AREVA

2002 Reference Document

Pursuant to regulation No. 98-01, the Commission des Opérations de Bourse
has registered this document under reference No. R-03-147.
This document may not be used to support a financial transaction unless it is accompanied
by a transaction note approved by the Commission des Opérations de Bourse.
This reference document was prepared by the issuer;
the signatories thereof assume all responsibility for its content.
This registration was made after reviewing the information provided on the
company' financial position for relevance and consistency;
it does not imply that the accounting and financial data contained herein are true.

The Commission des Opérations de Bourse calls the public's attention to two observations made by the company's statutory auditors in their report on the consolidated financial statements at December 31, 2002. These observations are presented in notes 1.1 and 21 of the Notes to the Financial Statements and concern:

— the impact from a change in accounting method in connection with the first implementation of accounting rule CRC 2000-06 regarding liabilities; and

— uncertainties inherent in the evaluation of decommissioning costs, including the share of such costs to be borne by customers, particularly EDF.

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* The order of presentation of this document follows the instructions contained in Commission des Opérations de Bourse rule #98-01 dated December 2001.

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Chapter 1:
Persons Responsible for the Reference Document and for auditing the financial statements

1.1 Person responsible for the Reference Document

Ms. Anne Lauvergeon
Chairman of the Executive Board

1.2 Certification by the person responsible for the Reference Document

To the best of my knowledge, the information contained in this prospectus is consistent with the facts; contains all of the information investors need to assess the assets, operations, financial position, financial performance and prospects of AREVA; and nothing has been omitted that would affect its meaning.

Signed in Paris, June 24, 2003

Signature of Anne Lauvergeon

1.3 Persons responsible for the audit of the financial statements

The persons responsible for auditing the financial statements have a six-year term of office.

1.3.1 Audit authority for the 2000-2001 financial statements

Registered auditors

Barbier Frinault & Autres
41, rue Ybry — 92576 Neuilly-sur-Seine cedex — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

Mazars & Guérard
Le Vinci — 4, allée de l'Arche — 92075 La Défense cedex — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

Alternate auditors

Alain Gouverneyre
41, rue Ybry — 92576 Neuilly-sur-Seine cedex — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

Max Dusart
Le Vinci — 4, allée de l'Arche — 92075 La Défense cedex — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

1.3.2 Audit authority for the 2002 financial statements

Registered auditors

Mazars & Guérard
Le Vinci — 4, allée de l'Arche — 92075 La Défense cedex — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

Deloitte Touche Tohmatsu
185, avenue Charles De Gaulle — 92524 Neuilly-sur-Seine cedex — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.(1)

RSM Salustro Reydel
8, avenue Delcassé — 75378 Paris cedex 08 — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2002.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2007.

Alternate auditors

Max Dussart

(1) Deloitte Touche Tohmatsu replaced Barbier Frinault & Autres in 2002 for a term of office expiring in 2007.

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

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2001.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

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

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2002.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2006.

Jean-Claude Reydel
8, avenue Delcassé — 75378 Paris cedex 08 — France

- Term began: Term granted by the Annual General Meeting of Shareholders convened for 2002.
- Term ends: Annual General Meeting of Shareholders convened to approve the financial statements for 2007.

1.4 Certification by the auditors responsible for the consolidated and corporate financial statements

As independent auditors to AREVA and in application of COB regulation n° 98-01, we have audited information on the financial position and past financial statements given in the present reference document in accordance with French accounting standards.

This reference document was established under the authority of the Executive Board. It is our responsibility to express an opinion on the faithfulness of the information it contains relative to the financial position and the financial statements of the company.

In accordance with French accounting standards, our efforts served to assess the faithfulness of the information on the company's financial position and financial statements and to verify their consistency with audited financial statements. We also read the other information contained in the reference document to identify any significant inconsistencies with information on the company's financial position and financial statements and to report any manifestly erroneous information based on a general understanding of the company acquired in the conduct of our mission. The projections presented in the group's management report under the heading ''Outlook'' are management objectives and not isolated estimates generated by a structured work process.

The annual financial statements and the consolidated financial statements for the fiscal year ending December 31, 2000 presented by the board of directors of CEA-Industrie and for the fiscal year ending December 31, 2001 presented by the AREVA Executive Board were audited by the accounting firms Barbier & Frinault and Mazars & Guérard in accordance with French accounting standards. The annual and consolidated financial statements for both fiscal years were certified unreservedly and with a comment in 2000 on the application of regulation 99-02 of the Comité de Réglementation Comptable [Accounting Controls Board] on rules for consolidation and the resulting changes in accounting methods.

We audited the annual financial statements and the consolidated financial statements for the fiscal year ending December 31, 2002 presented by the AREVA Executive Board in accordance with French accounting standards. Our report is without reservation and with two comments on two pieces of information described in notes 1.1 and 21 respectively of the consolidated financial statements. These relate to:

- the effect of the change in accounting method arising from the first-time application of CRC regulation no. 2000-06 with respect to liabilities, and
- the uncertainties inherent in evaluating costs for the back end of the cycle, due to ongoing revisions to certain decommissioning estimates and the share of them to be borne by customers, particularly EDF.

Based on our audit, we have no comments to make on the faithfulness of the information presented in the reference document pertaining to the company's financial position and financial statements.

Paris la Défense, June 24, 2003

DELOITTE TOUCHE TOHMATSU

Pascal Colin

Jean-Paul Picard

MAZARS & GUERARD

Thierry Blanchetier

Michel Rosse

RSM SALUSTRO REYDEL

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@arevagroup.com
- Vincent Benoit, Director of Financial Communications
  Address: 27-29 rue Le Peletier, 75009 Paris, France
  e-mail: vincent.benoit@arevagroup.com

1.6 Scheduled announcements and communications policy

The guiding principle behind AREVA's financial communications is to build strong relations with current and future shareholders and to develop a presence in the financial markets.

The Director of Financial Communications (see above) is supported in this mission by:

- Frédéric Potelle, Manager of Investor Relations
  Address: 27-29 rue Le Peletier, 75009 Paris, France
  e-mail: frederic.potelle@arevagroup.com

1.6.1 Scheduled announcements

Information of a financial, commercial, organizational or strategic nature that may be of interest to the financial community is provided to the national 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 at www.arevagroup.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.

Half-year and annual financial results are provided via telephone conferences and meetings with financial analysts.

The following list of scheduled events is regularly updated on the AREVA website.

Announcement date	Event
June 30, 2003	Dividend payment
August 4, 2003*	2nd quarter 2003 sales figures
September 30, 2003*	1st half 2003 financial results
October 1, 2003**	Information meeting on 1st half 2003 financial results (media, analysts, investors)
November 6, 2003*	3rd quarter 2003 sales figures
February 2004	4th quarter 2003 sales figures
March 2004	2003 financial results

* : the press release will be published on the announced date after 5:30 pm (Paris time)
** : time to be decided

1.6.2 Technical information on the group's businesses

In connection with a possible increase in publicly traded shares, the AREVA group organized a series of presentations and site tours to enhance the financial community's knowledge about the group's operations from a technical point of view as well as its understanding of the economic challenges involved.

The ''AREVA Technical Days'' (ATD) program was designed for this purpose. Two sessions were held in 2002: a general session on AREVA's businesses held in Paris in June, and a session on the back end of the nuclear fuel cycle held at the La Hague plant in December. Each session was attended by some 100 participants. New sessions will be held in 2003 and 2004.

- ATD 1: World energy challenges and presentation of the AREVA group's four divisions, held in Paris on June 27 and 28, 2002.
- ATD 2: Operations in the Back End division of the Nuclear Power business, presentations and facility tours at the COGEMA-La Hague plant on December 4 and 5, 2002.
- ATD 3: Operations in the Reactors and Services division, scheduled for July 2 and 3, 2003, in Chalon sur Saône.
- ATD 4: Operations in the Front End division of the Nuclear Power business, projected date posted on the group website at www.arevagroup.com under the ''Finance'' tab.
- ATD 5: Operations of the Connectors division, projected date posted on the group website at www.arevagroup.com under the ''Finance'' tab.
- ATD 6: Summary and outlook, projected date posted on the group website at www.arevagroup.com under the ''Finance'' tab.

To ensure the clarity of the information provided, participants and non-participants may view video footage of the meetings and related question-and-answer sessions on the group website in the ATD program area.

Chapter 2:
Information pertaining to the transaction

Not applicable

Chapter 3:
General information on the company and share capital

3.1 Statutory information

3.1.1 Legal name

The company's legal name is ''Société des Participations du Commissariat à l'Énergie Atomique''. The company's trade name is ''AREVA''.

In this document, the company may be referred to as ''AREVA''.

3.1.2 Relations with the French State

Incorporating orders

The Société des Participations du Commissariat à l'Énergie Atomique was created by ministerial order n° 83-1116 dated December 21, 1983, as modified, notably by ministerial order 2001-342 of April 19, 2001. Some of the order's main provisions are as follows:

- Changes to company bylaws are approved by ministerial order. However, capital increases are subject to joint approval by the minister of industry and the minister of the 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'Energie Atomique (CEA) is subject to the same approval as for a capital increase (article 2, paragraph 2).
- A government comptroller is designated by the French State and the company is subject to the provisions of ministerial order n° 53-707 dated August 9, 1953, excluding article 2. This order governs, among other matters, executive compensation in government-owned companies.
- The decisions of the Supervisory Board become effective only after a ten-day waiting period, during which time the government comptroller may reject them (article 5).
- Sales of AREVA shares are subject to approval by AREVA's Supervisory Board, except for shares traded on a regulated stock market (article 6).

The company's bylaws were amended on November 29, 2002 by the Extraordinary General Meeting of Shareholders. The amended bylaws were then approved by ministerial order n° 2003-94 of February 4, 2003. The amendments modified the powers and responsibilities of the Supervisory Board.

Designation of government representatives

The French government designated four members of the Supervisory Board as representatives of the French State.

Company representatives elected by company personnel

Three members of the Supervisory Board were elected by company personnel in 2002.

Legal form of the company

AREVA is a *Société Anonyme à Directoire et Conseil de Surveillance* (a business corporation with an Executive Board and a Supervisory Board) governed by the French Code of Commerce and by ministerial order dated March 23, 1967.

3.1.3 Purpose of the company

The purpose of the company, in France as well as abroad, is to acquire participating and equity interests, directly or indirectly, in whatever form, in any French or foreign company or enterprise involved in financial, commercial, industrial, real estate or securities operations, in the purchase, sale, exchange, subscription or management of securities or participating or equity interests, in providing services, particularly services supporting group operations, and in managing business and commercial operations, especially in the nuclear, information systems, electronics and connectors sectors. To achieve these goals, the company may:

- examine projects concerning the creation, development or reorganization of any industrial enterprise;
- implement any such project or contribute to its implementation by all appropriate means, particularly by acquiring participating or equity interests in any existing or proposed business venture;
- 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.

3.1.4 Corporate office

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

3.1.5 Statutory term

The company 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 previously dissolved.

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

3.1.6 Business registry, business code, registration number

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

3.1.7 Availability of incorporating documents

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

3.1.8 Annual financial statements

Accounting year

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

Corporate financial statements

After 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 shareowner, investment certificate owner or voting-right certificate holder may review these documents as well as any other document that must be provided by law, subject to conditions stipulated in current regulations. He or she may also request that these documents be mailed to him or her by the company as provided by the regulations.

Information on subsidiaries and equity interests

Information on subsidiaries and equity interests required by law is included in the report presented to the Annual General Meeting of Shareholders by the Executive Board and, as applicable, by the registered auditors.

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

The Executive Board attaches a table to the balance sheet presenting the position of said subsidiaries and equity interests in the format required by law.

Consolidated balance sheet and financial statements

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

The method used to prepare consolidated balance sheets and income statements must be disclosed in a note attached to these documents.

Distribution of profits

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 capital stock.

3. The profit available for distribution is equal to the profit for the year less prior year losses, less reserve allocations required by law and the company bylaws, plus retained earnings.

4. Except in cases of capital reduction, there shall be no profit distribution to all shareowners or other equity investors when shareholders' equity falls below an amount equal to the capital stock plus legal reserves, in accordance with the law and the company's bylaws, or when the company's equity would fall below such amount if the proposed distribution were to take place.

3.1.9 Information on General Meetings of Shareholders and Voting-right Certificate Holders

Provisions common to all meetings

Forms and deadlines for Notices of Meeting

Meetings are convened as provided by law.

Admission to Meetings — Deposit of Securities

1. Any shareowner 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 identity and of his 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 future bearer shares, 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 an emergency ruling at the request of any of the joint owners.

4. Any shareowner 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 work 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 article L. 432-6, paragraphs 3 and 4, of the French Labor Code may participate in the meeting.

Voting procedures

1. The voting rights attached to amortized or non-amortized shares and voting-right certificates are proportionate to the fraction of the 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 usufructuary in Annual General Meetings of the Shareholders and to the bare owner in Extraordinary General Meetings as well as in meetings dealing with statutory matters.

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

Rules governing Annual General Meetings of Shareholders

Quorum and majority

The Annual General Meeting of Shareholders may deliberate validly after the first notice of meeting only if the shareowners 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.

Resolutions are adopted by a majority vote of the shareowners or voting-right certificate holders present in person, by proxy or voting by mail, or attending the Annual General Meeting via videoconference or a telecommunications medium allowing them to be identified.

Rules governing Extraordinary General Meetings of Shareholders

1. The Extraordinary General Meeting of Shareholders has sole authority to amend any of the company bylaw provisions, or to increase or decrease the company's capital stock. 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 combinations that have been properly executed or in the case of fractional shares resulting from a capital increase or decrease.

2. As an exception to the exclusive jurisdiction of the Extraordinary General Meeting of Shareholders in matters of bylaws amendment, the Executive Board may modify bylaw provisions relating to the company's capital stock or the number of shares, investment certificates or voting-right certificates representing such capital, when such changes automatically result from a duly authorized capital increase, decrease or amortization.

Quorum and majority

Unless otherwise provided by law, a quorum representing one third of all shares and voting-right certificates entitled to vote is required after the initial notice of meeting of any Extraordinary General Meeting of Shareholders. The quorum required after the second notice of meeting is 25% of all shares and voting-right certificates entitled to vote. The quorum includes shareowners and voting-right certificate holders present at the meeting in person, by proxy, voting by mail, or participating by videoconference or a telecommunications medium allowing them to be identified, in accordance with applicable laws and regulations.

If no quorum has been reached for the second notice of meeting, the Extraordinary General Meeting may be postponed for 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 shareowners or voting-right certificate holders present in person, 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.

Rules governing Special Meetings of Investment Certificate Holders

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 Sharehold-

ers called to decide on a proposed capital increase, convertible bond issue, or bond issue with stock purchase warrants.

Investment certificate holders are admitted to the meeting following the same procedures applicable to the shareowners, described under article 32.

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

3.2 Information on company capital and voting rights

3.2.1 Capital stock

3.2.1.1 Capital Stock issued

The company's capital stock is one billion three hundred forty six million eight hundred twenty two thousand six hundred thirty eight euros (1,346,822,638 euros), 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), 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

Authorized share capital and issued share capital are identical. There are no securities outstanding that could ultimately result in the creation of new shares. Therefore, the concept of potential capital does not apply to the AREVA group.

The Annual General Meeting of Shareholders has not passed any resolution authorizing the issuance of securities giving access to share capital.

3.2.2 Changes in share capital since 1989

On May 29, 1989, the Extraordinary General Meeting of Shareholders voted to increase the company's capital stock to 6,999,412,000 French francs by creating 12,448 preferred investment certificates with a par value of 250 French francs each, issued in exchange for 3,112 equity certificates, and by creating 12,448 voting-right certificates for the Commissariat à l'Energie Atomique.

On May 31, 1990, the Extraordinary General Meeting of Shareholders voted to increase the company's capital stock to 7,016,500,000 French francs by creating 68,352 preferred investment certificates with a par value of 250 French francs each, issued in exchange for 17,088 equity certificates, and by creating 68,352 voting-right certificates for the Commissariat à l'Energie Atomique.

On March 23, 1992, the Extraordinary General Meeting of Shareholders voted to increase the company's capital stock to 7,353,577,000 French francs by creating 1,348,308 preferred investment certificates with a par value of 250 French francs each, issued in exchange for 337,077 equity certificates, and by creating 1,348,308 voting-right certificates for the Commissariat à l'Energie Atomique.

On June 23, 2000, the combined Annual and Extraordinary Meeting of Shareholders delegated complete authority to the Board of Directors to convert the capital stock into euros. On December 18, 2000, the Board of Directors, acting by delegation, decided to reduce the company's capital stock from 1,121,045,586.830 euros to 1,117,743,704 euros as of January 1, 2001.

On September 3, 2001, the Extraordinary General Meeting of Shareholders approved the takeover merger of Biorisys and Framatome S.A. and voted to increase the company's capital stock to 1,318,374,128 euros by creating 5,279,748 shares with a par value of 38.00 euros each, issued to Biorisys and Framatome S.A. shareholders excluding the company itself.

On September 3, 2001, the Extraordinary General Meeting of Shareholders decided to raise share capital to 1,346,822,638 euros by issuing 748,645 new shares with a par value of 38 euros per share in payment for the contribution of COGEMA shares from Total Chimie, Total Nucléaire, Entreprise de Recherches et d'Activités Pétrolières (ERAP) and the Caisse des Dépôts et Consignations.

3.2.3 Shareholders

The company's share capital as of May 31, 2003 is as follows:

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

In some cases, the rights attached to the shares were sub-divided into distinct investment certificates and voting-right certificates. An original share is reestablished with full rights and privileges when a voting right certificate and an investment certificate are reunited. CEA owns all of the voting-right certificates. Investment certificates are owned by the public and traded on the *Premier Marché* at Euronext Paris.

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

	12/31/1998		12/31/1999		12/31/2000		12/31/2001		12/31/2002		**5/31/2003**	
	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights	% capital	% voting rights
CEA	95.14	100.00	95.14	100.00	95.14	100.00	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
Caisse des Dépôts et Consignations							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
EDF							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 *
Crédit Agricole Indosuez									*0.40 **	*0.40 **	*0.52 **	*0.52 **
TotalFinaElf (now Total)							1.02	1.02	1.02	1.02	1.02	1.02
IC holders	4.86		4.86		4.86		4.03	—	4.03	—	4.03	—
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

* The Crédit Agricole Indosuez bank entered into a liquidity guarantee agreement with the Framépargne mutual fund 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, Crédit Agricole Indosuez purchased some AREVA shares beginning in July 2002.

Each member of AREVA's Supervisory Board holds one share of stock, except for members representing the French State. Members of the Executive Board do not own stock in the company.

3.2.4 Treasury stock

The company does not own any of its capital stock.

3.2.5 Preferential trading terms

There is no agreement granting preferential selling or buying terms for shares traded on a regulated stock market that would represent 0.5% or more of the company's voting rights.

3.2.6 Form of shares, investment certificates and voting-right certificates

Subject to the condition precedent that the shares and/or investment certificates issued by the company 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 conferring an immediate or future right to vote in a Meeting of Shareholders of the company are listed for trading on a regulated stock market, the company may request the name (or the legal name in case of a legal entity), nationality, year of birth (or year of creation 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 and any restrictions on same, in accordance with the law in this matter.

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

3.2.7 Transfer of shares, investment certificates and voting-right certificates

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 sign the transfer order. Any transfer expenses are borne by the buyer.

2. The sale of company shares not listed for trading on a regulated market to a third party, even if the sale is limited to bare ownership or usufruct of such shares, is subject to prior approval by the Supervisory Board in the manner and under the conditions hereafter:

a) The request for approval of transfer shall be delivered to the company by registered mail, return receipt requested. It 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, return receipt requested. However, the request shall be deemed to have been granted if no answer is provided within three months from 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 timeframe specified by law, cause a third party to acquire the shares, or shall acquire the shares itself for the purpose of reducing the company's capital. The original transfer request shall be deemed approved if the company-sponsored acquisition has not been completed within the timeframe mentioned above. However, the deadline to complete such an acquisition may be extended by a court ruling at the company's request.

d) Unless the parties agree otherwise, and in all instances of acquisition under the provisions of the preceding paragraph, the share price shall be set by an appraiser as provided under article 1843-4 of the French Civil Code.

3. Investment certificates may be sold freely. A voting-right certificate may be sold only in combination with an investment certificate unless the buyer already owns an investment certificate. Such a transaction results in the permanent reconstitution of a share.

3.2.8 Rights and obligations attached to shares, investment certificates and voting-right certificates

Possession of a share, an investment certificate or a voting-right certificate automatically implies acceptance of the company 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 irrespective of owner.

3.2.9 Liens

There are no liens on AREVA shares held by the principal shareholders identified in paragraph 3.2.3. Shares of group subsidiaries held by AREVA are similarly unencumbered.

All AREVA assets are free and clear of all liens.

3.2.10 Shareholders' agreement

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

The CDC and the CEA concluded an agreement on December 28, 2001 under which both parties agree that CDC will have the right to sell an equal number of AREVA shares as those sold by CEA in the event that AREVA shares owned by CEA are offered for sale on a regulated market. The CEA further agreed to undertake it 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 AREVA shares are not admitted for public trading by December 31, 2004.

Memorandums of understanding among Total Chimie and Total Nucléaire, AREVA and Cogema

Under the terms of two separate memorandums of understanding dated June 27, 2001, Total Chimie and Total Nucléaire agreed to sell

five-sixths of their equity interest in Cogema and contribute the remaining shares to AREVA (formerly called CEA-Industrie) prior to the split-up and merger decided by the Combined Annual and Extraordinary Meeting of Shareholders.

This memorandum of understanding also provides that the contributors shall retain their AREVA shares obtained 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, they shall have the option of terminating their shareholder status in AREVA's capital, and AREVA together with the contributors shall make their best efforts to ensure that the sale of the contributors' equity interest shall be carried out promptly and under mutually acceptable conditions.

Other shareholders' agreements for AREVA capital or its equity affiliates are described in paragraph 4.2.2.

3.3 Share trading

3.3.1 Trading exchange

AREVA's investment certificates are traded on the *Premier Marché* of Euronext Paris under ISIN code number FR 0004275832.

3.3.2 Custodian services

Custodian and transfer services are provided by:

Euro 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 volume over the past three years

2000

(in euros)	High*	Low*	Volume traded	Value
January	118.00	106.20	58 726	6 531 820
February	139.60	114.00	142 058	17 830 368
March	144.00	131.20	42 413	6 524 744
April	179.50	151.20	137 350	22 504 224
May	174.00	148.30	36 390	6 801 582
June	169.90	148.20	79 129	12 684 344
July	156.50	135.60	22 849	3 516 185
August	149.90	131.10	20 030	2 845 775
September	151.00	142.50	39 934	5 936 320
October	151.40	123.00	88 089	12 276 141
November	165.00	141.90	62 360	9 323 456
December	195.40	165.20	121 989	22 486 366

2001

(in euros)	High*	Low*	Volume traded	Value
January	203.90	174.80	93 556	18 296 363
February	214.00	189.70	87 112	17 613 657
March	196.90	168.90	1 555	284 221
April	217.90	172.20	72 861	14 616 814
May	243.80	214.00	90 851	21 021 725
June	237.80	199.90	81 387	17 750 701
July	228.00	166.00	66 445	13 348 650
August	189.00	147.20	40 549	6 995 959
September	159.00	120.80	119 993	17 214 343
October	141.00	129.50	41 448	5 631 125
November	155.00	137.50	88 447	12 891 793
December	166.80	141.70	131 938	20 610 035

2002

(in euros)	High*	Low*	Volume traded	Value
January	170.00	161.00	80 861	13 382 871
February	181.00	169.90	80 183	14 165 927
March	192.00	180.00	57 202	10 705 435
April	201.00	190.00	157 140	30 671 713
May	190.40	181.00	92 923	17 425 652
June	192.30	175.90	127 814	23 892 366
July	181.00	160.00	70 984	12 269 050
August	168.90	152.10	61 553	10 065 721
September	167.50	135.10	47 658	7 526 030
October	152.30	116.00	59 784	8 101 460
November	170.00	143.00	31 460	4 834 870
December	155.00	134.10	25 558	3 634 080

2003

(in euros)	High*	Low*	Volume traded	Value
January	150.00	134.20	96 171	14 030 400
February	137.60	126.00	59 654	7 873 500
March	149.50	126.00	40 132	5 385 800
April	168.50	137.30	53 489	7 895 100
May	188.00	158.00	61 966	10 673 100

Source: Reuters (shares traded and trading values), Bloomberg (daily closing prices).

* Daily closing prices.

3.4 Dividends

3.4.1 Dividend payment

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 are not subject to recovery. Dividends that have not been collected within five years from the set date of distribution are forfeited to the French State.

3.4.2 Five-year dividend data

(in euros)	Dividend	Tax credit	Gross dividend
1997	4.31	2.16	6.47
1998	6.19	3.09	9.28
1999	10.23	5.11	15.34
2000	22.85	11.42	34.28
2001	6.20	3.10	9.30
2001 (extraordinary dividend)	12.28	6.14	18.48
2002	6.20	3.10	9.30

3.4.3 Dividend policy

2002, 2003 and 2004 are transition years. It is AREVA's desire to transition from a dividend stock status to a growth stock. Ultimately, dividends will driven by AREVA's consolidated net income.

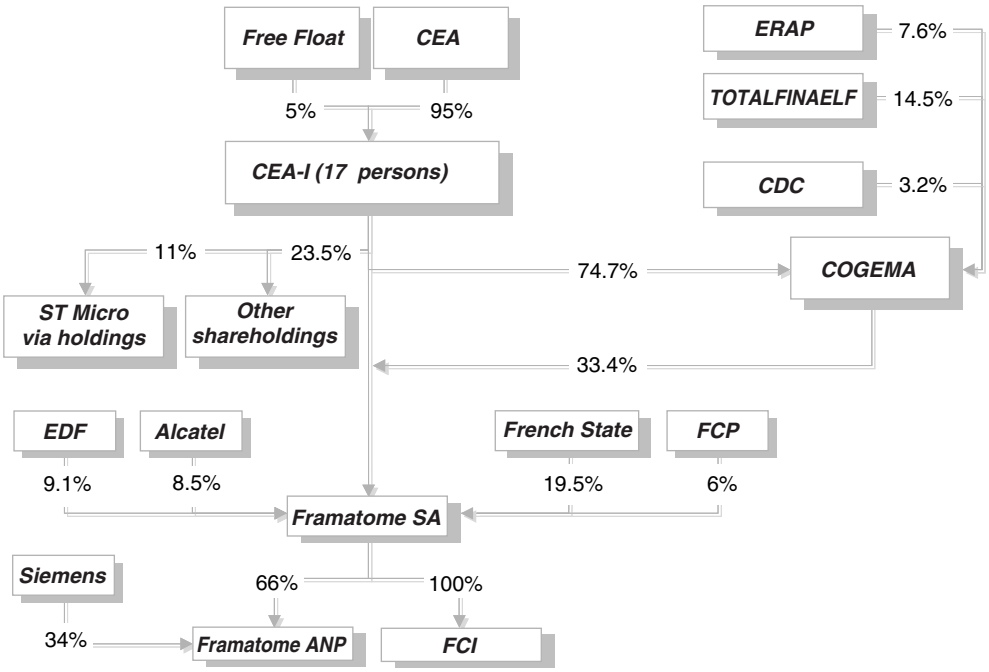
Chapter 4:
Information on company operations, changes and future prospects

4.1 Background and establishment of the AREVA group

4.1.1 Establishment of the AREVA group

The operations of CEA Industrie, COGEMA and Framatome were combined into a single entity under the code name Topco, as announced on November 30, 2000. This was a first step toward the establishment of AREVA on September 3, 2001. The combined resources of these three companies have created a major industrial group with considerable financial resources and greater operational coordination that is a leader in its business areas.

Initial structure of the CEA Industrie group in early 2001



This industrial complex was restructured in six stages:

1. COGEMA contributed equity interests unrelated to its commercial operations, i.e., its interests in Framatome, TotalFinaElf, Eramet and Cogerap, to Biorisys, a company created for this purpose whose share capital was held in its entirety by COGEMA.
2. CEA Industrie bought back 5/6ths of TotalFinaElf's equity interest in COGEMA.
3. Biorisys shares issued in exchange for COGEMA's contribution were distributed among the latter's shareholders.
4. CEA Industrie took over Biorisys and Framatome SA.
5. COGEMA's minority shareholders contributed their COGEMA shares to CEA Industrie in exchange for CEA Industrie shares.
6. CEA Industrie changed its trade name to ''AREVA''.

A capital increase for CEA Industrie in the amount of €229M together with consolidation goodwill of €144M and a merger bonus of €1,532M incorporating a merger dividend of €765M accompanied these contributions and takeovers.

AREVA was thus formed from the legal structure of CEA Industries and retains its Euronext Paris (*Premier Marché*) listing of a portion of the latter's share capital in the form of investment certificates.

The organization of the subsidiaries was simplified (see figure below) for greater operating efficiency, offering the following benefits:

- 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 a portion of committed costs;
- optimized financial resource management.

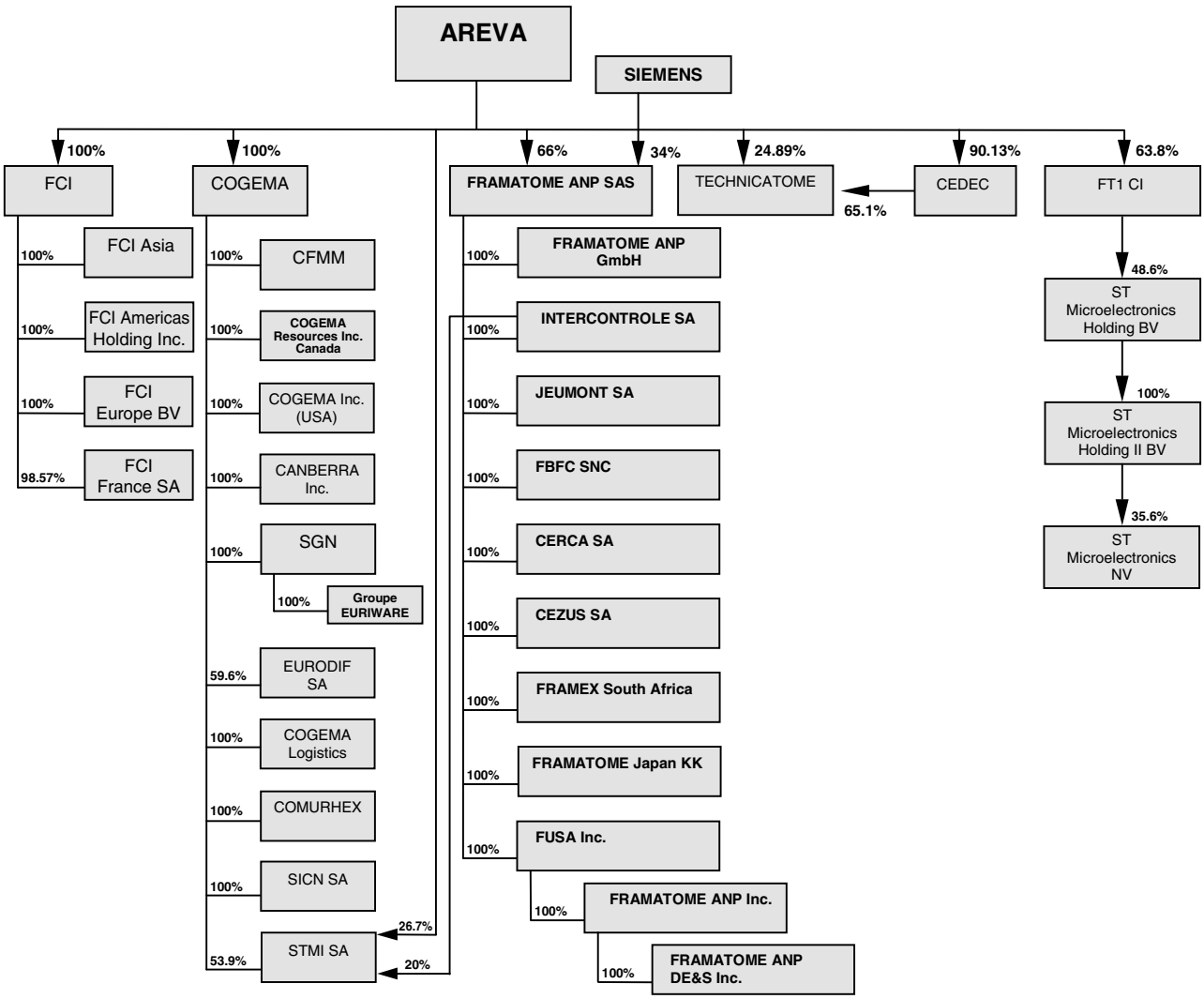
The AREVA group has two businesses:

Nuclear Power: This business covers every aspect of nuclear power, from uranium ore mining to fuel fabrication, reactor construction, spent fuel reprocessing and related services.

Connectors: This business includes the development and manufacturing of interconnection systems, primarily for the telecommunications, information technology and automobile sectors.

4.1.2 Organizational chart of the AREVA group

Simplified organizational chart of AREVA following takeover-mergers



4.1.3 COGEMA milestones

1976
- COGEMA is formed (Compagnie Générale des Matières Nucléaires) and acquires the majority of CEA's production department operations: uranium mining, uranium enrichment and spent fuel reprocessing.
- Startup of the UP2-400 plant, a 400 metric ton (MT) per year spent fuel reprocessing plant at La Hague.

1978
- The La Crouzille mining division produces the 10,000th MT of uranium ore from its deposit in the Limousin region in April 1978.

1979
- The Eurodif uranium enrichment plant at Pierrelatte enters service. Plant production capacity is quadrupled in two years to meet demand.

1980
- The Hérault mining division begins mining uranium. In addition to its uranium resources, plant fossils and fossils of at least six species of vertebrates are discovered and are used to reconstitute a picture of the natural environment of the Lodève basin 250 million years ago.

1980
- First year of production of the Cluff Lake uranium mine in Canada.

1980
- French Prime Minister R. Barre signs an order authorizing upgrades to the La Hague reprocessing plant at the conclusion of a public usefulness inquiry process.

1981
- Discovery of the Cigar Lake uranium deposit in Canada. Cigar Lake is the world's second largest high-grade ore deposit, with proven and probable reserves of 230 million pounds U_3O_8.

1989
- Startup of the 800 MT per year UP3 spent fuel reprocessing plant at La Hague.

1990
- Construction of the Melox MOX fuel fabrication plant begins at the Marcoule site.

1992
- COGEMA buys out Comurhex (uranium conversion plant) and becomes the only company in the world to cover every aspect of the nuclear fuel cycle: mining, chemistry, conversion, enrichment, fuel fabrication and spent fuel reprocessing.

1994
- Startup of the UP2-800 plant, bringing the group's spent fuel reprocessing capacity to 1,700 MT per year.

1995
- Commercial startup of MOX fabrication (plutonium-recycling fuel) for European utilities.

1999
- Authorization to increase capacity at the Melox plant and start of first MOX fuel fabrication for Japanese customers.

1999
- In November, COGEMA becomes the largest commercial shareholder of Framatome with a 34% equity interest. ''Nuclear fuel excluding MOX fabrication'' operations are transferred to Framatome.

4.1.4 Framatome SA milestones

1958
- Framatome is formed

1961-1967
- Construction of first reactor: Chooz A, a 300 MW pressurized water reactor (PWR).

1970-1992
- Construction of 54 nuclear steam supply systems (NSSS) for the French nuclear power program's 900 MW and 1300 MW PWRs.

1970-1994
- Construction of 9 NSSS for PWRs in Belgium, South Africa, South Korea and China.

1984-2000
- Construction of 4 NSSS for the N4 PWR in France.

1988-1993

- In July 1988, buy-out of English firm Jupiter, the first acquisition in the connectors field. The purchase of U.S. firm Burndy and French firm Souriau in January 1989 lead to the formation of the FCI group. The three acquisitions immediately place FCI among the world leaders in the connectors sector.
- Formation of FCI:
  Jupiter (1988), Burndy (1989), Souriau (1989)
  Schmid (1991)
  Daut + Rietz (1992)
  Connectors Pontarlier (1993)
  O/E/N Connectors (1993)

1989

- Acquisition of the Nuclear Technologies division of Babcock & Wilcox in the United States.

1993-1994

- FCI expands:
  Harbor Electronics (1993)
  Socket Express (1994)
  MoldCon/Tri-Tech (1994)
  AT&T Connectors (1994)
  McKenzie Technologies (1994)

1995

- China places order for the two Ling Ao power station units.

1995-1998

- FCI strengthens its positions:
  Specialty Connectors (1995)
  Interlock (1996)
  Ericsson Connectors (1996)
  Canstar (1997)
  FCI Il Heung (1997)
  Malico Saae (1997)
  Nortel Connectors (1997)
  Berg Electronics (1998)
  Kinloch (1998)

2000

- Civaux 2, the last power plant to be built in France, comes on line.

February 2001

- Framatome and Siemens seal a July 2000 agreement to merge their nuclear operations into Framatome-ANP. Siemens transfers its operations to Framatome-ANP in two stages: German operations are transferred on January 31, 2001, and U.S. operations are transferred on March 19, 2001. This equity contribution is 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 and Services divisions in 2001. This contribution positions AREVA:
  - as the sole supplier of next-generation EPR reactors;
  - as number one worldwide for fuel supply;
  - as a strong presence in Europe and the United States.

  Framatome ANP SAS is managed by a president appointed by a six-member board of directors serving five-year terms of office.

  In principle, decisions are made by a simple majority except for those involving revisions to the bylaws, which are made by a two-thirds majority. A ''put and call'' clause in the shareholders' agreement offers a solution in case of deadlock.

4.2 Overview of the group

4.2.1 Key figures

millions of euros	1998	1999	2000	2001	**2002**
Sales	7 845	9 517	9 041	8 902	8 265
• *Nuclear Power*	*6 441*	*7 375*	*6 213*	*6 826*	*6 576*
• *Connectors*	*1 201*	*1 951*	*2 645*	*1 966*	*1 560*
• *Other*	*203*	*191*	*183*	*111*	*129*
% of sales outside France	47.2%	47.6%	56.2%	52.9%	60.8%
Operating income	391	502	605	122	180
Consolidated net income	288	500	463	(587)	240
Shareholders' equity	3 270	3 914	4 170	4 187	4 020
Earnings per share	9.79	16.98	15.73	(18.65)	6.77
Workforce at year end	50 481	53 694	51 811	49 860	50 147

4.2.2 The group's businesses

Nuclear Power business

The energy situation

In 2000, worldwide electric power generation, which is itself only one fourth of all energy produced, was around 15,000 TWh. Of this amount, nuclear power generated 17%, or 2,500 TWh. Studies by the International Energy Agency (IEA) indicate that the demand for electricity should rise by more than 80% from 2000 to 2020.

In 2001, installed nuclear generating capacity consisted of 446 operating reactors in countries with 64% of the world's population. In Europe, where 151 reactors are in operation, nuclear power generates 35% of the electricity. In the United States, which has 104 units, 20% is nuclear-generated. On both continents, the nuclear power plant construction programs begun in the 1960s and bolstered in the 1970s following the oil crisis, which prompted new awareness of how vital energy self-sufficiency is, are now completed. France's last power plant, Civaux 2, was delivered in 2000.

In Asia, meanwhile, 21 reactors are under construction and 23 are planned.

A few fundamental concepts to understand 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 and used in the core of nuclear power plants, where they produce energy in the form of heat.

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

A chemical element may present variations as to the number of neutrons that make up the nucleus of its atoms. 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 uranium's natural state, the proportion of uranium 235 to uranium 238 is invariably 0.7%. The nucleus of uranium 235 consists of 92 protons but only 143 neutrons, unlike the 146 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 hit by a neutron, the atom splits into two smaller atoms, ejecting neutrons and releasing energy: this is known as the fission process.

Fission is a reaction that produces a large amount of energy. Each of the neutrons ejected during fission of a uranium 235 atom can bump into another atom, causing it to fission and to release more energy and eject more neutrons, which will in turn bump into other atoms: this is the ''chain reaction''. Because of its neutron reactivity,

uranium 235, even in small proportions, can sustain the chain reaction. The reaction ripples at very high speed from one atom to the next, increasing the cumulative amount of energy considerably: the fission reaction of one kilogram of uranium 235 can supply as much energy as is produced by burning ten metric tons of oil.

Both phenomena — nuclear fission and the chain reaction — are used in a nuclear power reactor. For use in a light water reactor, uranium is slightly enriched in uranium 235 (about 4%). The energy released by this fuel during fission 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 is the driving force for 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 meeting stringent nuclear safety requirements. The three main components needed to sustain the fission process in the reactor core and to maintain, control and cool the reactor are fuel, a moderator and 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 steam generators) and a cooling source to remove 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 in the process and dissipating residual heat.

Moderator and coolant

During the fission process, neutrons are released at a very high velocity. Bumping into lighter atoms slows them, making them interact much more with uranium 235 atoms. So-called ''thermal neutron'' (slow) reactors take advantage of this characteristic, which reduces the uranium 235 enrichment level required to sustain 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 immersed in pressurized water from the primary cooling system. The fission reaction heats the water. This heat is transferred to water in the secondary cooling system via heat exchangers, converting the water 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 turbogenerator.

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 comprises the nuclear steam supply system enclosed in a concrete building capable of containing hazardous products in the event of a leak (the containment building). The majority of the reactors in the French nuclear power program are PWRs, as is the case around the globe.

Other reactor types

Boiling water reactors (BWR) are generally comparable to pressurized water reactors, the main difference being the fact that the water is boiling when it comes into contact with the fuel and the primary and secondary cooling systems are not separate.

Heavy water reactors are prevalent in Canada, where the Candu reactor was developed. The moderator in this case is heavy water. It can also be used as a coolant, heavy water having properties similar to those of light water.

Fast breeder reactors use plutonium fuel. The coolant is liquid sodium. These reactors can operate in two different modes: in breeder mode, i.e., producing more fissile material than they consume, or in burner mode, i.e., consuming fissile materials (plutonium). Moreover, their characteristics make them especially suited for burning radioactive waste. Except when used as an incinerator, this reactor type could significantly boost recovery of the energy content of uranium resources.

AREVA's businesses

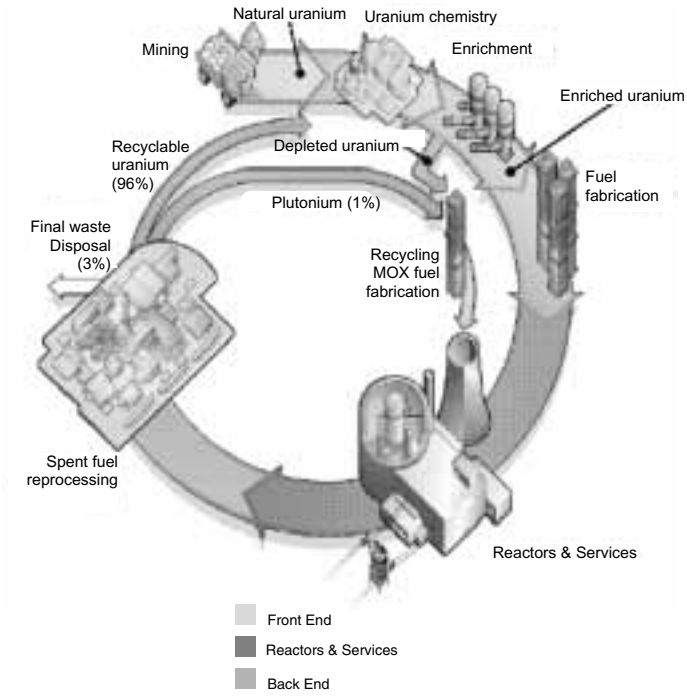
The AREVA group is active in every aspect of the nuclear fuel cycle. In the *Front End* of the fuel cycle, it supplies uranium ore, converts it and enriches it to fabricate the fuel assemblies that constitute the reactor core. In the *Reactors and Services* division, the group has expertise in all of the processes and technologies needed for the design, construction, maintenance and continuing performance improvement of reactors. Pressurized water reactors (PWRs) and

boiling water reactors (BWRs) are its primary markets. In the *Back End* of the fuel cycle, AREVA specializes in spent fuel reprocessing, recovering valuable energy materials for recycling into MOX fuel.

It is important to note that:

- AREVA does not own the materials it converts or processes in its facilities and plants, with the exception of the uranium it sells to utility customers after it is mined.
- AREVA does not own the final waste resulting from the reprocessing of its customers' spent fuel.
- AREVA neither owns nor operates commercial nuclear power plants.
- AREVA is primarily a supplier of services.

AREVA Nuclear Activities Diagram



The "Front End" division is active in:

- exploration for uranium deposits, mining and uranium ore processing (concentration);
- uranium conversion into a chemical form that is suitable for enrichment;
- enrichment in uranium 235; and
- fuel assembly fabrication.

The "Reactors and Services" division is active in:

- the design and construction of nuclear power plants;
- the supply of nuclear power plant equipment during maintenance and retrofitting operations;
- the supply of reactor services, particularly during scheduled outages.

The "Back End" division is active in:

- spent fuel reprocessing;(1)
- recycling of reusable materials;(1)
- waste packaging and storage; and
- transportation and logistics.

Each of the processing steps in the nuclear fuel cycle is highly specialized and constitutes an industry unto itself, with its own

(1) When the utility that owns the fuel opts for a so-called ''closed'' cycle

processes, technologies and business models. The AREVA group has set up an industrial organization consistent with these different business sectors, and its know-how in each is unparalleled on an international level. AREVA is the world leader in civilian nuclear power, as shown on the following table:

AREVA's worldwide competitive position

		2002 Market	CAMECO*	URENCO	USEC*	AREVA	BNFL WESTINGHOUSE	MINATOM Group	General Electric*	Other
FRONT END	Mining / Natural uranium	66,700 t	20%			20%		15%		45%
	Conversion / chemistry	62,550 t	20%			25%	5% (Shot down in 2006)	20%		30%
	Enrichment	37.3 MUTS**		15%	30% ***	25%	BNFL shareholder of URENCO	25% ****		5%
	Natural uranium fuel (UO2)	6,700 t				35%	25%	10%	15%	15%
	Reactors & Services	350 GWe				20%	20%	15%	15%	30%
BACK END	Reprocessing (t. processed)	1,850 t				60%	35%	5%		JNFL in time
	Recycling & MOX	180 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

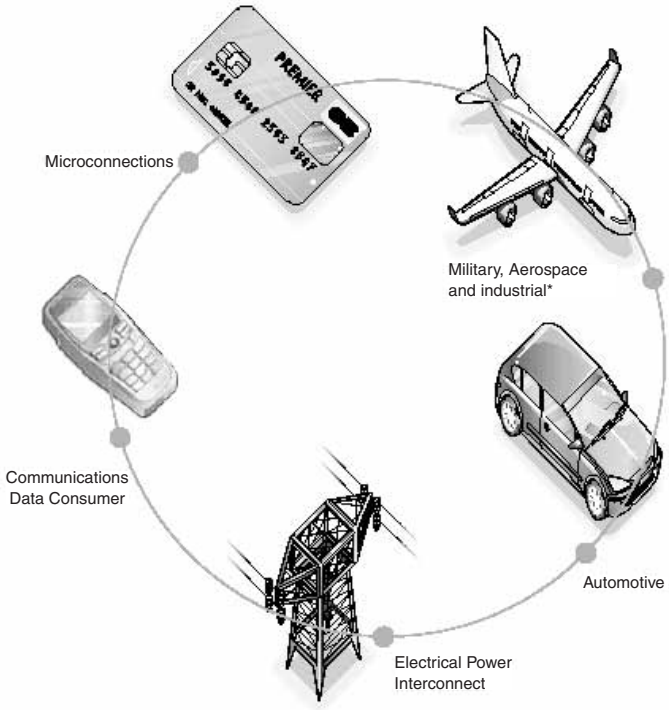
The Connectors business

The Connectors business is defined as all of the processes and technologies needed for the design and manufacturing of passive components called ''connectors''. Connectors transmit electrical or optical signals from a cable to electrical or electronic equipment, or from one printed circuit board to another.

At the heart of connectors are the metal contacts that transmit the signals. The contact may be connected to the end of an electrical wire, usually copper, or to a circuit board of electronic components. The contacts of a connector are separated from each other by plastic insulation, which also holds them in place. The unit consisting of these metal contacts together with their insulation is known as the connector.

Through its subsidiary FCI, AREVA is the world's third largest designer and manufacturer of connectors for information technology, telecommunications, consumer electronics, automobile, electric power, defense, aviation and smart card applications.

Diagram of AREVA's Connectors Business



* Operations sold on April 30, 2003

FCI has nearly 50 production sites in 19 countries on every continent, and its products are distributed in 80 countries. The group converts 12,000 metric tons (MT) of metals, especially copper-clad metals, and 15,000 MT of plastic resins every year, producing several billion electrical contacts and several hundred million boxes.

Equity interests

AREVA owns a portfolio of equity interests in publicly traded as well as private companies accounted for by the equity method. STMicroelectronics is the most significant of these equity interests.

Principal equity interests in publicly traded companies*

	STMICROELECTRONICS	ERAMET	ASSYSTEM
Equity interest	**11%**	**26%**	**39%**
Operations	For the third straight year, STMicroelectronics is one of the top five companies worldwide for semi-conductors	Eramet is a mining and metallurgy group that produces nonferrous metals, high-performance specialty steels and nickel alloys. Eramet had sales of €2,296M in 2002.	Assystem is a market leader in high value added services to industry with 2002 sales of €215M.
Stock exchange	• Euronext Paris • New York Stock Exchange • Milan	Euronext Paris	Euronext Paris
Market capitalization	**€16,820M** (€32,362M in 2001)	**€527M** (€867M in 2001)	**€113M** (€148M in 2001)

* The group has equity interests of lesser value in a few private companies.

Source: AREVA

Shareholder agreements tied to these equity interests are:

- **Eramet**

  AREVA's equity interest in Eramet is governed by a shareholders' agreement between Sorame and Ceir, on one hand, and AREVA on the other. This agreement was concluded on June 17, 1999, and will remain in effect through June 30, 2006. It will then automatically renew in consecutive one-year installments, unless terminated with one-year advance notice delivered by registered mail with return receipt requested.

  On August 3, 1999, stock market authority CMF issued decision No. 199C1045 regarding this shareholders' agreement. This decision was supplemented by CMF decision No. 201C1140 dated September 12, 2001.

  The key provisions binding AREVA, Sorame and Ceir are as follows:

  – The shareholders' agreement allocates all fifteen seats of Eramet's board of directors. AREVA is allowed to appoint three persons to serve as directors, and to appoint two additional persons who are independent of AREVA and Eramet, based on their expertise.

  – AREVA may 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. AREVA's total equity interest in Eramet may not exceed 33.32% of the company's share capital at any time unless AREVA exercises its right of first refusal or it share-purchase option under the shareholders' agreement.

  – Each party grants to the other party a right of first refusal on any sale of a minimum of 25,000 Eramet shares, or on any shares that one or the other party may decide to sell in one or more transactions over a twelve-month period for a total price of more than €7.5M.

- **STMicroelectronics**

  A shareholders' agreement among AREVA, France Télécom, and Finmeccanica governs these parties' indirect interests in STMicroelectronics through ST Holding II BV. This agreement, concluded on December 10, 2001, establishes a series of rules applicable to the three parties.

  AREVA, Finmeccanica, and France Télécom have decided to modify their respective equity interests and shareholder relations in ST Holding II BV to improve the liquidity of their indirect investment in STMicroelectronics while preserving a stable and balanced equity interest that promotes the company's growth and indepen-

dence. Accordingly, the parties have agreed on the following main provisions:

– Proceeds from the sale of ordinary STMicroelectronics shares will be distributed equally to France Télécom and Finmeccanica, for sales representing up to a total of 50 million shares. Proceeds from sales of any additional shares will be distributed to these parties in the ratio of 74%/26%.

– The following corporate governance principles will apply to ST Holding during a two-year period starting on December 10, 2001:

  (i) AREVA, Finmeccanica and France Télécom have agreed to maintain their respective investments in STMicroelectronics exclusively through ST Holding.

  (ii) All decisions will be made jointly by Finmeccanica and FT1CI, irrespective of their individual equity interests in ST Holding.

  (iii) All corporate governance rules, as well as the minimum holding requirement applicable to preferred STMicroelectronics shares, shall remain in effect.

  (iv) After the expiration of a 180-day standby period, France Télécom and Finmeccanica shall be released of the obligation not to sell their STMicroelectronics shares, subject to the restrictions and conditions stated in the previous paragraph.

– After expiration of the two-year period mentioned above, each ST Holding shareholder will have the right, for a three-month period, to increase its participating interest to the same level as the other shareholder by acquiring STMicroelectronics shares on the market. ST Holding control shall automatically transfer to any shareholder whose equity interest exceeds 52.5%, subject to certain rights retained by the minority shareholder. Each shareholder has the option of either:

  (i) remaining a ST Holding shareholder, in which case ST Holding will be managed jointly as long as the ratio of the shareholders' equity interests remains 47.5%/52.5%, taking into account any STMicroelectronics shares acquired (through ST Holding) to maintain this ratio; or

  (ii) selling its indirect equity interest in STMicroelectronics without restriction on the market, in a non-disruptive manner, subject to the other shareholder's preemptive right.

– The parties agreed that, subject to applicable laws and regulatory authorizations, the minimum percentage of STMicroelectronics shares to be held by ST Holding will be reduced from 33% to 30% so that ST Holding may acquire preferred shares and continue to benefit from its option.

• **FT1CI**

The FT1CI shareholders agreement between AREVA and France Télécom dated December 28, 2001 is the product of a shareholders agreement for STMicroelectronics between AREVA, France Télécom and Finmeccanica that was renegotiated in early December 2001. The FT1CI agreement establishes:

- terms and conditions for distributing proceeds from the sale of STMicroelectronics shares by ST Holding II BV to one or the other shareholder of FT1CI;
- rules of corporate governance pertinent to changes in the respective participating interests of FT1CI shareholders;
- rights and obligations of FT1CI shareholders in each instance of the sale of STMicroelectronics shares under the STMicroelectronics shareholders agreement between AREVA, France Télécom and Finmeccanica.

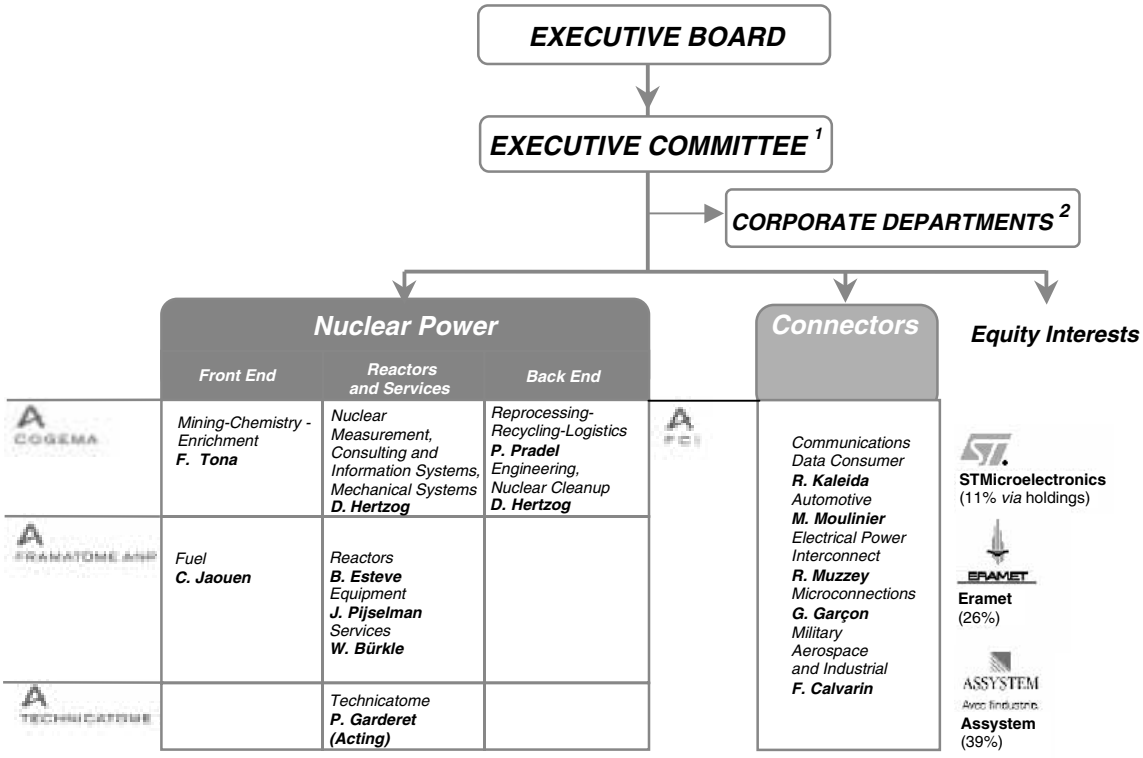
The agreement provides for the preservation of equal Franco-Italian control, independent of economic interests in STMicroelectronics Holding NV resulting from sales of shares. It also allows anti-takeover provisions to be preserved by issuing golden shares to STMicroelectronics. Lastly, the agreement stipulates that the shareholders are free to sell their participating interest two years after the date of the agreement, subject to certain provisions (preemptive right, joint sale, no sale to a competitor, etc.).

4.2.3 Operational organization and business reporting

The consolidated AREVA group currently includes four major companies: COGEMA, Framatome ANP, Technicatome and FCI, in which the group holds 100%, 66%, 84% and 100% respectively.

These companies have been organized into twenty-one business units, which were themselves organized into four divisions — Front End, Reactors and Services, Back End and Connectors — within the group's core businesses of Nuclear Power and Connectors, giving them greater accountability consistent with a value chain analysis.

The organization of the group is described in the figure below.



1. The AREVA Executive Committee is composed of:

- **Anne Lauvergeon**
  Chairman of the AREVA Executive Board,
  Chairman and CEO of COGEMA
- **Gérald Arbola**
  Member of the Executive Board,
  Chief Financial Officer of AREVA
- **Didier Benedetti**
  Member of the Executive Board,
  Chief Operating Officer of COGEMA
- **Jean-Lucien Lamy**
  Member of the Executive Board,
  Chairman and CEO of FCI
- **Vincent Maurel**
  Member of the Executive Board,
  President and CEO of Framatome ANP
- **Pierre Coursier**
  Director of AREVA Human Resources

2. The Corporate Departments are:

- Finance: **Gérald Arbola**
- Human Resources: **Pierre Coursier**
- Sustainable Development and Continuous Progress: **Yves Coupin**
- Legal Affairs: **Bernard de Gouttes**
- Strategy: **Philippe Knoche**
- Communications: **Jacques-Emmanuel Saulnier**
- International and Marketing: **Jean-Jacques Gautrot**
- Emerging Technologies: **Philippe Garderet**
- Information Systems: **Serge Lafont**

Ongoing changes

As a natural consequence of operations leading to the creation of the AREVA group, described in paragraph 4.1, and to optimize the group thus created, a group-wide, cross-cutting review of all support functions was performed in 2002, the first full year of the group's existence. The review looked at finance and accounting, human resources management and personnel administration, marketing and

sales, research and development, legal affairs, communications, strategy, purchasing and corporate services. The goal of the project in each of these fields was to define an organization that harvests synergies among the group's various entities, optimizes operations qualitatively and quantitatively, and achieves savings in committed costs. As a result of this review, changes were made to the organization of each support function in early 2003 along two main lines:

- Functional units were strengthened by setting up a group-wide matrix organization in which reporting lines are both functional and hierarchical.
- Shared services were created by combining certain functions or skills into one organizational unit and making them available to every entity in the group. These include, for example, some personnel administration and communications support functions (publications, multimedia, etc.), special legal and tax expertise, and cash management.

The review also provided the opportunity to recommend a common set of standards and procedures and to identify best practices to be implemented throughout the group.

Business reporting

The group provides financial data at the business, division and business unit level. Leading financial indicators are published at the division level (see paragraph 5.1.5). At the business unit level, only sales figures and the number of employees are provided.

Financial data is not provided on a company by company basis.

4.3 Message from Anne Lauvergeon, Chairman of the Executive Board

"2002: A group poised for action

The AREVA group had its first full year of operation in 2002, having been created in early September 2001. And we have covered a lot of ground since then. We have evolved from a compartmentalized financial holding company into an industrial organization structured around two businesses: Nuclear Power and Connectors. Our companies have set up shared business processes and decision-making systems. We are now organized for a more pragmatic approach to our markets and our customers.

The new structure has resulted in more efficient global strategies. Maximizing utility while minimizing costs for all of our corporate functions, we have put in place an integration process based on the principle of subsidiarity. The goal is to provide the best possible support to our field operations. These drivers can only lead to a more effective and cohesive organization and foster a sense of belonging.

To a large extent, it is AREVA's employees who sped integration along. Being part of a strong, global, market leader that offers them a continuing stream of advancement opportunities is a strong motivator.

Record operating income from nuclear business

Our 2002 financial performance bears out AREVA's ability to achieve its goals. As we predicted, net income was back in the black in 2002, at €240 million. Significantly improved profitability in nuclear operations is to be credited: operating income was up, at €649 million, and operating margin was 9.9%, up 56% over the previous year. Since 2000, operating income from our nuclear business has gained more than 90%. Through greater productivity, new contracts and capitalizing on our synergies, we have been able to exceed our own performance objective of double-digit growth in operating income from nuclear business for the 2001 to 2004 period.

Internationally, the group grew organically by 12% in 2002. The operations of U.S. firm Duke Engineering & Services were integrated in April 2002, as those of Siemens and Canberra were in 2001, boosting total growth to 22%.

In the United States, where sales have doubled since 2000, the U.S. Department of Energy chose our technologies for its depleted uranium defluorination plant and, in partnership with Duke Energy and Stone & Webster, for a facility to turn surplus defense plutonium from the U.S. stockpile into fuel. On the utility side, we developed a new contracting mechanism called ''Alliancing'' in which our profits are linked to our performance. This appeals to our power plant customers, who have rewarded us with numerous equipment and service contracts.

In Asia, we are working closely with our Japanese partners at the Rokkasho Mura spent fuel reprocessing plant to provide operational startup support. Also, Japan Nuclear Fuel Ltd (JNFL) acquired our MOX fuel fabrication technology.

In China, the Ling Ao power plant, whose construction we completed in 2001, was connected to the electric grid several months ahead of schedule in 2002.

In France, at the end of 2002 we renewed our fuel supply contract with EDF through 2006, offering even greater flexibility and quality guarantees to this major customer. We also signed amendments to spent fuel reprocessing and recycling contracts with two German utilities.

Now we must sustain the momentum and bolster profitability levels. The vitality of the U.S. market, where power plant life extension is a standard practice, and in Asia, where many countries are bringing new power plants on line, should help us do so.

All forms of energy have a role to play in the future

Though Germany and Belgium have announced plans to phase out nuclear power, other countries are opting for nuclear generated electricity. Brazil, South Africa, the United States and Finland indicated in 2002 that they will strengthen their nuclear power programs, for environmental as well as for economic reasons.

Demand for energy, like it or not, will continue to grow, fueled by a combination of demographics, legitimate development needs in underprivileged regions, and life styles in industrialized countries.

An increasing number of nations are also committed to reducing their production of greenhouse gases. There is an obvious need to conserve energy, but clearly all forms of energy have a role to play in an optimum energy mix, whether due to availability, resource conservation, cost, access or environmental protection.

Nuclear power has a key role to play in energy diversification, and will slow the depletion of our planet's fossil resources.

Recovery plan for connectors begins to show results

The crisis in the telecommunications market severely impacted our Connectors business in 2002. The sector represents a large part of our sales. But profits grew elsewhere, particularly in the automotive sector.

Our restructuring plan is beginning to show results. Operating loss before restructuring expenses was trimmed by €44 million in 2002, a considerable feat in view of the fact that telecom sales shed another 21%.

This result shows the intensity with which we are tackling reorganization. The closures announced at sixteen sites since 2001 as well as cost reductions generated close to €250 million in savings in 2002. We also signed a memorandum of understanding with Axa Private Equity for the sale of our Military, Aerospace and Industrial division, where we lacked the necessary critical mass.

FCI held onto its number 3 rank worldwide in connectors last year. Despite a telecom market expected to remain lackluster at best in 2003, we will pursue and accelerate our efforts. We are holding fast to our goal: by the end of 2003, operating income from the Connectors business, before restructuring expenses, should no longer have a negative impact on the group's operating performance.

Sustainable Development: an integral part of our strategy

We believe in corporate accountability and environmental stewardship. These concepts are familiar to us because nuclear power, our main business, calls for us to implement sustainable development in all our operations.

In 2002, we set up a Sustainable Development Department to coordinate and harmonize our programs in this area. Our goals are to publish regularly a sustainable development report setting forth our key performance indicators, beginning in 2003, and to promote ever greater openness and dialogue with all stakeholders.

Our science and ethics committee met three times in full committee and four times in sub-committee. The committee is providing practical guidance as we develop our plans in these areas.

Group preparing to increase float

AREVA's operations, and its management systems, are in working order. We are poised for a major new milestone: increasing the number of publicly traded shares. This gives our employees the opportunity to share in the wealth they have helped to create by becoming shareholders in their company. We must be ready to move when the time is ripe and our shareholders decide upon a plan.

We have taken several steps to prepare for this event, including communications designed to bring the financial community's understanding of our operations to a new level.

Bringing in new shareholders will not only give us greater financial and operational flexibility. It will make us a major publicly traded industrial group with a diversified shareholder base, heightening our visibility and our ability to compete in U.S. and Asian markets.''

4.4 Front End division

Key data

(millions of euros)	2001	**2002**
Sales	2 733	2 560
Operating income	362	333
Workforce at year end	9 245 people	9 536 people

Overview

The Front End division includes AREVA's businesses in the front end of the nuclear power generation cycle: uranium mining, concentration, conversion and enrichment; and nuclear fuel fabrication. These operations require a high level of expertise to achieve the absolute quality demanded by electric utilities around the globe. Our utility customers retain ownership of their materials throughout the entire chain of operations. The uranium concentrates they buy from AREVA undergo a series of processing steps culminating in nuclear fuel. AREVA is the only group in the world to operate in every one of these areas. Our goal is to boost international growth while achieving ever-higher levels of performance in a highly competitive market.

4.4.1 Mining business unit

Key data

(millions of euros)	2001	**2002**
Sales	489	536
Workforce at year end	1 509 people	1 565 people

Businesses

The Mining business unit has four main areas of expertise in addition to its trading operations: exploration, which employs geologists and geophysicists; mining; ore milling and processing; and reclamation following mine closure. Most of its employees are located in Africa, North America and Europe. A team of geologists and mining personnel is also based in Australia, where the company operates a gold mine, and in Kazakhstan, where a pilot plant produced its first uranium concentrates in 2002.

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, the discovery of large gold deposits and the soft uranium market prompted diversification into this mineral. Similarities between gold and uranium substratum allow the use of comparable ore mining and milling techniques and enable geologist personnel to maintain their know-how. Also, gold is an easy metal to sell on spot and forward markets.

Mining operations have a long development and production cycle, starting with mineral exploration. Geologists use special geophysical and geochemical techniques in the early phase of exploration. Aerial geophysical techniques are also used to explore for uranium, making use of its radiation. This is followed by detailed groundwork to estimate deposit reserves, primarily by boring samples. The sampling grid is tightened in promising areas to calculate reserves more accurately and confirm mining feasibility, both technically and economically. 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 €50M per deposit. AREVA's uranium exploration budget is approximately €10M per year.

Mining operations may last from 10 to 50 years and are subject to very specific tax and legal regulations. Uranium ore is mined in both underground and open pit mines. The ore is crushed in an on-site or off-site processing plant and the uranium is leached from the crushed ore with an acid solution. The resulting uranyl sulfate liquor is precipitated to produce a dry uranium concentrate called yellow cake. This product is packaged and shipped to the conversion facility of the customer's choice.

Mining reclamation is an important phase in the mining process. To date, the group has spent €400M to dismantle mining facilities and restore nine mining sites in Canada, France, Gabon and the United States. After a mine closes, mining lands are reclaimed, reseeded and monitored for radiation for approximately ten years.

Market, competition and position

The worldwide demand for uranium is approximately 56,000 metric tons (MT) per year and has grown by only 3% over the last five-year period. Market prices of natural uranium have remained at historically low levels since 1997. Prices were stable in 2002 at $9.70 to $10.20 per pound. More than half of the world's natural uranium production, representing approximately 33,000 metric tons per year, is mined in Canada and Australia, followed by Africa and central Asia, as shown in the figure below. Russia currently has relatively few uranium resources. The United States, a prominent producer in the past, now supplies only 3% of the world's uranium.

Estimated worldwide uranium production by country in 2002 (36,000 MT)

Canada	11 600 MT	32.5%
Australia	6 870 MT	19%
Niger	3 076 MT	8.5%
Russia	3 000 MT	8.5%
Kazakhstan	2 490 MT	7%
Namibia	2 334 MT	6.5%
Uzbekistan	2 100 MT	6%
United States	900 MT	2.5%
South Africa	824 MT	2%
Other (Brazil, Romania, China, Tcheck Republic, Ukraine)	3 046 MT	8.5%

Source: AREVA

The production market has reorganized over the past few years, particularly in the United States, where many small producers with only a few hundred metric tons of annual production have disappeared. Today, four producers control more than 60% of the world's annual production, including AREVA, which has about 19% of the total. Cameco and Rio Tinto are the group's main competitors in this market segment.

World production satisfies a little over half of world demand. In fact, supply has outweighed demand in the natural uranium market for the past ten years, with secondary sources providing over 40% of the natural uranium consumed each year. These sources come from draw-downs of inventories held by electric utilities and nuclear fuel cycle companies, material recovered from dismantled nuclear weapons, and recycled uranium recovered by spent nuclear fuel reprocessing.

Estimated worldwide uranium production by producer in 2002 (36 000 MT)

AREVA	7 457 MT	20.5%
RioTinto, Namibia and Australia	6 126 MT	17%
CAMECO, Canada	6 105 MT	17%
Russia	3 000 MT	8%
Western Mining, Australia	2 452 MT	7%
Kazatomprom, Kazakhstan	2 400 MT	7%
Navoï MMC, Uzbekistan	2 100 MT	6%
Other (market economy countries)	4 160 MT	11.5%
Other (non/recent market economy countries)	2 180 MT	6%

Source: AREVA

Operations and key events during the year

AREVA's natural uranium production rose 3.3%, from 7,217 MT in 2001 to 7,457 MT in 2002, making it the world's leading uranium producer. The increased production reflects good operating performance at all of the company's mines, especially at the Cluff Lake mine in Canada for its final year of production before shut-down and site reclamation.

Gold production was 5.9 MT, up 26% from 2001. Increased production reflects the acquisition of Société des Mines d'Ity (SMI) in Côte d'Ivoire and startup of the White Foil mine in Western Australia.

Key events in 2002 are listed below.

France

- At the end of the first half of the year, all facilities were dismantled at Société des Mines de Jouac, a wholly owned company of COGEMA. Site reclamation entered its final phase and will be fully completed in 2003.
- An investigating judge reviewed an illegal dumping complaint filed against COGEMA in March 1999 by *Sources et Rivières du Limousin* [''Springs and Rivers of the Limousin''], an environmental group based in the Limousin region of France, when elevated levels of uranium were found in a dried-out lake in St. Pardoux, though no health impacts were claimed. COGEMA provided comprehensive evidence to the judge demonstrating that it had observed all laws and regulations.

Niger

- Somaïr, a company owned 63.4% by COGEMA, produced 1,066 MT of uranium in 2002. Cominak, 34% owned by COGEMA, produced 2,006 MT. Both operating companies made

continuous progress advances in production processes, resulting in ISO 14001 certification, uranate analysis method certification by conversion company Comurhex, the installation of new mill instrumentation and control systems, and improved safety and radiation protection performance.

- Launch of a new mineral exploration project dubbed ''Tagora''. The project's short-term goal is to increase local reserves near sites operated by Somaïr and Cominak. In the medium to long term, a second exploration phase will look for additional reserves at the regional level.

Canada

- COGEMA's wholly owned Cluff Lake mine was shut down permanently in May 2002. The mill was shut down at the end of 2002 after producing 1,621 MT of uranium during the year. Cluff Lake was COGEMA's oldest mining operation in Canada. Close to 24,000 MT of uranium were produced at the mine from 1980 to 2002. Preliminary reclamation work started in 2001 and additional reclamation tasks will be performed in phases as environmental permits are received.

Kazakhstan

- A pilot *in situ* leaching facility started up at the Muyunkum-south site in 2002 and performed as planned, producing a total of 73 MT of uranium.

Australia

- The first ingots of gold were poured at the White Foil gold mine. Production is expected to increase from one MT during the first year of operation to two MT per year by the second year of operation until the reserves are mined out. The White Foil deposit was discovered in 1996 and has economically recoverable reserves estimated at approximately 7 MT.

Russia

- COGEMA and the Russian Ministry of Natural Resources created Novaya Lekhta, a semi-public company through which COGEMA will conduct mineral exploration in potentially uranium-rich Russian provinces.

Germany / United States

- COGEMA purchased the participating interests of its German partners E.On, EnBW and Steag in Urangesellschaft (UG), a trading company with offices in Germany and the United States. The purchase makes it the sole owner of the company.

Côte d'Ivoire

- COGEMA acquired a 51% participating interest in Société des Mines d'Ity, with the remaining shares held by the Republic of Côte d'Ivoire, and became the new operator. The mine produces almost 2 MT of gold per year and has 13 MT of gold in proven reserves. In view of the civil unrest rocking the country, the mine and all COGEMA exploration activities in Côte d'Ivoire were placed on stand-by at the end of the year

Reserves and production sites

AREVA has a strong presence in Niger, where its share of uranium production amounted to 2,000 MT in 2002, and in Canada, where it produced more than 5,000 MT.

The group's reserves and production in 2002 as compared to 2001 are summarized in the following table.

AREVA share in MT of uranium concentrates

	Resources (including reserves)		Production	
Site	End 2002	End 2001	2002	2001
France				
SMJ	0	n/a	11	179
Lodève	0	n/a	7	5
Niger				
Cominak	21 000	12 500	909	901
Somaïr	23 700	24 750	1 066	1 007
Canada				
Cluff Lake	0	1 100	1 621	1 288
McClean	7 150	7 450	1 641	1 776
McArthur (Key Lake)	65 800	68 000	2 158	2 061
Midwest	7 700	7 700	0	0
Cigar Lake	49 900	49 900	0	0
Kazakhstan				
Katco	17 600	17 700	44	0
TOTAL	**192 850**	**189 100**	**7 457**	**7 217**

A comparison of gold reserves and production for 2001 and 2002 follows.

AREVA share in kilograms of gold

	Resources (including reserves)		Production	
Sites	End 2002	End 2001	2002	2001
France				
SMB	0	n/a	47	970
Côte d'Ivoire				
CMA	**1 350**	2 850	1 519	1 494
SMI	**7 350**	0	1 530	0
Sudan				
AMC	**11 580**	13 250	2 103	2 167
Australia				
White Foil	**3 040**	4 900	652	0
Frog's Leg	**11 850**	11 850	0	0
Total	**35 170**	**32 850**	**5 851**	**4 631**

AREVA's pre-mining research and exploration activities give preference to areas adjacent to its operating mines. Exploration programs are conducted over periods in excess of ten years.

In addition to the resources indicated above, AREVA has also access to 23,000 MT of uranium corresponding to its share of highly enriched uranium (HEU) from dismantled nuclear weapons(2).

AREVA's reserves and production are thus well diversified.

Customer relations

Electric utilities worldwide are the end-users of the Mining business unit's uranium, with EDF representing its single largest customer and Asian customers making up the second pillar. The business unit pursued its marketing efforts in the United States, a strategic market for the group, where it has won several contracts.

The business unit has a backlog of orders totaling more than 50,000 MT, or close to seven years of production. This backlog includes long-term contracts, some extending for more than ten years and most of which were negotiated on a firm price basis.

Sustainable development and environmental protection

Environmental protection is an ongoing, priority objective for all of the business unit's operations. Receptor environments — air, water, soil, sediments, bio-indicators and the food chain — are carefully monitored. Results of sampling and analysis attest to the business unit's compliance with applicable regulations.

Over the past four years, the various entities of the Mining business unit have been working to establish an environmental management system incorporating continuous progress initiatives for controlling environmental impacts. Three additional sites were certified under ISO 14001 in 2002.

In accordance with AREVA's policy of identifying and sharing best practices throughout the group, a special effort was made in 2002 to improve performance in the area of effluent releases and to minimize their impact on the environment.

Suppliers and raw materials

The group's mining operations are conducted in remote areas and thus require careful procurement planning.

Critical supplies include chemical reagents and gasoline for mining equipment and vehicles.

In most instances, AREVA's mines are operated in shifts 24 hours a day. All equipment, supplies, utilities and services must be procured at the best available price, quality and delivery schedule. Core sampling is usually subcontracted. Open pit mining and ore milling and processing may also be subcontracted, particularly in the case of gold operations.

Research and development

As part of AREVA's overall R&D programs presented in section 4.4, and given current market conditions, the Mining business unit's R&D efforts focused on new exploration subjects as well as on improving ore processing techniques and effluent quality in 2002.

Outlook and development goals

Capital spending decisions are pending in Kazakhstan and Cigar Lake, Canada. In Australia, production should begin at the group's second gold mine.

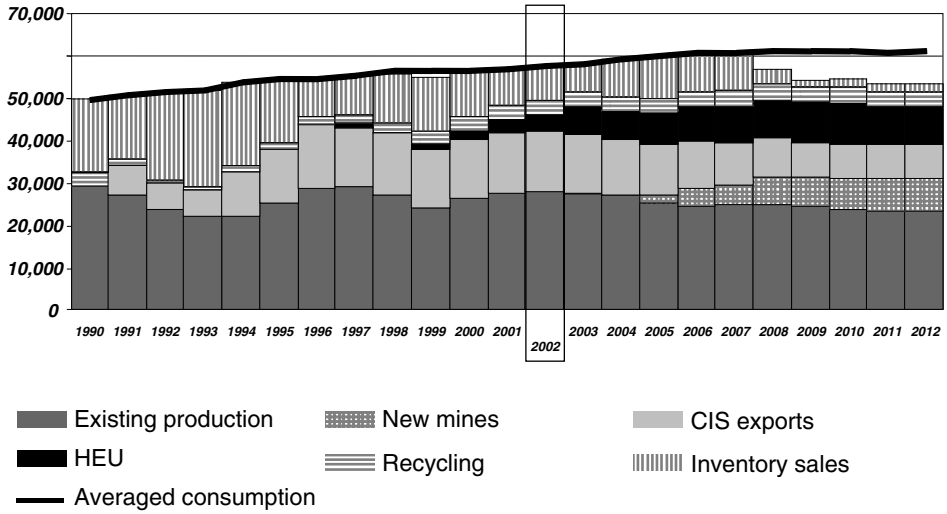
The Mining business unit is poised to take advantage of all business development and gold production opportunities.

Over the past ten years, production has exceeded demand in the natural uranium market, with secondary sources of supply covering close to 50% of all natural uranium requirements. These secondary sources include draw-downs of electric utility and nuclear fuel cycle company inventories, as well as material recovered from dismantled nuclear weapons.

Prices have been depressed since 1997, but remained stable in 2002 at $9.70 to $10.20 per pound. The price of uranium was $10.20 at end-December 2002.

(2) Under the START Agreements, the United States has agreed to market separative work units (SWU) contained in the HEU from dismantled weapons (see Enrichment business unit), while a team including AREVA will acquire the natural uranium component (UF6). This second commitment runs through 2013.

Estimated worldwide uranium supply and consumption (in MT)



Source: AREVA

Through 2013, AREVA will acquire a portion of the natural uranium hexafluoride (UF6) resulting from dilution of defense HEU, along with two other operators. This resource gives AREVA the equivalent of a mine with 2,000 MT per year of production, for a total supply of 9,000 MT per year.

4.4.2 Chemistry business unit

Key data

(millions of euros)	2001	**2002**
Sales	195	173
Workforce at year end	1 560 people	1 584 people

Businesses

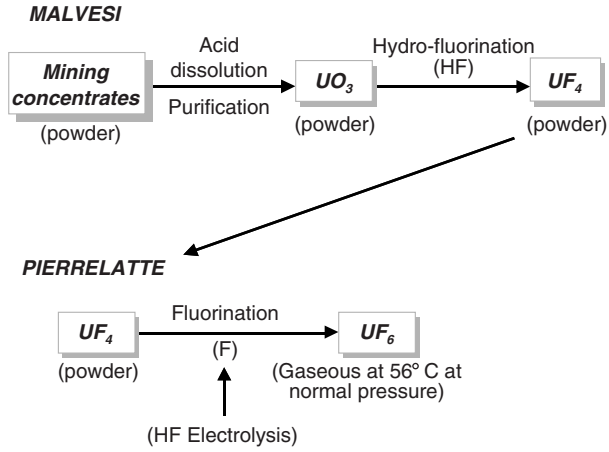
Natural uranium conversion

The Chemistry business unit derives most of its revenue from uranium conversion services. Conversion is the process by which uranium concentrates received from the mine are converted into uranium hexafluoride (UF6). Uranium enrichment, the necessary next step in nuclear fuel fabrication, requires uranium in the form of UF6 as feed material for all types of enrichment technologies.

Uranium concentrates shipped from the mines for conversion are usually owned by an electric utility. Conversion is a two-stage process. In the first stage, the uranium is converted into uranium tetrafluoride (UF4). This involves dissolving the mine concentrates with acid, then purifying, precipitating and calcining them to produce UO3 powder. The powder is fluorinated with aqueous hydrofluoric acid (HF), which converts it into uranium tetrafluoride powder (UF4), a solid compound that has the appearance of green granules. These operations are all performed in the group's Comurhex plant in Malvési, near Narbonne, France.

In the second stage, the UF4 is converted into uranium hexafluoride (UF6) through fluorination. UF6 is a solid compound that becomes a gas when heated at a relatively low temperature. The fluorine used in this process is produced through electrolysis of hydrofluoric acid. All of these operations are performed in the group's Comurhex facilities in Pierrelatte, France.

Uranium conversion process



Source: AREVA

The business unit's uranium fluorination know-how has been used for non-nuclear applications as well. In fact, Comurhex has developed a whole range of fluorinated products: tungsten hexafluoride is used in many modern communication tools, from cell phones to microchips to global positioning systems; fluorine-nitrogen products are used in

the automobile industry to treat plastics and to seal gasoline tanks; chlorine trifluoride is used in the microprocessor industry and to clean gaseous diffusion enrichment barriers. These operations have made the group the largest fluorine producer in Europe and the second largest in the world.

Uranium hexafluoride (UF6) stabilization through defluorination

The uranium enrichment process (see Enrichment business unit) generates depleted uranium hexafluoride or UF6 that can be converted into uranium oxide, a stable, non-soluble and non-corrosive form of uranium suitable for safe long-term storage pending reuse. The COGEMA-Pierrelatte plant is the only facility in the world that can convert depleted UF6 into oxide on an industrial scale. This process generates ultra-pure hydrofluoric acid (70%) that is sold to the chemical industry.

Recycling of reprocessed uranium

Nuclear fuel is unloaded after three or four years in the reactor, but it still contains 96% uranium by weight. The uranium is recovered through reprocessing in a plant such as the COGEMA-La Hague plant (see Reprocessing 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 are loaded with fuel made with reprocessed uranium.

Dismantling

Under contract to the Commissariat à l'Energie Atomique (CEA), the COGEMA-Pierrelatte site is dismantling and cleaning up facilities that produced highly enriched uranium for French defense programs until 1996. AREVA developed proprietary technologies to dismantle these facilities.

Production capabilities

The Chemistry business unit operates through two companies, Cogema and Comurhex, and four plants.

- Comurhex produces UF4 at the Malvési plant, which employs 260 people. The plant's five furnaces operate simultaneously.
- Comurhex produces UF6 at the Pierrelatte plant, which employs 345 people. Three flame reactors are used for production.
- COGEMA defluorinates depleted uranium at its Pierrelatte plant, which employs 900 people. The plant has four production lines.
- Uranyl nitrate is converted in three Pierrelatte plants, two belonging to COGEMA and one to Comurhex.
- COGEMA recycles lithium at its Miramas plant, which employs 50 people.
- COGEMA operates several storage facilities for raw materials, finished products and recyclable materials at its various plants.

The business unit's production capacities include 13,000 MT of UF6 conversion, 13,000 MT of defluorination, 2,800 MT of denitration and 80 MT of fluorinated products for non-nuclear industries.

Market, competition and position

The demand for conversion services in market economy countries was about 52,000 MT in 2002, including 18,000 MT in Europe, 20,000 MT in North America and 14,000 MT in Asia.

Over the last 10 years, conversion prices followed a pattern similar to that of natural uranium. The spot market price reported at year-end 2000 and 2001 was approximately $2.50 per kilogram of uranium in UF6, reflecting returns of UF6 inventories held by U.S. enrichment company USEC when it was privatized (approximately 20,000 MT) and the availability of highly enriched uranium from dismantled weapons. No company is able to cover its uranium conversion costs at this abnormally low price. In 2002, the market returned to normal price levels of $5 to $6 per kilogram of uranium in UF6, such as recorded in the early nineties.

With almost 13,000 MT converted in 2002, AREVA has become the world's largest provider of conversion services. It main competitors, Cameco in Canada and ConverDyn in the United States, each have similar production capacities (about 12,500 MT/year[3] and 14,000 MT/year[4] respectively). AREVA's only European competitor is BNFL, a British company with approximately 6,000 MT of capacity. BNFL has announced plans to withdraw from the market by 2006. Russia's Minatom has significant production capacities that are currently under-employed for technical and geographical reasons. These facilities are essentially dedicated to domestic Russian requirements, although a small portion of Minatom's production is exported.

Finally, AREVA sees in its ultra-pure fluorinated compounds for the electronics, automobile, glass manufacturing and other industries an opportunity for diversification with good growth potential.

Operations and key events during the year

The business unit's marketing efforts met with success in 2002 with the signature of several important contracts, including an order to defluorinate depleted UF6 for a European enrichment company during the 2002-2009 period. Negotiations to secure major new conversion and recycling contracts are ongoing.

(3) Source: Cameco

(4) AREVA estimate

In July 2002, the company started cleanup work in uranium facilities used to produce materials for French defense programs.

Customer relations

The Chemistry business unit has over thirty conversion customers around the globe, including most of the world's major nuclear utilities.

Firm price sales agreements usually cover a period of 3 to 5 years.

In the fluorinated compounds sector, AREVA's two main customers supply utilities to industry. Sales agreements cover a shorter period of time and deliveries are very sensitive to market conditions, particularly in the electronics industry.

Sustainable development and environmental protection

All of the Chemistry business unit's plants have embarked on sustainable development and continuous progress initiatives to achieve excellence in environmental performance. To this end, a network of environmental liaison representatives, dedicated organizational resources, training programs, action plans, reporting systems and progress reports have been in place for several years. The objective is to minimize our environmental impacts and to exceed legislative and regulatory requirements in this field whenever possible. Another objective is to instill an ever-present culture of concern for environmental protection in our employees and to respect the right to know of all our stakeholders by communicating candidly.

Both Comurhex plants were certified under ISO 14000 in 2001. Both COGEMA uranium chemistry facilities are working on achieving certification in the 2003-2004 time frame. The business unit's nuclear fuel cycle operations were incorporated into a uranium life cycle study that identified improvement targets for 2003, particularly with respect to releases of greenhouse gases and nitrates into the environment.

Suppliers and raw materials

Conversion is a service provided to electric utility customers that involves the conversion of raw materials, namely uranium concentrates. Operating supplies therefore represent a small percentage of the production cost. These supplies include chemicals, fluids and energy. Critical chemicals, including hydrofluoric acid, nitric acid and ammonia, are always procured from at least two suppliers.

Outlook and development goals

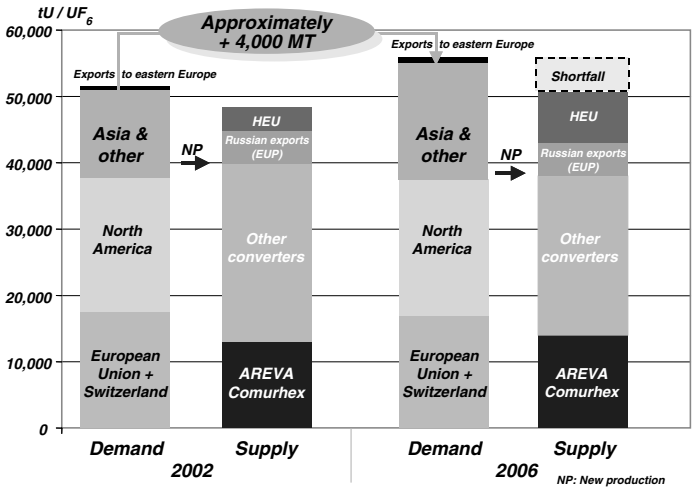
In the short term, in a market where demand currently outstrips supply, the Chemistry business unit expects a favorable impact on its bottom line from rising conversion prices.

Over the longer term (around 2006, see figure below), the worldwide conversion market will be reshaped by the withdrawal of BNFL, Europe's second largest converter, with 6,000 MT of capacity. AREVA in Europe and ConverDyn and Cameco in North America will then be the last three converters in the market economy world.

Russian exports are expected to remain stable. Programs to recover highly enriched uranium from dismantled weapons will generate a growing quantity of material, but this source of supply will remain modest compared with the world total.

Worldwide requirements should reach 56,000 MT in 2006, a 4,000 MT increase over 2002. Prices should logically rise as demand increases and production capacity decreases when BNFL leaves the market.

Status and outlook of supply and demand for uranium conversion services in market economy countries



Source: AREVA

4.4.3 Enrichment business unit

Key data

(millions of euros)	2001	**2002**
Sales	826	662
Workforce at year end	1 581 people	1 516 people

Business

The Enrichment business unit enriches natural uranium. The converter delivers natural uranium to the enrichment facility in the form of UF6, a chemical compound of uranium and fluorine that is gaseous at a temperature of 56°C and includes a small quantity (0.7%) of the fissile isotope of uranium (U^{235}) needed to make nuclear fuel for light water reactors. Enrichment is the process by which the U^{235} content of UF6 is raised from 0.7% to 3 to 5%, thus enabling nuclear fission in the reactor.

Two enrichment processes are currently in use on an industrial scale: centrifuge and gaseous diffusion. AREVA's enrichment plant uses the gaseous diffusion process.

The gaseous diffusion process takes advantage of differences in the atomic weights of U^{235} and U^{238} to separate these two isotopes in the UF6. The molecules in the gaseous UF6 are in perpetual motion, hitting the walls of whatever encloses them. Since these molecules all have the same kinetic energy, lighter ones — those that carry the fissile U^{235} isotope — are also the fastest, and thus will hit the wall of the enclosure more often statistically than heavier molecules carrying the U^{238} isotope. If that wall is porous, the lighter molecule has a higher probability of going through this barrier than the heavier molecule.

The UF6 is converted into a gas which is gradually enriched in a series of 1,400 diffusion barrier stages called the enrichment ''cascade''. Isotopic separation is a service sold to electric utilities and is measured in separative work units (SWU), an international unit of measure for enrichment services that is independent of the separation technology used.

Production capabilities

The capital-intensive enrichment industry also has a strong political dimension. Historically, major nuclear nations have wanted to control their sources of supply to ensure energy independence and limit nuclear proliferation.

This dimension must be kept in mind to place decisions made by the key players in this field in their proper context.

The business unit's production resources are concentrated in Eurodif, in which COGEMA owns 59.6%, directly and indirectly, with foreign partners holding 40.3%.(5)

Eurodif's 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 cascade's profile 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 SWU per year. The modular concept also accommodates a wide range of enrichment assays and production batch sizes on short notice.

Gaseous diffusion enrichment uses a large amount of energy. To provide enrichment services to some 100 reactors operated by 30 electric utilities worldwide, the business unit consumes as much electricity as the greater Paris area, or an average of 4 to 5% of France's entire production of electricity. Eurodif adjusts its electric power requirements to seasonal peak and off-peak demand to obtain the best available power rates.

Market, competition and position

Worldwide enrichment capacity is approximately 45 million SWU, excluding 5 million SWU from Russia's defense Highly Enriched Uranium (HEU) program imported by U.S. enrichment company USEC under an exclusive agreement. Theoretical installed capacities are shown below.

Worldwide SWU production capacity

Producer/importer	Nominal capacity	Technology
Minatom (Russia)	20 MSWU/year	Centrifuge
AREVA/Eurodif (France)	10 MSWU/year	Gaseous diffusion
USEC (United States)	8 MSWU/year	Gaseous diffusion
Urenco (UK, D, NL)	5 MSWU/year	Centrifuge
JNFL (Japan)	1 MSWU/year	Centrifuge
CNEIC (China)	1 MSWU/year	Centrifuge
USEC, as importer of Russian defense HEU	5 MSWU/year	Dilution
TOTAL	50 MSWU/year	

Source: AREVA

AREVA thus has approximately 20% of the world's total installed capacity. Demand is less than installed capacity, and is around 37 million SWU per year, as follows:

- 12 million SWU in Western Europe (32%)
- 12 million SWU in North and South America (32%)
- 8 million SWU in Asia (22%)
- 5 million SWU in Eastern Europe (14%).

In addition, Russian requirements may be estimated at 3 to 4 million SWU per year.

Due to the worldwide glut of SWU, restrictive measures have been put in place by various governments to avoid market disruption.

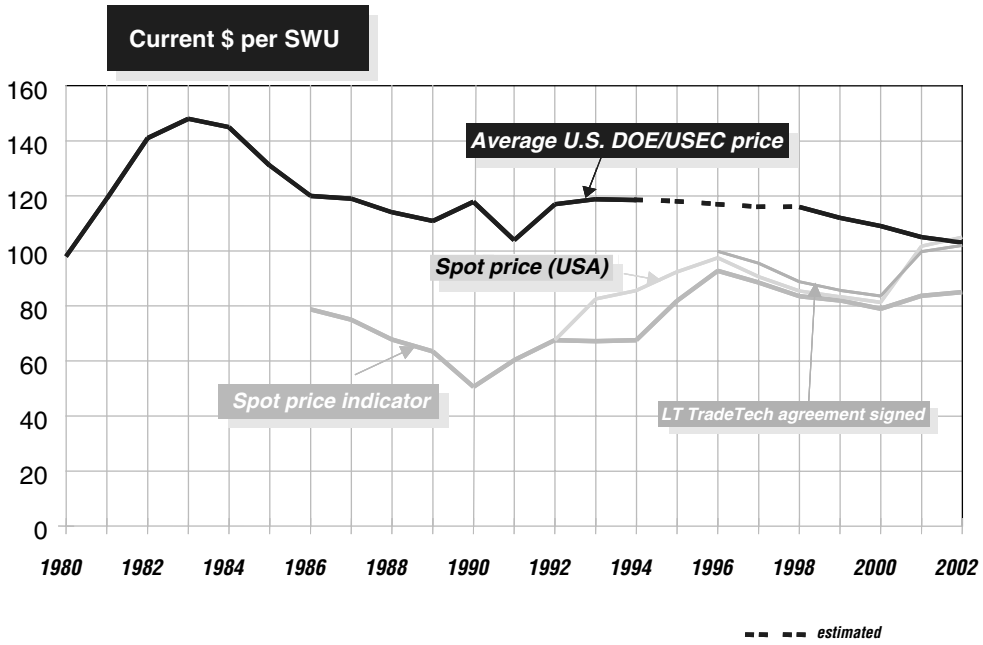
AREVA has the largest share of the Western European enrichment market, ahead of Urenco. In the United States, 50% of the demand is met with enriched uranium diluted from HEU recovered from Russian weapons and imported by USEC under an exclusive agreement, supplemented with new production from USEC. Despite this disadvantage, AREVA and Urenco are present in the U.S. market, where USEC has filed a dumping and illegal subsidies claim against them. USEC is also the largest supplier to Asia, mostly for historical reasons, followed by AREVA.

Supply exceeded demand during the 1995-2000 time frame, causing a drop in prices. This was compounded by USEC's marketing strategy in reaction to growing competition from other enrichment

(5) The other shareholders of Eurodif S.A. are Synatom (Belgium), Enea (Italy), Enusa (Spain) and Sofidif, a company owned by COGEMA (60%) and Iranian interests (40%). COGEMA's 60% interest in Sofidif is included in the 59.6% controlling interest mentioned earlier.

service providers. Spot prices have been rising since USEC's lawsuit in 2001, primarily in the U.S. market, to $80-100 per SWU (see figure below).

1980-2002 SWU prices



Source: AREVA

The market for enrichment services is a medium to long term market with moderate growth of 0.5-1% annually, mostly in Asia, where nuclear power programs are growing faster than in any other region of the world.

Operations and key events during the year

- The Enrichment business unit has a sizeable backlog of U.S. orders, despite the difficulties in that market, securing AREVA's mid-term position in that country.
- Duties levied against Eurodif in the United States: Following a complaint filed by USEC against Urenco and Eurodif, the United States Department of Commerce (''DOC'') imposed countervailing duties on U.S. imports due to dumping and unfair subsidies, effective mid-2001. These duties require a security deposit with the U.S. Customs Service. Urenco and Eurodif have appealed the decision. In February 2003, Eurodif asked the U.S. Court of International Trade (CIT) to strike down the DOC decision. In March 2003, CIT ruled that the DOC decision was not only without merit, but contrary to U.S. law. The court has instructed DOC to revise its decision on this basis.
- Signature of a Memorandum of Understanding between Urenco and AREVA (through its subsidiary COGEMA): AREVA and Urenco have formalized their intent to cooperate on the development of uranium enrichment centrifuge technology. The MOU covers the design and construction of centrifuge equipment and facilities as well as research and development on isotopic enrichment of uranium by centrifugation. Urenco and COGEMA plan to create a 50-50 joint venture that would be the sole development vehicle for Urenco and COGEMA in this field. The Enrichment business unit has opted for centrifuge technology for future replacement of Eurodif's gaseous diffusion facility, which is 60% owned by COGEMA. The groups will continue to compete in the production and marketing of enrichment services. Negotiations are in progress aimed at concluding a final agreement at an early date, subject to the necessary authorizations and approvals.

Customer relations

Customer relations are based largely on long term commitments supported by mostly firm price sales contracts with an average term of five years.

The Enrichment business unit's customers are electric utilities, EDF foremost among them.

Sustainable development and environmental protection

In 2002, the Enrichment business unit pursued renewal of AFAQ certifications under ISO 14001 and ISO 9001, which are now covered by a certified integrated management system (IMS).

Suppliers and raw materials

The Enrichment business unit does not own the material it enriches. Nevertheless, the business unit continued to increase supply chain reliability for feed materials and enriched products and to optimize related logistics (casks, cylinders and transportation).

Research and development

R&D efforts focused primarily on preparing agreements with Urenco for the future replacement of current enrichment technology with new centrifuge technology.

Like gaseous diffusion, centrifuge technology uses the difference in atomic weight between U^{235} and U^{238}, but the approach is entirely different. In centrifugation, UF6 gas is fed into a relatively flexible tube measuring 50cm to 2 meters in height that spins at very high speeds. The heaviest particles gravitate towards the outside of the receptacle, allowing lighter enriched uranium to be collected in the center. This technology consumes much less energy than the gaseous diffusion technology currently used by the group.

In October 2002, Urenco and AREVA, through its subsidiary COGEMA, signed an agreement formalizing their intent to cooperate in uranium enrichment centrifuge technology (see ''Operations and key events'' above).

Outlook and development goals

The Enrichment business unit increased its backlog considerably in early 2002, securing a solid workload for the mid-term.

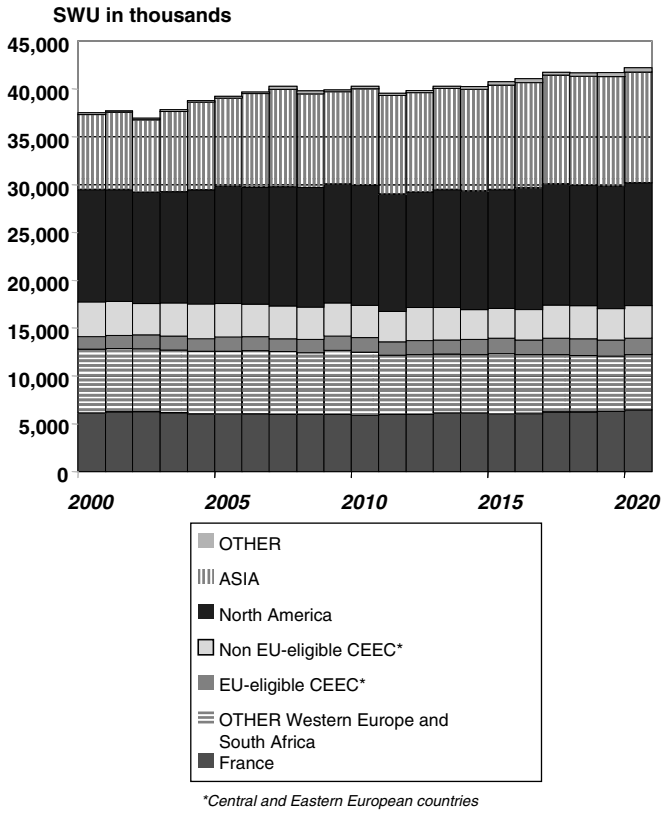
In terms of capital spending projects, work ended in the summer of 2002 on in-depth maintenance to improve plant reliability and availability, extending the service life of the Georges Besse plant until new centrifuge enrichment technology becomes available in the 2010-2015 time frame.

The business unit's next challenge is to acquire the technology that will replace its production facilities and to ensure a successful transition. The total investment required over the next ten years is approximately €2.5B.

Demand is assured for the next 20 years, given the known lifespan of reactors already connected to the grid. Growth is slow but steady at approximately 0.5-1% per year. Growth in Asia should offset any long-term declines in the European market relating to conservative scenarios on the future of nuclear power in the region.

AREVA's long-term forecast for the worldwide SWU market forecast is summarized in the figure below.

Estimated SWU demand by region



Source : AREVA

4.4.4 Fuel Fabrication business unit

Key data

(millions of euros)	2001	**2002**
Sales	1,223	1,189
Workforce at year end	4 595 people	4 871 people

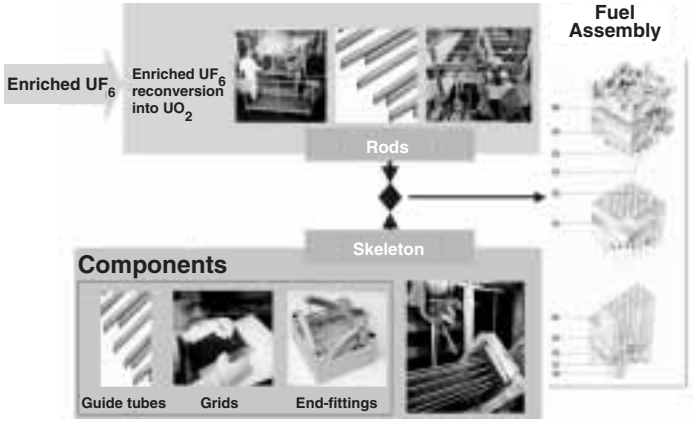
Businesses

Nuclear fuel design and fabrication.

Fuel is a consumable product that must be replaced at regular intervals. Fuel assemblies form the reactor core, where nuclear fission produces energy. For example, pressurized water reactors (PWR) contain between 157 and 205 fuel assemblies, depending on the PWR type. Fuel is the only real ''nuclear'' component of a reactor.

A fuel assembly is made of fuels rods containing sintered uranium oxide pellets — the fissile material — and a metal frame, or ''skeleton'', usually made of zirconium alloy.

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 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 to be inserted and the reactor core cooled under all circumstances.

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

Nuclear fuel must perform in an extremely demanding operating environment, and design quality is the key to fuel assembly performance. Nuclear fuel is not a mass-produced product: fuel designs are adapted to specific customer and reactor requirements. A large number of high-level scientific and technical skills are needed to achieve flawless design and fabrication quality, an absolute requirement.

The Fuel fabrication business unit has expertise in three key areas:

- Design: this includes neutronic, thermo-hydraulic and mechanical strength modeling codes and a database built on lessons learned from many years of reactor operating experience. Fuel designs are referenced in the reactor license application, and the fuel designer is effectively one of the utility's most important partners during discussions with nuclear safety authorities in its country.
- Zirconium and zirconium alloy production: This requires knowledge of chemical and metallurgical processes such as zirconium sponge fabrication, melting, extrusion, forging, rolling, thermal treatment and non-destructive examination.
- Fuel assembly fabrication: This requires knowledge of chemistry, powder metallurgy, various assembly processes, including advanced welding, mechanical engineering and machining, and numerous non-destructive examination methods and physical/chemical analyses.

The Fuel fabrication business unit has expertise in every aspect of the fuel design and fabrication process, including zirconium and zirconium alloy fabrication. The business unit designs, fabricates and sells nuclear fuel assemblies for commercial reactors and research reactors. The customer generally retains ownership of the fissile materials. In addition to conventional enriched uranium oxide fuel, the business unit also makes MOX (mixed plutonium/uranium oxide fuel) and enriched reprocessed uranium (ERU) fuel using fissile materials recovered through spent fuel reprocessing.

The unit is capable of customizing base products, such as AFA3G, HTP and Mark BW™ for pressurized water reactors (PWR), or Atrium™ for boiling water reactors (BWR), to meet specific requirements. Its Alliance™ product, a PWR fuel born of European and American cooperation, is undergoing qualification in several European and U.S. reactors.

Zirconium components for new PWR assembly designs are made with the M5® alloy, which is already being used in more than thirty reactors worldwide and has demonstrated remarkable qualities, including strong corrosion resistance.

Related services

The Fuel fabrication business unit offers licensing support and core replacement calculations to its customers, as well as fuel loading, fuel inspection and fuel repair services at the reactor site.

Zirconium products

The business unit also fabricates and markets finished and semi-finished zirconium and zirconium alloy products.

AREVA is the only group to possess expertise in every aspect of nuclear fuel design and fabrication, and particularly zirconium alloy fuel structures. As a result, some of the business unit's competitors are also its customers.

Design and production capabilities

The business unit is based in Paris. It operates three business lines with offices and production facilities in several locations:

- Fuel design and marketing, with European offices in Erlangen, Germany and Lyon, France and U.S. offices in Richland, Washington and Lynchburg, Virginia. This business line employs some 1,100 people.
- Zirconium, which employs 1,400 people at six fabrication facilities in Rugles, Montreuil Juigné, Paimboeuf, Ugine and Jarrie in France and in Duisburg, Germany. Each facility specializes in one aspect of zirconium metallurgy or forming.
- Fuel assembly fabrication, with seven production facilities:
  - Richland and Lynchburg in the United States, serving U.S. and Asian markets;
  - Romans sur Isère and Pierrelatte in France and Dessel in Belgium, serving EDF and other customers operating PWR reactors; and
  - Lingen and Karlstein in Germany, serving German and other customers customers operating BWR reactors.

The fuel fabrication business line, which employs 2,300 people, represents nominal production capacity of 3,100 MT of uranium, including 2,000 MT in Europe and 1,100 MT in the United States. AREVA's total fuel fabrication capacity is thus one third of worldwide capacity for light water reactor fuel, both PWR and BWR.

Market, competition and position

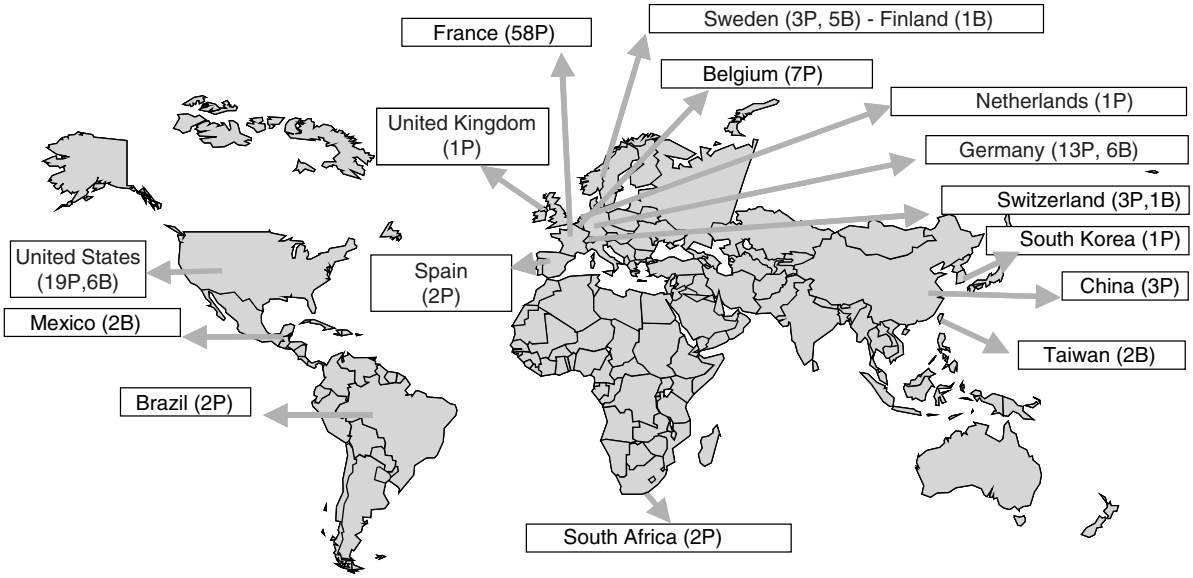
The business unit's principle business is the fuel assembly market for commercial BWR and PWR reactors as well as for research reactors.

The world market for BWR and PWR fuel is around 6,000 MT per year of heavy metal (uranium or plutonium) contained in the fuel assemblies. The United States accounts for 38% of worldwide demand, Europe 35% and Asia 25%.

The industry has reorganized several times over the past few years, leaving three companies to satisfy 80% of global fuel demand: AREVA, through its subsidiary Framatome ANP (38% market share), Westinghouse-BNFL-ABB (26%) and GNF (18%).

AREVA's many years of fuel fabrication experience are attested to by the cumulative supply of 95,000 PWR fuel assemblies and 45,000 BWR fuel assemblies in 20 countries. Today, 139 out of the world's 297 operating reactors are loaded with AREVA fuel, as shown in the figure below.

Reactors loaded with AREVA fuel



P: Pressurized Water Reactor. B: Boiling Water Reactor
Source: AREVA

Complex product and supplier qualification procedures, necessarily supported by lessons learned, form a strong entry barrier to new competitors.

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

- technical support for reactor license applications; and

- continually improved fuel designs to reduce operating costs, with the following key factors coming into play:
  - fuel reliability, a direct function of fuel design and fabrication quality, with one lost day of reactor production due to fuel failure costing five times the value added to the fuel assembly by the supplier; and
  - the amount of energy produced by the fuel before it is ''spent'', which is measured in terms of ''burnup'' expressed as ''MWdays per metric ton of heavy metal''.

Due to continuing performance improvements to fuel, and in a nuclear power generation market characterized by essentially flat production, fuel demand is on a slight downward trend in Europe and the United States. This trend is only partially offset by demand from new reactors coming on line in Asia. Thus, there is a glut of fuel fabrication capacity throughout the world, with demand absorbing only 65% of available capacity. However, the uprating of existing reactors and a steady increase in load factors should postpone production cutbacks caused by improved fuel performance.

In this environment, competition among suppliers and deregulated electricity markets have pushed fuel prices down over the past several years.

Cerca, a company of the Fuel Fabrication business unit, is the number one supplier of research reactor fuel worldwide, with €30M in 2002 sales, representing a 40% share of the world market.

Operations and key events during the year

European production levels for fuel assemblies and zirconium were high in 2002. The first core for the Ling Ao reactor (built by the Reactors business unit) was delivered in 2002 and the reactor entered service in the first half of 2003.

- Organization: Fuel operations in three regions of the world were consolidated and integrated during the year.
  - A new matrix organization by zirconium, fuel fabrication and design/marketing business line was set up.
  - A shared customer-oriented product strategy was initiated to harmonize products by capitalizing on the best products and services and the most advanced technologies (M5® alloy, Atrium™, 10 x 10, etc.), and to define the product of the future.
  - Blanket ISO 9001-2000 certification was secured in mid-2002 for all seventeen Fuel Fabrication business unit sites throughout the world.
- Production facilities: The Lingen fuel fabrication plant in Germany was granted a licensed capacity increase. A license application was submitted to increase capacity at the Romans fuel fabrication plant in France. These capacity increases are necessary to maximize flexibility and optimize production resources. Work continued on production streamlining, cost reductions and the adoption of best practices from the various entities involved in the merger of Framatome and Seimens KWU. Cost reductions were especially significant in the United States, where a reorganization plan to restore profitability launched in late 2001 is in progress.
- Sales and marketing: Major contracts were signed in 2002, including a multi-year fuel supply contract with EDF for the 2003-2006 period and several contracts deriving from synergies with other AREVA business units:
  - Alliancing contract with AEP in the United States (an alliancing contract covers a range of services in which the supplier and the customer agree to share risk and profit equitably) with the Services business unit and the Reactors business unit.
  - Contracts for fuel supply and related services with EnBW in Germany, for which several AREVA business units partnered at the customer's request. This global fuel services contract is representative of the alternatives available to AREVA customers.
  - Contract to supply four fuel reloads with M5® cladding to German electric utility GKN.
  - Contract with E.On to provide fuel and fuel management services to five German PWR reactors through 2009.
  - Contract with Energy Northwest in the U.S. to supply fuel assemblies for the Columbia Generation reactor.
  - Contract to reconvert depleted UF6 into U3O8 and UO2 with the U.S. Department of Energy as part of the Uranium Disposition Services team (UDS), with the business unit providing the process and fabrication expertise.
  - Contract with TEPCO to supply fuel assemblies in 2004, rewarding AREVA efforts in Japan and validating its commercial strategy in that country, where foreign suppliers have a small market share.

Customer relations

Most contracts are for a multi-year period — 60% of the business unit's sales for 2005 were already in backlog at the end of 2002 — and may cover one or more of a utility's reactors. Fuel assemblies are delivered in batches called reloads.

These contracts usually include services such as transportation and handling, technical support for fuel loading and unloading, fuel inspection during scheduled outages, or even underwater repair of damaged fuel rods or assemblies at the reactor site.

Given their importance for customer operations, the contracts generally include penalty clauses capped at the amount of the fuel supplier's services. Guarantees are provided for:

- fuel integrity under normal operating conditions and up to the contractual burnup;

- satisfactory reactor operations at nominal power;
- compatibility with fuel assemblies already in the reactor, insofar as fuel assemblies remain in the reactor for three or four years and are replaced in thirds or in quarters of a core; and
- safe spent fuel transportation and storage.

The business unit supplies fuel to EDF (58 reactors) and to 34 other electric utilities. AREVA fuel now powers 139 of the 297 reactors connected to the grid throughout the world.

Sustainable development and environmental protection

Environmental programs and objectives specific to each of the business unit's entities and sites are in place. Environmental procedures are part and parcel of standard operating procedures. Employees receive environmental protection training as part of their job training.

The various entities of the business unit have always adopted a proactive approach to environmental protection. The business unit's FBFC plant in Romans, France worked with the mayor's office to create a local environmental commission in 1978, three years before local information commissions were instituted nationally under the Mauroy memorandum.

Seeking ISO 14001 certification was a normal part of business for the business unit's sites. Environmental management systems are now certified at all of its European sites, from Erlangen (1996) to Ugine (April 2002).

In the United States, environmental projects include removal of liquid effluent storage ponds that were part of the wet process used in the past to convert UF6 into UO2. This process was replaced by a non-effluent generating dry process. Reducing solid low-level waste inventories is another major environmental objective.

In addition, the Dessel site in Belgium was certified under OHSAS 18001 in December 2001.

Suppliers and raw materials

Given the strongly competitive nature of the business, the business unit assessed procurement cost reduction opportunities, including pooling orders with other AREVA companies, which are now being implemented.

Raw materials used in the zirconium business

Raw materials, excluding semi-finished products, represent 20% of the total cost of the business unit's supplies and have remained essentially constant over the years.

Most outside procurements are for materials needed to produce zirconium alloy ingots.

- **Zircon flour:** The worldwide economic slowdown has caused zircon supply and demand to drop simultaneously. The Fuel Fabrication business unit issued requests for quotations to a broad panel of suppliers in Australia, South Africa and the United States and was able to maintain zircon supply quantities and prices.
- **Magnesium:** Western suppliers have been gradually disappearing and are being replaced by Chinese producers who will gain access to the European market in 2003, when anti-dumping measures expire. In 2002, magnesium was procured from traditional suppliers as well as from the spot market, resulting in a lower average cost for magnesium supplies than in 2001. Initial contacts have been made with Chinese producers for 2003 requirements.
- **Carbon black:** This material was purchased from two traditional suppliers under preexisting contracts, with purchase prices similar to 2001, while spot market prices increased due to new environmental requirements.
- **Niobium:** The main priority in 2002 was to secure a secondary source of niobium supply. This decision, combined with optimization of technical specifications, resulted in a decrease of more than 20% in the unit cost of niobium. In parallel, the business unit continues to increase its M5® alloy production (1.5% niobium content), which should give it a competitive edge in the years to come.

Suppliers and/or raw materials used for fuel fabrication

The business unit's electric utility customers provide the enriched UF6 required for fuel fabrication. The enrichment companies that deliver this material are not suppliers in the strict sense of the word, insofar as the material usually belongs to the customers. Nonetheless, framework agreements have been concluded, including some in 2002, to optimize uranium deliveries to comply with all of our obligations to our customers.

Zirconium alloys, primarily in the form of cladding, but also in the form of flat bands or plates or in bars, are the second most common category of raw materials used in fuel fabrication. It should be noted that the zirconium business line is part of the Fuel Fabrication business unit and thus shares its objectives and priorities.

Inconel alloys (special alloys made of nickel and chromium) are used in much smaller quantities to fabricate springs for fuel assemblies.

Subcontracted fabrication services primarily relate to spacer grid stamping. Spacer grids are a key fuel assembly component and the business unit has concluded a partnership agreement with its main French supplier. The agreement includes mutual performance commitments and safeguard clauses. Requests for quotations have also been issued to other suppliers of these services in Germany and in the United States.

Research and development

The Fuel Fabrication business unit invests, on average, from 4 to 5% of its sales revenue in research and development under multi-year programs[6] on a broad range of goals and issues:

- continuous improvement of fuel reliability and cost-effectiveness;
- flexibility to meet increasingly demanding reactor performance requirements;
- fuel safety during operations and storage;
- developing special equipment for at-reactor services; and
- developing the technologies of the future and ensuring AREVA's technology leadership.

Fuel is central to reactor operations and therefore a critical procurement for the customer. The business unit's main R&D mission is to meet and anticipate its customers' current and long-term needs and to offer reliable, high-performance fuel.

To fulfill this mission, three development programs were set up for products, modeling tools and materials, all of which are determining factors in fuel assembly performance. These programs are described below.

Products:

- For PWR fuel, where AREVA leads the field with a superior product offering (AFA 3G, HTP, Mark BW™):
  - ensure cross-fertilization of technologies acquired through the Framatome/Siemens merger and standardize fuel assembly components over the short to mid-term;
  - continue qualification of the new Alliance™ fuel; and
  - encourage long-term innovation and development to meet customer expectations beyond 2010 by optimizing resources and synergies among the French, German and American teams.
- For BWR fuel, where AREVA is a challenger:
  - continue to enhance the Atrium™ 10XP product over the short to mid-term; and
  - encourage innovation for the longer term.

Modeling tools:

- Continue developing modeling codes and methods to establish fuel behavior under the very demanding operating conditions imposed by the search for increasingly efficient fuel performance.

Materials:

- The main development target for zirconium alloys is to gain even more reactor operating experience with the M5®alloy at high burnup rates (70 GWd/MT, consistent with a 5% maximum enrichment assay) and under the most severe operating conditions in terms of temperature, linear heat generation rate, void coefficient and primary coolant chemistry. The result of 15 years of R&D, this material for fuel cladding and structural components will soon replace the materials currently in use.

R&D is performed by the business unit's design teams in Lyon, France, Erlangen, Germany and Richland, Washington in the U.S. and, for materials research, by the Cezus research center in Ugine, France.

For testing, the R&D teams have access to the testing resources of Cezus and the expertise and resources of Framatome ANP's Technical Center (Le Creusot and Chalon Saint Marcel in France, Erlangen in Germany). Additional testing expertise, resources and databases are available from French nuclear R&D agency CEA (research reactor and irradiated materials examination). The business unit also relies on support from research organizations such as Studsvick, ITU Karlsruhe and the Paul Scherrer Institute.

Outlook and development goals

In terms of production, the business unit hopes to receive approvals to add capacity at its Romans fuel fabrication plant in France by the end of 2003 and to increase the licensed capacity of the Lingen plant in Germany yet again. These two measures will contribute to optimization of AREVA's European production resources.

The unit's two U.S. production sites will be reorganized in 2003.

In terms of marketing and sales, important calls for bids are expected in 2003, providing several opportunities to confirm the business unit's product development strategy. This strategy applies to all of entities in the business unit and will be actively pursued while continuing to make progress in cost reduction efforts.

Over the longer term, AREVA's success rests on its contribution to the customer's fundamental objective of reducing electric power generating costs along key and interactive lines:

- core management, particularly core renewal by fifths, quarters, thirds, etc,;
- reactor cycles, understood as the time between two plant outages for partial core replacement;
- fuel burnup;[7] and
- isotopic enrichment levels.

Average reactor cycle costs decreased in 1990 to 90% of their 1980 levels and in 2000 to 85% of those levels. This trend provides perspective for future challenges.

(6) It takes 5 to 10 years to develop a new product and 10 to 15 years to develop a new alloy.

(7) Burnup is a unit of measure for the energy produced by burning fuel in the reactor.

4.5 Reactors and Services division

Key figures

(millions of euros)	2001	**2002**
Sales	1 879	1 931
Operating income	45	81
Workforce at year end	12 420 people	13 549 people

Overview

The Reactors and Services division designs and builds PWRs (pressurized water reactors), BWRs (boiling water reactors) and research reactors. The group built 102 of the 297 boiling water or pressurized water reactors in service worldwide at the end of 2002 and thus has a 34% market share. The group also offers products and services for the servicing and day-to-day operations of all types of nuclear power stations. As the world leader in these businesses, AREVA is in a constant state of readiness to meet the increasingly demanding requirements of its present and future customers, while reducing kilowatt-hour costs and ensuring the complete safety of their plants.

4.5.1 Reactors business unit

Key figures

(millions of euros)	2001	**2002**
Sales	464	483
Workforce at year end	2 327 people	3 378 people

Businesses

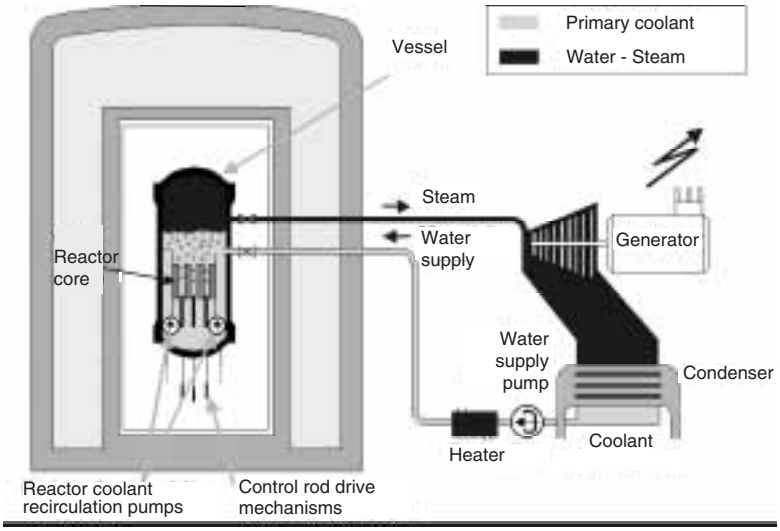
Introduction and definitions

A ''nuclear power station'' is defined as an industrial facility that generates electrical or thermal energy from one or more nuclear reactors. A ''nuclear reactor'' is a machine that produces an unlimited self-perpetuating chain fission reaction on demand and regulates the reaction's intensity. A ''nuclear steam supply system'' is a boiler in which the heat source is a nuclear reactor. Finally, a ''nuclear island'' is the entire system, encompassing the nuclear steam supply system and the fuel-related facilities, as well as the equipment required for the system's operation, safety and security.

In nuclear power stations, the turbine is driven by the steam produced by fission energy from the material in the reactor's core.

There are two major types of ''light'' water reactors: boiling water reactors (BWRs) and pressurized water reactors (PWRs). In BWRs (see figure below), water flows through the core, which consists of fuel rods. The fission process heats the water, which vaporizes at the top of the vessel. This steam drives the turbine before cooling and returning in liquid form to the condenser before being injected back into the reactor core. Thus, in a BWR, the water is in a closed cycle, in which the steam expands directly into the turbine.

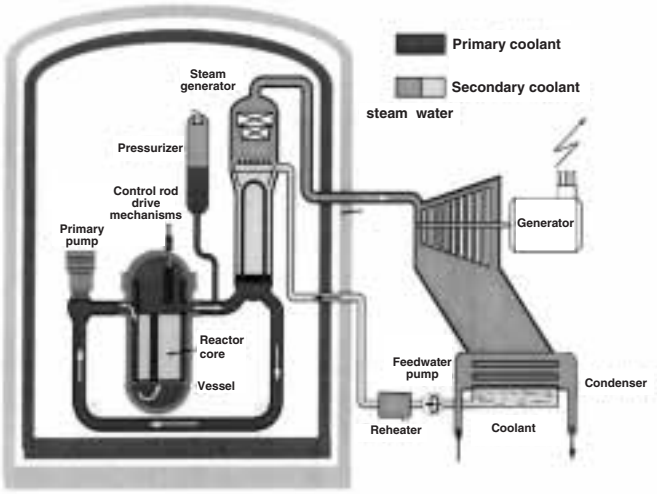
How BWRs work



Source: AREVA

In a PWR (see figure below), an intermediate coolant is placed between the water in the vessel and the turbine. The water flow from the vessel still passes through the fuel assemblies, but this water, heated by the fission process, itself heats the water in what is called the secondary coolant, which in turn drives the turbine. The ''energy generation'' feature is thus separate from the ''steam generation'' feature. This separation of features prevents the water that was in contact with the fuel from passing through the secondary coolant, facilitating major maintenance operations, among other things.

How PWRs work



Source: AREVA

The Reactors business unit is involved in every aspect of reactor construction, from design to the commissioning of steam supply systems and nuclear islands supplied by the AREVA group, which may be either PWR or BWR. AREVA does not operate nuclear power generating stations.

Business lines

- design, construction and commissioning of nuclear islands and various nuclear facilities;
- retrofits and engineering services for every reactor type in the world;
- design and fabrication of electrical systems and advanced control systems for new reactors;
- upgrades and retrofits to control systems for existing nuclear power stations;
- services for breeder reactors cooled with liquid metals, including reactor dismantling;
- various services for research reactors; and
- detailed safety analyses and license applications for large component replacements and 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.

Capabilities

The Reactors business unit has production resources in:

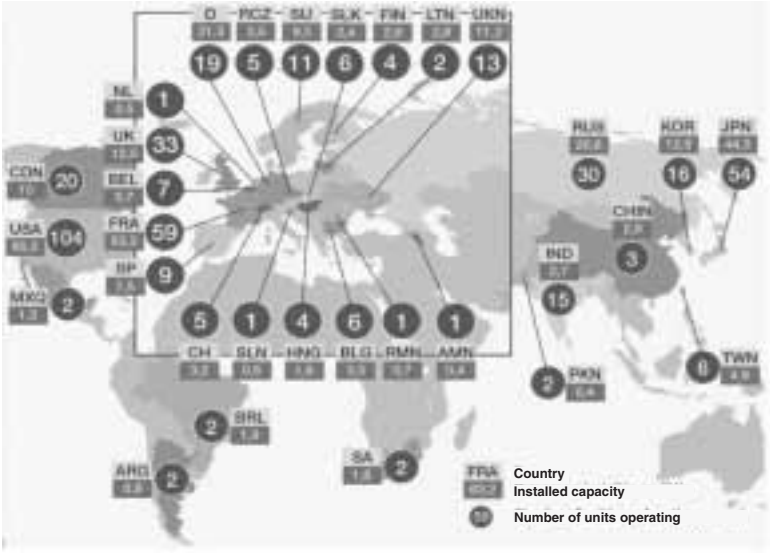
- France,
- Germany,
- the United States, and
- personnel on temporary assignment with clients worldwide.

Market, competition and position

There are currently 446 nuclear power stations in operation around the globe, 297 of which are either PWRs or BWRs. The other plants either use ''heavy water'' as a coolant, as in Canada, or gas.

These 446 power plants are clustered in three regions: the United States (104 reactors), Europe (187 reactors) and Asia (126 reactors), especially Japan.

Worldwide operating nuclear power stations



Source: CEA

In terms of installed capacity, the AREVA group is the world leader with over 100,000 MWe, ahead of BNFL (including ABB/Combustion Engineering and Westinghouse) and General Electric. In terms of the number of reactors, the group has built 102, versus 113 for the BNFL group and 55 for General Electric.

AREVA brings these considerable skills to the market, which today is primarily a market for servicing, maintenance, performance upgrades and increasing reactor capacity and service life.

The initial service life of a nuclear power plant is forty years, but this may be extended to sixty years in many cases. The world's first power reactors were build in the United States and are often ten to fifteen years older than their European counterparts. The need to modernize aging plants thus emerged in the U.S. market first.

U.S. nuclear power plant performance has improved considerably over the past ten years as a result of upgrades. Reactor efficiency has risen from 70% to 90%, or the equivalent of nearly thirty new reactors in terms of production, while electricity production from those same plants climbed by a third[8] since the early 1990s. The upgrades have lowered the price of the KWh and improved the utilities' bottom line.

U.S. electric utilities have always worked to reduce their operating and maintenance expenses. What is new is the current increase in capital spending, not for new reactors, but for existing ones. Replacing heavy equipment lowers electric generating costs. For example, steam generator replacement (20 meters high and 400 metric tons) is a substantial market. AREVA supplies 50% of the U.S. and European markets, which amounts to an average of two steam generators per year. Likewise, reactor vessel heads are essential components. In France, they were replaced in the 1990s because of premature wear and tear from corrosion. Today, AREVA has 80% of the reactor vessel head replacement market — which is very strong in the United States — and is at its production capacity limit.

The United States is also the source of an increasing number of requests to extend power plant service life by about twenty years. The considerable capital investment this requires is justified by service life extension.

It is currently estimated that U.S. nuclear operators will spend from twelve to fifteen billion dollars between 2003 and 2008; about 40% of this is in the AREVA group's skill set.

This is a global trend that will continue over the coming decades.

AREVA is experiencing strong growth in the United States, mainly due to the integration of Siemens's nuclear operations, with its large U.S. branch, and after the buyout of Duke Engineering & Services in 2002.

AREVA has conquered considerable market share for heavy equipment replacement, control system upgrades and service life extension, because we have all the required engineering skills. Conse-

(8) Source: NEI

quently, the share of engineering business, excluding initial construction, is well over 50%.

In Eastern Europe, countries with Russian-designed plants (forty outside Russia) offer a market for upgrades. The reactor technology is very similar to Western PWR technology and AREVA is thus able to offer services to upgrade safety and performance levels. The market is limited, however, due to financial considerations.

Operations and key events during the year

The highlight of 2002 was the acquisition of Duke Engineering & Services (DE&S) on April 30, when 330 of Duke's employees joined the Reactors business unit. This acquisition attests to the group's commitment to the strategic U.S. market, where it plans to grow by offering more engineering and control system services.

- Technical highlights of 2002 were:
  - the final acceptance memorandum for the Chooz power station in February 2002;
  - commercial commissioning of Ling Ao unit 1 and the signing of provisional acceptance certificates for Ling Ao units 1 and 2, completed ahead of schedule and to the Chinese customer's satisfaction, with Unit 2 scheduled to come on line on February 24, 2003;
  - the first phase of certification in the United States for the SWR 1000 reactor, the group's leading BWR product;
  - satisfactory performance of the Dukovany contract to upgrade control systems and the Bulgarian contract for Kozloduy reactors 5 and 6 late in the year, the largest for the Reactors business unit in 2002; and
  - submission of the updated application for the lead EPR[9] unit to the French authorities in this year of the national energy debate.
- Business highlights of the year were:
  - in September, an invitation to bid on Finland's fifth nuclear unit, with the proposal delivered to the customer on March 31, 2003;
  - Brazil's National Energy Policy Board's resolution to authorize customer ETN to build the third unit at Angra; and
  - Contract signature for modifications to be carried out during the ten-year overhaul of the two Daya Bay units in China.

Customer relations

The business unit's customers are electric utilities in Western and Eastern Europe (France, Germany, Belgium, Sweden, Switzerland, the Czech Republic, Bulgaria, Ukraine, etc.), Asia (China, etc.), North and South America (United States, Brazil, etc.), and South Africa, as well as operators of various nuclear facilities.

The contracts are usually conventional fixed-price contracts for engineering services and/or equipment supply.

Sustainable development and environmental protection

All of the business unit's German sites are ISO 14001 certified. The long-term goal is to certify all of the unit's sites.

Human resources

The Reactors business unit faces two specific challenges:

- The services provided require high-level scientific and technical skills that must be maintained despite the small workload for new reactor construction. A human resources plan has been developed for each service. Current performance on upgrade contracts will also help maximize skill maintenance.
- The skills acquired through integration of Siemens's nuclear operations are vested in employees who have the right to return to Siemens until 2004. Since February 1, 2001, the integration date, only a small number of these people have exercised this right.

Despite low workloads, France and Germany have continued to hire young engineers, primarily in the process engineering field.

On the other hand, employee exchanges among the three regions have intensified, strengthening skill sharing and best practices in the form of expatriations, temporary assignments and relocations.

Suppliers and raw materials

Strategic equipment to be delivered to customers — vessels, steam generators, primary pumps and pressurizers — is generally supplied under contracts between the customer and the Equipment business unit. The Reactors business unit thus provides services to the Equipment business unit to assess and demonstrate the safety of these components.

Auxiliary equipment (pipes, fittings, tanks and heat exchangers) is purchased from traditional suppliers that the group has certified for quality assurance.

Research and development

In the general context of the group's R&D programs (see paragraph 4.8), the Reactors business unit dedicated almost 4% of its sales to research and development. This work, done in the engineering units, but also through partnerships with research organizations, including French R&D agency CEA[10], relates to key technologies in pressurized and boiling water reactors, the development and valida-

(9) European Pressurized Reactor

(10) Commissariat à l'Énergie Atomique

tion of modeling tools, related processes and safety methods, control of hydraulic and thermo-mechanical events, materials performance and damage assessment.

With these technological developments, operators now have the means to upgrade reactor performance (fuel management and availability) and to manage and demonstrate their service life with their regulatory authorities. These developments have culminated in the design and qualification of new technical solutions for fluid systems, mechanical components, control systems used in new reactor models (EPR and SWR 1000) and in retrofits to currently operating plants.

Outlook and development goals

For recurring engineering and control system business, which amounted to more than 85% of sales over the past two years, the outlook is still good due to the utilities' desire to optimize

reactor reliability and availability, to extend service life and to upgrade performance. The outlook is especially good in the United States, where operators are applying for license renewals.

As for medium-term reactor construction projects, the situation has changed considerably over the past two years with the gradual rebirth of nuclear power. Implementation of one or more of the following projects may have a positive effect on the group's business.

- Finalization of the third unit at Brazil's Angra plant: A Franco-German co-financing scheme is being prepared at this time.
- Khmelnitsky 2 and Rovno 4: the corresponding contract is contingent on a loan agreement between the Government of Ukraine (the customer country) and the Western lenders, led by the European Bank for Reconstruction and Development (EBRD).
- Future units in China: early in 2003, the Government of China authorized a process that could lead to the construction of four units under the tenth five-year plan (2001-2006).
- South Africa: An Eskom decision to order the first batch of modifications to align the Koeberg reactors with the latest version of the French reactors, known as ''CPY level.''
- France: Launch of the lead EPR unit, which is contingent, among other things, on the national energy debate scheduled to continue through the end of May 2003.

4.5.2 Equipment business unit

Key figures

(millions of euros)	2001	**2002**
Sales	212	224
Workforce at year end	1 588 people	1 565 people

Businesses

The Equipment business unit has always focused on construction of the nuclear island. Its main activities are described below.

- The design and manufacture, based on engineering data, of the nuclear island's heavy components, including reactor vessels, steam generators, pressurizers and related components such as accumulators, auxiliary heat exchangers and support structures;
- The design and manufacture of primary motor-driven pumps and control rod drive mechanisms (systems that regulate the nuclear reaction inside the reactor core), as well as services and maintenance associated with these components. For many years, the business unit has worked to optimize these mechanisms for French utility EDF[11], acquiring unique expertise and a competitive advantage in this area.
- The design, manufacture, servicing and maintenance of electromechanical equipment for non-nuclear energy applications, primarily motors and alternators for wind turbines.

Capabilities

- The Chalon Saint Marcel plant, with 500 employees, works exclusively with nuclear equipment and is in the middle of the nuclear steam supply unit production chain. Since opening in 1975, this plant has produced all of the heavy components for the 900 MWe to 1450 MWe units in the French nuclear program. The plant has also delivered over 500 heavy components such as vessels, closure heads, steam generators and pressurizers to customers around the work, ranking it number one in production.
- The Jeumont plant, with around 900 employees, manufactures nuclear and non-nuclear equipment. In nuclear equipment, Jeumont specializes in the production of components and replacement parts for sensitive equipment such as primary reactor coolant pumps and control rod drive mechanisms, as well as related services. In its non-nuclear work, the Jeumont plant produces and sells electrical generators and motors for industry and the Navy. Jeumont has also developed an innovative concept for wind turbines drawing on its skills in continuous and variable-speed magnetic machinery.

(11) Electricité de France. EDF does not use its plants on a ''baseload / full capacity'' basis, as the American utilities do, for example. Instead, EDF adjusts reactor power generation to variations in grid demand. The result is a greater need for expertise in the design and manufacture of these reactor operating systems.

- Somanu, a subsidiary in Maubeuge, France with roughly fifty employees, has a ''hot'' workshop for working in contaminated environments.
- Sarelem, a subsidiary on the Bay of Nantes with about 120 employees, has a unit that maintains and repairs low-capacity motors and generators for non-nuclear applications.

Market, competition and position

Heavy nuclear equipment

The heavy nuclear equipment market served by the Chalon Saint Marcel plant is a global market in which supply outstrips demand. There are five competitors: two in Asia (Doosan and MHI), two in Europe (Ensa and Camozzi, formerly Ansaldo) and one in North America (BWC).

With no new plants under construction, heavy component replacement has become the principal market. The traditional domestic market with EDF and the Western European market are in decline. Access to the Eastern European and Asian markets is difficult. Moreover, other than a few opportunities in Brazil and South Africa, the largest replacement market for heavy components today is mainly the United States, which has the world's largest and oldest nuclear power stations. The United States is gradually moving towards extending the service life of currently operating reactors.

This market differs from the European market in the diversity of U.S. utility demand, requiring targeted responses that are not limited to supplying heavy components for widely divergent models (Westinghouse, Babcock & Wilcox and Combustion Engineering), but also include the integration and installation of these components in existing plants, sometimes accompanied by capacity upgrades.

In this context, the synergies between the services of the Chalon Saint Marcel plant and those of Framatome ANP Inc. (services and engineering in the United States) are a key discriminator in terms of the competition and essential to bringing the global response expected by the utilities.

The Chalon Saint Marcel plant became the leader in the U.S. market in 2002, with 50% of all steam generator replacement contracts and 60% of all reactor vessel head replacements.

Other nuclear equipment

As for the Jeumont plant's capabilities, given the lack of new power station construction projects, today's market is primarily one of supplying replacement parts and maintenance-related services for machinery. The Jeumont plant's main competitor in this market is BNFL/Westinghouse, particularly in the United States, while MHI (Japan) is a powerful challenger.

The Jeumont plant's market share for primary motorized pumps and control rod drive mechanisms is 80% to 100% in France, and about 10% elsewhere. Westinghouse controls 50% of the world market outside France and is launching operations in France.

Non-nuclear equipment

The non-nuclear equipment market is highly competitive. Jeumont has 5 to 10% of the market for medium-capacity alternators (10 to 60 MW), depending on the year, with competitors such as GE (also a customer), FKI (GB), ABB and Alstom.

In the maintenance market, Jeumont and Sarelem together control about 25% of the French market. The main competitor for services for EDF's large turbine generators is Alstom, with a 50% market share.

In submarine propulsion, Jeumont has roughly one third of the world market, with shipyards such as DCN (France), Izar (Spain) and Kockums (Sweden). The main competitor in this area is Siemens.

Wind turbines

The global market for wind turbines is expanding considerably. Today, six manufacturers control 85% of the market; they are mainly from Denmark and Germany, and include Vestas, Neg Micon and Enercon. Jeumont is in the startup phase of this promising market, with the goal of winning a significant share of the French market thanks to its technically attractive offering of generators and the fact that it is the only local industrial manufacturer.

Operations and key events during the year

Heavy nuclear equipment

The United States placed a large number of orders representing virtually all of the business unit's sales for the year, which were up from 2001 and 2002. These orders include replacement steam generators for Entergy's power stations in Arkansas and PSEG's Salem station in the United States, and about ten replacement vessel heads in the United States.

The upturn in production for export was a defining event for the Chalon Saint Marcel plant in 2002. Work for EDF remained strong, however, although performance of some contracts was postponed until 2004.

Other nuclear equipment

Backed by N-stamp certification from the American Society of Mechanical Engineers (ASME), which Jeumont earned in December 2001 and the Chalon facility has had since 1978, the Equipment business unit continued to take orders for export, including control rod drive mechanisms for the United States and replacement parts for Taiwan. Export sales topped 30% of sales for the first time ever. The emergence of a large vessel head replacement market in the United States and Europe will help Jeumont strengthen this position in the medium term.

Non-nuclear equipment

Non-nuclear work was generally flat. Services-related work was strong in 2002, with an increase in services for EDF's large turbine generators. In marine propulsion, the Business Unit delivered a second Scorpène submarine propulsion engine at Izar's shipyard in Cartagena, Spain. The collapse of demand for generators in the United States, however, required resizing of this operation in 2002.

Wind turbines

This business truly took off in 2002, with twenty-five turbines sold, five of which were for export.

Customer relations

In addition to EDF, a key customer for both Chalon Saint Marcel and Jeumont, the Equipment business unit's main customers are U.S. utilities, with their aging nuclear power stations. The strategic ''alliances'' established in the United States in this regard were a major highlight of the year.

Deregulation and an increasingly competitive market have made U.S. customers demand new and more financially attractive contracting mechanisms that are both 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.

In 2002, several long-term contracts or ''alliances'' were finalized with U.S. utilities, including PSEG (Salem), AEP (DC Cook) and FP&L (Turkey Point and St. Lucie). These contracts cover services, component replacement, engineering and licensing. The same sales policy will continue in 2003 with other utilities.

Sustainable development and environmental protection

The business unit's two principal entities, the Chalon Saint Marcel and Jeumont plants, began the ISO 14001 certification and environmental management process in 2002. Generally, however, the business unit does not perform any work that could significantly impact the environment.

In 2002, Chalon conducted an environmental audit, which was used to prepare an action plan at the end of the year. This action plan is to be implemented in 2003 in the form of an environmental program and related procedures. The Chalon Saint Marcel site's objective is to obtain ISO 14001 certification by the end of 2004.

The Jeumont plant received ISO 14001 certification on February 6, 2003.

Suppliers and raw materials

The Equipment business unit uses two main types of subcontractors in the nuclear field: tube-makers (suppliers of tubes for steam generators) and steel companies (primary component parts are made of forged steel). These subcontractors are critical from a technical standpoint, as component quality and performance depend on them, as well as important in terms of added value and production costs.

There are only a handful of steam generator tubing manufacturers. For the Western market, there are three: Sandvik (Sweden), Valinox (France) and Sumitomo (Japan). Due to their heavy workload at this time, these three suppliers tend to regulate the steam generator market. The Chalon Saint Marcel plant decided to diversify its sources in 2002 and placed orders with all three suppliers.

Likewise, only a few steel companies work in the nuclear field. For the Western market at this time there are European steel companies Fomas (Italy), SDF (formerly Terni, Italy) and CFI (France), and Asian steel companies Doosan (South Korea), JCFC (Japan), Kobe Steel (Japan) and JSW (Japan). The Equipment business unit has also diversified its sources in this procurement segment, using JSW's capabilities in Japan and those of European steel companies in 2002.

Outlook and development goals

Consistent with the group's strategic development objectives, the Equipment business unit started a business within Framatome ANP, Inc. in the United States on January 1, 2003 to participate in this growing market.

For heavy nuclear equipment and thanks to orders received in 2001 and 2002, the Chalon Saint Marcel plant's workload should increase 40% in 2003 compared with 2002. This increased workload is expected to continue.

The vessel head replacement and primary pump maintenance markets will continue to grow in the United States and Europe.

Business in France should be stable overall, with a slight drop in maintenance work caused by a slow market and EDF's introduction of competitors Westinghouse and MHI, offset by another takeoff in the market for replacement vessel heads and replacement parts.

Non-nuclear business should remain flat in 2003, as increased wind turbine sales offset the downturn in manufacturing while the other sectors (services and naval) remain stable. The partnership taking shape in wind turbines should help the group become a significant player in the fast-growing European market beginning next year.

4.5.3 Services business unit

Key figures

(millions of euros)	2001	**2002**
Sales	610	664
Workforce at year end	2 843 people	2 711 people

Businesses

An operating nuclear power station is temporarily closed for an ''outage'' every twelve to twenty-four months to replace a portion of the fuel in the reactor core. This outage, which must be completed as quickly as possible to maximize reactor availability and productivity, provides an opportunity to perform a series of component replacement, upgrades, maintenance and inspection operations.

The reactor Services business unit provides a full range of services, described below.

- Outage services: these are recurring maintenance operations for which the Services business unit stands out for its outage management skills, including minimizing outage times.
- Upgrades: taking advantage of the design and construction skills of the Reactors and the Equipment business units, the Services business unit provides a wide range of upgrades for nuclear power stations.
- Non-destructive inspections: these are safety inspections of major equipment required by regulation. The Services business unit is the world leader in vessel and steam generator inspections.
- Primary component services: repair and replacement of nuclear steam supply equipment, which requires the designer's know-how.
- Decontamination and chemical cleaning.
- Processing of reactor operating waste.

It should be noted that servicing operations performed during an outage, which must be kept as brief as possible, may require teams of over one thousand people, some of whom are Services business unit employees, while others are subcontractors and still others the customer's subcontractors. In this context, the business unit's mission usually includes an outage management component to coordinate the entire operation and the work of multiple contractors.

Capabilities

By definition, the Services business unit provides services at the customer's reactor site. For this reason, no equipment per se is required, except as necessary for work processes and equipment.

The teams are based mainly:

- in France, where 1,600 employees service EDF units;
- in Germany, with 400 employees; and
- in the United States, with 1,000 employees partly assigned to customer plants.

The operating nuclear plants of these three countries account for 60% of all the PWRs and BWRs in the world.

Market, competition and position

The market for reactor services consists of 377 reactors, including 297 PWRs or BWRs and 80 Candu-type or VVER reactors.

AREVA estimates the global reactor services market at €3B per year for PWRs and BWRs alone:

- 36% in Europe & South Africa,[12]
- 34% in North and South America, and
- 30% en Asia.[13]

Three major players control about 50% of this market:

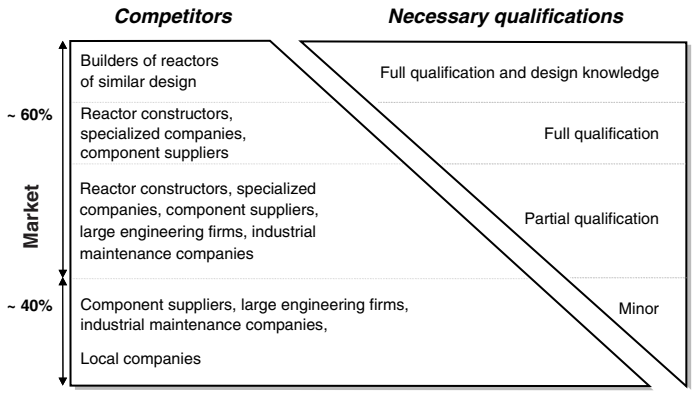
- AREVA, through the Services business unit, with about 20%;
- BNFL/Westinghouse, with about 20%; and
- General Electric, with about 10%.

Mitsubishi Heavy Industries, Hitachi, Toshiba and even many small, specialized ''Architect-Engineer'' companies, maintenance firms and

(12) South Africa operates two types of PWR reactors

(13) This figure is uncertain due to a relative lack of knowledge of the Japanese market, which is not an open market at this time.

component suppliers have the remaining 50%. Qualifications and entry barriers for this market are shown in the figure below.



AREVA's reactor Services business unit is the world leader in nuclear services and has the most complete skills portfolio for servicing PWRs, BWRs and VVERs.

The competition among the various players is increasingly intense and strongly encouraged by the utilities, as one of their major objectives is to minimize outage times while complying with strict safety, security and quality requirements. For example, average outage time has dropped in a few years from 60-70 days to 40-45 days, and some operators have had outages that lasted about fifteen days, or one third the current average outage time.

Operations and key events during the year

In terms of organization and business penetration:

- major multi-year contracts were signed in the three major world regions;
- in January 2002, the group opened a new subsidiary, Framatome ANP Canada, to meet the requirements of that market's twenty reactors;
- the scope of steam generator replacement services was expanded in the United States;
- in December 2002, the business unit won a contract to inspect twenty-nine EDF reactor vessels for the 2005 to 2010 time-frame; and
- in Rungis, a specialized center opened for remote analysis of steam generator tube data retrieved during on-site inspections.

In terms of portfolio operations, the highlights of the year were:

- the first refueling outage for unit 2 of Brazil's Angra plant took less than 28 days;
- a dual outage record was set in the United States:
  - Browns Ferry unit 3: 14 days, 17 hours, a refueling outage record for BWR and PWR plants in the United States;
  - Turkey Point unit 4: 15 days, 16 hours, the shortest outage on record for a PWR in the United States;
- the Sizewell outage, which was completed 16 days faster than the plant's best record to the satisfaction of customer British Energy, and for which teams from around the world cooperated under the new Alliancing contracting mechanism;
- simultaneous replacement of Fessenheim 1's steam generators, a primary loop section and the steam generator support; and
- replacement and repair of the coolant recirculation loops at the Oskarshamn BWR in Sweden.

Customer relations

The business unit's customers are electric utilities in Western and Eastern Europe (France, Germany, Belgium, Great Britain, Spain, Sweden, Switzerland, the Czech Republic, Bulgaria, Slovenia, Ukraine, etc.), Asia (China, South Korea, Japan, Taiwan, etc.), North and South America (United States, Canada, Brazil, etc.), and South Africa.

Deregulation pressures are pushing the market towards global solutions to achieve performance objectives, lower costs and extend plant service life while improving safety levels. These new requirements are leading operators to merge services under integrated maintenance services agreements and to adopt multi-year ''Alliancing'' type contracts that combine supplies, upgrades, engineering, services and even fuel, especially in the United States.

For example, in 2002, the Services business unit and partners Alstec and Mitsui Babcock proposed a risk- and benefit-sharing business concept based on transparency and performance. The estimated costs and the list of services to be performed were established jointly with the customer. If the target cost is exceeded, losses are shared. But if costs are lower, the team shares the profits with the customer. Overall performance, measured in terms of safety, quality and outage time, can impact the bottom line. This new type of contract relies on a field crew that works closely and in symbiotic fashion with the customer and that is able to overcome cultural differences to focus on each partner's objectives.

Sustainable development and environmental protection

Generally, the Services business unit is not engaged in activities that could have a significant environmental impact. Nonetheless, some of its teams have supported efforts by others to secure ISO 14001 certification.

Suppliers and raw materials

There is a marked trend in markets served by the business unit to concentrate a maximum number of operations into the shortest possible period of time. To achieve this, the business unit has entered into numerous partnership agreements with various suppliers to accommodate exceptionally heavy workloads or requests for specific services. These suppliers and service providers are certified in terms of quality and technical capability to ensure compliance with the base requirements for this type of work.

Research and development

In the general context of the group's R&D programs, the business unit's R&D efforts in 2002 focused mainly on:

- upgrading tools and servicing processes, and
- developing the TWS robotic arm for reactor vessel inspections.

Outlook and development goals

The business unit will continue to conduct its operations in a difficult business and economic environment characterized by:

- strong price pressures from customers,
- systematic competitive bidding, and
- the difficulty of finding subcontractors for certain services.

The solutions to these various challenges are many and varied:

- developing the new Integrated Maintenance Services concept to address customers' main concerns of shortening outage times and lowering maintenance costs;
- strengthening new partnering relationships with customers through special contracting mechanisms — alliancing — that do an even better job of meeting their financial concerns;
- continuing the quest for synergies among the business unit's operations in France, Germany and the United States; and
- expanding exports through partnerships and in some cases by acquiring local companies, such as Lesedi Nuclear Services (LNS) in South Africa in 2001.

In terms of the market, the expected trend is the consolidation of utilities and/or their procurement departments.

4.5.4 Mechanical Systems business unit

Key figures

(millions of euros)	2001	**2002**
Sales	38	36
Workforce at year end	740 people	672 people

Businesses

The Mechanical Systems business unit provides services that are historically linked to major fuel cycle plant construction programs in France and to facilities in the back end of the fuel cycle. Services include the design, manufacture, assembly, testing, maintenance and modification of mechanical units and their control systems. They also include the mechanical and welded fabrication of parts, components and fully engineered systems. The business unit's main specialty is the mass production of containers and internal equipment for nuclear fuel transportation and storage casks.

Capabilities

In the nuclear sector, the Mechanical Systems business unit has six facilities in France, two of which are dedicated to non-nuclear operations. Two licensed nuclear facilities and one environmentally regulated facility that formerly worked with uranium are now being cleaned up and dismantled.

Market, competition and position

The Mechanical Systems business unit works for the group's other business units, mainly in the nuclear area, and in particular for:

- the Engineering business unit, for its international projects;
- the Reprocessing business unit, for facility construction projects; and
- the Logistics business unit, for equipment used to manufacture the casks it designs.

The nuclear and non-nuclear markets served directly by the Mechanical Systems business unit are divided and thus difficult to quantify. The competition consists of small and medium businesses and of specialized subsidiaries of industrial and services groups.

Operations and key events during the year

In terms of organization, the highlight of the year was the business unit's reorganization into two separate units: nuclear manufacturing and conventional manufacturing, with the ultimate goal being to focus on nuclear operations.

In terms of production, work in the spent fuel transportation and storage cask fabrication market continued to grow.

Customer relations

Aside from services for the group's other business units, which accounted for a large majority of its work, the most significant portion of the Mechanical Systems business unit's sales came from certain CEA sites.

In the conventional manufacturing sector, the majority of sales came from the aerospace and automobile industries, with key customers

being EADS/Airbus, Dassault, Snecma, Delphi, Wagon Automotive, Garett and Renault.

Most contracts were on a fixed-price basis.

Suppliers and raw materials

The suppliers and raw materials used in the business unit's operations are conventional and off-the-shelf, although still subject to quality assurance requirements.

Outlook and development goals

Over the short to medium term, the Mechanical Systems business unit will focus on its core businesses, by:

- strengthening its services to the group's nuclear cycle facilities;
- bringing skills to major export projects, such as the MOX fuel fabrication facility in the United States and the spent fuel reprocessing plant in Rokkasho-Mura, Japan; and
- continuing to win market share in cask and component manufacturing, primarily for spent fuel storage.

4.5.5 Nuclear Measurement business unit

Key figures

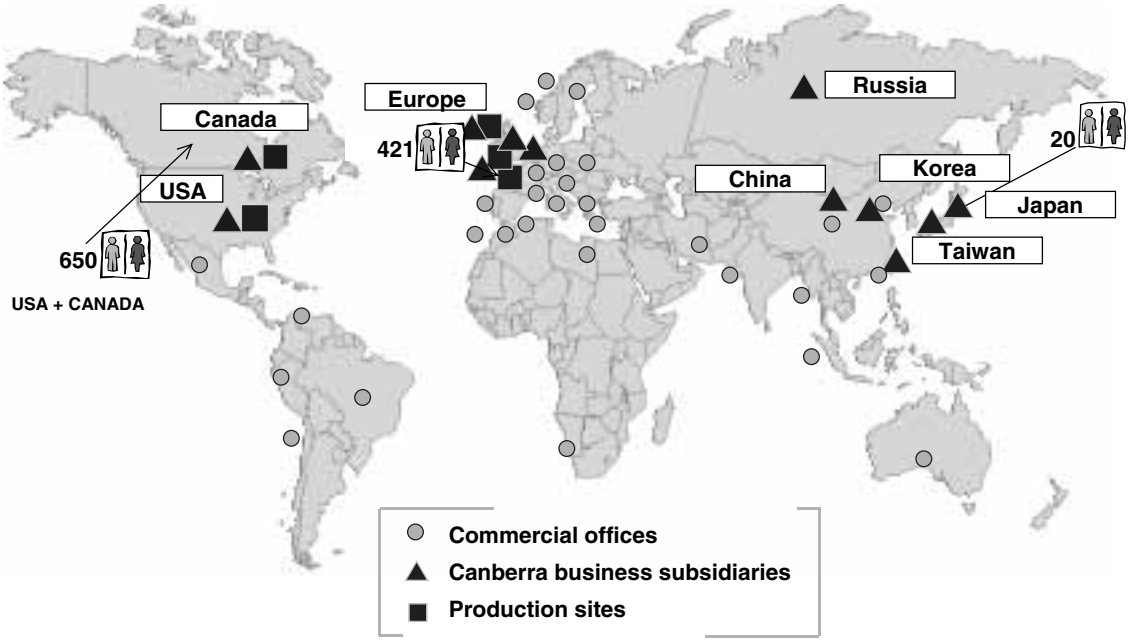
(millions of euros)	2001	**2002**
Sales	153	164
Workforce at year end	1 068 people	1 089 people

Businesses

The Nuclear Measurement business unit designs, manufactures and markets equipment and systems to detect and/or measure radioactivity in the fields of research, radiation protection, radiation chemistry, environmental monitoring and waste and effluent characterization.

Nuclear Measurement Capabilities

The business unit designs, manufactures and markets equipment worldwide, as shown in the figure below.



Market, competition and position

The global niche nuclear measurement market is worth an estimated €660M per year. The Nuclear Measurement business unit is the market leader with a 25% share.

The business unit operates in the United States (46% of sales), the world's largest market, and in Europe (28%, excluding France), France (13%), Asia (%) and elsewhere around the globe (5%).

Its principal competitors are:

- Bicron, of the Saint Gobain Group, with a market share of around 15%;
- Eberline, with about 8%; and
- MGP (France) and Ortec, with roughly 4% each.

The other 44% of the market is divided among some one hundred minor players.

Growth is slow at about 2 to 3% per year, although it could be bolstered over the coming years by the formation of the United States Department of Homeland Security. At the international level and especially in the United States, at issue is whether luggage should be systematically checked to ensure that there are no radioactive materials inside.

In the United States, the group has been consulted on this question by the U.S. government. The challenge is huge, involving the inspection of luggage at all airports and perhaps even at all ports and railway stations. If policy decisions are made in this direction, the nuclear measurement market could skyrocket.

Operations and key events during the year

The backlog of orders stood at €180M in 2002, or more than one year's worth of sales.

Sales have weakened in the U.S. in the aftermath of September 11, 2001, especially to the Department of Energy, where waste management and environmental management budgets have been cut.

In terms of markets, the trends that began in 2001 continued into 2002, namely:

- a sharp drop of investment in waste management equipment (sales of large turnkey systems);
- stable power station and laboratory equipment sales;
- prototype stage for major physics research projects; and
- rising sales of inspection and monitoring equipment.

The highlights of the year were:

- Canberra Japan KK was founded in March 2002. With this new company, the business unit's objective is to gain a foothold in Japan by becoming the leading Western manufacturer in this market.
- In May 2002, it was announced that the Warrington, Pennsylvania site would be closing, its ninety employees and operations to be transferred to the Meriden, Connecticut site, headquarters of the Nuclear Measurement business unit.
- The Department of Homeland Security was established in the United States, implementing U.S. government decisions after the events of September 11, 2001, and Congress voted to enact the department's budget.

Customer relations

Traditionally, the nuclear measurement market's customers are power stations, fuel fabrication and reprocessing facilities, radiation chemistry and environmental laboratories, scientific research laboratories and the medical sector.

In addition to these customers, the business unit also services public and private organizations in charge of radiological inspection at borders, and accident response teams. The response team customer category is growing, especially in the United States with the creation of the Department of Homeland Security.

Suppliers and raw materials

Among the raw materials the business unit uses, only germanium (a copper residue that does not exist in the natural state) is special because only two or three entities in the world are capable of producing the ultra-pure geranium crystals used to manufacture gamma-ray semiconductor sensors. Canberra is the leader among these three producers, and thus has a competitive advantage.

The other components or materials used by the business unit may be acquired without any particular constraint or risk.

Outlook and development goals

Over the coming years, the business unit should begin to reap benefits as R&D efforts turn out new products. The business unit should also see growth in sales tied to heightened radiological inspections, particularly in the United States, with the establishment of the Department of Homeland Security.

Over the short to medium term, the Asian market (Japan, South Korea, China and India, in order of importance) has significant growth potential due to new reactor construction scheduled in this region and the imminent startup of the Japanese spent fuel reprocessing plant, as well as scientific experiments conducted in India.

4.5.6 Technicatome business unit

Key figures

(millions of euros)	2001	**2002**
Sales	215	234
Workforce at year end	1 876 people	1 945 people

Businesses

Technicatome is an industrial engineering company in which AREVA has an 84% stake. It is a **turnkey contractor for safety systems**, which entails designing, managing, building, producing and operating technological systems requiring a high level of safety, reliability and availability.

These areas of specialization have applications in the nuclear, defense and transportation markets, including nuclear and non-nuclear naval propulsion systems and highly reliable electronic equipment and systems, both land-based and onboard. They require expertise in:

- electronic safety systems,

- acoustics and vibrations, and
- safety and risk analysis.

Capabilities

Technicatome is organized into two customer-oriented divisions supported by several companies and subsidiaries close to customers throughout France.

Markets, competition and position

Technicatome serves two basic markets: energy and propulsion. In both cases, it specializes in extreme operational constraints.

For thirty years, Technicatome has been designing and manufacturing nuclear boilers for naval propulsion for every generation of French submarines and the Charles de Gaulle aircraft carrier. Technicatome also provides propulsion-related services and systems, including operating and control systems, and noise reduction for facilities, systems and components. This business unit has unique experience as both designer and operator. In addition to designing nuclear boilers, it operates land-based prototype reactors used in a variety of tests and studies to verify the operational readiness of critical technologies:

- nuclear naval propulsion systems,
- full-scale testing of new technologies,
- endurance testing,
- predictive maintenance studies, and
- personnel training.

Technological entry barriers and clearance requirements for national defense projects result in little competition in this market, which makes up roughly 60% of sales.

There are no international business opportunities in nuclear naval propulsion, as countries that have chosen this type of propulsion understandably restrict entry to national suppliers with security clearances.

On the other hand, the energy and non-nuclear naval propulsion field opens up very promising international growth opportunities: customer demand is moving towards systems developers capable of making performance commitments, while shipyards are concentrating on their business as turnkey platform contractors and no longer wish to retain specific propulsion skills. Also, the emergence of cost-effective alternative technologies such as fuel cells and electric propulsion is attracting customers, and Technicatome fully intends to secure market share.

Transportation safety: ensuring equipment availability and human safety

Technicatome and its subsidiaries possess recognized and proven know-how in highly reliable equipment and electronic systems, both onboard and on land, which ensure the safety, comfort, reliability and availability of passenger and freight transport. 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, offering:

- safety monitoring systems for train conductors;
- operating parameter recorders, commonly called ''black boxes,'' to record operating events; and
- control systems to open and close subway doors.

Currently, the industrial market for transportation, manufacturing and environmental applications represents about 40% of Technicatome's sales.

Its competitors in this field are traditional systems and technology engineering firms.

Operations and key events during the year

Three key events occurred in 2002:

- a rise in orders received in its core business of nuclear propulsion along with rising sales in the energy and propulsion sectors for defense and civilian naval propulsion applications;
- very strong growth in safety systems for rail and urban transport, notably with a contract from French railways SNCF[14] to build a GPS-type (global positioning system) system to pinpoint a train's location on a rail line in real time;
- a large increase in orders and contracts in the field of large scientific measurement systems and for industry. Technicatome, as prime contractor, completed the construction of the Maâmora nuclear research center in Morocco for CNESTEN[15] and continues to serve as coordinator for the Megajoule Laser project, one of two simulation programs worldwide and proof of France's commitment to compliance with the International Nuclear Test Ban Treaty. Elsewhere, Airbus hired Technicatome to serve as prime contractor for the machines and tools portion of the finishing and testing station on the Airbus A380 final assembly line. The project is being carried out under a ''concurrent engineering'' approach at the Airbus site in Toulouse.

(14) Société Nationale des Chemins de Fer

(15) Centre National de l'Energie, des Sciences et des Techniques Nucléaires

Customer relations

Contracts are built on the principle that the turnkey contractor must provide performance and availability assurances (both technical and financial) for the system as delivered and during operations, as well as firm project management and a real mastery of the key technologies in the systems ordered by the customer.

In the energy and propulsion sector, the main customers are the French Navy, Armament Agency (Délégation générale à l'armement), Naval Shipyards (DCN[16]) and Atomic Energy Commission (CEA[17]). In the transportation, manufacturing and environmental markets, French railways SNCF, the Paris area transit authority (RATP[18]) and Airbus represent the lion's share of sales.

Sustainable development and environmental protection

Technicatome contributes directly to environmental protection and sustainable development through its dismantling engineering operations (nuclear cleanup) and through its measurement technologies and products to control environmental noise and acoustic vibrations. For its own operations, Technicatome has implemented a continuous improvement program built around environmental, labor and social criteria.

In the environmental area, Technicatome monitors and analyzes its water and energy consumption and waste volumes and releases, particularly greenhouse gas releases. In the labor and social areas, the business unit monitors its performance in the fields of health, risk and safety, and has taken measures to increase workforce diversity through greater representation of women and the handicapped.

Suppliers and raw materials

Technicatome now has the means to certify subcontractor quality for critical components (subsidiaries) and to limit procurement risks by diversifying its sources of supply. Technicatome does not own the nuclear materials used to manufacture nuclear propulsion fuels, nor does it control the related inventories. The CEA is the sole owner of these materials and retains control and management.

Research and development

In the general context of the group's R&D programs and in view of contracting opportunities these create for turnkey safety systems in the energy, propulsion, rail and urban transportation fields, the business unit focused its R&D efforts (4% of sales) on the following areas in 2002.

- Design studies for a 300 MWe power- and/or water-producing reactor deriving from the design of naval propulsion reactors to round out AREVA's reactor offerings.
- Controls for safety systems integrating new computer technology for rail, urban and nuclear applications.
- Exploratory research on energy systems, including pod-mounted engines, lithium-ion batteries, magneto-hydrodynamic conversion and electromagnetic catapult systems.
- Development of 2 and 5 KWe proton exchange membrane (PEM) fuel cells, the first stage in a program to design a 250 KWe cell by 2006.
- Development of innovative products for acoustical detection and acoustic vibration prediction.

Outlook and development goals

The development prospects for energy and propulsion operations suggest that sales will increase over the next few years. The French defense budget law has confirmed the country's commitment to large programs such as the Barracuda program, the fourth missile-launching nuclear submarine, the Megajoule Laser, and others.

Technicatome continues to focus on two strong areas for growth: energy and advanced naval propulsion systems on the one hand, and transportation safety systems and equipment, particularly for rail transport, on the other. The company will also continue to maintain a strong presence in the engineering of large scientific measurement systems and testing equipment.

4.5.7 Consulting and Information Systems business unit

Key figures

(millions of euros)	2001	**2002**
Sales	132	126
Workforce at year end	2 173 people	2 189 people

Businesses

The Consulting and Information Systems business unit has several business lines, described hereunder.

- ''Evolve,'' an approach to outsourcing information system (IS) management that evolves with customer needs, accounts for about 45% of the business unit's sales. In this approach, continuous improvement programs oriented towards streamlining

(16) Direction des Constructions Navales
(17) Commissariat à l'Energie Atomique
(18) Régie Autonome des Transports Parisiens

processes are part and parcel of the contract. This business line takes advantage of synergies with the business unit's other operations in consulting, systems integration, facilities management and document engineering. The business unit's IS outsourcing solution evolves with the customer's specific needs through a shared quest for new productivity opportunities and service continuity.

- Supply chain, information system and enterprise management consulting aimed at enhancing overall business performance accounts for 10% of sales.
- Information systems integration and optimization represents 30% of sales.
- Document engineering — the creation, management, use and circulation of the company's document resources — amounts to 15% of sales.

Organization and capabilities

The business unit is organized into two main functional groups, described below.

- Information systems (1,800 employees):
  - fifteen operational entities throughout France, some of which are repositories of know-how in a particular area of expertise; and
  - three service centers providing hosting services, two of which (Chambéry and Cherbourg) also offer remote operations and management of systems and networks.

Internationally, the business unit entered into strategic partnerships with manufacturers, software publishers, operators and enterprise management consulting firms to manage projects in Europe, the United States and Asia.

- Document engineering (500 employees):
  - four offices in key regions of France.

Market, competition and position

The business unit's share of the information technology (IT) subcontracting market in France was €28M in 2002. The market outlook is favorable, with growth projected at of 8% by 2005, boosting the total to €37M, driven mainly by average annual growth of 12% in the outsourcing market (Source: Pierre Audoin Conseil).

The business unit is a major player in the French market and became the leading computer services provider to French industry in just five years (Source: Logiciels & Systèmes, July 2002). The unit made a name for itself in the French outsourcing market by conquering fourth place in 2002 (Source: Pierre Audoin Conseil).

There are many competing service providers in the IT sector. The unit's main competitors are:

- Cap Gemini Ernst & Young, the leading computer services firm in the French market;
- IBM Global Services, number two in the market; and
- Atos, ranked third.

Competition is more dispersed in the specialized document engineering market, with smaller players such as Sonovision (technical documentation), Sedoc (entire design, production and distribution chain) and Syselog.

Operations and key events during the year

The slump in industrial investment and the economic slowdown in 2002 affected the IT sector generally, and did not spare the business unit. Nevertheless, large contracts won in the outsourcing segment provide a basis for future growth:

- Natexis Banques Populaires, for which the business unit provides global ''Evolve'' outsourcing for 10,000 work stations and 2,500 printers divided among fifteen subsidiaries at thirty sites in the greater Paris area and throughout France. This was the largest outsourcing contract to be awarded by the banking sector in 2002.
- The City of Issy les Moulineaux, true to its reputation as a pioneer in the use of innovative technologies, was the first local government to have an outside supplier assume full responsibility for its information systems. This project won the Cristal Achats Services award for excellence, given to the business unit by French association of procurement professionals CDAF[19], the services group of business association Medef,[20] and outsourced services institute IES[21]. Each year, the Cristal Achats Services Award recognizes the customer/service provider pair with the best outsourcing operation.
- The business unit also successfully developed production and logistics applications for Rossignol, Gefco and the Cité des Sciences, among others.

(19) Compagnie des Acheteurs de France

(20) Mouvement des Entreprises de France

(21) Institut Esprit Service

In the document engineering segment, the French Navy awarded an important contract to develop and implement a single system for all of its internal and external documentation, whether in paper or electronic format. The automated document processing and management system must be capable of productivity gains in processing a wide diversity of documents.

Customer relations

A majority of the business unit's contracts represent recurring business, primarily due to strong growth in the outsourcing segment, where more than 70% of the contracts are for 3 to 5 year terms. The business unit enjoys a contract retention and renewal rate of over 96% in this segment, one of the best in the industry.

The business model is adjusted to suit individual customer preferences: fixed price, cost-plus, performance contracts based on resources or results . . . the door is wide open to flexible and customized contracting mechanisms.

The business unit does not choose software or software publishers for the customer. It may provide decision support or maintain the chosen solution if requested, but it does not provide upgrades or otherwise ensure the longevity of the solution.

Suppliers and partnership agreements

The business unit has an active partnering program that targets manufacturers, publishers (SAP, for example), operators and enterprise management firms. These partnerships enable us to offer a range of unique and synergistic skills in areas such as consulting, systems integration, maintenance, training, operation and outsourcing, and to ensure that our employees are completely familiar with the products.

Through these partnerships, the business unit consolidates responsibility for projects involving several entities under the authority of a single individual in charge of managing the project team and leading the project to successful completion. The business unit commits, under fixed price contracts, to providing genuine value to its customers and ensuring that every member of the project team offers the best solution available for the need at hand.

Outlook and development goals

The IT market will continue to be characterized by low investment levels, at least in the first half of 2003, and strong price pressures from the competition. Ultimately, the global IT market can be expected to recover, returning to growth rates of around 5% per year.

Over the mid-term, the business unit will continue to seek growth opportunities in each of its four business lines.

4.6 Back End division

Key figures

(millions of euros)	2001	**2002**
Sales	2 213	2 087
Operating income	10	235
Workforce at year end	10 103 people	10 719 people

The Back End division includes reprocessing and recycling services performed after nuclear fuel has been used in the reactor. In line with its commitment to sustainable development and environmental protection, AREVA has developed advanced technologies to separate materials and recycle 96% of the spent fuel. We are the world leader in this market. Countries with major nuclear power programs — including Japan, Switzerland, Australia, Germany, Russia and France — are turning to this solution for their spent fuel management. In the United States, the Bush Administration's National Energy Policy states that this spent fuel management option, banned since the 1970s, must be reconsidered. AREVA also offers solutions to customers who have chosen dry storage for their spent fuel.

4.6.1 Reprocessing and Recycling business units

Key figures

(millions of euros)	2001	**2002**
Sales	1 797	1 648
Workforce at year end	5 948 people	6 161 people

Business areas

The Back End division reprocesses and recycles spent nuclear power reactor fuel. In line with its commitment to sustainable development and environmental protection, AREVA has developed advanced technologies to separate materials and recycle 96% of the spent fuel. These business units contribute to our goal of reducing the long-term impact of our operations in three specific ways:

- by recycling recovered uranium and plutonium into fresh fuel to conserve natural resources;
- by reducing non-recyclable waste volumes generated by nuclear power plants; and
- by decommissioning our facilities at the end of their service life to protect the environment.

In spent fuel reprocessing, recyclable uranium and plutonium are separated from final waste, including fuel assembly parts and fission products, through a series of physical and chemical operations.

The energy materials (uranium and plutonium) recovered through reprocessing, especially plutonium, can be recycled into nuclear reactors in the form of MOX, a different kind of power plant fuel made of a mixture of uranium and plutonium oxides. AREVA dominates the market for recycling technologies and has become the world leader in MOX fuel fabrication in the past few years.

Capabilities

The Reprocessing business unit has two commercial plants: the La Hague plant in northern France and the Marcoule plant in southern France.

The COGEMA — La Hague plant

The La Hague plant reprocesses spent nuclear fuel from nuclear power reactors. When spent 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%). Reprocessing involves separating the uranium, plutonium and waste into separate streams and processing them into stable forms:

- The uranium is purified for reuse and concentrated as liquid uranyl nitrate. It can then be converted into an oxide and recycled to make fresh fuel (see 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 (mixed oxide).
- The fission products, which contain most of the spent fuel's radioactivity, are calcined and incorporated into an inert glass matrix that is poured into universal canisters (CSD-V canisters) made of stainless steel. The metal structural components of the fuel are compacted and also placed in universal canisters (CSD-C canisters) of stainless steel.

The La Hague plant has two production lines, UP2 and UP3, each with a capacity of 1,000 metric tons (MT). The combined licensed nominal capacity for the La Hague plant is 1,700 MT per year.

The Marcoule plant

The first reprocessing plant to be built and operated in France, UP1, shut down in late September 1997. Cleanup of the UP1 plant began in 1998, with three programs defined:

- Decommissioning (MAD[22]): This program consists of in-depth cleanup of the facilities to a radiological level enabling safe and cost-effective dismantling operations.
- Mapping and Dismantling (DEM[23]): This involves dismantling the most contaminated equipment to ''level II'', the level at which the facilities are no longer considered to be licensed nuclear facilities (INB[24]) and become environmentally regulated facilities instead (ICPE[25]).
- Waste Retrieval and Packaging (RCD[26]): This program pertains to waste generated in the early days of site operations that have been in storage since then. The waste will be retrieved, sorted, processed if necessary and repackaged.

The Recycling business unit has three commercial production plants:

Melox

This plant fabricates MOX fuel made of a mixture of uranium and plutonium oxides. Its licensed capacity of 115 MT of oxide per year was achieved in 1998 under an EDF contract. The plant was designed to accommodate production for other utilities in addition to EDF.

COGEMA-Cadarache

The Cadarache plant produces around 40 MT of MOX fuel per year, primarily for German utilities. However, due to new seismic standards, MOX production is to be shut down no later than July 31, 2003.

Belgonucléaire's Dessel plant

AREVA has a long-term contract with Belgonucléaire that sets aside a portion of the plant's production capacity (40 MT per year) for MOX fuel fabrication.

In the mid-term, AREVA plans to concentrate MOX production at the Melox plant, where production may be increased without additional investment. To this end, a license request has been submitted to raise the plant's nominal capacity to 145 MT per year. The public inquiry process relating to this request is in progress.

Market, competition and position

The world market for spent fuel reprocessing and recycling is extremely concentrated and has strong barriers to entry, such that

(22) Mise à l'Arrêt Définitif
(23) Surveillance et Démantèlement
(24) Installation Nucléaire de Base
(25) Installation Classée pour la Protection de l'Environnement
(26) Reprise et Conditionnement des Déchets

only a few companies have succeeded in building reprocessing and recycling facilities. These barriers include:

- an oligopolistic industry with only a limited number of companies capable of providing recycling services, including AREVA, the only company to have large capacity facilities;
- major technological barriers;
- extremely high development costs for substitute technologies;
- capital-intensive industry (investment in facilities); and
- environmental regulations and barriers.

With an annual reprocessing capacity of 1,700 MT, the COGEMA-La Hague plant is the largest spent fuel reprocessing plant in the world, giving AREVA an effective worldwide market share of 47% in 2002 and 38% of projected effective worldwide capacity in 2005. With its installed capacity and operating experience, AREVA is number one in reprocessing worldwide, followed by British Nuclear Fuels Ltd. (BNFL) and Russia's Minatom.

Worldwide reprocessing capacities

Nuclear fuel	Nominal capacity (MT/yr)	Effective capacity
Light water reactor fuel:		
France, La Hague (AREVA)	1 700	1 700
RU, Sellafield (Thorp)	1 200	Max. 900
Russia, Chelyabinsk (Mayak)	400	Max. 150[27]
Japan (Rokkasho-Mura, not before 2005)	800	800
Total in 2002	3 300	2 750
Total in 2005 (at the earliest)	4 100	3 550

Source: AREVA, World Nuclear Association

There are currently four plants in the world that produce MOX fuel in commercial quantities. Two are in France (AREVA), one is in Belgium, and the fourth (128 MT/yr) started up in the United Kingdom in 2001 (BNFL). In 2000, about 190 MT of MOX were produced containing 10-12 MT of plutonium. Worldwide MOX fuel fabrication capacity is currently on the order of 300 MT/yr for 18-22 MT of plutonium. AREVA's share of installed worldwide capacity is therefore around 57%.

Operations and events during the year

- The EDF contract signed in 2001 entered into effect in 2002, securing plant work load through 2007, with EDF granting a reprocessing commitment through 2015.
- The technical support contract with Japan Nuclear Fuel Limited (JNFL) for startup of its Rokkasho-Mura reprocessing plant also became effective in 2002. In a spirit of teamwork, cooperation intensified in 2002 with the future operators of the Japanese sister plant to La Hague, scheduled to startup in the next few years, strengthening the ties between the two countries in the field of spent fuel reprocessing.
- In terms of production, 2002 saw the integration of the last two major facilities at the La Hague plant, marking the first time all production resources in the revamped and optimized plant are on line. The plant received ISO 14001 certification for its environmental management system in May 2001. It had previously received ISO 9001, 2000 version certification in November 2002 in recognition of its quality assurance programs at this technologically advanced site with 5,000 employees.
- Final waste was returned to Japan, Belgium, Switzerland and Germany in 2002.
- The first phase of the MAD program at the UP1 plant in Marcoule managed by Codem, a joint venture of CEA, EDF and COGEMA, was completed in 2002.
- In the second half of 2002, the Reprocessing and Recycling business units signed spent fuel reprocessing and recycling contracts with several German and Swiss utilities extending through 2009.
- The plutonium purification and conditioning facility (R4) at the COGEMA-La Hague plant entered service in April. In May 2002, the spent fuel hulls compaction facility (ACC) produced its first universal canister of compacted waste (CSD-C canister). The ACC facility will produce some 2,000 waste packages per year that will be shipped back to foreign customers or disposed of in Andra's future geologic repository.

(27) Primarily VVER fuel, Mayak cannot reprocess western PWR or BWR spent fuel.

- The Cadarache plant must shut down commercial production of MOX fuel in July 2003. The French government has authorized a public inquiry that could lead to a license amendment for the Melox plant, allowing it to increase capacity to 145 metric tons of heavy metal (MTHM) per year. The Melox plant entered service in 1995 and has already achieved its licensed annual production capacity of 115 MT of oxides (100 MTHM). The public inquiry process should be completed in 2003.

Customer relations

The principal customers of the Reprocessing and Recycling business units are electric utilities, including French utility EDF and German, Belgian, Swiss, Dutch and Japanese utilities.

Recent contracts are for global fuel services — transportation, reprocessing, uranium conversion and MOX fuel fabrication. The Reprocessing business unit coordinates services provided by several business units (Logistics, Chemistry and Recycling) under these contracts.

The Reprocessing business unit also reprocesses test reactor fuels for research centers and laboratories:

- Commissariat à l'Energie Atomique (CEA) and Institut Léo Langevin in France,
- the Mol research center in Belgium, and
- Australian Nuclear Science and Technology Office (ANSTO) in Australia.

In the nuclear field, as in most industrial sectors, customers are increasingly seeking global services that include both the industrial processing or manufacturing component and a significant number of related services.

Sustainable development and environmental protection

In line with AREVA's environmental policies, the Reprocessing and Recycling business units have adopted sustainable development programs that are fully integrated into their existing continuous progress programs. These programs include efforts to win ISO 14001 certification for La Hague, rewarded in 2001, and the Marcoule plant's commitment to securing ISO 14001 certification in 2003.

Work focuses on continuing to minimize releases in water and in the air, even though annual radiation exposure levels by the most affected members of the public are so low that they are deemed insignificant by the experts — comparable to one day of exposure to naturally-occurring background radiation.

On this subject, it is important to note that the group adopted continuous progress goals of reducing releases using the best available and most cost-effective technologies at least ten years ago, without being prompted. We invested more than 9 billion euros to quadruple plant production capacity while simultaneously reducing releases by more than 90%.

A recent independent study to identify and compare radioactive release sources in the Atlantic for the European Commission, known as Marina II, shows that the nuclear industry's radioactive contribution to the Atlantic and North Sea zone (the so-called Ospar zone) is minor compared to the declining contribution of the fertilizer (phosphates), oil and gas industries.

In 2002, the La Hague plant conducted numerous studies aimed at reducing ruthenium gas releases and performing more detailed analysis of chemical species present in the plant's gaseous releases. These activities will continue in 2003.

With respect to environmental impacts, the plants have conducted more detailed studies on chemical impacts to identify and isolate areas for improvement. The Reprocessing business unit is also performing an assessment of radiological impacts on habitat so as to optimize its continuous improvement programs.

Suppliers and raw materials

Ninety-six percent of a utility's spent fuel consists of valuable raw materials that may be recycled, and these constitute the feed material for operations of the Reprocessing and Recycling business units. The other materials needed for operations consist of acids and conventional industrial products. The metal components used to make MOX fuel assemblies are identical to those used in the fabrication of enriched uranium fuel.

Numerous external suppliers perform non-strategic functions at some of the group's sites, particularly the COGEMA-La Hague plant. These companies are subject to rigorous selection criteria and are closely supervised to ensure quality and compliance with health and safety requirements applicable to all operations at these sites. The site operators and the suppliers hold annual meetings to review continuous progress objectives and performance.

Research and development

In the reprocessing field, R&D programs focus on two activities: adapting technologies to new customer requirements, and minimizing environmental impacts from operations.

Different fuel characteristics

- Higher burnup rates for fuel to be reprocessed have required waste and waste package testing and characterization to optimize final waste volumes.
- R&D on MOX fuel reprocessing was completed and will be used to develop required safety documentation for an experimental reprocessing campaign.

Waste characterization and legacy waste packaging

- Support was provided for the planning and performance of a bituminization test on certain waste.
- COGEMA sent the first operational mathematical models on long-term waste package behavior to Andra.

Outlook and areas for growth

The La Hague plant will continue to operate over the mid- to long-term, reprocessing spent fuel[28] from EDF reactors (850 MT/yr) and from European customers in Germany, Switzerland and the Netherlands, giving an estimated combined production capacity of 1,100 to 1,200 MT of fuel per year. The future operators of the Rokkasho-Mura reprocessing plant in Japan will continue to train at the La Hague site.

Also, return shipments of vitrified waste to foreign customers will continue apace. More than half of the vitrified waste to be returned to Japan has already been shipped.

The spent fuel hulls compaction facility (ACC) and the plutonium purification facility (R4), both of which entered service in 2002, will achieve their nominal throughput. All production operations at the La Hague plant will thus be performed in new or upgraded and optimized facilities.

The outlook for MOX fuel is as follows:

- EDF: 100 MT/yr, consistent with the 850 MT/yr of spent fuel reprocessed;
- Germany: 30 to 40 MT/yr through 2010;
- Japan: 35 MT/yr through 2010;[29]
- Switzerland: 10 MT/yr over the coming years.

Pursuant to revised nuclear weapons non-proliferation programs with Russia and a recommendation by the U.S. National Security Council (NSC), the U.S. Secretary of Energy announced that the Department of Energy (DOE) has elected to convert 34 MT of defense plutonium into MOX fuel via a project awarded to a team consisting of Duke, COGEMA and Stone & Webster. DOE estimates the total cost of the program at $3.8 billion over a period of twenty years. In addition, the Bush Administration's National Energy Policy, put forth in 2001, states that MOX recycling must be considered a viable ''option'' for spent fuel management and indicates that a large amount of its plutonium inventory will be downblended for use in U.S. nuclear power plants.

4.6.2 Logistics business unit

Key figures

(millions of euros)	2001	**2002**
Sales	203	200
Workforce at year end	812 people	843 people

Business areas

The Logistics business unit conducts the following operations

- cask design and fabrication management[30] and other specialized equipment fabrication to transport and/or store nuclear materials from the front end and back end of the fuel cycle;
- nuclear materials transportation management and management of the transportation fleet;
- road transportation of nuclear materials in France;[31]
- logistics for nuclear and non-nuclear industries.[32]

Capabilities

Due to the international character of its business, the Logistics business unit has three offices worldwide:

- in the United States (90 people), where it has two subsidiaries specialized in cask design and fabrication and nuclear materials transportation management;
- in Japan (30 people), where it specializes in engineering, transportation management, and at-reactor cask management; and
- in Europe (750 people), via:
  - COGEMA Logistics, the business unit's lead company (325 people), which manages the business unit's technology and know-how;
  - Lemaréchal Celestin, a ground transportation company (140 people) that operates a fleet of 160 vehicles as well as COGEMA's rail terminal in Valognes and port facility in Cherbourg for nuclear materials transportation;
  - Mainco (290 people), which specializes in nuclear and non-nuclear logistics; and

(28) As of end-2002, more than 7,000 MT of spent fuel were in storage in the COGEMA-La Hague storage pools. At a throughput rate of 1,200 MT per year, this corresponds to six years of work load already in inventory.

(29) A lower amount is estimated for 2003 due to delays in the Japanese MOX program.

(30) Through Transnuclear, Inc. (U.S.), Transnuclear Tokyo (Japan) and its subsidiary COGEMA Logistics.

(31) Through its subsidiary Lemaréchal Celestin.

(32) Through its subsidiary Mainco

– subsidiaries and affiliates in Germany, Belgium, Canada and the United Kingdom, which serve the needs of those markets.

Market, competition and position

The business of front-end/back-end transportation and design of nuclear materials transportation and/or storage casks is characterized by:

- the wide variety and large number of materials involved;
- the international nature of the market; and
- regulatory requirements that are both stringent, particularly for the back end of the fuel cycle, and subject to change, and that are different for each transportation mode and applied differently in each country.

The market in which the Logistics business unit operates centers on the needs of electric utilities that operate nuclear reactors. To a lesser extent, it includes the needs of 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, based on installed nuclear generating capacity, availability of fuel cycle facilities, and the back-end option chosen by the utilities, discussed below.

In Europe, in addition to French utility EDF, most nuclear utilities, especially German utilities, use the fuel transportation services of the Logistics business unit, which also provides dry storage capacities to Germany, Belgium and Switzerland.

In the United States, utilities do not presently recycle spent fuel from their power plants. The U.S. 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, and the U.S. units of the Logistics business unit are leaders in this market.

Japan reprocesses its fuel in France and Great Britain, pending the availability of the national reprocessing and recycling industry it is building with the help of the AREVA group. It uses the services of the Logistics business unit to transport the recycled MOX fuel and final waste back to Japan.

The Logistics business unit and its lead company, COGEMA Logistics, is the only entity to operate in every aspect of the fuel cycle on an international level. Its competitors in various market segments are shown in the following table.

	Transportation	Cask and Equipment
Europe	NCS, BNFL, RSB	GNS/GNB, NAC, BNFL
United States	NAC, TLI, Edlow	Holtec, NAC, GNS/GNB
Asia	NFT, Japanese traders	MHI, HZ, JSW, NAC, Holtec

- The business unit's spent fuel transportation services to La Hague for EDF and German, Dutch and Swiss utilities make it the European leader in the back end of the fuel cycle.
- In the front end of the fuel cycle, the transportation market is highly segmented, less specialized and therefore highly competitive. The Logistics business unit is nonetheless present in these markets in Europe, North America and the Far East.
- The business unit sells a broad range of equipment meeting the latest requirements. Its ability to offer comprehensive solutions gives it a competitive advantage.

Operations and events during the year

Key operations for the year include:

- Transportation of 193 spent fuel casks for EDF, a record in terms of number of annual transports.
- ISO 9001, 2000 version certification for the business unit's lead company.
- A high level of spent fuel and vitrified waste transportation activity for German customers.
- More than 1,000 shipments of materials for the front end of the fuel cycle.
- Nearly three million kilometers without an incident, earning the French ministry of transportation's Golden Truck award for safety.
- The first national transportation emergency management drill, which was carried out successfully in association with governmental agencies.

Key commercial operations include:

- In **Europe**, supply contracts were awarded for more than forty spent fuel storage casks with German and Belgian customers, while Mainco won important supply management contracts.
- In the **United States**, numerous contracts were awarded for spent fuel storage solutions.
- In **Japan**, electric utility problems related to public acceptance issues resulted in postponements of MOX fuel shipments from the fuel fabrication plants.

Customer relations

The Logistics business unit's primary customers are European utilities in France, Germany, Switzerland, Belgium and the Netherlands as well as some of the largest utilities in the United States and Japan, nuclear fuel fabricators, nuclear materials brokers, and national organizations such as the U.S. DOE or Swedish spent fuel management agency SKB.

Most of the business unit's contracts are covered by long-term guarantees, including back-end transportation activities and the

supply of transportation and storage casks. In fact, some of our contractual concepts have set the international standard over the years, particularly with respect to loading and unloading interfaces in fuel cycle facilities.

Sustainable development and environmental protection

The Logistics business unit is fully engaged in an environmental management initiative that resulted in ISO 14001 certification for transportation subsidiary Lemaréchal Celestin in 2002. COGEMA Logistics, the business unit's lead company, undertook its own initiative to secure ISO 14001 certification in 2003 for all of its operations and all three sites.

Suppliers and raw materials

In addition to high-impact steel alloys and other conventional metallurgical materials, the business unit's cask fabrication subcontractors use borated stainless steel alloys (gamma radiation shielding) and borated aluminum alloys, both of which require specialized expertise. Supply quality and availability are closely monitored for these materials. Monomer resins (neutron radiation shielding) are also an important component in cask fabrication, but are not deemed critical from a supply standpoint. Our principal equipment suppliers are large welding and mechanical companies from around the world that use certified fabrication processes.

The business unit uses every mode of inland and maritime transportation available — road, rail, sea and river. Suppliers are chosen based on quality and safety criteria first, before cost is even considered.

Research and development

The business unit conducts research and development in partnership with many laboratories and with our partners in the United States and Japan. Key research and development areas are:

- cask performance, particularly cask materials; and
- safety demonstrations and safety margin data, particularly through optimization of computer modeling tools.

In addition to this work, the unit is actively involved in technology monitoring and in a program to protect proprietary innovations. Five patent applications were submitted in 2002.

Outlook and areas for growth

Business will be lively in the mid-term, sustained by a large backlog of orders. In the mid- to long-term, political decisions in Germany on the back end of the fuel cycle are creating demand for storage. The Logistics business unit, already present in the storage market in Belgium and Switzerland, successfully penetrated this market in Germany in 2002.

In the United States, the selection of a final disposal site or the startup of centralized interim storage sites should trigger a very large spent fuel transportation market, and the business unit is gearing up for this.

In Japan, large storage capacities will also eventually be needed, given the size of that country's nuclear power program. Participating in this market requires a strong local presence, which the business unit acquired in 2002 by taking a controlling interest in Transnuclear Tokyo.

The business unit has set two major goals for growth:

- to be a world-class player 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.

4.6.3 Nuclear Cleanup business unit

Key figures

(millions of euros)	2001	**2002**
Sales	88	100
Workforce at year end	2 190 people	2 556 people

Businesses

The Nuclear Cleanup business unit provides services to nuclear facility operators in five areas:

- nuclear waste processing and packaging;
- facility and equipment decontamination and cleanup;
- dismantling of decommissioned facilities;
- radiation protection for individuals and the environment, and certification of nuclear waste and waste packages; and
- nuclear logistics during outages for routine maintenance of nuclear power reactors and fuel cycle facilities.

Three categories of personnel work in each of these areas, usually in the customers' facilities:

- maintenance personnel;
- operations personnel for certain customer facilities; and
- engineers for feasibility studies, project planning and project management.

The business unit also provides health, safety, quality assurance and radiation protection training to its own personnel and to other nuclear service companies.

Capabilities

Most of the business unit's services are performed at customer sites. In addition to its human resources, the business unit owns an

environmentally regulated facility (ICPE[33]) where it maintains contaminated equipment, recertifies equipment, and processes low-level waste, both for its customers and for its own account.

Market, competition and position

The business unit conducts most of its operations in France. EDF and the CEA have indicated their intention of dismantling their decommissioned facilities, creating a major market.

The French nuclear cleanup market was about €270M in 2002, and has increased 4% per year for the last six years. EDF, which is increasingly turning towards ''global services'' type contracts, is by far the largest customer, representing close to half of the market.

The business unit is the leading supplier of nuclear cleanup services in France, with a market share of close to 40%. The main competitor is the Onet group (27%) through its subsidiary Onectra, which operates in the same sectors and for the same customers. Suez, primarily through its subsidiaries Endel and Sita, is also beginning to win business and presently has a 10% market share, making it a leading competitor. Bouygues, with a 4% market share, and Vinci, with a 3% share, are also competitors in the dismantling sector. The many other competitors are smaller companies. Foreign companies have yet to penetrate the market. Supply and demand are pretty much in balance.

For the last three years, demand has been characterized by strong price pressures from all customers. The combination of price pressures and fierce competition has reduced margins, requiring productivity gains to maintain profitability.

Operations and events during the year

Key events during the year were as follows:

- Steam generator replacement at EDF's Fessenheim 1 reactor in collaboration with the Services business unit.
- A substantial level of dismantling project planning and execution for decommissioned facilities of EDF and various CEA sites.
- Contributions to improved operating performance at the Socodei/Centraco waste melting and incineration facilities, which the business unit operates.
- Several multi-year (3-5 years) contracts signed for a score of EDF power stations.
- A nuclear cleanup technology transfer and technical support agreement with the China Institute of Radiation Protection under which the business unit will transfer certain advanced decontamination processes used in France and train the Institute's specialists beginning in 2003.
- To meet the increasing demand for training, the business unit helped start a national decommissioning and dismantling school[34] in partnership with nuclear technology institute INSTN,[35] which will offer degree programs to customer employees and to service providers involved in decommissioning and dismantling programs.

Customer relations

The vast majority of the business unit's customers (95%) are nuclear companies: utilities (EDF), fuel cycle companies, nuclear waste processing companies such as Socodei (melting and incineration), waste disposal agency Andra, and the CEA.

EDF sharply revised its contracting programs for maintenance and nuclear services in 2002 in favor of a more global and integrated approach which combines services previously subcontracted to several different entities. This approach has prompted companies either to acquire the necessary skills in-house or, more often than not, to enter into partnerships. The Nuclear Cleanup business unit secured all of the needed skills and/or partnership relationships to serve these global services markets.

EDF also increased the contract term for global services to multiple years (usually 3-5 years) and the scope to include several nuclear production sites in a given ''regional block''.

This change works to the advantage of larger suppliers, including the Nuclear Cleanup business unit, by allowing them to use synergies and package services offered by their various entities to meet customer requirements.

Sustainable development and environmental protection

Virtually all of the Nuclear Cleanup business unit's operations are related to environmental protection and sustainable development.

The business unit's environmentally regulated facility does not release any liquid or gaseous effluent, as confirmed by regular checks and inspections by the relevant prefectoral office. Waste is packaged and shipped to the Andra[36] disposal site.

Outlook and areas for growth

The market should grow significantly in the years to come due to new decommissioning and dismantling programs and to greater customer emphasis on cleanliness and radiation protection for individuals and well as for the environment.

(33) Installation classée pour l'environnement

(34) Ecole Nationale du Démantèlement

(35) Institut National des Sciences et Techniques Nucléaires

(36) Agence Nationale pour la gestions des Déchets Radioactifs

EDF and the CEA are each expected to spend €3M over the next twenty years on these programs, making it a very large potential market for the business unit.

4.6.4 Engineering business unit

Key figures

(millions of euros)	2001	**2002**
Sales	126	139
Workforce at year end	1 153 people	1 159 people

Businesses

The Engineering business unit provides facility design and construction services to worldwide nuclear operators as well as plant modifications and optimization of existing facilities. It also provides operating support in areas such as safety analysis and engineering calculations.

The business unit operates primarily in the front end and back end of the nuclear fuel cycle, and its services encompass every stage in the plant life cycle:

- process development and facility design;
- project implementation, including project management, procurement, construction, testing and startup;
- operating support; and
- facility and site cleanup and decommissioning programs.

The business unit's almost 50 years of skills acquisition and process development for nuclear fuel cycle facilities translate into unique added value and operating experience for its customers.

Capabilities

The Engineering business unit consists of design and engineering personnel based in France and in the United States (subsidiaries NHC[37] and CEC[38]), and advance teams at construction sites, particularly in Japan, where the group's personnel make up the country's largest community of French expatriates. The business unit also has a development and testing facility in northern France.

Market, competition and position

The business unit is active in the following market segments:

- spent fuel reprocessing;
- MOX fuel;
- spent fuel and waste management, including vitrification; and
- site cleanup and plant decommissioning.

The Engineering business unit conducts business in every country with nuclear power programs through its operating units in France and in the United States.

The nuclear fuel cycle market is stagnant and competition is strong. Key selection criteria for customers in need of engineering services are cost-effectiveness, proven processes and technologies, and superior safety and technical performance.

In France, the AREVA group is the Engineering business unit's primary market. Internationally, the business unit has been active in Asia, North America and Europe for many years, whether for major projects of strategic interest to the group or more specialized projects. The business unit has built a reputation for bringing straightforward and cost-effective solutions in addition to its know-how in the group's processes and technologies.

The business unit's main customers are the CEA, EDF and Andra in France; JNFL in Japan; the DOE in the U.S.; AECL[39] in Canada; and the UKAEA[40] in Great Britain.

Competition is plentiful, although region-specific. The main competitors are:

- in France: Thalès EC and Comex (Onet group);
- in Europe: BNFL and RWE Nukem;
- in the United States: Bechtel, Fluor Daniel, WGI, Jacobs;
- in Japan: the big ''makers'' MHI, Toshiba and Hitachi — JGC.

It is difficult to provide a market assessment because, paradoxically, the market for engineering services is a narrow one and highly oriented towards the back end of the fuel cycle. In fact, the market is limited to major projects cited previously (MOX). Other projects relate primarily to spent fuel and waste management or site cleanup and plant decommissioning, and are treated as operating costs (waste) or as draw-downs of provisions by the customer. Regulations and political decisions largely determine the growth of these markets.

Operations and events during the year

In 2002, the Engineering business unit strengthened its position in the radioactive waste and spent fuel management market and in the site cleanup and plant decommissioning market. Engineering sales revenue was €139M.

(37) Numatec Hanford Corporation
(38) Cogema Engineering Corporation
(39) Atomic Energy of Canada, Ltd.
(40) United Kingdom Atomic Energy Authority

Key events of the year included:

- Signature of a geologic repository design contract with Andra for long-lived waste.
- Contract award for retrieval of breeder reactor fuel at the Dounreay site from UKAEA, to be performed in association with another AREVA business unit.
- Startup testing of the multi-purpose waste and spent fuel storage facility built for the Dutch nuclear waste management agency.
- Continued work at the Chernobyl site in the Ukraine relating to stabilization and the shelter over the damaged reactor.
- Ongoing cleanup work at the Hanford site in the United States, where the Engineering business unit is transferring know-how relating to waste and spent fuel management, decommissioning and dismantling, and sampling and analysis.
- Participation in startup testing for the Rokkasho Mura spent fuel reprocessing plant in Japan, which is based on technology transferred by the AREVA group and should enter service in 2005, reprocessing some 800 MT of spent fuel per year after an initial ramp-up period.
- Continued its involvement in design of the MOX Fuel Fabrication Facility to recycle surplus defense plutonium under a DOE contract with the Duke-COGEMA-Stone&Webster (DCS) team.

Customer relations

Projects are performed under conventional cost-plus or fixed price contracts for a range of services, from engineering to turnkey facilities.

The Engineering business unit works directly for nuclear facility operators (CEA, EDF, Codem in France, UKAEA in the United Kingdom, Enresa in Spain, Enea in Italy, Covra in the Netherlands) and as a subcontractor.

The business unit also works for the European Commission on projects in Eastern Europe.

In the back end of the fuel cycle, some of the business unit operations are performed under long-term international bilateral agreements for technology transfer in critical fields. In summary, the business unit is a partner for commercial nuclear facility operators, directly or indirectly, in France and abroad.

Outlook and areas for growth

In 2002, the Engineering business unit pursued its strategy of implementing know-how in its core business of nuclear engineering. This strategy will be maintained in the years to come to achieve the following objectives:

- to remain the world leader in nuclear fuel cycle engineering;
- to increase cost-competitiveness by pursuing in-house cost reduction programs;
- to extend its reach beyond the group in France and abroad by focusing on the waste management and site cleanup and plant decommissioning segments; and
- to strengthen its position in certain countries through partnerships.

4.7 Connectors division

Key figures

(millions of euros)	2001	**2002**
Sales	1 966	1 560
Operating loss before restructuring costs	(181)*	(137)*
Workforce at year end	15 259 people	14 015 people

* The division's operating loss after restructuring costs was €406M in 2002 and €235M in 2001.

Technology

The connectors business comprises all of the technologies and processes needed to design and manufacture passive components called ''connectors'' that are used to transmit electrical or optical signals from a wire to a piece of electrical or electronic equipment or from one printed circuit board to another.

A connector's core consists of metal contacts that transmit the signal. The contact may be connected either to the end of an electric wire, which is usually copper-clad, or to a card bearing electronic components. The contacts on any given connector are insulated from one another by the plastic insulation that holds them in place. The metal contacts assembled together in their electric insulator make up a connector.

FCI makes several billion electric contacts a year which typically sell for 1 to 4 euro cents. These contacts are mostly protected by coatings of gold or tin to ensure their electrical quality and to maximize the number of times the connector may be inserted without altering its performance.

Several hundred million cover squeeze-ons are manufactured annually, generally of plastic, and can be sold separately to wiring makers, who then crimp their own contacts and insert them into housings for the auto industry. Sometimes FCI assembles them manually or automatically depending on the series (Communications Data Consumer). These connectors or connector parts are sold at prices ranging from 20 to 30 cents to a few euros each.

This business line is experiencing major technological breakthroughs, including miniaturization(41), higher transmission speeds(42) and systems utilization requirements spanning a wide range of temperatures, all with a minimal failure rate.

As a consequence, connector manufacturers must constantly innovate, primarily through research and development combined with aggressive patenting of innovations, and this against a backdrop of a continuously shrinking product life cycle.

AREVA's Connectors division and manufacturing capabilities

FCI was founded in 1989 and is wholly owned by AREVA, and is in fact the group's fourth division. It ranks third in the industry and is very close to second place, held by Molex. However, Tyco, the global industry leader outranks its competitors by far with sales nearly three times as high. The market is highly fragmented among a thousand players. This figure has been relatively stable over the past ten years as new players constantly replace those who withdraw or merge. For example, the world's sixth largest connector manufacturer is less than 25 years old.

A great deal of demand is shifting to Asia, which is attracting major electrical and electronics manufacturers seeking to lower their labor costs. The largest players can decide at any time to boost their competitive edge by moving their production overseas. They are generally followed by their competitors and by smaller players, who must similarly lower their costs in order to effectively compete.

Given this environment, FCI has about 50 plants in 19 countries on every continent, and it sells its products in 80 countries. Its manufacturing plant consists of 700 cutting presses, which each year process 12,000 tons of metal, particularly copper-clad materials, plus 1,000 plastic presses that process 15,000 metric tons of plastic resins a year. The Connectors division also has about a hundred automatic assembly machines working in the group's various plants.

The division's R&D operation, a critical function, is based on a portfolio of over 9,000 patents that is growing at a rate of 150 to 200 new patents a year.

4.7.1 Communications Data Consumer (CDC) business unit

Key figures

(millions of euros)	2001	**2002**
Sales	986	616
Workforce at year end	7 750 people	6 824 people

Businesses

The Communications Data Consumer business unit manufactures and supplies connectors to link boards to boards, boards to wires or to connector inputs and outputs for most telecom, data, consumer and industrial applications

(41) A computer server connector can now contain up to 5,000 output points in a 15 centimeter square card.

(42) Telecommunications users now demand transmission speeds of several billion bytes.

Capabilities

The Communications Data Consumer business unit's technical centers and production plants spanned three continents in 2002, with seven in Europe, six in the United States and eleven in Asia. The development centers are situated at Sarthe in France, Valley Green in the United States, Den Bosch in the Netherlands, Cochin in India, Ishioka in Japan plus Taiwan and Singapore.

Market, competition and position

The Communications Data Consumer business unit has traditionally been one of the leaders in its target market segments thanks to its strong positions in telecommunications, a potentially large market that accounts for the greatest share of FCI's sales. However, this segment only represented 39% of the Connectors division's sales in 2002 as opposed to 51% in 2001 and 65% in 2000. The data and telecom market has been in a deep recession since 2000. FCI has not lost market share in this segment, but its sales have naturally followed the sharp decline in global demand.

Nevertheless, the medium-term outlook remains bright despite the economy's ups and downs. Among the segments addressed, the business unit is taking particular aim at the telecom sub-segments, like access, transport, switching and networks, together with PC servers and computer storage units. It is also targeting consumer equipment such as television sets, printers, VCRs, CD players, DVD and industrial electronics. The accessible market in 2002 is estimated at US$10B, of which the Communications Data Consumer business unit holds 6.2% in market share behind Tyco and Molex and Foxconn of Taiwan.

The products aimed at these four user segments are grouped together in FCI's Communications Data Consumer business unit due to their strong synergies. These involve shared distribution channels and technical design, since they require the same technologies and skills, and similar manufacturing processes using the same materials and machines.

In the area of telecom infrastructure and servers, the Communications Data Consumer business unit has gained the technological edge over the competition thanks to its ''Metral'' technology, which is able to transmit high speed signals of over 10 gigabytes a second. Still more advanced technologies based on fiber optics will have to be widely adopted in order to raise transmission speeds further.

The following table breaks out the sales of the four principal segments.

Communications Data Consumer business unit sales in 2002

User sectors	% of 2002 sales
• Telecommunications (switching & routing, transmission systems, wired & wireless access, local networks)	36.8%
• Data (PCs, servers, storage units, peripherals)	37.3%
• Consumer (mobile telephones, DVD, CD players, video games TV decoders, VCRs, modems)	12.7%
• Industrial electronics (medical, instrumentation and controls)	13.2%

Source: AREVA

Operations and key events during the year

- The business unit reorganized and downsized its production resources in response to the continued collapse of the telecom market. The restructuring plans were the outcome of strategic decisions at the group level, and resulted in the closing of several plants in 2002 accompanied by job cuts, which lowered the headcount from 7,750 at year-end 2001 to 6,824 a year later. Additionally, production lines in the United States and in Europe were moved to Asia, a region now slated to handle 50% of the operations as opposed to 25% in 2000.
- FCI granted licenses to several competitors to use its Ball Grid Array technology (BGA). This patented technology consists of placing a very small metal ball under each of the contacts inserted in the connector's plastic housing. The metal ball makes direct contact with the points of the electronic board on which the resulting connector is positioned.
- FCI introduced new telecom product platforms, particularly for high speed transmission and products based on BGA technology, especially for the PC and mobile telephone markets.

Customer relations

Nearly half of the Communications Data Consumer business unit's sales are to Original Equipment Manufacturers (OEMs), and a third are to Contract Equipment Manufacturers (CEMs) and Original Design Manufacturers (ODMs). The rest are made through distributors.

The Communications Data Consumer business unit's major telecom customers are Ericsson, Lucent, Nokia, Alcatel, Nortel and Cisco for the OEMs, and Solectron, Flextronics, Huawei, Samsung, Sanmina and Jabil for the CEMs.

Its major data customers are Dell, IBM, HP-Compaq, Sun, Samsung, Seagate, Western Digital, Intel and Hitachi.

Sales to the consumer and industrial electronics segments are made to Motorola, Samsung, Siemens, Philips, Thomson, Nokia, Schneider, Alstom and ABB

Human resources

The restructuring plans carried out in 2002 reduced the headcount by some 12%. The Automotive business unit assumed control of the Communications Data Consumer business unit's plants in Fermoy Ireland and Tatabanya Hungary to keep up with its growing markets.

The business unit moved a portion of its production to China, where it built a plant to serve the Asian market, whose relative importance is growing in those segments served by Communications Data Consumer.

Suppliers and raw materials

Most of the materials that the Communications Data Consumer business unit uses (particularly plastics, metals and copper-clad metals) may be procured without any particular risk from several suppliers.

Research and development

The Communications Data Consumer business unit's R&D strategy is to make a significant effort to remain on the cutting edge of technology, and to offer innovative and competitive solutions despite the difficulties affecting the telecom-data sector.

The business unit has seven development centers employing 300 engineers working in three regions worldwide. They are in the United States, France, the Netherlands, India, Japan, Taiwan and Singapore.

In keeping with the technological issues affecting the market, the unit focused its R&D efforts in 2002 on:

- connectors for high speed transmission systems of 10 gigabytes per second,
- use of patented BGA technology on board-to-board connectors (MegArray),
- miniaturized products for brown goods featuring a 0.3 mm footprint between contacts and small size.

Outlook and development goals

Technological trends

The trend is always to smaller, faster and cheaper. The process of assembling electronic components will increasingly be less costly, and the connectors manufacturer must be able to provide solutions for his electronics assembler customers.

Transmission speeds are also an issue, and will require new technological feats. In 2005, the maximum transmission speeds in the data field will rise to 40 billion bytes per second from today's 10 billion bytes. The business unit has perfected techniques to characterize and help design circuit boards for OEMs and ODMs.

Future products will have to be user friendly as well. Individuals are overwhelmed by wiring and connectors, particularly in the developed countries. Future technologies will hasten the general adoption of the wireless principle, particularly blue-tooth and WIFI. These systems contain fewer connectors by definition, but they offer other opportunities with the growing share of wireless network applications (local radio transmissions).

In the same vein, the installation of connectors, i.e., their wiring plans, will be increasingly simplified and flexible for the user, as is already the case in the automobile market, which is also served by the connectors division.

Technological breakthroughs are occurring, notably the shift to very low voltage signals that are completely shielded from any external or internal electromagnetic influences. The demand is leading to distinguishing increasingly weak signals from unwanted noise and interference present everywhere in their transmission chains. These various techniques to protect signal integrity present a new technological challenge for the industry.

Market and sales

It is not possible to make a short-term sales forecast. The segments involved — telecom, data and consumer — are directly dependent on the global economy and on the confidence of operators and individuals, with very short response times. At this stage, there is no tangible factor that points to a rebound to rapid sales growth.

Over the long run, however, these sectors' equipment needs remain very significant. They will have to be met by increasingly better products in an environment of intense price competition.

The market's structural move from Europe and the Americas to Asia will continue, led by manufacturers involved in the multimedia transmission boom for consumer, with the portion of sales made to CEMs rising at the expense of those made to OEMs.

4.7.2 Automotive business unit

Key figures

(millions of euros)	2001	**2002**
Sales	500	531
Workforce at year end	3 535 people	3 782 people

Businesses

The Automotive business unit designs, manufactures and supplies interconnection systems for most of an automobile's electrical and electronic applications.

Towards the close of the 1990s, automotive connectors have gradually become one of the key components of a car's electrical and electronic systems. Initially limited to basic functions like lighting, automotive connectors have followed the advances in electronic components, providing comfort, safety and environmental protection in addition to electrical control systems(43).

Automobiles are increasingly complex products in which electronics were nearly absent twenty years ago. Electronics appeared in force with the arrival of fuel injected engines, and the matching connector had 35 contact points. Today, the average vehicle contains three electronic control units containing up to thirty microprocessors. Luxury models have up to 120 electric motors. Similarly, the number of contact points has risen from a few dozen to over 2,000 per car, totaling two kilometers of wiring. This has occurred despite multiplexing technology that transmits several signals through the same harness.

The penetration of electronic and electrical control systems in modern vehicles has enabled the Automotive business unit to focus its innovations on this market and to go beyond supplying simple products to offer complete sub-systems with added value.

The three main segments in which the Automotive business unit operates are:

- connectors for Electrical Distribution Systems (EDS), based on standards defined by car manufacturers, which represents around 60% of the business unit's sales;
- connectors for airbags and Safety Restraint Systems (SRS), which constitute a fast growing market due to their proliferation in the standard car;
- connectors used in Electronic Control Units (ECU), which are also specified by car manufacturers, mainly for reasons of reliability.

Capabilities

To ensure proximity with its multinational customers, the Automotive business unit has concentrated its manufacturing plants in the world's principal regions with:

- seven plants in Europe,
- three plants in North America,
- one plant in Brazil, and
- one plant in South Korea that also supplies Japan.

The production plants in each of these regions master the main processes required to design and produce automotive connectors, particularly high speed stamping machines, precision molding lines for plastics and inserts, and component assembly equipment.

Market, competition and position

In 2002, the global market for automotive connectors is estimated at €6.6B a year(44). The Automotive business unit ranks fourth in terms of market share(45) at 8%. The world market for light duty vehicles rose a moderate 2.1% with a strong 6.7% increase in North America and a 2.8% decline in Western Europe. The auto market has traditionally grown at an average rate of 2% a year over the past thirty years.

Despite a steady drop in prices of some 3% a year, demand for automotive connectors continues to increase moderately. Some segments are more buoyant, like connectors for airbags and electronic control units.

The automotive connectors market is experiencing a number of technological breakthroughs, mainly due to more stringent requirements in safety, comfort and communications(46).

The market segments and their competitive situation can be summarized as follows:

- around €4.4B for the Electrical Distribution Systems (EDS) segment in which the Automotive business unit ranks fifth with a 7% market share behind Tyco, Yasaki and Delphi in particular. This segment offers limited growth prospects, but is a key segment to access other core businesses;
- around €1.8B for the Electronic Control Unit (ECU) segment, where the Automotive business unit also ranks fifth with a 5% market share behind Tyco, Molex and Amphénol in particular;
- around €400M for the Safety Restraint Systems (SRS) segment, where the Automotive business unit ranks number one worldwide with a third of the market ahead of Tyco and Amphénol.

The Automotive business unit also ranks first worldwide in the emerging market for flexible printed circuitry, which has great potential for growth. It covers the whole range of connectors needed for the automobile industry.

(43) Estimates are that 17% of a car's production cost goes into electronics, about the same as for its mechanical components. This proportion climbs to 30% in luxury vehicles.

(44) A car's average ''connectors'' content is about €110 to €120 since it contains from 1,000 to 2,000 connectors and 150 to 300 housings.

(45) It ranks second in Europe which favorably positions FCI since the European car manufacturers dominate the Asian and South American markets and are in the vanguard of technological advances.

(46) The business unit formed a ''Multimedia'' segment in February 2000 to pursue this growth opportunity.

Operations and key events during the year

The business unit has advanced in all three segments in which it operates. The progress occurred:

- among existing customers but in new segments, as shown by the signing of a major contract involving the next generation of airbags for the PSA group;
- among new customers such as the Automotive business unit's first significant contract with BMW.

To bolster its positions in Japan and Korea, FCI also formed a joint development partnership with Mitsubishi Cables Industries (MCIL), a Japanese connectors manufacturer that is particularly well positioned with Mitsubishi and Nissan. This initiative was in response to the car makers' wish for suppliers with a global reach as they merge and globalize their own operations (Renault/Nissan, Daimler/Chrysler, etc.).

In terms of technological products, the Automotive business unit has begun deliveries of its ''Modupack'' line for use in flex-type wiring, which is slated to replace conventional wiring systems.

Customer relations

The business unit's customers are ordinarily:

- manufacturers of wiring looms for automobiles;
- manufacturers and suppliers of wiring looms and systems and electronic control units;
- car makers, which play a key role in setting their own standards for connectors and in choosing their preferred suppliers. The Automotive business unit is a partner of such major car makers(47) as VW, Daimler/Chrysler, BMW, PSA, Renault/Nissan, Ford, General Motors and Fiat.

In the EDS segment, its main customers are wiring makers such as Delphi, Yasaki, Lear and Valeo. In the ECU segment, they are mainly the major parts manufacturers like Bosch, Siemens, TRW and Delco. In the SRS segment, most sales are to airbag module suppliers, or to companies that supply wiring for these modules.

In the airbag connectors and seat-belt preload devices segment, the Automotive business unit supplies all of the world's car makers except for Honda in Japan. Its patented technology is used in over 50% of the systems made worldwide.

The business unit's largest customer accounts for a little over 10% of its sales and its top ten make up 57%, while the 20 biggest represent 69%.

Suppliers and raw materials

Most of the materials used by the Automotive business unit, mainly plastics and copper, can be procured without any particular risk from several suppliers. No ''exotic'' material is used.

The suppliers adhere to the business unit's objectives, and help to provide lower cost solutions to satisfy its parts manufacturers and car makers' clients.

Research and development

Some upcoming technological challenges for automotive connectors are:

- miniaturization — wires and connectors must be housed in ever shrinking spaces, which requires increasing the number of contacts in a given surface area;
- temperatures — some connectors can now work in temperatures of some 180 degrees centigrade, making it necessary to adapt their coating;
- vibrations — this is a source of resonance for onboard computers, which are increasingly plentiful, and the connectors plugged into them;
- increased power — to be supplied through connectors for which the risk of electric arcs must be controlled;
- signal integrity — as in aviation, interference between the vehicle's various electronic components is a cause of concern, which places growing importance on equipment shielding.

In addition to its new connectors for cars on the drawing board, the business unit's R&D program is aimed at meeting key requirements for time-to-market. Its objectives include lower production costs, miniaturization and new technological and materials solutions for increasingly harsh environments, in terms of temperature and vibrations in particular.

An increasing share of the R&D effort is done under customer contracts to develop specific products. The proposed projects are carried out in keeping with the customers' long-term needs, minimizing the risk of misallocating R&D funds.

Outlook and development goals

The market forecast for 2003 is uncertain for the auto industry because of the global economic outlook. Automobile production is forecast to remain flat, with a slight downturn in Europe and the United States. Nevertheless, a recession cannot be ruled out in this sector should there be major international disturbances.

(47) 50% of vehicle breakdowns are electrical or electronic, and connectors rank first as the cause. In light of this, the car makers have outsourced their production to the major connectors manufacturers, while writing up the technical specifications to ensure that their reliability ''which in fact is a major issue'' will end up meeting their expectations. Beyond the notion of reliability, the big car makers especially want to standardize the contact points as much as possible, maintain control over standards and prevent the proliferation of suppliers' standards.

Multimedia applications will eventually pose a technological challenge, making it a priority to glean a wide range of synergies that exist with the Communications Data Consumer business unit. This can be achieved by transferring the best technologies to the Automotive business unit and by some stages of product development.

One of the key objectives of the Automotive business unit will also be to improve its supply chain process even more for better procurement and customer satisfaction(48).

The trend to moving operations closer to growth areas is likely to continue worldwide. The year 2003 will probably see the start of manufacturing connectors for the auto market in FCI's present plant in China.

In this regard, the Automotive business unit plans to:

- continue to expand by further positioning itself as a supplier of automotive connectors worldwide; and
- be recognized by its customers as a strategic, competitive and innovative partner.

4.7.3 Electrical Power Interconnect (EPI) business unit

Key figures

(millions of euros)	2001	**2002**
Sales	244	200
Workforce at year end	1 873 people	1 641 people

Businesses

The connectors fabricated by the EPI business unit are quite different from the others because they are used to transport power, rather than signals. EPI connectors tend to be heavy (up to several kilos) and metallic. They are used by all major power utilities for energy production, transmission and distribution. Industrial maintenance and construction sites, and telecom equipment manufacturers around the globe are also major customers.

EPI's product platform tended to be developed at least 20 years ago. Customer requirements are more for reliability and quality than for new technologies. The connectors must be able to withstand 200°C heat levels on power lines, as well as frost, snow, storms and similar constraints.

The demand for electrical products is driven by power consumption and infrastructure expansion. EPI is a supplier worldwide selling mainly under the following brands: Burndy™, Malico™, Saae™, and Racine™.

Capabilities

In the Americas, EPI sites are located in New Hampshire and Connecticut in the United States; in Scarborough, Canada; in Toluca, Mexico; and in Sao Paolo, Brazil. In Europe, EPI manufacturing sites are in Evreux, Nantouin and Fressenneville in France and in Barcelona, Spain. The EPI business unit is also present in Yokosuka, Japan and in Brisbane and Sydney, Australia, with sales and service centers in Singapore and Hanoi/Vietnam.

EPI's R&D centers are located in Manchester, NH, U.S.A., in Evreux, France, Barcelona, Spain and in Yokosuka, Japan. All other sites have line expansion design groups that adapt existing design platforms from other EPI design centers to their local market requirements.

Market, competition and position

Tyco, Energy Division, is the only global competitor to EPI. Through an aggressive series of acquisitions following the AMP acquisition, Tyco has become a broad electrical connector and power system component supplier.

The EPI business unit participates in a group of product lines that have no global industry reporting. Therefore market positions are speculative. EPI is either the second or third largest vendor in its product lines, after Tyco and possibly Thomas and Betts.

Thomas and Betts and Panduit represent the strongest US competitors with a specific focus on the compression connectors and cable management products. Neither competitor appears to be broadening their offering to other sub-segments or product families. Panduit does not supply the power utility market for connectors.

Sicame of France completed several acquisitions during 2002 in an apparent effort to broaden their offering to multiple market segments and prepare to be more international.

Other competitors are national or regional in scope and tend to be niche suppliers in specific product lines or channels.

Operations and key events during the year

The utility market in Japan was sluggish for the full year due to government deregulation pressures and weak Japanese economy. Capital spending hit tool sales particularly hard. Capital spending cuts in all markets in the US caused tool sales to be off 35-40%. The Comision Federal de Electricidad, EPI's biggest Mexican customer, was hit with government funding cut backs and all purchases were stopped, causing CFE orders to drop by 66% for 2002.

In 2002, EPI continued to apply ''Lean Manufacturing'' techniques to all its U.S. operations and began implementing them in Europe as well.

(48) Customer satisfaction is regularly measured through surveys.

EPI entered the underground enclosure kitting product line with the acquisition of Scapa Group, PLC. kitting business unit in France completed January 28, 2002. Underground is clearly the product segment offering the greatest growth potential, and the EPI business unit is now well positioned to participate in this market.

Customer relations

EPI's customers are quite diverse and are located around the world. EPI's top two customers are North American distributors, representing about 14% of sales. The top twenty customers represent approximately 40% of total sales.

In 2002, EPI launched the Exceptional Customer Service program in the United States, with personalized customer information capture and follow up system implementation. These CRM (customer relationship management) tools provide an individual customer the ability to chose fax, phone, or email notifications of order acknowledgements, quotations, shipping acknowledgements, promotions, and policy changes such as price changes. Feedback from the industry has been unanimously positive. EPI US Received Supplier of the Year Award for Delivery and Service from the IMARK Group, a member-owned marketing group made up of more than 180 independently owned electrical distributors throughout the United States. The award recognized top performance for ensuring timely order processing, high fill rates, accurate and timely shipments, accurate invoices, and clear communications of policies.

EPI reorganized its U.S. Sales and Marketing with specific market assignments, including Utility, Construction Maintenance and Repair (CM&R), and OEM.

In Europe, a conversion was begun from an FCI shared sales force model in Europe to an EPI specialized sales organization setting up 2003 as the first year with an EPI Europe sales force along with a new centralized customer service group in Barcelona for all of Europe. As a result of the unified sales force launched EPI's first European wide sales project for substation Connectors. Transfer of customers as direct account to FCI Barcelona and some to FCI Evreux underway. EPI expects to complete the integration of all unshared/direct customers during April 2003. EPI received three substation connector orders in the UK, marking FCI's return to this market segment after an absence of about 25 years.

Suppliers and raw materials

The core raw materials for EPI connectors are Aluminum, Copper, and Steel mainly in tube, rod, casting ingot and extrusion. In the Americas, main raw materials are copper and extrusion and tube products, ingot and silicon bronze wire products. For Europe's Transmission line business, an increasing amount of forged steel and cast grey iron products is sourced from Asia. Japan began sourcing multiple products from Korea during 2002 with steel cable tray leading that volume and resulting in a major contract for Chubu International Airport project.

EPI selects suppliers based on the total cost and service options. The trend is for a continued use of European and domestic suppliers for key materials and increased use of Asian suppliers for commodity type products with higher volumes. EPI does not depend heavily on any one supplier.

Outlook and development goals

Sales volume is expected to increase slightly partly because of new products and partly from new end users, new distribution, and more shelf space at existing distribution. 2003 will be the first full year of the Underground Kits business in Europe. EPI must implement planned restructuring during 2003 in Europe.

4.7.4 Microconnections business unit

Key figures

(millions of euros)	2001	**2002**
Sales	63	61
Workforce at year end	285 people	286 people

Businesses

The Microconnections business unit fabricates 1.5 billion very tiny connectors per year. These connectors are flexible circuits that are glued under the microprocessors on many types of smart cards. Examples of these cards include telephone cards, credit cards, and the fast-growing markets of access control and traceability cards and identification cards. High-density flexible circuits are also used in such applications as computer printers.

Custom-designing most of its products for the majority of smart cards module producers worldwide, the Microconnections business unit is the world leader in IC card circuitry. Between 60 and 70% of smart cards in the world contain connectors from the Microconnections business unit. In addition, the Microconnections business unit increasingly manufactures products for the micro-packaging industry, with the watch industry as a key market target.

Capabilities

Designing flexible circuits requires a mastery of technologies, which the business unit has acquired over 20 years. The Microconnections business unit has several patents for the two major technologies required — engraving high-density flex circuits for printers and placing antennas on flex.

Market, competition and position

The Microconnections business unit holds the number one spot in the card circuitry industry.

In 2003, it is expected that prepaid phone card use will continue to decrease as mobile phone use continues to increase. Trends in the market such as growth in dual-interface (contact plus contactless) smart cards and the strong move for an open infrastructure show no signs of abating.

Operations and key events during the year

With the market saturation of the prepaid telephone market and the delays in Europe's 3G mobile-phone rollout, the lead smart cards market lost its usual annual growth in 2002, including in the area of multi-application smart cards.

The business unit performed a technological breakthrough in flex technology for watch industry micro-packaging with two major Swiss companies.

Customer relations

The clients of the Microconnections business unit are smart card manufacturers as well as the fabricators of microprocessors, which are connected to the cards. The major printer manufacturers are also counted among the clients. Major clients include Atmel, Gemplus, Philips, Schlumberger, Sema, Nedcard, Oberthur Card Systems, Orga, Sagem, STMicroelectronics and Infineon.

Suppliers and raw materials

The Microconnections business unit retains a policy of double sourcing, even for raw materials that are used in small quantities.

Research and development

Almost all the engineers and technicians are involved in new development programs outside the core business to allow the activity to broaden to additional applications. Microconnections has several new products under development, which are yet to be industrialized and which could become significant sources of diversification in the coming years, with a clear start in 2003. High Density Interconnect Flex and Radio Frequency Identification Devices are two main vectors of future new business.

The business unit's ecological commitment is at the forefront, not only for ethical and social reasons, but also for financial returns. A special effort has been performed in the field of greenhouse gas emission and water saving in 2002.

Outlook and development goals

The home entertainment market is ripe for smart cards where security in Multimedia applications is a must. ''Portability, security and storage'' are three key characteristics of smart cards for which the Microconnections business unit offers dedicated solutions.

A number of countries are initiating city-based smart card projects or much larger ID card projects. Large tests are set to begin in 2003. The IC Cards market rather limited growth will continue to come from the more traditional segments. Growth in microprocess.

4.7.5 Military, Aerospace and Industrial business unit (sold on April 30, 2003)

Key figures

(millions of euros)	2001	**2002**
Sales	162	149
Workforce at year end	1 164 people	1 204 people

Businesses

The Military, Aerospace and Industrial division (MAI) offers a range of internationally certified interconnection systems for the civil aviation industry and large military avionics programs. The business unit makes many connectors for defense, from the most conventional to the highest performance hermetic and filtered connectors. The business unit also supplies high-end interconnection systems worldwide for use in weaponry, undersea applications, launch vehicles, satellites and space stations.

The MAI business unit meets the diversified needs of industrial equipment manufacturers by providing a wide range of connectors for various types of equipment, including instrumentation and controls, motors, machine tools and robotics. In particular, the Trim Trio line of connectors is one of the division's flagship brands for industrial applications.

The business unit also serves industries operating under severe constraints such as railroads, nuclear plants and oil rigs, both on land and offshore. These connectors have specific characteristics designed to resist extreme conditions involving corrosion, intense pressures, fire and hermeticity.

Capabilities

The division operates plants in France, the United States, the Dominican Republic and Morocco. It also has a number of facilities in India and Japan.

Market, competition and position

The main competitors in the Military and Aerospace segment are Amphenol, Deutsch, ITT Cannon, JAE, DDK, Smith Industries and Radiall. In the Industrial segment they are Tyco, Deutsch, Harting, Lemo, ITT Cannon, Litton/Veam and Molex and AB Connectors.

Operations and key events during the year

The year's highlights were:

Aerospace:

- a seven-year contract with Airbus, giving the business unit a 45% market share
- in-house design for Airbus-Thales of high-speed Arinc connectors with new Elio fiber optic contacts and Quadrax contacts for its new A380 wide-body aircraft;
- Arinc 600 connectors for Bombardier's commuter aircraft; and
- A new three-year contract for 38999 connectors for use in Embraer commuter aircraft after a five-year hiatus.

Military:

- contract with EADS-LV to develop a safety and arming mechanism for use in a national program in France, beating out competition from TRW;
- contract with EADS-LV to develop a return connector for use in a national program in France, against competition from Deutsch;
- significant extension of a contract with Aselsan in Turkey to make filter audio connectors for military radio communications;
- two contracts with Kawasaki Heavy Industry (KHI) in Japan to supply umbilical connectors for its KAM-20 and KAM-80 anti-tank missile projects;
- another batch of filter connectors for military radio communications sold to SEL in Germany, now Thales; and
- Divex accounts in the United Kingdom, small-size series M titanium connectors for use by Royal Navy divers.

Industrial:

- approval of two new series of Power and VGEI connectors for Alstom and Bombardier;
- remote controlled connectors for Japan's MHI and IHI to build a new nuclear waste reprocessing plant at Rokkasho-Mura by JNFL;
- push-pull connectors with additional certifications from Trimble, Electric Mobility and Bentronics;
- renewal of contracts with ABB Robotics in Sweden;
- first contracts in China for several series of connectors for railroad use; and
- a new generation of circuit breaker connectors for Schneider.

Customer relations

The business unit's major aerospace customers are EADS, Airbus, Boeing, Snecma, DCN, Thales, Zodiac, BAe, Bombardier, Embraer, Labinal, Tecnologica Components, Aselsan, and Lockheed Martin. Its main industrial customers are ABB, Sercel, Schneider, Alstom, Schlumberger, Bombardier, Zebri, Cogema, KHI and Trimble.

Outlook and development goals

In December 2002, AXA Private Equity signed an agreement with FCI, AREVA's connectors subsidiary, for the joint purchase of the Military, Aerospace and Industrial business unit. The sale closed on April 30, 2003. The new company, to be named Souriau, will continue with the current business strategy.

4.8 Investment strategy

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 a world leader in nuclear energy, AREVA chooses external growth opportunities very selectively. The group's growth strategy is to strengthen regional positions (particularly in North America), accelerate international development, anticipate customer requirements and continue to offer the best available technologies.

In Connectors, the priority is the continued restructuring of the telecom business and the development of selected partnerships to expand into new markets, particularly in the automobile sector.

2000

In 2000, the group invested €612M in tangible and intangible assets and €162M in financial assets.

- The Front End division increased its equity interest in Eramet to 26% and purchased Cominor, a mining company with a gold property portfolio in Côte d'Ivoire and Sudan. Acquired from BRGM retroactively to January 1, 2000, Cominor has equity or controlling interests in several mining companies, including:
  - 90% of Compagnie Minière d'Afrique (CMA), a Côte d'Ivoire company that operates the Angovia gold mine, and
  - 40% of Ariab Mining Company Ltd (AMC), a Sudanese company that operates several open-pit gold mines.

With this transaction, AREVA also acquired a significant exploration portfolio in Africa (Mali, Côte d'Ivoire and Sudan).

- The Reactors and Services division acquired Eurisys Mesures shares owned by Sagem, making the group the sole owner of the nuclear instrumentation company. The group sold Thermodyn, a compressor and steam turbine manufacturer, to a joint company formed by Nuovo Pignone (81%) and Framatome (19%). Nuovo Pignone is an Italian subsidiary of the General Electric group.
- The Back End division's long-term capital spending program at the COGEMA-La Hague reprocessing plant ended with the successful completion of major facility construction, including R4 and ACC, which were ultimately turned over to the site operator in 2001.
- The Connectors division pursued its capital investment strategy in all major regions of the world and established new production units near customer sites. In Asia, the Singapore plant was expanded, new plants were built in Yokosuka, Japan, and a 50,000 m2 production site was opened in Dongguan, China. In Europe, the Hungarian plant was expanded to accommodate growth in Eastern Europe. The division also expanded its Epernon site in France, which serves the automotive industry. In the United States, a distribution center was inaugurated close to the Manchester, New Hampshire airport. The division continued to implement its external growth strategy to acquire new clients, increase market share and access new technologies and know how.

2001

In 2001, AREVA invested €559M in tangible and intangible production assets and €232M (net) in financial assets[49].

- In financial investments, AREVA purchased COGEMA shares owned by TotalFinaElf.
- The Front End division pursued its production capacity diversification and reorganization plan, and began operating a uranium leaching and concentration pilot plant in Kazakhstan.
- The Connectors division finished construction and began operating a regional tool manufacturing center in Cochin, India to supply quality tools to divisional production units.
- The Reactors and Services division acquired Canberra, making AREVA the largest nuclear instrumentation company in the world and strengthening its position in a high growth market while significantly increasing market share in North America. Elsewhere, AREVA's 46.1% participating interest in Clemessy was sold to Dalkia after the latter was merged into EDF.

2002

In 2002, AREVA invested €200M in tangible and intangible assets, net of asset sales, compared with €559M in 2001. This decrease reflects the sale of certain property interests, including the Framatome Tower, now renamed the AREVA Tower, in the Paris La Défense business district.

- Net investment remained stable in Nuclear Power, at €370M compared with €364M in 2001. Spending focused on maintaining existing production facilities in perfect working order and top safety condition.
- Due to weakness in the telecommunications market, the Connectors division cut back severely on investment in equipment and facilities, from €210M in 2001 to €88M in 2002.

  Investment is expected to remain stable in 2002 in both the Connectors business and the Nuclear Power business.
- The acquisition of Duke Engineering & Services in April 2002 boosted AREVA's U.S. engineering and nuclear services operations.

(49) In addition to AREVA's integration of Siemens' nuclear operations, as described in paragraph 4.1. A share issue reserved for Siemens AG funded this acquisition.

Net investment in long-term financial assets was stable at €213M in 2002, compared with €232M in 2001. Net 2002 investment includes:

- acquisition of Duke Engineering & Services in the United States in April 2002;
- acquisition of Sagem and Coficem shares in June 2002;
- the sale of Sovaklé shares in early 2002.

4.9 Research and development programs, intellectual property and trademarks

4.9.1 Research and development

Key figures

	2002	2001
R&D Expenditure	€332M	€377M
Nuclear Power share	65%	62%
Connectors share	35%	38%
Patent applications	192	180
R&D personnel(50)	2 700	2 700

AREVA spent 4.2% of its sales revenue on research and development in 2002, as it did in 2001. R&D expenditure is stable in the Nuclear business, where programs stretch out over several years. The Connectors division continued investing in R&D despite difficult market conditions, with the percentage of sales invested in R&D rising to 8% in 2002 compared with 7% in 2001.

General R&D organization

The AREVA group sets the pace for the competition in terms of technology, with hard-driving programs to harness advanced technologies and integrate them into our products and services. Ever since the first industrial applications for nuclear energy, we have worked continuously to maintain our strong technological lead and bolster our international positions. We have pooled our research and innovation functions as a group to tap into the resulting synergies and protect and multiply our technology assets. By functioning in integrated mode, we are able to consolidate best practices from throughout the group and thus boost R&D effectiveness in areas as wide-ranging as technology management, managing expertise and know-how, and planning R&D projects.

This means setting up shared programs for essential group functions such as R&D action plans, R&D project management and project portfolio management, managing expertise and technological excellence, and managing our intellectual assets. Coordinated by the AREVA Innovation and Emerging Technologies Department, our research and innovation activities also aim to promote and strengthen innovation within the group.

For example, the first annual Innovation Awards were handed out at the group's annual managers meeting in 2002. The winners, chosen from among many who applied, were:

- Burn-in of airbag connectors (Connectors division — Nuremberg)
- M5 fuel pellet/cladding interaction (Fuel business unit — Lyon)
- Reactor control system testing equipment (Reactors business unit — Erlangen)

(50) Including outsourced R&D.

- Gamma detector, NASA's Mars Odyssey probe (Nuclear Measurement business unit — Lingolsheim)
- Advanced ultrasound inspection (Services business unit — Lynchburg)
- Acoustical leak detection for pipelines (Technicatome business unit — Aix en Provence)
- Special prize: Background radiation measurement kit for the French school system (COGEMA — Vélizy)

To guarantee the success of these missions in a 50,000-employee group, we avoided rigid centralization of the research and innovation function. Indeed, given the diversity of the group's activities, the opposite is called for: R&D must be initiated and managed at the field level whenever possible with minimal corporate intervention, and then only to feed into the strategic and technological objectives of the business units and divisions.

Partnerships

Thirty years of technological achievement and commercial successes, both inside and outside France, have positioned AREVA as a world leader in the nuclear industry. In addition to our historically solid presence in Europe, AREVA has strongholds in North and South America and in Asia. Scientific and technical partnerships reflecting our international dimension will be a cornerstone of our continued growth. We already have a broad network of partnerships with the world's leading research laboratories. A good example is the Generation IV initiative(51) in which the world's finest nuclear R&D teams are studying cutting-edge reactor concepts representing potentially major technological breakthroughs. AREVA subsidiary Framatome ANP will be the industrial operator for mid-term commercial applications, around 2015, as part of a team featuring the best R&D capabilities in the world, including U.S. Department of Energy and French CEA research laboratories, with which we have special agreements on subjects of mutual interest.

Future directions

Making nuclear generated electricity even more cost-effective and readying the reactors of the future

Our R&D programs focus on increasing safety, reducing operating costs, minimizing final waste volumes and conserving natural resources.

The Front End division continues to push fuel performance to produce more energy, and thus more electricity, with the same amount of material. Efforts focus on cladding materials and the composition of ceramic fuel pellets, which involves testing additives to increase ceramic grain size. The resulting fuel performs better in the reactor, allowing higher burn-ups to be achieved and more energy to be produced. The division is also leading the timely transition to a different uranium enrichment technology.

The Reactors and Services division is already offering the third-generation European Pressurized Reactor (EPR) to its customers, the culmination of more than ten years of research and development with its European partners, EDF and the German utilities. New reactor types are being readied, paving the way for new applications such as large-scale hydrogen production for clean transportation systems, i.e., that do not release carbon dioxide (CO_2). These applications will capitalize on technological breakthroughs such as high temperature and very high temperature reactors (HTR and VHTR), with an expected roll-out in 2015. International cooperative efforts are multiplying, especially through the European Community Framework Programs for Research and Development (FP) and the international Generation IV initiative. These advanced technology innovation programs are slated to run through 2030, in close association with the CEA.

The Back End division brought a new and completely unique technology on line in 2002: the compaction facility for spent fuel hulls and end-fittings at the COGEMA-La Hague site. This facility reduces waste volumes generated by spent fuel reprocessing even further, optimizing the back end of the fuel cycle. Whether our customers choose reprocessing or dry storage, we are working to provide them with the most advanced technologies available at the lowest cost. The division is engaged in advanced research on reprocessing technologies for future generations of plants, primarily in partnership with the CEA, in the spirit of research mandated by the French waste act of 1991. The division is also working, under the Parité program, to boost the performance of plutonium-recycling MOX fuel to levels associated with the best uranium fuels (UO_2).

Miniaturization, speed, ruggedness: Meeting the price challenge while increasing the utility value of connectors for our customer

Cutting costs means a major development effort, primarily in the area of fabrication process optimization. Upstream, research is focusing on new coating materials, increasing bandwidth and thus transmission speeds, and fitting more contact points into less space. These efforts have paid off with innovative solutions for our customers, particularly in the automotive sector, where onboard electronics occupy an increasingly important place. In 2002, product development focused on:

- socket T and microprocessors,
- next-generation airbag connectors,
- high-density flex circuits for printers,
- miniature DVD and cell phone connectors, and
- high-speed connectors for servers and storage devices.

(51) The goal of the international Generation IV initiative is to develop fourth-generation nuclear reactors capable of replacing current reactors by 2030.

4.9.2 Intellectual property and trademarks

Intellectual property, licenses, patents, trademarks and technical expertise in general are enmeshed in the group's daily operations and thus in the production and protection of AREVA products, services and technology. Protecting our knowledge and defending our unique know-how means a comprehensive system for developing and managing AREVA's intellectual assets at the business unit level. This is also the key to negotiating successful technology transfer and process license agreements, now standard practice for large-scale international projects, especially when nuclear technologies are involved. AREVA has a portfolio of nearly 10,000 patents. Patents and confidentiality agreements are two of the ways that we protect our technologies.

A single policy for managing the group's intellectual assets is a prerequisite for technological cross-fertilization and the building of a shared technological culture. Specifically, this involves defining a clear-cut set of rules for sharing innovative and mature technologies among business units to ensure the best possible overall utilization and benefit while creating mechanisms for fair compensation.

Aware that adequate protection of AREVA group intellectual assets is a strategic issue, in 2002 we involved all of our entities in activities to pool our dedicated resources and strengthen their role.

The choice of a unifying name for our various entities was a crucial issue when the group was formed. The trade name we chose, ''AREVA'', is the property of the holding company. The legal name for the holding company remains ''Société des participations du Commissariat à l'Energie Atomique''.

''AREVA'' is a registered trademark in France and 74 other countries. The holding company closely monitors use of this name and trademark, as well as the domain names, and takes legal action in the event of infringement of our rights to this essential component of our image and intellectual assets.

The unifying effect of the ''A'' logo is put into practice by each subsidiary's use of the ''A'' followed by the subsidiary name. Older trademarks and domain names, such as COGEMA, are still managed by the main subsidiaries, which have their own portfolios of trademarks and domain names.

In addition to the trademark designating the group, the group's entities have a local trademark policy that is consistent with the commercial and competitive environment in which they market their products and services.

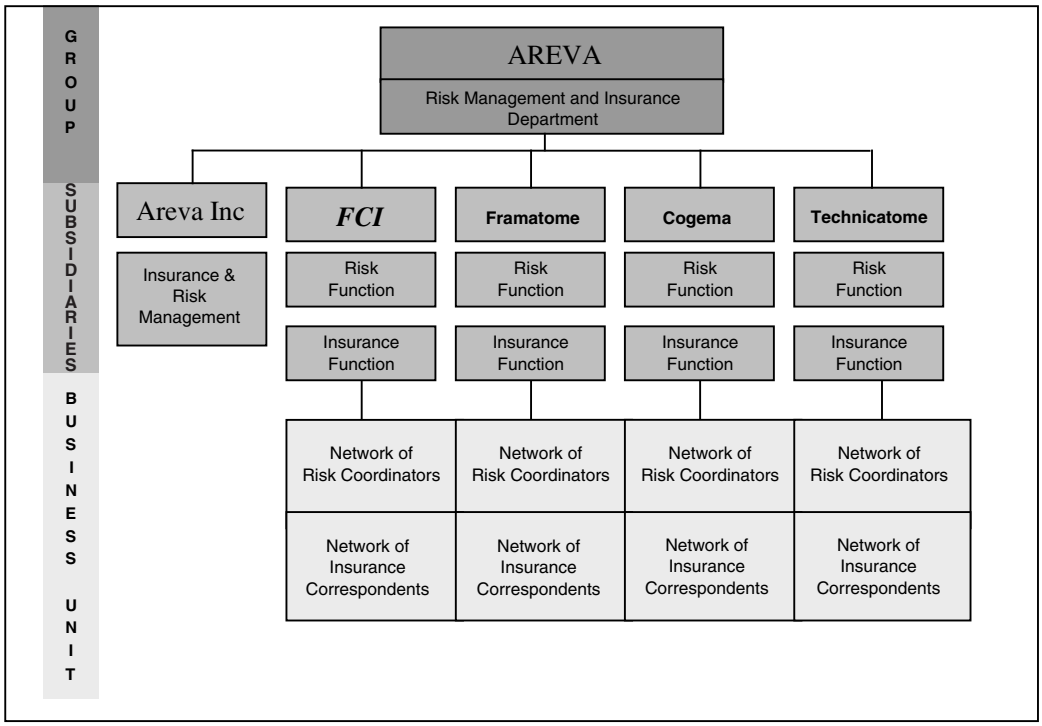
4.10 Risk and insurance

4.10.1 General approach to risk management and insurance

Organization

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 thus implemented 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, notably by implementing comprehensive and worldwide programs to insure risks, with financing transferred to the insurance market.

The risk management and insurance department includes both a risk function and an insurance function at each subsidiary's head office that works alongside the functional departments and the business units. Together, they establish shared principles, carry out the risk management and insurance department's action plan in their respective companies and draw up the necessary summaries and reports to each subsidiary's management. Due to the magnitude of AREVA's North American operations, a risk management office was also set up in the United States for all of the group's North American units to coordinate U.S. and Canadian risk management functions.

Risk mapping

The risk mapping that AREVA introduced group-wide in late 2001 to assess risk and manage it more effectively was completed in 2002. The conclusions reached in the mapping project were approved by AREVA's senior management and audit committee, and the audit committee established a multi-year audit plan based on the resulting risk map. In addition, senior management decided to update the risk map annually, and to do so at the level of each of the group's business units. A general operational risk management program was also laid out at the group level and is being adapted to each major subsidiary's situation.

Procedures and objectives

The notion of risk applies to the operations of each of the group's entities, which entails controlling their normal operating risks based on prior decisions and known facts as well as implementation of a business strategy whereby objectives involving both risk and potential profit are defined.

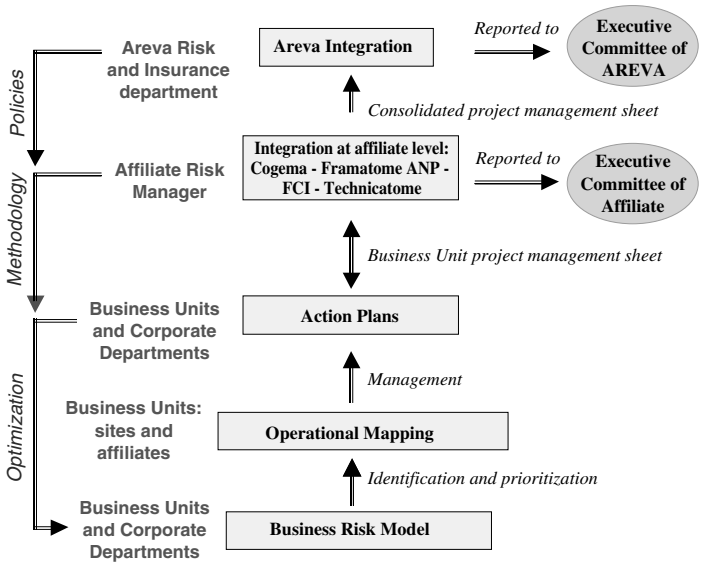
In both cases, risk management arises from a shared methodology, starting with risk analysis. The objective is to manage the risk, cradle to grave.

Consequently, the business units determine operational roadmaps based on which they recommend and carry out action plans.

Managing normal risk entails:

- an ongoing documented process of risk identification, analysis, ranking, optimization, financing and monitoring;
- a broad scope of action covering all of the group's activities, both operational (manufacturing, sales, projects, services, etc.) and functional (finance, legal constraints, contractual commitments, organization, human resources, etc.);
- contributing to resource optimization and cost reduction; and
- developing business continuity and emergency management plans.

AREVA's risk management process



Source : AREVA

The first step in risk management is to identify and describe the risk. To this end, the group has drawn up a business risk model (BRM) to be used 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 one 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 gravity of its risks and its degree of management at any given moment. The business unit can then define criteria to put in place 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 departments, each in their area of expertise, provide their management with a business unit-wide picture of risks 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.

4.10.2 Risk factors

In the framework of its risk management and assurance programs, AREVA believes it has mapped and seriously analyzed all of the risks, both general and specific, to which it could be exposed and as described below. Still, one cannot state with certainty that all residual risk has in fact been detected. The group will continue its risk mapping and assessment initiative and will adjust the level of its coverage accordingly.

However, the possibility that damage resulting from a risk factor may exceed the level of insurance coverage for that factor cannot be excluded.

Nuclear facility safety

Most of the facilities that AREVA operates in the nuclear field are regulated facilities. AREVA does not operate any nuclear power plants. Its operations consist of converting or reprocessing regulated products. Nuclear safety is defined as all of the means used to ensure the proper functioning of facilities, to prevent incidents and accidents and to limit the consequences of any incident or accident. It includes factoring in nuclear hazards and external non-nuclear hazards that could affect nuclear facilities. Nuclear safety is a function of:

- design specifications;
- the organization of operating activities, particularly systematic analysis prior to any new operation and analysis of events contributing to lessons learned;
- safety authorities with clearly defined responsibilities that enforce both national and international rules and regulations.

These risks are covered by conventions and insurance policies under terms and conditions described in paragraph 4.10.3.2.

The principal nuclear safety-related risks are described hereunder.

Nuclear criticality

An area containing fissile nuclear materials becomes critical when the rate of neutron production (through the fission process) is exactly equal to the rate of neutron dissipation. The nuclear criticality risk is defined as an uncontrolled nuclear chain reaction with a neutron spike. Were this to occur, operating personnel and individuals in the vicinity of the event would be exposed to radiation, causing more or less severe lesions in proportion to the intensity of the radiation exposure.

This risk is factored in whenever the facilities in question are designed to receive fissile materials. This hazard is controlled through equipment design, particularly equipment configuration, by limiting fissile isotopic assays, and by controlling the reference environment.

Radiation

Radiation consists of electromagnetic waves (similar to radio waves, light waves, ultraviolet rays, X rays or cosmic radiation) emitted by particles of matter such as electrons, protons and neutron, or by groups of such particles. The waves carry energy in proportion to the wave frequency or the speed of the particles. Their effect on irradiated objects is often to strip electrons from the atoms of the objects, leaving behind ionized atoms (*i.e.*, electrically-charged), which is why it is often called ionizing radiation.

An individual's exposure to radiation is expressed in terms of dose equivalent. In living organisms, the effect produced by an identical absorbed dose differs according to the type of radiation. The international unit of measure for dose equivalent is the sievert (Sv). Maximum allowable dose equivalents for members of the public and operating personnel are set by regulation.

In the case of nuclear industry workers, the dose received, excluding background radiation, is a function of the amount of time spent close to nuclear materials and the type and quantity of those materials.

Both workers and the public are protected with shielding that absorbs the majority of the particle flux and is designed to ensure compliance with applicable regulations. In addition to the regulations that apply in this area, the group follows the ALARA(52) principle, which holds that any reasonable technical or organizational action will be taken to reduce exposure to radiation.

Operators and contact maintenance personnel are closely monitored, both medically and radiologically. The radiation protection/health physics departments of AREVA and of its customers, in instances where services are performed in their facilities, are responsible for ensuring that legal and regulatory requirements are complied with at all times. Training sessions are regularly offered to ensure that workers have the requisite level of knowledge in this area.

These practices have, for example, limited exposure levels for workers who handle some of the most radioactive materials at the La Hague reprocessing plant to 0.072 mSv/person in 2001. This compares with an average annual exposure from background radiation (terrestrial and cosmic) of 2.4 mSv/person/year for the population of France.

Contamination

Contamination is defined as the presence of radioactive substances (dusts or liquids) in undesirable quantities on the surface or inside any area. For human beings, contamination may be external (on the skin) or internal (through breathing or ingestion).

The risk of an accidental release of radioactive materials in the facilities or the environment is identified and factored into the design of the facilities based on the principle of multiple containment barriers.

Terrorist acts

AREVA, as operator, and government agencies in the countries in which we operate facilities share responsibility for securing sites against acts of malfeasance. For example, the anti-terrorist *Vigipirate Renforcé* plan in effect in France has considerably strengthened surveillance and inspection measures to be taken by operators and government agencies.

Earthquakes

An earthquake is a non-nuclear risk that can result in damage which could compromise measures taken to ensure nuclear safety.

The risk of an earthquake affecting facilities that handle nuclear materials is incorporated into the design of the equipment, systems and facilities based on the ''design basis earthquake''. This analysis adds a statutory margin of safety to the worst recorded earthquake on record in the region where the facility is located and demonstrates the unlikelihood of damage that could compromise nuclear facility safety. These designs and demonstrations are included in the facility safety analysis report, which must be approved by the appropriate regulatory authorities.

In this field, all of the group's facilities comply with regulations and standards currently in effect. The expected revisions to the standards prompted the group to close its MOX fuel fabrication plant in Cadarache no later than July 31, 2003.

Floods

Certain plants of the Chemistry and Enrichment business units are located at Tricastin, near Pierrelatte, in the Rhone valley. The Rhone valley in general experiences flooding from time to time. The plants in question are situated at a level higher than the thousand year flood.

The unusual flooding of autumn 2002 had very limited, but real, consequences on COGEMA's Pierrelatte facilities. Nonetheless, an action plan was implemented in 2002 to reduce residual risk even further.

Chemical hazards associated with UF6 (uranium hexafluoride)

Uranium in the chemical form of UF6 is handled in certain facilities of the Chemistry, Enrichment and Fuel business units, for reasons having to do with the processes used in these facilities. UF6 is solid at normal temperatures and pressures and becomes a gas when heated, especially prior to enrichment. If the UF6 is released into the

(52) As Low As Reasonably Achievable

atmosphere in gaseous form, it can react with water vapor in the air, forming uranium oxide, a heavy metal, and hydrofluoric acid, which is highly toxic for humans and animals. In particular, hydrofluoric acid is corrosive and can cause injury if it is inhaled or comes into prolonged contact with skin.

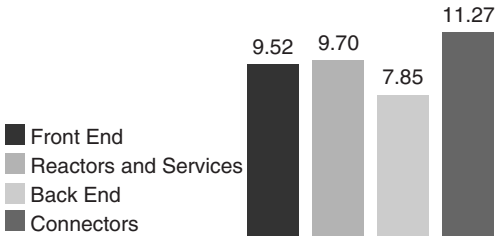
The amounts of UF6 handled at the production sites are significant enough to require that related risks be factored into facility design. The risks associated with UF6 are prevented and any impacts mitigated through the triple containment barrier system between the fluid and the environment, automated monitoring of high-risk areas, personnel training, ongoing drills in the facilities, the existence of local safety personnel (professional firemen on site with special training and equipment), and the existence of site emergency plans and emergency response plans that are regularly updated based on lessons learned.

Safety, an absolute priority

AREVA places top priority on the safety of its facilities. The group's entities conduct their operations in compliance with national and international regulations (IAEA[53] standards), and the operations are monitored by independent safety authorities specializing in such matters. In France, AREVA is regulated by nuclear safety authority ASN[54], which reports to the Ministries of the Environment, Industry and Health. ASN is responsible in particular for inspections and regulation of nuclear safety and radiation protection. The group's nuclear operations abroad are also strictly regulated, e.g. the U.S. Nuclear Regulatory Commission (NRC) in the United States. In addition to complying with stringent regulations, AREVA has formed an internal corps of safety inspectors, a sign of its commitment to being above reproach in this area.

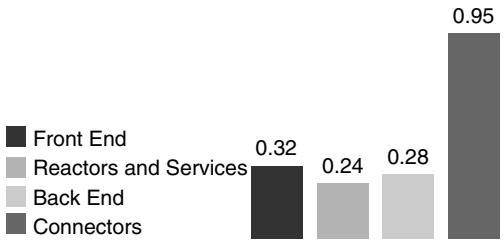
The group works diligently to ensure the safety of its employees and facilities at all times, resulting in a very low incident rate compared with other industries.

AREVA's Accident Frequency Rate* in 2002



* Number of accidents per million hours worked. In comparison, the average accident frequency rate with lost work days for France as a whole was 24.6 in 2000.

AREVA's Accident Severity Rate* in 2002



* Number of lost work days per thousand hours worked. In comparison, the average accident severity rate for France as a whole was 1.01 in 2000.

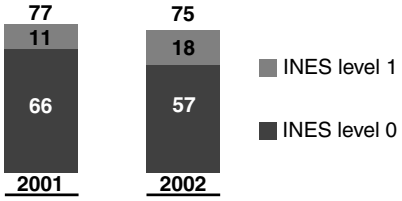
Source: AREVA

An international scale to measure the severity of nuclear events

The International Nuclear Event Scale (INES)[55] defines the severity of events occurring in nuclear facilities. It was established on an international level in 1991 and constitutes a tool for communicating with the media and the public. Events are classified according to severity on a scale of 0 (insignificant for safety) to 7 (accident with major releases and impacts on health and the environment).

The AREVA group has had no significant nuclear event, i.e., above level 2 on the INES scale, in the last three years. AREVA considers itself to be a leader in terms of the safety performance of its facilities.

Two-year comparison of incidents at group facilities



Although AREVA follows stringent procedures to prevent risk, the occurrence of an event that could have an impact on the environ-

(53) International Atomic Energy Agency
(54) Autorité de Sûreté Nucléaire
(55) International Nuclear Event Scale

ment, on human health or on the group itself cannot be entirely excluded.

Nuclear materials transportation

The Logistics business unit specializes in the multi-modal transportation (maritime, rail, road and air) of nuclear materials. This operation entails risks specific to the transportation of nuclear materials, such as a shipping accident or environmental damage.

Radioactive materials transportation occurs in the public domain. The ''defense in depth'' concept is used to protect members of the public and the environment from radiation during transportation operations. Cask design is the main component in this concept. As with any nuclear operation, these operations are governed by stringent international regulations. Under the terms of those regulations, the cask must guarantee materials containment, sub-criticality in the case of fissile materials, and radiation protection under normal and accidental operating conditions. The technical requirements accompanying the regulations cover cask design, fabrication, inspection during operations and maintenance. The higher the radioactivity contained, the stronger the casks must be.

AREVA has the required knowledge, products and processes to ensure maximum safety and security of shipments, and its covers its liability by taking out insurance in accordance with the requirements described in paragraph 4.10.3.2.

Although AREVA follows stringent procedures to prevent risk, the occurrence of an event that could have an impact on the environment, on human health or on the group itself cannot be entirely excluded.

Non-proliferation of nuclear materials

Proliferation is defined as the diversion of nuclear materials by a third party for non-peaceful purposes.

Non-proliferation is a shared objective for all of the signatory countries of international agreements in this area. The applicable requirements are covered under the IAEA's Convention on the Physical Protection of Nuclear Material, the Euratom treaty on the non-diversion of materials from their stated uses, and various laws and ministerial orders in France. Compliance with these requirements is regularly verified, primarily by inspectors from the IAEA and Euratom.

The diversion of nuclear materials held by an operator in the nuclear sector could result in severe penalties for the operator.

In this regard, AREVA has taken measures designed to know, at all times, the amount, quality, use and location of the materials held at any given time by the group's entities.

The record shows that all AREVA reports accounting for the materials it holds have always been approved by the national and international jurisdictions with which they are filed.

Environmental liabilities and environmental protection

In conducting its operations, the group constantly strives to protect the environment, both surface and subsurface, and to manage its radioactive waste while fighting pollution. In particular, the group must comply with requirements to restore its mines to environmental standards after closure and to minimize gaseous emissions and liquid releases in accordance with ministerial orders. AREVA has also embarked on a program of systematic identification of its environmental liabilities and hazards, and has set up environment management systems at many of its sites that have been certified by outside agencies.

The processes used in the group's nuclear operations generate very low level, low level and medium level waste. This waste is packaged into safe final form for disposal in disposal facilities that have been licensed by the regulatory authorities. Such facilities include the disposal centers operated by Andra(56), the French national waste management agency.

Non-recyclable final waste from spent fuel reprocessing operations, particularly compacted non-fuel bearing components and fission products, remain the property of AREVA's customers. This waste is returned to the customer after appropriate packaging and possibly interim storage in the group's facilities.

As a nuclear facility operator, AREVA is legally obligated to secure the facility, decommission it, and manage any resulting nuclear waste when it shuts down all or part of its individual facilities. Future expenses for this work were identified and a special provision was set aside to cover them. The constitution of this provision and its coverage of these expenses are spelled out in section 5.1.7.2 and in notes 9, 12 and 12 to the consolidated financial statements.

Under this program, AREVA believes it has set up provisions for all environment protection expenses that could reasonably be calculated as of December 31, 2002. However, the group cannot positively state that the amounts currently provisioned will prove sufficient to cover its obligations, due in particular to:

- increasingly demanding revisions to environmental protection legislation and regulations and court rulings;
- uncertainties weighing on the share of costs for the back end of the fuel cycle to be borne by third parties. Under a 2001 memorandum of understanding between Cogema and EDF, the latter's share of decommissioning expenses for facilities currently in operation at La Hague and for waste retrieval and packaging is

(56) Agence Nationale pour la gestion des Déchets Radioactifs

still under negotiation. Both companies have agreed to a June 20, 2003 deadline for resolution of the matter, which will be reflected in the half-year financial statements. The negotiation will take into account revisions to decommissioning and waste retrieval and packaging estimates for facilities that are now shut down (UP2 400) as well as for those still in operation (UP2 800 and UP3). Though it is difficult to predict the outcome of these negotiations, based on available information, there should be no significant impact on the group's financial position or consolidated accounts.

It is possible that these future obligations and additional expenses or responsibilities of an environmental nature that the group may have to bear in the future could have an effect on the group's future financial position or consolidated net income.

Political risk and country risk

AREVA is an international group with Nuclear Power and Connectors operations in many countries. Although AREVA is not immune to economic trends in its markets, its exposure to economic, financial and political risk where it does business is deemed low. This is either because the risks in these countries are considered to be low or because AREVA's exposure to the country said to be at risk would only have a very limited impact on the group's earnings.

Nuclear Power

The group's industrial operations do not entail high country risk inasmuch as they are located essential in Europe (France, Germany and Belgium) and in the United States. The group's mining operations are located mainly in Canada and Niger. It is also present in Kazakhstan, Sudan and Côte d'Ivoire, where political or economic developments may impact its operations, but without a significant impact on its earnings due to their nature or size. This is currently the case of a gold mine in Côte d'Ivoire whose operations have been suspended due to events in that country.

With respect to contractual activities, the group's Reactors and Services division's major projects in Asia and Eastern Europe are not at risk insofar as the contracts contain clauses and guarantees relating to project financing. The bulk of the service contracts in the Front End and Back End divisions are multi-year agreements in countries with low exposure and pressing energy needs.

Connectors

The Connectors division has a large number of sites, including a few in Southeast Asia. These make up a small portion of total capacity, with the majority located in stable Western European and North American countries. The fact that FCI expects to develop in Southeast Asia does not contradict this assessment, as the company plans to locate its businesses in low-risk countries.

Defense programs

A portion of the Technicatome business unit's sales are tied to budgets that are decided politically, particularly those for French defense programs.

The special case of the United States

The group already has sales in the U.S. market. Its operations could be negatively affected by geopolitical events.

Customer risk

AREVA does business with several large energy producers and is a preferred supplier to EDF, its largest client with about one third of its sales. Its commercial relationship with EDF is governed by master agreements that are renewed in batches. EDF announced in 2002 that it would gradually diversify its suppliers, particular for fuel. This move to bring in more competition occurred earlier than expected in our scenarios and will accelerate the group's efforts to streamline its production capabilities in view of this customer's importance, with a possibly negative impact on AREVA's net income or financial position.

AREVA may be exposed to a customer's default. This risk is particularly low for its nuclear operations. Its electric utility customers are large companies, mostly in sound financial condition, which in some cases receive government subsidies. Customer risk and country risk are one and the same for some contracts of the Reactors and Services division.

On the other hand, customer requirements in both the Front End and Back End divisions are sustained and their procurement contracts long-term, extending 5 to 10 years. This provides good visibility for the group's operations. Major contracts were renewed in 2001 in the Back End of the fuel cycle, while the Front End division's order book is already very full.

The risk of revisions to energy policies in some countries as a result of pressure by lobbying groups or events that give nuclear power a negative image cannot be excluded and could have unfavorable impacts on the group's financial position or net income. However, the extent and duration of the resulting changes, which can only occur slowly over the long term, and nuclear operators' need for access to other sources of power generation and transmission capacities and to find solutions to other issues raised by pulling out of nuclear power, considerably slows any reappraisal of their commitment to nuclear energy. This is illustrated by the German and Belgian examples. Germany, for example, does not plan to completely abandon nuclear power before 2020, even though the law requiring it was passed in 2002.

The Connectors division has a very different customer profile, which includes manufacturing groups of various sizes and sectors, particularly the telecommunications and information technology sectors.

Due to the economic environment of these sectors and certain moves to transfer production to specialized companies, some customers may be financially weaker or exert more intense pressure on prices. The large number of Connectors division customers limits the impact of the potential default of any single customer.

Raw materials, supplies and interdependence

Some Front End division operations, such as uranium chemistry or enrichment, require large quantities of raw materials or semi-finished goods, including raw materials and zircon ore. Shortages of these raw materials could slow production operations. The Reactors and Services division's engineering and service operations incur very little of this type of risk.

Assuring security of uranium supply is of strategic importance for nuclear utilities, closely backed by their governments. These include diversifying supply sources and maintaining strategic inventories. The relative abundance of uranium in relation to requirements (worldwide production capacity greatly exceeds annual requirements), the existence of an international market for essential raw materials and the widespread creation of inventories of raw materials and semi-finished goods remove any fear of shortages. The AREVA group has uranium ore reserves largely exceeding requirements for about ten years of production.

Some plants, especially in the Mining, Chemistry, Enrichment and Fuel Fabrication business units, depend heavily on one another for supplies. These plants are consequently exposed to the risk of an industrial breakdown that could delay or interrupt supplies. Rigorous maintenance plans and safety inspections ensure a high level of facility reliability, thus limiting this risk. Managing inventories of intermediary products also limits the impact of a possible breakdown and ensures a continuous supply of goods and services to the customer within a reasonable period of time.

It must be stressed that, except for its mining operations, AREVA is primarily a supplier of uranium processing services and its customers generally own the material. Its exposure to raw material price fluctuations is therefore very low. Furthermore, it is well known that changes in the price of uranium have only a limited impact on the price of the finished product, i.e., on the price per KWh of nuclear-generated electricity. A 25% increase in the price of natural uranium translates into only a 4% increase in the cost of the nuclear kilowatt hour (source: Report to the Finnish Parliament). Accordingly, the risk of customers turning to other power sources for this reason is very low.

Although the Connectors division, which consumes copper and gold, is potentially exposed to price fluctuations, it also benefits from reliable sources of supply due to the very nature of these markets. Some positions could be weakened by the quasi-monopoly of manufacturers of semi-finished goods used to manufacture components, but the Connectors division is attentive and is monitoring the financial condition of these suppliers while working to identify alternate sources of supply.

Industrial and product risks

AREVA operates industrial plants in its Nuclear Power business (specialized sites such as La Hague and Marcoule) and in its Connectors division, which has about thirty plants worldwide. AREVA is thus exposed to the risk of a manufacturing breakdown that could cause a delay or interrupt the flow of supplies or services.

AREVA sets high standards for its facilities maintenance and safety program to ensure a high level of reliability and speed in implementing business continuity plans. Applicable regulations specific to nuclear facilities require a high level of inspection and maintenance. AREVA complies with these regulations, devoting considerable effort to making its facilities reliable. Most of the operations maintain inventories of intermediate goods and reserve production capacity. These measures help minimize the impact of any eventual breakdown and ensure a continuous flow of goods and services to the customer within a reasonable period of time. This risk is covered by operating loss insurance under conditions described in paragraph 4.10.3. Despite loss prevention measures taken and the insurance coverage, which is limited by nature, we cannot completely eliminate the possibility that a major risk factor could have a residual effect on the group's consolidated income or net worth.

Risk of performance failure in products and services supplied to customers

The AREVA group designs and manufactures products that may carry guarantees for specific periods of time. The group's commitments could thus require that it recognize defects in product design or manufacturing and have to rework products that have already been delivered. The group controls this type of risk through strict control of product conformance and quality management programs.

However, the occurrence of a failure with concomitant impacts on AREVA cannot be completely ruled out.

The impacts of these risks are covered under the conditions described in paragraph 4.10.3.1.

Legal risks

The group conducts its operations in accordance with local laws under operating permits and licenses, particularly those concerning release limits and production capacity. Not complying with applicable provisions may result in the revocation of the operating permit or license. In the event of an incident with an inquiry, the government could temporarily suspend the permit or license for as long as it deems necessary. In addition, some of the group's companies may be subject to third party claims regarding environmental liability.

AREVA's mining operations are conducted under agreements or partnerships, such as the joint license with Cameco in Canada. These operations are thus exposed to a risk of non-renewal that could jeopardize their scope. However, the long-term nature of these licenses provides a high level of visibility for this activity.

Some programs, especially those of Technicatome relating to defense nuclear propulsion, are subject to special confidentiality or even top-secret restrictions.

Operations are subject to relevant local tax clauses governing manufacturing and production. Eurodif receives special tax treatment that reduces its tax rate.

Revisions to strengthen regulatory requirements or related programs could affect AREVA's net income or financial position.

Market risks

The group uses financial derivatives to manage its exposure to raw material price risks and those of some listed securities, particularly for its equity investment in STMicroelectronics. Currency risk is hedged with forward contracts and other derivative products. Several types of financial instruments are used to control debt, protect AREVA's short-term investments and manage the counterparty risk associated with these instruments. This is achieved by centralizing commitments and through procedures specifying counterparty limits and features by type. The measures taken by the group to manage these financial instruments and its principal positions are described in note 27 to the consolidated financial statements (chapter 5).

Risk specific to certain business units

Mining business unit (Front End): Economic viability of ISL mining process

A demonstration is under way on the economic viability of the in situ leaching process (ISL), which is currently undergoing qualification in Kazakhstan. The full-scale pilot installed in Kazakhstan by the group's subsidiary Katco is operating properly, but the economic viability of full-scale production has yet to be demonstrated under current market conditions. A detailed feasibility study is in progress. The total investment in the project to date is €30M.

Automotive business unit (Connectors): Global climate could impact automobile market

The organic growth of the automotive connectors market is estimated at 1.035 times that of the automobile market due to the increasing importance of electronics in automobiles.

Most sales, however, are secured 2-3 years in advance. In practice, connector suppliers are involved in the development stage by car makers via ''design competitions'' even before they bid on mass-produced connectors to be delivered only when vehicle production begins.

Risk of increased insurance premiums

Nuclear and non-nuclear insurance coverage should cost on the order of one half of one percent of the group's sales in 2003.

In a market characterized by the worldwide reduction of insurance capacities and changes on the horizon for special nuclear facility liability insurance are likely to result in a significant increase in this figure over the short term. On an annual basis, an additional expense of €10-20M can be expected.

Covenants applicable to borrowings

Type of commitment	Accounts	Residual amount	Maturity date	Covenants	Value at 12/31/02
CL / Barclays depreciable syndication	Audited AREVA consolidated accounts	$320M	7/26/06	1) Operating income / Net financial expenses greater than 2.5 2) Net debt / Equity less than or equal to 0.9 3) Net debt / Gross cash flow less than or equal to 3 *half-year test*	n/a * n/a * n/a *
HSBC multicurrency syndication	Audited AREVA consolidated accounts	$600M	4/19/05	1) Net debt / EBITDA greater than or equal to 3 *half-year test*	n/a *
BNP/RBC syndication	CRI	CAD305M	11/6/06	1) Total outside debt / (equity + shareholder advances) less than or equal to 100% 2) Consolidated cash flow + financial expenses (external + intra-group) + change in intra-group debt) / financial expenses greater than or equal to 1.5 3) Adjusted working capital requirement greater than or equal to CAD10M *half-year test*	46.30% 15.9 CAD119.3M
NRC decommissioning bond for FRA Inc	Audited AREVA consolidated accounts	$42M		*conditions* 1) Net worth — goodwill, patents, licenses & copyrights greater than or equal to $10M 2) Net worth — goodwill, patents, licenses & copyrights greater than or equal to 6 x $42M 3) Working capital requirement greater than or equal to 6 x $42M 4) Total assets greater than or equal to 6 x $42M *ratios* 5) Total liabilities & shareholders' equity / Net worth less than 2 6) Net income before minorities + amortization + depreciation / Net worth greater than 0.1 7) Working capital items / liabilities greater than 1.5 *annual test*	 $15,711 374x $5,150M $1,855M 0.78 0.1181 2.14

* given the net positive cash flow, net financial expenses in 2002 are negative and the ratio is not applicable

In practically all of our lines of credit, there is a clause by which the French government must hold at least 51% of the borrowing subsidiary. AREVA's commitments, however, are usually priced on a stand-alone basis.

As of December 31, 2002, applicable covenants were met with ample margins of error. As a result, the group considers the risk relating to these covenants to be quite low.

Ongoing litigation

USEC

In 2002, the United States Department of Commerce (DOC) levied countervailing duties on exports of enrichment services from France, Germany, the Netherlands and Great Britain to the United States pursuant to a complaint filed in December 2000 by the United States Enrichment Corporation (USEC) against Eurodif and Urenco. The anti-dumping and anti-subsidy duties levied on Eurodif imports into the U.S. required payment of a refundable deposit of €37.7M with U.S. customs in late 2002, which is recoverable upon completion of the legal proceedings. In April 2002, Eurodif filed an appeal against these decisions with the U.S. Court of International Trade (CIT).

McClean

On September 23, 2002, following a complaint lodged by the Inter-Church Uranium Committee Educational Cooperative (ICUCEC) for the nuclear regulatory authority's alleged non-compliance with the licensing process, the Federal Court of Canada, First Instance Division, cancelled the operating permit delivered in 1999 by the Atomic Energy Control Board (AECB) to the uranium mine and mill at McClean. The Canadian Nuclear Safety Commission (CNSC), which succeeded the AECB, and COGEMA Resources Inc appealed the move and requested that operations at the McClean site proceed until a decision is rendered. On November 7, 2002, the judge for the Canadian Federal Court of Appeal granted a stay for the first decision.

Tax litigation

One of the group's companies received a notice of reassessment relating to a dividend distribution it made in 1999. The notice is currently under discussion with the tax administration.

To the company's knowledge, no other litigation, arbitration or event exception occurred in the recent past that may or did have a significant impact on the financial position, net income, operations or net worth of the company or of the group.

4.10.3 General organization for hedging and insurance

The group's insurance programs are managed by the AREVA risk and insurance department. Specifically, the department:

- recommends internal financing solutions or transfers this risk to the insurance market;
- negotiates, establishes and manages comprehensive worldwide insurance programs for the entire group and reports to the Executive Board on its activities and cost commitments;
- negotiates the settlement of claims, supported by the subsidiaries.

To reduce the impacts of certain potential events on earnings, AREVA employs techniques to transfer the risk to insurance and reinsurance companies worldwide. These insurers are world-class entities and are well regarded in international markets. AREVA has taken out insurance coverage for industrial risks, public liability and the other risks and liabilities pertaining to its operations, with coverage limits consistent with the nature of its operations.

4.10.3.1 Non-nuclear operations insurance

Non-nuclear liability

The group has ''worldwide'' liability insurance coverage commensurate with its size and operations. This insurance covers the monetary consequences of any liability incurred by the operating entities for bodily harm, property damage and incidental damage suffered by third parties, excluding nuclear operator liability. The level of liability insurance coverage is a function of the reasonably likely risk the group could incur, identified and quantified through the risk mapping project, and of insurance capacities available on the market.

Non-nuclear property damage and operating loss insurance

The facilities for which the group is responsible are covered by damage insurance policies which also cover consequential operating losses. The policy limits are based on the estimated replacement value of the capital losses or an estimate of the maximum possible loss (MPL). The coverage period for operating losses ranges from 12 to 24 months.

4.10.3.2 Special insurance for nuclear facility operations

Nuclear liability

Legal liability

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. Its liability is objective, i.e., no-fault, for which there are few exemptions. The operator 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, which is generally insurance, on its total 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 his sub-contractors were at fault, since this rule overrides general law.

These overriding principles are laid down in international conventions and subsequently transposed into national law, including the Paris and Brussels conventions and the Price Anderson Act in the United States.

All of the countries in which AREVA operates nuclear facilities are governed by one of these laws.

For purposes of illustration, the principles of the conventions that apply in the European nations in which AREVA operates nuclear facilities are described below.

Basic characteristics of the Paris Convention

- Nature of liability — the strict and exclusive liability lies solely with the legal operator of the nuclear facility where the substances causing the damage are held or come from.
- Responsible person — the nuclear facility operator is the person designated or recognized as the facility's operator by the public authority with jurisdiction. 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 due to acts of armed conflict, hostilities, civil war, insurrection or a natural calamity of exceptional nature.
- Limitations of liability — the operator's liability is limited both as to the total amount and the duration. France has set a maximum liability amount of €91.5M (80 million special drawing rights, or SDR) per operator for a nuclear accident in a facility and €22.9M per accident during transport (the convention is undergoing

revisions and these amounts could be raised to €700M and €80M respectively). Since insurance is not normally available for more than ten years, the time limitation to sue for reparations is ten years from the date of the accident.

- Financial guarantee — to insure that funds will be available to compensate the victims, the convention stipulates that the operator is bound to have and maintain an insurance policy or other financial guarantee approved by the government where the facility is located and representing the amount of its liability as fixed by the convention. Up until now, insurance is the most commonly used form of financial guarantee. For example, Article 7 of the French law requires each operator to have and maintain insurance or another financial guarantee up to the limit of the amount of his liability per accident, or €91.5M. This financial guarantee must be approved by the Minister of the Economy and Finance.

The Brussels supplementary agreement

- This agreement fixes the amount of liability assumed by the signatory countries when the 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 French facility, the French government would assume liability beyond 80 million SDR (€91.M) and up to a limit of 175 million SDR (€228.6M). Thereafter the community of countries signing the Brussels supplementary agreement would assume liability for the amount in excess of 175 million SDR up to 300 million SDR (€381.1M). Draft revisions currently in progress call for the government of the country in which the nuclear facility responsible for the damage is located to intervene when damages exceed €700M and up to €1,200M. Above this amount, all signatory States would intervene up to €1,500M. A mechanism for increasing these amounts is to be included in the Convention as new States are added.

Description of insurance policies

The group has taken out specific nuclear insurance to cover its nuclear liability for operations of licensed nuclear facilities in France and abroad, and for its nuclear transportation activities. These policies are defined by the laws of the countries in which the facilities are located and by international agreements, namely the Paris and Brussels Conventions. The policies, which are specific to nuclear operators, comply with these requirements and conventions, including limits of liability. 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.

Damage insurance for nuclear facilities

Due to the nature of the damage to which the facilities could be exposed, this type of insurance is only provided by specialized insurance pools or syndicates capable of supplying the appropriate guarantees. 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). Insurer commitments could exceed one billion euros for certain complex facilities.

4.10.3.3 Other insurance coverage

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 accidents that comply with the legal requirements of each of the countries where AREVA subsidiaries are located.

4.10.3.4 Outlook and trends

In 2002, security measures already in place and a good understanding of risk enabled AREVA to avoid any notable losses or reductions of guarantees and to cut down sharply on the increases demanded by insurers for all of its industrial risks following the events of September 11, 2001. In addition, the group maintained its continuity of coverage at a good level in 2002. Some multi-year policies in effect on January 1, 2002 could not be cancelled by the insurers at year-end 2001.

As a result, premium increases were moderate in 2002 and kept in check as compared with the insurance premium hikes experienced by other economic sectors.

At year-end 2002, following competitive bidding by insurers, a new comprehensive program was developed and implemented. For 2003, the group chose to raise its level of self-insurance and thereby mutualize its most frequent risks by using captive tools.

The total cost for nuclear and non-nuclear risk insurance in 2003 is estimated to be one half of a percent of the group's 2002 consolidated sales.

The worldwide reduction of insurance capacities and expected changes to conventions for special liability coverage for nuclear facility operations are likely to result in an increase in this amount.

4.11 Human Resources

4.11.1 Key Figures

	2001	**2002**
Workforce by division*		
Front End	9,245	9,536
Reactors and Services	12,420	13,549
Back End	10,103	10,719
Connectors	15,259	14,015
Other operations including Corporate	2,586	2,328
Total	**49,613**	**50,147**
Workforce by geographic area*		
France*	30,694	30,314
Germany	3,879	3,799
Rest of Europe	3,151	2,566
United States	6,295	7,061
North and South America (excluding the U.S.)	2,392	2,617
Africa	704	915
Asia-Pacific	2,498	2,875
Total	**49,613**	**50,147**
Workforce by category*		
Engineers and Managers	n/a	13,677
Support Personnel	n/a	21,603
Craft Personnel	n/a	14,867
Total		**50,147**

* Registered workforce, i.e., under the management of the group's human resources departments.

n/a: not available

4.11.2 Human resources policy

The AREVA group has established major objectives for human resources management and organized them around five key principles that are based on the conviction that our employees are critical to our success as a group:

- Build a shared culture around the globe that can thrive on the group's multinational character.
- Develop group-wide tools for leadership and specialist management, including our own leadership model.
- Encourage mobility within the group.
- Renew dialogue with organized labor.
- Coordinate operations that have an impact on jobs by offering support and economic development programs.

These working themes are presented in Chapter 5.2, Human resources report, along with a breakdown of the workforce by activity sector and geographic area.

4.12 Sustainable Development

Sustainable development means balancing economic growth with social development while preserving the environment. AREVA has made sustainable development the foundation of its business strategy. At each of our sites, we are actively engaged in continuous progress programs in the fields of quality, safety, economic performance, social welfare, environmental protection, public affairs and dialogue with stakeholders. All for one goal: total performance improvement. Five principles guide us in our efforts:

- Strengthening our competitive position by offering customers the best available and most environmentally responsible products and services
- Preventing and minimizing environmental and technological impacts in all of our operations
- Acting responsibly with respect to the environment, our employees and the communities in which we do business
- Developing relations with our stakeholders based on receptiveness, dialogue and the concept of shared responsibility
- Assessing and reporting on our performance based on the systematic use of performance indicators

For AREVA, sustainable development translates into the continuous progress practices that we have systematically implemented for many years. We are aware of our responsibility to our share owners, our customers, our employees and our partners. This has prompted us to build our management model around sustainable development and to acquire the necessary resources to measure our performance in terms of economics, the environment, our employees and society.

4.12.1 A deeply rooted approach

The nuclear industry has had quality assurance programs in place since 1975. ISO 9001, the international standard, is the minimum certification level for most of our units. We have been implementing total quality management initiatives to improve our products, services and processes continually for more than ten years. These initiatives are founded on customer satisfaction, control of work processes, and employee involvement.

The critical self-assessment exercise patterned after the European Foundation for Quality Management model (EFQM), the most widespread continuous progress model in Europe, has been used by our German units and Reactors and Services division since 1992 and by the group's other nuclear operations since 1996-97. The Connectors business followed a similar path. In 2002, it used the ''Trotter Matrix'' to identify fundamental total quality criteria and tools applicable to the connectors business.

Environmental management systems meeting the ISO 14001 standard are already in place at most of our plant sites. Nineteen more of

our sites, including ten in nuclear and nine in connectors, received ISO 14001 certification in 2002. Several OHSAS 18001 certification initiatives are also in progress in the health and safety field, with FBFC Dessel in Belgium the first site to receive this certification in 2002.

A management system built around customers and work processes

Management by work processes was instituted in 2002, guided by implementation of the 2000 version of ISO 9001. Beyond the standards, our foremost concern is customer satisfaction. We are finding ways to measure satisfaction levels in each of our markets and are developing action plans for the needs they identify.

More than half of AREVA's nuclear entities conducted customer satisfaction surveys in 2002. Based on an assessment by Bishop (which, along with Fleck, is considered one of the most respected analysts in the components sector), FCI was ranked fifth in the top ten companies in the connectors sector in 2002. It did not even make the list in 2001.

4.12.2 Performance assessment and reporting indicators

We began the job of developing sustainable development and continuous progress indicators in 2002, using national and international models as our reference. Our efforts are guided by three goals:

- Quantify the group's overall performance using indicators
- Define and establish a shared set of performance improvement objectives for all operations
- Report to stakeholders on performance and progress

The first set of indicators will be published in the 2003 sustainable development report. The indicators will be phased in gradually, accompanied by active dialogue with stakeholders on the choice of indicators and by independent third-party verification of a certain number of them.

We are committed to earning ISO 14001 certification at all of our environmentally regulated sites by 2005. Thirty-three of them, or 45%, were already been certified as of year-end 2002.

Details of the measures taken in 2002 are given in section 5.3.

Chapter 5: Assets — Financial position — Financial performance

5.1 Financial report

5.1.1 Five-year consolidated financial highlights

millions of euros	1998	1999	2000	2001	**2002**
Consolidated income statement					
Sales:	***7 845***	***9 517***	***9 041***	***8 902***	***8 265***
— Nuclear Power	6 441	7 375	5 532	6 825	6 576
— Connectors	1 201	1 951	2 644	1 966	1 560
— Other	203	191	866	111	129
% of sales outside France	47.2%	47.6%	56.2%	52.9%	60.8%
Operating income	391	502	605	122	180
Net financial income	132	(4)	111	199	587
Exceptional items	(23)	24	78	319	289
Goodwill amortization	(79)	(146)	(154)	(989)	(593)
Share in net income of equity affiliates	402	929	443	102	83
Net income before minority interests	558	1 212	785	(367)	326
Net income	288	500	463	(587)	240
Cash flow statement					
Cash flow from operations			1 818	1 361	1 011
Cash flow from operating activities			1 452	1 204	907
Cash from (used for) investing activities			(1 453)	(1 306)	(484)
Cash from (used for) financing activities			(301)	(813)	(190)
Increase (decrease) in net cash			(289)	(903)	1 250
Balance sheet — Assets					
Net intangible assets (excluding goodwill)	272	502	498	534	510
Net goodwill	1868	2 157	2 113	2 195	1 537
Decommissioning assets	—	—	—	—	9 223
Net tangible assets	6 410	5 922	5 411	5 321	4 647
Long-term notes and investments	3 948	4 465	5 115	4 880	4 232
Working capital requirement	(2 922)	(2 584)	(1 627)	(1 210)	(958)
Cash and marketable securities	3 091	3 126	2 949	1 715	3 302
Balance sheet — Shareholders' equity and liabilities					
Shareholders' equity	3 270	3 914	4 170	4 187	4 020
Minority interests	1 652	2 019	2 434	1 004	988
Perpetual subordinated debt	215	216	216	216	215
Provisions for risk and liabilities	4 566	4 800	5 040	5 583	15 053
Debt	2 512	2 375	2 596	2 444	2 217
Data per share					
Outstanding shares at year-end	27 985 200	27 985 200	27 985 200	34 013 593	34 013 593
Outstanding investment certificates at year-end	1 429 108	1 429 108	1 429 108	1 429 108	1 429 108
Average number of outstanding shares and investment certificates in circulation	29 414 308	29 414 308	29 414 308	31 423 772	35 442 701
Earnings per share	9.79	16.98	15.73	(18.65)	6.77
Dividend paid out per share	6.19	10.23	22.85	6.20	6.20
Workforce					
Workforce at year-end	50 481	53 694	51 811	49 860	50 147

5.1.2 Segment Reporting

See chapter 4.2.3.

5.1.3 2002 Highlights

5.1.3.1 Markets and economic environment

Nuclear Power business

Note: The worldwide production data for nuclear reactors herein is reproduced from Nucleonics Week dated February 13, 2003.

Nuclear power generation was 2,678 TWh in 2002, up 1.2% over 2001. This increase reflects both improved average load factors for reactors already in service in 2001, which rose from 81.6% in 2001 to 82.2% in 2002, for a gain of 0.7%, and new reactors that came on line in 2002, including Yonggwang 5 in South Korea (1000 MWe PWR), Onagawa 3 in Japan (825 MWe PWR), and Qinshan II-1 (642 MWe PWR) and Ling Ao 1 (985 MWe PWR) in China.

Nuclear power stable in European Union and Switzerland in 2002

Nuclear power generation remained stable in the E.U/Switzerland region, with 921.3 TWh produced in 2002, up 0.2% over 2001. Power generation in France was 434.7 TWh in 2002 (+2.9%), a robust increase offset by lower production in Germany (–3.8%, due to incidents affecting the Brunsbüttel and Unterweser reactors) and in Sweden (–5.1%, Oskarshamn 1 being off line for most of the year).

European Commission proposes new directives

After publishing its ''Green Book'' on energy supply in the European Union, which underscored the importance of objectives set by the Kyoto agreement and the contribution that nuclear energy could make in this respect, the European Commission proposed a set of directives in November 2002 on:

- definition of a common safety area,
- management of nuclear waste deemed to be final,
- funding of future decommissioning and dismantling expenses of nuclear facilities.

The Commission developed this ''nuclear package'' of proposed regulations to prepare for the upcoming integration of certain new member nations from Central Europe with nuclear reactors.

Finnish parliament approves new reactor construction

In January and May 2002 respectively, the government and the parliament of Finland approved the construction of a fifth reactor for Finnish utility TVO. The request for proposals was issued in September and tender offers are expected in the spring of 2003. TVO has two sites under consideration and hopes to receive a final construction permit before the end of 2003.

National energy debate in France

The French government has announced its intention of holding a national energy debate in 2003 as a prelude to new energy policy framework legislation covering the next thirty years. Scheduled for the first half of 2003, the debate has three objectives: to answer questions raised by members of the public, to listen to their opinions, and to educate them on the consequences of their own behavior.

Legislative developments in Germany and Belgium

In Germany, the law ''for the organized abandonment of nuclear energy for the commercial production of electricity'' became effective on April 27, 2002. The first reactor (Stade, a 672 MWe PWR) is expected to shut down in 2003 and the last one (Neckar 2, a 1,365 MWe PWR) will shut down in around 2021 as a result of this law, which will also prevent the shipment of spent fuel to reprocessing facilities beginning in July 2005. Pending the availability of a permanent repository, German safety authority BFS authorized the startup of a first at-reactor storage facility for spent fuel casks at RWE's Emsland reactor in November 2002.

In Belgium, draft legislation on the gradual withdrawal from nuclear power was approved by the low chamber of parliament in December 2002 and by the high chamber in January 2003. The law will phase out all seven Belgian reactors from 2015 to 2025, except in the event of *force majeure* linked to security of energy supply. Nuclear operators will not be allowed to invoke *force majeure* themselves.

Power generation rises in North America

Reactor performance continued to improve in the U.S., with load factors climbing another 0.45% from 89.8% in 2001 to 90.2% in 2002. Some reactors were also able to ''uprate'' their maximum generating capacity. Together, these factors lifted U.S. nuclear power generation 1.7% in 2002 to a total of 817.2 TWh. Combined nuclear power generation figures for North America, up 1.5% from 2001 to 903.1 TWh, reflect this excellent performance.

New license applications in the United States

In April 2002, Dominion Energy, Entergy and Exelon announced their intention of submitting an early site permit request to the U.S. Nuclear Regulatory Commission (NRC) for a new reactor. All three utilities indicated they would submit applications in 2003. The U.S. Department of Energy (DOE) could offer one of its sites, such as Savannah River in South Carolina, INEEL in Idaho, or Portsmouth

in Ohio, for the construction of these next-generation reactors as part the ''Nuclear Power 2010'' program launched in February 2002.

Growth slows for nuclear power generation in Eastern Asia

Nuclear power generated 486.3 TWh in Eastern Asia in 2002, up only 0.9% over 2001, indicating much lower than expected growth in the number of nuclear reactors commissioned in the region. Robust growth in power generation in South Korea (+3.9%) and Taiwan (+11.5%) was insufficient to offset lower production in Japan (–1.2%) triggered by TEPCO difficulties with some of its reactors towards the end of 2002.

Connectors business

The market data provided hereunder is taken from the Bishop Report for 2002.

Worldwide connector sales were down 9.6% in 2002, at $23.1B. The continued decline is unprecedented, though the downward trend was less pronounced than in 2001/2000 (–19.1%). Only four years of declining sales have been recorded since 1981. The dramatic falls recorded in 2001 and 2002 brought sales to below their level of five years ago.

The three major connectors markets experienced a significant drop in sales: North America was down 13.5%, Europe dropped 15.6%, and Japan shed 8.9%. Only Asia-Pacific, the fourth largest market, recorded a gain with sales up 7.2%, mainly due to the shift of manufacturing operations to China.

Tail-end market segments in the automotive, military/aerospace and industrial, and medical electronics sectors were up 0.5%, 2.8% and 5.2% respectively. But the recession hit the star sectors of the nineties particularly hard: the telecommunications and data-transfer market dropped 29.5%, while sales to the computer industry were down 9.9%.

Some signs of a budding recovery were recorded towards the end of the year. Manufacturing backlogs were improved, with January 2003 orders at 106% of sales. The outlook for 2003 is moderate, however, except for the automobile, defense/aerospace and information technology markets, where American, Japanese, Taiwanese and Chinese manufacturers are creating strong demand.

5.1.3.2 Acquisitions and asset sales

Group

Sale of SOVAKLÉ

In early 2002, AREVA sold the group's real property subsidiary, Société Sovaklé, a company that owns 4,000 housing units in eight different regions, for €122M. The buyer, Foncière des Régions (formerly GSFR), is a publicly traded company on the *Second Marché*.

Sale of the Framatome Tower (Paris-La Défense)

TIAA-CREF, the investment fund of the Teachers Insurance and Annuity Association, acquired all of AREVA's interest in the Framatome Tower, one of the largest office buildings in the Paris-La Défense business district. The sale was for 25 floors or 49,000 m^2 of office space out of a total of 44 floors or 86,500 m^2 of office space. The transaction closed at €22M. The group's companies will retain their offices in the tower under lease agreements.

Sale of TotalFinaElf shares

In 2002, the group sold part of its 12.4 million shares of TotalFinaElf. The shares were recorded at December 31, 2001 under ''Other securities held in long-term financial portfolio'' not earmarked for the financing of decommissioning and dismantling expenses. The portfolio also includes 2.6 million shares of Alcatel and 1.7 million shares of Société Générale. The group sold 7 million TotalFinaElf shares in 2002 at an average price per share of €139.00 for a total of €975M. The transaction allowed the group to reduce its exposure to TotalFinaElf, with 5.4 million shares remaining in portfolio as of December 31, 2002. The lines held in other companies remained unchanged in 2002.

These shares are marketable without notice on securities exchanges and are not earmarked for decommissioning and dismantling expenses. Accordingly, they were all reclassified as cash equivalents on the consolidated balance sheet.

Acquisition of an additional interest in Sagem for the asset portfolio for plant decommissioning and dismantling expenses

AREVA owns a portfolio of financial assets managed with a very long-term perspective to back its obligation to decommission and dismantle the group's nuclear facilities.

For several years, the portfolio included a line of Sagem common shares representing 5.1% of that company's capital. This line was increased in June 2002 as follows:

– Acquisition on the market of a block of Sagem shares with preferred dividend rights for a total of €47M.

– Acquisition, from two Sagem subsidiaries, of a 19.9% participating interest in Coficem, a holding company that owns 41% of Sagem, for a total of €170M.

The decommissioning portfolio now includes a direct and indirect participating interest in Sagem representing 15.7% of that company's share capital, acquired for a total investment of €300M and

representing 16% of the net after-tax market value of the portfolio as of December 31, 2002.

This acquisition was financed with the total or partial sale of other lines, as well as through the reinvestment of dividends.

Nuclear Power business

Acquisition of Duke Engineering & Services in the United States

At the end of April 2002, Framatome ANP, Inc., an AREVA group company, acquired Duke Engineering & Services, a subsidiary of electric utility Duke Energy, for €75M. Duke Engineering & Services provides engineering services to the nuclear industry. The company also provides engineering services to operators of hydro and thermal (oil, gas) power plants and to the U.S. Department of Energy (nuclear cleanup and facility decommissioning and dismantling services). The company recorded close to $260M in sales in 2001 for a workforce of 1,250 employees. This acquisition strengthens AREVA's position in the U.S. nuclear engineering and services market. The market is expected to grow significantly, fueled by projects to extend the service life of nuclear reactors from the current 40 years to 60 years in the future, as well as nuclear reactor ''uprating'' projects.

Acquisition of Société des Mines d'Ity

On March 7, 2002, the group acquired shares held by La Source (Normandy group) in Société des Mines d'Ity (SMI) representing 51% of the company's share capital. The remaining shares (49%) are held by the Republic of Côte d'Ivoire. COGEMA is now the operator of the company, which produces 2 MT of gold per year and has 13 MT of proven gold reserves.

Connectors business

Sale of the Military / Aerospace and Industrial business unit

In 2002, *AXA Private Equity*, a market leader for investments in private companies, signed a share purchase agreement with FCI, the AREVA group connectors company, to acquire all of the operations of FCI's Military / Aeronautics and Industry (MAI) division. *AXA Private Equity,* its co-investors and the division's management will own all of the shares of the buyout company. The change in share ownership is in line with MAI's growth objective for its major markets. With €149M in 2002 sales and 1,200 employees worldwide (800 in France), MAI is the European leader for specialized connectors for defense, aviation, space and industrial applications. Title to the company was transferred on April 30, 2003.

5.1.3.3 Main contracts and significant events

Front End division

- *Contract with Air Products.* Capitalizing on its expertise in compressed fluorine gas (28 bar or 406 lbf/ft^2 pressure bottles), the Chemistry business unit entered into an exclusive supply agreement with Air Products for F_2N_2 (a mixture of fluorine and nitrogen) through 2006. Air Products, an American company, is the world leader in the production and distribution of fluorine derivatives. Fluorine/Nitrogen mixtures are widely used in the automobile industry, primarily to seal polyethylene gasoline tanks.
- *Contract for defluorination of depleted uranium in the United States.* The U.S. Department of Energy awarded a contract to AREVA subsidiary Framatome ANP, Inc. as head of the Uranium Disposition Services (UDS) team including partners Duratek Federal Services and Burns & Roe Enterprises, to defluorinate depleted uranium, preparing it for storage pending future reuse. The total value of the contract is $558M.
- *Memorandum of Understanding between Urenco and AREVA (through its subsidiary COGEMA).* Urenco and AREVA have formalized their intention of cooperating in the field of uranium enrichment by centrifuge technology. The MOU covers the design and construction of centrifuge equipment and facilities, as well as research and development relative to isotopic enrichment of uranium by centrifuge (uranium must be isotopically enriched in order to make nuclear fuel). Urenco and COGEMA plan to create a 50-50 joint venture that would be the sole development vehicle in this area for both companies. The Enrichment business unit has decided to use centrifuge technology to replace Eurodif's gaseous diffusion facility, which is 60% owned by COGEMA, when the time comes. The two groups will remain competitors for enrichment services and sales. Negotiations are in progress to speed signature of the final agreement, subject to receipt of the necessary authorizations and approvals.
- *Proceedings against Eurodif (Enrichment business unit) in the United States.* Following a complaint filed by USEC against Urenco and Eurodif, the U.S. Department of Commerce (''DOC'') imposed interim countervailing duties on the latter's U.S. imports due to dumping and subsidization, effective mid-2001. These duties require payment of a security deposit with U.S. Customs. Urenco and Eurodif have appealed this decision. In February 2003, Eurodif asked DOC for a revision. In March 2003, the U.S. Court of International Trade (CIT) ruled that the DOC directive was not only without merit but also inconsistent with U.S. law. The court has asked the DOC to revise its decision accordingly.

- *Complaint filed against Canadian nuclear safety authority.* A complaint filed by an environmental protection group against the Canadian Nuclear Safety Commission (CNSC, formerly known as the Atomic Energy Control board, AECB) prompted the Federal Court of Canada, first instance division, to cancel the initial operating permit issued to the McClean uranium mine and uranium ore processing plant operated by COGEMA Resources, Inc. The complaint is based on the regulator's alleged violation of the permitting process. It does not reflect in any way on the quality of the site's environmental management. COGEMA Resources, Inc. and the Canadian regulator have each appealed the court's decision and have requested permission to continue site operations pending a ruling on the appeal. The request to continue operations at McClean pending an appeal decision was granted in November 2002.
- *Australian gold mines.* In September 2002, COGEMA poured its first ingots of gold in Australia at the White Foil Mine in Western Australia.
- *Côte d'Ivoire:* COGEMA acquired a 51% participating interest in and became operator of Société des Mines d'Ity. The Republic of Côte d'Ivoire holds the remainder of the shares. The mine produces close to 2 MT of gold per year and has 13 MT in proven reserves. In view of the civil unrest in Côte d'Ivoire, the mine, as well as all COGEMA exploration activities in the country, was put on stand-by at the end of the year.
- *New fuel contract with EDF.* In late 2002, the Fuel Fabrication business unit signed a memorandum of understanding with EDF to supply nuclear fuel assemblies through 2006. The total value of the contract is one billion euros. The contract gives EDF maximum flexibility in managing its nuclear fuel requirements and allows the French utility to phase in procurement of fuel assemblies from other suppliers.
- *Fuel supply contract for the Gösgen reactor in Switzerland.* Kernkraftwerk Gösgen-Däniken AG, operator of the Gösgen reactor, awarded three separate contracts to the Fuel Fabrication business unit valued at €100M in June 2002. The contracts include the supply of fuel assemblies, revamping of the plant's pressure control system and construction of a spent fuel storage pool at the reactor site. Gösgen is a 1,020 MWe nuclear power plant with a three-loop pressurized water reactor (PWR) designed by Siemens. The plant came on line in 1979.

Reactors and Services division

- *Service contract with Exelon in the United States.* In June 2002, the Services business unit concluded a multiyear alliance with Exelon Corporation to provide services during scheduled outages at Unit 1 of the Three Mile Island reactor (TMI-1) near Harrisburg, Pennsylvania. The renewable contract covers outages scheduled for fall 2003, spring 2005 and fall 2006, based on 18-month cycles. The work program, which also extends to other AmerGen/Exelon sites, covers steam generator inspections and repairs, fuel reloading services, and outage support services. Framatome ANP's Services business unit will perform the work.
- *Revamping of instrumentation and control systems at Comanche Peak in the United States.* TXU Energy, owner of the Comanche Peak nuclear power plant in the U.S., has entered into an alliance with the AREVA group to modernize the plant's instrumentation and control systems. Outdated analog instrumentation at both units will be replaced with new digital systems. The agreement also covers project planning.
- *New steam generators for Salem power plant in the United States.* In December 2002, PSEG Nuclear LLC signed a contract with the group to supply four replacement steam generators for Unit 2 of the Salem nuclear plant in New Jersey. The contract is part of a strategic alliance between PSEG LLC and Framatome ANP concluded in the third quarter of 2002. The new steam generators will be built at the Chalon Saint Marcel facility. Delivery will occur at the beginning of April 2006.

Back End division

- *U.S. MOX Fuel Fabrication Facility project managed by DCS (Duke-COGEMA-Stone & Webster) gains momentum.* The United States government, through the U.S. Department of Energy (DOE) announced its decision to recycle all 34 MT of the country's surplus defense plutonium into MOX fuel. The project will use technologies implemented at the Melox plant.
- *Conceptual design of waste vitrification facility in Canada.* Atomic Energy of Canada, Ltd. (AECL) awarded a contract to the Engineering business unit for a conceptual design and budget estimate for a liquid waste retrieval and vitrification facility at the Chalk River site in Ontario and for a feasibility study on fuel element retrieval.
- *Technology transfer to China.* In April 2002, the Nuclear Cleanup business unit signed a cleanup technology and technical support agreement with the China Institute for Radiation Protection (CIRP).
- *Decommissioning of the Dounreay reactor in the United Kingdom.* In September 2002, a team including AREVA subsidiaries Framatome ANP and COGEMA won a contract with the United Kingdom Atomic Energy Authority (UKAEA) to dismantle the experimental Dounreay Fast Reactor (DFR) by 2008.
- *E.ON orders fuel casks.* In September 2002, German utility E.ON Kernkraft ordered 25 spent fuel transportation and storage casks

from the Logistics business unit. The €40M contract includes both cask supply and associated services. Deliveries will start in 2006.

- *Renewal of reprocessing and recycling contracts.* During the second half of 2002, the Reprocessing and Recycling business units signed several agreements with Swiss and German utilities to reprocess and recycle their spent fuel through 2009.
- *Public inquiry on proposed upgrades to the Melox recycling plant at Marcoule, France.* In October 2002, the French government announced that a public inquiry process would be launched in early 2003 on a proposed capacity authorized increase at the Melox recycling plant. The current licensed capacity of 100 MT/year would be raised to 145 MT/year to allow transfer of MOX fuel fabrication operations presently performed at the Cadarache plant to the Melox plant. The Cadarache plant cannot meet new seismic standards and will be permanently shut down by the end of 2003.
- *New R4 and ACC facilities come on line at the COGEMA-La Hague reprocessing plant.* In April 2002, COGEMA brought a new plutonium purification and packaging facility (R4) into service at the La Hague spent fuel reprocessing plant. The ACC compaction facility for spent fuel hulls and end-fittings was placed in service in May. The facility packages compacted non-fuel bearing components into universal canisters.
- *Revised licensed capacity for COGEMA-La Hague reprocessing plant.* At the end of the public inquiry process conducted in early 2000, ministerial orders amending the licensed nuclear facility (INB) status of the La Hague site were published in the French government register *Journal Officiel* in January 2003. The orders authorize the site to reprocess specific types of fuels and recyclable materials in the site's two plants. Each plant's licensed capacity is limited to 1,000 MT of nuclear materials per year. The site's overall capacity remains unchanged at 1,700 MT of nuclear materials per year cumulative for both plants.

Connectors

Connectors division

- The Communications Data Consumer business unit granted a users license for its patented Ball Grid Array (BGA) technology to two connector companies, Tyco and Molex. The technology is used to manufacture integrated circuit boards for new microprocessors and telecommunication applications.
- The Electrical Power Interconnect business unit acquired Scapa (Barnier brand) kit design, testing and manufacturing operations, thus gaining a major position in the niche market of underground connections. These operations are now integrated with the operations of the company's Evreux site in Normandy.
- In February 2002, Ericsson certified the business unit's QikPwr™ connectors for the first time.
- The Electrical Power Interconnect business unit also launched its U.S. customer relationship management (CRM) program. CRM allows customers to track their purchase orders and delivery receipts, cost proposals, promotional offers and price lists on line. In September 2002, IMARK, a U.S. group of over 180 independent electrical distributors, bestowed its Supplier of the Year award to the division in recognition of delivery and service quality.
- The Electrical Power Interconnect business unit expanded its distribution network to include Arrow, a leading American electrical distributor.
- The Automotive business unit partnered with Japan's Mitsubishi Cable Industries, Ltd. (MCIL), which supplies cables to Mitsubishi and Nissan, to develop advanced automotive connector solutions in Asia.
- In November 2002, the Automotive business unit won a first contract with BMW, as well as a major contract with PSA (Peugeot Citroën) to supply next-generation connectors for airbags, thus strengthening its world leadership position in this market segment.
- As part of its total quality management program, the Automotive business unit implemented the new ''Six Sigma'' method in 2002.
- The Microconnections business unit penetrated the Swiss watch industry micropackaging market with its breakthrough flex connector technology.

5.1.4 Income statement

5.1.4.1 Sales

In 2002, AREVA recorded €8,265M in consolidated sales compared with €8,901M in 2001, a 7.1% decrease.

in millions of euros	2000	2001	**2002**
Nuclear Power	6 213	6 826	6 576
Connectors	2 645	1 966	1 560
Other	183	111	129
Total	**9 041**	**8 902**	**8 265**

Nuclear Power business

The Nuclear Power business recorded €6,576M in 2002 sales compared with €6,826M in 2001, a 3.7% decrease. Sales were stable when adjusted for changes in cross-billings. Sales for 2001

must be adjusted for like-for-like comparisons with 2002. In 2002, some customers exercised a contractual option to supply the energy needed by the group for enrichment of the customers' natural uranium. Consequently, the value of the energy component is no longer included in the cost of services for these customers and is therefore no longer billed to them as of 2002. This change in energy procurement method has no impact on AREVA's operating income. It has an impact only on the amount of cross-billings and sales reported for 2002.

The scope of the consolidated group changed in 2001 with the integration of Canberra and Siemens' nuclear operations and the sale of Clemessy, and changed again in 2002 with the acquisition of Duke Engineering & Services. With these acquisitions, AREVA strengthened its positions in Europe and especially in the United States. Nuclear sales are down 3.1% when adjusted for changes in cross-billings and changes in the consolidated group, as described above.

Connectors business

The Connectors business recorded €1,560M in 2002 sales, compared with €1,966M in 2001, a 20.7% decrease reflecting a significant drop in the telecommunications market, where the group does considerable business. Sales were essentially flat in all other market segments.

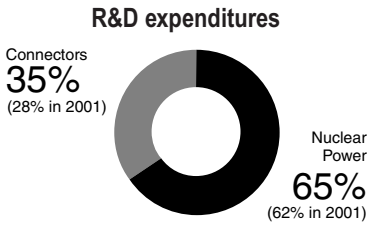
Other operations and corporate expenses

Other sales revenue items include the following:

- AREVA SA recorded €16M in sales, essentially from real property rentals;
- Packinox SA, which is being sold, recorded €35M in sales;
- Some of Duke Engineering & Services' sales, representing €77M, for operations that are not strategic for AREVA or that have not been allocated to a particular division.

5.1.4.2 Research and development

Research and development spending was €332M in 2002 compared with €377M in 2001. Spending was level, at 4.2% of sales in 2002 and in 2001. The breakdown of R&D spending between the Nuclear and Connectors businesses is as follows:



Nuclear R&D remained stable, primarily due to the multiyear aspect of R&D projects in this field. In the Connectors business, despite difficult market conditions, R&D increased from 7% of sales in 2001 to 8% in 2002.

5.1.4.3 Operating income

AREVA had consolidated operating income of €180M in 2002, up 48% from €122M in 2001.

in millions of euros	2000		2001		**2002**	
		% of Sales		% of Sales		% of Sales
Nuclear Power	341	5.5%	417	6.1%	649	9.9%
Connectors	289	10.9%	(235)	–12.0%	(406)	–26.0%
Other	(25)	—	(60)	—	(63)	—
Total	**605**	**6.7%**	**122**	**1.4%**	**180**	**2.2%**

Nuclear Power business

The growth in AREVA's operating income reflects the performance of the Nuclear Power business, which recorded €649M in operating income in 2002 compared with €417M in 2001, a 56% gain. Operating margin grew 3.8 percentage points, from 6.1% in 2001 to 9.9% in 2002. This is the highest margin rate ever recorded for this business. AREVA is ahead of schedule on its stated commitment to achieve double-digit operating margin growth in the nuclear business in the 2002-2004 time frame, thanks to productivity gains in all business units, new contracts, and the development of new synergistic approaches.

It should be noted that a write-off in the amount of €184M impacted operating income in 2001, reflecting a capacity adjustment at the Melox recycling facility.

Restructuring expenses of €76M in 2002 and €58M in 2001 are included in operating income reported by the Nuclear Power business.

Connectors business

Despite lower sales, the Connectors business reduced its operating loss before restructuring expenses from €181M in 2001 to a loss of €137M in 2002. Business units active in the telecom market were the only ones to record a loss. Business units focusing on the automotive, manufacturing, and microconnections markets were all profitable.

Restructuring expenses rose sharply, from €29M in 2001 to €269M in 2002. A series of restructuring and production streamlining measures initiated in late 2001 were stepped up in 2002, at a cost of €162M. A €110M write-off was also recorded to reflect adjustments made to the capacity of certain production assets.

After restructuring expenses of €269M in 2002, the operating loss for the Connectors business was €406M, compared with a loss of €235M in 2001.

Other operations and corporate expenses

In this line, operating income consists mainly of corporate expenses incurred by AREVA SA, COGEMA and Framatome ANP at the holding level that are not allocated to operating units.

5.1.4.4 Net financial income

millions of euros	2000*	2001	**2002**
Investment income, net of interest expense	66	30	10
Net foreign exchange gain or (loss)	(7)	(6)	1
Net gain or (loss) on sales of securities	29	92	689
Dividends from securities	3	60	57
(Increase) decrease of provisions on securities	(11)	28	(46)
Gain (loss) from decommissioning assets and long term contracts	22	(17)	(115)
Other income (loss) from financial activities	9	12	(8)
Total	**111**	**199**	**587**

* Reconstituted data, not audited.

Financial income increased from €199M in 2001 to €587M in 2002, including a €689 million gain on the sale of 7 million shares of TotalFinaElf (see § 5.1.3.2).

Investment income, net of interest expenses on loans and credit lines, decreased from €30M in 2001 to €10M in 2002, reflecting AREVA's lower average net cash position. AREVA had paid a significant dividend in the second half of 2001 (€1.2B) and purchased 5/6th of TotalFinaElf's investment in COGEMA, an outlay in excess of €500M (see chapter 4.1). In 2002, the sales of financial and real property assets (AREVA Tower — formerly the Framatome Tower — and sales of TotalFinaElf shares) took place towards the end of the year.

Dividends from securities considered part of the company's cash position were €57M. A €46M provision was recorded against these securities in 2002 as financial markets declined.

Net consolidated financial income includes €81M in interest on long term advances from customers of the Back End business unit and €30M for an inflation adjustment on decommissioning and dismantling provisions. The asset portfolio set up to fund nuclear facility decommissioning costs contributed a net loss of €4M, representing provisions on securities impacted by declining equity markets, partially offset by dividends and net gains on sales of assets.

5.1.4.5 Exceptional items

Exceptional items decreased from €319M in 2001 to €289M in 2002, a year in which certain non strategic assets were sold. Sovaklé, the group's real property company, was sold in January 2002. AREVA's real property interest in the AREVA Tower (formerly the Framatome Tower) was sold in December 2002. These transactions generated a total gain of €293M in 2002.

In 2001, an exceptional dilution gain of €304M was recorded when Siemens acquired a participating interest in Framatome ANP.

5.1.4.6 Corporate income tax

Corporate income tax rose from €120M in 2001 to €220M in 2002. During the same period, the group's income before tax rose from a loss of €349M to a profit of €463M.

AREVA is authorized to file a consolidated tax return. Accordingly, the corporate income tax obligation is computed at the group level. The group's effective tax rate for 2002 is 20.9%, compared with 33.7% in 2001 and 37.5% in 2000. The decrease in actual tax rate for 2002 reflects the lower long-term capital gains tax rate (20.2%) applicable to sales of Sovaklé and TotalFinaElf shares.

5.1.4.7 Share in net income of equity affiliates

AREVA's share in the net income of equity affiliates, representing €83M in 2002 and €102M in 2001, comes essentially from STMicroelectronics. AREVA's 17.3% share of that company's net income represented €75M in 2002 and €95M in 2001.

5.1.4.8 Goodwill amortization

Goodwill amortization and write-offs decreased from €989M in 2001 to €593M in 2002. Consistent with the methods used in 2001, AREVA performed an impairment test on the goodwill recorded as an asset for the Connectors business. A strategic management firm assessed the company's mid-term forecast based on a complete review of product catalogs, projected customer requirements, and restructuring plans in effect. This review showed that an additional write-off in the amount of €275M was required in 2002. Write-offs in the amount of €730M had already been recorded in 2001. The Connectors goodwill remaining after these write-offs, representing €380M as of December 31, 2002, will be amortized in future years.

In 2002, AREVA also recorded an exceptional write-off of €163M in goodwill when the company was established, primarily to account for the sale of certain assets, in particular shares of TotalFinaElf. In all, goodwill write-offs totaled €438M in 2002.

Recurring goodwill amortization was €156M in 2002.

5.1.4.9 Minority interests in subsidiaries' earnings

Minority interests were €86M in 2002, compared with €220M in 2001. This decrease reflects changes in the share capital of certain subsidiaries when AREVA was formed in September 2001. Before September 3, 2001, minority interests corresponded in part to the share of net income (or loss) of various minority shareholders of COGEMA and Framatome SA. These interests disappeared after September 3, 2001, when COGEMA's shareholders became AREVA shareholders.

The following table summarizes minority interests in subsidiaries' earnings:

millions of euros	2000	2001	**2002**
Minority interests through September 3, 2001	122	120	0
Recurring minority interests since September 3, 2001			
— Siemens' 34% interest in Framatome ANP	0	46	56
— France Télécom's interest in STMicroelectronics*	183	35	11
— Minority interests in Eurodif (uranium enrichment)	16	18	18
— Other	1	1	

* After goodwill allocation to France Télécom

5.1.4.10 Consolidated net income

Consolidated net income was €240M in 2002, compared with a loss of €587M in 2001. Several non-recurring events, some favorable and some unfavorable, impacted AREVA's consolidated income in 2002. The table below summarizes these events(1) and their impact, representing a total positive contribution of €103M to consolidated income before tax and a total positive contribution of €10M to consolidated net income.

Specific items impacting AREVA's 2002 consolidated income statement:

millions of euros	**Gross amount**	Net contribution after tax
Restructuring expenses	(345)	(223)
Gain on sales of securities	689	550
Exceptional items	289	194
Provisions on securities	(92)	(73)
Goodwill amortization	(438)	(438)
TOTAL	103	10

Net earnings per share of €6.8 were recorded for 2002, compared with a loss per share of €18.6 in 2001, based on the average number of shares and investment certificates outstanding for each year, namely 35.4 million shares and investment certificates in 2002 and 31.5 million shares and investment certificates in 2001.

(1) Restructuring expenses included in operating income, gain on sale of TotalFinaElf shares, depreciation of financial assets, sale of Sovaklé and real property interests in the Framatome Tower (Paris-La Défense), goodwill write-offs.

5.1.5 Data by division and by business

5.1.5.1 Key data

By division and by business

millions of euros (except personnel data)	Front End	Reactors and Services	Back End	Nuclear Power	Connectors	Holding, other operations, and consolidation entries*	Consolidated
2002							
Income							
Gross sales	2 583	2 074	2 271	**6 928**	**1 560**	(223)	**8 265**
Inter-company sales	(24)	(143)	(185)	**(352)**	**0**	352	**0**
Contribution to consolidated sales	2 559	1 931	2 086	**6 576**	**1 560**	129	**8 265**
Operating income	333	81	235	**649**	**(406)**	(63)	**180**
as % of sales	13.0%	4.2%	11.3%	**9.9%**	**(26.0)%**	n.a.	**2.2%**
Cash							
EBITDA**	425	87	756	**1 268**	**(26)**	(92)	**1 150**
% of contribution to consolidated sales	16.6%	4.5%	36.2%	**19.3%**	**–1.7%**	n.a.	**13.9%**
Net cash used in investing activities	(93)	(49)	(228)	**(370)**	**(88)**	(25)	**(483)**
Gain or loss from sales of tangible and intangible assets	(1)	(1)	23	**21**	**2**	—	**23**
Change in operating working capital requirement	113	34	(280)	**(133)**	**86**	(25)	**(72)**
Operating cash flow	445	71	271	**787**	**(26)**	(143)	**618**
Other							
Fixed assets	2 076	551	12 057	**14 684**	**944**	4 521	**20 149**
Working capital requirement	600	277	(2 241)	**(1 364)**	**352**	54	**(958)**
Capital employed***	1 955	906	509	**3 370**	**1 611**	1 050	**6 031**
Workforce	9 536	13 549	10 719	**33 804**	**14 015**	2 328	**50 147**

millions of euros (except personnel data)	Front End	Reactors and Services	Back End	Nuclear Power	Connectors	Holding, other operations, and consolidation entries*	Consolidated
2001							
Income							
Gross sales	2 761	2 057	2 418	**7 236**	**1 966**	(300)	**8 902**
Inter-company sales	(28)	(178)	(205)	**(411)**	**0**	411	**0**
Contribution to consolidated sales	2 733	1 879	2 213	**6 825**	**1 966**	111	**8 902**
Operating income	362	45	10	**417**	**(235)**	(60)	**122**
as % of sales	13.2%	2.4%	0.5%	**6.1%**	**(12.0)%**	n.a.	**1.4%**
Fixed assets	1 444	394	3 606	**5 444**	**3 015**	4 471	**12 930**
Workforce	9 245	12 622	10 100	**31 967**	**15 293**	2 600	**49 860**
2000							
Income							
Gross sales	2 357	1 908	2 340	**6 605**	**2 644**	(208)	**9 041**
Inter-company sales	(29)	(233)	(130)	**(392)**	**—**	392	**—**
Contribution to consolidated sales	2 328	1 675	2 210	**6 213**	**2 644**	184	**9 041**
Operating income	200	84	57	**341**	**289**	(25)	**605**
as % of sales	8.6%	5.0%	2.6%	**5.5%**	**10.9%**	n.a.	**6.7%**
Fixed assets****	1 381	303	3 907	**5 591**	**3 997**	3 549	**13 137**
Workforce	7 590	13 756	9 716	**31 062**	**18 457**	2 292	**51 811**

* Some operations of Duke Engineering & Services, acquired in May 2002, are yet to be allocated among the relevant Nuclear business units. In the meantime, these operations are recorded under ''other operations''.

** EBITDA is understood as operating income before net depreciation, depletion, amortization and provisions, except for provisions concerning the company's working capital.

*** Capital employed includes net tangible and intangible assets, operating working capital requirement, customer prepayments invested in fixed assets, and provisions for liabilities.

**** COGEMA's participating interest in Eramet, recorded under the ''Front End'' in 2000, was recorded under ''Holding and other operations'' in 2001.

By geographic area

millions of euros	2000 Total	2001 Nuclear	2001 Connectors	2001 Other	2001 Total	**2002** Nuclear	**2002** Connectors	**2002** Other	**2002** Total
Net sales by area									
France	3 961	3 914	217	63	4 194	3 033	197	12	3 242
Europe (excl. France)	1 574	1 270	562	5	1 837	1 227	414	5	1 646
North America	1 519	674	441	7	1 383	1 208	411	84	1 703
Asia	1 511	782	577	24	1 122	954	387	9	1 350
Other areas	476	184	169	13	366	153	151	20	324
Total	**9 041**	**6 825**	**1 966**	**111**	**8 902**	**6 575**	**1 560**	**130**	**8 265**
Tangible assets by area									
France	4 476	3 896	118	161	4 175	3 638	81	72	3 791
Europe (excl. France)	141	53	119	60	232	100	96	6	202
North America	358	349	330	42	721	314	150	28	492
Rest of the world	436	7	186	0	193	11	151	0	162
Total	**5 411**	**4 305**	**753**	**263**	**5 321**	**4 063**	**478**	**106**	**4 647**

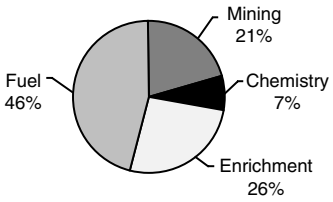
5.1.5.2 Financial performance by division

Front End division

millions of euros	2000	2001	**2002**
Sales	2 328	2 733	**2 560**
Operating income	200	362	**333**
% of sales	*8.6%*	*13.2%*	***13.0%***

Sales in the **Front End** division were down 6.3%, from €2,733M in 2001 to €2,560M in 2002. Sales were up 2.9% before changes in cross-billing arrangements[(2)]. Sales of Duke Engineering & Services, a company acquired in April 2002, are included in 2002 sales revenue. Division sales are down 1.7% before changes in consolidated group.

2002 sales by business unit



Sales of the *Mining* business unit rose 10%, reflecting strong trading activity. The business unit produced 7,457 MT of uranium concentrates in 2002, compared with 7,217 MT in 2001. In 2002, Katco, a Kazakhstan company owned 45% by COGEMA, produced its first tons of uranium in a pilot plant.

The volume of concentrates sold under multiyear contracts remained stable. Trading operations, on the other hand, were very lively. COGEMA purchased the 30.6% interest held by German minority shareholders in Urangesellschaft, its trading subsidiary. Uranium spot market prices remained stable throughout the year at approximately $10 per pound of U3O8, reflecting the relative abundance of secondary supply sources, primarily from the recycling of enriched uranium of Russian origin.

The *Mining* business unit produced 5,853 kgs of gold, up 26% from 2001.

(2) 2001 sales were adjusted to allow comparison with 2002, when certain customers exercised an option to supply the energy required to enrich their natural uranium. Consequently, the value of the energy component is no longer included in the cost of enrichment services provided and is no longer passed through to the customer. This change in cross-billing practice impacts reported sales for 2002 but has no impact on the company's operating income.

Chemistry business unit sales shrank 11%, with stable sales of conversion services and lower sales of decommissioning and dismantling services for third party facilities.

Uranium concentrate conversion price indicators remained stable at year-end 2001 levels in 2002, after firming up considerably in 2001. Market activity appeared to be picking up over the course the year, however. Ultimately, the business unit closed the year having produced 12,360 MTU/UF6, up from 11,650 MT in 2001. The *Chemistry* business unit launched a review of its technical, organizational and human resources with to achieve a target production rate of 13,000 MT per year.

Sales of the *Enrichment* business unit grew 16% before changes in cross-billings (see footnote 2). This increase reflects higher export sales, higher prices in some instances, and reductions in feed material inventories. The business unit continued to pursue renewal of its ISO 14001 and ISO 9001 certifications from French QA agency AFAQ,(3) which are now combined in a single integrated and certified management system.

Sales of the *Fuel* business unit decreased by 3% (12% before changes in the consolidated group), after a rather exceptional 2001. Deliveries increased in France and Germany, but with a less favorable product mix in terms of unit price. The business unit delivered the first reactor core to the Ling Ao 2 nuclear power plant in China, which was connected to the electric grid in early 2003.

The **Front End** division recorded €333M in operating income for 2002, compared with €362M in 2001. The 2002 level of operating income remains strong considering record nuclear fuel sales in 2001. Operating income was affected by:

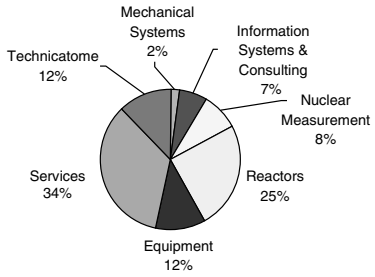
- lower unit cost of sales for the *Mining* business unit;
- lower profitability for the *Chemistry* business unit, with 2002 production costs impacted by technical difficulties;
- improved performance for the *Enrichment* business unit, reflecting efficient plant operations and increased volumes;
- lower profits for the *Fuel* business unit due to an unfavorable sales mix, with cost reduction programs and productivity improvement plans remaining in effect to counter price pressures.

Reactors and Services division

millions of euros	2000	2001	**2002**
Sales	1 675	1 879	**1 931**
Operating income	84	45	**81**
% of sales	*5.0%*	*2.4%*	***4.2%***

Sales of the **Reactors and Services** division were up 2.8%, from €1,879M in 2001 to €1,931M in 2002. Sales were down 1.4% before changes in the consolidated group. No reactor construction billings were recorded in 2002. In the United States, sales rose almost 10% on a like-for-like basis.

2002 sales by business unit



For the *Reactors* business unit,(4) sales gained 4%, with U.S. operations strengthened by the acquisition of Duke Engineering & Services in late April 2002. Like for like, sales were less dynamic than in 2001, a year that benefited from final billings for construction of the Ling Ao nuclear plant in China. The team turned in an excellent performance, with both units connected to the grid well ahead of schedule in May 2002 and January 2003 respectively. Renovation work on Bulgaria's Kozloduy 5 and 6 reactors began to gain momentum. In the United States, strong marketing activity relating to reactor life extension and uprating projects was still insufficient to offset the lack of new reactor construction work.

For the *Services* business unit, sales climbed 9% after integration of part of Duke Engineering & Services' operations. Sales were stable on a like-for-like basis. The backlog surged in the United Sales with numerous vessel inspection and repair orders. European operations remained stable.

For the *Equipment* business unit, sales were strong in 2002 (+6%). At the Chalon Saint Marcel plant, production was up to satisfy numerous vessel head and steam generator orders for the U.S. market. At the Jeumont plant, the wind turbine business

(3) Agence française pour l'assurance de la qualité

(4) Formerly known as Projects and Engineering

developed rapidly in France with the Escale 1 project and abroad with several demonstration units in Canada, South Korea and South Africa.

The *Technicatome* business unit recorded 9% in growth linked to the launch of major naval propulsion projects. Significant operating growth was also recorded in rail and urban transportation security systems.

The *Nuclear Measurement* business unit grew 7% due to changes in the consolidated group, but sales dropped in the United States when some customers deferred their orders. The U.S. Department of Homeland Security budget became law late and consequently the business unit did not receive the volume of work it had anticipated in 2002. These deferrals were offset by robust sales in Asia. The business unit strengthened its Japanese business by creating a subsidiary in Tokyo to capitalize on the group's strong presence in the area.

For the *Information Systems* business unit (Euriware), sales were down 5% due to a slowdown in industrial investment in the French market, affecting its systems integration business. This setback was offset in part by strong outsourced information system business.

The *Mechanical Systems* business unit, confronted with a drop in investment by its main customers, recorded declining sales in 2002. Three sites were closed to adjust capacity to market conditions. The business unit was reorganized along two business lines, Nuclear and Manufacturing, with the ultimate objective of refocusing on the nuclear market.

Operating income rose vigorously for the **Reactors and Services** division, from €45M in 2001 to €81M in 2002, for a 1.8 point gain in operating margin.

This improvement reflects cost-cutting measures implemented in all business units, especially the *Reactors* business unit, which also invoiced German utilities for several years of development work on the European Pressurized Reactor (EPR). Final acceptance of the Chooz 1 and 2 reactors and interim acceptance certificates for both Ling Ao reactors were also beneficial to the business unit. Operating income includes expenses incurred in the preparation of major tender offers still in progress.

The *Services* business unit and the *Equipment* business unit capitalized on a strong American market for vessel head and steam generator replacement.

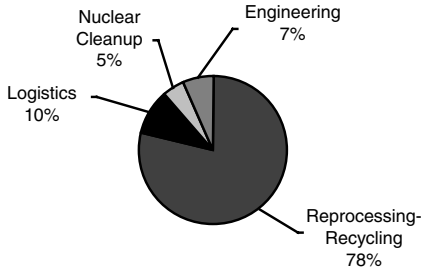
Lastly, operating income for the Reactor and Services division includes significant expenses related to the restructuring of the *Mechanical Systems* business unit, including the shut-down of three facilities.

Back End division

millions of euros	2000	2001	**2002**
Sales	2 210	2 213	**2 087**
Operating income	57	10	**235**
% of sales	*5.0%*	*0.5%*	***11.3%***

Sales for the **Back End** division were down 5.7%, to €2,086M. The previous year included a non-recurring billing to French utility EDF for several years of spent fuel storage services. Except for this item, division sales were up on strong engineering and technical support billings in the United States and Japan.

2002 sales by business unit



Sales increased in *Reprocessing-Recycling* (excluding a billing for the balance of storage services provided in 2001). In *Reprocessing*, a new spent fuel management agreement concluded with EDF in August 2001 was in effect on a full-year basis in 2002. Training services at the COGEMA-La Hague plant for future operators of the Rokkasho-Mura plant, scheduled to start up in 2005, also began under a July 2001 agreement with a Japanese consortium. Three hands-on training modules were successfully completed in 2002.

In November 2002, the COGEMA-La Hague plant was certified under ISO 9001 Version 2000, the only standard in effect for organizational quality management. Site production, measured in terms of quantities of spent fuel sheared, was 1,061 MT in 2001, up from 951 MT in 2001. The site received 1,389 MT of French and foreign PWR and BWR spent fuel, up from 1,034 MT in 2001. As of December 31, 2002, 7,783 MT of spent fuel were stored in the La Hague pools, compared with 7,453 MT as of December 31, 2001.

In the *Recycling* business unit, the Melox plant in Marcoule and the COGEMA plant in Cadarache produced close to 140 MT of uranium/plutonium fuel (MOX) in 2002. Recycling proceeded on schedule for European utilities. However, difficulties in the Japanese nuclear sector are seriously affecting the market, and the business unit will have to revise its medium term MOX fuel assembly fabrication plans for its Japanese customers.

From a 2002 sales point of view, however, non-recurring items from technology agreements and contractual changes with the business unit's Japanese customers boosted sales revenue compared with the previous year.

For the *Engineering* business unit, sales increased 10%. The business unit is actively involved in the contract with a Japanese consortium for plant testing and startup support for the Rokkasho Mura plant. In the United States, the business unit is participating in a project to recycle surplus defense plutonium.

For the *Logistics* business unit, sales edged down 2% in 2002. The business unit transported 253 spent fuel casks during the year, compared with 189 casks in 2001. The COGEMA-La Hague plant continued to return vitrified waste to its foreign owners: sixteen shipments of glass canisters were made to Germany, Belgium and Switzerland in 2002, compared with twenty in 2001. The business unit delivered 96 casks to its customers in 2002, including 65 to U.S. customers, up 16% from 2001. To capitalize on growth prospects in Japan, the business unit increased its participating interest in Transnuclear, Ltd. (Japan) to 47.5%, thus becoming the company's largest shareholder.

For the *Nuclear Cleanup* business unit, sales were up 14% in 2002. The business unit demonstrated its ability to adjust to the trend among French nuclear operators towards greater integration of maintenance services. The business unit is targeting new decommissioning and dismantling programs at French utility EDF and nuclear R&D agency CEA. Future growth is contingent on the scope and schedule for these programs.

Operating income soared for the **Back End** division, from €10M in 2001 to €235M in 2002. It should be noted, however, that a write-off in the amount of €184M had been recorded in 2001 to reflect capacity changes at the Melox recycling plant.

Operating income grew in *Reprocessing and Recycling*, reflecting the full-year effect of a startup support contract at Rokkasho-Mura (Japan) signed in mid-2001, three training modules completed in 2002, and excellent performance on a contract signed with EDF in 2001.

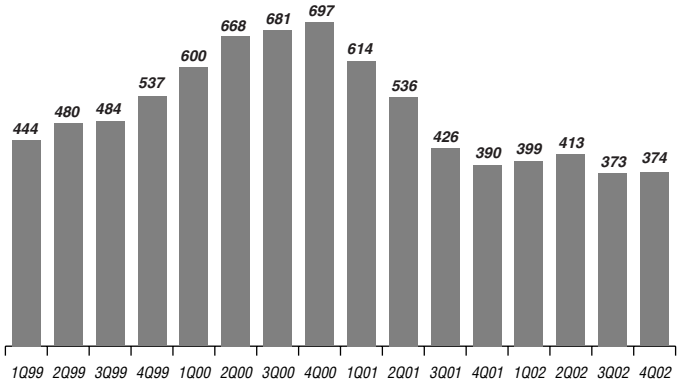
The *Logistics* business unit maintained a stable operating income level, capitalizing on growing German and American demand for dry storage casks.

Connectors division

millions of euros	2000	2001	**2002**
Sales	2 645	1 966	1 560
Operating income before restructuring expenses	289	–181	–137
% of sales	*10.9%*	*–9.2%*	*–8.8%*
Operating income	289	–235	–406

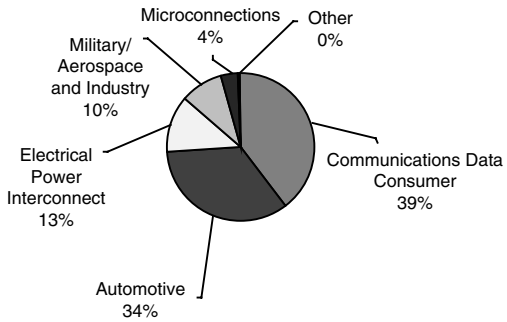
Sales were down 20.7% for the year in the **Connectors** division. Quarterly sales were as follows:

Quarterly Connectors division sales



Division sales for the fourth quarter of 2002 were €374M, essentially unchanged from the third quarter. Second quarter sales were down 8% from the first quarter, reflecting persistently weak energy and telecom equipment market conditions in the United States.

2002 sales by business unit



Sales of the *Communications Data Consumer* and *Electrical Power Interconnect* business units were down significantly in 2002, at –37.5% and –17.8% respectively. The quarterly business review shows a stable fourth quarter in 2002 in comparison to the third quarter, when sales were down 13% and 9% respectively from the

second quarter. The decrease reflects lower sales to telecommunication equipment companies in the United States where, contrary to expectations, no recovery had yet materialized by the middle of the year.

The *Communications Data Consumer* business unit launched two major programs to improve customer service in 2002. It also concluded important alliances to promote its Ball Grid Array (BGA) technology and strengthened its technology leadership with new high-speed connection products.

The *Automotive* business unit recorded 6% growth in 2002, outperforming the automotive connector market, which grew 4% in 2002. The business unit increased its market presence with strong growth in airbag connectors. The business unit won a major contract for next-generation airbag connectors from PSA Peugeot Citroën.

Military/Aerospace and Industrial sales were down 9% in 2002, reflecting a soft civil aeronautics market in the United States and Germany.

Sales were essentially stable in the *Microconnections* business unit, at –2%, despite difficulties in the smart card industry, its major market. The company was able to strengthen its world leadership position and maintain its margins. New technology is being developed for high-density flex connectors and microconnectors for the watch industry.

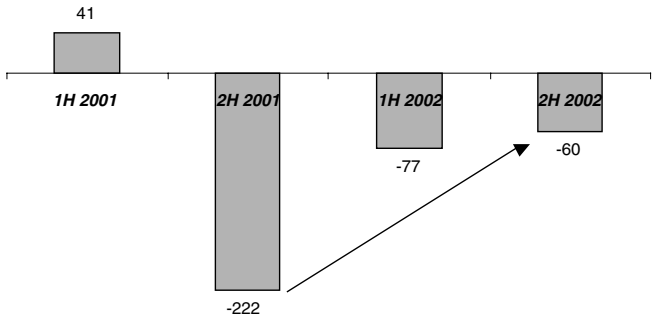
From a geographic point of view, the sharpest decline in sales for the **Connectors** division was in North America (–33%), primarily in *Communications Data Consumer* (–54%), *Electrical Power Interconnect* (–24%), and *Military/Aerospace and Industrial* (–28%).

Several customers transferred their production operations from Europe and North America to Asia, where sales of these three business units declined by only 14% while regional sales were up for the other business units.

Sales were down 21% in Europe, with particularly poor sales in the *Communications Data Consumer* business unit (–45%).

While sales shed another €400M in 2002, the operating loss before restructuring expenses of €44M was less than in 2001, thanks to rigorous restructuring measures. Negative operating cash flow also improved significantly, from –€106M in 2001 to –€25M in 2002, reflecting reduced capital spending and a lower working capital requirement. The division is making progress towards recovery. Restructuring and cost reduction measures initiated in 2002 should have a positive impact on financial performance in 2003.

Six-month operating income before restructuring expenses



The Connectors division reported an operating loss of €406M in 2002, impacted by restructuring expenses from measures initiated during the year.

This operating loss came entirely from the *Communications Data Consumer* business unit. All other business units, including *Automotive*, *Electrical Power Interconnect* and *Microconnections*, reported positive results. In fact, profitability increased for the *Automotive* business unit, thanks to higher sales volume with existing large customers and to the acquisition of new customers. The *Electrical Power Interconnect* business unit reported positive results despite poor energy and telecommunication markets in the United States.

In December 2002, Axa Private Equity agreed to purchase the *Military/Aerospace and Industrial* business unit. Though profitable, this business unit had not reached a strategic size. Title transfer occurred on April 30, 2003.

5.1.6 Cash flow

Summary cash flow data

millions of euros	2000	2001	**2002**
Cash flow from operations	1 818	1 361	1 011
Change in working capital requirement	(366)	(157)	(104)
Cash flow from operating activities	**1 452**	**1 204**	**907**
Investment in tangible and intangible assets	(612)	(559)	(200)
Change in customer prepayments invested in fixed assets	(679)	(515)	(71)
Free cash flow[5]	**161**	**130**	**636**
Net investment in long-term financial assets	(162)	(232)	(213)
Capital contributions	43	133	—
Dividend distributions	(384)	(1 225)	(262)
Increase (decrease) in debt	41	279	72
Sale (purchase) of marketable securities	—	—	995
Foreign exchange variations	13	10	23
Cash increase/(decrease)	**(289)**	**(903)**	**1,250**
Cash at the beginning of the year*	**2 690**	**2 402**	**680****
Cash at year-end*	**2 402**	**1 499**	**1 929**

* Net of bank credit balances

** See § 5.1.6.3

5.1.6.1 Free cash flow

Consolidated cash flow from operations fell from €1,361M in 2001 to €1,011M in 2002, a decrease of €350M. EBITDA[5] was essentially stable at €1,150M (€1,181M in 2001).

Lower cash flow from operations reflects a drop in net financial income adjusted for items without impact on cash (gain on sales of securities) and a change in reporting format, with deferred tax entries included in gross margin in 2002. In 2001, deferred tax entries were included in working capital requirement.

The working capital requirement, shown below, increased by €104M in 2002.

millions of euros	2002	2001	**2000**
Change in inventories and work in process	59	458	271
Change in accounts receivable and other receivables	(7)	34	(110)
Change in accounts payable and other liabilities	(789)	(306)	(128)
Change in customer prepayments received	579	(403)	(594)
Change in down payments paid	53	60	195
Total	**(104)**	**(157)**	**(366)**

AREVA generated €636M in consolidated free cash flow[6] in 2002, up from €130M in 2001. This increase reflects lower net capital spending due to sales of tangible assets and smaller reimbursements of customer prepayments invested in fixed assets. The Nuclear

(5) Operating income before depreciation, depletion, amortization and provisions (excluding entries concerning working capital items)

(6) Cash from operating activities less net cash flows invested in tangible and intangible assets +/– changes in customer prepayments invested in fixed assets.

Power business generated €787M in operating cash flow[7] for 2002, while €26M were used in the Connectors business (see key data, § 5.1.5.1).

5.1.6.2 Capital spending programs

Capital expenditure for tangible and intangible assets, net of asset sales, decreased by €559M to €200M in 2002, primarily due to the sale of real property assets, including the Framatome Tower in Paris-La Défense. Net capital spending remained stable in Nuclear Power, at €370M compared with €364M in 2001. Spending focused on maintaining existing production facilities in perfect working order and top safety conditions. The Connectors division adjusted to a very soft telecommunications market by reducing the amount of capital spent on facilities, from €210M in 2001 to €88M in 2002. Capital spending is expected to remain stable for both businesses in 2003.

Acquisitions of financial assets, net of financial asset sales, decreased from €232M in 2001 to €213M in 2002. Net 2002 spending includes the following:

- acquisition of Duke Engineering & Services in the United States in April,
- acquisition of Sagem and Coficem shares in June,
- sale of Sovaklé at the beginning of the year.

5.1.6.3 Ending cash position

Dividend distributions for 2001 represented €262M, including €220M paid to AREVA shareholders in July 2002. The line ''Sale or purchase of marketable securities'' mainly reflects the sale of 7 million shares of TotalFinaElf in the fourth quarter of 2002.

As a result, cash increased by €1,250M in 2002. The cash position as of December 31, 2002 presented in the table below totals €1,929M. As per accounting standards, the cash position is the consolidated cash position per the books, net of bank credit balances totaling €116M and, in 2002 only, net of income from short-term investments with original maturities of more than 3 months.

The beginning and ending cash positions for 2002 presented in the cash flow statement are computed as follows:

millions of euros	**1/1/2002**	**12/31/2002**
Cash and cash equivalents	1 715	3 302
Less bank credit balances	–216	–116
Less marketable securities with maturities over 3 months	–819	–1 260
Net cash position reported in cash flow statement	680	1 929

(7) Operating income before increase/decrease in depreciation, depletion, amortization and provisions (excluding entries concerning working capital items) less cash invested in tangible and intangible assets less change in working capital requirement.

5.1.7 Balance sheet data

Summary consolidated balance sheet

millions of euros	12/31/2001	**12/31/2002**
ASSETS		
Net intangible assets	2 729	2 047
— *including: Goodwill*	*2 195*	*1 537*
Net tangible assets	5 321	4 647
Decommissioning assets	—	9 223
Long-term notes and investments	4 880	4 232
Total assets	**12 930**	**20 149**
LIABILITIES AND SHAREHOLDERS' EQUITY		
Shareholders' equity	4 187	4 020
Perpetual subordinated debt	216	215
Minority interests	1 004	988
Provisions	5 583	15 053
— *incl: Provision for decommissioning and dismantling*	*2 759*	*12 283*
Net debt/(Net cash position)	729	(1 085)
Working capital requirement	1 210	958
Total liabilities and equity	**12 930**	**20 149**

5.1.7.1 Fixed assets

In 2002, fixed assets included €1,537M in goodwill and €510M in capitalized mineral exploration costs and similar expenses. The value for the second category of asset remained essentially unchanged from 2001 (–€24M). Goodwill, however, decreased by €658M, primarily due to €594M in goodwill amortization, including €440M in write-offs.

Net tangible assets decreased by €674M. This trend will continue for the medium term since AREVA completed the bulk of its plant construction program and annual depreciation now exceeds annual capital spending. The ACC and R4 facilities at the COGEMA-La Hague plant (Back End division) were considered assets in progress until they entered service in 2002. They became subject to depreciation in 2002.

Long-term notes and investments decreased due to the reclassification of marketable securities not earmarked for decommissioning[8] from ''Long-term notes and investments'' to ''Cash and cash equivalents''. The book value of reclassified securities was €726M as of January 1, 2002.

(8) 12.4 million shares of TotalFinaElf, 1.7 million shares of Société Générale, 2.6 million shares of Alcatel

5.1.7.2 Decommissioning assets and provisions

(millions of euros)	12/31/2001	**12/31/2002**
Assets		
Gross decommissioning assets	**—**	**9 223**
Net decommissioning assets — AREVA's obligation	*—*	*1 194*
Net decommissioning assets — Third party obligations (not subject to amortization)	*—*	*8.0*
Net financial portfolio	**2 003**	**2 127**
Liabilities		
AREVA's share of provision	**2 759**	**4 254**
Amount amortized as of 12/31/01	*2 759*	*2 759*
Additional provisions	*—*	*1 495*
Third party share of provision	**—**	**8 029**

Effective January 1, 2002, in compliance with French accounting rule no. CRC 2000/06, the group modified its accounting method to establish decommissioning provisions (covering facility dismantling, decontamination, waste retrieval and packaging) for the nuclear facilities it operates. Under the new method, the total estimated decommissioning cost, including any portion of the decommissioning cost financed by third parties, is fully provisioned upon startup of the facility. Under the former accounting method, the decommissioning provision was limited to the portion of the cost borne by the group, accrued over the projected life of the facility. As a result of this accounting method change, the decommissioning provision surged from €2.8B at end-2001 to €12.3B at end-2002. AREVA is ultimately responsible for €4.3B of this amount, while third parties are responsible for €8B. As a precautionary measure, these last amounts are not adjusted.

The counterpart for the provision is recorded as ''Decommissioning assets'' on the asset side of the balance sheet. This account stood at €9.2B, net, as of December 31, 2002, and includes:

- the portion of the decommissioning cost ultimately to be borne by the group (€1.2B) to be amortized over approximately 15 years;
- the portion of the decommissioning cost financed by third parties (€8B), which will be reclassified as a receivable when contract conditions allow or, at the latest, when dismantling and decommissioning operations are carried out.

AREVA's provision for its share of decommissioning cost changed as follows between December 31, 2001 and December 31, 2002:

Provision as of December 31, 2001: €2.8B

- *Additional provision to reconcile with cost estimate as of 12/31/01* *+1.1B*
- *New facilities (ACC, R4) and changes in the consolidated group* *+0.4B*
- *Inflation* *+0.1B*
- *Decommissioning and dismantling completed* *–0.1B*
- Total provision as of December 31, 2002: 4.3B

This change in accounting method has no impact on the group's consolidated equity or net income.

To finance its share of decommissioning and dismantling expenses in the amount of €4.3B, AREVA has set up a long-term portfolio of assets to cover these expenses[9], most of which will likely be incurred from 2015, at the earliest, through 2040.

Using this assumption, the group established a projected decommissioning spending curve and calculated the actual portfolio yield needed to cover this cost. Based on a before-tax portfolio value of €1,889M at December 31, 2002, the group has pegged the required yield at approximately 4%.

(9) For the time being, this portfolio does not cover decommissioning, dismantling and cleanup costs for Framatome ANP's facilities, (€295M as of December 31, 2002).

5.1.7.3 Working capital requirement

AREVA has a negative working capital requirement, reflecting significant customer prepayments, primarily relating to operations in the Back End division. In 2002, AREVA's operating working capital requirement decreased by €72M as of December 31, 2002, reflecting delays in collecting payments representing €156M from Back End division customers.

5.1.7.4 Net cash position

AREVA's net cash position, defined as cash plus marketable securities minus debt, was €1,085M as of December 31, 2002, compared with €729M as of December 31, 2001. This change reflects a reclassification of long-term financial portfolio assets not earmarked for decommissioning to ''Cash and cash equivalents'', as discussed in paragraph 5.1.7.1. The cash increase also reflects the sale of 7 million shares of TotalFinaElf.

Marketable securities are recorded at their original acquisition cost. Net after-tax unrealized gains for the marketable securities represented €360M as of December 31, 2002.

5.1.7.5 Shareholders' equity and dividend distribution

Shareholder's equity decreased by €167M in 2002, primarily due to dividends amounting to €220M paid in 2002 for 2001, and a €171M negative foreign exchange translation adjustment. AREVA's net income for 2002 is also included in shareholders' equity.

The Supervisory Board has voted to propose a net dividend distribution of €6.20 per share or investment certificate at the Annual General Meeting of Shareholders to be held on May 12, 2003. This dividend will be payable as of June 30, 2003.

5.1.7.6 Provisions

Provisions for retirement programs and benefits increased from €467M as of December 31, 2001 to €568M as of December 31, 2002. This increase reflects a jump in pre-retirement program commitments made in 2002.

Total retirement commitments were €1,474M. These commitments are adjusted at an annual rate of 5.5%, including 1.5% for inflation. The total value of assets in outside trust covering these commitments is €761M. AREVA follows International Accounting Standards Committee (IASC) standards that provide for annual amortization of the actuarial differences between anticipated and actual returns on assets, and between anticipated beneficiary populations and actual beneficiary populations (taking into account staffing levels and compensation increases), which is €145M. As a result, the total provision for 2002 was €568M.

Except for decommissioning provisions discussed in paragraph 5.1.7.2 above, provisions did not change significantly from 2001 (€2,357M) to 2002 (€2,202M). A significant portion of these provisions, representing €1,326M in 2001 and €1,372M in 2002, relates to future costs on contracts predating 2001. The bulk of these provisions is intended to offset differences between book depreciation and depreciation for tax purposes of assets used in the performance of contracts that have been completed.

5.1.7.7 Return on average capital employed (ROACE)

millions of euros	Capital employed 2001**	Capital employed 2002	Net operating income* 2001	Net operating income* 2002	ROACE 2001	ROACE 2002
Nuclear Power	3 913	3 790	269	440	6.9%	11.6%
Connectors	2 346	1 887	<0	<0	n.a.	n.a.
Other	618	663				
Consolidated	**6 877**	**6 340**	**89**	**138**	**1.3%**	**2.2%**

* Operating income less pro forma tax expense (at average tax rate for all operating units, except for those subject to a special tax rate, such as Eurodif)

** Capital employed in 2001 is not averaged over 2000/2001

In 2002, ROACE rose from 6.9% to 11.6% in the Nuclear Power business, reflecting both an increase in operating income and a decrease in capital employed.

Average ROACE for the AREVA group settled at 2.2% in 2002 (compared with 1.3% in 2001), reflecting losses in the Connectors division.

Capital employed is determined as follows:

millions of euros	**2002**	2001	Average
Tangible and intangible assets			
• **Intangible assets**	**510**	**534**	**522**
Goodwill, at original cost	*3 816*	*4 069*	*3 943*
– Goodwill on assets not used in operations (STM, Eramet)	*(227)*	*(225)*	*(226)*
– FCI goodwill write-offs	*(978)*	*(730)*	*(854)*
• **Goodwill used in ROACE calculation**	**2 611**	**3 114**	**2 863**
Tangible assets	*4 647*	*5 321*	*4 984*
– Provisions for liabilities	*(962)*	*(948)*	*(955)*
• **Tangible assets used in ROACE calculation**	**3 685**	**4 373**	**4 029**
Total	**6 806**	**8 021**	**7 414**
Customer prepayments invested in fixed assets	**(1 276)**	**(1 206)**	**(1 241)**
• **Operating working capital requirement**			
Working capital requirement	*(957)*	*(1 210)*	*(1 083)*
– Working capital requirement not directly related to operations (for income tax, holding operations, down payments on assets, etc.)	*775*	*995*	*885*
– Interest-bearing customer prepayments	*383*	*347*	*365*
• **Operating working capital used in ROACE calculation**	**201**	**133**	**167**
Total capital employed	**5 731**	**6 948**	**6 340**

5.1.8 2003 outlook

The Supervisory Board has voted to propose a net dividend distribution of €6.20 per share or investment certificate at the Annual General Meeting of Shareholders to be held on May 12, 2003. This dividend will be payable as of June 30, 2003.

Nuclear Power sales are expected to remain stable in 2003, with no significant change in operating income. All business units will continue their international development efforts.

The Connectors division does not anticipate any short-term recovery in the telecommunications market. Management will continue to implement the reorganization and production streamlining plan begun in late 2001. AREVA's goal remains unchanged: by the end of 2003, the Connectors division should no longer have a negative impact on AREVA's operating performance.

5.2 Human resources report

5.2.1 Key figures

	2001	**2002**
Workforce by division*		
Front End	9 245	9 536
Reactors and Services	12 420	13 549
Back End	10 103	10 719
Connectors	15 259	14 015
Other operations and Corporate	2 586	2 328
Total	**49 613**	**50 147**
Workforce by geographic area*		
France*	30 694	30 314
Germany	3 879	3 799
Rest of Europe	3 151	2 566
United States	6 295	7 061
North & South America (excluding the U.S.)	2 392	2 617
Africa	704	915
Asia-Pacific	2 498	2 875
Total	**49 613**	**50 147**
Workforce by category*		
Engineers and Managers	n/a	13 677
Support personnel	n/a	21 603
Craft personnel	n/a	14 867
Total		**50 147**

* Registered workforce; i.e., under the management of the group's human resources departments. Group employees are hired within the scope of private employment agreements.

n/a: not available.

5.2.2 Group workforce in 2002

At year-end 2002, the AREVA group had a workforce of 50,147 people, 534 people more than at year-end 2001.

The change in workforce is due in part to changes in the scope of consolidation, which added 1,400 people to the group with the acquisition of Duke Engineering & Services, and in part to a decrease in workforce in the Connectors business due to a reorganization of its production resources.

More than 30,000 AREVA group employees work in France (exact figure: 30,314). Another 20,000 work all around the globe: 6,365 in Europe (excluding France), 7,061 in the United States, 2,617 in North and South America (excluding the United States), 2,875 in Asia and 915 in Africa.

There are notable variations from one year to the next. The workforce increased in the United States by 766 people, mainly due to the acquisition of Duke Engineering & Services, and in Asia by 377 people, due to FCI's growing operations there. It decreased in Europe by 380 people in France and 665 people elsewhere, mainly due to the reorganization of FCI production resources.

The percentage breakdown of the group's workforce is 27% engineers and managers (13,677 out of 50,147 employees), 46% technical and administrative personnel (21,603 employees, and 30% craft personnel (14,867 employees).

Workforce by division

- The three nuclear divisions are well balanced in terms of workforce, with 9,536 people in the Front End division, 13,549 people in Reactors and Services and 10,719 in the Back End division.
- The number of people working in the Connectors business dropped 8.2% compared to 2001, to 14,015. This was primarily due to the complete or partial shutdown of plants in the United States, Japan and Europe (Switzerland, Scotland and Belgium).
- Corporate activities for AREVA itself and for its businesses and divisions employ 2,328 people.

The AREVA group recruited 6,200 people in 2002, including 1,980 in the COGEMA group, 1,900 in the Framatome group and 2,100 in the FCI group. More than 4,000 of the total number of recruits were hired under open-ended employment agreements.

More than 6,600 people left the AREVA group in 2002: 2,000 left at the end of fixed term employment agreements, 1,800 were dismissed, 1,300 were laid off, 1,000 resigned, and 500 left due to early retirement programs.

5.2.3 Main policy directions of the AREVA group Human Resources department

5.2.3.1 Building a shared culture around the globe

AREVA University has been developing alongside AREVA and is pursuing several major objectives:

- developing the high-level training in key areas needed by current and future AREVA leaders to further the group's success,
- providing group employees with exceptional opportunities to reinforce their international background and understanding, and
- facilitating the transfer of technical expertise and know-how relating to the advanced technologies that are central to our business.

Drawing on the wealth of knowledge that exists throughout the group, AREVA University set out in 2002 to deploy new tools designed to anchor the group in a shared culture.

The first important project along these lines in 2002 was our Initiation to Germany program, which gave fifteen executives the opportunity to learn more about a country of vital interest to AREVA.

Another project involved a series of breakfast lectures at AREVA headquarters attended by several dozen executives. The eclectic choice of topics and the diverse backgrounds of the participants made for another unique opportunity to network and share knowledge.

The AREVA Management Days on November 4 and 5 chaired by Anne Lauvergeon assembled some 200 of the group's specialists, managers and executives, a third of whom were promising young managers. The event was an occasion for sharing information on management practices and continuous progress efforts throughout the group. Managing knowledge resources, sustainable development and defining an AREVA leadership mode were just a few of the topics covered during the workshop.

AREVA University is developing a series of diversified programs for 2003, including orientation classes for new recruits, a Plant Managers circle, and more.

Alongside AREVA's activities in these areas, the subsidiaries worked on international integration and on training their management teams.

5.2.3.2 Developing group-wide tools to manage leaders and specialists

AREVA deployed a number of tools for leadership management in 2002:

- annual performance reviews became standard practice;
- a weighting system for executive positions using the Watson Wyatt approach was developed in the second half of 2002 and validated by corporate management in January 2003; and
- numerous instances of mobility occurred among the management staffs of the newly consolidated group, particularly in the nuclear business.

Expertise is also essential to maintaining AREVA's technological lead, and managing that expertise is another of our priorities. The multitude of our entities and centers of expertise, each with their own history, the diversity of know-how we use in our businesses, and the necessities imposed by the age pyramid have made it more essential than ever to formulate an expertise management program.

A task force consisting of representatives from the Corporate Human Resources and Innovation and Emerging Technologies departments laid the groundwork in 2002 for programs at the group level to:

- identify three levels of expertise,
- define the roles and responsibilities of our experts, and
- manage career development processes.

The recommendations of this task force will be put into practice gradually.

5.2.3.3 Fostering mobility within the group

AREVA views employee mobility as a key component of continuous progress and future growth. Mobility reaps benefits for group companies and employees alike:

- mobility allows companies and subsidiaries to replenish know-how by sharing experience with other units, develop management skills, and internationalize their personnel;
- mobility gives employees access to a wider selection of career development opportunities.

To promote mobility within the group both quantitatively and qualitatively, the group's HR teams have worked to unify their career management practices and mobility management tools:

- The first job listing bulletin for the entire AREVA group was issued in November 2002. A mobility committee composed of the group's key human resources managers also meets once a month to review progress and facilitate employee mobility.
- Our human resources specialists are also working with our information systems team to unify subsidiary Intranet systems and put mobility related information online for all of the group's employees.

In 2002, a total of 900 employees changed locations within the group, either by moving from one subsidiary to another or from one unit to another within a subsidiary. About half of these moves involved employees of the COGEMA group.

5.2.3.4 Strengthening dialogue with labor

Labor policy: striving for consistency

AREVA's labor policies are governed by the principle of subsidiarity. Each subsidiary defines its own labor policy based on its particular economic, industrial and commercial circumstances, and in agreement with its personnel and their representatives. However, important subjects affecting the future or image of the group, such as mobility, job reclassification or the European work council, are handled at the group level.

Expanding group-level relations with labor

Existing organizations at each of the group's companies — work council, central work council, labor representatives, etc. — will continue as before. In addition, corporate management has consistently made its intentions known of creating favorable conditions for direct dialogue with labor representatives. Several steps have been taken in this direction in Europe and France, as listed below.

- At the European level, the establishment of a European work council has been a priority from the start. In 2002, discussions opened on conditions for meetings of a special bargaining unit on the subject, although no agreement was reached. The special bargaining unit should in principle be able to meet in the first half of 2003.
- In France, a collective bargaining agreement was signed on February 11, 2002, spawning several specific agreements:
  - on the role and resources allocated to labor coordinators (two agreements signed on September 5, 2002), and
  - on the organization of bodies for social dialogue in France (agreement signed on October 16, 2002).
  - In addition, negotiations were in progress in the first quarter 2003 on mobility and job reclassification.
- Following conclusion of an electoral framework agreement in France on March 15, 2002, the group's French employees elected employee representatives to the AREVA Supervisory Council (first round on May 28, second round on June 20, 2002), giving participating labor organizations the opportunity to express their points of view and measure their audience.

In line with the collective bargaining agreement signed by AREVA in February, FCI management and labor organizations signed an agreement on November 19, 2002 to set up a joint committee for information exchange and negotiations. The committee can negotiate aspects of HR resources planning, professional and geographic mobility, and related support measures.

5.2.3.5 Supporting organizational change prompted by industrial developments

Special actions are required when production resources are reorganized and jobs are affected. These include job support, economic development programs, and continued and expanded dialogue with local partners. This is particularly true in France.

Job support

Productivity gains in all of the group's business units and decreasing workloads at some of our sites have prompted a variety of staff cutback measures in France. Among the most significant measures taken in 2002:

- At COGEMA subsidiary SGN, the declining workload over the past few years triggered a special manpower adjustment plan (Pagec). Another COGEMA subsidiary, SICN, announced the shutdown of its Veurey site and established a job preservation plan. By year-end 2002, 166 SGN employees and 58 SICN Veurey employees had found a satisfactory solution to their employment problems.
- At the Framatome ANP site in Courbevoie, 120 employees left as part of the 2001 voluntary early retirement program.
- At COGEMA sites and FCI France sites, departures due to voluntary early retirement were negotiated and implemented in 2002, with 121 COGEMA employees and 121 FCI employees leaving for early retirement.
- FCI deployed a corporate mobility program to be implemented at FCI sites by local human resource managers. This approach was echoed at the group level, promoting a sense of solidarity among subsidiaries. The approach aims to adapt resources to individual company needs while contributing to the career development of employees. FCI established a training budget to support and facilitate mobility. By the end of December 2002, there had been 130 employee moves, with 80% taking place within FCI. For 2003, the trend continues, particularly with more mobility towards nuclear activities.

Guiding principles for the group's labor policy in France are anticipation, voluntary action and negotiation.

As soon as a problem is identified, preventive measures to adjust manpower to workloads are implemented through:

- mobility programs,
- manpower loans between group business units,
- reduced work hours, and
- early retirement and pre-retirement programs.

When these voluntary measures are not enough, a labor-management dialogue is initiated to establish job preservation plans (manpower reduction plans).

Economic development

AREVA is also engaged in several economic development programs for the regions in which we do business and the people who live there. We provide support for group sites that require reconversion when technological change or shifting markets make it necessary to restructure operations.

In 2002, the Economic development department provided support to the Burgundy, Nord Cotentin and South Rhône Valley regions. AREVADelfi, a development capital company, funded twelve projects in those regions, creating 642 new jobs over a three-year period for a total commitment of €1,874,000.

In addition, a framework agreement was signed with the Caisse des Dépôts et Consignations in 2002 to set up joint projects for areas undergoing change or reconversion.

The Caisse des Dépôts et Consignations and AREVA also worked together in founding the ''Enterprise Village'' at our Creusot site, which has since created more than 500 jobs. Three other reconversion sites have been acquired by the Harfleur 2000 Company, created specifically for that purpose.

In the Pierrelatte and Cherbourg areas, a close partnership was established with local communities to set up economic and job development programs.

Relations with integration support associations, schools, environmental protection associations, consumer associations and local populations

AREVA seeks to establish relationships of trust with all stakeholders through dialogue based on openness and transparency. This desire is substantiated by our many activities to inform local communities, associations, the general public, the media, the government and stakeholders in general.

The group also helps develop and disseminate scientific knowledge by working with scientific institutions such as the Palais de la Découverte, the Cité des Sciences and the French Association for the Advancement of Science and by participating in training programs for students in French universities and *grandes écoles*.

5.2.4 Major human resources achievements in 2002

5.2.4.1 The group's first human resource projects

The group had its first full fiscal year in 2002. For AREVA SA, it was the year in which it laid the foundations of human resources programs in several key directions:

- staffing of AREVA SA,
- developing tools for centralized executive career management,
- taking stock of and unifying HR management practices within the group,
- pursuing mobility and job support activities to cope with necessary manpower adjustments,
- increasing dialogue between the group and organized labor, and
- streamlining and optimizing HR operations as part of the group's ''Let's Go!'' program for corporate streamlining.

At the same time, the AREVA group identified human resource objectives and organized them around five main policy lines that are based on the conviction that the group's success depends essentially on our employees:

- Build a shared culture around the globe that thrives on the group's multinational character.
- Develop group-wide tools for leadership and specialist management, including our own leadership model.
- Encourage mobility within the group.
- Renew dialogue with organized labor.
- Coordinate operations that have an impact on jobs by offering support and economic development programs.

These issues are developed in paragraph 5.2.3.

5.2.4.2 COGEMA achievements

Developing human resources management

People reviews

To reinforce performance assessment as part of enhanced career management practices, COGEMA held systematic people reviews in eleven business units before consolidating them by sector and by business line.

Individualizing compensation

COGEMA is also developing a system of individualized compensation for managers. Each individual's contribution is reviewed and compensated based on results in terms of performance objectives achieved and continuing performance improvement.

The COGEMA Institute

Developing management skills is a major objective at the COGEMA Institute this year. A steering committee of line managers was set up to define institute objectives.

The institute has welcomed 550 trainees so far and organized 2,100 days of training. It also expanded its programs for international management, technical expertise and the COGEMA business lines.

Center for International Mobility

The Center for International Mobility was created to optimize the management of international mobility. It has become the unique COGEMA group intermediary for expatriations. It currently manages 200 employees in 21 different countries.

Labor relations

Agreements for voluntary early retirement

Changes in industrial operations also require organizational change and workforce restructuring. Negotiations in late 2001 and early 2002 led to agreements with the labor organizations on voluntary early retirement programs for end-of-career management. The purpose of the agreements, which provide an early retirement option for certain COGEMA, Comurhex, Eurodif, Socatri, Melox and STMI employees, is to make end-of-career management a component of the human resources department's normal HR planning process. Departures began during the fourth quarter 2002 and will be spread out over the next two years.

As part of skills maintenance, a program has been set up to facilitate mobility within the group, plan ahead for reclassifications and transfer expertise through appropriate training and instruction.

Job protection plans

SGN, AT-Nutech and SICN all signed job protection plans that provide for the establishment of a reclassification unit in each company to support mobility and give employees maximum opportunity for reclassification within the group.

Developing mobility

In 2002, the mobility process instituted at COGEMA was gradually extended to the other AREVA subsidiaries and even to companies in similar lines of business (CEA, Andra and Eramet).

The process includes regular meetings for employment managers at the national level (bimonthly) and at the employment area level (quarterly).

Job listings are now posted on both the COGEMA and the AREVA websites.

5.2.4.3 Framatome ANP achievements

Harmonizing human resources programs

Since it was created in 2001 and integrated Siemens personnel, Framatome ANP has built up a strong international dimension, creating a new cultural environment for the employees of three regions to work in. This prompted the harmonization and development of new human resources policies and procedures.

PRD (the Performance Recognition Development process) is a new approach to human resources management that is suited to Framatome's international dimension and the new challenges this entails.

From assessment to performance recognition to career development, the PRD method is based on a single process that is used everywhere at Framatome ANP. The new method was developed using best employee assessment practices developed in house. It relies on a shared international vocabulary for all managers that applies to all business lines and motivates all business processes. The vocabulary constitutes a ''business language'' based on results, on contributions from each job position to the smooth running of the company and its business. In that framework, the PRD process allows each individual to maximize performance and achieve corporate performance goals. These new procedures have been in place since April 2002.

The ''International Mobility'' charter

Framatome ANP set up an international organization to coordinate its global offering of products and services so that customers might benefit from the best of its innovation capacity, efficiency and methods. In this context, team integration, the sharing of skills between regions and opportunities for its managers to acquire international management experience are key factors for Framatome ANP.

Company success depends on its ability to organize international mobility. For this reason, Framatome ANP has established a new international mobility program suited to its objectives spelled out in a new ''International Mobility Charter''.

E-recruiting and setting up a Framatome ANP human resources website

Framatome ANP intends to improve its communications with recruitment targets (mainly young graduates) and speed up the candidate applications process by relying heavily on the Internet. Its website is also a way to establish an international corporate image.

At the ''Framatome ANP recruiting center'', candidates can access all of Framatome ANP's job openings and training positions and send in their resumes on line. This new tool alerts recruiting managers as soon as a reply to a posting is sent in via the Internet, and candidates are informed immediately that their application is being reviewed.

The system went online in August 2002.

Listening to people and establishing an in-house opinion barometer

An employee opinion survey was conducted in September 2002 to evaluate the impact of the changes taking place at Framatome ANP since it was founded in January 2001. A questionnaire was sent to all Framatome ANP employees in France, Germany and the United States. The average return rate was 47%, with 40% replying in France, 67% in Germany and 45% in the United States.

All employees received a report with details of the survey (by region, sector and department) and the continuous progress measures to be adopted during reunions organized at the appropriate echelons of responsibility.

Foremost among the opinions expressed in the survey were a strong sense of pride and attachment to Framatome ANP, firm confidence in the company's future, and the wish for information, communications and human resources development.

The next survey is scheduled for 2004 and will allow assessment of the programs instituted and the progress made thus far.

The Young Generation makes recommendations to Framatome ANP management

A group of the ''under 35'' generation employees from France, Germany and the United States was encouraged by Framatome ANP management to organize its first international meeting in Erlangen last June. During the meeting, these young Framatome ANP employees formulated recommendations for the Executive Committee. Management approved a number of these proposals, and task forces with Young Generation representatives were created to discuss the integration plan, career development support, Intranet and Internet networks, the division's vision and ''intercultural'' seminars. The next meeting is scheduled for 2003.

Duke Engineering & Services: Framatome ANP enriched with skills from 1,250 new employees

A notable event in 2002 was the acquisition of Duke Engineering & Services, reinforcing Framatome ANP's position in the field of nuclear engineering and services in the United States.

Equipment: a busy year 2002 at Châlon Saint Marcel

The U.S. nuclear industry is beginning to pick up again. The effect of this is to lengthen the service life of nuclear plants and accelerate the replacement of heavy equipment such as steam generators. There is a considerable market for replacement reactor vessel heads. The mechanical equipment segment was strong overall in 2002, though uneven. U.S. orders (four closure heads and six steam generators) boosted workload for the engineering department, procurement office and plant facilities.

Strong synergies between its international marketing, manufacturing and research and development teams have put Framatome ANP ahead in this market, which is currently very active and highly competitive in terms of delivery times and prices, requiring rapid adaptation of our manufacturing methods.

Courbevoie: many voluntary early retirements

Negotiations in 2001 led to an agreement on an early retirement plan as part of our 2001-2002 staff cutback measures. Applying the measures in 2002 resulted in a large majority of departures for voluntary early retirement, retirement and complete or gradual pre-retirement. These departures were spread out over the entire year. Mobility opportunities, mainly within the group, made it possible to make progress on reclassifications. Plans for expertise transfer were set up as part of skills maintenance. We continued to recruit young engineers to compensate for turnover and to rebalance our age pyramid.

Synergy, the key to success

The creation of Framatome ANP in January 2001 was a major challenge. We combined the nuclear know-how of three different regions — France, Germany and the United States — to provide the world with safe, clean and cost-effective nuclear power. We brought together nuclear cultures that were complementary, to be sure, but also different corporate cultures. A year later, the initial results are highly encouraging, thanks to the combined efforts of our international teams, who were able to pool their expertise and mine synergies in every country where Framatome is present: China, Bulgaria, the United States, Brazil, France and Germany.

5.2.4.4 FCI's main achievements

Key events in France

Signature of a collective bargaining agreement for FCI's French companies

On November 19, 2002, FCI management and the leading labor organizations signed a collective bargaining agreement to establish a joint committee for exchange and negotiation. The committee will negotiate on aspects of HR planning, professional and geographic mobility, and related resources. The agreement reflects AREVA's commitment to dialogue between the group and labor organizations and helps promote team spirit among the group's subsidiaries.

Labor relations: agreements for early retirement programs

On March 19, 2002, FCI France and labor organizations signed an end-of-career management agreement, opening up opportunities for FCI France employees aged 55 before February 28, 2005 to retire early within the 2002 to 2005 time frame. The purpose of the agreement is to set up an end-of-career management program as a component of the human resources department's normal HR planning process. It is in line with FCI's other initiatives in terms of reorganization of working time and reduced work week measures (the subject of a number of agreements signed by FCI and its divisions since February 25, 2000). By December 31, 2002, a total of 121 people in FCI's French companies had taken advantage of voluntary early retirement.

2002 programs

Developing skills

The Vita program launched in 2001 continued in 2002, involving some 180 people in Europe, North and South America and the Asia-Pacific region. Creating synergy among Business Units, sharing best practices and promoting a better understanding of FCI vision and strategy through practical case studies and talks management are some of the activities conducted last year.

Establishing a consistent global compensation policy

FCI's payroll administration is conducted at the international level to ensure that compensation is consistent (job assessment system) and externally competitive (salary band system based on market data). All human resources managers have received training in these methods, which will be deployed in all AREVA group subsidiary companies.

Developing a mobility program adapted to the corporate environment

Starting in January 2002, FCI established a mobility program that is coordinated at the corporate level and applied onsite by local human resources managers. It is deployed at the AREVA group level and helps promote team spirit among the group's subsidiaries. The program aims to adapt resources to individual company needs while contributing to our employees' career development. A training budget has been established to support and facilitate mobility.

By year-end 2002, a total of 130 employees made career moves, with 80% of them involving employee mobility within the FCI group. The trend continues in 2003, particularly with more mobility towards nuclear activities.

5.2.5 Social accounting

5.2.5.1 Health and safety

Exposure to radiation

Improving work conditions and preventing health risks are an enduring concern for AREVA. Through its safety and health risk prevention policy, the group strives constantly to improve safety at its sites and to protect the health of its employees and of the surrounding communities.

AREVA devotes considerable resources to prevention and monitoring for possible exposure to chemical and radiation risks.

Employees who have been exposed to radiation are monitored individually with the help of dosimetry badges. Employees from non-group companies also benefit from the same radio-toxological monitoring as group employees.

The average individual work-related dose to group employees exposed to radiation was 1.57 mSv in 2002. The total collective accumulative dose for employees was 24,242 mSv.

Occupational accidents

With respect to work safety, all employees are motivated to maintain a ''zero accident'' record on a daily basis.

The 2002 rate for occupational accidents with loss of time for group employees was 9.65.

The 2002 occupational accident severity rate for group employees was 0.48.

5.2.5.2 Training programs

AREVA sets a particularly high value on skills development. About 54% of group employees benefited from a training program in 2002.

COGEMA

In 2002, COGEMA continued as before to direct training towards maintaining employees' high level of professional skills and building the necessary safety culture required by our facilities. Training also played a large part in employee ability to keep up with changes in organizational or functional unit, thanks to extensive skills maintenance programs.

Determined to reinforce training management based on the principle of subsidiarity and make training a component of sustainable development, COGEMA furthered these objectives by:

- pursuing and expanding COGEMA Institute's role in spreading a shared managerial culture to business units and setting up a steering committee of managers for the Institute;

- actively seeking more effective training programs by mobilizing human resource managers, resulting in a large number of initiatives; and
- carrying out specific activities such as program support (safety, purchasing, etc.), developing learning approaches, and others.

Framatome ANP

Framatome ANP's training program focused on strengthening employee technical skills, as always, but also on some innovative programs designed specifically for the company.

To enhance personnel productivity, the Services business unit started a ''Human Factors'' training program. The business unit operates in a difficult environment in which employees must not only be technically proficient, meet deadlines and control costs, they must also be mindful of personnel safety and nuclear facility safety requirements. In this particular context, ''Human Factors'' training is part of a company-wide continuous progress program that is based on understanding the human factor in all processes. This approach is an important part of the business unit's strategy. Some 1,000 people will be trained. Framatome ANP subsidiary Cezus also developed a project for local management called ''Learning about fuels'', with has similar goals.

The 17th ''Young Managers'' meeting, which opened in June 2002, aims to develop the potential of Framatome ANP's young engineers and managers. This year, two young COGEMA managers joined the training program. Projects with a strategic interest for operations were given as case studies to these young managers in their capacity as ''junior consultants''. Their study results were presented to the Framatome ANP steering committee in March 2003.

The ''Team Management'' seminar met three times in 2002. This seminar assembles high-level managers (engineers, engineering technicians and foremen/supervisors) from all business units. Its purpose is to instill in them a management culture that will support them when they take up their position or become team managers.

The ''Dealing better under pressure from buyers'' workshop was created at the demand of the operational units. The three-day workshop aims to prepare and train business engineers as well as technical managers in bargaining techniques to be better prepared opposite buyers for Framatome ANP customers, who are more aggressive these days.

With a view to developing economic culture, a one day ''Economic performance analysis'' workshop helps all ''non-financial'' staff understand and analyze a balance sheet and income statement and acquire a command of key financial indicators. The Services department also organized economic culture training in some of its business units to provide staff with an understanding of key economic and financial indicators.

The French-German combination within the Framatome ANP group has given rise to intercultural seminars to facilitate working relationships between French and German colleagues.

5.2.5.3 Involving women in group life

AREVA champions female employees and works to ensure that they have the same rights and advantages as their male colleagues.

According to 2002 indicators on the subject, 8.1% of top management positions are held by women, 15.2% of managers are women and 21.2% of all employees are women.

5.2.5.4 Employing and integrating the handicapped

At year-end 2002, there were 504 handicapped employees, or 1% of the group's workforce. The proportion rises to 3% in some business units, including Eurodif, Socatri, Polinorsud, FCI Besançon and Jeumont.

Each subsidiary deploys its own programs for integrating handicapped employees on a regular basis. These include reorganizing job stations, means of transport and site access and setting up special alarm systems.

5.2.5.5 Social welfare projects

Social welfare projects make up a large part of AREVA's efforts to provide aid and jobs for employees.

The wide diversity of circumstances (regulations, subsidiary's economic position, community, etc.) makes it difficult to summarize the many projects involved.

In France, particularly in the nuclear sector, a significant percentage of payroll expense is devoted to social welfare: more than 2% at COGEMA SA and from 1 to 3% at Framatome ANP, depending on the plant.

5.3 Environmental report

5.3.1 Key figures

	AREVA 2002*	Perimeter covered**
Consumption		
Quantity of energy consumed (MWh)	19 427 103	99.89%
Quantity of water tapped (m^3)	135 493 451	99.89%
Plastic materials purchased (MT)	16 401	99.89%
Copper and copper alloy purchased (MT)	8 954	99.89%
Use of hazardous chemicals		
Nitric acid (MT)	22 451	99.89%
Tributyl phosphate (MT)	82.18	99.89%
Sulfuric acid (MT)	81 415	99.89%
Hydrofluoric acid (MT)	5 960	99.89%
Ammonia (MT)	4 217	99.89%
Chlorine (MT)	7 886	99.89%
Chlorinated solvents (MT)	82	99.89%
Waste		
Quantity of special industrial waste (SIW) (MT)	18 763	94.32%
Quantity of common industrial waste (CIW) (MT)	19 769	94.32%
Quantity of household waste (MT)	873	94.32%
CIW+SIW+Household waste: portion recycled / disposed of	39%	93.90%
Volume of radioactive waste from operations sent to an approved storage center (m^3)	4 520	99.89%
Releases		
Total nitrogen releases into water environments (MT)	830	99.89%
Copper releases (MT)	0.6	99.89%
Chromium releases (MT)	0.4	99.89%
Lead releases (MT)	0.1	99.89%
Uranium releases (MT)	2.2	91.14%
Direct greenhouse gases (MTe*** CO_2)	423 117	99.89%
Toxic gas releases: volatile organic compounds (Kg VOC)	32 888	99.89%
Releases of acidifying gases (MTe SO_2)	2 109	99.89%
Releases of ozone-depleting gases (Kge**** CFC 11)	5 390	99.89%

* The group was founded in September 2001 and began to compile performance indicators in 2002, its first full year of operation, to measure its consumption and releases. Therefore, the group is not yet able to present figures for comparison with earlier years.

** The perimeter covered applies only to the production sites, and the coverage rate is measured relative to the number of employees.

*** Metric tons equivalent

**** Kilograms equivalent

5.3.2 Strengthening relations with outside stakeholders

The group would like more dialogue with all of its stakeholders so that their concerns can be better incorporated into the definition of its objectives for continuous progress. Special efforts along these lines are being made at the various sites, and people have shown great willingness to take part in the discussions.

5.3.2.1 Strengthening dialogue at the local level

Working together with the stakeholders is most often institutionalized in local bodies such as the CLI[10] (local information commissions),

(10) Commissions locales d'information

which are compulsory for sites with INB[11] classification (licensed nuclear facilities); CLIS[12] (local information and monitoring commissions); and CLIRT[13] (local information and industrial and technological risk prevention committees). The group plays an important role in these bodies by giving them necessary information about its operations.

Examples:

COGEMA, our subsidiary, is also part of GRNC[14] (Nord-Cotentin radioecological group). The group's initial studies found there was no cause-and-effect relationship between the incidence of leukemia cases and radiological releases from the combined nuclear sites operated by COGEMA and EDF in the Nord-Cotentin region. The scope of the study was expanded in 2000-2002 to include the impact of chemical releases on human health and ecosystems, and led to the same conclusions, while underscoring the need to acquire further knowledge of the toxicological and eco-toxicological properties of chemicals. Among the potential impacts to be investigated, the GRNC noted that of low releases of dioxins from the La Hague plant waste incineration facility. COGEMA has since decided to close this small incineration plant for financial reasons.

Additional projects are planned to answer specific questions and raise awareness about the group's operations. For example, in 2002, an information and employee involvement program was held with the railway employees union for the rail transport of depleted uranium oxide between two southern sites.

After the Verts de Haute Savoie (green party of the Haute Savoie region) detected traces of radioactivity in a downspout at our facility in Annecy, COGEMA's environmental department and SICN organized dialogue to clarify viewpoints and launched a study to assess health risks. The spokesperson for the green party was satisfied and pointed out that our approach was on target.

5.3.2.2 Participating in public discussions

The group set up a social observatory several years ago to improve its interaction with the outside world and enable the group to listen to society about major topics of concern. In addition, a survey of French perceptions of nuclear issues was launched in 2002 using the brand marketing survey model. The purpose of these measures is to enable AREVA to gain a grasp of the public's expectations in terms of information, dialogue and areas for improvement.

The group is interested in these discussions and is supporting a number of initiatives that focus on the long term. We have supported the annual OECD Forum and the International Weather Festival several times to maintain contact with various constituencies.

The group encourages it employees to attend and give speeches at conferences organized by members of parliament, the government, the media, associations and international organizations, such as the Earth Summit in Johannesburg in September 2002. As a result, the number of public appearances by group managers in discussion forums rose from 34 in 2001 to 42 in 2002.

AREVA launched its new website in late 2002. The site illustrates the group's commitment to sustainable development and its environmental, financial, corporate and societal performance. In addition to providing corporate information, www.arevagroup.com seeks to be a genuine forum for dialogue among our stakeholders. The website features a discussion forum with a voting system that allows visitors to the site to express their opinions on the various subjects. Website visitors may compare their positions with those of other participants using the ''opinion barometer''.

5.3.2.3 Participating in discussion forums

The group is contributing to exchanges and working groups via a smaller circle of discussion and proposal organizations such as *ADAPes* and *Confrontations* in the realm of public debate, *Entreprises pour l'Environnement* [Businesses for the Environment] and the *Fonds Français pour la Nature et l'Environnement* [French Nature and Environment Fund], the World Energy Council, and the World Business Council for Sustainable Development in the more general context of businesses contributing to sustainable development.

The group also established a Science and Ethics Committee to analyze major societal issues that may impact the long-term development of the energy sector. The Committee prepares recommendations on these topics to the Chairman of AREVA's Executive Board.

Professor Maurice Tubiana chairs the Science and Ethics Committee. Professor Tubiana is the former chairman of the *Académie de medicine* (academy of medicine) and a member of the *Académie des sciences* (academy of sciences), where he chairs the Environment

(11) Installations nucléaires de base

(12) Commissions locales d'information et de surveillance

(13) Comités locaux d'information et de prévention des risques industriels et technologiques

(14) Groupe Radio-écologique du Nord-Cotentin

Committee, and chairman of the Centre Antoine Béclère. The committee's members include:

- Roger Balian, President of the *Société française de physique* (French society of physics), member of the *Académie des sciences*;
- Francis Balle, Professor at Université Paris II, former member of the CSA[15] national audiovisual board;
- Geneviève Barrier, Professor Emeritus at the Faculté Necker-Enfants Malades (Necker childrens hospital and school), former director of the SAMU[16] emergency medical service and former member of the *Comite national d'éthique* (national ethics committee);
- Patrick Champagne, sociologist at the INRA[17] national agronomic research institute;
- Georges Charpak, Nobel Prize;
- Hubert Curien, former president of the *Académie des sciences*, former minister;
- Professor Georges David, member of the *Académie de médecine*, former member of the *Comité national d'éthique*;
- François Ewald, Professor at CNAM[18] (national conservatory for arts and crafts) and member of the *Commission de la Charte de l'Environnement* (environmental charter commission) chaired by Yves Coppens;
- Roland Masse, former chairman of OPRI[19] (radiation protection agency);
- Michel Serres, science historian, member of the *Académie française*;
- Alain Touraine, sociologist, dean of studies at the *École des hautes études en sciences sociales* (school of advanced social science studies).

In 2002, the committee addressed three main topics:

- The establishment of an inter-academy body tasked with responding quickly to any information debated in the media involving science and technology. Under the working name *Office Français d'Information Scientifique et Technique,* (French Scientific and Technical Information Office), this body is already receiving support from the ministers of Research and National Education. The future office will be placed under the stewardship of the Institut de France and will be backed by its network of 2,000 experts.
- Monitoring of the work of the Coppens Commission set up by the President of the Republic to support the establishment of an Environmental and Sustainable Development Charter buttressed by the Constitution.
- The preparation of the draft AREVA Values Charter.

5.3.3 Maintaining a high level of safety and controlling technological risks

In nuclear safety, COGEMA's office of the Inspector General continued its work of inspection and experience-sharing begun in early 2001. As a management tool for nuclear safety, the office of the Inspector General supports the group's commitment to exemplary conduct in this area. The office of the Inspector General's scope of work will gradually be expanded to encompass all of the group's nuclear facilities.

Above and beyond a mere review of facility compliance with applicable requirements, the office of the Inspector General analyzes the work processes of operating units, existing safety systems and their mode of operation. The analysis identifies potential deficiencies, but it also recognizes good practices that should be implemented elsewhere. These lessons learned contribute to a shared culture among the group's industrial operators, and also facilitate the evaluation of the operating teams' safety culture.

In 2002, the office of the Inspector General performed thirty-two inspections with a team of five inspectors. Their work centered primarily on the following:

- a review of the process for identifying and maintaining skills (training, certification and clearances), and an analysis of conditions for controlling fire hazards during operations;
- a review of the contractor selection and approval process; and
- a review of lock-and-tag procedures for construction and facility reconfiguration, and an assessment of the operating teams' safety culture.

(15) Conseil supérieur de l'audiovisuel

(16) Service d'aide médicale d'urgence

(17) Institut national de la recherche agronomique

(18) Conservatoire national des arts et métiers

(19) Office de protection contre les rayonnements ionisants

The strengths were found to be:

- an acute perception of the importance of safety,
- firm commitments in this area by management, and
- good skills acquisition based on appropriate training programs.

Areas for improvement identified are practices for supervising and supporting service providers, as well as risk analysis practices, and practices for handling anomalies. Ongoing vigilance must be maintained to prevent the human factor from being a major cause of an incident.

Of the 75 events reported in 2002, 18 were ranked level 1 on the International Nuclear Events Scale (INES), while none reached a level higher than 1. Although the total number of reported events remained largely unchanged from 2001, there was an increase in the number of level 1 events, although the change did not seem to be significant. Analysis of event clustering confirms the importance of thorough servicing, maintenance and control operations in the facilities, and the necessity of maintaining vigilance to prevent the risk of fire.

Although the office of the Inspector General generally observed no major malfunctions in any of the group's facilities, this safety culture must be carefully maintained as a guarantee of performance essential to the sustainable development of the group's operations.

5.3.4 Preventing environmental and eco-health risks

5.3.4.1 Monitoring the environment and controlling releases

In conjunction with inspections performed by the authorities and independent inspection bodies, AREVA is deploying considerable resources to self-monitor its environmental performance, and particularly to monitor releases. At each site, skilled workers regularly take samples and measurements in the various receptor environments (air, water, soil, wildlife and vegetation). Six group laboratories have obtained environmental accreditation for analyses from the COFRAC[20] (French accreditation board).

5.3.4.2 Managing land use

AREVA places emphasis on lowering the residual impact of its operations on the land and fostering redevelopment by conducting major site restoration and redevelopment projects at the sites once operations cease.

Simplified risk assessments (SRA) defined by the methodology handbooks of the Ministry of Ecology and Sustainable Development are used to manage polluted sites and land. SRAs were performed at COGEMA's Miramas site and SICN's Annecy and Veurey sites in 2002, and equivalent investigations have been undertaken at various FCI sites in the U.S. and France.

5.3.4.3 Preventing eco-health risks

The emphasis on public health has led us to develop an eco-health risk culture that we hope to deploy beyond our regulatory obligations and beyond the area of radiological exposure, for which considerable efforts have already been made.

The use of new tools such as health risk assessments (HRA) to evaluate health impacts from chemicals quantitatively, using methodology handbooks from INVS[21] (national health surveillance institute) and INERIS[22] (national environment and risks institute) will help bolster our knowledge of our potential impacts.

One HRA was finalized in 2002 for SICN's Annecy site. This retrospective study takes into account air and water releases since the facility was built in 1957. No excessive health risks due to our operations were found.

5.3.4.4 Controlling risks linked to the use of hazardous chemicals

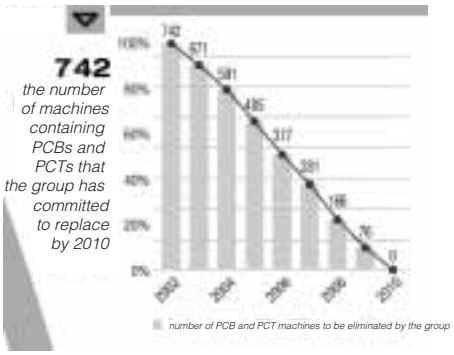
The processes we use may involve significant quantities of hazardous chemicals such as nitric acid (20,354 MT), sulfuric acid (81,415 MT, mainly for mining operations), hydrofluoric acid (6,429 MT), ammonia (4,913 MT), chlorine (7,886 MT), lead (5 MT in connectors) and other chemicals. All of these chemicals are stored and handled with every necessary precaution. Most of the sites that use these materials are regulated under the European ''Seveso'' directive. Our approach aims to reduce quantities used whenever possible, or to seek substitute products. FCI is a case in point, having undertaken a program to eliminate the use of lead by 2006.

PCBs and PCTs are toxic chemicals used to manufacture electrical distribution equipment, among other things. AREVA's subsidiaries began to eradicate them several years before the European directive set a 2010 date for their elimination, and AREVA has made a commitment to phasing out the remaining 742 machines under a plan approved by the Ministry of Ecology and Sustainable Development.

(20) Comité française d'accréditation

(21) Institut National de Veille Sanitaire

(22) Institut national de l'environnement et des risques



Source: "AREVA and Sustainable Development" brochure

In 2002, safety improvements at our Seveso-regulated facilities pertained to:

- updating hazards studies,
- launching studies to optimize safety perimeters, and
- preparing to implement the provisions of draft legislation on technological risks, many of which have already been incorporated into the safety standards of most of our nuclear sites.

5.3.5 Improving environmental performance

The objective is to lessen the impacts of our operations, but also to improve cost-effectiveness through eco-efficiency processes. Our approach consists of eight components for progress, described hereunder.

5.3.5.1 Greenhouse gases and energy

Eurodif's Georges Besse plant, where uranium is enriched by gaseous diffusion, is the biggest consumer of electricity in the AREVA group (19 million MWh). The group is preparing to phase in the centrifuge process to replace plant capacity in the medium term, as this technology consumes twenty times less electricity than gaseous diffusion.

The group's direct greenhouse gas emissions amounted to 421,683 MTe of CO_2 and are caused by burning fossil fuels (243,466 MTe CO_2); consuming coolants, refrigerants and fire-extinguishing fluids (6,302 MTe CO_2); and certain chemical processes (171,915 MTe CO_2, due primarily to the emission of SF6 during uranium conversion operations).

In 2002, reduction efforts focused on the fossil fuel plants, the choices of the fossil fuels per se, and the development of an energy eco-efficiency program.

This means changing behaviors, improving utilities (compressed air, refrigeration, steam, heating and air conditioning), lighting, and gaseous chemical releases that contribute to the greenhouse effect. The energy diagnostics program will be expanded to include the entire group, including service operations.

We have also launched studies to determine the feasibility of reducing greenhouse gases in chemical processes.

5.3.5.2 Water usage

Of the 135,500,000 m^3 AREVA taps, roughly 120 million m^3 is taken from the Rhône River to cool facilities at the Marcoule and Tricastin sites.

For the rest, we are taking steps to improve our control of the water cycle, particularly at the production sites, so that we tap less water from the natural environment. These approaches require a detailed knowledge of water consumption and the actual costs associated with managing the cycle, as well as considerable involvement of site personnel and subcontractors, and involve improving the management of process systems and modifying equipment, or even changing the technology, to encourage recycling and reuse of water.

Examples:

At FCI's Mantes La Jolie site, where integrated circuit boards are manufactured, water consumption has been reduced to one-twentieth of the amount consumed ten years earlier.

STMI: By using two original patented techniques, gels and foams, secondary effluent from decontamination operations has been reduced by a factor of 6 to 10 compared to the conventional high-pressure water technique. The Nuclear Cleanup business unit uses a patented dry process to clean contaminated clothing at its Triade nuclear facility (6,000 m2) in Bollène, France, thus eliminating effluent generation.

5.3.5.3 Consumption of materials

We are pursuing efforts to reduce our consumption of chemicals with high direct or secondary impacts, identified through the use of environmental analysis tools (life cycle analysis and health risk assessment), particularly through internal recycling programs. We are also reducing our consumption of primary materials (8,954 metric tons of copper, 16,401 metric tons of plastic and ligno-cellulose materials) identified through environmental accounting.

Examples:

FCI, a major consumer of copper, copper alloys and plastics, is making a special effort to reduce production scrap and to recycle metal and plastic waste at its production sites. In 2002, a total of 16,401 metric tons of plastic resins were consumed. Without these

programs, including internal recycling of plastic injection nozzles, the requirements would have been 21,300 metric tons.

Eurodif has succeeded in reducing its potassium tetraborate consumption by nearly 20% over the past three years.

5.3.5.4 Waste

Conventional waste

In this category of waste, the total production is:

- 18,760 metric tons of special industrial waste (SIW), and
- 19,768 metric tons of common industrial waste (CIW).

A total of 39% of this waste was recycled.

Programs are in progress in all of the group's facilities to:

- minimize and control waste generation at the source;
- promote sorting, recycling and reuse of waste; and
- improve processing and packaging of non-reusable waste.

Examples:

As required by law, the Melox plant conducted a waste survey that identifies nuclear and conventional waste separately and defines processing methods for them based on toxicity, with emphasis on recycling whenever technically feasible and economically reasonable. The plant has also set up a selective collection center to manage and monitor the appropriate processing and disposition of conventional waste. Since 2001, Melox has recycled 100% of its SIW (electrical cells, batteries and neon).

At a constant production volume, the waste volumes produced by the Connectors division at the Mantes la Jolie site fell from 2,700 metric tons in 2001 to 2,230 tons in 2002, a 20% decrease. These results were achieved through improvements in production efficiency, but also through selective sorting and recycling of packaging waste, as most of this waste was returned to the suppliers to be reused.

Radioactive waste

Radioactive waste consists of 1) process waste, such as fission products and fuel hulls and end-fittings, that remains the property of electric utility customers and is returned to them after packaging; 2) plant waste generated by operations, such as technological waste, ion exchange resins and sludge; and 3) plant decommissioning waste. We strive to reduce our operating waste volumes from year to year and to reduce the volume and radiotoxicity of final waste from spent fuel reprocessing for our customers. In 2002, 4,520 m^3 of radioactive waste from operations were shipped to an approved storage center.

The group provided information on radioactive waste by contributing to the preparation of the Ninth Report of the National Observatory of ANDRA[23] (national radioactive waste management agency) published in 2002.

Examples:

With the startup of the hull and technological waste compaction facility, compactable waste volumes were reduced by a factor of five at the La Hague plant from late 2001 to 2002.

From 2000 to 2001, Melox cut the number of waste drums shipped to Andra's storage center by 28%.

5.3.5.5 Releases in water

The nuclear fuel cycle is characterized by the small quantities of materials processed. The result is small total quantities of reagents for uranium mining and chemistry and for spent fuel reprocessing. Some chemical releases, nitrogen in particular, with a total of 831 metric tons released in 2002, are nonetheless significant in the Chemistry and Reprocessing business units, and programs are in place to improve the situation.

Our plant sites in France release a total of 2.2 metric tons of uranium into the water environment per year. As a comparison, the Rhône River alone carries along 80 metric tons of naturally occurring uranium.

The Connectors division releases heavy metals, mainly from electrolytic treatments of metal connector parts. A total of 119 kg of copper and 20 kg of lead have been released. In addition to processing these releases, lead substitution programs are under way.

Examples:

Saint Viaud: Cezus manufactures zirconium rods used to contain uranium pellets in nuclear reactor cores. The rolling, cleaning, degreasing and stripping operations involved can generate releases that are harmful to the environment. The Loire valley company therefore invested in ''clean'' equipment. First it built a detoxification station in 1995 to collect and treat all wastewater. Then it went further by installing a recycling station for spent fluonitric acid. Once its operation is optimized, this equipment will collect up to 70% of the acids for reuse, decreasing nitrate discharges four-fold.

Fuel business unit: In the United States, the main environmental projects consist of 1) eliminating liquid effluent storage ponds created by the old wet method of converting UF6 into UO2 (replaced

(23) Agence nationale pour la gestion des déchets radioactifs

by the dry process, which does not generate such effluent), and 2) decreasing the inventory of solid low-level waste.

5.3.5.6 Releases in the air

Fire extinguishers and refrigeration and air-conditioning systems are the primary sources of ozone-depleting substances. The goal is to phase out these substances pursuant to the Montreal Protocol, which took effect in January 1, 1989 and has been ratified by over 180 countries, including France. These emissions amounted to 5,390 kg in 2002.

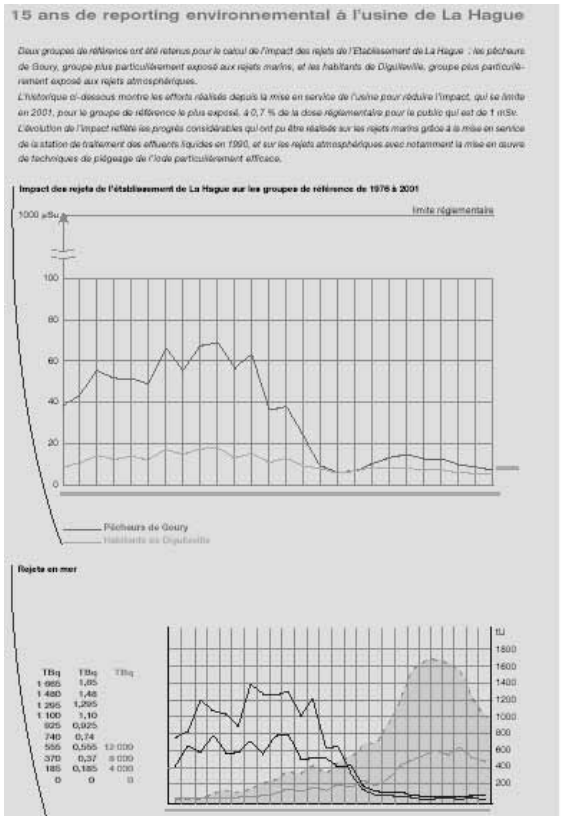
The principal acidifying gases released by the group are sulfur oxides linked to the operation of industrial steam supply systems, as well as emissions of nitrogen, fluorine and chlorine compounds from certain chemical processes. These emissions amounted to 2,069 metric tons in 2002.

AREVA is striving to lower its impacts on air quality by implementing an active policy to control and limit releases. Studies have been launched to set objectives for reductions in this area.

5.3.5.7 Radioactive releases and radiological impacts

The radiological impact of the group's operations on the most exposed members of the public (''reference groups'') is limited to 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.

Since 1997, French nuclear sites have published and publicly distributed annual environmental reports in which radioactive releases and trends are described in great detail. For example, at La Hague, the downward trend of radioactive releases over the last 15 years reflects the continuous progress made in this area, as shown in the figure below.



5.3.5.8 Odor and noise pollution

Few of the group's sites generate this type of pollution. Nonetheless, Comurhex decided to invest €2.2 million in odor reduction facilities to be operational in 2003, while FCI increased the soundproofing insulation in the housing of its refrigeration units at its Ferté-Bernard plant.

5.3.6 Improving regional integration

5.3.6.1 Protecting and restoring ecosystems

A specialized 50-person unit is in charge of restoring AREVA's mining sites in France, the United States, Gabon, and elsewhere around the world. Going well beyond environmental regulatory requirements, the unit's goal is to recreate a genuine natural space.

In Lodève, for example, 92 hectares (227 acres) were sewn with fifteen species of herbs and 15,500 trees and shrubs of twenty different species, while four types of semi-aquatic plants were added to the wetlands. Runoff water from the area is processed at a water treatment station, which in turn facilitates the recovery of significant tonnages of uranium, though these amounts are dropping considerably.

5.3.6.2 Revitalizing the local economy

Also in Lodève, COGEMA contributed €4.5M to the Lodève economic development plan, which among other things has provided assistance to around fifty startup and expanding businesses representing 250 new jobs.

In Creusot, Framatome continued to convert its Harfleur plant into a ''business village'' via a management firm set up with the Caisse des Dépôts and local governments. This six-hectare (fifteen-acre) enclosed site has been redeveloped and is now occupied by eleven firms with 350 employees and a long-term objective of 600 jobs.

5.3.6.3 Participating in local economic diversification

Above and beyond our ''repair'' operations, the group seeks to reduce the economic dependence of areas where its largest facilities are located by contributing to their diversification. In particular, the group is providing assistance in the areas of regional marketing, business development and project expertise.

In 2002, these business development activities helped diversify the economy around COGEMA's principal sites by establishing ten enterprise projects with a potential to create 203 jobs.

5.3.6.4 Providing financial support to plant sites

The group set up a financial tool, AREVAdelfi, to help fund projects to create or develop local businesses through equity or equity loans at discounted rates, regardless of the site's particular circumstances.

In 2002, AREVAdelfi's commitment committee decided to support twelve projects contributing to the creation of 661 jobs over three years.

5.3.6.5 Corporate sponsorship programs at the local and national level

A corporate sponsorship committee was established to meet society's expectations while ensuring that the group's programs are both consistent and acceptable to the employees. The committee brings together individuals from the group's corporate departments: sustainable development, communications, human resources, international development, legal affairs, technology, and others.

The committee's role is to define a program to be implemented by all of the group's worldwide subsidiaries and sites, adapting it to their own cultures and values as required.

5.3.6.6 Opening our sites to the public

As a sign of its commitment to openness, dialogue and transparency for all of its stakeholders, the group holds open houses and offers tours of its sites. In 2001, 26,000 people toured the group's sites.

Following the events of September 11, 2001, strengthened national security measures (the *Vigipirate renforcé* plan) have required that we close some of our sites to the public. The group is seeking alternatives until these sites are reopened. For example, at the La Hague plant, the group has organized tours of the surrounding area to provide information about the site as well as the region in which it is located.

5.4 Consolidated financial statements

5.4.1 Auditors' report on the consolidated financial statements — Year ended December 31, 2002

To the shareowners of AREVA:

In accordance with our appointment as auditors by your Annual General Meeting, we have audited the accompanying financial statements of AREVA (Société des Participations du Commissariat à l'Energie Atomique) for the year ended December 31, 2002.

The consolidated financial statements have been prepared by the Executive Board. Our role is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with professional standards applicable in France. These standards require that we plan and perform our audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatements. 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 and the results of its operations in accordance with accounting principles generally accepted in France.

Without prejudice to the opinion above, we call your attention to the following two points:

- Note 1.1 to the financial statements explains the impact of the change of accounting method resulting from the first implementation of accounting rule CRC n° 2000-06 concerning liabilities.
- Note 21 to the financial statements outlines the inherent uncertainty of decommissioning and dismantling cost estimates, and the revision of certain dismantling cost estimates currently under way, including costs borne by certain customers, in particular EDF.

We have also verified, in accordance with professional standards applicable in France, the Group financial information contained in the Management Report. We have no comment to make as to the fair presentation of this information, or its consistency with the consolidated financial statements.

Paris, March 28, 2003

The auditors,

DELOITTE TOUCHE TOHMATSU

Pascal Colin

Jean-Paul Picard

MAZARS & GUÉRARD

Thierry Blanchetier

Michel Rosse

RSM SALUSTRO REYDEL

Denis Marangé

Hubert Luneau

5.4.2 Consolidated income statement

in millions of euros	**2002**	2001	2000
SALES	8 265	8 902	9 041
Cost of sales	(6 129)	(6 956)	(6 815)
GROSS MARGIN	2 136	1 946	2 226
Research and development expenses	(332)	(377)	(394)
Sales and marketing expenses	(384)	(471)	(374)
General and administrative expenses	(624)	(571)	(551)
Other operating income and expenses (note 3)	(616)	(405)	(302)
OPERATING INCOME	180	122	605
Financial income (note 5)	587	199	111
Exceptional items (note 6)	289	319	78
Income tax (note 7)	(220)	(120)	(298)
Share in net income of equity affiliates (note 11)	83	102	443
NET INCOME BEFORE GOODWILL AMORTIZATION	919	622	939
Goodwill amortization (note 8)	(593)	(989)	(154)
NET INCOME BEFORE MINORITY INTERESTS	326	(367)	785
Minority interests in subsidiaries' earnings (note 19)	(86)	(220)	(322)
CONSOLIDATED NET INCOME	240	(587)	463
AVERAGE NUMBER OF OUTSTANDING SHARES	35 442 701	31 423 772	29 414 308
Earnings per share (in euros)	6.77	(18.65)	15.73

5.4.3 Consolidated balance sheet

ASSETS In millions of euros at December 31	**2002**	2001	2000
FIXED ASSETS			
Net intangible assets (note 8)	2 047	2 729	2 610
Decommissioning assets (notes 1 & 9)	9 223	—	—
Net tangible assets (note 10)	4 647	5 321	5 412
Equity in net assets of affiliates (note 11)	1 652	1 674	1 883
Other long-term notes and investments (note 12)	2 580	3 206	3 232
TOTAL	20 149	12 930	13 137
WORKING CAPITAL			
Inventories and in-process (note 13)	1 960	2 119	2 470
Accounts receivable and related accounts (note 14)	2 552	2 509	2 551
Other accounts receivable (note 15)	1 400	1 286	939
Cash and cash equivalents (note 16)	3 302	1 715	2 949
TOTAL WORKING CAPITAL	9 214	7 629	8 909
TOTAL ASSETS	29 363	20 558	22 046

LIABILITIES AND SHAREHOLDERS' EQUITY In millions of euros at December 31	**2002**	2001	2000
Share capital	1 347	1 347	1 121
Consolidated premiums and reserves	2 333	3 156	2 387
Currency translation reserves	100	271	200
Consolidated net income — current year	240	(587)	463
SHAREHOLDERS' EQUITY (note 17)	4 020	4 187	4 171
PERPETUAL SUBORDINATED DEBT (note 18)	215	216	216
MINORITY INTERESTS IN EQUITY OF CONSOLIDATED AFFILIATES (note 19)	988	1 004	2 434
Pension and retirement obligations (note 20)	568	467	245
Provisions for risk and liabilities (note 21)	14 485	5 116	4 795
Financial debt (note 22)	2 217	2 444	2 596
Prepayments (note 23)	4 066	3 576	4 245
Accounts payable	1 056	1 163	1 331
Other operating liabilities (note 24)	1 748	2 385	2 011
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	29 363	20 558	22 046

Off balance-sheet commitments: see note 28

5.4.4 Consolidated cash flow statement

In millions of euros	**2002**	2001	2000
CASH FLOW FROM OPERATING ACTIVITIES			
CONSOLIDATED NET INCOME	240	(587)	463
Minority interests	86	220	322
Net income before minority interests	326	(367)	785
Share of loss (gain) in net income of equity affiliates, net of dividends	(55)	(93)	(443)
Net depreciation of fixed assets	1 380	1 868	1 191
Net provision for risk and liabilities	331	309	381
Loss (gain) on disposition of fixed assets and marketable securities	(977)	(51)	(41)
Other non-cash items	6	(305)*	(55)
Cash flow from operations	1 011	1 361	1 818
Change in working capital requirement (note 25)	(104)	(157)	(366)
CASH FROM OPERATING ACTIVITIES	907	1 204	1 452
CASH FLOW FROM INVESTING ACTIVITIES			
Investment in tangible and intangible assets	(430)	(560)	(794)
Investment in long-term notes and investments	(475)	(678)	(493)
Change in customer prepayments invested in fixed assets	(71)	(515)	(679)
Disposals of tangible and intangible assets	230	1	182
Disposals of long-term notes and investments	262	446	331
CASH FROM (USED FOR) INVESTING ACTIVITIES	(484)	(1 306)	(1 453)
CASH FLOW FROM FINANCING ACTIVITIES			
Capital contributions received	—	133	43
Dividends paid	(262)	(1 225)	(384)
Increase (decrease) in debt	72	279	41
CASH FROM (USED FOR) FINANCING ACTIVITIES	(190)	(813)	(301)
Decrease (increase) in marketable securities	995	—	—
Impact from change in currency rates	23	10	13
INCREASE (DECREASE) IN NET CASH	1 250	(903)	(289)
Cash at the beginning of the year	1 715	2 949	3 126
Less: bank credit balances	(216)	(547)	(436)
Less: reclassification of marketable securities (note 16)	(819)		
NET CASH AT THE BEGINNING OF THE YEAR	680	2 402	2 690
Cash at the end of the year	2 045	1 715	2 949
Less: bank credit balances	(116)	(216)	(547)
NET CASH AT THE END OF THE YEAR	1 929	1 499	2 402

* including –€303M in dilution gain. See note 6

5.4.5 Change in consolidated shareholders' equity

In millions of euros	Number of shares and investment certificates outstanding	Capital stock	Consolidated premiums and reserves	Currency translation reserves	Total Shareholders' equity	Minority Interests
January 1, 2000	29 414 308	1 121	2 705	88	3 914	2 020
Share issue Net 2000 income			463		463	322
Dividends paid			(301)		(301)	(84)
Change in accounting method and other adjustments			(17)		(17)	76
Currency translation adjustment				112	112	100
December 31, 2000	29 414 308	1 121	2 850	200	4 171	2 434
Capital increase/decrease	6 028 393	226	1688		1 914	
Net 2001 income			(587)		(587)	220
Dividends paid			(1 197)		(1 197)	(42)
Change in consolidated group						(1 555)
Change in accounting method and other adjustments[(1)]			(185)		(185)	52
Currency translation adjustment				71	71	(105)
December 31, 2001	35 442 701	1 347	2 569	271	4 187	1 004
Net 2002 income			240		240	86
Dividends paid			(220)		(220)	(41)
Change in consolidated group						(24)
Change in accounting method and other adjustments			(16)		(16)	
Currency translation adjustment				(171)	(171)	(37)
December 31, 2002	35 442 701	**1 347**	**2 573**	**100**	**4 020**	**988**

(1) See notes 1.16 and 2.1

5.4.6 Data by business line and by region

DATA BY BUSINESS LINE

2002

In millions of euros (except personnel data)	Front End	Reactors and Services	Back End	Nuclear Power	Connectors	Holding, other operations, and consolidation entries	Consolidated total
Income items							
Gross sales	2 583	2 074	2 271	**6 928**	**1 560**	(223)	**8 265**
Inter-company sales	(24)	(143)	(185)	**(352)**	**0**	352	**0**
Contribution to consolidated sales	2 559	1 931	2 086	**6 576**	**1 560**	129	**8 265**
Operating income	333	81	235	**649**	**(406)**	(63)	**180**
% of sales	13.0%	4.2%	11.3%	**9.9%**	**(26.0)%**	n.a.	**2.2%**
Cash flow data							
EBITDA	425	87	756	**1 268**	**(26)**	(92)	**1 150**
% of contribution to consolidated sales	16.6%	4.5%	36.2%	**19.3%**	**–1.7%**	n.a.	**13.9%**
Net cash used in investing activities	(93)	(49)	(228)	**(370)**	**(88)**	(25)	**(483)**
Gain or loss from sales of tangible and intangible assets	(1)	(1)	23	**21**	**2**	—	**23**
Change in operating working capital requirement	113	34	(280)	**(133)**	**86**	(25)	**(72)**
Operating cash flow	445	71	271	**787**	**(26)**	(143)	**618**
Other							
Fixed assets	2 076	551	12 057	**14 684**	**944**	4 521	**20 149**
Working capital requirement	600	277	(2 241)	**(1 364)**	**352**	54	**(958)**
Capital employed	1 955	906	509	**3 370**	**1 611**	1 050	**6 031**
Employees	9 536	13 327	10 719	**33 582**	**14 015**	2 550	**50 147**

Some of the operations of Duke Engineering and Services, a company acquired in May 2002, are yet to be allocated among the relevant nuclear divisions. In the meantime, these operations are recorded under ''other operations''.

Sales of the Front End division (EURODIF) declined as some customers exercised an option to supply the group with the energy required to enrich their natural uranium. Consequently, the value of the energy component of the enrichment process (€193M in 2002) is no longer recorded either in sales revenue or in the cost of services we provide to these customers. As this cross-billing practice was margin neutral for AREVA, its discontinuation has no impact on the company's reported profits.

The amount of interest on long term contracts recorded as sales revenue represented €6.4M in 2002.

EBITDA is understood as operating income before depreciation, depletion, amortization and provisions.

Capital employed includes net tangible and intangible assets, operating working capital requirement, customer prepayments invested in fixed assets, and provisions for costs and expenses.

2001

in millions of euros (except personnel data)	Front End	Reactors and Services	Back End	Nuclear Power	Connectors	Holding, other operations, and consolidation entries	Consolidated Total
Income items							
Gross sales	2 761	2 057	2 418	**7 236**	**1 966**	(300)	**8 902**
Inter-company sales	(28)	(178)	(205)	**(411)**	**0**	411	**0**
Contribution to consolidated sales	2 733	1 879	2 213	**6 825**	**1 966**	111	**8 902**
Operating income	362	45	10	**417**	**(235)**	(60)	**122**
% of sales	13.2%	2.4%	0.5%	**6.1%**	**(12.0)%**	n.a.	**1.4%**
Fixed assets	1 444	394	3 606	**5 444**	**3 015**	4 471	**12 930**
Employees	9 245	12 622	10 100	**31 967**	**15 293**	2 600	**49 860**

2000

in millions of euros	Front End	Reactors and services	Back End	Connectors	Holding, other operations, and consolidation entries	Consolidated Total
Sales	2 357	1 908	2 340	2 644	(208)	**9 041**
Inter-company sales	(29)	(233)	(130)	—	392	**—**
Total	2 328	1 675	2 210	2 644	184	**9 041**
Operating income	200	84	57	289	(25)	**605**
Fixed assets	1 381	303	3 907	3 997	3 549	**13 137**
Employees	7 590	13 756	9 716	18 457	2 292	**51 811**

COGEMA's participating interest in Eramet, recorded under ''Front End operations'' in 2000, was recorded under ''Holding and other operations'' in 2001.

BY REGION

Sales by area

in millions of euros	2002 Nuclear	2002 Connectors	2002 Other	2002 Total	2001 Nuclear	2001 Connectors	2001 Other	2001 Total	2000 Total
France	3 033	197	12	3 242	3 914	217	63	4 194	3 961
Europe (excl. France)	1 227	414	5	1 646	1 270	562	5	1 837	1 574
North America	1 208	411	84	1 703	674	441	7	1 383	1 519
Asia	954	387	9	1 350	782	577	24	1 122	1 511
Other areas	153	151	20	324	184	169	13	366	476
Total	**6 575**	**1 560**	**130**	**8 265**	**6 825**	**1 966**	**111**	**8 902**	**9 041**

Tangible assets

in millions of euros	2002 Nuclear	2002 Connectors	2002 Other	2002 Total	2001 Nuclear	2001 Connectors	2001 Other	2001 Total	2000 Total
France	3 638	81	72	3 791	3 896	118	161	4 175	4 476
Europe (excl. France)	100	96	6	202	53	119	60	232	141
North America	314	150	28	492	349	330	42	721	358
Other areas	11	151	0	162	7	186	0	193	436
Total	**4 063**	**478**	**106**	**4 647**	**4 305**	**753**	**263**	**5 321**	**5 411**

5.5 Notes to the consolidated financial statements

All amounts are presented as millions of euros unless otherwise indicated. Because numbers have been rounded off, certain totals may not be exact.

Note 1 — Accounting principles

AREVA's consolidated statements have been prepared in accordance with the accounting rules and methods for consolidated accounts approved by the Order of June 22, 1999, approving rule n° 99-02 from the Committee on accounting regulations (*Comité de Réglementation Comptable*, ''CRC'').

The financial statements of companies consolidated by full consolidation or proportionate consolidation are restated by applying the principles of the group.

1.1. Change in accounting method for the fiscal year

Handling of end-of-life-cycle operations (decommissioning of nuclear facilities, decontamination, and waste retrieval and packaging) and decommissioning assets.

In accordance with CRC rule n° 2000/06, and effective January 1, 2002, the group modified its method of constituting provisions for the nuclear facilities it operates to account for end-of-life-cycle operations (decommissioning, decontamination and waste retrieval and packaging). A provision is now set up for the total estimated cost of end-of-life-cycle operations, including any portion of the cost funded by third parties, as soon as a facility enters service. Previously, the provision only covered the estimated amount of costs ultimately to be borne by the group and was increased gradually over the projected service life of the facilities. The offsetting entry for this provision was recorded on the asset side of the balance sheet under ''Decommissioning assets''. This item records the estimated portion of the cost ultimately borne by the group, depreciated over the projected life of the facilities, and the portion of the cost funded by third parties, which will be reclassified in receivables as soon as contract conditions permit but no later than the actual performance of decommissioning operations.

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.

This change in accounting method had no effect on shareholders' equity as of January 1, 2002. It required a €8.918M increase in provisions for end-of-life-cycle operations, offset by an increase in decommissioning assets in the same amount (cf. note 9). On the income statement, the former method of increasing provisions for end-of-life-cycle operations was replaced by depreciation of decommissioning assets under calculation methods identical to those used previously and specified hereunder.

The impact of end-of-life-cycle operations on the consolidated balance sheet of AREVA is summarized below.

IN BILLIONS OF €	**12/31/2002**	**01/01/2002**	12/31/2001
Assets			
Decommissioning assets (note 9):			
— AREVA share	1.2	1.1	—
— Third party share	8.0	7.8	—
Long-term portfolio earmarked for decommissioning operations (note 12)	2.1	2.0	2.0
Liabilities			
Provisions for end-of-life-cycle operations (note 21):			
— AREVA share	4.3	3.9	2.8
— Third party share	8.0	7.8	—

1.2 Change in format of financial statements

The group adopted a new format for its accounts in 2001 to improve its financial communications. The 2000 information has been reclassified accordingly. In particular, restructuring costs and income from disposals of tangible assets, previously recorded as extraordinary items, are now included in ''Other operating income and expenses''. However, disposals of tangible assets continue to be recorded in exceptional items when the individual amounts are significant and listed in note 6.

The table below details the transition from the 2000 income statement presented in the 2000 annual report to the 2002 income statement published this year.

2000 Income Statement	2000 Annual Report	Shared operations	Disposals of fixed assets	Equity interest	2002 Annual Report
Sales	9 041				9 041
Operating income	576	(2)	66	(34)	605
Net financial income	71	2	39		111
Exceptional items	183		(105)		78
Employee profit-sharing	(34)			34	—
Income tax	(299)				(299)
Income from equity investments	443				443
Amortization of goodwill	(154)				(154)
Net income before minority interests	785	—	—	—	785

1.3 Consolidation method

The consolidated statements combine the financial statements as of December 31, 2002 for AREVA and for the significant subsidiaries which it holds and over which it has exclusive control or in which it exercises either joint control or a significant influence on 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 on financial policy and management are accounted for using the equity method.

The equity share of minority shareholders in consolidated subsidiaries, if negative, is assumed 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.

1.4 Aggregates of companies and goodwill

The difference, on the acquisition date, between the acquisition cost of a company's stock and the Group's share in such company's net equity, as restated when warranted, is recorded under assets as ''goodwill'' if it is positive or under liabilities as ''Provisions for risk and liabilities'' if it is negative.

Within a maximum one year from the date control was acquired, the group may revise its evaluation and allocate the difference between the stock's purchase price and the group's equity in the acquired company to goodwill and initial consolidation differences.

Goodwill in the Nuclear and Connectors businesses is normally amortized using the straight-line method over periods of time that are specific to the business, but never more than 20 years. Positive or negative goodwill of less than €1.5M is recorded as income in the year of the acquisition.

1.5 Intangible assets

Set-up expenses

These costs are fully amortized in the group's consolidated accounts.

Research and development expenses

Research and development costs that are not funded by third parties are recorded as expenses during the fiscal year in which they are incurred. Development projects in progress are recorded at cost as intangible assets when it is possible to demonstrate the success, the profitability and the usefulness of the development. If not, the costs for research activities are recorded as expenses in 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 fixed assets directly allocated to research and development activities.

Mineral exploration

Exploration costs, including geological work and associated expenses, are determined in accordance with the rules set forth in the Chart of Accounts. Exploration costs that do not relate to a deposit where economically recoverable reserves have been discovered are expensed during the year in which they are incurred. Mining pre-development expenses relating to reserves presenting technical and economic characteristics that indicate a strong probability of profitable mining development may be capitalized at year-end. Indirect costs, excluding overhead expenses, are included in the valuation of these costs. Capitalized pre-mining exploration and development expenses are tied to identified reserves. They are depreciated in proportion to the number of tons mined from the specific reserve.

Other intangible assets

Software development expenses are capitalized and depreciated over the software's estimated useful life. Software design expenses are expensed as incurred. Trademarks are not amortized. A provision for depreciation is recorded when a trademark's present value is inferior to its book value.

1.6 Decommissioning assets

In accordance with CRC rule n° 2000-06 pertaining to liabilities, the group recognizes, in addition to the value of its tangible assets, its share of ultimate end-of-life-cycle operation costs (nuclear facility decommissioning, decontamination) and sets up a provision for the total amount of waste retrieval and packaging costs to be borne by the group. AREVA also accounts for ultimate decommissioning costs funded by certain customers.

The group's share of these costs is amortized on a straight line over the life of the facilities determined on the basis of firm contracts performed by each facility, including reasonable expectations for contract renewals. Using this method, amortization periods were established based on existing or reasonably expected contracts for the main facilities:

- 2010 for the enrichment plant at Tricastin (Eurodif),
- 2015 for the spent fuel reprocessing plant at La Hague (COGEMA),
- 2017 for the MOX recycling plant at Marcoule (Melox).

Amortization periods may be revised if the group's backlog changes significantly.

1.7 Tangible assets

Tangible assets appear on the balance sheet at cost, except for assets that have been revalued in accordance with locally applicable accounting rules. The accounting effect of such revaluations is recorded in the consolidated financial statements.

Interest incurred on specific financing of industrial complexes may be capitalized during construction and over the life of the corresponding assets.

Depreciation of tangible assets is calculated under 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 10 years; construction over 10 to 45 years; production facilities, equipment and tooling over 5 to 10 years; general facilities and miscellaneous fixtures over 10 to 20 years; and transportation equipment, office equipment computer equipment and furniture over 3 to 10 years. Fixed assets financed under lease arrangements are restated in the consolidated accounts when they are significant.

1.8 Long-term notes and investments

Equity interests in unconsolidated companies and long-term portfolio securities are subject to depreciation if their value in use or utility value, assessed security by security, becomes lower than their historical cost.

The item ''Long-term financial portfolio'' includes investments in marketable securities, whether directly held individual securities or mutual funds, made for a mid- to long-term purpose. The inventory value is determined based on the utility values defined below:

- Directly held individual securities: average of (a) market values established by a stable panel of financial analysts at the close of the fiscal year and (b) the mid-term value, which takes into account the growth rate of future benefits, the stock market risk and the risk specific to the company in question. A provision is not taken for depreciation until after a depreciation test has been performed based on the stock market value: if the average stock market value 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 taken for depreciation by comparing the utility value as defined above with the book value.
- Securities in the form of mutual funds: moving average of their net asset value on the stock market for a period not to exceed 24 months preceding the end of the fiscal year.

1.9 Depreciation of fixed assets

Fixed assets (other than assets resulting from employee benefits and long-term notes and investments) are subject to asset depreciation tests.

A provision for depreciation 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 and its utility value. The utility value 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 removal value at the end of its projected service life.

Provisions for the depreciation or write-off of an asset are assessed based on the recoverable value of the cash-generating unit to which the asset belongs. The cash-generating unit of an asset includes the goodwill allocated to that unit. Any depreciation of the cash-generating unit is first assigned to the goodwill applied to that unit.

A provision for depreciation recorded in previous fiscal years is reflected in 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 depreciation was recorded. A write-off of goodwill is non-reversible.

1.10 Inventories, work in process and long-term contracts

Inventories and work in process are valued at cost in the case of products and at their acquisition cost for goods acquired for consideration, adjusted if necessary by a provision for depreciation when this price exceeds the probable liquidation value. Financial expenses and research and development costs are not taken into account in the valuation of inventories and goods in process unless they are financed by customers.

Since January 1, 2000 the group has opted for the preferred percentage-of-completion method to record long-term contracts, as presented in CRC rule no 99-08 and adopted in the new methodology for the consolidated financial statements. The percentage of completion calculation for each contract is limited to the actual completion of services.

Income recorded by a group subsidiary for engineering services provided to another group company and capitalized as fixed assets is eliminated in consolidation when the amount is significant. It is deducted instead from the fixed assets and depreciated over the depreciation period for the assets in question. Any probable loss on a contract in process or on the order book is fully funded as soon as it is known.

Financial income generated by the excess of customer prepayments over costs incurred on long-term notes and by the interest billed to customers is recorded when it is realized. However, when such financial income is significant, it is treated as a price supplement and is deferred for later inclusion in sales based on the methods described above.

1.11 Marketable securities

Marketable securities are valued at their acquisition cost or at their inventory value if the latter is lower. In the event that the valuation as of the end of the period shows an overall loss by class of securities, a provision for depreciation is recorded at a matching level. The inventory value of bonds, commercial paper and open-ended rate funds held in connection with the management of prepayments on contracts is equal to the deal price on the last day of the fiscal year; the inventory value of other marketable securities is equal to the average stock market value for the last month of the fiscal year.

1.12 Perpetual subordinated debt

The gross amount of the perpetual subordinated bond is 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 is posted to the ''Other long-term notes and investments'' account. An increase in the value of this deposit during the year is recorded as financial income.

1.13 Conversion of financial statements of foreign companies

The financial statements of foreign companies are converted according to the following principles:

- balance sheet items are converted at the rates of the end of the period, with the exception of equity components, which are kept at their historic rates;
- income statement transactions are converted at average annual rates;
- currency translation differences in income and shareholders' equity are recorded directly as equity under the heading ''Unrealized foreign exchange gains/(losses)''.

1.14 Translation of transactions in foreign currencies and financial instruments

Underlying currency gains and losses are recorded as income unless the foreign currency transactions are accompanied by parallel transactions to hedge the currency exchange rate fluctuation risk. Underlying currency gains and losses linked to foreign currency

financing of long-term investments by foreign subsidiaries (foreign loans or prepayments relating to shareholders' equity) are recorded in shareholders' equity.

Currency transactions on the financial markets are meant to cover the currency risk generated by the group's businesses. As of the end of the year, all assets, liabilities and off-balance sheet items denominated in foreign currencies are valued at the official rate as of December 31. When the currency transactions are intended to hedge long-term advances denominated in foreign currencies, the underlying income or loss calculated as of the end of the period for the hedge and the item hedged is recorded directly in income. Transactions concluded on the forward market for financial instruments are used to manage the rate risk associated with the group's investments. The variable-rate six month interest on the perpetual subordinated bond is hedged using rate swaps.

1.15 Deferred taxes

AREVA has qualified 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 2002 to 2004 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 values and the tax value of assets and liabilities according to the liability method of tax allocation. Temporary taxable and deductible differences are staggered (by year for negative carry-forwards over the taxable period, per country-specific legislation) and offset when country-specific tax law so authorizes.

Temporary net taxable differences generate a deferred tax credit. Temporary net deductible differences, deferrable losses and unused tax credits generate a deferred tax debit equal to the probable amounts recoverable in the future. Deferred tax debits are analyzed case by case based on mid-range income projections of 3 to 5 years.

1.16 Pensions, retirement-related severance pay and related benefits

Since 2001, the group has booked the entire amount of its commitments for pensions, severance pay, medical insurance, job-related awards, accident and disability insurance and other related commitments, whether for active personnel or for retired personnel.

For defined contribution plans, payments by the group are recorded as expenses for the period to which they relate.

For defined benefit plans relating to post-employment benefits, benefit costs are estimated using the projected credit unit method. Under this method, accrued pension benefits are allocated among service periods based on the plan vesting formula, taking into account a linearization effect when the vesting rate is uneven in later benefit periods.

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.

The post-January 1, 2001 discount is spread out 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 bond on the closing date for defined benefits on the closing date,
- fair value for plan assets on the closing date.

The costs of plan changes are spread out over the vesting period.

The effect of this change of methods on net shareholders' equity as of fiscal year 2001 is a reduction of €32M (reduction of €3M for minority interests).

1.17 Provisions

In accordance with CRC regulation n° 2000-06 on liabilities, a provision shall be recorded whenever there is an obligation towards a third party as of the closing date and a probable reduction of equity without a corresponding increase in equity after the closing date in at least the same amount. A reasonably reliable estimate of equity reduction must be determined in order to record a provision.

In accordance with CRC n° 2000-06, the group changed its accounting method regarding provisions for end-of-life-cycle operations (decommissioning, decontamination and waste retrieval and packaging) for the nuclear facilities it operates, effective January 1, 2002. Given that deterioration begins as soon as the facility enters service, the total estimated cost of end-of-life-cycle operations is now provisioned as soon as operations begin, including any share funded by third parties. Previously, a provision was recorded gradually over the estimated service life of the facilities and limited to estimated costs ultimately to be borne by the group.

No provision is set up for potential liabilities corresponding to an obligation that is neither probable nor certain as of the closing date. Potentially significant liabilities are disclosed in note 29.

1.18 Cash flow statement

The group uses the ''indirect method'' for presenting cash flows from operating activities.

Cash is composed of cash and cash equivalents, available bank balances and short-term investments maturing in less than three months.

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 investment cash flow.

1.19 Investment subsidies

Investment subsidies are included in income using a straight-line method, according to a schedule that is consistent with the depreciation period for the tangible assets being subsidized.

Unamortized investment subsidies are recorded under ''Other operating liabilities''.

Note 2 — Consolidation scope

2.1 Formation of AREVA

The Combined Annual and Extraordinary Shareholders' Meeting (''SM'') of September 3, 2001 approved the capital restructuring transactions for CEA-I that had been decided by the French government on November 30, 2000, as well as the name change for the group, which became AREVA. The equity interests of minority shareholders of COGEMA, FCI and Framatome ANP, all of which were subsidiaries of CEA-I, were acquired or swapped for AREVA shares. The table below summarizes the changes in the direct and indirect shareholding structures of the companies:

Before the SM of September 3, 2001	CEA-1	COGEMA	Framatome S.A.*	Framatome ANP
CEA	95.1%			
Investment certificates	4.9%			
CEA-I (directly and indirectly)		74.7%	48.3%	31.8%
French Republic			19.6%	13%
Erap		7.6%	2.6%	1.7%
Caisse des dépots et consignations		3.2%	1.1%	0.7%
TotalFinaElf		14.5%	4.8%	3.2%
Employee shareowners			6%	4%
EDF			9.1%	6.1%
Alcatel			8.5%	5.5%
Siemens				34%
Total	**100%**	**100%**	**100%**	**100%**

* including equity interest in FCI (100%)

After SM of September 3, 2001	AREVA	COGEMA	FCI	ANP
CEA	78.9%			
French Republic	5.2%			
Investment certificates	4%			
Erap	3.2%			
Caisse des dépots et consignations	1.4%			
TotalFinaElf	1%			
Employee shareowners	1.6%			
EDF	2.5%			
Alcatel	2.2%			
AREVA		100%	100%	66%
Siemens				34%
Total	**100%**	**100%**	**100%**	**100%**

In addition, CEA-I acquired 5/6 of TotalFinaElf's stake in COGEMA.

The minority interests acquired as of September 3 totaled €1.606B.

The acquisition price (including the acquisition of 5/6 of the stake) was €2.467B.

The fair value of these components acquired on that same date was €2.263B.

The €204M difference between the acquisition price for the assets and liabilities and the fair value of these components was charged against shareholders' equity.

The €657M difference between the acquisition price for the assets and liabilities and the amount of the minority interests was recorded as goodwill in accordance with paragraph 211 of COB[24] regulation 99-02.

2.2 Consolidated companies (French/foreign)

(number of companies)	**2002**		2001		2000	
Consolidation method	French	Foreign	French	Foreign	French	Foreign
Full consolidation	91	97	101	92	101	86
Equity method	11	8	9	4	15	36
Proportionate consolidation	2	6	2	5	20	5
Sub-total	104	111	112	101	136	127
Total	**215**		**213**		**263**	

Transactions in 2002

Framatome ANP signed an agreement to acquire Duke Engineering & Services (DE&S), a subsidiary of U.S. utility Duke Energy, on January 31, 2002. DE&S had 2001 sales of $280M, primarily in the U.S. nuclear engineering and services sector. The acquisition was finalized in late April 2002 and will boost the group's U.S. market share. The acquisition price of DE&S and its subsidiaries was $80.5M.

COGEMA group subsidiaries in the United States were reorganized by moving the equity interests in the subsidiaries to a single structure, COGEMA, Inc. The purpose of the reorganization is 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. received SGN's shares in COGEMA Services, Inc. (100%),

(24) *Commission des Opérations en Bourse*, the French stock market watchdog

COGEMA's shares in Canberra, Inc. (100%), and COGEMA Logistics' shares in Transnuclear, Inc. (100%).

AREVA sold real property management company Sovaklé in January 2002 for €122M. Pragodata was sold for a symbolic euro. Atea Industrie S.A. was sold on January 25, 2002.

Rockridge merged with parent company ANP, Inc. CFC merged with parent company FBFC. Icmat merged with parent company Intercontrôle. Euriware Group merged with Antel Services. Conservatome merged with COGEMA Logistics. Gemma was created and acquired via the contribution of a portion of SICN's assets and liabilities. COGEMA sold its transportation operations to COGEMA Logistics by transferring all of its assets and shareholders' equity.

Euriware Group bought out the 48.96% minority interest in subsidiary Axisse (henceforth Euriware PGI) and the 60% interest in DGI2000, becoming sole shareowner in each case. It bought a 4.26% minority interest in subsidiary PEA Consulting then sold 10.66% to Geraco, becoming 65.32% shareowner (with 34.32% held by Geraco), for total equity 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.

The Société des Mines d'Ity (SMI) was acquired for €12M.

Pursuant to transactions involving SGN in 2000 and 2001, all operations were transferred out of Krebs and the real estate investment companies of Euze, Bois Mouton, Mares aux Saules and Place Ovale and the companies were deconsolidated as of 1/1/2002.

Transactions in 2001

In application of the final agreement signed on July 4, 2000 and after approval by European anti-trust authorities, Siemens AG (Germany) contributed all of its shares in subsidiary Siemens Nuclear Power GmbH (Germany) of the KWU division to Framatome ANP SAS on January 30, 2001. This contribution was supplemented by a cash contribution giving Siemens AG 34% of Framatome ANP SAS upon completion of the transaction. Under these same agreements, Framatome ANP acquired U.S. firm SPC, Inc. on March 19, 2001, then merged with it on August 31, 2001.

COGEMA acquired U.S. firm Canberra Industries and Belgian firm Canberra Benelux for €189M from U.S. company Packard. Both companies were fully consolidated as of February 1, 2001.

SPRG and Clemessy SA and their subsidiaries were sold to Dalkia (Vivendi Environnement, France) in September 2001.

The remaining 40% stake in Oris was sold to the Schering group.

Transactions in 2000

SGN sold 50% of Krebs Speichim to Technip in connection with Technip's departure as a shareholder of COGEMA.

The industrial maintenance business (Game) was sold to Clemessy.

COGEMA acquired all of Eurisys Mesures shares from SGN and from the Sagem group.

Under agreements signed with Siemens AG (Germany), Framatome contributed a portion of its assets to Framatome ANP on July 1, 2000.

Sixty percent of the Oris group was sold to the Schering group.

2.3 Impact of changes in consolidation

The impact of the changes in consolidation on sales and operating income for 2000, 2001 and 2002 is as follows:

Deconsolidated companies in millions of €	**2002**	2001	2000
Sales	34	334	616
Operating income	0	8	7

Consolidated companies in millions of €	**2002**	2001	2000
Sales	229	916	49
Operating income	11	15	—

The impact on the sales of the consolidated companies is detailed below:

in millions of €	**2002**	2001	2000
Gemma (France)	7		
SMI (Côte d'Ivoire)	18		
SGT (United States)	14		
DE Canada Services, Inc. (Canada)	16		
DE&S (United States)	174		
ANF GMBh (Germany)		4	
ANP GMBh (Germany)		696	
NDT GMBh (Germany)		20	
Framatome ANP, Inc. (United States)		90	
Canberra USA (United States)		93	
Canberra Benelux (Belgium)		4	
Canberra Eurisys (France)		9	
NPI (France)			6
Aptec (France)			5
Aptec NRC (France)			21
Cominor (France)			3
CMA (France)			14
Total	**229**	**916**	**49**

2.4 Pro forma data and historically reconstituted data (unaudited)

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 in a change in balance sheet, sales or operating income totals for all operations of more than 15% 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 is above the threshold indicated above and in the absence of audited historical accounting data, the group reconstitutes historical data after the fact.

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.

Portions of a reconstituted income statement are presented hereunder for fiscal years 2000, 2001 and 2002, based on a constant consolidation scope in which the following changes are considered to have occurred as of January 1, 2000:

- acquisition of Siemens' nuclear operations in 2001, which were an integral component of Siemens KWU division in 2000 and for which reconstituted data is supplied for 2000;
- full consolidation of Canberra in 2000 and 2001; and
- deconsolidation of Clemessy as of January 1, 2000.

No reconstituted income statement was established for transactions occurring in 2002.

in millions of €	**2002**	2001 reconstituted	2000 reconstituted
SALES	8 265	8 982	10 011
OPERATING INCOME	180	124	673
Financial income	587	178	76
Extraordinary items	289	341	117
Income tax	(220)	(120)	(327)
Share in net income of equity affiliates	83	101	443
Goodwill amortization and provisions	(593)	(987)	(173)
NET INCOME BEFORE MINORITY INTERESTS	326	(363)	809
Minority interests	(86)	(220)	(314)
CONSOLIDATED NET INCOME	**240**	**(583)**	**495**

Note 3 — Other operating income and expenses

in millions of €	**2002**	2001	2000
Net gains (losses) on sales of non-financial fixed assets	(24)	(26)	104
Restructuring costs and [''CATS'' — ''CASA''] retirement plans	(345)	(87)	(17)
Other operating income and expenses	(247)	(292)	(389)
TOTAL	**(616)**	**(405)**	**(302)**

Restructuring costs were €240M for the connectors business (FCI) and €35M for the nuclear power business.

[CATS — CASA] plans were €29M for the connectors business (FCI) and €41M for the nuclear power business.

Other operating income and expenses primarily include increases in net amortization associated with end-of-life-cycle operations.

In 2001, other operating income and expenses primarily include a €184M increase in depreciation for the MOX recycling plant at Marcoule and increases in provisions for asset depreciation amounting to €62M.

Note 4 — other income statement data

in millions of €	**2002**	2001	2000
Payroll expense	2 728	2 697	2 552
Workforce	50 147	49 860	51 811

in millions of €	**2002**
Increases in amortization	787
Increases in provisions	331
(Gains)/losses on disposals of non-financial assets	24

• Company representative compensation

The following table shows compensation, including in-kind benefits, paid in fiscal year 2002 to representatives of the company and of controlled companies in compliance with article L. 233-16 of the French Commercial Code.

Total amount in euros paid in fiscal year 2002

Members of the Executive Board	Anne Lauvergeon	364 209
	Gérald Arbola	289 217
Members of the Supervisory Board*	Pascal Colombani	101 650
	Philippe Pontet	112 801
	Euan Baird	6 863
	Patrick Buffet	17 542
	Philippe Braidy	10 675
	Thierry Desmarest	10 675
	Gaishi Hiraiwa	3 050
	Daniel Lebègue	15 253
	Jean-Claude Bertrand	6 100**
	Gérard Mélet	6 100**
	Alain Vivier Merle	6 100**

* Some amounts for prior years may have been paid in fiscal year 2002.

** Members elected by company personnel who may have exercised their prerogative to request that their directors' fees be paid to their labor organization.

Note 5 — Net financial income

in millions of €	**2002**	2001	2000[1]
Investment income	97	141	196
Interest expense on loans and lines of credit	(87)	(111)	(130)
Net foreign exchange gain/(loss)	1	(6)	(7)
Net gain/(loss) on sales of securities	689	92	29
Dividends received	57	60	3
Provisions on securities	(46)	28	(11)
Debt write-off	(8)	(9)	(1)
Income from decommissioning operations and other long-term notes	(115)	(17)	22
Other income/(loss) from financial activities	—	21	10
Total	**587**	**199**	**111**

(1) Unaudited reconstituted historical data

The amount of financial interest on long-term notes transferred to customer prepayments for fiscal year 2002 was €19.8M. In 2002, financial income included €57.4M in depreciation of the long-term financial portfolio earmarked for end-of-life-cycle operations.

Note 6 — Extraordinary items

In 2002, extraordinary items were primarily the €77M gain for the sale of Sovaklé and the €216M gain from the sale of the Framatome Tower in the Paris area.

In 2001, extraordinary items primarily reflect the impact of the €303M dilution gain related to Siemens' acquisition of a stake in Framatome ANP SAS (see note 2). After the write-off of goodwill on Framatome, the net gain from dilution was €284M.

Note 7 — Income tax

Analysis of income tax expense

in millions of €	**2002**	2001	2000
Current taxes (France)	(184)	(270)	(272)
Current taxes (other countries)	(50)	(48)	(81)
Total current taxes	(234)	(318)	(353)
Deferred taxes	14	198	55
TOTAL	**(220)**	**(120)**	**(298)**

Reconciliation of income tax expense and income before taxes

in millions of €	**2002**	2001	2000
Net income before minority interests	240	(587)	463
Minority interests	86	220	322
Share in net income of equity affiliates	(83)	(102)	(443)
Tax expense/(income)	220	120	299
Income before tax	463	(349)	640
Theoretical tax profit/(expense)	(164)	127	(242)
Reconciliation			
Effect of income taxed abroad	12	34	14
Transactions taxed at a reduced rate	125	5	8
Permanent differences	(236)	(347)	(127)
Tax credit and other taxes	21	60	65
Change in provision for depreciation of positive deferred taxes	22	—	(17)
Real tax income/(expense)	**(220)**	**(120)**	**(298)**

The tax rates used in France are as follows:

Year	2000	2001	2002	2003
Tax rate	37.76%	36.43%	35.43%	35.43%

Detail of permanent differences	**2002**	2001
Goodwill amortization	(209)	(357)
Parent/subsidiary tax treatment	105	22
Nondeductible provisions	(10)	3
Intra-group dividends and share of net income	(115)	(23)
Other permanent differences	(7)	8
Total permanent differences	(236)	(347)

Note 8 — Intangible assets and goodwill

2002

in millions of €	Net values at 12/31/01	Investments	Increases in amort. and provisions	Decreases in provisions	Currency translation differences	Changes in consolidated group	Other changes	Net values at 12/31/02
Goodwill	2 195	—	(594)	—	(128)	77	(13)	1 537
Pre-mining research and other expenses	534	24	(91)	3	(45)	6	79	510
Total	**2 729**	**24**	**(685)**	**3**	**(173)**	**83**	**66**	**2 047**

2001

In millions of €	Net values at 1/1/01	Investments	Increases in amort. and provisions	Decreases in provisions	Currency translation differences	Changes in consolidated group	Other changes	Net values at 12/31/01
Goodwill	2 113	674	(1 026)	16	79	303	36	2 195
Pre-mining research and other expenses	498	31	(130)	2	2	132	(1)	534
Total	**2 610**	**705**	**(1 156)**	**18**	**81**	**435**	**35**	**2 729**

GOODWILL

Gross values

In millions of €	Opening 2001	Acquisitions and disposals	Increase	Currency translation and other	Closing 2001	Additions and withdrawals	Increase	Currency translation and other	**Closing 2002**
Nuclear power									
Framatome ANP	307	297		(40)	564	69		(7)	626
COGEMA	160	77			237	8		(20)	225
Technicatome	16			1	17				17
Connectors									
FCI	2 089			98	2 187			(322)	1 865
STMicroelectronics	228	(45)			183				183
Holding and others									
AREVA	202	656		(19)	839			17	856
Eramet	44			(2)	42			2	44
Other	8			(8)	0				0
Total	**3 054**	**985**		**30**	**4 069**	**77**		**(330)**	**3 816**

Depreciation

In millions of €	Opening 2001	Acquisitions and disposals	Increase	Currency translation and other	Closing 2001	Additions and withdrawals	Increase	Currency translation and other	**Closing 2002**
Nuclear power									
Framatome ANP	147		34	(46)	135		33	36	204
COGEMA	88	(8)	14		94		17	1	112
Technicatome	11		1	(1)	11		1		12
Connectors									
FCI	520		847	26	1 393		320	(228)	1 485
STMicroelectronics	74	(19)	23		78		18		96
Holding and others									
AREVA	91		70		161		203	(1)	363
Eramet	2				2		2	3	7
Other	8			(8)	0				0
Total	**941**	**(27)**	**989**	**(29)**	**1 874**	**—**	**594**	**(189)**	**2 279**

Net Values

In millions of €	Opening 2001	Acquisitions and disposals	Increase	Currency translation and other	Closing 2001	Additions and withdrawals	Increase	Currency translation and other	**Closing 2002**
Nuclear power									
Framatome ANP	160	297	(34)	6	429	69	(33)	(43)	421
COGEMA	72	85	(14)		143	8	(17)	(20)	113
Technicatome	5		(1)	2	6		(1)		5
Connectors									
FCI	1 569		(847)	72	794		(320)	(94)	380
STMicroelectronics	154	(26)	(23)		105		(18)		87
Holding and others									
AREVA	111	656	(70)	(19)	678		(203)	18	493
Eramet	42			(2)	40		(2)	(1)	38
Other	—				—				—
Total	**2 113**	**1 012**	**(989)**	**59**	**2 195**	**77**	**(594)**	**(141)**	**1 537**

In an industry in consolidation, the Connectors division has 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 downturn in the telecommunications and media technologies market, which intensified in the second half of 2001 and continued through the first quarter of 2002, the group decided to reassess the utility value of this business line compared to its acquisition price. As a result, the group wrote off €730M in goodwill for Berg.

In 2002, due to changing conditions in the telecommunications market in which FCI's Communications Data Consumer (CDC) business unit operates, FCI verified the potential loss in value of all tangible and intangible assets for the business unit.

Based on the methods used in fiscal year 2001, FCI estimated the value in use of the CDC business unit's assets and compared this

with the net asset value of the business unit. The choice of value in use to make this comparison reflects FCI's circumstances, as the market value could only be used in the event of a decision to sell.

This comparison prompted FCI to write down €275M (impact on income) in goodwill from the acquisition of Berg.

The value in use estimate for the CDC business unit was made by discounting the unit's future cash flows before tax, excluding the effect of financing on the unit and including the effects of the changing economic environment and the business strategy developed for the unit. An average discount rate of 12.85% was used. Future cash flows were established based on a mid-range plan developed with the support of an independent business consulting firm. The plan assumes flat volumes for the 2003 to 2006 period, annual growth of around 6.4% during the 2007 to 2012 period, then growth of 1.5% per year. Deployment of this business strategy, accompanied by optimization of production resources, should enable the CDC business unit of FCI to return to margin rates comparable to those of the competition in 2006. It will be important to adhere to the critical path of the business plan, which will be the subject of close and regular supervision throughout its deployment.

The net value of the business unit's goodwill after this write-down is €352M.

The group also wrote down €163M in goodwill in 2002 (€59M in 2001) resulting from the creation of AREVA (see note 2.1) due to asset disposals and depreciation during those accounting periods.

- Pre-mining studies and other expenses

Other intangible assets are primarily capitalized pre-mining studies expenses in the following fields:

CAPITALIZED PRE-MINING STUDIES EXPENSES

In millions of €	Net values at 12/31/01	Increase	Decrease	Net depreciation	Currency translation difference	Other changes	Net values at 12/31/02
Uranium	314	5	—	(13)	(45)		260
Gold	4	7	—	(6)	—	8	13
Total	**318**	**12**	**—**	**(19)**	**(45)**	**8**	**273**

EXPLORATION EXPENSES (included in pre-mining studies expenses in the income statement)

In millions of €	**2002**	2001
Uranium	10	10
Gold	5	5
Total	**15**	**15**

RESERVES

	12/31/01	increase	production	12/31/02
Uranium (metric tons)	189 100	11 207	7 457	192 850
Gold (kilograms)	32 850	8 171	5 851	35 170

Note 9 — Decommissioning assets

As provided under CRC accounting rule n° 2000-06 on liabilities (see notes 1.1, 1.6 and 21), the group records the deferred decommissioning cost of its nuclear facilities (dismantling and decontamination), including waste retrieval and packaging expenses and including the portion of the cost ultimately charged to certain customers when applicable, under ''Tangible assets''. Conversely, as soon as a facility starts operating, a provision is established to cover its total estimated end-of-cycle cost, including the cost portion ultimately charged to customers (see note 21).

Decommissioning assets represented €9.223B as of 12/31/2002. No asset has been recorded for sites being currently undergoing dismantling.

The Group's share of responsibility in future dismantling expenses is €1.194B. The share that will be charged to certain customers represents €8.029B.

	Group share	Third party share	Total
Decommissioning	1 194	5 298	6 492
Waste retrieval and packaging	0	2 731	2 731
Total	**1 194**	**8 029**	**9 223**

Note 10 — Tangible assets

31/12/2002

	Gross value	Depreciation	Net book value
Land	203	(79)	125
Buildings	1 852	(1 111)	740
Plant, equipment and tooling	16 939	(13 450)	3 489
Other	691	(514)	177
Tangible assets in progress	236	(120)	116
Total	**19 921**	**(15 274)**	**4 647**

31/12/2001

	Gross value	Depreciation	Net book value
Land	238	(80)	158
Buildings	2 063	(1 199)	863
Plant, equipment and tooling	16 411	(13 403)	3 009
Other	836	(585)	251
Tangible assets in progress	1 169	(129)	1 040
Total	**20 718**	**(15 397)**	**5 321**

2002

In millions of €	Net book value at 1/1/02	Investments	Disposals	Net depreciation, amortization and provisions	Currency translation difference	Changes in consolidated group	Other changes	Net book value at 12/31/02
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**

2001

In millions of €	Net book value at 1/1/01	Investments	Disposals	Net depreciation, amortization and provisions	Currency translation difference	Changes in consolidated group	Other changes	Net book value at 12/31/01
Land	155		(74)	63		11	2	158
Building	826	30	(41)	(52)	4	50	45	863
Plant, equipment and tooling	3 205	181	(244)	(387)	9	87	159	3 009
Other	232	32	(53)	(22)	(2)	23	42	251
Tangible assets in progress	993	320	(42)		5	9	(245)	1 040
Total	**5 411**	**563**	**(454)**	**(398)**	**16**	**180**	**3**	**5 321**

In 2002, the net value of capitalized financial lease contracts was €13M (€19M in 2001, €41M in 2000).

Note 11 — Equity in net assets of affiliates

The group's share in the net equity of affiliates was €1.652B as of December 31, 2002 (€1.674B in 2001, €1.883B in 2000).

In millions of €	% interest	Share of net income	Share of net equity **2002**	% interest	Share of net income	Share of net equity 2001
Nuclear power						
AMC	40%	5	19	40%	5	19
Cilas	37%	(2)	4	37%	(2)	6
Comilog[1]	7.7%	1	27	7.7%	(1)	26
Cominak Niger	34%	1	8	34%	(1)	8
Groupe Assystem	38.6%	5	34	38.6%	5	31
Katco.	45%	(3)	(6)	45%	(4)	(4)
LNS	29.7%	0	0	29.7%	0	0
Sechaud et Metz	34%	0	2	34%	0	2
Signum	32.3%	0	0	32.3%	0	0
Socodei	49%	4	1	49%	0	(3)
Sofinel	29.7%	1	0	29.7%	0	0
Sofradir	20%	0	3	20%	0	3
Timet Savoie	19.8%	1	10	19.8%	0	9
Corys Tess	28.4%	0	1	28.3%	0	1
Connectors						
STMicroelectronics holding[2]	17.3%	75	1,230	17.3%	95	1 249
Other operations and holding companies						
Eramet	26.3%	(1)	264	26.2%	5	265
Eramet Manganèse Alliages	30.5%	(6)	56	30.5%	0	63
Total		**82**	**1 652**		**102**	**1 674**

(1) Comilog is an Eramet group company. The participating interests reported above relate to Comilog shares held directly by the AREVA group.

(2) The group's share represented 11.03% as of December 31, 2002 (11.05% as of December 31, 2001).

Dividends received from equity affiliates in 2002 represented €27.5M (€8.7M in 2001, €13M in 2000).

Note 12 — Other long-term notes and investments

In millions of €	**12/31/02** Gross	**12/31/02** Provisions	**12/31/02** Net	12/31/01 Gross	12/31/01 Provisions	12/31/01 Net	12/31/00 Net
Equity securities	137	(103)	34	129	(79)	50	98
Long-term portfolio for facility decommissioning	2 184	(57)	2 127	2 003		2 003	2 681
Other long-term financial portfolio assets				724		724	54
Receivables from equity affiliates	114	(43)	71	134	(41)	93	114
Loans, deposits and miscellaneous receivables	410	(62)	348	397	(61)	336	285
Total	**2 845**	**(265)**	**2 580**	**3 387**	**(181)**	**3 206**	**3 232**

- Equity securities

The largest amounts correspond to shares held by COGEMA in companies owning mineral deposits.

• Long-term portfolio dedicated to COGEMA and Eurodif facility decommissioning

In €M	**2002**	2001
Securities portfolio		
Gross book value	2 184	2 003
Net book value	2 127	2 003
Utility value	2 694	n/a
Market value	1 809	2 541
Deferred taxes*	80	(141)
After tax market value	1 889	2 400
Cash and cash equivalents	0,0	106
Total	1 889	2 506

* credit balance in 2002

Portfolio composition

In €M	**2002**	2001
In utility value		
Listed shares	1 547	n/a
Unlisted shares	207	n/a
Mutual fund shares	940	n/a
Market value at 12/31		
Listed shares	954	1 479
Unlisted shares	164	80
Mutual fund shares	691	981
By location#		
France	1 118	1 560
Europe (excluding France)	691	981

#: based on market value

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 21).

To meet this obligation, the group has set up a cash reserve covering future facility decommissioning and waste disposal expenses and has established a special portfolio to cover all expenses connected with decommissioning obligations. This portfolio does not currently cover cleanup and decommissioning expenses for Framatome ANP sites (€295M as of 12/31/2002).

The amount in this portfolio was determined with asset management optimization models that take into account (a) the timing of future decommissioning cash spending, which will largely occur from 2015 through 2040 and (b) the portfolio's average long-term return. The portfolio is currently comprised of equities, an asset class with generally higher long-term returns than other investment assets. 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 perspective to ensure stability in investment values. 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 perspective and to ensure that the overall approach is consistent with the group's objective. AREVA does not consider it necessary to disclose the portfolio's investment lines, as changes may be made at any time to optimize portfolio performance. Total portfolio performance is benchmarked to the MSCI Europe index.

The portfolio's market value net of deferred taxes, based on year-end closing prices, was €1.889B as of December 31, 2002, compared with €2.506B as of December 31, 2001 (€2.4B excluding cash). The portfolio's value as of December 31, 2002 does not cover the group's share of estimated future decommissioning expenses. However, based on an expected portfolio return of 4%, AREVA anticipates that the portfolio's value will be sufficient to satisfy the group's decommissioning obligations when facility decommissioning and waste packaging operations begin.

Securities held in this long-term portfolio are recorded at cost and priced regularly. As explained in note 1.8 on accounting methods, a provision is established to record changes in the securities' utility value, which is determined using either a multi-criteria approach for securities held directly or a liquidation value approach for mutual funds. The asset impairment provision on the portfolio's value as of December 31, 2002 was €57.4M.

• Other long-term investment in securities

In 2001, this account included publicly traded shares held by AREVA in a medium-term liquidity investment perspective. These investments, consisting of 12.4 million shares of TotalFinaElf, 2.6 million shares of Alcatel and 1.7 million shares of Société Générale, were not made to cover any specific group commitment. Accordingly and in the absence of any group intention of holding these investments for the long-term (some TotalFinaElf shares were sold in 2002), the securities have been reclassified as marketable securities (see note 16).

- Accounts receivable related to equity interests, loans, deposits and other accounts receivable

In millions of €	Gross amounts	Maturity < 1 yr	Maturity 1-5 yrs
Accounts receivables related to equity interests	114	71	43
Loans, deposits and other accounts receivable	410	29	381
Total	**524**	**100**	**424**

Loans, deposits and other accounts receivable primarily include a €150M deposit (including interest) made in connection with a perpetual subordinated bond issue on November 15, 1991 (see note 18).

In 2002, 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. The countervailing duties, levied for alleged dumping and illegal subsidies, required that Eurodif deposit €37.7M with the U.S. Customs administration at the end of 2002. This deposit can be recovered after the case is adjudicated. Eurodif appealed the DOC decision with the U.S. Court of International Trade in April 2002.

Note 13 — Inventories and goods in process

In millions of €	**2002**	2001	2000
Raw materials and other supplies	475	535	421
Goods in process	404	471	619
Services in process	638	616	805
Intermediate and finished products	691	775	860
Goods	33	56	59
Total gross value	2 242	2 453	2 763
Provisions for write-down	(282)	(334)	(294)
Net book value	**1 960**	**2 119**	**2 470**

Note 14 — Accounts receivable and related accounts

In millions of €	**2002**	2001	2000
Gross values	2 593	2 567	2 594
Write-down	(41)	(58)	(43)
Net book value	**2 552**	**2 509**	**2 551**

Note 15 — Other accounts receivable

In millions of €	**2002**	2001	2000
Current accounts of non-consolidated companies	18	10	(11)
Government	379	526	356
Other accounts receivable	496	283	309
Deferred taxes — debits	231	210	212
Other	276	257	73
Total	**1 400**	**1 286**	**939**

Note 16 — Cash and marketable securities

In millions of €	**2002**	2001	2000
Marketable securities — Equities (at cost)	1 299	821	
Marketable securities — Equities (provisions)	(39)	(2)	
Other marketable securities (at cost)	1 816	625	2 424
Other marketable securities (provisions)	0	0	(2)
Cash and cash equivalents	226	269	528
Net book value as of December 31	**3 302**	**1 715**	**2 949**

- Cash and marketable securities — detail

2002

In millions of €	Number of shares	Gross book value	Net book value	Market value
Marketable securities				
Publicly traded shares[(1)]				
— TotalFinaElf	5 403 567	310	310	735
— Alcatel	2 597 435	27	13	11
— Société Générale	1 690 000	105	92	94
Short term investments (> 3 months)				
Other		857	845	859
Total marketable securities		1 299	1 260	1 699
Cash and cash equivalents				
— Short-term investments (< 3 months)		1 816	1 816	1 817
— Cash		226	226	226
Total cash		2 042	2 042	2 042
Net book value as of December 31		**3 341**	**3 302**	**3 741**

(1) shares of publicly traded companies recorded under ''Other long-term investment in securities'' as of December 31, 2001 (see note 12)

2001

In millions of €	Number of shares	Gross book value	Net book value	Market value
Marketable securities				
Short term investments (> 3 months)				
Other		821	819	850
Total marketable securities		821	819	850
Cash and cash equivalents				
— Short-term investments (< 3 months)		625	625	630
— Cash		269	269	269
Total cash and cash equivalents		894	894	899
Net book value as of December 31		**1 715**	**1 713**	**1 749**

At December 31, 2002, short-term investments with maturities of less than three months when the investment was made consisted mostly of negotiable instruments and short-term cash mutual funds. Built-in gains are estimated at €0.5M as of December 31, 2002, compared with €5M as of December 31, 2001.

Investments include:

- Publicly traded shares owned by AREVA, which are not earmarked to cover any particular commitment (these shares were recorded as ''Other long-term investment in securities'' at December 31, 2001). The built-in gain on these shares represented €400M as of December 31, 2002, compared with €1,423M as of December 31, 2001.
- Bonds and mid-term marketable securities, short-term rate funds, bond rate funds and balanced equity/bond funds. A portion of these investments serve as security for expenses to be incurred under certain sales contracts for which the group has received customer down-payments. There was no built-in gain on these investments as a whole as of December 31, 2002, compared with a built-in gain of €29M as of December 31, 2001.

The following table presents the group's pro forma cash and marketable securities as of December 31, 2001 under the definition used at December 31, 2002, i.e., including securities that were recorded under ''Other long-term investment in securities''.

2001

In millions of €	Number of shares	Gross book value	Net book value	Market value
Marketable securities				
Listed shares				
— TotalFinaElf	12 428 567	595	595	1 994
— Alcatel	2 597 435	27	27	50
— Société Générale	1 690 000	104	104	106
Short term investments (> 3 months)		0		
Other		821	819	850
Total marketable securities		1 547	1 545	3 000
Cash and cash equivalents				
— Short-term investments (< 3 months)		625	625	630
— Cash		269	269	269
Total Cash and cash equivalents		894	894	899
Net value at December 31		**2 441**	**2 439**	**3 899**

The net book value of cash and marketable securities represented €3,302M as of December 31, 2002. Net cash totaled €3,187M after deduction of credit bank balances in the amount of €116M (see note 22), compared with €2,225M as of December 31, 2001 (€1,499M plus €726M corresponding to other long-term investments in securities reclassified to marketable securities).

The net cash and cash equivalents amount presented in the cash flow statement was determined as follows:

In millions of €	**12/31/2002**	12/31/2001
Cash and marketable securities	3 302	1 715
Less: bank credit balances	–116	–216
Less: marketable securities	–1 260	–819
Net cash and cash equivalents presented in the cash flow statement	1 926	680

Note 17 — Shareholders' equity

Share capital

At December 31	**2002**	2001	2002
CEA	78.9%	78.9%	95%
Investment certificates	4%	4%	5%
French Republic	5.2%	5.2%	
Caisse des dépots et consignations	3.6%	3.6%	
Erap	3.2%	3.2%	
TotalFinaElf	1%	1%	
Employee shareowners[(1)]	1.2%	1.6%	
Crédit Agricole Indosuez	0.4%		
EDF	2.5%	2.5%	
Total	**100%**	**100%**	**100%**

(1) Since July 2002, some AREVA shares previously held by Framépargne (0.4%) have been held by Crédit Agricole Indosuez bank to ensure liquidity for the Framépargne employee stock fund.

Currency translation reserves

Currency translation reserves represented €100M as of December 31, 2002 (€271M in 2001, €200M in 2000). This variation reflects changes in the value of the U.S. dollar for the most part.

Reserves eligible for distribution

As of December 31, 2002, AREVA S.A. had recorded €543M in reserves eligible for distribution. These reserves were comprised of consolidation goodwill, a merger premium of €332M and current-year earnings of €216M.

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 is as follows:

- Fiscal year 2002: 35,442,701 shares and investment certificates.
- Fiscal year 2001: 31,423,772 shares and investment certificates.
- Fiscal year 2000: 29,414,308 shares and investment certificates.

Note 18 — Perpetual subordinated debt

Framatome S.A. issued 250 perpetual subordinated securities with a nominal value of $1,000,000 on November 15, 1991 which were subscribed directly by financial institutions. These securities are redeemable only in the event that the company is liquidated, after other creditors have been fully compensated. However, the issuer has reserved the right to redeem all or part of the securities in the event of extraordinary circumstances beyond its control during the first fifteen years.

This perpetual subordinated debt, valued at the exchange rate in effect on the date of issuance ($1 = €0.85059), is recorded on the balance sheet as ''Perpetual subordinated debt''. The securities are recorded at the historical book value, as the group does not incur any foreign exchange risk on the transaction.

The securities coupons, payable in perpetuity on a semi-annual basis, are equivalent to the 6-month Libor rate plus 0.70%.

A $76,085,000 deposit was deducted from proceeds from the issue and paid to an investment firm. It is recorded under ''Other long-term financial assets''. In consideration for this deposit, the investment firm will pay AREVA, as of the sixteenth year following the perpetual subordinated debt date of issue, interest equal to the interest due by AREVA to the holders of the perpetual subordinated debt after fifteen years. This deposit is valued at the rate of exchange in effect on the perpetual subordinated debt issue date and is not reimbursable, except in the event of extraordinary circumstances. The deposit is recorded as an asset at its historical value. Accrued interest on this deposit is recorded as a credit in a financial income account.

Note 19 — Minority interests

As of 12/31/2002, the largest minority interests were as follows:

- STMicroelectronics: €455M
- Framatome ANP: €380M
- Eurodif: €110M

Major changes in minority interests in 2001 were as follows:

– Acquisition by Siemens AG of an equity interest in Framatome ANP on January 30, 2001.

– Acquisition by AREVA on September 3, 2001 of all shares held by third parties (except Siemens AG) in COGEMA, Framatome ANP and FCI (see note 2). The third parties' share of income in these companies for the period January 1, 2001 through September 3, 2001 is included in ''Minority interests in subsidiaries' earning'' (see Income statement).

– Reduction of France Telecom's minority interests in STMicroelectronics (consolidated by AREVA under the equity method) reflecting a partial sale of shares at the end of December 2001.

Note 20 — Pensions and similar benefits

Group companies, in accordance with laws and practices in effect 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 pension supplements may be contractually guaranteed to ensure a minimum level of income to certain employees. These arrangements constitute defined benefit plans.

Each year, independent actuaries determine the group's commitments as of year-end.

In some companies, these obligations are covered in whole or in part by insurance policies or outside 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; an asset is recorded in the event of a surplus, subject to specific conditions.

In 2002, nine AREVA group companies concluded certain retirement agreements with unions and with the Ministry of Labor under the CATS, CASA and CASAIC provisions of the government order of February 9, 2000. These early retirement arrangements allow eligible employees to retire voluntarily without terminating their employment contracts and offer specific advantages in terms of employment or social security tax obligations. The plans will accept new participants for a limited period of time expiring on February 28, 2005 at the latest. The net present value of the nine plans' future obligations was estimated at €153M as of December 31, 2002.

Provisions for early retirement represented €225M as of December 31, 2002, including €92M for CATS/CASA/CASAIC plans and €133M for previous early retirement plans.

Balance sheet reconciliation (in millions of euros)	**12/31/2002**	12/31/2001
Total provisions for pension and similar benefits	**568**	**467**
Retirement assets recorded by group companies	(43)	(54)
Subsidiaries not evaluated	(9)	(10)
Total	**516**	**403**
Retirement benefits	96	86
Other retirement obligations	225	131
Retirement-related benefits	195	186

Other retirement commitments include early retirement plans (including government-sponsored CATS, CASA and CASAIC plans) and supplemental retirement programs.

Retirement-related benefits include health and disability benefits for retirees and service award benefits.

The main actuarial assumptions used in determining the group's obligations are as follows:

- Discount rate: 5.5%, including 1.5% for inflation.
- Return on assets:
  - 5.5% for the euro zone,
  - 7.5% for the dollar zone.
- Mortality tables:
  - Annuity tables for pension obligations,
  - TV 88-90 for one-time payments.
- Annual social security ceiling increase: +0.5% before inflation.
- Retirement age: 62 for exempt personnel, 60 for non-exempt personnel.
- Average attrition is assumed to occur among employees in each group company at a declining rate reflecting age brackets.
- Salary increase rates: based on age and employment status.

Net Book Value of Retirement Obligations

In millions of €	At December 31, 2002 Retirement bonuses	Other retirement obligations	Related benefits	At December 31, 2001 Retirement bonuses	Other retirement obligations	Related benefits
Actuarial debt	179	1 056	239	164	961	199
Retirement assets, at fair market value	(76)	(723)	(14)	(85)	(761)	(13)
Non-accrued actuarial variances	(2)	(35)	(8)	12	(35)	1
Non-accrued cost of past services	(5)	(72)	(22)	(4)	(34)	(2)
Total net obligation	**96**	**225**	**195**	**86**	**131**	**186**

In millions of € Expense recorded in 2002	Retirement bonuses	Other retirement obligations	Retirement-related benefits
Current period cost	10	48	5
Adjustment of prior-period accruals	9	55	13
Anticipated return on assets	(1)	(46)	(1)
Amortization of actuarial gains or losses	—	1	1
Amortization of past service cost	1	4	—
Plan establishment, reduction or termination	(7)	93	1
Total 2002 expense	**12**	**155**	**19**

In millions of € Expense recorded in 2001	Retirement bonuses	Other retirement obligations	Retirement-related benefits
Current period cost	8	41	7
Adjustment of prior-period accruals	9	54	12
Anticipated return on assets	(4)	(46)	(1)
Amortization of actuarial gains or losses			
Amortization of past service cost		3	
Plan establishment, reduction or termination	(2)		(3)
Total 2001 expense	**10**	**51**	**15**

	2002	2001
Variations in provisions		
Restated balance	403	264
Foreign exchange adjustment	1	1
Change in consolidated group	(2)	83
Total expense	186	77
Premiums collected/benefits paid out	(72)	(23)
Net book balance	**516**	**403**

Note 21 — Provisions for risk and liabilities

2002

In millions of €	Opening balance	Increase	Decrease (when risk has materialized)	Decrease (when risk has not materialized)	Reclassifications, changes in consolidated group/foreign exchange	Closing balance
Decommissioning of nuclear facilities	1 759	6 850[(1)]	(189)	(1)	85	8 504
Waste retrieval	1 000	2 766[(1)]	(34)	—	47	3 779
Sub-total: provisions for decommissioning	**2 759**	**9 616**	**(223)**	**(1)**	**132**	**12 283**
Mining site reclamation and mill decommissioning	112	14	(24)	—	(12)	90
Provisions for risk	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
Total provisions	**5 116**	**10 144**	**(725)**	**(66)**	**16**	**14 485**

(1) Includes €8.918B from a change of accounting method effective January 1, 2002

2001

In millions of €	Opening balance	Increase	Decrease	Reclassifications, changes in consolidated group/foreign exchange	Closing balance
Decommissioning of nuclear facilities	1 761	133	(278)	143	1 759
Waste retrieval	895	127	(8)	(14)	1 000
Sub-total: provision for decommissioning	**2 656**	**260**	**(286)**	**129**	**2 759**
Restoration of mining sites and decommissioning of concentration plants	117	16	(22)	1	112
Provisions for risk	536	230	(369)	82	479
Restructuring and layoff plans	107	156	(149)	69	183
Contract performance risk	1 177	442	(100)	(135)	1 384
Other	202	70	(216)	143	199
Total provisions	**4 795**	**1 174**	**(1 142)**	**289**	**5 116**

Provisions for decommissioning

- *Nature of the commitments*

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. This final waste must ultimately be sent to a permanent disposal site.

Group facilities subject to these obligations include facilities in the front end of the fuel cycle, such as Eurodif's enrichment plant in

Pierrelatte, but are predominantly facilities in the back end of the fuel cycle, including the reprocessing plants at Marcoule and La Hague and the uranium/plutonium (MOX) fuel fabrication plants. Framatome ANP sites are also subject to these obligations. Lastly, like any nuclear operator, the group is responsible for facilities that it operates but does not own, such as CEA facilities operated by COGEMA Pierrelatte or certain Marcoule facilities.

In certain instances, essentially in the case of spent fuel reprocessing services, customers have agreed to assume direct responsibility for a portion of the cost from decommissioning operations and final waste disposal. These contractual arrangements have the effect of transferring the financial impact of decommissioning and waste disposal from the group to third parties. In other instances, decommissioning costs were included in the price of the services provided by the group.

As required under CRC accounting rule n° 2000-06 on liabilities, the group has changed accounting methods applicable to provisions accrued to cover the cost of decommissioning its facilities, including facility decontamination and dismantling and waste retrieval and packaging. A provision is now established as soon as a facility starts operating to cover its total estimated decommissioning cost, including all cost ultimately charged to third parties when applicable. Conversely, a decommissioning asset is recorded under ''Fixed assets'' (see note 9). The decommissioning provision represented €12,282M as of December 31, 2002, including €4,254M for which the group is ultimately responsible and €8,029 to be charged to third parties. The provision is in current euros not adjusted for inflation.

The bulk of these expenses will be incurred after 2015 and the spending period may extend beyond 2040.

• *Decommissioning provision determination*

Decommissioning obligations are calculated facility by facility as follows:

The group has adopted the level 2 decommissioning standard of the International Atomic Energy Agency (IAEA) and ensures the passive safety of its facilities.

Expenses are estimated on the basis of current decommissioning costs, not adjusted for inflation, including interim surveillance and ultimate waste disposal expenses.

SGN, an engineering firm that served as prime contractor for the construction of the majority of the group's reprocessing 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.

The cost estimates are adjusted each year for inflation. 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.

In the absence of firm supplier commitments for permanent waste disposal, waste retrieval and packaging cost estimates were based on technical and financial assumptions derived from a study prepared by SGN in 1994. Ultimate waste disposal plans (relating to B and C waste of the French waste classification system) will eventually be determined under programs established by law n° 91-1381, now incorporated in article L.542-1 *et seq.* of the French Code of Environmental Law. However, the group has elected to maintain its current cost estimates for the following reasons:

– The key features of the French national program for B and C waste disposal have not yet been established. The administration must present an evaluation report to Parliament on research done on these waste types, conceivably together with proposed legislation authorizing the development of a final repository for high-level, long-lived waste and outlining disposal conditions.

– Preliminary estimates submitted to waste generators by Andra, the French nuclear waste management agency, have increased but remain tentative and have never been finalized.

– The estimated unit costs of deep disposal vary significantly, depending on various site development scenarios.

– The group's own comparative analyses of international waste disposal rates offered by existing disposal sites for these same types of waste indicate that Andra's estimates are too high.

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. AREVA expects to complete its update of the largest estimates, for the La Hague and Marcoule plants, in 2003. The process, the procedures and the proposed systems will be audited by an independent firm and will take into account lessons learned during the permanent shut-down of the Marcoule plant, which is now being dismantled.

The portion of the decommissioning cost that will be charged to third parties is not definitively settled. EDF's share of decommissioning and waste retrieval/packaging expenses at the COGEMA La Hague plant is currently being negotiated under a framework agreement concluded by the two companies in 2001. The companies have established a schedule leading to a firm conclusion on or before June 30, 2003. The results of this negotiation will be reflected in the financial statements for H1 2003. The negotiation takes into account changes in decommissioning cost estimates and waste retrieval and

packaging cost estimates, as indicated above, for facilities that are now shut down (La Hague UP2-400) as well as facilities in operation (UP2-800 and UP3). Although it is still difficult to judge the final impact of these negotiations, current indications suggest that they should not have a significant impact on AREVA's financial statements or financial situation.

The provisions recorded based on the above principles present a reasonable evaluation of AREVA's decommissioning obligations. This evaluation relies on the best future cost estimates prepared by the group based on current legislation, technology state-of-the-art and lessons learned.

- *Provision for reclamation of environmentally regulated sites*

The group operates certain industrial sites that are environmentally regulated sites under the law. These sites must be reclaimed when operations cease permanently. The group's total obligation in this respect represented €23M as of December 31, 2002.

- *Financing 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 notes and investments'' (see note 12).

Risk

Provisions for risk were as follows:

Provisions, in millions of euros	**12/31/2002**
Litigation	17
Contingencies on contracts	224
Foreign exchange risk	2
Losses on contracts	91
Environmental risk	14
Tax risk	21
Financial guarantees	12
Work in progress	15
Oris	3
Other provisions	37
TOTAL	**436**

Restructuring

The restructuring provision was €183M as of December 31, 2002 (€183M in 2001, €107M in 2000). This includes a provision for employee layoffs (€138M) and provisions for site closures and related costs (€45M).

These provisions, including a layoff plan spending schedule and the personnel involved, are indicated below.

COMPANY In millions of €	Site closure and related costs	Layoff plan	Estimated spending **2003**	**2004**	**2005**	Estimated workforce
COGEMA	27	35	35	—	—	378
ANP	—	41	38	3	—	342
FCI	18	60	60	—	—	1 689
AREVA	—	2	2	—	—	—

Layoff provisions are generally recorded when plans are presented 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 liabilities

Provisions for liabilities relate to expenses to be incurred under contracts concluded before 2001.

The expenses to be incurred fall into two categories:

- Provisions for charges to be incurred in the amount of €962M. These provisions correspond to depreciation on assets allocated to and financed under certain sales contracts when the depreciation period exceeds the duration of the contract.
- Provisions for contract completion in the amount of €410M. These provisions correspond to additional services, such as waste storage or processing, that must be rendered under a contract after margins on the activity have already been recognized under the company's accounting method.

Note 22 — Debt

In millions of €	**2002**	2001	2000
Bonds (French francs)	2	2	2
Loans from financial institutions	2 001	2 097	1 879
Short-term bank facilities	116	216	—
Other debt*	98	129	715
TOTAL	**2 217**	**2 444**	**2 596**

* including leasing debt: €15M

Changes in consolidated group reduced net cash by €49M in 2002 (vs. a decrease in net debt of €373M in 2001).

Debt by maturity, by currency and by type of interest rate:

In million of €	2002
Debt maturing in less than one year	1 092
Debt maturing in one to five years	1 118
Debt maturing in more than five years	7
Total	**2 217**

In million of €	2002
Euro denominated debt	1 334
USD denominated debt	653
Debt denominated in other currencies	230
Total	**2 217**

In million of €	2002
Fixed rate debt	494
Variable rate debt	1 723
Total	**2 217**

Major loans

Unless they have been swapped, variable rate loans are based on Libor or Euribor.

FCI and AREVA	
Variable rate loan 1999/2006 (USD400M)	320
Syndicated line of credit 2002/2006 with floating rate (USD600M)	565
Variable rate bilateral lines of credit 2002/2003 (USD1B)	865
COGEMA	
Variable rate loan 2000/2006 (CAD305M)	305
6% loan in fine 2000/2007 (€38M)	38

Guarantees and covenants

No assets have been pledged to secure any loan or debt, except for assets financed under lease arrangements.

Covenants

Certain loan agreements to finance subsidiaries such as FCI and CRI Canada (a COGEMA subsidiary), include covenants concerning:

- Gearing ratios at the group level, calculated on the basis of group equity or cash flow. These types of ratios did not apply at year-end 2002 as the group maintained a positive cash position.
- Debt service. None of these ratios approaches the thresholds included in the agreements.

Note 23 — Prepayments and Advances

In millions of €	2002	2001	2000
Trade prepayments and advances	2 860	3 043	3 198
Customer prepayments invested in fixed assets	1 206	533	1 047
TOTAL	**4 066**	**3 576**	**4 245**

These accounts record French and foreign customer prepayments specified under sales contracts. The prepayments finance working capital requirements or are invested in fixed assets. They are reimbursed by deduction from invoices on sales of uranium, nuclear fuel, enrichment services or spent fuel reprocessing services. At year-end 2002, the majority of these prepayments were related to sales of spent fuel reprocessing services at the COGEMA-La Hague plant or services associated with these operations. Interest-bearing prepayments and advances accounted for €382M of the total amount of prepayments received from customers.

Only prepayments and advances effectively collected are recorded as a liability.

Trade advances also include the difference between sales of spent fuel reprocessing services at La Hague, recognized proportionally when the cost of services is incurred and the corresponding invoices issued to customers.

This account also includes interest income on advances or prepayments received under certain contracts performed without margin.

The main changes recorded in 2002 include:

- €532M transferred from ''Other liabilities'' (note 24) to ''Trade prepayments and advances''
- €743M transferred from ''Trade prepayments and advances'' to ''Customer prepayments invested in fixed assets''.

Note 24 — Other liabilities

In millions of €	2002	2001	2000
Taxes and social security taxes	1 081	1 194	1 214
Deferred tax: credit balances	146	132	371
Other liabilities	521	1 059	426
TOTAL	**1 748**	**2 385**	**2 011**

The main entry of the year was a €532M account-to-account transfer from ''Other liabilities'' to ''Trade prepayments and advances''.

Note 25 — Cash from operating activities

Changes in working capital requirements

In millions of €	**2002**	2001	2000
Change in inventories and work in process	59	458	271
Changes in trade and other accounts receivable	(7)	34	(110)
Change in trade and other accounts payable	(789)	(306)	(128)
Change in advances received on sales	579	(403)	(594)
Change in advances made on purchases	53	60	195
TOTAL	**(104)**	**(157)**	**(366)**

Note 26 — Related party transactions

The consolidated financial statements include normal business transactions with companies in which the group may have unconsolidated participating interests or with companies consolidated under the equity method or with shareholders controlling more than 5% of the parent company's equity.

2002

In millions of €	CEA	STMicroelectronics
Loans (including short-term loans) to unconsolidated companies	—	—
Guarantees given to unconsolidated companies	—	—
Sales	303	—
Purchases	57	49

2001

In millions of €	CEA	STMicroelectronics
Loans (including short-term loans) to unconsolidated companies	—	—
Guarantees given to unconsolidated companies	—	—
Sales	144	—
Purchases	11	23

Note 27 — Financial instruments

General objectives and counterparty risk management

The group uses derivatives to manage its exposure to currency and interest rate risk, fluctuations of raw material prices and changes in the price of certain publicly traded securities. These instruments are generally used as a hedge in the management of group assets, liabilities or 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 risk and raw material price risk is centralized in the parent 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 exposure directly implement their strategy in concurrence with the parent company.

Foreign exchange risk management

AREVA trades currencies on forward markets and uses derivative products to cover or manage:

- The foreign exchange exposure of subsidiaries engaged in international trade. This exposure is systematically hedged. The risk may be hedged by special insurance contracts acquired on a case-by-case basis, for instance through Coface (a French export insurance group). Other exposure may be identified through an annual or multi-year budget, in which instance the risk covered corresponds to a certain percentage of the estimated budget.
- The balance sheet risk on loans to subsidiaries made in currencies other than their own.
- Foreign currency cash positions, through currency swaps.

Interest rate risk management

The group uses several types of financial instruments, as required by 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. Rate futures are used to manage medium term investments.

Raw material price risk management

The group uses financial instruments, including futures and commodity swaps, to reduce its exposure to commodity price volatility for raw materials used in manufacturing, especially copper, or to hedge its sales as a producer especially for COGEMA's gold mining subsidiaries.

Risk on shares

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, 2002.

	Notional amount of contracts as of December 31, 2002 (by maturity)							
In millions of €	2003	2004	2005	2006	2007	>5 years	Total	Market value (difference)
FOREIGN EXCHANGE INSTRUMENTS								
Currency swaps — borrower								
U.S. dollars for euros	246	3	—	—	1	—	**250**	28
Canadian dollars for euros	359	—	—	—	38	—	**397**	55
Pounds sterling for euros	12	—	—	—	—	—	**12**	—
Yens for euros	20	—	—	—	—	—	**20**	—
Swiss francs for euros	1	—	—	—	—	—	**1**	—
Swedish kroner for euros	3	—	—	—	—	—	**3**	—
Australian dollars for euros	—	—	—	—	—	—	**—**	—
Hong Kong dollars for euros	—	—	—	—	—	—	**—**	—
U.S. dollars for Canadian dollars	5	19	—	—	—	—	**24**	—
U.S. dollars for Australian dollars	6	—	—	—	—	—	**6**	1
Currency swaps — lender								
U.S. dollars for euros	42	—	—	—	—	—	**42**	–2
Canadian dollars for euros	165	—	—	—	—	—	**165**	–13
Pounds sterling for euros	3	—	—	—	—	—	**3**	—
Yens for euros	1	—	—	—	—	—	**1**	—
Australian dollars for euros	—	—	—	—	—	—	**—**	—
Hong Kong dollars for euros	—	—	—	—	—	—	**—**	—
Currency futures — buyer								
U.S. dollars for euros	114	1	1	1	—	—	**117**	–5
U.S. dollars for Canadian dollars	—	—	—	—	—	—	**—**	—
Canadian dollars for euros	10	—	—	—	—	—	**10**	–2
Euros for U.S. dollars	3	—	—	—	—	—	**3**	—
Pounds sterling for euros	2	—	—	—	—	—	**2**	—
Yens for euros	15	1	—	—	—	—	**15**	–1
Yens for U.S. dollars	1	—	—	—	—	—	**1**	—
Australian dollars for euros	—	—	—	—	—	—	**—**	—
Yuans for euros	1	—	—	—	—	—	**1**	—
Currency futures — buyer								
U.S. dollars	233	59	25	—	—	—	**317**	31
U.S. dollars for Canadian dollars	81	10	—	—	—	—	**91**	—
U.S. dollars for Australian dollars	—	—	—	—	—	—	**—**	—
Canadian dollars for euros	16	—	—	—	—	—	**16**	3
Canadian dollars for U.S. dollars	2	—	—	—	—	—	**2**	—
Pounds sterling for euros	1	—	—	—	—	—	**1**	—
Yens for euros	6	—	—	—	—	—	**6**	1
Yens for U.S. dollars	5	4	—	—	—	—	**9**	—
Australian dollars for euros	—	—	—	—	—	—	**—**	—
Australian dollars for U.S. dollars	13	4	—	—	—	—	**16**	—
Swedish kroner for euros	1	—	—	—	—	—	**1**	—
Currency options								
Call — buyer								
U.S. dollars for euros	5	—	—	—	—	—	**5**	—
Put — buyer								
U.S. dollars for euros	5	—	—	—	—	—	**5**	—
Collars								
U.S. dollars for euros	57	—	—	—	—	—	**57**	9

Notional amounts in foreign currency have been converted into euro based on year-end closing exchange rates, except for currency swaps.

		Notional amounts of contracts as of December 31, 2002 (by maturity)							
In millions of €	*Fixed rate*	2003	2004	2005	2006	2007	>5 yrs	Total	Market value (diff.)
INTEREST RATE INSTRUMENTS									
Interest rate swaps- fixed payer									
Euro [a]		—	—	—	—	—	—	**—**	—
U.S. dollar	*2.98-6.23 %*	286	95	143	—	—	—	**524**	–16
Canadian dollar	*3.45-4 %*	—	117	—	—	—	—	**117**	–4
Interest rate swaps- fixed receiver									
Euro [a]	*6 %*	—	—	—	—	38	—	**38**	—
U.S. dollar		—	—	—	—	—	—	**—**	—
Canadian dollar		—	—	—	—	—	—	**—**	—
Interest rate swaps- variable/ variable									
Euro		219	20	—	—	—	—	**239**	—
Collars [b]									
Euro		—	—	—	—	—	—	**—**	—
U.S. dollar		—	—	—	—	—	—	**—**	—

[a] variable-rate payer swap in CAD

[b] no net option sales

	Notional amounts of the contracts as of December 31, 2002 (by maturity date)						
In millions of €	2003	2004	2005	2006	2007	> 5 years	Total
COMMODITIES AND EQUITIES							
COMMODITIES							
Gold							
Forward transactions — Buyer	—	—	—	—	—	—	**—**
Forward transactions — Seller	50	21	—	—	—	—	**71**
Copper							
Swap- lender	4	—	—	—	—	—	**4**
STOCK DERIVATIVES							
Puts and calls	—	—	—	—	—	—	**—**
Equity swaps	—	—	—	—	—	—	**—**

Note 28 — Commitments made 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.

In million of €		31/12/2002
I COMMITMENTS MADE	(6+10+16)	**912**
1 – Guarantees of endorsements of notes and other instruments		0
2 – Endorsements of notes and other instruments		1
3 – Corporate guarantees		639
4 – Letters of comfort/letters of intent		37
5 – Other guarantees		0
6 – Total corporate guarantees provided to third parties	(1+2+3+4+5)	**677**
7 – Collateral		0
8 – Mortgages		0
9 – Other asset-based guarantees given		0
10 – Total asset-based guarantees provided to third parties	(7+8+9)	**0**
11 – ''Return to better fortune'' clauses		0
12 – Representations and warranties		35
13 – Subsidies subject to contingent repayment		3
14 – Commitments made on trade receivable financing		0
15 – Other commitments made		196
16 – Total other commitments made	(11+12+13+14+15)	**234**
II DEBT SECURED WITH TANGIBLE ASSETS	(18+19)	**0**
18 – Secured debt to financial institutions		0
19 – Other secured debt		0
III COMMITMENTS RECEIVED	(21 to 26)	**231**
21 – Personal/corporate guaranties		20
22 – Asset-based guarantees		2
23 – Guarantees payable on first demand		32
24 – Representations and warranties		2
25 – ''Return to better fortune'' clauses		1
26 – Other commitments received		175
IV RECIPROCAL COMMITMENTS	(28 to 32)	**198**
28 – Unused portion of credit lines		182
29 – Fixed assets on order (major capital investments)		0
30 – Documentary credit		0
31 – Securities piggyback arrangements		0
32 – Other reciprocal commitments		16

Main transactions

Commitments made:

– Corporate guarantees	**639**
Performance guarantees given by AREVA SA on the ''Blue'' contract	119
Guarantees given to customers by Framatome ANP GmbH	46
Guarantees given to banks in connection with Framatome ANP GmbH operations	195
Guarantees given to customers by Framatome ANP, Inc.	86
Guarantees given to banks in connection with Framatome ANP, Inc. operations	28
Guarantee given by AREVA SA in connection with a perpetual subordinated bond issue (letters of indemnity)	54
Corporate guarantees given by Technicatome	19
Guarantee of value given by AREVA SA to Framépargne	17
Guarantee of performance given by AREVA SA on ''MF RATP 2000'' contract	10
Other corporate guarantees given	65
– Other commitments made	**196**
Back-to-back guarantees on bank guarantees provided by Framatome ANP GmbH	80
Back-to-back guarantees on bank guarantees provided by Framatome ANP SAS	21
Back-to-back guarantees on bank guarantees provided by ANF	22
Forward currency sales commitments made by Framatome ANP SAS	30
Back-to back guarantee given by AREVA SA for the repayment of customer advances	4
Other commitments made	39
Commitments received:	
– Other commitments received	**175**
Guarantees on amounts withheld for warranty from FCI SA sales proceeds	135
Guarantees on amounts withheld for warranty from Framatome ANP SAS sales proceeds	15
Guarantees on amounts withheld for warranty from FCI Hong Kong sales proceeds	5
Commitments received on trade receivable financing	6
Currency swap options purchased by Framatome ANP SAS	4
Forward currency purchases by Framatome ANP SAS	4
Other commitments received	6

Reciprocal commitments include mainly:	
– Unused portion of credit lines	**182**
Bank guarantees and credit lines available to FCI	182

The Framépargne employee stock fund included in the AREVA group savings plan owns 418,721 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 guarantee of liquidity. An independent financial institution gave the guarantee, which expires on July 10, 2003. Subsequently, to allow this commitment to come into effect, the company gave a guarantee of value for the same period. At December 31, 2002, this guarantee related to 141,854 shares sold by Framépargne. A €10.7M provision was recorded for 2002. The company estimates that the commitment for the balance of the guarantee represents €16.7M.

Maturities by category

MATURITIES BY CATEGORY In millions of euros		Total	Under one year	1 to 5 years	Over 5 years
I COMMITMENTS MADE	(6+10+16)	**912**	**303**	**137**	**472**
1 – Guarantees of endorsements of notes and other instruments		0	0	0	0
2 – Endorsements of notes and other instruments		1	1	0	0
3 – Corporate guarantees		639	104	91	444
4 – Letters of comfort/letters of intent		37	25	7	5
5 – Other guarantees		0			0
6 – Total corporate guarantees given	(1+2+3+4+5)	**677**	**130**	**98**	**449**
7 – Collateral		0	0	0	0
8 – Mortgages		0	0	0	0
9 – Other asset-based guarantees given		0	0	0	0
10 – Total asset-based guarantees given	(7+8+9)	**0**	**0**	**0**	**0**
11 – ''Return to better fortune'' clauses		0	0	0	0
12 – Representation and warranties		35	7	13	15
13 – Subsidies subject to contingent repayment		3	0	1	2
14 – Commitments made on trade receivable financing		0	0	0	0
15 – Other commitments made		196	166	25	5
16 – Total other commitments made	(11+12+13+14+15)	**234**	**173**	**39**	**22**
II DEBT SECURED WITH TANGIBLE ASSETS	(18+19)	**0**	**0**	**0**	**0**
18 – Secured debt to financial institutions		0	0	0	0
19 – Other secured debt		0	0	0	0
III COMMITMENTS RECEIVED	(21 to 26)	**231**	**218**	**13**	**0**
21 – Personal/corporate guaranties		20	20	0	0
22 – Asset-based guarantees		2	2	0	0
23 – Guarantees payable on first demand		32	32	0	0
24 – Representations and warranties		2	2	0	0
25 – ''Return to better fortune'' clauses		1	0	1	0
26 – Other commitments received		175	163	12	0
IV RECIPROCAL COMMITMENTS	(28 to 32)	**198**	**187**	**4**	**7**
28 – Unused portion of credit lines		182	182	0	0
29 – Fixed assets on order (major capital investments)		0	0	0	0
30 – Documentary credit		0	0	0	0
31 – Securities piggyback arrangements		0	0	0	0
32 – Other reciprocal commitments		16	5	4	7

Note 29 — Disputes and contingent liabilities

USEC

As indicated in note 12, in 2002, 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 or Great Britain. This action followed complaints submitted in December 2000 by the United States Enrichment Corporation (USEC) against Eurodif and Urenco. To guarantee payment of these countervailing duties for alleged dumping and illegal subsidies, Eurodif deposited €37.7M with the U.S. Customs administration at the end of 2002. This deposit can be recovered after the case is adjudicated. Eurodif appealed the decision with the U.S. Court of International Trade in April 2002.

McClean

On September 23, 2002, the Federal Court of Canada, ruling on a claim submitted by the Inter-Church Uranium Committee Educational Cooperative (ICUCEC) against the nuclear safety authority for violating the permitting process, cancelled 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 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.

Tax disputes

A group company has been notified of a tax adjustment on 1999 dividend distributions. The case is now being discussed with the tax administration.

Note 30 — Event subsequent to year-end

In 2002, the CPC2 framework agreement concluded with Belgonucléaire in 1995 was renegotiated. At the time, this agreement reflected the parties' intent to cooperate in the fabrication and marketing of MOX fuel elements made in Belgonucléaire's Belgian facility. COGEMA had requested on many occasions that the agreement be amended. Rather than turning to arbitration, the parties reached a mutually acceptable agreement and a contract rider was executed on February 4, 2003.

Note 31 — The consolidated group

FC : full consolidation
PC : proportional consolidation
EM : equity method

			2001		**2002**	
Company name, Legal form, Corporate office	Country	Business reg. no.	Method	% Interest	Method	% Interest
Framatome ANP						
Intercontrole SA — 94583 Rungis	France	305 254 526	FC	66.00	FC	66.00
IC-MAT SARL — 91090 Lisses	France	399 090 927	FC	66.00	Merger	
Somanu SA — 92400 Courbevoie	France	328 946 231	FC	56.10	FC	58.08
Framatome ANP SAS — 92400 Courbevoie	France	428 764 500	FC	66.00	FC	66.00
ANF Gmbh Advanced Nuclear Fuels, 49 811 Lingen	Germany		FC	66.00	FC	66.00
FUSA (Framatome USA Inc)	United States		FC	66.00	FC	66.00
Framex South Africa — 8000 Cape Town	South Africa		FC	65.92	FC	65.92
Nuclear Power International SNC — 92800 Courbevoie	France	950 565 978	FC	66.00	FC	66.00
NNS SNC — 69006 Lyon	France	333 824 530	FC	39.60	FC	39.60
CERCA SA — 92400 Courbevoie	France	572 205 433	FC	66.00	FC	66.00
ANP GMBH, 91058 Erlangen	Germany		FC	66.00	FC	66.00
Atea Industries SA	France	434 004 354	FC	66.00	Sold	
Incore Services SA — 44472 Carquefou	France	872 802 848	FC	66.00	FC	66.00
LNS	South Africa				EM	29.70
SGT, LTD.	United States				PC	33.00
SFCNUM	South Africa				EM	32.34
SOFINEL	France	312 664 824			EM	29.70
Rockridge Technologie Inc. — 94510 Benicia CA	United States		FC	66.00	Merger	
Jeumont SA — 92400 Courbevoie	France	341 805 836	FC	66.00	FC	66.00
Visionic SA — 45600 Sully-sur-Loire	France	326 382 900	FC	66.00	FC	66.00
Sarelem SA — 92400 Courbevoie	France	319 606 091	FC	66.00	FC	66.00
Cte-Ndt SA — 94583 Rungis	France	308 548 742	FC	66.00	FC	66.00
NDT Gmbh — 91058 Erlangen	Germany		FC	66.00	FC	66.00
Timet Savoie SA — 95023 Cergy Pontoise	France	408 579 084	EM	19.80	EM	19.80
Fragema GIE, 69006 Lyon	France	338 344 658	FC	66.00	FC	66.00
CEZUS SA — 92400 Courbevoie	France	071 500 763	FC	66.00	FC	66.00
CFC SNC — 92400 Courbevoie	France	321 617 508	FC	66.00	Merger FBFC	

			2001		**2002**	
Company name, Legal form, Corporate office	Country	Business reg. no.	Method	% Interest	Method	% Interest
FBFC SNC — 92400 Courbevoie	France	300 521 754	FC	66.00	FC	66.00
FBFC International SA — 1000 Bruxelles	Belgium		FC	66.00	FC	66.00
Framatome ANP Holding Inc. — 24506 Lynchburg VA	United States		FC	66.00	FC	66.00
Framatome Technologies Group Inc.	United States		FC	66.00	Merger	
Framatome Technologies Inc.	United States		FC	66.00	Merger	
Framatome ANP Holding Inc.	United States				FC	66.00
Framatome ANP De&S Hanford, Inc.	United States				FC	66.00
Framatome ANP DE&S DE&S, Nothwest, Inc.	United States				FC	66.00
Northrop, Devine & Tarebell Inc.	United States				FC	66.00
Framatome ANP DE&SR, LLC	United States				FC	66.00
DE-SE Framatome ANP De&S Hanford, Inc.	Canada				FC	66.00
Framatome ANP DE&SR, Inc.	Canada				FC	66.00
Framatome ANP&DE&S	Czech Republic				FC	66.00
Framatome ANP Blakey Staffing Solution	Canada				FC	66.00
Washington Framatome ANP DE&S Decontamination & Decommissioning LLC	United States				FC	66.00
Framatome ANP DE&S Inc Korea Branch	South Korea				FC	66.00
Framatome ANP DE&S Inc Argentina Branch	Argentina				FC	66.00
Framatome ANP DE&S Srl	Peru				FC	66.00
Framatome ANP DE&S Srltda	Peru				FC	66.00
COGEMA	**France**	**305 207 169**	**FC**	**100.00**	**FC**	**100.00**
Katco.	Kazakhstan		EM	45.00	EM	45.00
CRI CAN	Canada		FC	100.00	FC	100.00
MUL	Canada		FC	100.00	FC	100.00
UEM, Saskatoon Saskatchewan S7K3X5	Canada		FC	100.00	Consolidated with CRI Canada	
COGEMA Inc.	United States		FC	100.00	FC	100.00
CRI USA	United States		FC	100.00	FC	100.00
PMC USA	United States		FC	100.00	FC	100.00
Eurodif SA, 78 140 Velizy Villacoublay	France	723 001 889	FC	59.65	FC	59.65
Eurodif Production, 26 700 Pierrelatte	France	307 146 472	FC	59.65	FC	59.65
Cie française de Mokta (CFM) 78 140 Velizy Villacoublay	France	552 112 716	FC	100.00	FC	100.00
COMILOG	France	592 017 750	EM	7.65	EM	7.65
ERAMET MANG ALLIAGES	France	423 464 577	EM	30.50	EM	30.50
SOCATRI	France	302 639 927	FC	59.65	FC	59.65
SOFIDIF	France	303 587 216	FC	60.00	FC	60.00
Tasys	France	408 773 323	FC	100.00	FC	100.00
Cie Nucléaire de services (CNS)	France	401 649 363	FC	51.00	FC	51.00
SICN	France	325 720 209	FC	100.00	FC	100.00
GEMMA	France	332 201 664	—	—	FC	100.00
Séchaud et Metz, 92 260 Fontenay Aux Roses	France	652 030 677	EM	34.00	EM	34.00
Euriware PGI (Axisse)	France	380 416 222	FC	51.00	FC	100.00
SGN, 78 180 Montigny le Bretonneux	France	612 016 956	FC	100.00	FC	100.00
Eurodoc	France	349 617 084	FC	100.00	FC	100.00
Euriware SA	France	320 585 110	FC	100.00	FC	100.00
AT-Nutech	France	379 385 982	FC	100.00	FC	100.00
Sogéfibre, 78 180 Montigny Le Bretonneux	France	351 543 004	FC	100.00	FC	100.00
Valfibre, 50 700 Valognes	France	950 619 890	FC	99.90	FC	99.90
Krebs	France	381 040 294	FC	100.00	—	—

			2001		2002	
Company name, Legal form, Corporate office	Country	Business reg. no.	Method	% Interest	Method	% Interest
SCI le Bois Mouton	France	316 111 327	FC	99.80		
SCI de l'Euze	France	403 082 977	FC	100.00		
SCI Mares aux Saules	France	384 579 645	FC	99.95	—	—
SCI Place Ovale	France	384 639 399	FC	100.00	—	—
Le Bourneix (SMB), 78 140 Velizy Villacoublay	France	323 097 899	FC	100.00	FC	100.00
COGEMA Australia, Sydney, NSW 2000	Australia		FC	100.00	FC	100.00
MINERAUS	Australia		FC	100.00	FC	100.00
Sytech, 78 190 Trappes	France	383 323 805	FC	59.99	FC	59.99
Eurisys Corporation (COGEMA Services)	United States		FC	100.00	FC	100.00
COGEMA Engineering	United States		FC	100.00	FC	100.00
NHC, 20 814 Bestheda Maryland	United States	—	FC	100.00	FC	100.00
Socodei, 95 613 Eragny sur Oise	France	380 303 107	EM	49.00	EM	49.00
Mécagest	France	350 357 596	FC	100.00	FC	100.00
Mécachimie	France	304 864 036	FC	100.00	FC	100.00
Mainco.	France	350 130 167	FC	100.00	FC	100.00
GIE COMMOX	France	331 102 624			FC	100.00
Lemaréchal	France	323 266 460	FC	100.00	FC	100.00
Canberra CO (APTEC Instruments Ltd)	Canada		FC	100.00	FC	100.00
Canberra Dover Inc.	United States		FC	100.00	FC	100.00
Canberra Eurisys SA (Mesures)	France	384 449 773	FC	100.00	FC	100.00
Groupe Assystem	France	323 158 709	EM	38.55	EM	38.55
Maintenance Eurisys Mesures (M.E.M) Canberra Maintenances	France	322 522 681	FC	99.98	FC	99.98
Groupe Euriware	France	378 566 343	FC	100.00	FC	100.00
Euriware Group (services)	France	318 132 040	FC	100.00	FC	100.00
DGI 2000	France	331 813 378	EM	40.00	FC	100.00
PRAGODATA	Czech Republic		FC	100.00	—	—
ANTEL SERVICES	France				FC	100.00
IFATEC	France	321 833 444	FC	99.90	FC	99.90
COMURHEX, 78 140 Velizy Villacoublay	France	712 007 962	FC	100.00	FC	100.00
COGEMA LOGISTICS (TRANSNUCLEAIRE)	France	602.039.299	FC	100.00	FC	100.00
Transnucléaire US (undergoing consolidation)	United States	—	FC	100.00	FC	100.00
CONSERVATOME	France	662 036 411	FC	100.00	Merger	
COMINAK, Niamey	Niger	—	EM	34.00	EM	34.00
COMINOR	France	422 123 984	FC	100.00	FC	100.00
AMC	Sudan		EM	40.00	EM	40.00
CMA	Côte d'Ivoire		FC	90.00	FC	90.00
SMI	Côte d'Ivoire				FC	51.00
Somaïr, Niamey	Niger	—	FC	61.40	FC	63.40
COGEMA Germany	Germany		FC	100.00	FC	100.00
Urangesellschaft, 60 486 Frankfurt	Germany	—	FC	69.41	FC	100.00
Urangesellschaft USA	United States	—	FC	69.41	FC	100.00
Mines de Jouac (SMJ) 78 140 Velizy Villacoublay	France	303 697 924	FC	100.00	FC	100.00
Cie Française de Mines et Methaux CFMN, 78140 Vélizy Villacoublay	France	300 574 894	FC	100.00	FC	100.00
COGEMA Minerals Corporation (COMIN), 82 604 Mills NY	United States		FC	100.00	FC	100.00
PEA Consulting (formerly Eurisys Consulting)	France	592 029 128	FC	95.74	FC	99.99
Geraco.	France	432 125 664	FC	100.00	FC	100.00
CANBERRA Industries US (undergoing consolidation)	United States		FC	100.00	FC	100.00
COGEMA Instruments Inc.	United States		FC	100.00	FC	100.00
CANBERRA Eurisys Benelux	Belgium		FC	100.00	FC	100.00
CANBERRA Eurisys GMBH	Germany		FC	100.00	FC	100.00

Company name, Legal form, Corporate office	Country	Business reg. no.	2001 Method	2001 % Interest	**2002** Method	**2002** % Interest
Technicatome SA — 91190 Gif-sur-Yvette	**France**	**772 045 879**	**FC**	**83.58**	**FC**	**83.58**
01DB Italia	Italy		PC	37.21	PC	37.21
01DB Brazil	Brazil		PC	30.89	PC	30.89
01DBINC.	United States		PC	37.21	PC	37.21
Aesse	Italy		PC	37.21	PC	37.21
CORYS TESS 38000 Grenoble	France	413 851 924	EM	28.43	EM	28.43
CVI	France	384 787 958	FC	74.43	FC	74.43
ELTA	France	388 919 177	FC	83.58	FC	83.58
HELION	France	435 050 737	FC	82.81	FC	83.07
IQS, 13 590 Mereuil	France	380 094 235	FC	83.58	FC	83.58
Isis Mpp — 31084 Toulouse	France	325 517 621	FC	83.58	FC	83.58
M.V.I Technologies — 69670 Limonest	France	332 087 949	FC	74.43	FC	74.43
Metravib — 69670 Limonest	France	409 869 708	FC	74.41	FC	74.41
01BD S'tell	France	344 830 179	FC	74.43	FC	74.43
PrincPCia RD 83507 La Seine sur Mer	France	320 786 171	PC	20.90	PC	20.90
PrincPCia Marine	France	384 408 993	PC	10.66	PC	10.66
SCS	Italy		PC	37.21	PC	37.21
Technoplus Industries -13170 Les Pennes Mirabeau	France	338 296 478	FC	83.58	FC	83.58
FCI			**FC**	**100.00**	**FC**	**100.00**
Framatome Connectors International Berg Asia Pte Ltd — Singapore 089315	Singapore		FC	100.00	FC	100.00
FCI Connectors Australia Pty Ltd — Smithfield NSW	Australia		FC	100.00	FC	100.00
Framatome Connectors International Austria GmbH — 5230 MattFChoffen	Austria		FC	100.00	FC	100.00
Framatome Connectors International Deutschand GMBH — 65824 Schwalbach	Germany		FC	100.00	FC FC	100.00
Framatome Connectors International Americas Inc. — Manchester, NH 16831	United States		FC	100.00	FC	100.00
Framatome Connectors International Mechelen — 2800 Malines	Belgium		FC	100.00	FC	100.00
Framatome Connectors International Besançon SA — 25000 Besançon	France	388 636 896	FC	99.95	FC	99.95
Framatome Connectors International Brasil Ltda — Sao Paulo CEP 04901	Brazil		FC	100.00	FC	100.00
Berg UK Limited, Dunstable	U.K.		FC	100.00	FC	100.00
Framatome Connectors International Canada Inc. — Scarborough Ontario M1P 2G9	Canada		FC	100.00	FC	100.00
Framatome Connectors International Schweiz AG — 6340 Baar	Switzerland		FC	99.25	FC	99.25
Framatome Connectors International PRC Ltd -	China		FC	100.00	FC	100.00
Framatome Connectors International Netherland Antilles NV, Curaco.	Dutch Antilles		FC	100.00	Liquidated	
Framatome Connectors International Hertogenbosch BV — 5222 AV's Hertogenbosch	Netherlands		FC	100.00	FC	100.00
Framatome Connectors International Distribution BV — 5222 AV's Hertogenbosch	Netherlands		FC	100.00	Absorbed	
Framatome Connectors International Dominican Republic Inc — Santiago de Los Caballeros	Dominican Republic		FC	100.00	FC	100.00
FCI Automotive Deutschland GmbH — 90411 Nuremberg	Germany		FC	100.00	FC	100.00
Framatome Connectors International Connectors Espana SA — 08635 San Esteve de Sesrovires	Spain		FC	100.00	FC	100.00

Note 31 — The consolidated group

			2001		**2002**	
Company name, Legal form, Corporate office	Country	Business reg. no.	Method	% Interest	Method	% Interest
Framatome Connectors International France SA — 78000 Versailles	France	552 056 533	FC	99.95	FC	99.95
Framatome Connectors International SA — 75009 Paris	France	349 566 240	FC	100.00	FC	100.00
Framatome Connectors International Automotive France SA — 28 230 Epernon	France	775 678 980	FC	99.95	FC	99.95
Framatome Connectors International Trésorerie SA — 78000 Versailles	France	393 476 783	FC	100.00	FC	100.00
Framatome Connectors International Finland OY — 02270 Espoo	Finland		FC	100.00	FC	100.00
Framatome Connectors International Hong Kong Ltd, Tsim Sha Tsui Road, Kowloon	China		FC	100.00	FC	100.00
Framatome Connectors International Holding (Europe) BV, 5222 AV's Hertogenbosch	Netherlands		FC	100.00	FC	100.00
Framatome Connectors International Hungary KFT — 2800 Tatabanya	Hungary		FC	100.00	FC	100.00
Framatome Connectors International Korea Ltd — Ichon-Kun, Kyungju-si	South Korea		FC	100.00	FC	100.00
Framatome Connectors International Ireland BV — 5222 AV's Hertogenbosch	Ireland		FC	100.00	FC	100.00
Framatome Connectors International Italia SpA — 10156 Torino	Italy		FC	100.00	FC	100.00
Framatome Connectors International Technology & Services Ltd, Cochin, Kerala	India		FC	100.00	FC	100.00
Framatome Connectors International Japan KK — Shinagawa-ku Tokyo 140	Japan		FC	93.60	FC	93.60
Framatome Connectors International Katrineholm AB — 641 22 Katrineholm	Sweden		FC	100.00	FC	100.00
Framatome Connectors International Connectors UK Ltd — Dunstable	U.K.		FC	100.00	FC	100.00
Sté Rhénane de ParticPCations SA — 78000 Versailles	France	318 099 306	FC	99.95	FC	99.95
Framatome Connectors International Belgium NV — 1140 Evere	Belgium		FC	100.00	FC	100.00
Morroco Connectors International	Morocco				FC	100.00
Framatome Connectors International Electrique France SA — 27000 Evreux	France	775 596 679	FC	100.00	FC	100.00
Framatome Connectors International Microconnections SA — 78200 Mantes-la-Jolie	France	335 187 696	FC	99.95	FC	99.95
Framatome Connectors Mexico SA de CV — Toluca, Estado de Mexico C.P 50200	Mexico		FC	100.00	FC	100.00
Framatome Connectors International Electronics Mexico S de RL de CV — Chihuahua, Mexico.	Mexico		FC	100.00	FC	100.00
FCI Connectors Malaysia Sdn Bhd — 47400 Petaling Jaya, Selangor	Malaysia		FC	100.00	FC	100.00
FCI Electronics Services SRL de CV — 53370 Edo de Mexico	Mexico		FC	100.00	FC	100.00
Framatome Connectors International Nantong Ltd — Jiangsu, PRC 22630	China		FC	100.00	FC	100.00
Framatome Connectors International Nederland BV — 2908 LJ Capelle A/D Ijssel	Netherlands		FC	100.00	FC	100.00
FCI OEN Connectors Ltd Ltd — 682 019 Vyttila, Cochin	India		FC	62.84	FC	62.84
Framatome Connectors International Asia Technology Pte Ltd — Singapore 089315	Singapore		FC	100.00	FC	100.00

Company name, Legal form, Corporate office	Country	Business reg. no.	2001 Method	2001 % Interest	**2002** Method	**2002** % Interest
Framatome Connectors International Pontarlier SA — 75009 Paris	France	383 703 808	FC	100.00	FC	100.00
Framatome Connectors International Qingdao Co. Ltd — Qindao HFCh — Tech Industrial Garden	China		FC	100.00	FC	100.00
Framatome Connectors International Scotland Ltd — Glasgow G33 4JD	U.K.		FC	100.00	FC	100.00
Framatome Connectors Shangaï Co. Ltd — Shanghai	China		FC	100.00	Liquidated	
Framatome Connectors International Singapore Pte Ltd — Singapore 089315	Singapore		FC	100.00	FC	100.00
Framatome Connectors International Donguuan Co. Ltd — Shatia Town, Donguuan Municipality	China		FC	100	FC	100
Framatome Connectors International Americas Special Purposes Vehicules — Manchester, NH 03301	United States		FC	100.00	FC	100.00
Framatome Connectors International Connectors Sweden AB S-10074 Stockholm	Sweden		FC	100.00	FC	100.00
Framatome Connectors International Taiwan Ltd, Chungli — Taoyuan, Taiwan	Thailand		FC	100.00	FC	100.00
Technocontact SA — 78000 Versailles	France	712 052 364	FC	99.95	FC	99.95
Framatome Connectors International Americas Technology Inc, Manchester, Nh 16830	United States		FC	100.00	FC	100.00
Framatome Connectors U.K. Ltd — LU5 4TS Dunstable Bedfordshire	U.K.		FC	100.00	FC	100.00
Framatome Connectors International USA Inc. Etters (Valley Green) PA 17319	United States		FC	100.00	FC	100.00
FCI Americas International Holding Inc, Etters, Pennsylvania	United States		FC	100.00	FC	100.00
Framatome Connectors International Americas Holding Inc. — Manchester, NH 1630	United States		FC	100.00	FC	100.00
STMicroelectronics						
STMicroelectronics	Netherlands		EM	11.05	EM	11.03
STMicroelectronics Holding BV	Netherlands		EM	30.99	EM	30.99
STMicroelectronics Holding II BV	Netherlands		EM	30.99	EM	30.99
Holding companies and other						
STMI	France	672 008 489	FC	67.06	FC	67.06
AREVA SA 75009 Paris	France	712 054 923	FC	100.00	FC	100.00
CILAS	France	669 802 167	EM	37.00	EM	37.00
SOFRADIR	France	334 835 709	EM	20.00	EM	20.00
SOVAKLE	France	572 210 425	FC	100.00	Sold	
Polinorsud	France	343 008 231	FC	67.06	FC	67.06
MSIS	France	327 492 336	FC	67.06	FC	67.06
GADS	France	420 952 194	FC	67.06	FC	67.06
RTC	France	331 055 947	FC	67.06	FC	67.06
ESI	France	400 013 629	FC	53.65	FC	53.65
STMILOG	France	388 398 059	FC	67.06	FC	67.06
Trihom	France	378 649 040	FC	44.26	FC	44.26
Gamma Assistance	France	350 322 293	FC	67.06	FC	67.06
CEDEC, 75015 Paris	France	394 329 841	FC	90.14	FC	90.14
ERAMET	France	632 045 381	EM	26.26	EM	26.28
Melox 78 140 Velizy Villacoublay	France	378 783 237	FC	100.00	FC	100.00
COGERAP	France	328 171 004	FC	100.00	FC	100.00
FT1CI	France	385 129 036	FC	63.77	FC	63.77
CERE SA — 92400 Courbevoie	France	330 956 871	FC	100.00	FC	100.00

			2001		**2002**	
Company name, Legal form, Corporate office	Country	Business reg. no.	Method	% Interest	Method	% Interest
FPCt SA — 92400 Courbevoie	France	351 737 051	FC	99.00	FC	99.00
Packinox SA — 92400 Courbevoie	France	333 914 760	FC	100.00	FC	100.00
Framapar SA — 92400 Courbevoie	France	410 343 669	FC	100.00	FC	100.00
SECORI sA — 92400 Courbevoie	France	328 740 550	FC	99.76	FC	99.76
Teknassur — Luxembourg	Luxembourg		FC	100.00	FC	100.00
FRAREA — 92400 Courbevoie	France	381 484 955	FC	100.00	FC	100.00
SEPI SA — 1211 Geneva	Switzerland		FC	100.00	FC	100.00

5.6 Additional information on the consolidated financial statements

5.6.1 Consolidated income statement in the format specified under paragraph 41 of accounting rule CRC 99-02

In millions of euros	**2002**	2001	2000
SALES	8 265	8 902	9 041
Cost of products and services sold	(6 129)	(6 956)	(6 815)
GROSS MARGIN	2 136	1 946	2 226
Research and development expenses	(332)	(377)	(394)
Marketing expenses	(384)	(471)	(374)
General and administrative expenses	(624)	(571)	(551)
Other operating expenses and income (note 3)	(616)	(405)	(302)
OPERATING INCOME	180	122	605
Financial income (note 5)	587	199	111
INCOME BEFORE EXCEPTIONAL ITEMS AND TAX	767	321	716
Exceptional items (note 6)	289	319	78
Income tax (note 7)	(220)	(120)	(298)
NET INCOME FROM CONSOLIDATED COMPANIES	836	520	496
Share in net income of equity affiliates (note 11)	83	102	443
NET INCOME BEFORE GOODWILL AMORTIZATION	919	622	939
Goodwill amortization (note 8)	(593)	(989)	(154)
NET INCOME BEFORE MINORITY INTERESTS	326	(367)	785
Minority interests in subsidiaries' earnings (note 19)	(86)	(220)	(322)
CONSOLIDATED NET INCOME	240	(587)	463
AVERAGE NUMBER OF SHARES	35 442 701	31 423 772	29 414 308
Earnings per share (€)	6.77	(18.65)	15.73

5.6.2 Additional information on note 21

The 2001 provision for risk represented €479M, as follows:

Provisions, in millions of euros	**12/31/2002**	12/31/2001
Litigation	17	16
Contingencies on contracts	224	280
Foreign exchange risk	2	(2)
Losses on contracts	91	108
Environmental risk	14	14
Tax risk	21	—
Financial guarantees	12	15
Work in progress	15	8
Oris	3	4
Other provisions	37	36
TOTAL	**436**	**479**

5.7 Simplified AREVA SA financial statements

Balance Sheet

In thousands of euros	2002 Gross	2002 Depreciation, amortization, provisions	2002 Net	2001 Net	2000 Net
ASSETS					
Tangible and intangible assets	39 261	17 394	21 867	24 307	279
Long term notes and investments	3 113 343	1 283 210	1 830 133	2 633 647	1 146 649
TOTAL FIXED ASSETS	3 152 604	1 300 604	1 852 000	2 657 954	1 146 928
Trade and other accounts receivable	435 941	2 543	433 398	284 486	58 919
Cash and cash equivalents	2 017 404	149	2 017 255	582 426	847 807
TOTAL WORKING CAPITAL	2 453 345	2 692	2 450 653	866 912	906 726
Prepaid expenses and unrealized foreign exchange gains	272		272	1 264	0
TOTAL ASSETS	5 606 221	1 303 296	4 302 925	3 526 130	2 053 654

In thousands of euros	2002	2001	2000
LIABILITIES AND SHAREHOLDERS' EQUITY			
Capital stock	1 346 823	1 346 823	1 121 046
Other shareholders' equity	694 130	697 765	874 242
TOTAL SHAREHOLDERS' EQUITY	2 040 953	2 044 588	1 995 288
PERPETUAL SUBORDINATED DEBT	212 647	212 647	0
PROVISIONS FOR RISK AND LIABILITIES	773 400	87 110	27 074
DEBT	1 275 225	1 176 203	31 292
Unearned income and unrealized foreign exchange losses	700	5 582	0
TOTAL LIABILITIES AND EQUITY	4 302 925	3 526 130	2 053 654

Income Statement

In thousands of euros	**2002**	2001	2000
OPERATING INCOME			
Sales	73 133	55 618	860
Other operating income	4 003	1 323	138
TOTAL OPERATING INCOME	77 136	56 941	998
OPERATING EXPENSES	(125 527)	(97 669)	(5 763)
OPERATING INCOME	**(48 391)**	**(40 728)**	**(4 765)**
FINANCIAL INCOME	951 497	349 248	132 014
FINANCIAL EXPENSES	(968 037)	(1 107 243)	(497)
NET FINANCIAL INCOME	(16 540)	(757 995)	131 517
EARNINGS BEFORE EXCEPTIONAL ITEMS AND TAX	**(64 931)**	**(798 723)**	**126 752**
EXCEPTIONAL INCOME	366 532	261 860	133 111
EXCEPTIONAL EXPENSES	(67 709)	(225 208)	(98 007)
NET EXCEPTIONAL ITEMS	298 823	36 652	35 104
Income tax and employee profit sharing	(17 662)	49 110	(11 366)
NET INCOME	**216 230**	**(712 961)**	**150 490**

Table of subsidiaries and equity interests

Financial information Subsidiaries and equity interests (in thousands of euros, unless indicated otherwise)	Share capital	Premiums, reserves, and retained earnings	% of interest owned	Gross book value of shares owned	Net book value of shares owned	Loans and advances outstanding	Sales before tax (last fiscal year)	Net income of (loss) — last fiscal year	Dividends collected in 2002
A – Detailed information on subsidiaries and equity interests (when net book value exceeds 1% of AREVA's capital)									
1 – Subsidiaries (over 50% of capital held by AREVA)									
• Cédec 27/29, rue le Peletier – 75009 Paris	36 532	1 045	90	33 466	33 466		0	1 987	790
• Compagnie d'Etude et de Recherche pour l'Energie (CERE) 27/29, rue le Peletier – 75009 Paris	247 500	23 355	100	251 541	251 541	4	0	–11 278	66 000
• Cogema 2, Rue Paul Dautier – 78141 Vélizy Cedex	100 259	84 152	100	703 929	703 929	154 158	2 541 156	94 529	
• Framatome ANP s.a.s. Tour Framatome – 92084 Paris La Défense Cedex	400 000	111 786	66	277 638	277 638		1 013 883	215 184	43 006
• Framatome Connectors International (FCI) 53, Rue de Chateaudun – 75009 PARIS	866 394	–420 206	100	1 205 872	0		56 400	–499 391	
• Framapar 27/29, rue le Peletier – 75009 Paris	22 116	–27 251	100	22 477	22 477	34	129	–2 576	
• FT1CI 27/29, rue le Peletier – 75009 Paris	84 688	1 300 985	64	54 888	54 888		0	–12 648	6 301
• Sepi 6, rue François Bellot – 1211 Genève 12 – Suisse	CHF 61	CHF 53	100	36 415	36 415		0	–18 993	
2 – Equity interests (between 10% and 50% of capital held by AREVA)									
• Eramet	76 395	714 569	26	288 402	288 402		543 004	4 000	7 381
• Technicatome	20 000	40 425	25	14 042	14 042		149 477	7 980	747
B – Summary information on other subsidiaries and equity interests									
1 – Subsidiaries not listed under paragraph A									
a) French subsidiaries (cumulated total)				26 668	18 581	1 332			
b) Foreign subsidiaries (cumulated total)									
2 – Equity interests not listed under paragraph A									
a) in French companies (cumulated total)				16 161	8 830	76			
b) in Foreign companies (cumulated total)									

Company income (and other significant data) for the past five years

In thousands of euros	1998	1999	2000	2001	**2002**
Line items					
1 – Capital as of year-end					
Share capital	1 121 046	1 121 046	1 121 046	1 346 823	1 346 823
Number of ordinary shares outstanding	27 985 200	27 985 200	27 985 200	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
2 – Activities and income for the year					
Sales	20 909	21 377	860	55 618	73 133
Income before tax, employee profit sharing, and calculated costs (depreciation, depletion, amortization, and provisions)	68 071	750 399	110 679	193 610	1 084 311
Income tax	8 076	8 127	11 366	–49 667	17 662
Net income after income tax, employee profit sharing, and calculated costs (depreciation, depletion, amortization, and provisions)	77 322	682 116	150 490	–712 961	216 230
Net income distributed(1)	182 058	300 889	672 179	219 745	219 745
3 – Data per share					
Income after income tax and employee profit sharing, before calculated costs	2,04	25,23	3,38	6,85	30,10
Income after income tax, employee profit sharing, and calculated costs	2,63	23,19	5,12	–20,12	6,10
Dividend per share(1)	6,19	10,23	22,85	6,20	6,20
4 – Personnel					
Number of employees as of year-end	18	16	17	108	189
Total compensation for the year	1 338	1 383	1 279	14 766	18 337
Payroll taxes and other benefit expenses for the year	588	579	536	7 335	6 826

(1) Taking into account the net income for the year, representing 216 230, the Supervisory Board proposes to take 3 515 from the merger premium to increase income distribution to 219 745, representing 6.20 euros per share.

Allocation of net income

Income for the year	216 230 219,47 euros
Amount deducted from the merger premium	3 514 526,73 euros
TOTAL DISTRIBUTED	219 744 746,20 euros
Merger premium before distribution	187 871 554,07 euros
Premium distributed	3 514 526,73 euros
MERGER PREMIUM AFTER DISTRIB	184 357 027,34 euros

Comments on Areva's corporate financial statements

Year ended December 31, 2002

Balance sheet comments

The balance sheet total is €4,303M, compared with €3,526M in 2001, the 22% increase reflecting capital gains recorded in 2002 on the sale of assets, including the AREVA/Framatome Tower, Sovaklé and TotalFinaElf shares.

Major asset sales took place at the end of the year, significantly increasing the year-end cash position to €1,651M.

Net assets are essentially stable (–3%), with net income of €216M offsetting most of a €220M dividend distribution on 2001 results, applied against the merger premium.

Framatome issued 250 perpetual subordinated bonds (''TSDI'') with a par value of $1,000,000 each on November 15, 1991 which were purchased directly by financial institutions. Considered perpetual from a legal standpoint, these bonds are recorded on the balance sheet under ''Perpetual subordinated debt'' at their original issue price. These bonds are not subject to foreign exchange risk.

The change in the amount of the provision for risk (€709M compared with €16M in 2001) reflects a provision of €681M for FCI shares held by AREVA.

Income statement comments

AREVA's corporate net income for 2002 is €216M, compared with a loss of –€713M in 2001. As a result, AREVA is able to pay a dividend similar to the previous year's distribution without significantly impacting the company's equity. Only €3.5M will be deducted from the merger premium to distribute €220M in total dividend.

The company's **operating income** was down 18.8%, at a loss of –€48M compared with a loss of –€41M in 2001, reflecting an increase in the level of services provided to the group, a significant increase in services acquired from vendors (+52.4%) and, to a lesser extent, an increase in payroll expenses (+23.9%). At the same time, sales increased by 31.5% to €73 million compared with €56M in 2001.

Net financial income was down at –€16M, but compares favorably with the 2001 loss of –€758M and is a major factor in AREVA's improved corporate net income. Financial income for 2002, at €951M compared with €349M in 2001, includes a €691M gain on the sale of part of AREVA's portfolio of TotalFinaElf shares and €125M in dividends from subsidiaries. The balance of the account includes €46M in interest on the company's long-term financial portfolio, plus €37M in interest from marketable securities and loans/current account advances to subsidiaries. Financial expenses totaled €968M in 2002 compared with €1,107M in 2001 and include a provision for risk on FCI shares in the amount of €681M, taken after fully provisioning the balance of the book value of FCI shares, representing €168M. Interest and interest expenses include €34M in interest on subsidiaries' current accounts. Currency translation losses of –€35M are offset by essentially equivalent currency translation gains.

Exceptional items of €299M include €209M in gain on the sale of the AREVA/Framatome Tower and €88M in gain on the sale of Sovaklé shares.

The company's 2002 income tax expense of €17.6M was calculated based on specific rules applicable to groups allowed to file consolidated returns.

Chapter 6:
Information on Company management, Executive Board and Supervisory Board

6.1 Composition and Operations of management, executive and supervisory bodies

6.1.1 Composition of management, executive, and supervisory bodies

6.1.1.1 Composition of the Executive Board

Anne Lauvergeon, Chairman of the AREVA Executive Board

Term began : Supervisory Board meeting of July 3, 2001 — Term ends : First Supervisory Board meeting after July 3, 2006.

Age 43, Ingénieur en chef of the Corps des Mines, graduate of Ecole Normale Supérieure, doctorate in physical sciences, responsible for studying chemical safety-related issues in Europe for the Commissariat à l'Energie Atomique (CEA) in 1984, mineral resources administrator for the Ile-de-France region in 1985, deputy department head at the Conseil Général des Mines in 1988, special assistant for international economics and trade to the President of the French Republic in 1990, deputy secretary general for the organization of G7 summits for the President of the French Republic in 1991, general partner with Lazard Frères & Cie in 1995, executive vice president of Alcatel Télécom in 1997, chairman and CEO of COGEMA in 1999, and chairman of AREVA since July 3, 2001.

Other offices held:

- Chairman of the board of directors of COGEMA
- Member of the supervisory board and vice chairman of the supervisory board of Sagem
- Member of the boards of directors of Suez and TotalFinaElf
- Permanent representative of AREVA to the board of directors of FCI

Gérald Arbola, Member of the AREVA Executive Board, Chief Financial Officer of AREVA

Term began : Supervisory Board meeting of July 3, 2001 — Term ends : first Supervisory Board meeting after July 3, 2006.

Age 55, graduate of Institut d'Etudes Politiques de Paris, holds an advanced degree in economics, joined the COGEMA group in 1982 as director of planning and strategy for SGN, chief financial officer at SGN from 1985 to 1989, executive vice president of SGN in 1988, chief financial officer of COGEMA in 1992 and member of the executive committee in 1999, while also serving as chairman of the board of SGN in 1997 and 1998, chief financial officer and member of the Executive Board of AREVA since July 3, 2001.

Other offices and positions:

- Chairman of the board and CEO of FT1CI and chairman of COGERAP SAS
- Member of the board of directors of COGEMA and Assystem
- Member of the governing board of STMicroelectronics Holding N.V.
- Member of the board of directors of Framatome ANP

The three members listed below were appointed by a decision of the Supervisory Board on October 15, 2002 and confirmed by the minister of the Economy, Finance and Industry and the delegated minister of industry on January 21, 2003.

Didier Benedetti, Member of the AREVA Executive Board

Term began : Supervisory Board meeting of October 15, 2002 — Effective date : February 1, 2003 — Term ends : First Supervisory board meeting after July 3, 2006.

Age 50, *Ingénieur* of the Ecole Supérieure d'informatique, d'électronique et d'automatique (ESIEA) and a graduate of Institut d'Administration des Entreprises (IAE) of Paris, held various positions with Schlumberger, with Thomson, where he was executive vice president of Thomson Brandt Armement and vice chairman of Thomson Consumer Electronic, and with the Fiat group, where he was president of all Magneti Marelli passenger compartment divisions. Became chief operating officer of COGEMA in June 2002.

Other offices:

- Chief operating officer of COGEMA
- Member of the board of directors of Compagnie Nucléaire de Services (CNS)

Jean-Lucien Lamy, Member of the AREVA Executive Board

Term began : Supervisory Board meeting of October 15, 2002 — Effective date : February 1, 2003 — Term ends : First Supervisory Board meeting after July 3, 2006.

Age 55, graduate of Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, master in economic systems from the University of Stanford and MBA from the University of Iowa, held various positions in multinational groups, including Rockwell and Allied Signal, before joining the Labinal group in 1984, becoming president of several operating divisions in 1987 and contributing to the international development of Labinal through organic growth and acquisitions until it was acquired by Snecma in late 2000. Became chairman and CEO of FCI in November 2001.

Other offices held:

- Chairman and CEO of FCI
- Chairman of FCI Expansion 1 and FCI Expansion 2
- Member of the board of directors of Eramet
- Permanent representative of FCI to the boards of directors of FCI Micronnections, FCI Besançon, FCI France and FCI Automotive France
- Chairman of the supervisory board of FCI Connectors Hungary
- Chairman and CEO of FCI Connectors Espana, FCI Americas Holding, Inc., FCI Americas International Holdings, Inc., FCI Americas Technology, Inc., FCI Delaware, Inc., and chairman of FCI Italia, FCI Americas, Inc. and FCI USA, Inc.
- Member of the boards of directors of FCI Asia Pte Ltd and FCI Japan K.K.
- Member of the executive board of FCI Nederland BV

Vincent Maurel, Member of the AREVA Executive Board

Term began : Supervisory Board of October 15, 2002 — Effective date : February 1, 2003 — Term ends : First Supervisory Board after July 3, 2006.

Age 55, graduate of Ecole Polytechnique and Ecole Nationale Supérieure des Télécommunications, joined Thomson CSF in 1974, later becoming executive vice president and industrial director for Alcatel Telspace. Starting in 1993, managed the steam turbine division then the turnkey electric power plant division for Alstom before becoming chairman of ABB-Alstom Power France and its services subsidiary. Joined COGEMA in December 2000 as executive vice president of the enrichment business unit and member of the executive committee. Has been president of Framatome ANP since December 2001.

Other offices held:

- President of Framatome ANP SAS
- Member of the supervisory board 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

Members appointed by the Shareholders

Philippe Pontet, Chairman of the AREVA Supervisory Board

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting
Born October 30, 1942 in Dijon, France

Other offices held:

- Chairman of SOGEPA SA and SOGEADE Gérance
- Member of the board of directors of FCI SA
- Member of the board of directors of Framatome ANP SAS
- Chairman of Placement Obligations (NSM Gestion mutual fund) and AGF Foncier (mutual fund)

Alain Bugat, Vice Chairman of the AREVA Supervisory Board

Term began: January 2003 Supervisory Board — Term ends: 2006 Annual General Meeting
Born September 8, 1948 in Bordeaux, France

Other offices held:

- Chairman of the board of directors of Technicatome (resigned in 2003) and of the supervisory board of MVI Technologies
- Member of the board of directors of DCN-International
- Permanent representative of Technicatome to the board of directors of Financière La Calhène until March 5, 2002 and to Cybernetix since June 21, 2002.

Euan Baird (1)

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting
Born September 16, 1937 in Aberdeen, Great Britain

Other offices held:

- Chairman of the board of directors of Schlumberger Limited
- Member of the boards of directors of Scottish Power, Société Générale and Rolls Royce
- Member of the advisory board of Banque de France

Philippe Braidy (replaced by Alain Bugat in 2003)

Term began: 2001 Annual General Meeting — Term ends: 2002
Born March 1, 1960 in Algiers, Algeria

Other offices held:

- Chairman of Co-Courtage Nucléaire (CCN) and Simebio
- Permanent representative of CEA to the board of directors of CEA Valorisation
- Permanent representative of CEA Valorisation to the board of directors of Opistech
- Financial director of CEA

(1) Independent member of the Supervisory Board. Individuals who hold less than 10% of the company's capital and who have no financial or commercial relationship with the company (as customer or supplier) are considered to be independent.

Patrick Buffet

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting
Born November 19, 1953 in Lyon, France

Other offices held:

- Member of the board of directors of the Commissariat à l'Energie Atomique (CEA) and of Suez group subsidiaries Société Générale de Belgique, Tractebel, Elyo and Degrémont
- Member of the supervisory board of CDC Ixis

***Thierry Desmarest*(2)**

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting
Born December 18, 1945 in Paris, France

Other offices held:

- Chairman and CEO of TotalFinaElf SA and Elf Aquitaine
- Member of the supervisory board of Air Liquide
- Member of the board of directors of Sanofi-Synthélabo
- Chairman of Fondation Total

***Gaishi Hiraiwa*(3)**

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting
Born August 31, 1941 in Tokyo, Japan

Other offices held:

- Member of the boards of directors of Japanese companies Kokyo Tatemono Co, Ltd, Japan Oil Development Co., Ltd, Three Hundred Club, World Trade Center Building Inc., Dai-ichi Mutual Life Insurance Company (until July 3, 2002), Toko Tatemono Co., Ltd, Japan Securities Finance Co., Ltd (until June 25, 2002), and Nippon Television Network Corporation; and of Arabian Oil Co, Ltd (until March 28, 2002) and Sumitomo Mitsui Banking Corporation (until June 27, 2002).

Daniel Lebègue

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting
Born May 4, 1943 in Lyon, France

Other offices held:

- Chairman of the supervisory board of CDC Ixis
- Member of the boards of directors of C3D, Gaz de France and Thalès
- Member of the supervisory boards of Caisse Nationale des Caisses d'Epargne and CNP

Olivier Pagezy

Term began: June 2003 Supervisory Board meeting — Term ends: 2006 Annual General Meeting
Born April 7, 1968

Other offices held:

- Member of the board of directors of CEA Valorisation
- Member of the board of directors of Co-Courtage Nucléaire

Commissariat à l'Energie Atomique (CEA)

Term began: 2001 Annual General Meeting — Term ends: 2006 Annual General Meeting

Represented by Mr. Philippe Rouvillois, born January 29, 1935 in Saumur, France, chairman of the board of directors of Institut Pasteur, permanent representative of the government to the board of directors of EDF International, and chairman of Fondation Pasteur.

Other offices held by CEA:

- Member of the board of directors of Brevatome (nuclear patent applications)
- Member of the board of directors of CEA Valorisation
- Member of the board of directors of Sofratome (nuclear engineering and construction)
- Member of the board of directors of Technicatome

Members representing the French State appointed by ministerial order:

Jeanne Seyvet

Term began: 2001 — Term ends: 2006 Annual General Meeting
Born March 23, 1954

Other offices held:

- Member of the boards of directors of Renault and Bull
- Member of the boards of directors of Ecole Normale Supérieure (ENS) and Ecole Polytechnique

(2) Independent member of the Supervisory Board. Individuals who hold less than 10% of the company's capital and who have no financial or commercial relationship with the company (as customer or supplier) are considered to be independent.

(3) Independent member of the Supervisory Board. Individuals who hold less than 10% of the company's capital and who have no financial or commercial relationship with the company (as customer or supplier) are considered to be independent.

- Government commissioner to France Telecom, FT1CI and ERAP

Dominique Maillard

Term began: 2001 — Term ends: 2006 Annual General Meeting
Born March 28, 1950 in Paris, France

Other offices held:

- Member of the board of directors and representative of the French State to the board of directors of La Poste (French postal service), ERAP and Ecole Nationale Supérieure des Mines de Paris
- Government commissioner to COGEMA, ANDRA and the Comité de l'Energie Atomique (electricity regulation commission)
- Member of the steering committee and atomic energy committee of the International Atomic Energy Agency

Hubert Colin de Verdière

Term began: 2002 — Term ends: 2006 Annual General Meeting
Born October 31, 1941

Other offices held:

- Representative of the French State to the board of directors of COGEMA
- Representative of the Ministry of Foreign Affairs to the board of directors of Ecole Nationale d'Administration
- Member of the board of directors of GIP/France Coopération Internationale (public interest group) and of the Association française d'action artistique (AFAA)

Bruno Bézard

Term began: 2002 — Term ends: 2006 Annual General Meeting
Born May 19, 1963

Other offices held:

- Member of the boards of directors of Renault, SNCF, EDF, SOGEADE, SOGEPA and France Télévisions

Members representing the employees

Jean-Claude Bertrand

Safety leader, COGEMA/Pierrelatte facility
Born November 16, 1951
Term began: 2002 — Term ends: 2007

Gérard Melet

Purchaser, COGEMA/La Hague
Born July 24, 1957
Term began: 2002 — Term ends: 2007

Alain Vivier-Merle

Special assistant for strategy and marketing,
Framatome ANP — Lyon
Born October 4, 1948
Term began: 2002 — Term ends: 2007

Other offices held:

- Chairman of the supervisory board of the Framépargne company mutual fund (until end of April 2003)
- Member of the supervisory board of SOGEPLAN A.

6.1.2 Operations of administrative, management and supervisory bodies

6.1.2.1 Operations of the Executive Board

The Executive Board consists of at least two members and at most five members appointed by the Supervisory Board, which names one of the members chairman of the Executive Board. When company shares are publicly traded in a regulated market, the Executive Board may be increased to seven members.

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 the appointment. The Supervisory Board may appoint a new member to the Executive Board during the term of the latter. The decision to increase the number of Executive Board members above the number set upon appointment of the Executive Board is subject to the approval of the Executive Board chairman.

Executive Board member terms are renewable.

The Executive Board meets whenever required by the company's interests at the corporate office or other location indicated in the notice of meeting. The Executive Board met thirteen times in 2002. For the decisions of the Executive Board to be valid, at least half of the members must be present. Management duties may be distributed among the members of the Executive Board based on a proposal of the Chairman of the Executive Board, as approved by the Supervisory Board.

Full powers are vested in the Executive Board to act on behalf of the Company in all circumstances with regard to third parties, excepting powers expressly attributed by law to the Supervisory Board and to the Combined Shareholders.

6.1.2.2 Operations of the Supervisory Board

The Supervisory Board has been kept regularly informed of business transactions and operations of the company and of the group by the Executive Board since its establishment. As part of its supervisory

responsibilities, it has been able to perform such verifications and checks as it deemed necessary.

The Supervisory Board operates under its rules of order, in particular with respect to the following:

- creation of four committees, as described below,
- preparation of Supervisory Board meetings,
- scheduling of Supervisory Board meetings,
- resources made available to Supervisory Board members elected by company personnel.

The Supervisory Board consists of at least ten and no more than eighteen members, including three members elected by company personnel per the conditions described below and any representatives of the French State appointed pursuant to Article 51 of law no. 96-314 dated April 12, 1996. The three members representing company personnel are elected by an electoral college consisting of engineers, managers and related employees (one member) and by an electoral college consisting of the other employees (two members). The members of the Supervisory Board serve for a term of five years. The Supervisory Board elects a chairman and a vice chairman from among its members who are charged with convening the Board and conducting meetings, with the vice chairman fulfilling these functions in the event of the Chairman's absence or inability to do so. The chairman and the vice chairman are individuals.

The Supervisory Board meets at least once per quarter at the corporate office 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. The Supervisory met on four occasions in 2002.

Decisions are made on a majority vote of the members present or represented. In the event of a tie, the chairman of the meeting casts the deciding vote.

The Supervisory Board exercises ongoing control of the Executive Board's management of the company, giving its approval for operations that the latter may require. It discusses the overall strategy of the company and of the group. Annual budgets and multi-year plans for the company, its direct subsidiaries and the group are subject to its approval, as are subsidiary operations when these fall under Article 23-2 and involve an amount exceeding the previously established authorization threshold in this Article.

The following Executive Board decisions are subject to prior approval by the Supervisory Board if they involve an amount greater than 80 million euros:

- issues of marketable securities, regardless of type, that may have an impact on capital stock;
- significant decisions on opening establishments in France and abroad, either through the direct creation of an establishment of a direct or indirect subsidiary, or through the acquisition of a participating interest, and decisions on closing such establishments;
- significant operations that may affect the group's strategy and modify its financial structure or scope of activity;
- acquisitions, extensions or sales of participating interests in any company, now or in the 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, credits and advances;
- acquisitions and disposals of any debt by any means.

Proposals for appropriations of earnings presented by the Executive Board are subject to the prior approval 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: Pascal Colombani (Chairman), Dominique Maillard, Euan Baird, Patrick Buffet and Bruno Bézard. François Muller, government controller, participates in the Committee in an advisory capacity.

The committee meets at least once every half-year 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 strategic objectives for the company and its main subsidiaries and for assessing the risks and merits of major strategic initiatives proposed by the Executive Board to the Supervisory Board. It ensures adherence to the company's strategic policy and its implementation at the subsidiary level.

The strategy committee met twice in 2002:

- On July 8, the committee addressed trends in the nuclear power market and the company's objectives. Major directions and investments for the various divisions were discussed:
  - In the Front End division, the focus was on major investments to restore balance in the mining sector.
  - In the Reactors & Services division, discussions centered on the future of the Reactors business unit, particularly with respect to the potential for construction of a European Pressurized Reactor (EPR).
  - In the Back End division, discussions related to major contracts (EDF for reprocessing/recycling services and JNFL for the transfer of know-how useful to operation of the Rokkasho-Mura

plant in Japan) and to the license amendment to increase production at the Melox plant.

- On September 24, the committee met regarding:
  - public acceptance of nuclear power,
  - increasing the number of outstanding shares,
  - review of reports submitted by the Executive Board, including:
    - an alternate scenario in the reactors and services field, and
    - recent connector market trends and changes relating to them at FCI.

Audit committee

The three members of the audit committee are chosen from among the members of the Supervisory Board. They are: Philippe Pontet (Chairman), Bruno Bézard and Philippe Rouvillois.

The committee meets at least once each quarter and as often as necessary to fulfill its duties, and is convened by its chairman or at least two of its members. The committee held its first meeting in the fourth quarter of 2001. It is responsible for assessing and helping to define any accounting, financial and ethical standards to be implemented by all of the group's companies in France and abroad.

It verifies the appropriateness and effectiveness of these standards and the effectiveness of internal management controls. The committee reviews proposed budgets, preliminary financial statements and proposed multi-year plans for the company, its direct subsidiaries and the group, and submits its comments to the Supervisory Board.

The committee establishes a risk map and assesses resources earmarked or to be earmarked to prevent risk occurrence.

The audit committee met five times in 2002:

- On January 15 to review the proposed 2002 budgets for AREVA, its main subsidiaries and the group and preliminary financial figures for fiscal year 2001.
- On March 15 and April 5 to review the 2001 financial statements and Executive Board's management report pertaining to that fiscal year.
- On July 17 to review the revised 2002 budget, the macro risk map and the multi-year audit plan as well as the group's Audit Charter.
- On October 2 and 10 to review financial statements for the quarter ending June 30 as well as procedures adopted when COGEMA strengthened its direct and indirect participating interest in Sagem. The financial forecast for 2002 and 2003 were examined, particularly the scenario involving amortization of Berg's goodwill, the sale of the Framatome tower during the 2002 fiscal year, and the TotalFinaElf course of action.
- On December 20, the meeting was an opportunity to review conditions for developing a COGEMA audit report following the appearance of certain information in the press. The committee heard Mr. Marangé, COGEMA's auditor from RSM Salustro Reydel, tasked by COGEMA's management to conduct an external audit of this report. In addition, the committee reviewed the group's financial and cash management operations.

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: Daniel Lebègue (Chairman), Patrick Buffet and Dominique Maillard (who has resigned and has been replaced by Alain Bugat). François Muller, government controller, participates in the Committee in an advisory capacity.

The committee meets at least once each half-year and as often as necessary to fulfill its duties, and is convened by its chairman or at least two of its members.

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. For nominations, the committee reviews the files of candidates for membership in 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 shareowners and the French State; it can review the files of candidates for membership in the Supervisory Board and convey its opinion to the 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 five times in 2002:

- On January 21 to review terms for the departure of Mr. Vignon, President of Framatome ANP.
- On February 21 to recommend to the Supervisory Board the compensation bonus for Mrs. Anne Lauvergeon and Mr. Gérald Arbola for fiscal year 2001 and the conditions for distributing the variable portion of compensation for 2002 to the members of the Executive Board. The amount of directors' fees for 2002 was also discussed.
- On May 29, the committee reviewed the terms of appointment of the chief operating officer of COGEMA and incentive terms for four FCI executives.
- On July 23 to review the terms for candidacy of three new members of the Executive Board, i.e., the heads of the three main entities of the AREVA group (COGEMA, Framatome ANP and FCI) and discuss the amount of their compensation.

- On December 10, the committee again reviewed the status of the three new members of the Executive Board, particularly the termination clauses of their employment agreements.

Nuclear cleanup and decommissioning funding committee

The Supervisory Board created this fourth committee at its meeting of December 10, 2002.

The Committee has a maximum of five members chosen from among the members of the Supervisory Board. They are: Philippe Pontet (Chairman), Philippe Rouvillois, Bruno Bézard, Dominique Maillard and Philippe Braidy (who resigned in January 2003). François Muller, government controller, participates in the Committee in an advisory capacity.

The Committee meets at least once per half-year and 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's subsidiaries to cover future nuclear cleanup and decommissioning expenses. In this capacity, and based on pertinent documentation submitted by AREVA, including a management charter, it 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 related asset management strategy. The committee gives its opinion and makes recommendations to the Supervisory Board on these matters, which are summarized in an annual report to the Board for preparation of the latter's report to the Annual General Meeting of Shareholders.

The Committee may give audience to financial consulting firms chosen by the fund management companies.

6.2 Executive compensation

6.2.1 Total gross compensation

The table below sets forth the compensation received in fiscal year 2001 by each executive of the company and of companies under AREVA's control, as defined by Article L. 233-16 of the French Commercial Code, including in-kind benefits.

	Total amount paid in € for the fiscal year	
Executive Board members	2001	**2002**
Anne Lauvergeon	267 676	364 209
Gérald Arbola	207 818	289 217
Didier Benedetti	—	Appointed February 1, 2003
Vincent Maurel	—	Appointed February 1, 2003
Jean-Lucien Lamy	—	Appointed February 1, 2003
Supervisory Board members***	2001	**2002**
Pascal Colombani	50 000	101 650
Philippe Pontet	107 000	112 801
Euan Baird	—	6 863
Patrick Buffet	9 152	17 542
Philippe Braidy*	6 100	10 675
Thierry Desmarest	6 100	10 675
Gaishi Hiraiwa	—	3 050
Daniel Lebègue	8 389	15 253
Jean-Claude Bertrand**		6 100
Gérard Mélet**		6 100
Alain Vivier-Merle**		6 100

* Replaced by Mr. Bugat as member of the Supervisory Board on January 23, 2003.

** Members elected by company personnel in 2002 who opted to distribute their net directors' fees to the labor organization of which they are members. They began participating in Board meetings on July 25, 2002.

*** Certain amounts corresponding to prior fiscal years may have been paid in 2002.

The minister of the Economy and Finance and the minister of Industry set the compensation for the Chairman and the members of the AREVA Executive Board based on a recommendation by the group's compensation committee.

For fiscal year 2002, the committee recommended a fixed annual compensation for Anne Lauvergeon of €304,898 and a maximum bonus of €121,960 at its November 24, 2001 meeting. This recommendation was approved by the ministers of the Economy and Finance and of Industry on December 13, 2001.

The Company has no pension or similar commitment to Ms. Anne Lauvergeon. A pension provision in the amount of €24,317 was recorded in 2002 for Mr. Gerald Arbola.

6.2.2 Executive shares of capital stock

Each member of the AREVA Supervisory Board owns one share of stock, except for members representing the French State. Members of the Executive Board do not hold Company shares.

6.2.3 Stock options

The AREVA group does not presently have a stock option plan.

6.2.4 Information on transactions with members of the company's management, executive or supervisory bodies, with companies who share executives with the Company, or with shareholders controlling over 5% of the Company's voting rights

6.2.4.1 Fiscal year ending December 31, 2002

''To the AREVA shareholders:

As independent auditors of your company, we hereby present our report on regulated agreements. Pursuant to Article L. 225-88 of the French Commercial Code, we have been advised of agreements that have been approved by your Supervisory Board.

It is not our responsibility to search for the possible existence of other agreements, but rather, based on the information provided to us, to convey to you the essential features and terms and conditions of those about which we have been informed, without expressing an opinion on their usefulness or their merit. It is your responsibility, under the terms of Article 117 of the ministerial order dated March 23, 1967, to assess the value of concluding these agreements for purposes of approving them. We have performed our work in accordance with French accounting standards, which require that we use due care to verify the consistency of the information provided to us with the underlying documents from which they derive.''

6.2.4.2 With FCI

To finance FCI, the Supervisory Board authorized the Executive Board to subscribe to a $600 million line of credit with a bank syndicate, or the equivalent value in euros, for a period of three years.

In addition, if FCI subscribes to this line of credit, the Supervisory Board authorized the Executive Board to grant an AREVA guarantee at first request to the bank syndicate in the amount of $620 million, or the equivalent value in euros.

Cognizant member of the Supervisory Board: Mr. Philippe Pontet.

6.2.4.3 With COGEMA / Framatome ANP / FCI and Technicatome

On July 25, 2002, the Supervisory Board authorized Mr. Arbola, in his capacity as member of the Executive Board, to sign five service agreements for recurring and non-recurring services invoiced by AREVA to several of its subsidiaries in fiscal year 2002. The following agreements were involved:

AREVA / COGEMA:

- September 3, 2001 to December 31, 2002
- estimated total amount: €11,626M
- cognizant member of the Supervisory Board: Mr. Pascal Colombani
- term: one year, renewable, starting December 31, 2002;

AREVA / Framatome ANP:

- January 1, 2002 to December 31, 2002
- estimated total amount: €10,729M
- cognizant member of the Supervisory Board: Mr. Philippe Pontet
- term: one year, renewable, starting December 31, 2002;

AREVA / FCI

- January 1, 2002 to December 31, 2002
- estimated total amount: €8,279M
- cognizant member of the Supervisory Board: Mr. Philippe Pontet
- term: one year, renewable, starting December 31, 2002;

AREVA / Technicatome:

- September 3, 2001 to December 31, 2002
- estimated total amount: €0.282M
- term: one year, renewable, starting December 31, 2002;

Framatome ANP / AREVA:

- January 1, 2002 to December 31, 2002
- estimated total amount for recurring services: €0.777M
- cognizant member of the Supervisory Board: Mr. Philippe Pontet
- term: one year, renewable, starting December 31, 2002.

6.2.4.4 With FCI

On October 15, 2002, to finance FCI, the Supervisory Board authorized the Executive Board to issue AREVA guarantees on first request to banks agreeing to grant credits to FCI in amounts not to exceed €1,020M.

In addition, the Supervisory Board authorized the Executive Board to subscribe to banking lines of credit in the amount of €1,000M in

AREVA's name as co-borrower with FCI and to provide the AREVA guarantee on first request in an amount not to exceed €1,020M, proportionate to credit draw-downs by FCI. This financing mechanism replaced AREVA's €1,000M commercial paper program authorized by the Supervisory Board on July 25, 2002.

Cognizant member of the Supervisory Board: Mr. Philippe Pontet.

6.2.4.5 With COGEMA

On October 15, 2002, the Supervisory Board authorized Mr. Arbola to sign a service agreement for recurring and non-recurring services invoiced to AREVA by COGEMA. The main features of the COGEMA / AREVA services agreement are as follows:

- term: one year, renewable, from January 1, 2002 to December 31, 2002
- Total estimated amount: €4,211M
- cognizant members of the Supervisory Board: Mr. Pascal Colombani and Mr. Hubert Colin de Verdière

6.2.4.6 With FCI

On December 10, 2002, the Supervisory Board authorized the Executive Board to undertake all necessary measures in connection with the sale of FCI's Military, Aerospace and Industrial division (MAI).

In addition, upon the sale of MAI, the Supervisory Board authorized the Executive Board:

- to issue a joint warranty for FCI and FCI France's CATS/CASA early retirement plan commitments to the acquirer of MAI or the entity to which FCI France's MAI operations would be transferred, in an amount not to exceed €17.8M
- to issue a joint warranty for FCI's guarantee commitments relating to the sale to the acquirer of MAI in an amount not to exceed €33.25M.

Cognizant members of the Supervisory Board:

Messrs. Philippe Pontet, Daniel Lebègue and Patrick Buffet.

6.2.5 Prior year agreements remaining in effect during the fiscal year

6.2.5.1 With CEDEC

The technical support agreement relating to accounting and legal services and the cash management agreement concluded with AREVA remained in effect during the fiscal year and were renewed. The amount invoiced for accounting and legal services in fiscal year 2002 was €9,688.14.

Financial expenses paid to CEDEX under the cash management agreement were €84,967.56.

Cognizant director: AREVA.

6.2.5.2 With Etablissements Pierre MENGIN

AREVA guaranteed commitments amounting to €609,796.07 for Etablissements Pierre MENGIN, in the process of liquidation, as part of the sale of Euriso-Top to Cambridge Isotopes Laboratories, Inc. (CIL). The sale, accompanied by a warranty of assets and liabilities in an amount up to the acquisition price, was authorized by the board of directors on October 19, 2000.

In addition, the interest-free shareholder advance of €1,936,102.52 granted to Etablissements Pierre MENGIN in 1989 was maintained.

6.2.5.3 With Framatome ANP

The warranty of assets and liabilities granted by AREVA to Framatome ANP as part of the sale of Intercontrôle remained in effect during the fiscal year. No sums were paid by AREVA in 2002 in connection with this warranty.

6.2.6 Fees paid to auditors for fiscal year 2002

Millions of €	Audit (Registered auditors, certification, review of corporate and consolidated financial statements)	Related services	Other services	Total
Deloitte & Touche Tohmatsu	2.7	0.1	—	2.8
Mazars et Guérard	0.9	—	—	0.9
RSM Salustro Reydel	1.8	0.5	0.6	2.9
Total	**5.4**	**0.6**	**0.6**	**6.6**

6.3 Profit-sharing plan

AREVA group practices in the area of savings plans (profit-sharing, incentive remuneration and savings plans) continued to reflect the background and circumstances of each subsidiary (Framatome ANP, COGEMA, FCI and Technicatome).

6.3.1 Profit-sharing and incentive remuneration

Various profit-sharing and incentive remuneration agreements have been signed in the group's companies to involve personnel in the overall performance of their company. Profit-sharing is oriented primarily towards overall financial performance, while incentive remuneration focuses more on partial financial results or on more technical or special fields.

As defined in these agreements, the objective is to distribute a bonus approximately equal to one month's salary to company personnel if the objectives are met.

The performance criteria stipulated in the various profit-sharing agreements are generally linked to:

- quantitative results (such as operating income, sales revenue, operating profit, etc.)
- productivity gains
- cost reductions
- qualitative results (continuous progress objectives specific to each company)

The existence or non-existence of profit-sharing and incentive remuneration agreements is specific to each company.

6.3.2 Corporate Savings Plans and investment vehicles

There are a wide range of savings plans and investment vehicles within the AREVA group:

- The AREVA corporation signed a Group Savings Plan agreement on May 17, 2002 consisting of three mutual funds: a ''monetary'' fund, a ''diversified'' fund and a fund comprised exclusively of AREVA shares.
- The COGEMA group has developed numerous agreements (or rules) over the years and created investment vehicles based on the needs of its companies. The majority of funds are multiple-company funds. There are currently about sixteen Savings Plans and 39 different funds within the COGEMA group.
- Most of the companies in the Framatome ANP group participate in the AREVA group savings plan, which replaced the former savings plan of the Framatome group.
- Most of the companies in the FCI group currently have their own savings plans and will participate in the AREVA group savings plan in 2003.
- The companies in the Technicatome group currently have their own savings plans.

6.3.3 Employee shareowners

Current situation

The Framatome group has taken a series of steps since 1986 to expand employee ownership of its capital stock. The last capital increase, in 2000, won over substantial numbers of employee shareowners. Employee-owned shares acquired through these operations were invested in the ''Framépargne'' fund, which is now part of the AREVA group savings plan.

On September 3, 2001, following the takeover of Framatome SA by AREVA, Framatome SA shares were converted into AREVA shares. Subsequently, the Framatome savings plan became the AREVA group savings plan.

On December 31, 2002, the ''Framépargne'' fund held 418,721 AREVA shares, or €115,483,251.80 invested in unlisted company securities. Fund liquidity is currently guaranteed whenever liquidity falls below 15%. The managing bank held 141,854 AREVA shares as of end-2002.

Developments

When AREVA was created in September 2001, the general management of the group expressed its desire to expand employee ownership in France and abroad. The group is now preparing to trade its shares publicly in the financial markets. This creates an opportunity for the vast majority of group employees to subscribe for AREVA shares.

6.3.4 Stock options

The AREVA group does not presently have a stock option and/or purchase plan.

6.4 Annual General Meeting of Shareholders of May 12, 2003

6.4.1 Order of business

The shareholders have been convened in an Annual General Meeting of Shareholders in accordance with the provisions of the French Commercial Code, ministerial order dated March 23, 1967 and the bylaws of our company to deliberate on the following order of business:

- Reading of the Executive Board's management report on the fiscal year ending December 31, 2002;
- Reading of the Auditors' report on the financial statements for fiscal year 2002;
- Reading of the Supervisory Board's report on the Executive Board's report on the corporate financial statements and the consolidated financial statements for fiscal year 2002;
- Reading of the Auditors' special report on agreements referred to in Article l. 225-86 of the French Commercial Code;
- Approval of the corporate and consolidated financial statements of the company (balance sheet, income statement and notes for the fiscal year ending December 31, 2002);
- 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 Auditors;
- Appropriation of earnings for the year;
- Setting of directors' fees for the Supervisory Board;
- Ratification of the nomination of a new member of the Supervisory Board;
- Granting of authority to execute formalities.

6.4.2 Notice of meeting

Notices of meeting were properly sent and all documentation and exhibits stipulated by current regulations were made available to you by the statutory deadline.

Company operations during fiscal year 2002

The management report (financial, corporate and environmental) is presented in Chapter 5 of this reference document.

6.4.3 Comments on the Executive Board's report by the Supervisory Board

Pointing out that the strong level of operating income from the nuclear business and from sales of non-operating assets to optimize asset management resulted in a consolidated net profit despite FCI's losses, and that the implementation of new accounting rules pertaining to environmental liabilities had a considerable impact on certain balance sheet items, the Supervisory Board had no comment to make on the corporate and consolidated financial statements for the fiscal year nor on the corresponding management report prepared by the Executive Board.

6.4.4 Resolutions

6.4.4.1 First resolution

The Combined Shareholders, having heard the Executive Board's management report, the Supervisory Board's report, the reading of the Auditors' reports, and the additional explanations provided verbally, approve in their entirety the reports of the Executive Board and the Supervisory Board, as well as the balance sheet, income statement and notes to the corporate and consolidated financial statements for the fiscal year ending December 31, 2002, as presented.

Consequently, the Combined Shareholders approve the management actions taken and accounted for by the Executive Board, and discharges the members of the Executive Board and of the Supervisory Board as well as the Auditors of their duties for the past fiscal year.

6.4.4.2 Second resolution

The Combined Shareholders, having heard the reading of the special auditors report on agreements referred to in Article L. 225-86 of the French Commercial Code, hereby approves all of the agreements concluded or in effect during fiscal year 2002.

6.4.4.3 Third resolution

The Combined Shareholders, taking into account profits for the year of €216,230,219.47, supplemented by €3,514,526.73 from the total merger premium of €187,871,554.07, and in accordance with the law, hereby appropriates distributable earnings as follows:

• Distributable earnings for the year:	€216,230,219.47
• Deduction from the merger premium:	€ 3,514,526.73
• Distributable profits:	€219,744,746.20
• Dividend to shareholders:	€219,744,746.20

Subsequent to this distribution, the merger premium is brought back to €184,357,027.34.

The dividend per share and per investment certificate is set at €6.20, plus a tax credit of €3.10 per share and per investment certification, resulting in actual income of €9.30 per share, to be paid on June 30, 2003.

The Combined Shareholders take note that the amount of dividends distributed for the three previous fiscal years and the amount of the corresponding tax credit were as follows

In euros	Dividends	Tax credit	Actual income
Fiscal year 1999	10.23	5.11	15.34
Fiscal year 2000	22.85	11.42	34.27
Fiscal year 2001	6.20	3.10	9.30

6.4.4.4 Fourth resolution

The Combined Shareholders set the total amount of directors' fees for the Supervisory Board at €145,000.

This decision applies to the fiscal year in progress and will be upheld unless countermanded.

6.4.4.5 Fifth resolution

On the recommendation of the Supervisory Board, the Combined Shareholders ratify the Supervisory Board's January 23, 2003 appointment of Mr. Alain Bugat as member of the Supervisory Board to replace Mr. Philippe Braidy, who has resigned, for the remainder of his predecessor's term, i.e., until the Annual General Meeting called to rule on the financial statements for fiscal year 2005.

6.4.4.6 Sixth resolution

The Combined Shareholders grant full authority to the bearer of an original, an excerpt or a copy of the present meeting report for purposes of filing, publishing and recording same, and for other purposes as he shall decide.

Chapter 7:
Recent developments and future prospects

7.1 Recent developments

February 4, 2003: Contract to supply two reactor vessel heads to nuclear power plants owned and operated by Dominion in the United States. Dominion is one of the largest electric utilities in the United States, with 3.8 million customers in five states. The new vessel heads will be manufactured at the Saint Marcel plant in France.

February 24, 2003: Startup of the Ling Ao-2 nuclear power station in China, two months ahead of schedule. Ling Ao is China's second high-capacity nuclear power plant after Daya Bay, both of whose nuclear islands were supplied by Framatome ANP, a subsidiary of AREVA and Siemens.

February 26, 2003: Framatome ANP, a subsidiary of AREVA and Siemens, and the fuel element fabrication facility in Yibin, China (China National Nuclear Corporation, CNNC) sign a new five-year cooperation agreement for on-site fuel fabrication, inspection and repair operations.

March 31, 2003: Framatome ANP, a subsidiary of AREVA and Siemens, submits a proposal to Teommisuuden Voima Oy (TVO) to build Finland's fifth nuclear reactor.

April 6, 2003: Operations are suspended at the McArthur River uranium mine in Canada due to flooding. Mine operator CAMECO holds a 70% equity interest in the mine; COGEMA, a subsidiary of the AREVA group, holds the remaining 30%. Production will remain on hold for an estimated four to six months. COGEMA's share of McArthur's 2002 production was 2,158 metric tons of uranium, or 29% of the group's total 2002 production.

May 7, 2003: First quarter 2003 sales figures are released.

Millions of euros	1Q2003	1Q2002	Change (%)
Front End	698	730	–4.3%
Reactors & Services	471	339	+38.9%
Back End	388	267	+45.1%
Sub-total Nuclear	1 557	1 336	+16.5%
Connectors	354	400	–11.3%
Corporate and other	19	28	–33.8%
Total	**1 930**	**1 763**	**+9.5%**

First quarter 2003 sales for the AREVA group were €1,930 million, up 9.5% year-on-year from €1,763 million. Sales were up 9.8% on a like-for-like basis, with nuclear up 17.0% and connectors down 11.3%.

From 1Q2002 to 1Q2003, the $/€ exchange rate had a negative impact of €80 million or –4.5% on sales revenue.(1)

Front End division

- Discounting changes in the consolidated group(2) and the impact of customer-exercised power supply options(3), division sales increased 1.3%.
- Sales were up significantly (+17.4%) in the *Mining* business due to increased uranium sales volumes and a favorable product mix effect. Given the size of the group's uranium inventory, the early April 2003 incident at the McArthur mine in Canada should not affect 2003(4) deliveries.
- First quarter 2003 *Enrichment* sales were up sharply compared with those of 1Q2002 (+37.1%) due to a strong level of customer delivery requests in the early part of the year. This increase is much higher than growth expectations for the entire year of 2003.
- Sales for the *Fuel* business unit were down (–27%) year-on-year. Fuel deliveries are a function of reactor loading schedules, which are not evenly spaced throughout the year. Major deliveries made during the first quarter of 2002 represented 37% of the unit's sales for the year. The first quarter of 2003 is more consistent with the annual average.

Reactors and Services division

- Discounting the effect of changes in the consolidated group,(5) division sales rose 28.6%.
- Sales were sharply up in the *Equipment* (+60.8%) and *Reactor Services* (+47.6%) business units, due primarily to major reactor vessel head replacements in the United States.
- The sharp rise in sales for the *Reactors* business unit (+57.2%) reflects follow-on billings on previously completed work. For the full year, sales should level off and be comparable to 2002.

Back End division

- In the *Reprocessing-Recycling* field, which accounts for three-fourths of the division's sales, the very sharp rise in sales (+62.5%) is due to a change in the timing of invoices in 2003

(1) –€52M or –3.9% for the Nuclear Power business and –€28m or –7.0% for Connectors

(2) €11M attributable to the acquisition of Duke Engineering & Services in May 2002

(3) In the enrichment business, some customers have the option to provide the energy needed to perform our services. For like-for-like comparisons, sales figures for 1Q2002 and 1Q2003 must be adjusted by the value of this energy, which was purchased and passed through to the customer previously.

(4) However, as announced on April 16, 2003, the impact on AREVA group operating income could go as high as €3M per month of outage.

(5) May 2002 acquisition of Duke Engineering & Services, which had a positive impact of €35M.

compared with 2002. In 2002, 10% of the sales for the entire year occurred in the first quarter. In 2003, sales should be slightly lower than in 2002 due to a rescheduling of MOX fuel fabrication runs for Japanese clients.

- Performance of major *Reprocessing-Recycling* contracts with EDF and foreign customers continued smoothly on both a technical and a commercial level. In the first quarter of 2003, a training program was conducted for the future operators of the Japanese plant at Rokkasho Mura.
- Sales for the *Logistics* business unit were up (+31.1%), marking a return to normal volumes.

Connectors division

- First quarter 2003 *Communications Data Consumer* sales were down year-on-year (–16.4%), though the sales decline — once again attributable to the telecom sector — was lower than the last quarter of 2002 (–4.2%).
- Year-on-year sales for the *Electrical Power Interconnect* business unit were sharply down (–24.7%), primarily due to the deterioration in the U.S. market, where it has the most exposure, though the sequential sales decline rate was lower (–12%).
- Sales continued to rise for the *Automotive* business unit (+4.1%), translating into a gain in market share at a time when year-on-year car sales were down in Europe (–2.2%) and the United States (–4.4%).
- As announced in December 2002, the *Military, Aerospace and Industrial* business unit (–15%) was sold on April 30, 2003.

May 12, 2003: After the Annual General Meeting of Shareholders, Mr. Pascal Colombani resigned as chairman of the Supervisory Board.

May 15, 2003: Framatome ANP announced a new contract with EDF to inspect nuclear reactor vessels: ''EDF has awarded a €30M contract to Framatome ANP's French subsidiary Intercontrôle to inspect 29 Pressurized Water Reactor (PWR) vessels during the period 2005-2010''.

May 21, 2003: COGEMA Inc. announced that it has been awarded a $29.7M contract concerning the United States Department of Energy ''Yucca Mountain'' project.

June 12, 2003: AREVA's Supervisory Board elected Mr. Philippe Pontet as chairman of the Supervisory Board to replace Mr. Pascal Colombani, who resigned on May 12, 2003. Mr. Alain Bugat was elected vice chairman of the Supervisory Board.

7.2 Future prospects

General trends are given in section 5.1.8. Detailed perspectives by Business Unit are given in paragraphs 4.4.1 through 4.7.5.

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