law, in accordance with professional standards applicable in France.

We have no comment to make as to the fair presentation and consistency with the financial statements of the information given in the report of the Executive Board and in the documents addressed to the shareholders with respect to the financial position and the financial statements.

Pursuant to the law, we assured ourselves that the information relating to the acquisition of interests or control and the identity of the holders of share capital and voting rights have been presented in the Management Report.

Paris, April 15, 2005

The Statutory Auditors

Deloitte & Associés

Pascal Colin

Jean-Paul Picard




Mazars & Guérard

Thierry Blanchetier

Michel Rosse




Salustro Reydel

Denis Marangé

Hubert Luneau




5.6.2. Balance sheet

ASSETS

<i>(in thousands of euros)</i>	Notes	12/31/2004			12/31/2003
		Gross	Depreciation, amortization and provisions	Net	Net
Non-current assets					
Intangible assets	5.7.4.1.	1,694	928	766	835
Tangible assets	5.7.4.2.	19,146	10,119	9,027	22,594
Long-term investments	5.7.4.3.	5,574,811	2,207,821	3,366,990	2,801,336
Total non-current assets		5,595,651	2,218,868	3,376,783	2,824,765
Current assets					
Inventories and work-in-process					
Advances and prepayments on orders	5.7.4.4.	269		269	281
Trade accounts receivable and related accounts	5.7.4.4.	52,868	159	52,709	37,336
Other accounts receivable	5.7.4.4.	126,741	32,763	93,978	174,901
Investment securities	5.7.4.6.	143,075		143,075	216,547
Cash and marketable securities (including non-trade current accounts)	5.7.4.6.	1,520,234		1,520,234	1,281,437
Total current assets		1,843,187	32,922	1,810,265	1,710,502
Prepaid expenses	5.7.4.5.	1,028		1,028	1,390
Unrealized foreign exchange losses		3,541		3,541	51
Total assets		7,443,407	2,251,790	5,191,617	4,536,708

LIABILITIES AND SHAREHOLDERS' EQUITY*(in thousands of euros)*

	<u>Notes</u>	<u>12/31/2004</u>	<u>12/31/2003</u>
Shareholders' equity			
Share capital	5.7.4.8.	1,346,823	1,346,823
Share premiums	5.7.4.9.	328,289	328,289
Reserves and retained earnings	5.7.4.9.	357,218	204,489
Net income-current year	5.7.4.9.	301,555	372,444
Tax-driven provisions	5.7.4.9.	1,169	1,561
Total shareholders' equity		<u>2,335,054</u>	<u>2,253,606</u>
Other shareholders' equity			
Perpetual subordinated debt	5.7.4.10.	212,647	212,647
Total other shareholders' equity		<u>212,647</u>	<u>212,647</u>
Provisions for contingencies and losses			
Provisions for contingencies	5.7.4.11.	58,261	53,986
Provisions for losses	5.7.4.11.	74,937	65,980
Total provisions for contingencies and losses		<u>133,199</u>	<u>119,966</u>
Debt			
Borrowings	5.7.4.12.	2,412,107	1,799,704
Advances and prepayments on orders received		28,625	0
Trade accounts payable and related accounts	5.7.4.12.	37,278	33,101
Other debt	5.7.4.12.	31,992	117,653
Cash instruments	5.7.4.12.	711	24
Total debt		<u>2,510,713</u>	<u>1,950,482</u>
Deferred income		0	0
Unrealized foreign exchange gains		4	7
Total liabilities and shareholders' equity		<u>5,191,617</u>	<u>4,536,708</u>

5.6.3. Income statement

(in thousands of euros)

	Notes	12/31/2004	12/31/2003
Operating income			
Sales		86,585	36,046
Provision reversals		341	1,277
Operating expenses reclassifications		55	110
Other income		172	264
Total operating income		87,153	37,697
Operating expenses			
Purchases of materials and other supplies and sub-contracting		(6,840)	(5,278)
Other external services		(120,229)	(75,080)
Taxes and duties other than income tax		(5,808)	(4,249)
Payroll expenses		(27,511)	(28,747)
Charges to amortization, depreciation and provisions		(3,298)	(2,310)
Other operating expenses		(787)	(531)
Total operating expenses		(164,472)	(116,195)
Net operating loss	5.7.5.1.	(77,320)	(78,498)
Financial income			
Income from participating interests		290,325	331,618
Income from other marketable securities and capitalized receivables		0	22
Other interest and related income		53,324	84,055
Foreign exchange gains		252,580	107,453
Net proceeds from sales of marketable securities		39,558	288,117
Provision reversals		3,352	683,761
Financial expenses reclassifications		1,378	1,302
Total financial income		640,518	1,496,328
Financial expenses			
Interest and related expenses		(64,704)	(45,354)
Foreign exchange losses		(243,577)	(103,847)
Net expenses on sales of marketable securities		0	0
Charges to provisions		(28,751)	(910,594)
Total financial expenses		(337,033)	(1,059,795)
Net financial income	5.7.5.2.	303,485	436,533
Income before exceptional items and tax		226,165	358,035
Exceptional income			
From operations		1,138	12
From capital or fixed asset transactions		71,078	35,270
Provision reversals		6,199	7,547
Total exceptional income		78,415	42,829
Exceptional expenses			
On operations		(383)	(7,386)
On capital or fixed asset transactions		(19,547)	(15,077)
Charges to provisions		(13,539)	(62,523)
Total exceptional expenses		(33,469)	(84,986)
Exceptional items	5.7.5.3.	44,946	(42,157)
Employee profit-sharing		0	0
Income tax	5.7.5.4.	30,444	56,566
Net income		301,555	372,444

5.6.4. Cash flow statement

(in millions of euros)

	<u>12/31/2004</u>	<u>12/31/2003</u>
Cash flow from (used in) operating activities		
Net income for the year	302	372
Net depreciation and amortization	2	2
Net charges to provisions	34	251
Loss (gain) on disposals of non-current assets and investment securities	(92)	(284)
Debt waivers and other non-cash income	(1)	(1)
Change in advances and prepayments on orders	28	-
Change in trade accounts receivables and other receivables	32	188
Change in trade accounts payable and other liabilities	(83)	(1,056)
Other	20	(25)
Cash from (used in) operating activities (I)	<u>242</u>	<u>(553)</u>
Cash flow used in investing activities		
Investment in tangible and intangible assets	(5)	(5)
Net investment in long-term investments	(1,027)	(1,872)
Disposals of tangible and intangible assets	70	2
Disposals of long-term investments	1	7
Change in non-current asset receivables and debt	31	31
Other (decrease in long-term investments)	352	8
Cash used in investing activities (II)	<u>(578)</u>	<u>(1,829)</u>
Cash flow used in financing activities		
Decrease (increase) in share capital and related premiums	-	-
Dividends and dividend withholding tax	(220)	(220)
Change in borrowings	0	0
Cash used in financing activities (III)	<u>(220)</u>	<u>(220)</u>
Change in net cash (I + II + III)	<u>(556)</u>	<u>(2,601)</u>
Before changes in investment securities	-	-
Change in investment securities	112	434
Increase (decrease) in net cash	<u>(444)</u>	<u>(2,167)</u>
Net cash at the beginning of the year (A)	<u>(517)</u>	<u>1,651</u>
Net cash at the end of the year (B)	<u>(961)</u>	<u>(517)</u>
Increase (decrease) in net cash (B - A)	<u>(444)</u>	<u>(2,167)</u>

» 5.7. Notes to the AREVA financial statements

The following represent the notes to the AREVA balance sheet before appropriation of earnings for the year ended December 31, 2004, showing total assets of €5,191,617 thousand and to the AREVA income statement, showing net income of €301,555 thousand.

The financial statements have been prepared for a twelve-month period extending from January 1 to December 31, 2004.

These notes include:

- Major events of the year;
- Accounting policies, rules and methods;
- Notes to the balance sheet;
- Notes to the income statement;
- Additional information.

The notes and tables presented below represent an integral part of the financial statements approved by the AREVA Supervisory Board.

5.7.1. Activity of the company

AREVA is a services and financial holding company. Services provided include centralized cash management and consulting and support services for the Group.

5.7.2. Major events of the year

Acquisition of Alstom's Transmission & Distribution business

On January 9, 2004, having received all required European Commission and national antitrust authorizations, the AREVA group signed the final purchase agreement for Alstom's Transmission & Distribution operations.

T&D's business – electricity transmission and distribution – is an important component of the value chain in the electric energy industry. It connects electric power generators with end-users consisting of large and small businesses as well as individual consumers. The T&D market begins at the power plant outlet and ends at the point where individual and industrial users are connected to the grid. T&D supplies this market with electricity transformation equipment such as transformers and grid connection equipment: circuit breakers and disconnectors often combined within “sub-stations”. These major equipment items go hand in hand with measurement equipment, measurement transformers, automatic relays and grid

operating systems, and grid safety equipment such as lightning arresters. T&D does not supply low value-added equipment, such as wires and electric towers. T&D also offers grid monitoring and management systems and a broad range of value-added services to electric operators.

Purchase price

A Sale and Purchase Agreement (SPA) was signed by AREVA and Alstom on September 25, 2003 for the purchase of Alstom's Transmission & Distribution (T&D) operations, with a closing date of January 9, 2004.

The purchase price for T&D operations was set by the SPA at €950 million. This enterprise value was subject to price adjustments concerning certain operating and balance sheet items relating to fiscal year 2003, as well as the cash balance transferred as of December 31, 2003.

As provided in the SPA, the two groups jointly called in an independent expert, KPMG, to determine these adjustments. The independent expert submitted his conclusions on December 23, 2004:

- the enterprise value after adjustment was reduced from €950 million to €913 million, representing a decrease of €37 million in the purchase price;
- the net cash position of the division at the end of 2003 was valued at €140 million.

Prior to the presentation of the independent expert's conclusions, AREVA settled the amount of €950 million (including €23 million still held in an escrow account pending the sale of the Indian and Pakistani subsidiaries). AREVA therefore made an additional payment to Alstom on December 29, 2004 of €103 million.

The total price paid by AREVA for the acquisition of the T&D operations was, therefore, €1,053 million, financed from Group shareholders' equity.

Vendor warranties

The AREVA T&D purchase agreement includes two vendor warranties, one specific and one general.

The specific vendor warranty comprises several sub-warranties:

- a warranty covering environmental issues, with a trigger threshold of €12 million;
- a tax warranty;
- a warranty covering pension fund issues;
- a warranty covering specific contracts or litigation in respect of which an autonomous comprehensive indemnity warranty has been granted by Alstom.

The general vendor warranty covers all problems not covered by the specific warranty described above. The general warranty has a trigger threshold of €19 million and a cap of €175 million.

Sale of real estate assets located in Lyon

AREVA sold real estate assets located in Lyon on July 29, 2004. Sales proceeds totaled €69.3 million and generated a pre-tax capital gain of €51.7 million.

5.7.3. Accounting policies, rules and methods

5.7.3.1. Rules and methods concerning balance sheets accounts

The AREVA financial statements for the year ended December 31, 2004 have been prepared in accordance with French accounting standards established in 1999 (*Plan Comptable Général*).

Tangible and intangible assets

Tangible and intangible assets appear on the balance sheet at cost, except for assets that have been revalued in accordance with applicable accounting rules.

Depreciation and amortization is calculated using the most appropriate method for the asset category.

Off-the-shelf software is generally amortized over three years or less. Buildings are depreciated over twenty-five years, building improvements and office furniture over ten years, and office equipment, computers and vehicles over a maximum of five years.

In addition, each asset is subject to an individual depreciation schedule. An impairment provision may also be recorded when a specific asset's book value exceeds its value in use.

Long-term investments

Long-term investments are recorded on the balance sheet at cost (i.e. acquisition price, or contributed value for contributed assets).

Impairment losses are recorded in respect of participating interests when their book value exceeds their value in use, determined on a security by security basis.

Such impairment provisions are determined based on the Group's interest in each affiliate's equity (or consolidated equity for parent companies) as of the year-end. However, this

evaluation may take into account events or positions subsequent to the year-end, when they are known before closing, as well as each affiliate's estimated profitability or market value.

Receivables and debt

Receivables and debt are recorded at nominal value. Provisions for the impairment of receivables may be recorded to reflect potential collection difficulties based on information available at closing.

Receivables and debt denominated in foreign currencies are translated and recorded in euro based on year-end exchange rates. Differences compared to previously recorded unrealized gains and losses are recognized on the balance sheet as currency translation differences. Hedged receivables and debt denominated in foreign currencies are translated into euro using the hedge rate.

Unrealized foreign exchange losses are recognized through a contingency provision.

Marketable securities

Marketable securities are recorded at the lower of cost and period-end value. A provision for impairment is recorded when the valuation of a class of security as of the end of the period shows an overall loss. The period-end value is equal to the average closing market price of a security during the last month of the period.

A separate impairment provision for other cash investments, such as debt instruments that are not publicly traded, is recorded when warranted.

Other shareholders' equity

The gross amount of the perpetual subordinated bond issue is recorded as "Perpetual subordinated debt" and retained at its historic value.

The amount of the deposit deducted from this issue and paid to an investment firm is recorded in "Other long-term investments". This deposit, recorded on the balance sheet at its book value on the date of the perpetual subordinated bond issue, may only be recovered under exceptional circumstances.

Provisions for contingencies and losses

Provisions for contingencies and losses may be recorded, in particular to cover restructuring and litigation expenses.

A provision for deferred tax liability has been recorded to recognize AREVA's expected use, as provided under tax consolidation and integration rules (see Note 5.7.3.3.), of tax losses that French subsidiaries are entitled to apply against future profits.

Provisions for contingencies and losses are consistent with French rules governing liabilities dated December 7, 2000 (CRC Regulation No. 2000-06).

Pension obligations

The financial statements reflect all of AREVA's pension, retirement and similar benefit obligations, both for current and retired employees.

Payments by the Group under defined contribution plans are recorded as expenses of the period to which they relate.

In the case of defined benefit plans, benefit costs are estimated using the projected unit credit method. Under this method, accrued pension benefits are allocated among service periods based on the plan vesting formula. If service in subsequent years results in accrued benefit levels that are substantially higher than during previous years, the company must allocate the accrued benefits on a straight-line basis. The amount of future benefit payments to employees is determined based on salary trend assumptions, retirement age and mortality, discounted to present value based on interest rates for long-term bonds from AAA issuers.

Actuarial gains and losses are spread over the average expected remaining working life of personnel taking part in these plans, for the portion exceeding the greater of:

- 10% of the present value of the defined benefit obligation at the year-end,
- 10% of the fair value of plan assets at the year-end.

In accordance with the CNC recommendation of April 1, 2004 and the Official Statement of July 22, 2004, which indicates:

"Companies which value their obligations using methods similar to those laid down in the recommendation (issued by the CNC on April 1, 2003) and which apply the corridor method, may, on first-time adoption of the recommendation, either retain actuarial gains and losses not yet amortized to income in their balance sheet, or transfer them to shareholders' equity".

AREVA transferred accumulated actuarial losses of €177 thousand to shareholders' equity.

The cost of plan changes are spread over the vesting period.

5.7.3.2. Cash flow statement

AREVA presents cash flows from operating activities using the indirect method.

Cash is composed of cash and cash equivalents, available bank balances, short-term investments with an initial maturity of less than three months and non-trade current accounts.

5.7.3.3. Additional information

In 1983, AREVA received regulatory approval to submit a consolidated tax return under Article 209-5 of the French Tax Code. This approval, which is granted for a three-year period expires December 31, 2004. A request for renewal has been submitted to the Ministry for the Economy, Finance and Industry for the period 2005 to 2007 inclusive.

Under the rules governing consolidated tax returns, the tax burden is computed based on the Group's consolidated taxable income rather than the taxable income of AREVA.

In addition, AREVA has also elected to apply the tax integration regime defined in Articles 223A *et seq.* of the French Tax Code. The provisions of the tax integration agreements signed between AREVA and its tax-integrated subsidiaries are in accordance with common law.

5.7.4. Notes to the balance sheet

5.7.4.1. Intangible assets

Gross values

Intangible assets (in thousands of euros)	31/12/2003	Additions	Disposals	31/12/2004
Software	1,267	427	0	1,694
Advances and prepayments on non-current assets	20	0	20	0
Total	1,287	427	20	1,694

Amortization

Intangible assets (in thousands of euros)	31/12/2003	Charge	Reversal	31/12/2004
Software	452	476	0	928
Total	452	476	0	928

5.7.4.2. Tangible assets

Gross values

Tangible assets (in thousands of euros)	31/12/2003	Additions	Disposals	31/12/2004
Land	1,662	624	1,344	942
Buildings	30,360	2,578	24,729	8,209
Production facilities, equipment and tooling	524	7	100	431
Other tangible assets				
- general facilities, fixtures, etc.	4,196	2,183	644	5,736
- vehicles	121	48	0	169
- office and computer equipment	624	85	3	705
- office furniture	1,510	151		1,661
Assets in progress	2,051	1,293	2,051	1,293
Advances and prepayments on non-current assets	0	0	0	0
Total	41,048	6,969	28,871	19,146

The decrease in the "Buildings" heading followed the sale of the real estate assets held by AREVA in Lyon. This sale is discussed in greater detail in the section concerning major events of the year.

Depreciation and provisions

Tangible assets (in thousands of euros)	31/12/2003	Charge	Reversal	31/12/2004
Land improvements	169	1	0	170
Buildings	16,171	802	9,369	7,604
Production facilities, equipment and tooling	488	14	100	402
Other tangible assets				
- general facilities, fixtures etc.	1,122	544	603	1,063
- vehicles	33	31	0	64
- office and computer equipment	231	161	3	389
- office furniture	240	187	0	427
Total	18,454	1,740	10,075	10,119

5.7.4.3. Long-term investments

Gross values

Long-term investments (in thousands of euros)	31/12/2003	Additions	Disposals	31/12/2004
Participating interests	4,248,892	620,460	34,953	4,834,399
Loans to participating interests	413,787	1,013,497	1,040,142	387,142
Other long-term securities	8,050	1,600	1,716	7,934
Loans	56,619		63	56,556
Other long-term investments	262,011	26,926	157	288,780
Total	4,989,359	1,662,483	1,077,031	5,574,811

Participating interests essentially comprise the following:

- Cere: €251,541 thousand
- COGEMA: €703,929 thousand
- Eramet: €291,693 thousand
- FCI: €2,505,872 thousand
- Framatome ANP: €277,638 thousand
- AREVA T&D Holding: €532,794 thousand.

The increase in this heading is mainly attributable to the following transactions:

- acquisition of AREVA T&D Holding followed by a share capital increase, in the amounts of €32,794 thousand and €500,000 thousand, respectively;
- AREVA T&D UK Limited share capital increase in the amount of €48,874 thousand;
- AREVA T&D INC share capital increase in the amount of €37,761 thousand.

Disposals correspond to the share capital decrease performed by SEPI in the amount of €34,624 thousand.

Loans to participating interests comprise medium-term loans made to certain Group companies, notably:

- €268,335 thousand to AREVA T&D Holding,
 - \$97,000 to COGEMA, Inc.,
 - €19,870 thousand to AREVA T&D Belgium,
 - €11,184 thousand to AREVA T&D Germany,
- and accrued interest on these loans of €14,529 thousand.

Loans include €51,096 thousand in principal lent to Creusot Loire (company currently in liquidation) and interest on this loan of €5,433 thousand. An impairment provision is recorded in respect of these balances in the amount of €56,529 thousand.

Other long-term investments mainly include:

- a €150,000 thousand down payment on the acquisition of a participating interest in the Urenco subsidiary, ETC.

In 2003, the AREVA group decided to invest in the centrifuge uranium enrichment process. Consequently, AREVA entered into certain agreements with shareholders of Urenco, the owner of this technology, to acquire a 50% interest in ETC. The agreements also sought to obtain the right to use this technology and to ensure the supply of the centrifuge cascades and related services necessary to the construction of the George Besse II facility.

In 2003, AREVA made a €150 million down payment towards the total purchase price for the 50% interest in ETC and for the right to use the centrifuge enrichment technology.

- a €64,717 thousand (\$76,085) deposit paid to an investment firm out of the proceeds of the perpetual bond issue (See Section 5.7.4.10.). This deposit, which can only be recovered under exceptional circumstances, is recorded in the balance sheet at its historical amount, translated at the exchange rate prevailing on the perpetual bond issue date (\$1 = €0.85059).
- non-deductible interest on the perpetual subordinated bonds of €47,033 thousand.
- €23,100 thousand balance on the escrow account relating to T&D operations in India and Pakistan still to be transferred by Alstom.

Impairment provisions

Long-term investments (in thousands of euros)	31/12/2003	Charge	Reversal	31/12/2004
Participating interests	2,126,107	21,442	93	2,147,456
Loans to participating interests	1,936			1,936
Other long-term securities	3,450	50	1,600	1,900
Loans	56,529			56,529
Other long-term investments				
Total	2,188,022	21,492	1,693	2,207,821

Participating interest impairment provisions primarily include:

- a charge to provisions of € 19,831 thousand in respect of FCI securities reflecting the negative impact of exchange rate movements on the consolidated net asset value of FCI Group;
- a charge to provisions of €1,286 thousand in respect of Cilas securities.

Other long-term security impairment provisions include a provision reversal of €1,600 thousand in respect of Pixtech securities, following the liquidation of the company.

5.7.4.4. Current assets (excluding cash and marketable securities)

(in thousands of euros)	31/12/2004	31/12/2003
Advances and prepayments on orders	269	281
Accounts receivable and related accounts	52,868	37,476
Provisions for impairment of trade accounts receivable	(159)	(140)
Other accounts receivable	126,741	207,010
Provisions for other accounts receivable	(32,763)	(32,109)
Total	146,956	212,518

Other accounts receivable include the following items:

- Consolidated income tax receivable: €82,425 thousand,
- Amounts receivable from tax integrated subsidiaries in respect of the tax charge: € 12,671 thousand.

5.7.4.5. Loan and receivable maturities at year-end

(in thousands of euros)	Gross value	Maturing in less than one year	Maturing in one year or more
Non-current assets			
- Loans to participating interests	387,142	1,954	385,188
- Loans and other long-term investments	353,270	229,706	123,564
Current assets			
- Trade accounts receivable and related accounts	52,868	52,868	
Other accounts receivable	126,741	126,741	
Prepaid expenses	1,028	1,028	
Total	921,049	412,297	508,752

5.7.4.6. Cash and investment securities

<i>(in thousands of euros)</i>	31/12/2004	31/12/2003
Investment securities - equities (gross book value)	143,075	216,547
Investment securities - equities (impairment losses)		
Other marketable securities (gross book value)	724,009	1,132,280
Other marketable securities (impairment losses)		
Cash instruments	655	19
Cash and cash equivalents	795,570	149,138
Total	1,663,309	1,497,984

Marketable securities, comprised mainly of negotiable debt instruments and Total shares, amounted to €867,084 thousand as of December 31, 2004.

Unrealized gains on marketable securities totaled €152,693 thousand at the year-end.

Cash and cash equivalents include non-trade current accounts of €784,437 thousand.

5.7.4.7. Accrued income

Accrued income included in loan and receivable headings breaks down as follows:

<i>(in thousands of euros)</i>	Amount
Long-term investments:	
- Loans to participating interests	14,529
- Loans	5,433
Trade accounts receivable and related accounts	46,396
Other receivables (excluding taxes and social security liabilities)	273
Taxes and social security liabilities - other receivables	82,425
Non-trade current accounts	1,275
Marketable securities	1,646
Total	151,977

5.7.4.8. Share capital

The share capital as of December 31, 2004 breaks down as follows:

- Shares: 34,013,593
- Investment certificates: 1,429,108
- Par value of shares and investment certificates: €38

There was no change during the year.

5.7.4.9. Other shareholders' equity

Shareholders' equity excluding share capital

<i>(in thousands of euros)</i>	31/12/2003	Increase	Decrease	31/12/2004
Merger premium	184,357			184,357
Consolidation goodwill	143,932			143,932
Legal reserve	134,682			134,682
Regulated reserves	6,405			6,405
Permanent reserves	3,302			3,302
Retained earnings	60,100	152,877	147	212,830
Net income for the year	372,444	301,555	372,444	301,555
Tax-driven provisions	1,561	16	408	1,169
Total	906,783	454,448	372,999	988,232

Appropriation of 2003 net income (Ordinary General Meeting of Shareholders - May 4, 2004):

- Dividend distribution: €219,744 thousand,
- Appropriation of remaining net income to retained earnings: €152,700 thousand,
- Total, corresponding to 2003 net income: €372,444 thousand.

5.7.4.10. Perpetual subordinated debt

Framatome SA issued 250 perpetual subordinated bonds with a nominal value of \$1,000,000 each on November 15, 1991, which were subscribed directly by financial institutions. These bonds are redeemable only on the liquidation of the company, after other creditors have been fully compensated. However, the issuer has reserved the right to redeem all or part of the bonds in the event of extraordinary circumstances beyond its control during the first fifteen years.

These perpetual subordinated bonds, valued at the exchange rate prevailing on the date of issuance (\$1 = €0.85059), are

recorded on the balance sheet under "Other Shareholders' Equity". The bonds are retained at historical book value, as the Group does not incur any foreign exchange risk on the transaction.

The bond coupon, payable in perpetuity on a semi-annual basis, is equivalent to the 6-month Libor rate plus 0.70%.

A US\$76,085,000 deposit, deducted from the issue proceeds and paid to an investment firm, is recorded in "Other long-term investments". In consideration for this deposit, the investment firm will pay AREVA, as of the sixteenth year following the perpetual subordinated bonds issue date, interest equal to the interest due by AREVA to the holders of the perpetual subordinated debt after fifteen years. The deposit is valued at the exchange rate prevailing on the perpetual subordinated bond issue date (\$1 = €0.85059) and is not repayable, except in the event of extraordinary circumstances. It is recorded as an asset in the balance sheet at its historical value.

5.7.4.11. Provisions for contingencies and losses

<i>(in thousands of euros)</i>	31/12/2003	Charge	Reversal	31/12/2004
Provisions for contingencies	53,986	11,468	7,193	58,261
Litigation	20,773		347	20,426
Fines and penalties	21		21	0
Foreign exchange losses	1,251	3,541	1,251	3,541
Framépargne liquidity guarantee	14,313	3,719		18,032
Other risk	17,628	4,208	5,574	16,262
Provisions for losses	65,980	9,330	373	74,937
Pension obligations	1,669		373	1,296
Deferred tax liability (consolidated tax regime)	42,084	9,080		51,164
Ship ownership interests	22,227	250		22,477
Total	119,966	20,798	7,566	133,199
<i>Including charges to and reversals of provision recorded as:</i>				
- operating			341	
- financial		7,260	1,251	
- exceptional		13,538	5,797	
<i>Including charges to and reversals of provisions taken directly to shareholders' equity</i>				
			117	

The Framépargne employee stock fund included in the AREVA group savings plan owns 306,810 shares of the company. These shares are not publicly traded and, as provided by the law on employee savings plans, the fund benefits from a liquidity guarantee. This guarantee was given by an independent financial institution and expires on December 31, 2005. Subsequently, to allow this commitment to come into effect, the company gave a value guarantee covering the same period. This guarantee concerns 253,765 shares sold by Framépargne. A €18.0 million provision was recorded in this respect as of December 31, 2004. The company estimates the commitment in respect of the residual guarantee at €6.2 million as of December 31, 2004.

Provisions for losses primarily consist of a deferred tax liability of €51,164 thousand, in respect of AREVA's expected use of tax losses of certain of its subsidiaries in the consolidated tax return.

5.7.4.12. Debt maturity at year-end

<i>(in thousands of euros)</i>	Amount	Maturing in one year or less	Maturing in one to five years	Maturing in more than five years
Loans from financial institutions	4,307	4,307		
Other loans and borrowings	2,407,800	2,407,441	3	356
Trade accounts receivable – advances and down-payments received	28,625	28,625		
Trade accounts payable and related accounts	35,618	35,618		
Accounts payable to non-current assets suppliers	1,660	1,660		
Income tax and social security liabilities	19,734	19,734		
Other debt	12,258	11,573	685	
Cash instruments	711	711		
Total	2,510,713	2,509,669	688	356

Loans from financial institutions consist of bank overdrafts.

Other loans and borrowings correspond mostly to non-trade current accounts including cash advances made to or received from subsidiaries under certain cash management agreements. Also included are deposits and collateral received.

Other debt includes €5,177 thousand in respect of tax integration current accounts.

5.7.4.13. Accrued expenses

Accrued expenses included in liability headings break down as follows:

<i>(in thousands of euros)</i>	Amount
Borrowings	
- Loans from financial institutions	-
Other loans and borrowings	757
Other liabilities	
- Trade accounts payable and related accounts	32,398
- Accounts payable to non-current assets suppliers	772
- Income tax and social security liabilities	9,031
- Other debt	547
Total	43,505

5.7.5. Notes to the income statement

5.7.5.1. Net operating loss

Reported sales include:

- income from real estate activities of €9,714 thousand;
- services and payroll expenses rebilled to subsidiaries of €76,871 thousand.

Operating expenses reflect holding company activities and services provided to subsidiaries under various service agreements. The net operating loss for the year was €77,320 thousand.

5.7.5.2. Financial income

Financial income mainly comprises:

- dividends received from subsidiaries of €270,010 thousand;
- net proceeds from the sale of securities of €39,558 thousand, including €37,011 thousand realized on the sale of Total shares;
- income from negotiable debt instruments, non-trade current accounts and loans to subsidiaries, and marketable securities, Total shares and other investments of €65,073 thousand;
- financial provision reversals of €3,352 thousand.

Financial expenses include interest expenses on non-trade current accounts with subsidiaries of €47,969 thousand.

Charges to financial provisions totaled €28,751 thousand.

Financial income and expenses also include foreign exchange movements with a net positive impact of €9,003 thousand.

5.7.5.3. Exceptional items

Exceptional items include:

- net gain on the sale of the Lyon real estate: €51,741 thousand
- net gain on the sale of the Courbevoie real estate: €358 thousand
- net gain on the sale of land in Châlon: €269 thousand
- net charge to the deferred tax provision (consolidated tax regime): €9,080 thousand.

5.7.5.4. Income tax

AREVA's income tax position for 2004, determined in accordance with the rules specific to the consolidated tax regime, resulted in a tax credit of €30,444 thousand. This includes the tax credit in respect of 2004, adjustments to the tax charge for 2003, and taxes paid by tax integrated subsidiaries.

With the exception of AREVA T&D INC and AREVA T&D UK Limited, **Transmission & Distribution** Division companies are not included in the tax consolidation and integration scopes for 2004.

The tax credit breaks down as follows:

(in thousands of euros)

Income tax refund in respect of 2004 (consolidated tax regime)	3,291
Decrease in income tax charge in respect of 2003 (consolidated tax regime)	148
Additional 2004 contributions (tax integration regime)	(2,400)
2004 tax to be collected from integrated subsidiaries	28,180
Income tax adjustments to prior years	1,225
Total	30,444

Following AREVA's tax election, the AREVA integrated tax group subject to the provisions of Articles 223A *et seq.* of the French Tax Code include the following companies: Arevadelfi, AREVA Finances, AREVA Participations, Canberra Eurisys, Cere,

CFM, CFMM, COGEMA, Cogerap, Cominor, Comurhex, Ets Pierre Mengin, Euriware, Eurodoc, FCI, FCI Automotive France, FCI Besancon, FCI Electrique France, FCI Europe, FCI Finances, FCI France, FCI Microconnections, FCI Participations, FCI Pontarlier, FCI Tresorerie, Fipt, Fracere, Framapar, Frarea, Groupe Euriware, Krebs & Cie, Le Marechal, Mainco, Mecachimie, Mecagest, Sao, SGGM, SGN, SICN, Simebio, Simo, Technocontact, COGEMA Logistics.

The tax authorities conducted an audit of consolidated income reported by AREVA in respect of 2000 and 2001. The corresponding revised tax assessments have been received and their implications are fully reflected in the financial statements at the year-end.

5.7.6. Additional information

5.7.6.1. Employees

The company had 161 employees as of December 31, 2004, as indicated in the following table:

	2004	2003	2002
Managerial personnel	111	131	126
Supervisors	14	22	14
Support staff	36	44	49
Total	161	197	189

5.7.6.2. Information on lease arrangements

AREVA exercised the purchase option contained in the Lyon real estate lease arrangement in advance on June 24, 2004, thereby acquiring ownership of the entire building. The purchase consideration plus the option exercise price totaled €3,200 thousand, comprising €625 thousand in respect of the land and €2,575 thousand in respect of the building.

No lease installments were paid during 2004.

5.7.6.3. Company exposure to market risk

General objectives and counterparty risk management

AREVA uses derivatives to manage its exposure to currency and interest rate risk, fluctuations in commodity prices and changes in the price of certain publicly traded securities. Excluding specific situations (notably comprehensive foreign exchange hedges during offer periods), these instruments are generally considered hedges of company assets, liabilities and specific commitments.

AREVA controls the risk associated with these instruments by centralizing the commitments and by implementing a series of procedures that specify the limits and characteristics of the counterparty for each type of instrument.

Management of interest rate risk and commodity price risk is centralized by the parent company. Foreign exchange risk is also usually managed by AREVA on behalf of the subsidiaries. The few subsidiaries that manage their foreign exchange exposure directly implement their strategy in concurrence with AREVA.

Foreign exchange risk management

AREVA trades currencies on forward markets and uses derivative products to hedge or manage:

- the foreign exchange risk exposure of subsidiaries engaged in international trade as a result of receivables, payables and firm commitments or highly probable future cash flows. Exposure is systematically hedged on inception.
- For certain contracts, the trade risk in the offer stage is hedged by highly specific insurance contracts (e.g. Coface contracts) or on a comprehensive basis within the Group. Other exposure may be identified through an annual or multi-annual budget, in which case the risk hedged corresponds to a certain percentage of the estimated budget.
- the balance sheet exposure on loans to subsidiaries made in currencies other than reporting currency.

Foreign currency cash positions are managed through currency swaps.

Notional amounts of contracts as of 12/31/04 (by maturity)

<i>(in millions of euros)</i>	2005	2006	2007	2008	2009	> 5 years	Total	Market value
FOREIGN EXCHANGE INSTRUMENTS								
Currency swaps - borrower								
U.S. dollars for euros	391.3	37.7	13.1	5.4	3.6	1.1	452.2	26.8
Canadian dollars for euros	52.0						52.0	0.1
U.S. dollars for Canadian dollars	8.0						8.0	0.8
Yen for euros	38.6						38.6	0.1
Swiss francs for euros	7.0						7.0	0.0
Pounds sterling for euros	60.7						60.7	0.4
Other currencies	60.0	0.7					60.7	0.8
Currency swaps - lender								
U.S. dollars for euros	207.4	29.7	1.9	0.1	0.1	0.2	239.4	(16.1)
Canadian dollars for euros	66.5	0.9	3.2			0.2	70.8	0.0
U.S. dollars for Canadian dollars	8.4						8.4	(0.8)
Swiss francs for euros	27.7	3.3					31.0	(0.1)
Pounds sterling for euros	29.4						29.4	(0.2)
Yen for euros	34.3						34.3	0.1
Other currencies	58.8	1.6					60.4	(0.7)
Forward transactions - Buyer								
U.S. dollars for euros	362.1	106.5	15.7	7.7	3.8	1.2	497.0	(38.8)
U.S. dollars for Canadian dollars	98.5	40.4					138.9	(13.8)
Canadian dollars for euros	9.1	0.6	0.6	0.6			10.9	0.1
Yen for euros	9.9	5.4	0.0				15.3	(1.1)
Swiss francs for euros	70.4	17.5	2.0	0.4			90.2	(0.5)
Pounds sterling for euros	74.7	8.0	0.8				83.5	(1.8)
New Zealand dollars for Australian dollars	25.3						25.3	0.0
New Zealand dollars for euros	84.7						84.7	0.0
Other currencies	107.7	5.0	2.4	0.3	0.4		115.8	(3.5)
Forward transactions - Seller								
U.S. dollars for euros	261.7	133.7	24.0	1.7	0.2	0.1	421.4	39.1
U.S. dollars for Canadian dollars	91.3	40.5					131.7	12.9
Canadian dollars for euros	1.1	1.5	3.8	0.6	0.2		7.4	0.0
Yen for euros	8.5	4.0	0.8				13.2	1.2
Swiss francs for euros	75.3	22.8	2.0	0.4			100.4	0.5
Pounds sterling for euros	59.3	0.8	0.2				60.2	1.2
New Zealand dollars for euros	110.0						110.0	0.0
Other currencies	117.2	6.8	2.3	0.3	0.4		127.1	1.9
Currency options								
Call - buyer								
Euros for U.S. dollars	1.0						1.0	0.0
Pounds sterling for Canadian dollars	9.8						9.8	(0.1)
Calls - seller								
Euros for U.S. dollars	1.0						1.0	0.0
Pounds sterling for Canadian dollars	9.8						9.8	0.1
Puts - seller								
Euros for pounds sterling	3.5						3.5	0.0
Euros for U.S. dollars	8.0						8.0	0.0
Collars								
U.S. dollars for euros								

Notional amounts in foreign currency have been translated into euros based on year-end closing exchange rates.

Interest rate risk management

AREVA uses several types of financial instruments, in line with market conditions, to allocate its debt between fixed rate and floating rate obligations and to manage its investment portfolio. The Group primarily uses swaps for debt management and cash management purposes. Interest rate futures are used to manage medium-term investments.

Notional amounts of contracts as of 12/31/04 (by maturity)

<i>(in millions of euros)</i>	<i>Fixed rate</i>	2005	2006	2007	2008	2009	> 5 years	Total	Market Value
INTEREST RATE INSTRUMENTS									
Interest rate swaps- fixed payer									
Euro									
U.S. dollar	[2.5350 % - 3.435 %]	110.12	7.34					117.5	(0.3)
Canadian dollar									
Interest rate swaps - fixed receiver									
Euro*									
U.S. dollar	[2.5350 % - 3.435 %]		7.34					7.3	0.0
Interest rate swaps - floating/floating									
Euro									

* Floating-rate payer swap in CAD (currency swap).

Commodity risk management

The Group uses financial instruments, including futures, commodity swaps and options, to reduce its exposure to commodity price volatility for commodities used in manufacturing, especially gold, copper and silver, and to hedge its sales as a producer, especially for COGEMA's gold mining subsidiaries. All hedging activities are budget-based.

Notional amounts of contracts as of 12/31/04 (by maturity)

<i>(in millions of euros)</i>	2005	2006	2007	2008	2009	> 5 years	Total	Market Value
COMMODITIES								
Gold								
Forward transactions - Buyer	44.9						44.9	(0.9)
Forward transactions - Seller	44.9						44.9	0.9
Options - buyer CALL								
Copper								
Forward transactions - Buyer	14.0						13.9	0.3
Forward transactions - Seller	14.0						13.9	(0.3)
Options - buyer CALL	7.6						7.6	0.5
Options - seller CALL	7.6						7.6	(0.5)
Silver								
Forward transactions - Buyer			0.3				0.3	0.0
Forward transactions - Seller			0.3				0.3	0.0
Options - buyer CALL								
Options - seller PUT								

Equity risk management

To manage its long-term investment positions, the Group may elect to use puts and calls backed by equities held in the portfolio. No such transaction was pending as of December 31, 2004.

Market value of financial instruments

The market value of financial instruments was provided by counterparty banks and financial institutions or calculated using standard methods based on market conditions at the year-end.

5.7.6.4. Off-balance sheet commitments excluding finance lease arrangements

AREVA has established a procedure to identify and confirm off-balance sheet items disclosed in these Notes. This procedure includes a definition of the main categories of commitments and their evaluation methods. It also includes a method to collect and control the data, relying largely on confirmations from third parties.

Commitments given

<i>(in thousands of euros)</i>	Total	< 1 year	Maturing 1 to 5 ans	> 5 years
Contract guarantees given	143,512	26,227	25,469	91,816
Comfort letters	52,248	42,964	9,009	275
Corporate guarantees given	675,835	313,336	341,568	20,931
Financial recovery clauses	429			429
Vendor warranties given	65,221	14,471	50,750	
Other commitments given	267,720	143,522	81,634	42,564
Total	1,204,965	540,520	508,430	156,015

The Framépargne employee stock fund included in the AREVA group savings plan owns 306,810 shares of the company. These shares are not publicly traded and, as provided by the law on employee savings plans, the fund benefits from a liquidity guarantee. This guarantee was given by an independent financial institution and expires on December 31, 2005. Subsequently, to allow this commitment to come into effect, the company gave a value guarantee covering the same period. This guarantee concerns 253,765 shares sold by Framépargne. A €18.0 million provision was recorded in this respect as of December 31, 2004. The company estimates the commitment in respect of the residual guarantee at €6.2 million as of December 31, 2004.

AREVA gave a parent company guarantee to the customer TVO in the amount of its total commitment under the EPR reactor contract in Finland and received from Siemens a guarantee in the amount of its share. This net commitment is not included in the summary table.

Commitments received

<i>(in thousands of euros)</i>	Total	< 1 year	Maturing 1 to 5 ans	> 5 years
Vendor warranties received	425,000		175,000	250,000
Total	425,000		175,000	250,000

Reciprocal commitments

Reciprocal commitments correspond to commitments accepted by the Group where a third-party guarantee is received in return.

<i>(in thousands of euros)</i>	Total	< 1 year	Maturing 1 to 5 ans	> 5 years
Authorized credit lines not drawn	455,180	455,180		
Security call or put options	388,300	388,300		
Total	843,480	843,480		

Other reciprocal commitments are described hereafter.

In 2003, AREVA gave a commitment to the shareholders of Urenco to acquire a 50% participating interest in the British company, ETC. This commitment represents a maximum of €388 million, in addition to the €150 million down payment made on the signature of the Memorandum of Agreement and recorded in the balance sheet under "Other long term investments" (see Note 5.7.4.3.). This consideration will be adjusted based on the Euribor rate for the period January 1, 2005 to the transaction closing date, which will be no later than December 31, 2005.

A number of guarantees and conditions precedent apply to this commitment.

Acquisition of a 50% interest in ETC will give AREVA access to ultracentrifuge technology for uranium enrichment.

5.7.6.5. Additional information concerning affiliates

<i>(in thousands of euros)</i>	2004 Gross values
Long-term investments	
- Participating interests	4,828,932
- Loans to participating interests	387,142
Accounts receivable	
- Trade accounts receivable and related accounts	52,253
- Other accounts receivable	14,013
- Non-trade current accounts	780,324
Debt	
- Trade accounts payable and related accounts	17,563
- Other debt	33,888
- Non-trade current accounts	2,406,693
Income from participating interests	284,271
Other financial income	117,362
Financial expenses	192,683

5.7.6.6. Executive officer compensation

Total compensation and benefits in kind paid to executive officers (members of the Management and Supervisory Boards) during the year by the company and companies under its control (as defined by Article L. 225-102-1 of the French Commercial Code, introduced by the NRE Act of May 15, 2001 and amended by the Financial Security Act of August 1, 2003) totaled €3,025 thousand.

5.7.6.7. Five-year financial summary

Performance indicator (in thousands of euros)	2000	2001	2002	2003	2004
Share capital at the year-end					
Share capital	1,121,046	1,346,823	1,346,823	1,346,823	1,346,823
Number of ordinary shares outstanding	27,985,200	34,013,593	34,013,593	34,013,593	34,013,593
Number of investment certificates outstanding	1,429,108	1,429,108	1,429,108	1,429,108	1,429,108
Financial results					
Sales	860	55,618	73,133	36,046	86,583
Net income before tax, employee profit-sharing, depreciation, amortization and provisions	110,679	193,610	1,084,311	598,720	306,817
Income tax charge (credit)	11,366	(49,667)	17,662	(56,566)	(30,444)
Net income after tax, employee profit-sharing, depreciation, amortization and provisions	150,490	(712,961)	216,230	372,444	301,555
Dividend distribution*	672,179	219,745	219,745	219,745	
Per share data (in euros)					
Net income after tax and employee profit-sharing, but before depreciation, amortization and provisions	3.38	6.85	30.10	18.49	9.52
Net income after tax, employee profit-sharing, depreciation, amortization and provisions	5.12	(20.12)	6.10	10.51	8.51
Dividend per share*	22.85	6.20	6.20	6.20	
Workforce					
Number of salaried employees at year-end	17	108	189	197	161
Payroll	1,279	14,766	18,337	17,726	16,582
Social security and other social welfare contributions	536	7,335	6,826	8,005	8,526

* 2004: pending decision of the Annual General Meeting.

5.7.6.8. Events subsequent to the year-end

None.

5.7.6.9. Detailed financial information on subsidiaries and affiliates as of December 31, 2004

<i>(in thousands of euros)</i>	Share capital	Share premiums, reserves and retained earnings	% of share capital held	Gross book value of investments	Net book value of investments	Outstanding loans and advances granted by the parent company	2004 Sales	2004 Net income/(loss)	Dividends received by AREVA during 2004
A - Detailed information on subsidiaries and affiliates whose gross carrying value exceeds 1% of AREVA share capital									
1 - Subsidiaries (more than 50% of share capital)									
- Cédec									
27/29, rue le Peletier - 75009 Paris	36,532	1,270	90	33,466	33,466		0	7,857	1,976
- Compagnie d'Etude et de Recherche pour l'Energie (CERE)									
27/29, rue le Peletier - 75009 Paris	247,500	785	100	251,541	251,541		0	16,172	29,535
- COGEMA									
2, rue Paul Dautier - 78141 Vélizy Cedex	100,259	(23,663)	100	703,929	703,929		2,357,748	202,166	126,075
- Framatome ANP SAS									
Tour Framatome									
92084 Paris La Défense Cedex	400,000	106,982	66	277,638	277,638		1,084,136	109,781	72,600
- Framatome Connectors International (FCI)									
53, Rue de Chateaudun - 75009 Paris	2,166,394	(1,839,477)	100	2,505,872	374,372		59,813	52,181	0
- Framapar									
27/29, rue le Peletier - 75009 Paris	22,116	(32,111)	100	22,477	22,477		871	(2,133)	0
- FT1CI									
27/29, rue le Peletier - 75009 Paris	68,375	845,342	79	54,888	54,888		0	223,725	12,457
- Frarea									
27/29, rue le Peletier - 75009 Paris	6,375	80,639	100	30,940	30,940		0	11	7,697
- AREVA T&D Holding									
27/29, rue le Peletier - 75009 Paris	500,037	(1,242)	100	532,794	532,794	282,280	0	(5,291)	0
- AREVA T&D Inc*									
47 East Industrial Park Drive 3109 Manchester New Hampshire - USA	35,240	(44,132)	100	37,761	37,761		182,770	(19,662)	0
- AREVA T&D UK Limited**									
St Léonard's Works - St Léonard's Avenue ST 17 4LX - Stafford - RU	48,222	(52,086)	100	48,875	48,875		421,012	10,293	0
2 - Affiliates (10 to 50% of share capital)									
- Eramet	78,002	750,970	26	291,693	291,693		ND	ND	5,811
- Technicatome	20,000	31,813	25	14,042	14,042		230,681	11,202	2,988
B - Summary information concerning other subsidiaries and affiliates									
1 - Subsidiaries not included in Section A above									
a) French subsidiaries (total)				7,714	2,165	1,936			
b) Foreign subsidiaries (total)				4,929	4,929	58			9,143
2 - Affiliates not included in Section A above									
a) French companies (total)				13,024	5,426				1,727
b) Foreign companies (total)									

* Consolidated data translated into euros based on USD following exchange rate: 0.803073.

** Consolidated data translated into euros based on GBP following exchange rate: 1.418339

5.7.6.10. Litigation

Based on risk analysis procedures implemented by the Group and the current stage of negotiations, no material provisions are recorded in the financial statements in respect of litigation.

- **Tax disputes**

During 2003 and 2004, the French tax authorities conducted an audit of consolidated income reported by the AREVA group for fiscal years 2000 and 2001. This audit has now been completed and the definitive financial implications are recorded in the financial statements.

- **European Commission investigation into anti-competition practices in the Gas Insulated Switchgears (GIS) market**

An investigation carried out by the European Commission into alleged anti-competition practices between GIS suppliers,

highlighted practices completely unknown to AREVA at the time of acquisition. AREVA cooperated fully with the Commission in establishing the facts. The Commission has not yet issued a “notice of grievances” against AREVA, which does not know the legal nature of the facts concerned. AREVA associated Alstom in all activities before the Commission, as it considers that a claim may be valid under the vendor warranties granted by Alstom.

This investigation led to investigations by antitrust authorities in Hungary, New Zealand, Australia and Mexico. AREVA wishes to eradicate all anti-competition practices identified and has had various discussions with the Commission on actions taken to ensure such eradication. AREVA is currently implementing a compliance program within all its activities.

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Chapter 6

Corporate governance

» 6.1. Composition and functioning of management and supervisory bodies

6.1.1. Composition of management and supervisory bodies

6.1.1.1. Composition of the Executive Board

The Executive Board consists of at least two members and at most five members named by the Supervisory Board, which appoints the chairman of the Executive Board from among its members. When AREVA shares are publicly traded in a regulated market, the Executive Board may be increased to seven members.

All Executive Board members must be natural persons. Executive Board members need not be company shareholders and may be chosen, in particular, among AREVA's salaried personnel. The term of any member of the Supervisory Board appointed to the Executive Board shall end with the beginning of his or her duty as a member of the Executive Board.

The Executive Board is appointed for a term of five years expiring at the first meeting of the Supervisory Board held after the fifth anniversary of that appointment. The Supervisory Board may appoint a new member to the Executive Board during its term. The decision to increase the number of Executive Board members above the number set at its appointment is subject to the approval of the Executive Board chairman.

Executive Board member terms are renewable.

As of the date of filing of this report, the following persons served as members of AREVA's Executive Board:

Anne Lauvergeon (age 45)

The Supervisory Board appointed Mrs Anne Lauvergeon as chairman of the Executive Board of AREVA on July 3, 2001. Her term will expire at the first meeting of the Supervisory Board held after July 3, 2006.

Mrs Lauvergeon holds the rank of *Ingénieur en chef* of the *Corps des mines*, is a graduate of Ecole Normale Supérieure and holds a doctorate in physical science. She held several positions before joining AREVA.

In 1984, she was in charge of studying chemical safety-related issues in Europe for the French atomic energy commission (*Commissariat à l'énergie atomique, CEA*). In 1985, she was in charge of managing underground resources in the *Ile-de-France* region. In 1988, she also became deputy department head at the *Conseil Général des Mines*, before becoming special assistant on international economics and trade to the

President of the French Republic in 1990, for whom she also served as deputy secretary general responsible for the organization of G7 summits in 1991. In 1995, Mrs Lauvergeon joined Lazard Frères & Cie as general partner. She joined Alcatel Telecom as Executive Vice President in 1997.

Other offices held:

- Chairman and CEO of COGEMA since 1999,
- Chairman of AREVA Enterprises Inc.,
- Vice-Chairman of the Supervisory Board of Sagem,
- Permanent representative of AREVA to the Board of Directors of FCI,
- Member of the Board of Directors of Suez, Total and AREVA T&D Holding SA.

Gérald Arbola (age 56)

Mr. Arbola is the Chief Financial Officer of AREVA. The Supervisory Board appointed Mr Arbola to the Executive Board on July 3, 2001. His term will expire at the first meeting of the Supervisory Board held after July 3, 2006.

Mr Arbola is a graduate of *Institut d'Études Politiques de Paris*. He also holds an advanced degree in economics.

Mr Arbola held a number of positions in the COGEMA group before joining AREVA. He joined the COGEMA group in 1982 as Director of planning and strategy of SGN, and later served as the Chief Financial Officer of SGN from 1985 to 1989 and as the Executive Vice-President of SGN in 1988. He became the Chief Financial Officer of COGEMA in 1992 and a member of the Executive Committee in 1999, at the same time serving as Chairman of SGN in 1997 and 1998.

Other offices held:

- Chairman and CEO of FT1C1 and Chairman of Cogeraip,
- Vice-Chairman of STMicroelectronics NV and STMicroelectronics Holding NV, since March 1, 2005 and March 18, 2005, respectively,
- Chairman of AREVA Finance/Gestion (AFG),
- Member of the Board of Directors of COGEMA and AREVA T&D Holding SA,
- Member of the Board of Directors of Framatome-ANP.

Didier Bénédicti (age 52)

The Supervisory Board appointed Mr Bénédicti to the Executive Board on October 15, 2002. His appointment was confirmed on January 21, 2003 by the minister of the Economy, Finance and Industry and the junior minister in charge of Industry. His term will expire at the first meeting of the Supervisory Board held after July 3, 2006.

Mr Bénédicti holds the diploma of *Ingénieur* from the *Ecole Supérieure d'Informatique, d'Électronique et d'Automatique* (ESIEA) and is a graduate of *Institut d'Administration des Entreprises* (IAE) of Paris.

Mr Bénédicti held several positions with Schlumberger, Thomson and Fiat before joining AREVA. In particular, he served as Executive Vice-President of Thomson Brandt Armement and Vice-Chairman of Thomson Consumer Electronic, and as President of all Magneti Marelli passenger compartment divisions (Fiat group).

Other offices held:

- Chief operating officer of COGEMA and member of its Board of Directors since June 2002,
- Member of the Board of Directors of COGEMA, Inc. and member of the Supervisory Board of Eurodif SA,
- Member of the Board of Directors of *Compagnie Nucléaire de Services* (CNS) and of *Multiservices et Enseignements Pratiques*.

Jean-Lucien Lamy (age 57)

The Supervisory Board appointed Mr Lamy to the Executive Board on October 15, 2002. His appointment was confirmed on January 21, 2003 by the minister of the Economy, Finance and Industry and the junior minister in charge of Industry. His term will expire at the first meeting of the Supervisory Board held after July 3, 2006.

Mr Lamy is a graduate of *Ecole Nationale Supérieure de l'Aéronautique et de l'Espace*. He holds a master's degree in economic systems from the University of Stanford and an MBA from the University of Iowa.

Mr Lamy held several positions in multinational groups, including Rockwell and Allied Signal, before joining the Labinal group in 1984. He became President of several operating divisions in 1987 at a time when Labinal was expanding abroad through mergers and acquisitions. He left the company when it was acquired by Snecma in late 2000.

Other offices held:

- Chairman and CEO of FCI since November 2001,
- Chairman of the Supervisory Board of FCI Connectors Hungary,
- Chairman and CEO of FCI Italia S.p.A., FCI Americas International Holdings Inc., FCI Americas Technology Inc., FCI Americas Inc. and FCI USA Inc.,
- Permanent representative of FCI to the Boards of Directors of FCI Expansion 1 SAS, FCI Micronnections, FCI Besançon, FCI France and FCI Automotive France,

- Member of the Boards of Directors of FCI Asia Pte Ltd and FCI Japan K.K., representing FCI, and managing director of FCI Nederland BV,
- Member of the Board of Directors of Eramet.

Vincent Maurel (age 57)

The Supervisory Board appointed Mr Maurel to the Executive Board on October 15, 2002. His appointment was confirmed on January 21, 2003 by the minister of the Economy, Finance and Industry and the junior minister in charge of Industry. His term will expire at the first meeting of the Supervisory Board held after July 3, 2006.

Mr. Maurel is a graduate of *Ecole Polytechnique* and *Ecole Nationale Supérieure des Télécommunications*.

He joined COGEMA in December 2000 as Executive Vice President of the Enrichment Business Unit and Member of the Executive Committee. He became president of Framatome-ANP in December 2001. Previously, he had joined Thomson CSF in 1974, later becoming Executive Vice-President and industrial Director for Alcatel Telspace. Starting in 1993, he managed the steam turbine division and subsequently the electric power plant division within GEC-Alstom before becoming Chairman of ABB-Alstom Power France and its services subsidiary.

Other offices held:

- Member of the Supervisory Board and Shareholders Committee of Framatome-ANP GmbH (Germany),
- Member of the Board of Directors of Framatome-ANP Inc. (USA).

6.1.1.2. Composition of the Supervisory Board

Supervisory Board members are appointed by the General Meeting of Shareholders and voting right certificate holders, except for French government representatives on the Supervisory Board and members elected by company personnel.

The Supervisory Board consists of at least ten and no more than 18 members, including three members elected by company personnel per the conditions described below and representatives of the French government appointed pursuant to Article 51 of law no. 96-314 dated April 12, 1996, as applicable. The three members representing company personnel are chosen by an electoral body consisting of engineers, managers and support personnel (one member) and by an electoral body consisting of all other employees (two members).

The members of the Supervisory Board serve for a term of five years. The duties of Supervisory Board members not elected by company personnel expire at the end of the Annual General Meeting held in the year of expiration of his or her term convened to approve the financial statements of the previous year.

The General Meeting of Shareholders may dismiss members of the Supervisory Board, other than representatives of the French government and members elected by company personnel. The duties of a member elected by company personnel expire upon the announcement of the results of elections, which AREVA must organize according to the bylaws, or upon the termination of said member's employment contract or his or her dismissal, as provided by legislation and regulations in effect at the time of the dismissal.

Only natural persons may be elected by company employees to serve as members of the Supervisory Board. Members of the Supervisory Board not elected by company employees may be natural or moral persons.

Except as otherwise provided by law, each member of the Supervisory Board must own at least one share of the company.

The Supervisory Board elects a Chairman and a Vice-Chairman from among its members; they are charged with convening the Board and conducting meetings, with the vice chairman filling these functions in the event of the Chairman's absence or inability to do so. The Chairman and the Vice-Chairman are natural persons.

A number of changes were made to the composition of the Supervisory Board in 2004. Mr Jean-Pierre Falque-Pierrotin, Director General for Industry, Information Technologies and the Postal Service (DIGITIP) at the ministry of the Economy, Finance and Industry, was appointed to represent the French government, replacing Mrs Jeanne Seyvet. Mr Jean-Pierre Lafon, secretary general at the ministry of Foreign Affairs, was appointed to represent the French government, replacing Mr Hubert Colin de Verdière.

On March 8, 2005, the Supervisory Board appointed Mr Frédéric Lemoine to replace Mr Philippe Pontet, who had resigned. This appointment is subject to confirmation by AREVA's Annual General Meeting of Shareholders, to be held on May 12, 2005.

As of the date this report was filed, the Supervisory Board consisted of 16 members:

Members appointed by the Shareholders:

Frédéric Lemoine (age 39)

Appointed by the Supervisory Board on March 8, 2005 to replace Mr Philippe Pontet, resigning, subject to confirmation by the Annual General Meeting of Shareholders to be held on May 12, 2005. Mr Lemoine was appointed chairman of the Supervisory Board on March 8, 2005. His term expires at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Frédéric Lemoine is a graduate of *Ecole des Hautes Études Commerciales*, of *Institut d'Études Politiques de Paris* and of *Ecole Nationale d'Administration*.

Other offices held:

- Administrator of LCE SARL,
- Member of the Board and Chairman of the Audit and Accounting Committee of Groupama SA.

Alain Bugat (age 56)

Mr Bugat became a member of the Supervisory Board on January 23, 2003. The General Meeting of Shareholders confirmed his appointment on May 12, 2003. He was appointed Vice-Chairman of the Supervisory Board on June 12, 2003. His term expires at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Bugat is a graduate of *Ecole Polytechnique*, holds the rank of *Ingénieur General de l'Armement*, and is a graduate of *Ecole Nationale des Techniques Avancées*.

Other offices held:

- Administrator general and Chairman of the CEA Board of Directors,
- Member of the Board of Directors of DCN SA,
- Member of the Boards of Directors of COGEMA and EDF representing the French government,
- Member of the Board of *Agence Nationale de la Recherche Technologique* (ANRT), an association.

Euan Baird ⁽¹⁾ (age 67)

Appointed to the Supervisory Board by the General Meeting of Shareholders on June 18, 2001, his term expires at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Baird is a graduate of Cambridge University.

Other offices held:

- Member of the Boards of Directors of ScottishPower and Société Générale,
- Member of the Advisory Board of Banque de France.

Patrick Buffet⁽¹⁾ (age 51)

Mr Buffet was appointed to the Supervisory Board by the General Meeting of Shareholders on June 18, 2001. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Buffet holds the rank of *Ingénieur* in the *Corps des Mines*.

Other offices held:

- Executive Director of Suez,
- Member of the Boards of Directors of Neuf Telecom, Caravelle, Electrabel, Fabricom and Suez Tractebel,
- Member of the Supervisory Board of Astorg Partners and advisor to S.I. Finance.

Thierry Desmarest⁽¹⁾ (age 59)

Mr Desmarest was appointed to the Supervisory Board by the General Meeting of Shareholders on June 18, 2001. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Thierry Desmarest is a graduate of *Ecole Polytechnique* and holds the rank of *Ingénieur en Chef* in the *Corps des Mines*.

Other offices held:

- Chairman and CEO of Total SA and Elf Aquitaine,
- Member of the Supervisory Board of Air Liquide,
- Member of the Board of Directors of Sanofi-Aventis.

Gaishi Hiraiwa⁽¹⁾ (age 90)

Mr Hiraiwa was appointed to the Supervisory Board by the General Meeting of Shareholders on September 3, 2001. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Hiraiwa is counselor to the Emperor of Japan and a former Chairman of Tepco.

Other offices held:

- Member of the Boards of Directors of Kokyo Tatemono Co. Ltd, Three Hundred Club, World Trade Center Building Inc., Tôkô Tatemono Co. Ltd, and Nippon Television Network Corporation.

Daniel Lebègue⁽¹⁾ (age 61)

Mr Lebègue was appointed to the Supervisory Board by the General Meeting of Shareholders on June 18, 2001. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Lebègue is a graduate of *Institut d'Études Politiques de Paris* and *Ecole Nationale d'Administration*.

Other offices held:

- Member of the Boards of Directors of Alcatel, Scor, Crédit Agricole SA and Technip,
- Chairman of the *Institut Français des Administrateurs* and of *Transparence Internationale*, both associations.

Olivier Pagézy (age 37)

Mr Pagézy became a member of the Supervisory Board on June 12, 2003. His appointment was confirmed by the General Meeting of Shareholders on May 4, 2004. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Pagézy is a graduate of *Institut d'Études Politiques de Paris* and *Ecole Nationale d'Administration*.

Mr Pagézy is the Chief Financial Officer of the CEA.

Other offices held:

- Member of the Boards of Directors of CEA Valorisation and Co-Courtage Nucléaire.

Commissariat à l'énergie atomique (CEA), represented by Jacques Bouchard

The CEA became a member of the Supervisory Board at the Supervisory Board Meeting held on July 18, 2001. This appointment was confirmed by the General Meeting of Shareholders on September 3, 2001.

The CEA's term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

(1) Independent members of the Supervisory Board. Individuals who hold less than 10% of the company's share capital and who have no financial or commercial relationship with the company (as customer or supplier) are considered to be independent.

The CEA is represented by Mr Jacques Bouchard (age 65). Mr Bouchard is a graduate of *Ecole Centrale des Arts et Manufactures*.

Other offices held:

- Permanent representative of the CEA to the Board of Directors of Technicatome,
- Member of the Boards of Directors of COGEMA and SFEN (association).

Other CEA offices held:

- Member of the Boards of Directors of Brevatome (nuclear patent applications management), CEA Valorisation and Technicatome.

Members representing the French government, appointed by ministerial order:

Luc Rousseau (age 48)

Mr. Rousseau was appointed by ministerial order dated March 11, 2005, published in the *Journal Officiel* (official gazette) of March 25, 2005, to replace Mr. Jean-Pierre Falque Pierrotin. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr. Rousseau is a graduate of *École Polytechnique* and holds the rank of *Ingénieur* in the *Corps des Mines*.

Mr. Rousseau is Director General of Enterprises at the ministry of Economy, Finance and Industry.

Other offices held:

- Member of the Atomic Energy Committee,
- Government Commissioner for the Board of Directors of the French Postal Service.

Dominique Maillard (age 55)

Mr Maillard was appointed by ministerial order dated June 28, 2001, published in the *Journal Officiel* (official gazette) on June 30, 2001. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Dominique Maillard is a graduate of *Ecole Polytechnique* and holds the rank of *Ingénieur* in the *Corps des mines*. He is the Director of Energy and Raw Materials at the ministry of the Economy, Finance and Industry.

Other offices held:

- Member of the Boards of Directors and representative of the French government to the Boards of Directors of the French Postal Service, Erap and *Institut Français du Pétrole*,
- Government commissioner to COGEMA, Andra and the electricity regulation commission (*Commission de régulation de l'électricité*),
- Member of the steering Committee of the International Energy Agency and the French atomic energy board (*Comité de l'énergie atomique*).

Jean-Pierre Lafon (age 64)

Mr Lafon was appointed by ministerial order dated December 15, 2004, published in the *Journal Officiel* (official gazette) on December 24, 2004, to replace Mr Hubert Colin de Verdière. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr Lafon holds a doctorate in mathematics. He is the secretary general of the ministry of Foreign Affairs.

Other offices held:

- Representative of the French government to the Board of Directors of ENA,
- Member of the Boards of Directors of *GIP/France coopération internationale*, EDF, and the *Association Française d'Action Artistique* (AFAA),
- Member of the French atomic energy Board (*Comité de l'énergie atomique*).

Bruno Bézard (age 41)

Mr Bézard was appointed by ministerial order dated July 22, 2002, published in the *Journal Officiel* (official gazette) on July 26, 2002, to replace Mr Nicolas Jachiet. His term will expire at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005.

Mr. Bézard is a graduate of *Ecole Polytechnique* and *Ecole Nationale d'Administration*. He is the head of the Equity holdings department and Deputy director general of the French agency that manages the French government's equity holdings, *Agence des participations de l'Etat*, at the Department of Treasury and Economic Policy, ministry of the Economy, Finance and Industry.

Other offices held:

- Member of the Boards of Directors of SNCF, EDF, France Télévisions and the French postal service.

Members elected by and representing the employees:

Jean-Claude Bertrand (age 53)

Mr Bertrand was elected by the employee electoral body on May 28, 2002 in elections validated by the works council (*Comité d'Entreprise*) on July 12, 2002. He took office at the Supervisory Board Meeting held on July 25, 2002. His term will end following elections to be held in 2007.

Mr Bertrand is a facility safety supervisor at COGEMA-Pierrelatte.

Gérard Melet (age 47)

Mr Melet was elected by the employee electoral body on May 28, 2002 in elections validated by the works council (*Comité d'Entreprise*) on July 25, 2002. He took office at the Supervisory Board Meeting held on July 25, 2002. His term will end following elections to be held in 2007.

Mr Melet is a buyer in the COGEMA-La Hague purchasing department.

Alain Vivier-Merle (age 56)

Mr Vivier-Merle was elected by the electoral body consisting of engineers and managers on June 20, 2002 in elections validated by the works council (*Comité d'Entreprise*) on July 12, 2002. He took office at the Supervisory Board Meeting held on July 25, 2002. His term will end following elections to be held in 2007.

Mr Vivier-Merle is a manager of strategy and marketing programs for Framatome-ANP in Lyon.

Other offices held:

- Member of the Supervisory Board of Sogepans A,
- Member of the Supervisory Board of the Framépargne mutual fund and the AREVA money market fund.

The following persons attend the meetings of the Supervisory Board in an advisory capacity: Mr François Muller, acting as government controller, and Mr Christophe Xerri, representing the unified delegation of AREVA personnel (*Délégation unique du personnel d'AREVA*).

Censors:

AREVA's bylaws authorize the Supervisory Board to appoint one or several censors, whose mission is to assist the Supervisory Board in its oversight function. The censors attend the meetings of the Supervisory Board without the right to vote.

No censor had been appointed as of the date this report was filed.

6.1.2. Functioning of management and supervisory bodies

6.1.2.1. Functioning of the Executive Board

Full authority is vested in the Executive Board to act on behalf of the company in all circumstances with regard to third parties, except when authority is expressly attributed by law and the bylaws to the Supervisory Board and to the combined shareholders. Executive Board meetings are recorded in a written meeting report.

The Executive Board convenes General Meetings of Shareholders and voting right certificate holders, and Special Meetings of investment certificate holders.

The Executive Board meets whenever AREVA's interests so require. Meetings are held at the corporate headquarters or any other place indicated in the notice of meeting. The Executive Board met 14 times in 2002, 17 times in 2003 and seven times in 2004, with an attendance rate of 94%.

At least half of the members must be present for decisions of the Executive Board to be valid. Decisions are made on a majority vote of members present or represented. Executive Board decisions are recorded in minutes.

Management duties may be distributed among the members of the Executive Board based on a recommendation from the chairman of the Executive Board approved by the Supervisory Board. On October 15, 2002, the Supervisory Board approved the following distribution of duties among members of the Executive Board: Mrs Anne Lauvergeon and Mr Gérald Arbola are in charge of the Group's general management; Gerald Arbola is also in charge of financial management for the Group; Mr Didier Bénédicti is in charge of R&D for the Group; Mr Jean-Lucien Lamy is in charge of purchasing for the Group; and Mr Vincent Maurel is in charge of information systems for the Group.

The Chairman of the Executive Board represents AREVA with regard to third parties. The Supervisory Board may, based on a recommendation from the chairman of the Executive Board, appoint one or more general managers with the authority to represent the company with regard to third parties. As of today, no member of the Executive Board has been appointed in that capacity.

The Executive Board approved its rules of procedure on February 7, 2003, including:

- distribution of duties among the members,
- order of the meetings of the Executive Board,
- conditions for the Executive Board to delegate its authority to an Executive Board member.

6.1.2.2. Functioning of the Supervisory Board

The Supervisory Board meets at least once quarterly at the corporate headquarters or any other place indicated in the notice of meeting issued by the Chairman, or by the Vice Chairman in the absence of the former, to review the Executive Board's report.

At least half of the members must be present for decisions of the Supervisory Board to be valid. Decisions are made on a majority vote of the members present or represented. In the event of a tie vote, the chairman of the meeting casts the deciding vote.

The Supervisory Board appoints certain members and the chairman of the Executive Board. The Supervisory Board may recommend the dismissal of Executive Board members to the General Meeting of Shareholders.

The Supervisory Board may call meetings of the General Meeting of Shareholders.

The Supervisory Board exercises ongoing control over the management of AREVA by the Executive Board. The Executive Board regularly informs the Supervisory Board of the business and operations of the company through quarterly reports. The Supervisory Board performs such verifications and procedures as it deems necessary in connection with its supervisory responsibilities.

The Supervisory Board submits its remarks on the report of the Executive Board and on the financial statements to the Annual General Meeting of Shareholders.

Since the entry into force of Law No; 2003-706 known as the French Financial Security Act, enacted on August 1, 2003, the Supervisory Board reviews its chairman's report on the preparation and organization of the Board's undertakings and on the Group's internal control procedures on an annual basis.

The Supervisory Board delegates authority to the Executive Board to conduct transactions that the Executive Board cannot accomplish without such authorization. It reviews the overall strategy for AREVA and for the Group. Annual budgets and multi-year plans for AREVA, its direct subsidiaries and the Group are subject to Supervisory Board approval, as well as any transaction at the subsidiary level contemplated by Article 23-2 of the bylaws.

According to Article 23-2 of the bylaws, the following Executive Board decisions are subject to prior approval by the Supervisory Board when they involve an amount exceeding €80 million:

- issues of marketable securities, regardless of type, that may have an impact on share capital;
- significant decisions on opening establishments in France and abroad, either directly, through creation of an establishment of a direct or indirect subsidiary, or by acquiring an equity stake, or by decisions to close such establishments;
- significant operations that may affect the Group's strategy and modify its financial structure or scope of business;
- acquisitions, extensions or sales of equity in any company, existing or future;
- exchanges of goods, securities or assets, excluding cash operations, with or without payment of cash;
- acquisitions of buildings;
- settlements, compromises or transactions relating to disputes;
- decisions pertaining to loans, borrowings, credit and advances; and
- acquisitions and disposals of any debt by any means.

In addition, proposals for appropriations of earnings presented by the Executive Board are subject to the prior approval of the Supervisory Board.

On July 3, 2001, the Supervisory Board authorized the Executive Board to carry out certain transactions, up to the following amounts:

- disposals of real property up to €30 million;
- provision of collateral to secure corporate commitments, up to 80 million euros per year in the aggregate, provided that no single commitment exceeds €30 million.

At that same meeting, the Supervisory Board established its rules of procedure, mainly for:

- the establishment and functioning of the four Committees described below;
- rules for preparing Supervisory Board deliberations;
- conditions for establishing the schedule of Supervisory Board meetings; and
- resources at the disposal of Supervisory Board members elected by the employees.

Supervisory Board meetings in 2004

In 2004, the Board met six times at the corporate headquarters (attendance rate: 77%).

The Supervisory Board voted on the matters described below:

- January 9, 2004: The Supervisory Board acknowledged implementation of the acquisition of the T&D business, which had been previously authorized, and which closed on January 9, 2004. The Supervisory Board also acknowledged the transfer of existing surety and guarantees given on account of the T&D companies as part of the transactions to acquire this new business. It authorized the Executive Board to provide AREVA's guarantee for existing commitments, in place of Alstom Holdings or any other Alstom holding company, up to the total value of the commitments accepted under the T&D acquisition agreement. At that same meeting, the Supervisory Board authorized the Executive Board to provide a guarantee for surety, endorsements and guarantees on account of AREVA subsidiaries in an amount not to exceed the sum total of €1 billion in 2004.
- February 3, 2004: The Supervisory Board discussed amendments to the STMicroelectronics shareholders' agreement dated December 10, 2001 and, subject to the approval of (ii) hereafter, (i) authorized a shareholder's advance to FT1CI in an amount corresponding to the acquisition of 7 million STMicroelectronics shares by FT1C1, thus enabling AREVA to participate, through FT1CI, in the exercise of an option to restore balance among shareholders, as contemplated in the above-mentioned shareholders' agreement; and (ii) authorized the Executive Board to acquire FT1CI shares offered for sale from France Telecom, as indicated in the notice given to AREVA by France Telecom, equivalent to 17 million underlying STMicroelectronics shares, which CEA committed to buy on December 31, 2005 for the price agreed upon in the agreement between AREVA and CEA.
- March 16, 2004: The Supervisory Board authorized a mining investment project in Kazakhstan and the establishment of the Katco company, in partnership with Kazatomprom (a Kazakh government-owned company) during the operating phase, for a total of \$80 million.
- July 8, 2004: The Supervisory Board authorized the sale of a real estate complex in Lyon. At that same meeting, the Supervisory Board authorized the renewal of the liquidity agreement between Framépargne and Calyon, effective July 12, 2004 and running through December 31, 2005, and the agreement guaranteeing the value of AREVA shares sold by Framépargne to Calyon, given by AREVA to Calyon in an amount of up to €100 million. The Supervisory Board also authorized the sale of all Melox shares held by AREVA to COGEMA. In addition, the Supervisory Board authorized the execution of an agreement between AREVA and COGEMA designating AREVA as COGEMA's agent for the management of the decommissioning fund.
- September 28, 2004: The Supervisory Board authorized the Executive Board to exceed the ceiling of €1 billion previously authorized by the Supervisory Board on January 9, 2004 by €250 million to provide surety, endorsements and guarantees on account of AREVA subsidiaries. The authorization increased the ceiling to €1,250 billion and was in effect until December 31, 2004. At that same meeting, the Supervisory Board authorized the recapitalization of AREVA T&D Holding SA by forgiving €500 million of its receivables. The Board approved this same process for AREVA T&D USA, in the amount of €40 million, and AREVA T&D UK, in the amount of €50 million. The Supervisory Board also approved the key points of the Group's strategic action plan for the period 2005-2009.
- December 21, 2004: The Supervisory Board authorized COGEMA to pay a lump sum of €427 million to the CEA as payment in full for the transfer of COGEMA's cleanup and decommissioning obligations at the Marcoule site to the CEA. At that same meeting, the Board authorized a capital investment project at the Cigar Lake mine for up to CAD146 million, i.e. approximately €93 million. In addition, the Supervisory Board once again authorized the Executive Board to provide an AREVA guarantee to release Alstom Holdings and any other Alstom holding company of surety or guarantee obligations undertaken previously for the T&D business, which were transferred or are to be transferred to AREVA pursuant to agreements between AREVA and Alstom, in particular the Share Purchase Agreement of September 25, 2003. The Board also approved the Nuclear business, Transmission and Distribution business and Connectors business sections of the proposed consolidated budget for 2005. At that same meeting, the Supervisory Board authorized the Executive Board to provide surety, endorsement and/or guarantees in the name of AREVA to third parties in an amount not to exceed €650 million in 2005. Also on December 21, 2004, the Supervisory Board authorized trademark and shared services agreements between AREVA and its subsidiaries COGEMA, Framatome-ANP, FCI, AREVA T&D Holding SA and Technicatome, and a service agreement between AREVA and AREVA T&D Holding SA to confirm invoices issued for services performed in 2004. Also at that meeting, the Supervisory Board authorized the sale of the T&D business in New-Zealand and Australia for a total price of approximately €112 million.

Supervisory Board meetings in 2005

• On March 8, 2005, the Supervisory Board unanimously approved the business plan, acknowledged the net profit for the year of €301,555 million, and approved the proposal to distribute a net dividend of €9.59 per share and per investment certificate. The Board finalized its report and heard the Chairman's report in accordance with the law of August 1, 2003 on financial security. During the same meeting, the Supervisory Board authorized the Executive Board to give sureties, endorsements and guaranties with regard to obligations of AREVA T&D UK, a subsidiary, to local landlords of facilities leased on Glover Street, St. Leonard Street and Speke Approach. In addition, the Board acknowledged Mr. Philippe Pontet's resignation as a member and Chairman of the Supervisory Board, and appointed Mr. Frédéric Lemoine to replace him as a new member and Chairman of the Supervisory Board for the remainder of Mr. Philippe Pontet's term, which expires at the General Meeting of Shareholders convened to approve the financial statements for the year ending December 31, 2005, subject to approval by the next General Meeting of Shareholders. The Supervisory Board also appointed Mr. Frédéric Lemoine Chairman of the Strategy Committee.

Committees established by the Supervisory Board

The Supervisory Board may establish Committees comprised of Board members, which functions under its responsibility. The Board establishes the composition and duties of each Committee and the compensation, if any, of the members. On July 3, 2001, the Supervisory Board set up a Strategy Committee, an Audit Committee, and a Compensation and Nominating Committee. On December 10, 2002, the Supervisory Board created a cleanup and decommissioning fund Monitoring Committee.

Prior to each meeting of the Supervisory Board, as necessary, the specialized Committees carry out detailed analysis and regularly report on their work to the members of the Supervisory Board.

Strategy Committee

The five members of the Strategy Committee are chosen from among the members of the Supervisory Board. They are: Frédéric Lemoine, chairman, who was appointed on March 8, 2005 to replace Philippe Pontet, Dominique Maillard, Euan Baird⁽¹⁾, Patrick Buffet⁽¹⁾ and Bruno Bézard. François Muller, government controller, participates in the Committee in an advisory capacity. Bernard de Gouttes serves as Committee secretary.

(1) Independent members of the Supervisory Board.

The Committee meets at least once per six-month period and as often as necessary to fulfill its duties, and is convened by its Chairman or at least two of its members. It is responsible for advising the Supervisory Board on the strategic objectives of AREVA and of its main subsidiaries and for assessing the risks and merits of major strategic decisions proposed by the Executive Board to the Supervisory Board. It ensures application of AREVA's strategic policy and its implementation at the subsidiary level. It orders studies to be carried out as it deems useful and recommends policies as it deems necessary.

The Strategy Committee met once in 2004 with an attendance rate of 60%:

- On September 21, 2004, the Committee examined the strategic action plan for the period 2005-2009 covering FCI, T&D, AREVA's minority interests in STMicroelectronics and Eramet, the Nuclear business, and a financial summary, as submitted to the Supervisory Board for approval. It was agreed that the strategic plan will be examined every other year and that cross-cutting topics concerning the Group will be examined in the intervening years.

The Strategy Committee met three times in the first quarter of 2005, with an attendance rate of 60%:

- On February 7 and February 17, 2005, the Committee reviewed a tentative partnership project with WMC, an Australian metals company that produces uranium in particular, and potential AREVA strategies in the framework of this project.
- On February 23, 2005, the Committee met to review AREVA's 2005-2007 business plan. The Committee gave a favorable opinion on the business plan, which was subsequently submitted to the Supervisory Board for approval.

Audit Committee

The four members of the Audit Committee are chosen from among the members of the Supervisory Board. They are: Daniel Lebègue⁽¹⁾ (Chairman), Bruno Bézard, Jean-Claude Bertrand and Olivier Pagézy, who was appointed to the Supervisory Board on January 9, 2004 to replace Philippe Rouvillois. François Muller, government controller, participates in the Committee in an advisory capacity. Alain Salmon serves as Committee secretary.

The Committee meets at least once quarterly and as often as necessary to fulfill its duties, and is convened by its chairman or at least two of its members. Its mission is to evaluate and help define as necessary accounting, financial and ethical standards to be implemented by the Group's companies in France and abroad.

It verifies the appropriateness and effectiveness of these standards and the effectiveness of internal management controls. It draws up reports and conducts reviews of particular points at the request of the Supervisory Board or on its own initiative. The Committee reviews proposed budgets, preliminary financial statements and proposed multi-year plans for AREVA, its direct subsidiaries and the Group, and submits its comments to the Supervisory Board. For the annual financial statements, it consults with AREVA's statutory auditors and those of its subsidiaries in order to assist the Supervisory Board in its mission of audit and control.

The Committee has the authority to assess the quality of the financial information provided to the public by AREVA. Upon expiration of the term of a statutory auditor, the Committee recommends a new statutory auditor or the renewal of the current auditor's term, after soliciting competitive bids.

The Committee maps the Group's potential and existing risks and assesses resources provided or to be provided to prevent them.

Five Audit Committee meetings were held in 2004, with an attendance rate of 94%:

- March 3 and March 12, 2004: the Committee reviewed the main year-end reporting options, with a view to closing the books for 2003 and improving internal controls and financial reporting procedures. Accordingly, the Committee heard the statutory auditors' report. The Committee noted the stability of the Group's sales revenue and the improved operating income resulting from the recovery of the connectors business, despite erosion in the Energy business and unchanged decommissioning cost assumptions in 2003 compared with 2002. The Committee also reviewed budget components for the T&D division and the change in shareholders of STMicroelectronics. In addition, the Committee examined potential improvements to management and steering tools.
- July 2, 2004: the Committee examined the proposed budget revision for 2004 and noted that net income was up compared with the initial budget, due to improved operating income, net financial income and net exceptional items. The Committee requested details on the status of discussions with Alstom regarding the final T&D business acquisition price, which is subject to audit as provided in the Share Purchase Agreement.
- September 20, 2004: the Committee examined the six-month interim financial statements, which included consolidation of

the T&D business in the AREVA consolidated financial statements. The Committee also examined the plan to recapitalize AREVA T&D to return it to a positive equity position by forgiving part of AREVA T&D's debt to AREVA. The Committee deemed that formal authorization by the Supervisory Board was required to carry out this operation.

- December 17, 2004: the Committee reviewed the following points:
 - transition to International Financial Reporting Standards (IFRS): the Committee emphasized the importance of this challenge for 2005, in terms of financial reporting, particularly considering the prospect for a stock offering;
 - forecast for the year and 2005 budget;
 - renewal of the administrative agreement allowing consolidated tax reporting;
 - main aspects of the internal audit program implemented in 2004, the program for 2005, and the organization and composition of audit teams; and
 - selection of a second statutory auditor for T&D.

The Audit Committee met twice in the first quarter of 2005, with an attendance rate of 87%.

- January 14, 2005: the Committee reviewed the results of the internal audit program for 2004, in particular those aspects concerning the T&D business. The Committee noted that the number of internal audit missions increased in 2004. It recalled that the company would continue to apply the COSO internal auditing standards until market authorities approve a common standard. The Committee noted an improvement in various components of the company's internal controls.
- March 3, 2005: the Committee reviewed the financial statements for 2004 and the report of the Chairman of the Supervisory Board on internal controls. In this context, the Committee heard the college of AREVA's statutory auditors. The Committee recommended that retirement commitments in the euro zone be calculated based on a 4.5% discount rate, which is closer to the rate selected by other large energy businesses. The Committee suggested changes to the wording of notes 13 and 22 of the notes to the financial statements. The statutory auditors called the Committee's attention to the challenges of the transition to International Accounting Standards IAS 32 and IAS 39, and approved without reservation the financial statements as presented, with comments regarding deep geological disposal costs and the split of cleanup and decommissioning costs at the

(1) Independent members of the Supervisory Board.

La Hague site. The Committee took note of the statutory auditors' positive assessment of the report on internal controls submitted by the Chairman of the Supervisory Board.

Compensation and Nominating Committee

The three members of the Compensation and Nominating Committee are chosen from among the members of the Supervisory Board. They are: Patrick Buffet⁽¹⁾, chairman, Daniel Lebègue⁽¹⁾ and Bruno Bézard. François Muller, government controller, participates in the Committee in an advisory capacity. Bernard de Gouttes serves as Committee secretary.

The Committee meets at least once each six-month period or as often as necessary to fulfill its duties, and is convened by its Chairman or at least two of its members.

With respect to compensation, the Committee is responsible for recommending executive compensation levels, retirement and insurance programs, and in-kind benefits to the Supervisory Board based on comparable factors in the market and on individual performance assessments. In this regard, the Committee reviewed the timing and procedures for offering stock ownership plans to corporate officers, management personnel and employees of AREVA and of its direct and indirect subsidiaries. With respect to nominations, the Committee reviews the files of candidates for membership on the Executive Board and conveys its opinion to the Supervisory Board. The Committee may also, at the Board's request, recommend members to the Supervisory Board other than members representing the shareholders and the French government; it may review the files of candidates for membership on the Supervisory Board and convey its opinion to that board. The Committee also gives the Supervisory Board its opinion on executive nominations for first-tier companies of the AREVA group.

The Compensation and Nominating Committee met six times in 2004 with an attendance rate of 94%:

- January 13, 2004: the Committee recommended:
 - the appointment of Mr Philippe Guillemot to the position of AREVA Director in charge of the transmission & distribution business;
 - a proposal to increase the aggregate budget for Director's fees for 2003, considering that the number of Supervisory Board and Committee meetings was larger than anticipated;
 - a proposal to increase the amount of Directors fee for attending a Committee meeting, to maintain the amount of

the Directors fee paid for attending a Supervisory Board meeting, and to increase the aggregate budget for Director's fees to take into account the increasing number of meetings; and

- raising the ceiling of the guarantee to indemnify the Group's Directors and officers, including T&D Directors and officers, effective as of the closing of the acquisition on January 9, 2004.
- March 3 and March 10, 2004: the Committee reviewed proposed changes to the compensation of Mr Jean-Lucien Lamy, Chairman of FCI.
- March 17, 2004: the Committee issued a recommendation to renew the terms of COGEMA executives, and gave opinions concerning the performance of AREVA Executive Board members in 2003, based on qualitative and strategic objectives.
- June 1, 2004: the Committee proposed qualitative and strategic objectives to assess the performance of the members of the Executive Board in 2004. The Committee also confirmed the decisions of the Executive Board regarding company contributions to the employee savings plan for 2004, and the conditions concerning the determination of company profit-sharing contributions based on consolidated net income for 2003.
- December 21, 2004: the Committee reviewed proposed changes to the compensation of members of the Executive Board.

The Compensation and Nominating Committee met on March 8, 2005, with an attendance rate of 67%:

- March 8, 2005: the Committee issued a favorable opinion on the appointment of Mr. Frédéric Lemoine as a member of the Supervisory Board, to replace Mr. Philippe Pontet, resigning. The Committee also issued a favorable opinion on the candidacy of Mr. Lemoine for the position of Chairman of the Supervisory Board at its meeting of March 8, 2005, and for his appointment as Chairman of the Strategy Committee.

Cleanup and Decommissioning fund Monitoring Committee

The Committee has a maximum of five members, chosen from among the members of the Supervisory Board. They are: Alain Bugat (Chairman), Dominique Maillard, Gérard Melet, Olivier Pagézy and Bruno Bézard, who was appointed to the Supervisory Board on March 16, 2004, to replace Philippe Rouvillois. François Muller, government controller, participates

in the Committee in an advisory capacity. Alain Salmon serves as Committee secretary.

The Committee meets at least once each six-month period or as often as necessary to fulfill its duties, and is convened by its chairman or at least two of its members. The Committee is charged with helping to monitor the asset portfolio set up by AREVA subsidiaries to cover future nuclear cleanup and decommissioning expenses. In this capacity, and based on pertinent documentation submitted by AREVA, including a management charter, the Committee reviews the multi-year schedule of estimated future cleanup and decommissioning expenses for affected companies of the AREVA group; the criteria for establishing, using and controlling funds earmarked for expenses by these companies; and the investment management strategy for the related assets. The Committee provides the Supervisory Board with opinions and recommendations on these various topics.

The Committee may consult with the financial consulting firms chosen by the fund management companies.

The cleanup and decommissioning fund Monitoring Committee met three times in 2004 with a 78% attendance rate:

- February 17, 2004: the Committee reviewed the status of decommissioning liabilities and assets as of December 31, 2003 and proposals from the Executive Board to modify asset management methods. The Committee requested that the Supervisory Board approve the agreement between COGEMA and AREVA concerning AREVA's management of assets earmarked to cover COGEMA's decommissioning expenses and the selection of a firm to serve as an advisor to develop management procedures defining asset allocation criteria, authorized transactions, terms and conditions for outsourced management, and possible changes to the Supervisory Board's procedures regarding the Committee's responsibilities and increasing the number of Committee members.
- June 9, 2004: the Committee reviewed the status of decommissioning liabilities and assets as of the end of May. The Committee pointed out the high percentage of equities included in the portfolio of assets earmarked to fund decommissioning expenses. The Committee also noted that the assets earmarked by Eurodif are currently insufficient to cover future expenses. The Committee assessed the progress made in the negotiations among COGEMA, EDF and the CEA, and acknowledged agreements in principle reached between COGEMA and CEA and between COGEMA and EDF respectively. The consequences of these agreements will not be included in the corporate and consolidated financial statements of AREVA until a final contract is executed. The Committee recommended that the Supervisory Board approve a draft agreement submitted by the Executive Board concerning COGEMA's designation of AREVA as its agent to organize and control the management of COGEMA assets earmarked to fund decommissioning expenses. The Committee examined a draft agreement with the AXA group for asset management advice, pursuant to a request for proposals. The Committee approved the proposed contract, provided that AXA does not manage these assets.
- December 20, 2004: the Committee reviewed the latest available status of decommissioning liabilities and assets submitted by the Executive Board, in particular the provision for COGEMA and Framatome-ANP as of December 31, 2004. The Committee indicated that the physical lifespan of the facilities, according to its engineers, is fifty years, which means that dismantling would take place around 2040. The Committee also noted that EDF has made a commitment in principle to treat used fuel until 2015. The Committee reviewed the conditions for establishing a portfolio of assets to fund decommissioning costs at Framatome-ANP, and a possible cash contribution to the portfolio, considering agreements reached with Siemens when the company was established. The Committee asked its financial advisor, AXA, to present its asset management assessment and recommendations. The Committee seconded AXA's recommendations to initiate a process in early January 2005 to restore balance to the portfolio by increasing the allocation to debt instruments. The Committee gave its approval to initiate a request for proposals process at the end of January leading to the selection of external fund managers.

6.1.3. Observations by the Supervisory Board on the Executive Board's management report and the 2004 financial statements

In 2004, the Supervisory Board convened six times at the corporate office on notice duly given by its Chairman. The attendance rate was 77%.

Before each meeting, the Supervisory Board's specialized Committees conducted in-depth reviews of the topics on the agenda. These Committees include the Strategy Committee, the Audit Committee, the Compensation and Nominating Committee, and the Cleanup and Decommissioning Fund Monitoring Committee. Minutes of the Committee meetings

were regularly distributed to the members of the Supervisory Board.

The Supervisory Board and its specialized Committees monitored the business and operations of the Group and of its main subsidiaries and participating interests, in particular through quarterly reports presented by the Executive Board.

As part of its supervisory mission, the Supervisory Board also performed checks and controls as it deemed necessary, particularly regarding the corporate and consolidated financial statements, based on the opinion of the Audit Committee and in close cooperation with the statutory auditors.

In addition to the recurring subjects examined by the Supervisory Board – particularly concerning the financial statements, budgets, significant capital spending projects, the Group's operations and strategy, and governance and labor policy issues – several major transactions with a material impact on the Group's future, described in the Executive Board's management report, required the prior authorization of the Supervisory Board. They include:

- Changes in the STMicroelectronics shareholders' agreement resulting in a shareholder's advance to FT1CI to finance the acquisition of approximately 7 million shares of STMicroelectronics, enabling AREVA to participate, through FT1CI, in the option to rebalance the majority shareholders' respective shares, as provided in the shareholders' agreement.
- Several mining investment projects in Kazakhstan (Katco mining company) in the amount of \$80 million, and in Canada (Cigar Lake mine) in the amount of approximately €93 million. These investments enable the AREVA group to strengthen its positions in the front end of the cycle significantly while increasing its access to uranium resources.
- Sales concerning a number of assets that were not strategic to AREVA's core business, i.e. the sale of an office park in Lyon, France, for approximately €68.6 million, and the sale of T&D operations in New Zealand and Australia, for approximately €112 million.
- Capital increase for AREVA T&D Holding SA (€500 million), AREVA T&D USA (€40 million) and AREVA T&D UK (€50 million) by capitalizing a portion of these companies' debt to AREVA to enable them to return to a positive equity position.
- COGEMA's €427 million payment to the CEA, corresponding to a lump-sum payment for the transfer of COGEMA's cleanup and decommissioning obligations at the Marcoule site to the CEA.

- Signature of an agreement transferring the responsibility for managing COGEMA's decommissioning fund to AREVA. The Supervisory Board, having heard the opinion of the Strategy Committee, approved the strategic action plan submitted by the Executive Board for the 2005-2009 period.

The Board acknowledged the closing of the T&D acquisition, which it had previously authorized, with actual transfer of the business occurring on January 9, 2004.

The Board expressed satisfaction with the announcement in 2004 of three decisions of major significance for the future of the Group:

- The European Commission issued a favorable opinion on the Georges-Besse II project when it authorized the establishment of ETC, a joint AREVA/Urenco company, in the field of uranium enrichment by centrifugation.
- EDF has decided to launch the first in a series of EPR reactors at the Flammanville site in Normandy. This is the second marketing success for this new generation of reactors, following the sale of a similar reactor in Finland in 2003, and confirms AREVA's leadership in the market for third generation reactors.
- On November 10, 2004, the minister of Economy, Finance and Industry announced a decision to increase the number of AREVA shares traded on the stock market. The percentage of AREVA's capital held by the public would increase to 35-40%. The French government will retain ownership, directly or indirectly, of more than half of the company's share capital. This transaction will facilitate the development of AREVA business over the long term.

In addition, the Supervisory Board reviewed nuclear safety in the Group, in particular the Nuclear Safety Charter. The charter is an important baseline document in terms of governance and reporting on the fundamental requirement for nuclear safety in all of AREVA's nuclear facilities.

After verification and inspection of the corporate and consolidated financial statements for 2004, in accordance with Article L. 225-68, paragraph 6 of the French Commercial Code, the Supervisory Board had no observation to make regarding the financial statements or on the management report prepared by the Executive Board, as presented at the Supervisory Board meeting held on March 8, 2005.

For the Supervisory Board,
The Chairman,
Philippe Pontet

6.1.4. Report of the Supervisory Board Chairman on conditions for planning and organizing the functions of the Supervisory Board and on internal control procedures

6.1.4.1. Introduction and regulatory framework

Under the provisions of articles L. 225-37 and L. 225-68 of the French Commercial Code, implementing article 117 of the Law on Financial Security, the Chairman of the Board of Directors or the Chairman of the Supervisory Board, as the case may be, of any *société anonyme* (corporation governed by the laws of France) with a registered office in France, whether raising funds from the public or not, must “report, in a report attached to the report specified under articles L. 225-100, L. 225-102, L. 225-102-1 and L. 233-26, on the conditions for planning and organizing the functions of the Board and on internal control procedures established by the company. Without prejudice to the provisions of article L. 225-56, the report shall also mention the extent to which the Board may have limited the powers of the Chief Executive Officer.”

The present report is published in accordance with Article 117 of the Law on Financial Security. The Executive Board has made the resources of the corporate departments available to the Chairman of the Supervisory Board, with coordination by the audit department, to perform the work necessary to prepare his mission. This work was submitted to the Audit Committee for an opinion and to the college of Statutory Auditors before it was presented to the Supervisory Board.

6.1.4.2. Preparation and organization of the Supervisory Board's functions

Supervisory Board missions

See paragraph 6.1.2.2.

Composition of the Supervisory Board

See paragraph 6.1.1.2.

Supervisory Board functions

See paragraph 6.1.2.2.

Functions of the four Committees

See paragraph 6.1.2.2.

6.1.4.3. Internal control procedures Corporate values and action principles

Sustainable development is at the center of AREVA's industrial strategy, which rests on three pillars: profitable growth, social responsibility, and respect for the environment.

This approach translates into ten commitments:

- Governance,
- Continuous improvement,
- Respect for the environment,
- Financial performance,
- Risk prevention and control,
- Innovation,
- Social responsibility,
- Community involvement,
- Dialogue et consensus building,
- Customer satisfaction.

To underpin this process, AREVA established a Values Charter approved by the Supervisory Board, and promoted the strengthening of internal control systems in all of its entities.

Internal control objectives

AREVA's internal control system enables the Group to meet its objectives and manage risk.

The Group's internal control procedures consist of rules, instructions and practices in effect in throughout the organization, with the following objectives:

- To ensure that AREVA operations and employees:
 - all applicable laws and regulations, standards and internal procedures;
 - operate in a manner consistent with the values, goals and objectives set by the company's representative bodies and management, particularly in the area of risk management.
- To verify that internal and external communications give an accurate picture of the Group's operations and financial position, including those of the subsidiaries.

However, internal control procedures, no matter how well designed and implemented, can only provide reasonable assurances, not absolute guarantees.

Main risk factors

The Group implemented a risk mapping process as soon as AREVA was established. AREVA's Insurance and Risk Management department updates the risk map on an annual basis. The Audit department submits the risk map to the Supervisory Board's Audit Committee. The key risk factors are described in paragraph 4.14.3.

Managers and departments with control responsibilities

In matters of corporate governance, AREVA has opted for an organization based on the separation and balance of powers. Executive and management authority is vested in the

Executive Board, while distinct control authority is vested in the Supervisory Board and the General Meeting of shareholders.

The Executive Board and Executive Committee of AREVA, both comprised of officers from first-tier subsidiaries, define the Group's objectives and contribute to the establishment of internal control systems, with support from the corporate departments.

The corporate departments implement specific controls in their respective areas of responsibility. These departments include the Audit department, the Finance department, the Human Resources department, the Legal department, the Strategy department, the Organization and Information Systems department, etc.

Financial information is analyzed and validated by a number of managers in the financial controls department, including managers in charge of operations and financial controls, financial controllers in the Business Units and subsidiaries, AREVA's consolidation department, business analysts, etc. The most important issues concerning financial reporting are submitted to the Supervisory Board's Audit Committee.

In addition, a Nuclear Executive Committee was established on December 1, 2004, with its members consisting primarily of key managers in the nuclear sector in France, Germany and the United States. The Committee issues an opinion on any project involving a significant financial commitment or with a strong marketing or strategy component.

Internal control procedures

Since it was established, AREVA has worked continuously to strengthen its organization and its internal control procedures.

In 2004, the Group adopted a Values Charter which establishes rules of conduct to which all of the Group's executives must subscribe by signing a letter agreement. These rules incorporate AREVA's policy of ethical behavior, with particular emphasis on human rights; sustainable development; compliance with treaties, laws and regulations; performance; sincerity of communications; protection of individuals and property; and continuous improvement. The Charter provides that any individual may report a blatant dysfunction or a breach of laws or regulations to his or her management. The Charter also establishes precise rules in matters such as insider trading, conflicts of interest and the traceability of payments.

AREVA has also established "organization" and "standards and procedures" units to prepare organizational procedures for the company and to centralize procedures management for the entire Group. Contact persons have been designated in AREVA's first-tier subsidiaries to ensure their distribution. The subsidiaries use them as a basis for developing their own procedures and management processes, including ISO certification, delegation of authority, approval processes for proposals and capital expenditures, continuous improvement initiatives, etc.

Procedures regarding financial and accounting information

AREVA prepared an accounting and financial manual that includes a glossary, which defines the notions used in the financial statements and the performance indicators, and standards and procedures applicable to long-term contracts, provisions, decommissioning liabilities, etc. Every year, the Group updates its key financial policies, which cover areas such as investments, interest rate risk, foreign exchange risk, etc.

In addition, the Group has deployed a shared reporting and consolidation system to harmonize, accelerate and ensure secure processing of accounting and financial data. Group entities record their data in the system according to a schedule and rules established at the corporate level. Local information systems are automatically integrated to ensure data reliability (FCI being a separate consolidation level). The consolidation process and system administration are centralized at the AREVA level.

The system was installed at AREVA T&D in 2004, where 300 people received training on the consolidation system.

As early as 2003, a project management organization was set up to allow AREVA to transition to the International Financial Report Standards (IFRS):

- The financial and accounting information systems were adapted, including upstream systems and the consolidation system.
- The Group's financial and accounting manual was updated and distributed to the Group's units.
- Training sessions were organized for 500 financial managers throughout the Group.
- The main impacts of IFRS transition were analyzed.
- The Supervisory Board's Audit Committee received a progress report on plan implementation.

As a result, beginning in 2005, AREVA will be able to produce restated financial statements for 2004 based on the IFRS.

The project management system will remain in place in 2005 to implement International Accounting Standards (IAS) 32 and 39 regarding the handling of financial instruments. AREVA has decided to adopt these particular standards beginning January 1, 2005.

Assessment of AREVA's internal control system

AREVA optimizes its internal control systems on a continuous basis.

This effort is supported by the Audit department, which monitors the effectiveness of internal control procedures within the Group and reports to the Executive Board and to the Supervisory Board's Audit Committee. The department's missions, which reflect the Group's risk map, are carried out in accordance with an audit charter and with standards of the profession defined by the Institute of Internal Auditors (*Institut français de l'audit et du contrôle interne*, IIA-Ifaci). The resulting recommendations give rise to action plans, which are monitored in liaison with the managers involved.

Two synergistic self-assessment initiatives were also set up and are being implemented in all of the Group's entities: the AREVA Way questionnaire, which supports implementation of the continuous improvement initiative, and a self-audit questionnaire specifically designed to help the units improve their internal control processes.

The self-audit questionnaire was previously used in 2003. It was updated in 2004 to reflect changes in the Group's standards, and in particular to take into account the transition to the IFRS. The new version includes 40 internal control themes with around 600 underlying questions. The college of Statutory Auditors reviewed the accounting and financial themes. The questionnaire was distributed to 188 entities in 2004, compared with only 65 entities in 2003. A software application facilitating data collection is available on the intranet.

The Audit department and the college of Statutory Auditors verified the reliability of some of the responses to the questionnaire in almost 105 entities and 11 countries, representing more than 80% of AREVA's consolidated sales revenue. In liaison with the college of Statutory Auditors in France, Statutory Auditors in foreign countries were informed of the responses and verified the adequacy of the supporting documentation and the consistency of the responses with their general knowledge of the audited entity and its environment, including its internal control systems, acquired while performing their regular auditing duties.

This initiative, which should lead to a continuous, in-depth assessment of internal controls throughout the Group, contributes to the continuous improvement of the internal control systems in the Group's entities, whether or not they are subject to the French Law on Financial Security. The verifications have not revealed any dysfunctions that might have a major impact on the business or financial statements of the Group.

The main event of 2004 was the T&D acquisition and its integration into the Group's internal control system. This transition to group standards should continue in 2005. A series of actions were implemented to strengthen the division's internal control systems in areas where certain weaknesses were identified after its acquisition.

Philippe Pontet

6.1.5. Statutory Auditors' report on the report of the Supervisory Board Chairman

Statutory Auditors' report, prepared in accordance with the last paragraph of Article L. 225-235 of the French Commercial Code, on the report prepared by the Chairman of the Supervisory Board of AREVA (*Société des Participations du Commissariat à l'Energie Atomique*), with respect to the internal control procedures for the preparation and treatment of financial and accounting information

To the Shareholders,

In our capacity as Statutory Auditors of AREVA (*Société des Participations du Commissariat à l'Energie Atomique*) and in accordance with the last paragraph of Article L. 225-235 of the French Commercial Code, we hereby report to you on the report prepared by the Chairman of your company in accordance with Article L. 225-68 of the French Commercial Code for the year ended December 31, 2004.

It is the responsibility of the Chairman of the Supervisory Board to discuss, in his report, the conditions and organization of the Board's procedures and the internal control procedures implemented by the company.

It is our responsibility to report to you our observations on the information and assertions set out in the Chairman's report on the internal control procedures relating to the preparation and treatment of financial and accounting information.

We have performed our procedures in accordance with the professional guidelines applicable in France. These guidelines

require that we perform procedures to assess the fairness of the information set forth in the Chairman's report with respect to internal control procedures relating to the preparation and treatment of the financial and accounting information. These procedures mainly consisted of the following:

- obtaining an understanding of the objectives and general organization of internal controls as well as the internal control procedures relating to the preparation and treatment of financial and accounting information, as presented in the chairman's report.

- obtaining an understanding of the procedures underlying the information presented in the report.

On the basis of these procedures, we have no comment to make on the information and the assertions given in respect to the internal control procedures relating to the preparation and treatment of financial and accounting information, set forth in the report of the Chairman of the Supervisory Board, prepared in accordance with the last paragraph of Article L. 225-68 of the French Commercial Code.

Neuilly-sur-Seine, La Défense and Paris, April 15, 2005

The Statutory Auditors

Deloitte & Associés

Pascal Colin



Jean-Paul Picard



Mazars & Guérard

Thierry Blanchetier



Michel Rosse



Salustro Reydel

Denis Marangé



Hubert Luneau



» 6.2. Executive compensation

6.2.1. Compensation of corporate officers

The ministry of the Economy, Finance and Industry sets compensation for the Chairman and members of the Executive Board and for the chairman, Vice-Chairman and members of the Supervisory Board of AREVA, based on a recommendation from the Compensation and Nominating Committee of the Supervisory Board.

The table below sets forth the compensation and benefits paid to each executive of the AREVA group in fiscal years 2002, 2003 and 2004 by AREVA, by the companies it controls, or by the company by which it is controlled, namely the CEA.

6.2.1.1. Compensation paid to the members of the Executive Board (in euros)

Members of the Executive Board ⁽¹⁾	2002				2003				2004			
	Fixed comp. (a)	Variable comp. (b)	In-kind benefits (c)	Total gross comp. (d=a+b+c)	Fixed comp. (a)	Variable comp. (b)	In-kind benefits (c)	Total gross comp. (d=a+b+c)	Fixed comp. (a) ⁽⁴⁾	Variable comp. (b)	In-kind benefits (c)	Total gross comp. (d=a+b+c)
Anne Lauvergeon ⁽²⁾	308,252	54,121	1,836	364,209	316,266	93,678	7,172	417,116	322,912	123,216	4,248	450,376
Gérald Arbola ⁽²⁾	246,601	39,332	3,284	289,217	280,106	74,943	6,906	361,955	286,308	109,262	4,849	400,419
Didier Bénédicti ⁽³⁾					273,900	98,770	6,726	379,396	308,529	114,257	5,018	427,804
Vincent Maurel ⁽³⁾					263,225	171,080	3,866	411,171	266,095	98,542	3,312	367,949
Jean-Lucien Lamy ⁽³⁾					253,825	110,760	4,210	368,795	285,916	107,573	3,001	396,490

(1) Compensation is calculated based on the date of appointment.

(2) Appointed by the Supervisory Board on July 3, 2001. Mr Arbola's employment contract with COGEMA is suspended during his term as an Executive Board member.

(3) Appointed by the Supervisory Board on October 15, 2002, with an effective date of February 1, 2003. Members of the Executive Board who have an employment contract with AREVA, which is suspended during their terms.

(4) Fixed compensation for the members of the AREVA Executive Board in 2004 includes adjustments concerning 2003, i.e. 5,308 euros for Mrs Anne Lauvergeon, 4,704 euros for Mr Gerald Arbola, 4,653 euros for Mr Didier Bénédicti, 4,015 euros for Mr Vincent Maurel and 4,312 euros for Mr Jean-Lucien Lamy.

6.2.1.2. Calculation of 2002 bonus (paid in 2003):

For 2002, the Compensation and Nominating Committee proposed that variable compensation to the two members of the Executive Board, set at a maximum of 40% of their gross annual fixed compensation respectively, be determined based on (i) quantitative performance objectives for 60% and (ii) strategic and qualitative objectives for the remaining 40%.

The Compensation and Nominating Committee proposed that the 2002 bonus for Mrs Anne Lauvergeon and Mr Gérald Arbola be set at 75% of the ceiling. The minister of the Economy, Finance and Industry and the junior minister in charge of Industry approved this amount.

6.2.1.3. Calculation of 2003 bonus (paid in 2004):

For 2003, the Compensation and Nominating Committee proposed that variable compensation to the five members of the Executive Board, representing a maximum of 40% of their

gross annual fixed compensation respectively, be determined based on (i) quantitative objectives linked to performance for 70% of the bonus amount (AREVA financial performance objectives for Mrs Anne Lauvergeon and Mr Gérald Arbola; split 40/30% between the financial performance of AREVA and of the subsidiaries under their direction for Mrs Didier Bénédicti, Vincent Maurel and Jean-Lucien Lamy), and (ii) individual strategic and qualitative objectives for the remaining 30%.

The Compensation and Nominating Committee recommended Executive Board member bonuses for 2003 as follows:

- Mrs Anne Lauvergeon and Mr Gérald Arbola: 97% of the ceiling,
- Mr Didier Bénédicti: 94% of the ceiling,
- Mr Jean-Lucien Lamy: 95.5% of the ceiling,
- Mr Vincent Maurel: 94% of the ceiling.

The minister of the Economy, Finance and Industry and the junior minister in charge of Industry approved this amount.

6.2.1.4. Calculation of 2004 bonus (to be paid in 2005):

The Compensation and Nominating Committee recommended that the variable component of compensation for the five members of the AREVA Executive Board in 2004, which is capped at 40% of their annual fixed gross compensation, be determined based on quantitative objectives related to financial performance for 70%, and strategic and individual qualitative objectives for 30%.

The Committee also recommended that quantitative objectives for Mrs Didier Bénédicti, Vincent Maurel and Jean-Lucien Lamy be further allocated between two sets of objectives representing 35% each, one related to AREVA's financial performance and the other related to the financial performance of the companies under their direct supervision, i.e. COGEMA, Framatome-ANP and FCI respectively.

Lastly, the Committee recommended an additional bonus for Mr Jean-Lucien Lamy, not to exceed 40% of his annual fixed gross compensation, based on specific and challenging objectives directly related to FCI's financial performance.

6.2.1.5. Pensions and retirement benefits

There is no commitment to Mrs Anne Lauvergeon, Mr Didier Benedetti or Mr Jean-Lucien Lamy for pensions or retirement benefits. A provision for pension was recorded in 2004 in the amount of 57,685 euros for Mr Gérald Arbola and 51,250 euros for Mr Vincent Maurel.

6.2.1.6. Liability insurance for officers and directors

Please see Section 4.14.6.2. for a description of insurance acquired by AREVA to cover the civil liability of officers and directors.

6.2.1.7. Compensation paid to the members of the Supervisory Board (in euros)

Supervisory Board ^(1 & 2)	2002			2003			2004		
	Gross compensation (a)	Director's fees (b) ⁽¹⁴⁾	Total gross compensation (c=a+b)	Gross compensation (a)	Director's fees (b) ⁽¹⁴⁾	Total gross compensation (c=a+b)	Gross compensation (a)	Director's fees (b) ⁽¹⁴⁾	Total gross compensation (c=a+b)
Pascal Colombani ^(3 & 4)	101,650		101,650	277,280		277,280			
Philippe Pontet ^(5, 6 & 13)	112,801		112,801	89,748		89,748	119,724		119,724
Frédéric Lemoine ⁽¹⁵⁾									
Alain Bugat ^(7, 8 & 13)				150,546		150,546	162,180		162,180
Euan Baird		6,863	6,863		27,964	27,964		19,250	19,250
Jacques Bouchard ^(4, 9 & 11)				50,110		50,110	225,680	14,000	239,680
Patrick Buffet		17,542	17,542		21,000	21,000		26,750	26,750
Philippe Braidy ^(4 & 7)		10,675	10,675	12,260		12,260			
Thierry Desmarest		10,675	10,675		12,000	12,000		16,000	16,000
Gaishi Hiraiwa		3,050	3,050		22,675	22,675		16,000	16,000
Daniel Lebègue		15,253	15,253		20,000	20,000		31,750	31,750
Olivier Pagézy ^(3 & 4)				86,434	8,000	94,434	150,452	27,000	177,452
Jean-Claude Bertrand ^(10 & 12)		6,100	6,100	46,520	14,000	60,520	49,536	24,250	73,786
Gérard Melet ^(10 & 12)		6,100	6,100	31,167	12,000	43,167	35,495	20,750	56,245
Alain Vivier-Merle ^(10 & 12)		6,100	6,100	67,700	12,000	79,700	70,817	16,000	86,817

(1) Compensation calculated based on date of appointment or end of term.

(2) Certain director fees corresponding to prior fiscal years may have been paid in 2002, 2003 or 2004.

For Mr. Baird: €6,863 for 2001 was paid in 2002, €12,964 for 2002 was paid in 2003 and €6,000 for 2003 was paid in 2004.

For Mr. Bouchard: €2,000 for 2003 was paid in 2004.

For Mr. Buffet: €763 for 2001 was paid in 2002 and €6,000 for 2003 was paid in 2004.

For Mr. Desmarest: €4,000 for 2003 was paid in 2004.

For Mr. Hiraiwa: €3,050 for 2001 was paid in 2002, €10,675 for 2002 was paid in 2003 and €4,000 for 2003 was paid in 2004.

For Mr. Lebègue: €763 for 2001 was paid in 2002 and €6,000 for 2003 was paid in 2004.

For Mr. Pagézy: €5,000 for 2003 was paid in 2004.

For Mr. Bertrand: €6,000 for 2003 was paid in 2004.

For Mr. Melet: €5,000 for 2003 was paid in 2004.

For Mr. Vivier-Merle: €4,000 for 2003 was paid in 2004.

(3) Mr. Pagézy replaced Mr. Colombani as a member of the Supervisory Board on June 12, 2003.

(4) Includes compensation received from the CEA and AREVA by Messrs. Colombani (in 2002 and 2003), Braidy (2003), Bouchard and Pagézy (2003 and 2004).

(5) In 2002, 2003 and 2004, corresponds to the compensation received from AREVA only.

(6) Mr. Pontet was appointed Chairman of the Supervisory Board, replacing Mr. Colombani, at the Supervisory Board Meeting held on June 12, 2003. Mr. Pontet receives a flat fee paid by AREVA with the approval of the supervising ministers.

(7) Mr. Bugat replaced Mr. Braidy on the Supervisory Board on January 23, 2003 and was appointed Vice Chairman of the Supervisory Board on June 12, 2003.

(8) In 2003 and 2004, the amount represents compensation as CEA Administrator-General only. Mr. Bugat receives no compensation as Vice-Chairman of the AREVA Supervisory Board.

(9) Mr. Bouchard replaced Mr. Rouvillois as the Permanent Representative of the CEA on September 25, 2003.

(10) Members elected by company personnel who became members of the Supervisory Board on September 25, 2002 and who opted to distribute their net directors' fees to the labor organization of which they are members. Amounts reported for 2003 and 2004 correspond to their compensation as employees of AREVA subsidiaries (COGEMA or Framatome-ANP).

(11) For 2004, Mr. Bouchard's compensation includes €22,712 for unused vacation pay remaining due as of the date of his retirement.

(12) 2004 compensations include:

- for Mr. Bertrand: €2,220 for incentive remuneration;

- for Mr. Melet: €1,926 for incentive remuneration;

- for Mr. Vivier-Merle: €2,910 for profit-sharing;

(13) Mr. Pontet and Mr. Bugat are not entitled to director fees.

(14) Every member of the Supervisory Board receives a flat fee for each meeting of Supervisory Board he or she attends, and a flat fee for each meeting of a specialized Committee he or she attends as a Committee member, as follows:

in 2002: €1,525 per meeting of the Supervisory Board and €763 per meeting of a specialized Committee;

in 2003: €2,000 per meeting of the Supervisory Board and €1,000 per meeting of a specialized Committee;

in 2004: €2,000 per meeting of the Supervisory Board and €1,250 per meeting of a specialized Committee.

(15) Mr. Lemoine was appointed by the Supervisory Board on March 8, 2005 to replace Mr. Pontet, subject to confirmation of this appointment by the Annual General Meeting of Shareholders to be held on May 12, 2005.

6.2.2. Executive shares of share capital

Members of the AREVA Supervisory Board appointed by the shareholders each own one share of stock, except for the CEA, which holds 78.86% of the share capital and 82.99% of the voting rights.

Members of the Executive Board do not own any shares in the company.

6.2.3. Stock options allowing subscription or acquisition of shares – Issue of shares free of charge

The AREVA group does not presently have a stock option plan, nor has a share purchase plan been set up. No issue of shares free of charge was undertaken or authorized.

6.2.4. Statutory Auditors' Special report on regulated agreements

In our capacity as Statutory Auditors of your company, we hereby report on regulated agreements involving related parties.

6.2.4.1. Agreements authorized during the year

In accordance with Article L 225-88 of the French Commercial Code, we have been notified of the agreements previously authorized by your Supervisory Board.

The terms of our engagement do not require us to identify such agreements, if any, but to communicate to you, on the basis of the information provided to us, the principal terms and conditions of those agreements brought to our attention, without expressing an opinion on their usefulness and appropriateness. It is your responsibility, in accordance with Article 117 of the Decree of March 23, 1967, to assess the interest involved in respect of the conclusion of these agreements for the purpose of authorizing them.

We conducted our procedures in accordance with professional standards applicable in France; those standards require that we agree the information provided to us with the relevant source documents.

• With COGEMA

At its meeting of July 8, 2004, the Supervisory Board authorized the sale of AREVA's entire interest in Melox (50%) to COGEMA for €192 thousand in connection with the internal reorganization of Melox.

At the same meeting, the Supervisory Board also authorized a mandate agreement pursuant to which COGEMA entrusts AREVA with the power to manage or organize and control, in its name and on behalf of COGEMA, the assets earmarked to cover decommissioning expenses and the management of radioactive waste. This agreement has been entered into for an indefinite period and may be terminated by either of the parties by giving three months notice. Remuneration for the performance of these services is made in accordance with the general principles covering service agreements of the AREVA group. Members of the Supervisory Board concerned: Messrs. Alain Bugat, Jacques Bouchard, Hubert Colin de Verdière and Dominique Maillard.

Members of the Executive Board concerned: Mrs Anne Lauvergeon, Messrs Gérald Arbola and Didier Benedetti.

• With COGEMA, Framatome-ANP, FCI, AREVA T&D Holding SA and Technicatome

At its meeting of December 21, 2004, the Supervisory Board authorized:

- the 2005 trademark licensing and shared service agreements between AREVA and its subsidiaries, COGEMA, Framatome-ANP, FCI, AREVA T&D Holding SA and Technicatome, from January 1, 2005 to December 31, 2007, which is then renewable for a period of three years pursuant to a fixed rate fee of 0.5% for the trademark and 0.6% for shared services based on the contributed sales of the beneficiary company;
- the service agreement between AREVA and AREVA T&D Holding SA for the regularization of invoicing of services rendered between January 1 and December 31, 2004 for a total annual amount of €21.503 million.

Members of the Supervisory Board concerned: Messrs Alain Bugat, Jacques Bouchard and Dominique Maillard.

Members of the Executive Board concerned: Mrs Anne Lauvergeon, Messrs Gérald Arbola, Didier Benedetti, Jean-Lucien Lamy and Vincent Maurel.

6.2.4.2. Agreements authorized in previous years having a continuing effect during the year

In addition, pursuant to the Decree of March 23, 1967, we have been advised that the following agreements approved in previous years have had continuing effect during the year.

• With FCI

- At its meeting of April 16, 2002, the Supervisory Board authorized the Executive Board to subscribe to a credit line of USD 600 million (or its equivalent in euros) with a banking syndicate, for a three-year period, to finance FCI.

Furthermore, assuming that this credit line would be subscribed to by FCI, the Supervisory Board authorized the Executive Board to issue a first demand guarantee from AREVA, for an amount of USD 620 million or its equivalent in euros, to the banking syndicate.

There were no draw-downs on this credit line by FCI in 2004:

- At its meeting of December 10, 2002, the Supervisory Board authorized the Executive Board to take all measures necessary in connection with the sale of the Military/Aerospace Industry (MAI) Division of FCI, which took place in 2003.

In addition, in connection with the completion of the sale of MAI, the Supervisory Board authorized the Executive Board to do the following:

- Grant a joint and several guarantee to the purchaser MAI or to the entity to which the MAI activity of FCI France would be transferred, to back the commitments of FCI and FCI France with respect to the CATS/CASA retirement plans, up to a maximum amount of €17.8 million;
- Grant a joint and several guarantee in connection with the commitments relating to the sale given by FCI to MAI's purchaser, up to a maximum amount of €33.25 million.

As of December 31, 2004, the guarantees currently outstanding in connection with these authorizations totaled €14.47 million and €33.25 million, respectively.

• With COGEMA, Framatome-ANP, FCI and Technicatome

At its meeting of July 25, 2002, the Supervisory Board authorized Mr Arbola, in his capacity as a member of the Executive Board, to sign four service agreements covering the performance of recurring and non-recurring services invoiced by AREVA to several of its subsidiaries:

• AREVA and COGEMA

Services invoiced in 2004 with respect to 2004: €21.562 million
Invoicing in 2004 with respect to the 2003 balance: €3.3 million

• AREVA and Framatome-ANP

Services invoiced in 2004 with respect to 2004: €17.970 million
Invoicing in 2004 with respect to the 2003 balance: €3.242 million

• AREVA and FCI

Services invoiced in 2004 with respect to 2004: €2.439 million
Credit note prepared in 2004 with respect to the 2003 balance: €(2.528) million

• AREVA and Technicatome

Services invoiced in 2004 with respect to 2004: €1.626 million
Invoicing in 2004 with respect to the 2003 balance: €0.107 million

• With COGEMA

- At its meeting of October 15, 2002, the Supervisory Board authorized the signature of a service agreement for the recurring and non-recurring services invoiced by COGEMA to AREVA. The main impacts of this agreement during the year were as follows:

Services invoiced in 2004 with respect to 2004: €6.127 million
Invoicing in 2004 with respect to the 2003 balance: €0.244 million

- At its meeting of March 27, 2003, the Supervisory Board authorized the Executive Board to transfer to AREVA or counter-guarantee its subsidiary, COGEMA, with respect to the syndicated credit line of CAD305 million, granted in November 2000 to COGEMA Resources Inc. Canada, for CAD280 million, i.e. €173 million at the actual exchange rate.

This commitment was updated on December 31, 2004 to CAD255 million.

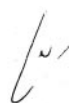
• With Framatome-ANP

The vendor representations and warranties agreement granted by AREVA to Framatome-ANP in connection with the sale of Intercontrôle was continued during the year. No amount has been paid by AREVA in 2004 in connection with these warranties.

• With Etablissements Pierre Mengin

The interest-free shareholders' advance of €1,936,102.52 granted to Etablissements Pierre Mengin in 1989 was maintained.

Neuill -sur-Seine, La Défense and Paris, April 12, 2005



Deloitte & Associés

Pascal Colin
Jean-Paul Picard




Mazars & Guérard

Thierry Blanchetier
Michel Rosse




Salustro Reydel

Denis Marangé
Hubert Luneau



6.2.4.3. 2004 audit fees

<i>(in thousands of euros)</i>	Audit	Related services	Other services	Total
Mazars & Guérard	1,953	353	48	2,354
Deloitte & Associés	6,819	821	249	7,889
Salustro Reydel	2,836	6		2,842
Total	11,608	1,180	297	13,085

» 6.3. Profit-sharing plan

Profit-sharing and incentive remuneration plans in the Group are subject to agreements established at level of the parent company and at the level of its subsidiaries or sites. Accordingly, these plans are a reflection of prior decisions and the specific circumstances of each entity, even in 2004.

6.3.1. Profit-sharing and incentive remuneration

Various profit-sharing and incentive remuneration agreements are in effect in the Group's companies to give employees a stake in their companies' overall performance and to strengthen the employee-company relationship while providing them with tax and employment benefits linked to these mechanisms.

6.3.1.1. Profit-sharing

Employee profit-sharing regulations, spelled out in Articles L. 442-1 *et seq.* of the French Labor Code, provide for employees to receive a portion of the company's net taxable income, determined according to a legally mandated formula incorporated in almost all profit-sharing agreements signed by Group entities.

The global amount so determined is then allocated among the company's employees based on their seniority and/or the beneficiary's salary, in accordance with specific agreements.

A company's profit-sharing contributions may not be withdrawn by a beneficiary for a period of five years, unless otherwise allowed by regulation. These contributions benefit from preferential tax and social security tax treatment. Subject to provisions of the agreement, employees may elect investment of these contributions in company-sponsored mutual funds included in the contributing company's employee savings plans or in the Group's employee savings plan, if the company participates in that plan.

6.3.1.2. Incentive remuneration

Incentive remuneration, regulated under Articles L. 441-1 *et seq.* of the French labor Code, allows a company to provide a financial incentive to its employees based on specific and technical qualitative and quantitative objectives. Incentive remuneration agreements are concluded for periods of three years. The various agreements in effect in the Group expire on dates specific to the Group entity involved. The agreement for AREVA SA expired on December 31, 2004 and will be renewed in the second quarter of 2005.

The performance criteria included in the incentive remuneration agreements concluded by Group entities are defined jointly by the management of the company and by the organizations representing company personnel. Depending on the agreement, these criteria may include:

- quantitative performance, such as operating income, sales revenue, operating profit, etc.;
- productivity improvements;
- costs reductions;
- qualitative performance (performance improvement objectives specific to each company, e.g. meeting delivery schedules, reduced customer claims, improved industrial safety as evidenced by lower accident frequency and accident severity rates, quality certification or renewal, etc.).

Company contributions for incentive remuneration are paid after year-end closing. Employees usually have the option of investing these contributions in the employee savings plan to which the company subscribes. These contributions, which the beneficiary may not withdraw for a period of five periods, benefit from preferential tax and social security tax treatment applicable to employee savings plans.

6.3.2. Corporate savings plans and investment vehicles

A process to simplify the Group's employee savings plans was initiated in the second half of 2004. As a result, a new Group savings plan was established under an agreement dated February 9, 2005 with employee representatives to the AREVA's Works Council.

Any French company under the direct or indirect majority control of the AREVA group may participate in the plan. The purpose of the new plan is to constitute an employee savings system shared by all group companies, thus strengthening employee integration and the Group's construction.

The new Group savings plan offers a wide range of investment vehicles and company-sponsored mutual funds, allowing participants to select the vehicles best suited to their individual circumstances and investment philosophies.

6.3.3. Employee share ownership

When the Group was established in September 2001, Framatome shares held by employees via the Framépargne corporate mutual fund were exchanged for AREVA shares. Those shares are currently invested in the "Framépargne" fund of the AREVA group savings plan.

The Framépargne fund held 306,810 AREVA shares at December 31, 2004, or 0.86% of AREVA's share capital, for 76,088,880 euros invested in unlisted company securities. The fund currently benefits from a liquidity guarantee with Calyon that takes effect whenever liquidity dips below a minimum threshold of 15%.

When AREVA was created in September 2001, the general management of the Group expressed its desire to expand employee share ownership in France and abroad.

The Group is planning to open its share capital to the financial marketplace; this would be the time to offer the opportunity of subscribing to AREVA shares to as many employees as possible.

6.3.4. Stock options allowing subscription or acquisition of shares – Issue of shares for no consideration

As of the date this report was filed, AREVA has not established a stock option plan allowing the subscription and/or acquisition of shares at the Group level.

➤ 6.4. AREVA Values Charter

On June 12, 2003, the Supervisory Board reviewed the AREVA Values Charter adopted by the Executive Board.

The Values Charter applies to all operations controlled by the Group, whether nuclear or non-nuclear, in any country in which these operations are conducted, without exception.

The Values Charter applies to all Group executives and employees. At each level, local management is responsible for implementing the Values Charter, which combines values, principles of action and rules of conduct.

AREVA values support the Group's sustainable development initiative. They include integrity, excellence, responsibility, sincerity, partnership, profitability and customer satisfaction.

The principles of action focus on each category of AREVA group stakeholders: customers, shareowners, employees, suppliers and subcontractors, the public and the planet.

In addition, the Values Charter spells out rules of conduct applicable in everyone in specific domains of risk exposure, in particular regarding conflicts of interests, insider information and self dealing.

The Values Charter refers to a memorandum circulated by AREVA on the prevention of self dealing; this memorandum applies to all Group executives and employees. In particular, the memorandum confirms that executives and employees holding insider information regarding the Group or AREVA investment certificate must (i) refrain from concluding or initiating, directly or through a third party, any transaction involving AREVA's investment certificate before the public has gained access to that information; and (ii) refrain from divulging insider information inside or outside the Group, except as required to fulfill their duties. The memorandum also includes a number of recommendations for preventing self dealing.

An Advisory Committee on Ethics has been established to oversee implementation of the Values Charter, capitalize on lessons learned and propose changes as required.

The Chairman of the Executive Board has designated a business ethics advisor, who reports to the head of the Group's legal department. He advises management regarding ethical conflicts concerning the Values Charter, designs and oversees training programs regarding ethics and Group values in liaison with AREVA University, and coordinates a network of business ethics contacts in first-tier subsidiaries.

» 6.5. Annual General Meeting of Shareholders of May 12, 2005

6.5.1. Order of business

- Presentation of the Executive Board's management report for the year ending December 31, 2004, including information on the social and environmental impacts of the company's operations, in accordance with Article L. 225-102-1 of the French Commercial Code.
- Presentation of the Supervisory Board's report on the Executive Board's report on the corporate and consolidated financial statements for 2004, and of the report of the Chairman of the Supervisory Board on the Supervisory Board's activities and internal control procedures, and observations submitted by the Statutory Auditors, in accordance with Articles L. 225-68 and L. 225-235 of the French Commercial Code.
- Reading of the general report of the Statutory Auditors on the financial statements for 2004.
- Reading of the special report of the Statutory Auditors on agreements referred to in Article L. 225-86 of the French Commercial Code.
- Approval of the company's corporate and consolidated financial statements for the year ending December 31, 2004 (balance sheet, income statement and notes).
- Approval of agreements referred to in Article L. 225-86 of the French Commercial Code.
- Discharge for the members of the Executive Board, the Supervisory Board and the Statutory Auditors.
- Appropriation of earnings for the year.
- Transfer of amounts from the special long-term gain reserve to an "other reserves" account.
- Confirmation of directors' fees allocated to the Supervisory Board for 2005.
- Confirmation of the appointment of a new member to the Supervisory Board.
- Powers of attorney for formalities.

6.5.2. Resolutions

First resolution

Shareholders, deliberating as an Ordinary General Meeting, having heard the Executive Board's management report, the Supervisory Board's report, the report of the Chairman of the Supervisory Board on the preparation and organization of the Supervisory Board's functions and on internal control procedures, the reading of the Statutory Auditors' reports, and the additional explanations provided verbally, approve in their entirety the reports of the Executive Board, the Supervisory Board and the Chairman of the Supervisory Board, as well as the balance sheet, income statement and notes to the corporate and consolidated financial statements for the year ending December 31, 2004, as presented.

Consequently, the Shareholders approve the management actions taken and accounted for by the Executive Board, and discharge the members of the Executive Board and of the Supervisory Board as well as the statutory auditors of their duties for the year-ended.

Second resolution

The Shareholders, having heard the reading of the special report submitted by the statutory auditors on agreements referred to in Article L. 225-86 of the French Commercial Code, hereby state their approval of all of the agreements concluded or continuing in 2004.

Third resolution

The shareholders, taking into consideration net earnings of €301,555,266.19 for the year, hereby decide to appropriate distributable earnings, in accordance with the law, as follows:

• Net income for the year	€301,555,266.19
• Legal reserve (fully accrued)	
• Retained earnings	€212,829,388.65
• Distributable earnings (art. L. 232-11 of the French Commercial Code)	€514,384,654.84
• Dividend to shareholders and investment certificate holders	€339,895,502.59

Subsequent to this allocation, retained earnings are brought back to €174,489,152.25.

The net dividend per share and per investment certificate is set at €9.59. Dividend distributions to individuals are subject to a 50% tax exemption. Dividends will be paid on June 30, 2005.

The shareholders note that the amount of dividends distributed for the three previous fiscal years and the amount of the corresponding tax credit were as follows:

<i>(in euros)</i>			
Year	Dividend	Tax credit	Total income
2001	6.20	3.10	9.30
2002	6.20	3.10	9.30
2003	6.20	3.10	9.30

Fourth resolution

To reflect the change in French tax legislation regarding capital gains introduced by article 39 of the Supplemental Budget Law for 2004, the shareholders hereby decide to transfer the amounts recorded in the special long-term gains reserve account, totaling €6,402,858.72, to the “other reserves” account.

Fifth resolution

The Shareholders hereby set the total amount of directors fees for the Supervisory Board at €227,500.00 per year.

This decision applies to the current year and shall remain in effect until modified.

Sixth resolution

On the recommendation of the Supervisory Board, the shareholders hereby ratify the Supervisory Board’s March 8, 2005 appointment of Mr. Frédéric Lemoine as member of the Supervisory Board to replace Mr. Philippe Pontet, resigning, for the remainder of his predecessor’s term, i.e. until the Annual General Meeting convened to rule on the financial statements for the year ending December 31, 2005.

Seventh resolution

The Shareholders hereby grant full authority to the bearer of an original, an excerpt or a copy of these minutes for purposes of publishing and recording same, and for other purposes as required.

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Chapter 7

Recent developments
and future prospects

» 7.1. Events subsequent to year-end closing for 2004

January 13, 2005

In September 2003, the AREVA group signed a contract to acquire Alstom's Transmission and Distribution business (T&D). At the time, the purchase price for the T&D acquisition had been set at the enterprise value of €950 million, subject to price adjustments concerning certain 2003 income statement and balance sheet items and the cash situation contributed as of December 31, 2003.

As contemplated in the purchase agreement, the Groups jointly selected the accounting firm of KPMG to calculate these adjustments. The firm submitted its report on December 23, 2004 as follows:

- the enterprise value was reduced from €950 million to €913 million, thus reducing the purchase price by €37 million;
- the Division's net cash position as of December 31, 2003 was calculated at €140 million.

AREVA had paid €950 million before this expert evaluation, including €25 million still in escrow pending the transfer of the Division's Indian and Pakistani subsidiaries. AREVA therefore made an additional payment of €103 million to Alstom on December 29, 2004.

January 17, 2005

AREVA T&D concluded an early retirement agreement (CASA) on January 17, 2005 covering 82 employees in France. An amendment to the agreement is being negotiated with representatives of company personnel to extend it to 406 additional employees who meet the agreement's age criteria.

February 3, 2005

AREVA's **Transmission & Distribution** Division was awarded two contracts in Tunisia to build five high voltage substations and two load management systems for the power grid. The turnkey contracts valued at €62 million were signed with the Tunisian utility *Société tunisienne de l'électricité et du gaz* (STEG). These projects are part of Tunisia's tenth renovation plan for the electric power supply system.

February 15, 2005

AREVA's **Transmission & Distribution** (T&D) Division won a €25 million contract in Canada to build the world's first power line de-icing and power quality regulating system. The turnkey contract is with Hydro Québec, the state-owned electricity

generation, transmission and distribution company for the province of Quebec.

February 28, 2005

On February 28, the AREVA Group officially submitted its bid in response to the international call for tender issued on September 28, 2004 by the Chinese authorities for the construction of four nuclear islands in Yangjiang and Sanmen and for related third-generation technology transfer.

AREVA's offer is for the EPR, currently the only third-generation reactor to have already received orders from utility customers.

March 3, 2005

On March 3, 2005, the U.S. Court of Appeals for the Federal Circuit confirmed that sales by COGEMA and Eurodif are sales of enrichment services, making the protection measures against dumping and subsidies instituted by the U.S. Department of Commerce in 2001 illegal under U.S. law. This decision should put an end to all of the proceedings pending at this time.

March 4, 2005

AREVA's **Transmission & Distribution** Division (T&D) won a turnkey contract to build two biomass power plants in Paraná, Brazil. The €16.6 million contract was signed with CCC Machinery, a subsidiary of the German group, Münchmeyer Petersen.

March 8, 2005

On March 8, 2005, Mr. Frédéric Lemoine was appointed Chairman of the AREVA Supervisory Board. He replaces Philippe Pontet, who tendered his resignation following his appointment as Vice-Chairman of Corporate Finance Europe at HSBC CCF.

March 21, 2005

On March 21, 2005, Mr. Gérald Arbola, Chief Financial Officer and member of the Executive Board of AREVA, was appointed Chairman of the Supervisory Board of STMicroelectronics.

March 23, 2005

The four Mox fuel assemblies fabricated from U.S. surplus defense plutonium left the port of Cherbourg on March 23 at 3:05 a.m. for Charleston, South Carolina in the United States. The two British ships transporting the fuel, the Pacific Teal and the Pacific Pintail, are specifically designed for the shipment of nuclear materials.

The program to convert surplus defense plutonium inventories into civilian nuclear fuel for power plants falls under non-proliferation agreements entered into between the United States and the Russian Federation. The four assemblies fabricated in France will be used to validate the performance of MOX fuel in a U.S. nuclear reactor and will be loaded in a reactor at the Catawba power plant operated by Duke Power.

March 30, 2005

AREVA, through its subsidiary COGEMA, has signed an assistance contract with BNFL (British Nuclear Fuel Limited) aimed at improving the performance of the UK company's vitrification facility at its Sellafield plant.

The terms of the contract will see AREVA provide a range of services over the following four years, including the supply of equipment for the vitrification process and a transfer of the French Group's expertise and skills in implementing these, for which BNFL personnel will be received at COGEMA's La Hague plant. The contract also includes on-site assistance at Sellafield when putting the equipment into operation, plus additional technical assistance from France by way of a helpline.

Vitrification is the process used by BNFL and AREVA for the safe packaging over time of high-level waste from used fuel treatment. Over 10,000 vitrified waste containers have been filled in COGEMA La Hague since it was first opened.

According to Philippe Knoche, Vice-President of the Treatment Business Unit, "This contract, like the Japan Project, demonstrates our ability to design new business services and turn our technologies, experience and professionalism into attractive assets for new customers."

Avril 5, 2005

A consortium led by AREVA has been awarded a contract worth over €300 million by EDF.

The contract covers the replacement of eighteen steam generators from six 900 MW reactors with one reactor on option, as well as the associated services.

The replacements will be carried out by Framatome ANP and the associated companies during unit outages scheduled between the end of 2006 and 2012, beginning with Bugey 4.

AREVA won the contract thanks to its ability to manage major projects and its expertise in interface management.

By the end of 2004, AREVA had replaced over 100 steam generators in 40 plants worldwide, representing 60% of all operations.

April 7, 2005

By a Share Purchase Agreement dated 6 April 2005, AREVA T&D has agreed to purchase from Alstom up to 66.35% of the equity share capital of its Indian subsidiary Alstom Limited for a maximum consideration of €14.5 million.

Alstom Limited is a listed company in India, mainly active in Transmission & Distribution. Based on audited results for the year ended 31st March 2004, the company had net sales in the region of €100 million with profit after tax of circa €3 million.

Pursuant to Indian Takeover Regulations, AREVA T&D is required to make an offer to all shareholders of Alstom Limited to acquire up to 20% of the present share capital, payable in cash, and corresponding to a total amount of circa €10.8 million. The Offer is expected to be closed by the end of first half 2005.

The transaction is subject to obtaining the regulatory approvals in India.

This agreement also enables AREVA to transfer the non T&D business to a subsidiary of Alstom at a price based on an independent valuation, subject to the necessary shareholder and regulatory approvals.

April 8, 2005

AREVA to acquire the Swedish company Uddcomb engineering. The AREVA group set a formal agreement to acquire the Swedish company Uddcomb engineering.

The acquisition will be finalized over the following weeks.

Uddcomb engineering is a profitable company that specializes in nuclear plant maintenance, repair, upgrading and engineering services and employs 100 people. The company has a long history in the nuclear market, supplying fifteen reactor pressure vessels and other components to power plants in Sweden, Finland and Germany.

Thanks to this acquisition realized through Framatome ANP*, AREVA will strengthen its ability to support locally its customers in the nuclear engineering and services sector. AREVA is thereby reinforcing customer relations and its commitment to the Swedish market.

» 7.2. Outlook

As indicated in the general comments presented at the beginning of this annual report, this chapter includes information on the objectives, prospects and growth areas for AREVA and its markets. This information should not be construed as a guarantee that events or results contemplated herein will actually occur, or that any particular objective will be achieved. Neither AREVA nor the AREVA group commits to updating forward-looking statements or information included in this chapter.

The AREVA group's financial outlook for the coming years is strong. The Group's nuclear business is a recurring source of operating cash flows. The cash flows generated over the past two years are a high benchmark, however, due to a sharp decrease in working capital requirements resulting from significant customer advances and prepayments in the Back End of the fuel cycle.

In time, the **Nuclear** Divisions could profit from new growth in nuclear power generation. This is a medium- to long-term prospect, considering the long lead times in the nuclear industry.

In Transmission and Distribution, the three-year restructuring plan launched in 2004 should allow the **T&D** Division to boost operating profitability significantly, to a level approaching that of its main competitors, by 2007. However, operating income is not expected to improve significantly until then due to restructuring costs for the division, particularly in light of restructuring projects announced for Europe between then and now.

Recovery will continue in the **Connectors** Division, improving operating margins in this business even more over the coming years.

For 2004, the Group forecasts:

- growth in sales revenue on a like-for-like basis;
- a decrease in operating income and consolidated net income, reflecting restructuring costs related to the **T&D** Division's three-year action plan.

At the division level, the Group expects:

- stable and significant operating income in the nuclear business, with a significant increase in capital expenditures (see section 4.12.);
- a slight increase in operating income before restructuring for the **T&D** Division; and
- steady sales revenue and operating income in the **Connectors** Division.



Glossary

» GLOSSARY [to be supplemented]

ADNR ORDER

French administrative order of March 12, 1998, as amended, pertaining to the carriage of dangerous goods via inland navigation. The purpose of the order is to define rules specific to the carriage of dangerous goods in France by inland navigation, whether such carriage is national or international. It refers to the technical appendices of the Regulations for Carriage of Dangerous Goods on the Rhine (ADNR) adopted by a resolution of the Central Commission for Navigation on the Rhine (CCNR) of December 1, 1993.

ADR ORDER

French administrative order of June 1, 2001, as amended, pertaining to the carriage of dangerous goods by road. This order incorporates and supplements the provisions of the European Agreement on the International Carriage of Dangerous Goods by Road of September 30, 1957 (ADR) and its appendices, and defines rules specific to the carriage of dangerous goods by road in France, whether such carriage is national or international.

AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS (ANDRA)

Public industrial and commercial agency with oversight by the Ministries of Industry, Research and the Environment. Andra operates independently of waste producers. Created in 1991, the agency has three missions:

- an industrial mission, by which the Agency provides for the management, operation and monitoring of radioactive waste disposal centers; designs and builds new centers for waste that is not acceptable in existing facilities; and defines radioactive waste packaging, acceptance and disposal specifications in accordance with nuclear safety rules;
- a research mission, by which ANDRA participates in and contributes to research programs pertaining to the long-term management of radioactive waste, in particular in cooperation with the French Atomic Energy Commission CEA (*Commissariat à l'énergie atomique*); and
- an information mission, in particular through the development of a register of all radioactive waste on French territory.

ASSEMBLY, FUEL ASSEMBLY (See "FUEL ELEMENT")

ATOM

The basic component of the chemical elements that form matter. It consists of a nucleus containing positively charged or neutral particles (protons and neutrons) around which negatively charged particles (electrons) spin.

BARRIER, CONTAINMENT BARRIER

System capable of preventing or limiting the dispersal of radioactive matter.

BECQUEREL (Bq) (See also "RADIOACTIVITY")

Unit of measure for nuclear activity (1Bq = 1 atomic particle disintegration per second). The Becquerel is a very small unit. Formerly, nuclear activity was measured in curies (1 curie = 37 billion Bq).

BURNUP

The total amount of energy released by one unit of mass of nuclear fuel. Often expressed as megawatt-days per metric ton, MWd/MT (thermal megawatts).

CENTRIFUGATION (See "ULTRACENTRIFUGATION")

CLADDING

Sealed metal tube surrounding nuclear fuel to protect it from corrosion by the reactor coolant and prevent the dispersion of fission products. Cladding constitutes a "primary barrier".

CONTAINMENT AREA

During the construction of a facility designed to contain radioactive materials, a series of containment barriers is put up between the materials inside and the environment outside the facility as part of the engineered structures. This creates separate areas called "containment areas".

CONTROL RODS

Control rods serve to control the chain reaction in the nuclear reactor core. Control consists of ensuring that the number of neutrons produced in the reactor core through fission is exactly equal to the number of neutrons that dissipate in the reactor core. The ratio between these two numbers (production divided by dissipation) is called the multiplication factor, K,

which must be absolutely equal to 1. To maintain the $K=1$ ratio at all times, elements made up of atomic nuclei that absorb the neutrons are inserted (or withdrawn) as required. The control rods inserted into the reactor core absorb the neutrons to a greater or lesser degree.

COOLANT

The heat-removing fluid circulating in a nuclear reactor core.

CORE, REACTOR CORE

Area in a nuclear fission reactor comprising the nuclear fuel and configured in a manner that fosters the fission chain reaction.

CRIMPING

Method for permanently attaching a connector to a conductor using pressure to squeeze or shape the crimp barrel (section of the splice or terminal that receives the conductor) around the conductor to establish a good electrical and mechanical connection.

CRITICALITY

(adj. **CRITICAL, SUBCRITICAL, SUPERCRITICAL**)

When neutrons are produced by the fission of nuclear material in a given medium at the same rate as they dissipate through absorption and release outside the medium, that medium is said to have become critical.

DECAY POWER

The power released by the radioactivity of the nuclear fuel and other materials in a nuclear reactor that has been shut down, or in a used fuel assembly.

DECOMMISSIONING

Term covering every stage following the shutdown of a nuclear facility or mine at the end of its useful life, from final closure to the removal of radioactivity at the site, including physical dismantling and decontamination of all non-reusable facilities and equipment.

DECOMMISSIONING OBLIGATIONS

In this document, decommissioning obligations refers to the sum of obligations to shut down and dismantle nuclear facilities and manage the nuclear waste.

DECONTAMINATION

Decontamination is a physical, chemical or mechanical operation designed to eliminate or reduce the presence of radioactive or chemical materials deposited on or in a facility, open area, equipment or personnel.

DIRECTION GENERALE DE LA SURETE NUCLEAIRE ET DE LA RADIOPROTECTION (DGSNR)

French government agency reporting to the Ministers of Industry, the Environment and Health. Its specific functions are to define and implement policy in the fields of nuclear safety (civilian applications) and radiation protection and, in particular, to verify safety-related measures taken, contemplated or implemented by operators in the nuclear sector, and to monitor liquid and gaseous effluent and waste from licensed nuclear facilities. The DGSNR, commonly referred to as the nuclear safety authority, or ASN (*Autorité de sûreté nucléaire*), is supported by the Nuclear Safety and Radiation Protection Divisions (DSNR) of the Regional Departments of Industry, Research and the Environment, or DRIRE (*Directions régionales de l'Industrie, de la Recherche et de l'Environnement*).

DISPOSAL OF RADIOACTIVE WASTE

(see also **"STORAGE"**)

A radioactive waste management operation consisting of the disposal of packaged waste in a specially designed area that will ensure safety (reversible or irreversible disposal).

DOSE

(see also **"GRAY"** and **"SIEVERT"**)

Measure used to characterize human exposure to radiation. The term "dose" is often erroneously used in place of "dose equivalent".

- Absorbed dose: quantity of energy absorbed by matter, whether living or inert, when exposed to radiation. It is expressed in grays (Gy).
- Dose equivalent: the same absorbed dose may have different effects on a living organism, depending on the type of radiation involved (X-rays or alpha, beta or gamma radiation). A dose multiplier, or "quality factor", is used to take these differences into account in calculating the dose, giving a "dose equivalent".
- Effective dose: sum of weighted dose equivalents delivered to various tissues and organs by internal and external irradiation. The unit of measure for effective dose is the Sievert (Sv).
- Lethal dose: fatal dose of nuclear or chemical origin.
- Maximum permissible dose: dose defined by regulation that may not be exceeded over a given period of time.

ELECTRIC CONTACT

Conducting element of a component that connects with a matching element to transfer current.

ELECTRICITY DISTRIBUTION SYSTEM

System that delivers electricity locally to consumers, e.g. industries, businesses, service providers, residences, etc. Electricity is distributed at medium voltage (12-24,000 V) and gradually reduced to low voltage at the point of consumption (230 V in Europe, 110 V in the United States).

ELECTRICITY TRANSMISSION SYSTEM

System that supplies electricity from the power plant to the distribution system. It spans large geographical areas. The transmission system includes high voltage and very high voltage power lines, transformers and switchgear equipment.

ENERGY MARKET MANAGEMENT SYSTEM

Management software for energy markets that allows power generators and distributors to manage their commercial relations more effectively. The software provides strategic planning; transaction and processing of deals and related risk management; and customer account management.

ENRICHED REPROCESSED URANIUM

Following analysis, used fuel treated at the La Hague plant can be re-enriched to its initial concentration in fissile isotopes (about 3-5%). Commonly referred to as ERU.

ENRICHED URANIUM, DEPLETED URANIUM

Before it is used to fabricate fuel elements, natural uranium is enriched in ²³⁵U to a concentration of 3-5%. Natural uranium is enriched in ²³⁵U using an isotopic separation process. The physical or chemical processes used to enrich uranium also produce uranium that has a lower concentration of ²³⁵U than natural uranium: this is known as depleted uranium.

ENRICHMENT

Process used to increase the abundance of fissile isotopes in an element. Naturally occurring uranium is composed of 0.7% ²³⁵U (fissile isotope) and 99.3% ²³⁸U (non-fissile isotope). The concentration of ²³⁵U is increased to 3-4% to make it usable in a pressurized water reactor.

EUROPEAN PRESSURIZED REACTOR (EPR)

The EPR is a third-generation pressurized water reactor (PWR). The EPR generates about 1600 MWe of electric power and features enhanced safety and simplified operations and maintenance. It also has a projected service life of 60 years, compared with a 40-year service life for other power reactors.

AREVA offers two third-generation reactor models: the EPR and the SWR 1000, a boiling water reactor (BWR) that can generate 1,000-1,250 MWe.

EVOLUTIONARY FACILITIES MANAGEMENT

Facilities management refers to the management of a customer's information systems by a specialized company. It is evolutionary when it supports the establishment of performance improvement plans.

EXPOSURE

Exposure of an organism to a source of radiation, characterized by the dose received.

- External exposure: exposure from a radiation source outside the organism.
- Internal exposure: exposure from a radiation source inside the organism.

FINAL WASTE

According to article L. 541-1-III of the French Environmental Code, final waste, whether or not it is a product of waste treatment, is waste that cannot be further treated by recovering reusable material or by rendering it less polluting or hazardous under current technical and economic conditions.

FISSILE

Refers to a nuclide capable of undergoing fission when impacted by neutrons, even when those neutrons have low energy. Some examples: ²³³U, ²³⁵U, ²³⁹Pu and ²⁴¹Pu. High-energy neutrons can induce fission in nearly all heavy nuclei.

FISSION

The splitting of a heavy nucleus – usually upon impact with a neutron – into two smaller nuclei, or fission products, accompanied by the emission of neutrons and radiation and the release of a considerable amount of heat. The energy released as heat is the principle underlying nuclear power generation.

FISSION PRODUCTS

Fragments of heavy nuclei produced by nuclear fission (the splitting of ²³⁵U or ²³⁹Pu nuclei) or by the subsequent radioactive decay of nuclides formed during this process. All fission fragments and their decay products are called “fission products”. In used fuel treatment plants, they are separated by solvent extraction after dissolving the fuel in nitric acid, then concentrated by evaporation and stored pending immobilization in glass (see Vitrification) and packaging in a stainless steel canister.

FLEX CONNECTOR

Interconnection system for flexstrips.

FUEL CYCLE

The combination of industrial operations performed involving nuclear fuel. These operations include uranium ore mining and processing, uranium conversion and enrichment, fuel fabrication, used fuel treatment, recycling of recovered fissile materials, and waste management. The fuel cycle is said to be "closed" when it includes used fuel treatment and recycling of fissile materials recovered by such treatment. The fuel cycle is said to be "open" or "once-through" when fuel is disposed of after it has been used in the reactor.

FUEL ELEMENT (or fuel assembly)

Bundle of fuel rods filled with uranium or MOX pellets. The core of a reactor contains 100-200 fuel assemblies, depending on the reactor type.

FUEL ROD

Metal tube about 4 meters long (about 13 feet) and 1 centimeter in diameter (about 2/5 of an inch) filled with about 300 pellets of nuclear fuel.

FUEL STORAGE POOL

Pool in which used fuel is stored after removal from the reactor to allow the assemblies to lose most of their radioactivity through radioactive decay. The water shields personnel from the radiation emitted by the used fuel.

GASEOUS DIFFUSION

Process for separating molecular species in gaseous form. The process takes advantage of the difference in the velocity of the molecules, which is specific to their mass and dimensions, and thus the different rates at which they pass through a semi-permeable membrane. The uranium hexafluorides $^{235}\text{UF}_6$ and $^{238}\text{UF}_6$ are separated in this manner, causing the uranium to be enriched in ^{235}U for nuclear fuel.

GRAY (Gy)

Unit of measurement for absorbed dose. Absorbed dose was formerly measured in rads (1 gray = 100 rads).

HIGH-LEVEL LONG-LIVED WASTE (HLLW)

Waste from used fuel representing a high level of radioactivity and a very long half-life. At this time, there is no final management solution for this waste, which is currently immobilized in matrices to ensure radioelement containment. HLLW management is the subject of research conducted under the aegis of Andra pursuant to the "Bataille" Law of 1991, as codified in articles L. 542-1 of the French Environmental Code. Three avenues are being explored: transmutation of long-lived radioactive elements; disposal in

deep geologic formations; and immobilization and long-term surface storage.

HIGHLY ENRICHED URANIUM (HEU)

Under the START Agreements, the United States has agreed to market separative work units (SWU) contained in highly enriched uranium (HEU) from dismantled weapons, while the natural uranium component (UF_6) of the HEU will be acquired by a team of which AREVA is a member. The latter commitment remains in effect until 2013. For the AREVA group, this resource is equivalent to a uranium mine that produces 2,000 metric tons annually.

INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE (IRSN - See also "DGSNR")

The French institute for radiation protection and nuclear safety, a public industrial and commercial agency whose mission, in particular, is to conduct research and assessments in the fields of nuclear safety, protection of people and the environment from ionizing radiation, and nuclear materials safeguards. IRSN provides the DGSNR with technical support.

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

International organization overseen by the United Nations whose mission is to promote the use of atomic power for peaceful purposes and to verify that nuclear materials in users' possession are not diverted for defense purposes.

INTERNATIONAL NUCLEAR EVENT SCALE (INES)

An international scale used to define the severity of an event occurring in a nuclear facility. It was designed by an international group of experts under the aegis of the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD). It was established at the international level in 1991. Like scales used for earthquakes or avalanches, the INES is a tool for providing information to the media and the general public. Events are classified by increasing order of severity, from level 0 to level 7. For example, the Chernobyl accident was a level 7 event. Following a favorable decision on June 24, 1999 by CSSIN, the French Nuclear Safety and Information Council (*Conseil supérieur de la sûreté et de l'information nucléaire*), and after a one-year trial period, the French Nuclear Safety Authority ASN (*Autorité de sûreté nucléaire*) decided on April 11, 2001 to widen the scope of the INES scale to include incidents or accidents involving radioactive materials transportation.

ISO STANDARD (International Standards Organization)

International standards. The ISO 9000 standards series defines quality organization and management system requirements to demonstrate the quality of a product or service based on customer requirements. The ISO 14000 standards set requirements for environmental management organizations and systems designed to prevent pollution and reduce the environmental effects of an activity.

ISOTOPES

Elements whose atoms have the same number of electrons and protons, but a different number of neutrons. Uranium, for example, has three isotopes: 234U (92 protons, 92 electrons, 142 neutrons), 235U (92 protons, 92 electrons, 143 neutrons), and 238U (92 protons, 92 electrons, 146 neutrons). A given chemical element can therefore have several isotopes with a differing number of neutrons. All of the isotopes of a given element have the same chemical properties, but different physical properties (mass in particular).

ISOTOPIC ASSAY

The ratio of the atoms of a given isotope of an element to the total number of atoms of the element. Isotopic assay is expressed as a percentage.

LEACHING

Process for extracting certain compounds contained in powdery, permeable or porous media, using a suitable solvent that flows naturally through the material to be processed. This method can be applied directly to highly fragmented soil (in situ leaching), or to material that has been extracted, broken up and placed on a suitable surface (heap leaching). The process is used to extract metal elements, including uranium. The same process is involved when rainwater runs through a mass of waste and extracts certain components from it.

LICENSED NUCLEAR FACILITIES (INB in French)

Nuclear facilities subject to an administrative licensing process and oversight, pursuant to amended Order 63-1228 of December 11, 1963. These regulations apply to nuclear reactors (except for those used as part of a propulsion system); particle accelerators; plants used in the preparation, fabrication or conversion of radioactive substances (in particular plants used to prepare nuclear fuel, to treat irradiated fuel, or to process radioactive waste); and facilities for the disposal, interim storage, or utilization of radioactive materials, including waste. The regulations for licensed nuclear facilities apply to the above-mentioned facilities only when the quantity or total activity of the radioactive materials

is above a threshold set by an administrative order, based on the type of facility and radioactive element involved. The DGSNR organizes INB inspection and oversight, which is exercised by inspectors of licensed nuclear facilities designated jointly by the Ministers of Industry and the Environment.

LOAD MANAGEMENT SYSTEM

Systems to optimize electricity flows, prevent equipment overloads, limit losses and analyze outage risks.

METRIC TONS OF HEAVY METAL (MTHM)

Heavy metal is the nuclear material in fuel: uranium oxide, or a mixture of uranium and plutonium oxides in the case of MOX fuel. The unit of measure for heavy metal is the metric ton.

MODAL SHIFT ORDERS

These are French administrative orders that set rules for different transport modes (mainly road, rail and river) concerning vehicles, packages, professional driver/conductor/pilot training, and documentation to be provided for the carriage of dangerous goods. The rules stem from international and European community laws and apply in particular to the carriage of radioactive materials (class 7 carriage).

MOX ("Mixed Oxides")

A mixture of uranium and plutonium oxides used to make certain nuclear fuels.

NATURAL URANIUM (Unat)

Naturally-occurring radioactive element in the form of a hard, gray metal, found in several ores, and in particular in pitchblende. Natural uranium is a mixture of 99.28% fertile 235U and 0.71% 234U.

NUCLEAR FUEL

A nuclide that undergoes fission in a reactor, thereby releasing energy. By extension, a product that contains fissile material and supplies energy in the reactor core by maintaining the chain reaction. A 1300 MWe pressurized water reactor contains about a hundred tons of fuel, part of which is periodically replenished.

NUCLEAR MATERIALS SAFEGUARDS

This function has two aspects:

- All of the measures taken by operators to ensure the safety of the materials in their possession: tracking and accountability, containment, monitoring, physical protection of the materials and facilities, and protection during transport.

- Inspections performed by government or international agencies, such as IAEA and Euratom, to verify the effectiveness and reliability of the above measures.

In both cases, the purpose of safeguards is to prevent any unauthorized transfer or theft of material or malicious activity.

NUCLEAR SAFETY (See also "SAFETY ANALYSIS REPORTS")

In the nuclear industry, nuclear safety covers all of the measures taken at each stage of the design, construction, operation and final shutdown of a facility to ensure operational safety, prevent incidents, and limit their impact.

- Fundamental safety rules (RFS in French): technical rules issued by the nuclear safety authority concerning licensed nuclear facilities which define nuclear safety objectives and describe practices deemed sufficient to ensure compliance with them by the French nuclear safety authority (Autorité de Sûreté Nucléaire).
- General operating rules (RGE in French): document developed by the operator of a licensed nuclear facility defining the prescribed operating range of the facility and identifying functions important for safety. It describes measures to be taken if facility performance is outside the normal operating range.

PACKAGING

Fuel packaging: special packaging for used fuel to prepare it either for interim storage or for final disposal.

Waste packaging: operation consisting of converting waste into a form suitable for transport and/or storage and/or final disposal.

- Very low-level radioactive waste (vinyl, cleaning rags, etc.) is placed in steel drums.
- Low- and medium-level waste is first compacted to reduce its volume as much as possible, then encapsulated in a special material (concrete, bitumen or resin) to form solid blocks capable of withstanding environmental conditions.
- For high-level waste, the matrix material is glass (vitrification process). Vitrified waste is placed in metal canisters.

PLUTONIUM

Chemical element with the atomic number 94 and conventional symbol Pu. Plutonium 239, a fissile isotope, is produced in nuclear reactors from uranium 238.

RADIATION, IONIZING RADIATION (See also "RADIOACTIVITY")

Flux of electromagnetic waves (radio waves, light waves, ultraviolet or X rays, cosmic rays, etc.), of particles of matter (electrons, protons, neutrons), or of a group of such particles. The flux carries energy in proportion to the wave frequency or to the particle speed. Their effect on irradiated objects is often to strip electrons from their atoms, leaving ionized atoms in their wake, which carry electrical charges, hence the generic name of "ionizing" radiation.

RADIATION PROTECTION (See also "RADIOACTIVITY")

Term commonly used to designate the branch of nuclear physics concerned with protecting people from ionizing radiation (also referred to as "health physics"). By extension, the term covers all of the health measures taken to protect members of the public and workers from such radiation and to comply with laws and regulations.

RADIOACTIVE WASTE (also referred to as NUCLEAR WASTE)

Non-reusable by-products of the nuclear industry. The four classes of waste are based on radioactivity levels:

- very low-level waste (VLLW);
- low-level waste (LLW) from operations and maintenance, such as gloves, booties, face masks, etc., which make up 90% of the waste sent to licensed disposal facilities;
- medium-level waste (MLW), such as dismantled production equipment, measurement instrumentation, etc. (8%);
- high-level waste (HLW), mainly fission products that have been separated during used fuel treatment and recycling operations (2%).

RADIOACTIVITY

Emission by a chemical element of electromagnetic waves and/or particles caused by a change in its nucleus. Emission can be spontaneous (natural radioactivity of certain unstable atoms) or induced (artificial radioactivity). Radioactivity has several forms:

- Emission of alpha particles (combination of two protons and two neutrons), called "alpha radiation". The particles involved in alpha radiation are helium 4 nuclei, which are highly ionizing but not very penetrating. A single sheet of paper stops them.
- Emission of electrons, known as "beta radiation". The particles involved in beta radiation are electrons with a negative or positive charge. They can be stopped by a few meters of air or a single sheet of aluminum foil.

- Emission of electromagnetic waves, known as “gamma radiation”. Electromagnetic radiation similar to light and X rays. Thick, compact materials (concrete, lead) are needed to stop it.

All of these different types of radiation are grouped under the general heading of “ionizing radiation”. The radioactivity of an isolated quantity of an element gradually decreases over time as the unstable nuclei dissipate. The half-life is the time required for the radioactivity of a radioactive substance to decrease by half.

RADIOELEMENT (also called RADIONUCLIDE)

Any radioactive material. Only a small number of radioelements are found in nature: a few heavy elements (thorium, uranium, radium, etc.) and a few light elements (carbon 14, potassium 40). The others – numbering more than 1,500 – are created artificially in the laboratory for medical applications or in nuclear reactors* as fission products.

REACTOR, NUCLEAR REACTOR

System in which controlled nuclear reactions are conducted, producing heat used to make steam. The steam activates a turbine, which in turn drives an electric generator. Different reactor types use different fuel, moderators (to control the reaction) and coolants (to remove heat used to generate power). The pressurized water reactor (PWR) currently used by EDF uses slightly enriched uranium fuel and pressurized light water as the moderator and coolant.

- Boiling water reactor (BWR): nuclear reactor in which boiling pressurized water is used to remove the heat from the reactor.
- Pressurized water reactor (PWR): nuclear reactor moderated and cooled by light water maintained in the liquid state in the core through appropriate pressurization under normal operating conditions.

RESERVES / RESOURCES

Indicated mineral resources

That portion of mineral resources for which the quantity and concentration or quality, density, shape, and physical characteristics can be estimated with enough confidence to allow suitable application of technical and economical parameters for purposes of planning mining operations and assessing the deposit’s economic viability.

The estimate is based on reliable and detailed exploration and testing information that is collected using appropriate

techniques at locations such as outcroppings, surface cuts, shafts, workings and drill holes that are close enough together to allow a reasonable assumption about the geological and grade continuity.

Inferred mineral resources

That portion of mineral resources for which the quantity, concentration and grade can be estimated based on geological evidence and a limited sampling, and can be reasonably relied upon without verification of geological and grade continuity. The estimate is based on limited information and sampling collected using appropriate techniques at locations such as outcroppings, surface cuts, shafts, workings and drill holes.

Measured mineral resources

That portion of mineral resources for which the quantity, grade or quality, density, shape, and physical characteristics are so well established that they can be estimated with enough confidence to allow the suitable application of technical and economical parameters for purposes of planning mining operations and assessing the deposit’s economic viability.

The estimate is based on reliable and detailed exploration and testing information that is collected using appropriate techniques at locations such as outcroppings, surface cuts, shafts, workings and drill holes that are close enough together to allow a reasonable assumption about the geological and grade continuity.

“Other mineral resources” means uranium ore bodies for which mining operations have been suspended for administrative reasons, or which require more favorable market conditions to be profitably mined. The indicated tonnages reflect the quantity of metal in the earth without application of the plant’s rate of output. Additional development work or changes in mining criteria may result in the reclassification of these “other resources” as “resources”.

“Total mineral resources” is defined as the sum of all categories of resources. They are a good long-term indicator for comparing producer portfolios.

Mineral reserves

The portion of measured or indicated mineral resources that is economically recoverable and shown to be so by at least one feasibility study. The study must include adequate information about mining and processing operations, metallurgy, economic

aspects and other relevant factors to demonstrate that mining is economically justified at the time the report is written. Mineral reserves include dilution materials and the allowance for mining losses incurred during mining operations.

Mineral resources

Mineral-bearing concentrations or indicators of a natural, solid inorganic or fossilized organic material in or on the Earth's crust, and which is present in such form, quantity, concentration or quality to indicate that there are reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of the mineral resources are known, estimated, or interpreted based on specific geological evidence and data.

Probable mineral reserves

The economically recoverable portion of the indicated mineral resources and, in some cases, of the measured mineral resources, as shown by at least one feasibility study. The study must include adequate information about mining and processing operations, metallurgy, economic aspects and other relevant factors to demonstrate that economic extraction can be justified at the time the report is written.

Proven mineral reserves

The economically recoverable portion of measured mineral resources, as shown by at least one feasibility study. The study must include adequate information about mining and processing operations, metallurgy, economic aspects and other relevant factors to demonstrate that extraction is economically justified at the time the report is written.

RESIDUE

Non-reusable material remaining after physical or chemical processing. The term has a more specific meaning in used fuel treatment, where it refers to any waste that has been packaged.

RID ORDER

French administrative order of June 5, 2001, amended, pertaining to the carriage of dangerous goods by rail. The order incorporates and supplements the provisions of the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID), taken to apply the Berne Convention concerning International Carriage by Rail (COTIF) adopted May 9, 1980. It defines rules specific to the carriage of dangerous goods by rail in France, whether such carriage is national or international.

SAFETY ANALYSIS REPORTS

Reports describing the design of licensed nuclear facilities and the measures taken to ensure safety. These reports identify the risks presented by the facility and analyze the measures taken to prevent those risks as well as measures conducive to reducing the probability of accidents and their effects.

- Preliminary safety analysis report: written during the preliminary design stage, this report contains a general description of the facility and of the operations performed therein. It endeavors to identify the risks, to define safety options, to list safety principles and to justify the choice of the site. In France, this report is submitted in support of the application for a construction permit under the provisions of a 1963 decree.
- Interim safety analysis report: submitted in support of the application for an operating license, this report describes the as-built facility and is used to verify that the facility has been built in accordance with the safety principles set out in the preliminary safety analysis report and with the technical requirements for construction stipulated in the construction permit.
- Final safety analysis report: presented after facility testing and before the operating license is granted.

SAFETY SYSTEMS

Combination of equipment used to detect and eliminate defects or other abnormal operating conditions in electric power supply systems.

SIEVERT (Sv)

Official unit of measure for dose equivalent, i.e. the fraction of energy from radiation received by one kilogram of living matter. On the basis of the measured energy dose received (measured in grays), the dose equivalent is calculated by applying various factors according to the type of radiation received and the organ concerned. The abbreviation for Sievert is Sv.

Commonly used submultiples are:

- the millisievert, or mSv, equal to 0.001 Sv (a thousandth of a Sv),
- the microsievert, or μ Sv, equal to 0.000 001 Sv (a millionth of a Sv).

For example, the mean annual dose from exposure to natural background radiation (terrestrial, cosmic, etc.) is 2.4 mSv/person in France.

STORAGE (see also "DISPOSAL")

Temporary storage of radioactive waste.

SWU (Separative Work Units)

The production of an enrichment plant is expressed in separative work units, or SWU. This unit is proportional to the amount of uranium processed and is used to express the work involved in separating a fissile isotope.

TRADING

Commercial transactions in the natural uranium market in the form of the purchase, sale, exchange, rental or loan of quantities of uranium that are not directly connected to the group's mining operations.

TRANSFORMER STATION (SUBSTATION)

Interface between sections of an electric power supply system that operate at different voltages. Voltage is transformed and electricity supply flows are controlled in the substation.

TRANSPORT CASK

A container designed specifically to keep certain radioactive materials – used fuel, vitrified waste, etc. – totally contained during transport and to withstand any accidents.

TREATMENT

Treatment of used fuel to extract fissile and fertile materials (uranium and plutonium) for recycling purposes and to package the different types of waste into a form suitable for disposal. Fission products and transuranic waste are vitrified.

ULTRACENTRIFUGATION

Enrichment process in which a gaseous mixture of isotopes is spun at very high speed using centrifugal force to modify the composition of the mixture.

UO₂ POWDER

UO₂ is the symbol for uranium oxide. Uranium oxide comes in powder or pellet form. It is one of the components of nuclear material.

URANIUM

Chemical element with atomic number 92 and conventional symbol U, which has three natural isotopes: ²³⁴U, ²³⁵U and ²³⁸U. The only naturally-occurring fissile nuclide is ²³⁵U, which is used as a source of energy.

URANIUM HEXAFLUORIDE (UF₆)

The uranium contained in nuclear fuel must be enriched in fissile U²³⁵. Enrichment is achieved by gaseous diffusion or by ultracentrifugation. The uranium is first converted into a gas called uranium hexafluoride for this purpose.

VITRIFICATION

Process used to solidify concentrated solutions of fission products and transuranic elements separated during used fuel treatment by mixing them with a glass matrix at melting them at high temperature.

YELLOWCAKE

"Cakes" of 80% uranium concentrates.

ZIRCONIUM

Transition metal, like titanium, discovered in 1824 by Berzélius. Zirconium has the atomic number 40 in the periodic table of elements. It is the base alloy in the cladding of light water reactor fuel elements, used for its mechanical strength and corrosion resistance in high temperature water combined with its very low thermal neutron absorption.