

The Brass LNG Project



Brass LNG is a company incorporated under the laws of the Federal Republic of Nigeria. The Shareholders are Nigerian National Petroleum Corporation (NNPC) (49%), Eni International (17%), Phillips (Brass) Limited (an affiliate of ConocoPhillips) (17%) and Brass Holdings Company Limited (an affiliate of Total) (17%). The Company was formed to construct and operate a Liquefied Natural Gas Plant to be sited on the Island of Brass, Bayelsa State, in Nigeria's Central Niger Delta following a Heads of Agreement signed in 2003 by the Shareholders.

The contract for the Front End Engineering Design (FEED) of the proposed LNG Plant was awarded to San Francisco-based Bechtel Corporation in late 2004. This followed the completion of conceptual studies that assessed the viability of building an onshore LNG facility in the region of Brass Oil Terminal operated by Nigerian Agip Oil Company (NAOC). The FEED was for two LNG trains, each nominally sized at 5 million metric tons per year.

The primary FEED studies were conducted in 2005 with further optimisation in 2006. This paved the way for the competitive Engineering Procurement and Construction (EPC) tendering process, which is in progress. The facility is targeted to be in operation by 2011.

Natural gas supplies for the facility will come from the substantial gas reserves within oil and gas fields already operated by existing joint ventures. This will be a world-class LNG facility and an important and strategic opportunity for the joint ventures to reduce gas flaring in Nigeria. Furthermore, it will be an additional opportunity for Nigeria to monetise part of its vast natural gas reserves. The project enables the respective companies to be important players in helping to meet the growing worldwide demand for clean energy, and strengthens their long-term relationship with NNPC and the Federal Republic of Nigeria.



Funsho Kupolokun, Group Managing Director, NNPC exchanging the signed Shareholders' Agreement for the LNG Plant with Todd Creeger, MD Phillips (Brass) Limited. Looking on is Dalhatu Makama, Brass LNG's Company Secretary and Legal Adviser.

The first major milestone was the Environmental Impact Assessment (EIA) in May 2006 and thereafter signing of the Shareholders' Agreement in September 2006. The Shareholders' Agreement regulates the manner in which the Company will undertake the project.

The company's marketing strategy aims at developing long-term LNG Sales and Purchase Agreements which provide for maximum returns to the shareholders. The primary market for the LNG will be the Atlantic Basin (North American and Europe), where the company seeks to become one of the key players.

Brass LNG limited is positioned to utilise best industry practices to conduct its business. Special attention will be given to safety of personnel, the public and facilities; protection of the environment; and partnership with all stakeholders, especially neighbouring communities. This will enhance sustainable development which is a key goal of the community. The company seeks to be the leading producer and marketer of LNG.



Kupolokun with Giancarlo Vacchelli, Regional V-P West Africa & Libya for Eni Int'l N.A.N.V. Sarl.



Kupolokun with Jean Luc Porcheron, V-P Brass Holding Company Limited for Total.



Global Forum for Gas Research to Meet in Paris

By George H. B. Verberg, Christian Beckervordersandforth and Marc Florette

There has been a general trend over the last 10 years for gas companies, particularly those in liberalised markets, to reduce R&D expenditure. Given the strategic challenges facing the gas industry, it is time to reconsider the level of R&D expenditure and its business focus and reverse this trend.

After the fruitful IGRC2004 in Vancouver, Canada, much thought went into the future positioning of the International Gas Research Conference and, as reported in previous issues of this magazine, it has been taken fully under the umbrella of IGU. The official name of the conference has changed to the IGU Research Conference, while retaining the IGRC abbreviation.

IGRC is the only gas-related research conference organised on a worldwide basis and the last four events have had an average attendance of over 500 professionals. As a global

forum, IGRC provides an excellent opportunity for interactions among delegates from the wide range of institutions that have gas research in common or benefit from the results.

Preparations are now underway for a new IGRC to be held from October 8-10, 2008 in Paris, France, hosted by the Association Française du Gaz (AFG). The venue will be the La Villette Conference Centre in the Cité des Sciences et de l'Industrie, which is in the north-east of Paris with excellent transport links and is just 25 minutes from Charles de Gaulle airport. The sponsors at press-time included Gaz de France, N.V. Nederlandse Gasunie, Advantica, Petronas and Kiwa Gastec.

The programming of the conference has been reviewed to give greater prominence to the relationship between the gas business and gas research, while the topics will be focused on aspects of strategic importance for the gas industry. Oral presentations will be given on a range of topics such as CO₂ capture and sequestration, methane hydrates, how to increase the efficiency of depleting gas fields, gas and renewables, safety, pipeline integrity, distributed energy generation and the use of information technology to improve distribution management. In addition, poster sessions will be organised related to the gas chain: exploration and production (including LNG), storage, transmission, distribution and utilisation.

The call for papers will be made in the third quarter of 2007 and the final conference programme will be distributed in early 2008, while the deadline for the submission of the papers for the proceedings will be in the second quarter of 2008.

Technological success cannot be taken for granted, it needs to be nurtured through research and development focused on basic science as well as technology breakthroughs. At the end of the day, however, a clear link to market needs is decisive for the interest of companies.

We call upon you and your colleagues to put this conference in your diary, prepare to submit



Vancouver was the host city of the last IGRC (ABOVE) and IGRC2008 will be held in Paris at the Cité des Sciences et de l'Industrie (OPPOSITE).



papers and attend. Since hotel rooms in Paris are scarce be sure to make your reservations as early as possible. Use the IGRC website www.igrc2008.com for links to the selected hotels.

George H. B. Verberg, IGU's Immediate Past President, is the Chairman of the IGRC Policy

Committee, Christian Beckervordersandforth, Head of Development at E.ON Ruhrgas, is the Chairman of the IGRC Programme Commission and Marc Florette, Vice President Research & Development at Gaz de France, is the Chairman of the National Organising Committee of IGRC2008.

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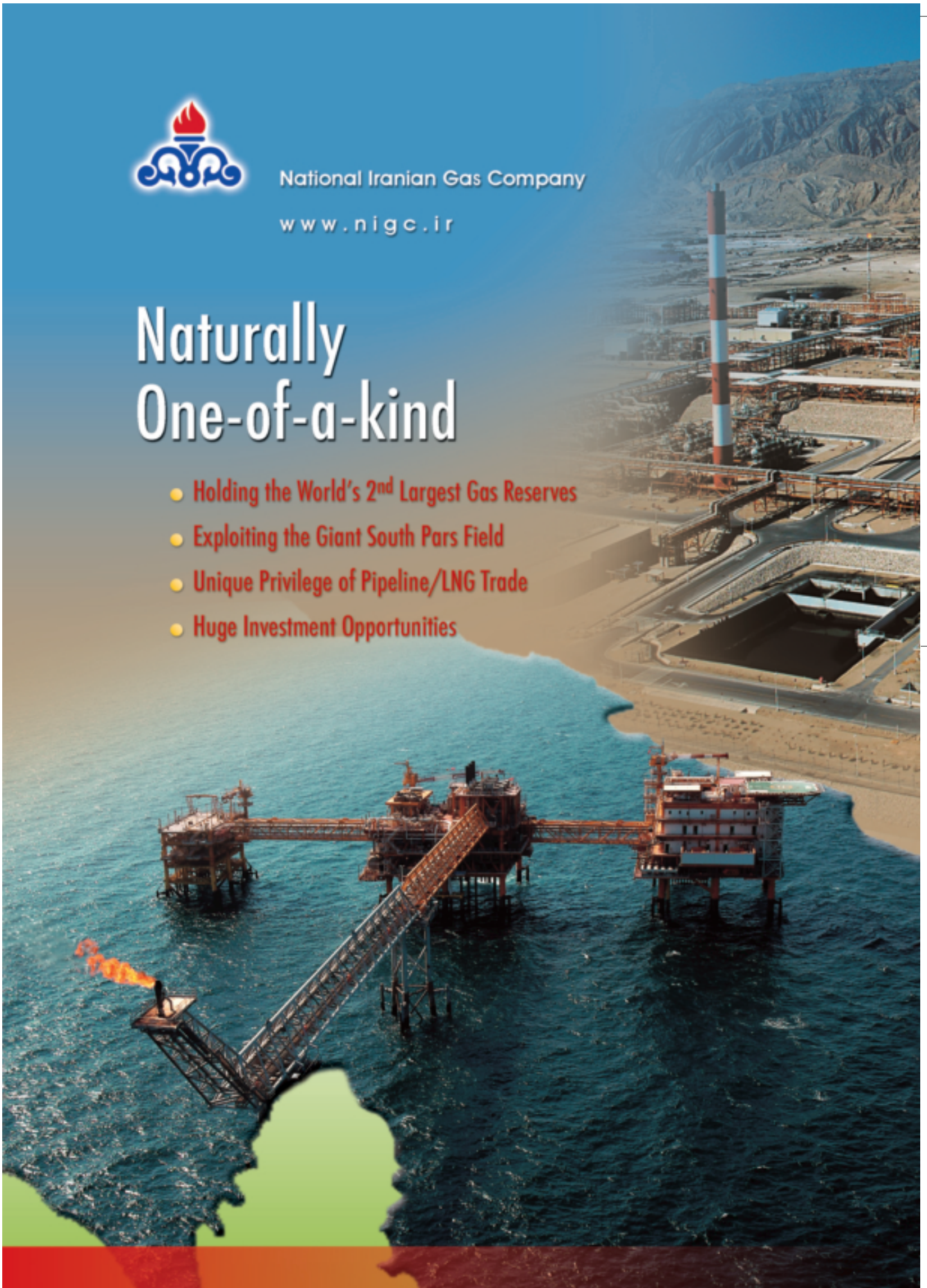


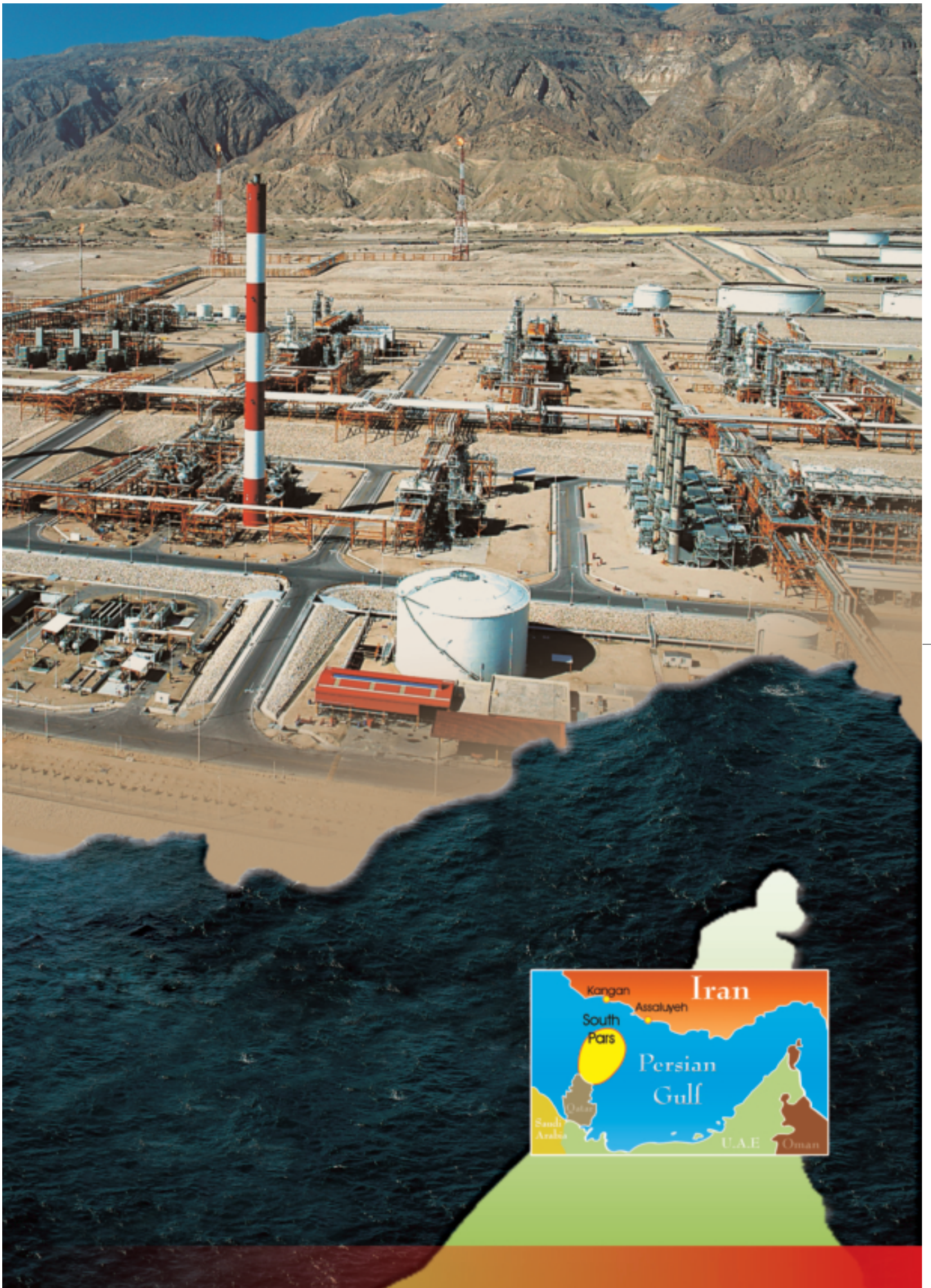
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Memories of an IGU Committee Secretary

By Larry T. Ingels

While *International Gas* necessarily focuses its attention on the business of IGU, it is easy to forget that involvement in, and engagement with, the important work of the Union has great extra-mural benefits as well. There are many opportunities for networking and discovering the rich histories and heritage of the countries in which IGU meetings and conferences take place.

It is heartening to see that involvement from the gas industry in the form of record numbers of nominees for the Study Groups goes from strength to strength, which means that more people can influence the workings of the Union and share experiences with their peers worldwide.



President Reagan addresses the 17th World Gas Conference, which was held in Washington DC, June 5-9, 1988.



Larry Ingels: fond memories.

Here, Larry T. Ingels, a long-serving Engineering Services Director of the American Gas Association (AGA) and four-time Committee Secretary, shares his memories of work with IGU from a personal perspective.

● 1988-1991

I first became involved with IGU in June 1988 when the United States hosted the 17th World Gas Conference in Washington DC. The welcome address was given by US President Ronald Reagan. His wife Nancy also attended and spoke at a ladies' luncheon.

The President of IGU at this time was John Kean Sr, Chairman and CEO of NUI Corporation in New Jersey. (Mr Kean retired as a member of the IGU Council last June in Amsterdam after a long and illustrious career in the international gas industry.)

The fitting theme for WGC1988 was "Creating a One-World Gas Industry", with natural gas being promoted as the "Fuel of the Future". The USSR and the German Democratic Republic (DDR) were still in existence then and the DDR was about to take over the IGU Presidency for the 1988-1991



Triennium. Little did we know at the time of the coming events in the Soviet Union, in Germany and in other countries of Eastern Europe that would have a profound effect on the world and IGU.

I attended this conference on behalf of my boss, AGA Vice President Louis A. Sarkes, who had served as Secretary for previous IGU Technical Committees. Sadly, Mr Sarkes was in poor health and died the following year.

For the 1988-1991 Triennium, the US had the Chairmanship of Committee E – Domestic and Collective Utilisation of Gases. Due to Mr Sarkes' health, I was designated as Secretary for the Committee in 1988. The Chairman was Fred Sullivan, President of Elizabethtown Gas in New Jersey. In addition to accomplishing our technical responsibilities, we made many friends and have fond memories of our meetings.

Committee E developed a musical tradition. One of our members, Mr Shimotani, a Vice President from Osaka Gas, was a harmonica player and brought his instrument to the meetings. Then in the evenings after dining he would play American folk songs and most of us joined in for singing. One of our most memorable meetings was hosted by Osaka Gas in Japan. After business, we met in the evening for music and other entertainment. One evening our hosts provided some professional music, and then representatives from each country were requested to sing a song together from their country. My wife Sue has a beautiful voice and joined Stan Blachman from the AGA laboratories in Cleveland and myself for a song. It turned out to be somewhat "painful" because Stan could not carry a note and constantly threw us off key. Anyway, it was fun! For Japan, Mr



Larry Ingels started his IGU work when John Kean Sr was President. Mr Kean is seen seated right in this picture next to George H. B. Verberg (President 2003-2006). Behind them from left are the current President, Ernesto López Anadón, Hiroshi Urano (President 2000-2003), Claude Détourné (President 1997-2000), Hans Jørgen Rasmussen (President 1994-1997) and Rolf Beyer (Honorary Member).



Onishi, Chairman and CEO of Osaka Gas, sang a song in Japanese that he recalled from his childhood. Our host, Mr Shimotani was amazed. He said he had never heard his chairman sing before!

One other memory from this trip concerns a visit to Kyoto. One of our days at the meeting was a national holiday in Japan, so we had two buses and went from Osaka to the ancient city of Kyoto. In the back of each bus was a small lounge with drinks and a hostess. Our bus got called about halfway to Kyoto to make an emergency stop. The other bus, which had the Germans and some other beer drinkers on board, had run out of beer and had to stop to "refuel".

Another memorable meeting during that Triennium was held in Helsinki in 1990. After the work was over our Finnish host arranged for us to take a weekend cruise to Leningrad (now St Petersburg again). We went to the famous Hermitage Museum which was unprepared for a group of international visitors. The staff found a lady who spoke English and who gave up her lunch hour to give us a highlights tour. The exhibits were beautiful, but strangely some of the guards in each gallery permitted photos while others did not. We also visited the Summer Palace and the front lines when Leningrad was under siege in World War II.

The afternoon of our technical tour was memorable as well. Our host took us on a bus ride to his summer cottage outside Helsinki. It was a nice quiet ride through forests covered with birch trees and roads with elk warning signs. Fortunately, no elks challenged our bus. Also fortunately, the lady who was our guide warned us to use toilet facilities before going to the countryside. It seems that at our host's place, there was a cottage and sauna, but no toilet facilities. Although it was a beautiful place, we stayed there only a few minutes, by majority vote!

German reunification took place in the run-up to the 18th World Gas Conference in 1991. As a result, Ruhrgas took over organisational responsibility under the able direction of Rolf Beyer,

and the conference schedule was moved from June to July in Berlin. During that time there was a heat wave in Germany. Most of the hotels were without air conditioning, so there were a few problems sleeping at night. For myself, I covered with a wet towel for "natural" air conditioning in order to sleep.

During the week my wife and I took a special ride along the old Berlin Wall to capture some of the artwork on camera. All in all it was a very moving experience to be in Berlin at that time and Rolf Beyer was made an Honorary Member of IGU in recognition of his work in ensuring a successful WGC1991.

● 1991-1994

For the next two Triennia I was privileged to be the Secretary for IGU Committee D – Gas Distribution. Our US Chairman was Rudy Stys, Vice President from Public Service Electric & Gas in New Jersey. In those days the Chairmanship of the Committees did not necessarily change for each Triennium. Of course now, the Vice Chairman of the Committee is usually the Chairman for the next Triennium.

In 1992 one of our meetings was held in Melbourne, Australia. Our host was Mr A. J. Baker. It was a long trip from the US, but a very interesting place to visit. This was a chance to see firsthand the unusual animals there. Before, I had just seen them on television or in books, but now I saw at first hand kangaroos, kiwis and platypuses. It was also a good place to get gemstones, such as fire opals. A week was not long enough to visit such a faraway place, but my father was ill and I had to return early. In fact, he died at age 79 while I was on my way back home. Upon my return, I immediately went to Oklahoma to meet with my family for the funeral.

Another interesting place where we met was Cork in Ireland. My mother being Irish, it was a special treat for me. Our host was Gerry Geoghegan of Bord Gáis Eireann. (Gerry's brother Fergal later became a member of Working



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Is within vertically integrated oil and energy company INA, part of Naftaplin - Exploration and Production Division. Commercial and Trade Sector is engaged in the domestic and import gas supply business as well in wholesale of natural gas to all consumers in the Croatian energy market. Our Vision is to maintain our position as a leader in the Croatian wholesale natural gas market and to expand our activities to become a significant player in the region. Our Mission is to promote the use of natural gas aiming at environmental protection, to provide excellent and reliable service to meet our customers needs and expectations so to earn their permanent trust.

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The 20th World Gas Conference in 1997 was in Copenhagen, Denmark.

Committee 4.) I recall that the hills were all bright green and there was good salmon for meals, but it rained every day. We saw the sun only on the day we left. I also remember all of the sheep, marked with red and blue paint to help neighbours tell which sheep were which. The early 1990s were fairly hard economic times for the Irish. The current “boom” had not yet arrived. However, I did see a sign for one enterprising Irishman. It read: “Drinking Consultant”.

The 19th World Gas Conference in 1994 was in Milan, Italy. Our Committee host was Giuseppe Pozzi of Gas Energia SpA. That meeting included a brief visit to La Scala for a taste of opera. Being in Milan also gave everyone an opportunity to visit other beautiful cities in northern Italy, including Florence, Venice and Pisa.

● 1994-1997

Our first Committee meeting in 1994 was in Amsterdam. Our host was Jaap van der Kuil. I remember all of the bicycles – more of them than

people, I think. We also heard that many bicycles went missing and ended up in the bottom of the canals. That seemed still to be the case during this last World Gas Conference in Amsterdam in June 2006. I don’t recall seeing so many bicycles any place else in Europe. However, the city was very clean, the people friendly and the sightseeing great.

The most memorable meeting of this Triennium was in Croatia, but for sad reasons as this was the time of the Yugoslav wars of succession. Our host was Miljenko Šunić from the Gas Utility of Zagreb. While we were away from the city on our technical tour our hosts got the word that their country was under fresh attack. Of course they were all distressed. Fortunately, however, no great damage or injuries were reported. We returned safely to the city and our members were able to leave Croatia later that day without problems.

The 20th World Gas Conference in 1997 was in Copenhagen, Denmark. Our local host was Svend Bomholt, a long-time member of the Distribution

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Larry Ingels stepping out of a Ferrari after a test ride near Milan in October 2004.

Committee. I recall the Mermaid with head intact and the beautiful Tivoli Gardens. Also, Denmark, like The Netherlands is a great cycling country with few hills. This was a return visit for me. I had visited Copenhagen in 1956 as a Midshipman assigned to a US Navy destroyer for summer training.

● **1997-2000**

The UK provided the Chairman for Distribution, now called Working Committee 5 (WOC 5). The Chairman was Chris Le Fevre and the Secretary was Neil Shaw, both from Transco. The 21st World Gas Conference was held in Nice, France, where I was privileged to attend as a poster presenter on the AGA Best Practices Programme. My co-presenter was Bill Kaphing from Xcel Energy in Minnesota. Bill was Chairman of our AGA Best Practices Steering Committee.

● **2000-2003**

France provided the Chairman and Secretary for WOC 5 during the 2000-2003 Triennium. The WOC 5 Chair was Joel Gregoire and the Secretary was Daniel Hec, both of Gaz de France. Daniel is now the Secretary General of Marcogaz. The 22nd World Gas Conference was held in Tokyo, Japan. I attended the meeting in Tokyo as the incoming Secretary for the Distribution Committee, which was re-designated as WOC 4 for the forthcoming Triennium.

● **2003-2006**

This was my fourth and last Triennium as a Committee Secretary (one with Utilisation and three with Distribution). My last Chairman was Peter Cistaro from Public Service Electric & Gas in New Jersey. During the Triennium, our Committee met in London, Washington DC, Milan, Moscow,



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Barcelona and Bratislava. Among our members we were privileged to have one lady for several years – Elzbieta Dzirba from the Polish Oil and Gas Company (PGNiG).

During our stay in Milan, our host Alessandro Soresina from Aem Gas SpA arranged for our members to get a test ride around a test track in a Ferrari.

One other unusual meeting was hosted by Gazprom in a new company hotel near Moscow and included a joint workshop with the Transmission Committee. Each evening we enjoyed colourful folk dancing and singing from the various parts of Russia.

The 23rd World Gas Conference in Amsterdam in 2006 was a great success. In addition to the papers and posters there was an outstanding exhibition. One stand featured an unusual challenge: to build a model bridge designed by



Building Leonardo da Vinci's bridge in Virginia.



WGC2003 in Tokyo.

Leonardo da Vinci. The design was for a bridge held together by interlocking pieces with no nails or other fasteners, something that requires a lot of coordination, teamwork and skill to successfully complete. Leigh Ann Shoji-Lee of Union Gas in Canada and I teamed up for bridge building during the exhibition and we were rewarded with miniature bridge kits. Later, I took the design home and with my oldest son David made some large duplicate pieces for a bridge. Then three of my grandsons and I completed our own bridge as a family project.

The travels, experiences and friendships made through IGU since 1988 are a treasure for me and for my wife Sue, who was with me for most of the meetings. We hope to keep in touch with our international friends in our retirement years.

Blessings to all for your friendships!

Larry T. Ingels, P.E., recently retired as Engineering Services Director of the American Gas Association (www.aga.org).

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SPP is a Slovak brand with many years of experience and tradition in the energy sector. Last year the gas industry in Slovakia commemorated its 150th anniversary. SPP is the largest carrier of natural gas in the EU and on the domestic market it serves 1.4 million customers.

Entry to the EU brought new challenges. Preparations for the liberalised gas market in the EU were also made by a key, for Slovakia strategic, entity in the energy business – SPP. In July 2006 the company underwent the process of legal unbundling. Based on the requirements of both European and Slovak legislation to create independent network operators for transmission and distribution, by July 1, 2006 the SPP group was established. Since then the SPP brand has been represented by three legally independent entities: the parent company SPP, a.s. and two 100% subsidiaries: SPP-preprava, a.s. (transmission) and SPP-distribúcia (distribution).

► Largest gas carrier in the EU

Slovakia has a strategic position between European centres of gas consumption on one side and Russia as a producer on the other. The gas pipelines under the SPP

brand have formed part of the international transit network for almost four decades already. Today, the transmission company SPP-preprava is the largest natural gas carrier in the European Union.

► Densest gas distribution in the EU

Thanks to the well developed gas pipeline distribution network owned by SPP-distribúcia, Slovakia is, together with The Netherlands, the most densely covered country in the EU in terms of gas distribution. In Slovakia gas is distributed to more than 76% of all municipalities, which means as much as 94% of the population has access to natural gas.

Following partial privatisation in 2001 (shareholders being the State, E.ON Ruhrgas and Gaz de France) and five years of intensive restructuring, the SPP group continues to optimise all internal and external processes and endeavours to raise further the efficiency, transparency and competitiveness of all the group's companies. The priority of the traditional and reliable SPP brand is to improve and extend the quality of its portfolio of services for customers and business partners.

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EMFESZ's primary business involves the continuously expanding Hungarian natural gas market, which is characterised by a high gas pipe penetration and seasonal consumption trends.

Currently, some 40% of all energy consumed in Hungary comes from natural gas. Some 75-78% of all gas used here is imported. Natural gas needs are covered primarily through a contract with Gazprom.

► Milestone

Therefore importing Central Asian gas to Europe via our company constituted a significant milestone in the diversification of energy sources, the task set forth by the EU and the European Energy Charter.

In accordance with European Union regulations, the first steps have been taken in Hungary in the past few years to create a free market in natural gas, which will be completed in 2007. Currently, the domestic market is served by three active gas providers, with our company claiming 75% of all free market consumers and nearly 60% of the total volume provided to them.

We now have about 50 consumers with 180 delivery points. Last year EMFESZ delivered 2.6 billion m³, out of which nearly 1 billion m³ was provided directly to the competitive market. This year the company plans to sell 3 billion m³, which will cover 20% of Hungarian gas consumption. The volume stored for the present gas year by EMFESZ has exceeded 150 million m³.

Our gas comes from Central Asia, primarily from Turkmenistan. Natural gas travels through pipelines inherited from the Soviet Union over several thousand kilometres across five states, before it finally reaches the Ukrainian-Hungarian border. There, EMFESZ receives the gas from the giant RosUkrEnergo AG (RUE), our strategic partner.

Our primary goal is to provide quality service, consistently competitive prices, and favourable terms of payment to all our customers. EMFESZ has been active for nearly two years, with gas supply overseen by a team of highly qualified professionals. They use a 24-hour dispatch centre with an advanced IT platform that conforms to the ISO 9001-2000 quality assurance system. Thus, our business offers the background and references necessary to prepare consumers currently supplied by public utilities to move onto the competitive market, and to sell them natural gas under favourable terms.

As a result of its good strategy EMFESZ Ltd managed to increase total sales almost 15 times in 2005 as compared to the previous year and turned over US\$437.6 million (based on the Hungarian National Bank's average rate as of December 31, 2005). Operational profit went up from negative to US\$50.1 million as did net income, which approached US\$47.1 million. A Polish subsidiary was launched recently to operate in the free gas market.

We strongly believe that this unique take-off makes EMFESZ Ltd a genuine rising star in the world energy market.

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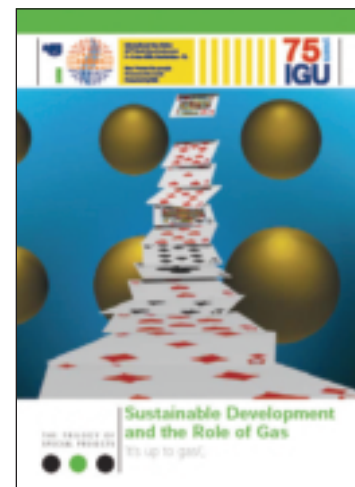
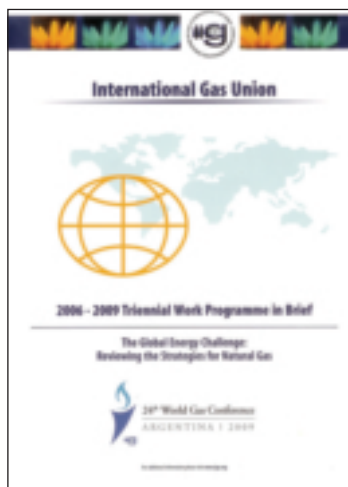
Publications and Documents Available from IGU

As a non-commercial organisation promoting technical and economic progress in the gas industry worldwide, IGU offers its publications free of charge and you are invited to order the IGU publications currently available from the Secretariat. (All documents are A4 format unless stated otherwise and those that can be downloaded from the IGU website are indicated.)

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2006-2009 Programme

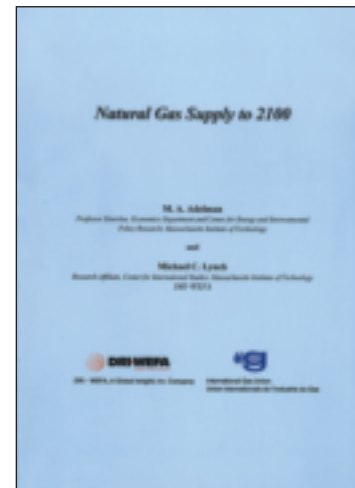
- Strategic Guidelines 2006-2009.
- Triennial Work Programme in Brief.



- Triennial Work Programme.

Scientific and technical papers and documentation

- Natural Gas Supply to 2100, M. A. Adelman and Michael C. Lynch, DRI-WEFA, IGU, October 2002, (51 pages 18 x 25.7 cm). This booklet outlines the authors' assessment of a long-term supply curve for natural gas.
- Seven Decades with IGU, ISC 2003, (186 pages). IGU's 70th anniversary fell in 2001 and at the next World Gas Conference in 2003 this book was launched containing articles on the organisation's history and on contemporary issues facing the international gas industry.
- Proceedings of the 20th World Gas Conference, Copenhagen 1997, (CD-ROM).
- Proceedings of the 21st World Gas Conference, Nice 2000, (CD-ROM).



- Proceedings of the 22nd World Gas Conference, Tokyo 2003, (available on www.igu.org).
- Proceedings of the 23rd World Gas Conference, Amsterdam 2006, (CD-ROM).



- Worldwide Underground Storage (UGS) database, (available on www.igu.org).
- Gas to Power Global Outlook, (brochure, 12 pages).
- Sustainable Development and the Role of Gas, (brochure, 12 pages).
- The Art of Regulation, (brochure, 8 pages).
- International Gas, ISC, October 2006, (196 pages). The sixth issue of the IGU Magazine.

IGU organisational information

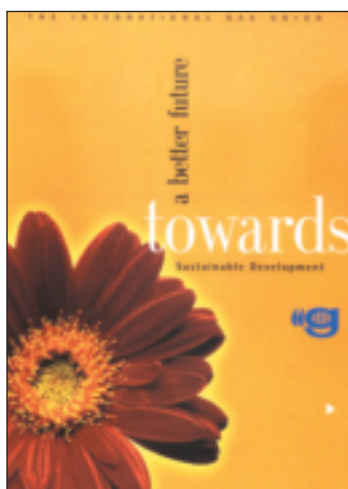
- IGU Articles of Association, (A5, 28 pages).
- IGU Guiding Principles for Sustainable Development, October 2003, (A5, 12 pages).
- News, Views and Knowledge on Gas – world-

wide, (3 pages). This general brochure gives a concise introduction to the organisation together with its Vision and Mission.

- A Better Future Towards Sustainable Development, (5 pages). This brochure highlights IGU's position in promoting natural gas as a part of the solution to climate change.
- IGU Organisation Chart 2006-2009, (4 pages).

Apart from being available in print format, the following publications can also be downloaded from www.wgc2006.nl/sprb:

- Gas to Power Africa
- Gas to Power China
- Gas to Power Europe
- Gas to Power India
- Gas to Power Japan
- Gas to Power Korea
- Gas to Power North America
- Gas to Power North East Asia – Taiwan, China
- Gas to Power Russia
- Gas to Power South America
- Gas to Power South East Asia and Australasia
- Report Regulation
- Report Sustainability
- The Paradigm Change in International Natural Gas Markets and the Impact on Regulation
- Micro CHP in Perspective



RasGas, The Energy To Transform

RasGas is one of the premier integrated liquefied natural gas (LNG) enterprises in the world. Since its creation in 1993, RasGas has developed world-class facilities for the extraction, storage, processing and export of LNG, and has entered into long-term agreements to supply LNG to customers in Korea, India, Italy, Spain, Belgium, Taiwan and the United States of America. In addition, RasGas is a first-rate provider of condensate, high quality oil and natural gas liquids such as propane and butane. RasGas has emerged as a leading player in the global natural gas industry, supplying LNG to international customers, operating its own fleet of LNG tankers and initiating technology-led projects such as the production and sale of helium.

Operating from the State of Qatar, RasGas benefits from the massive resources of the North Field. Qatar's North Field is one of the world's largest single discovered sources of non-associated natural gas, with recoverable estimated gas reserves of more than 900 trillion cubic feet and 23 billion barrels of condensate, representing about 15% of proven world gas reserves. With such a significant gas position, Qatar is quickly becoming the LNG capital of the world. The Qatari government has set a goal of delivering 77 million tonnes per annum (Mtpa) of LNG by the end of the decade and RasGas will play a considerable role in meeting this goal.



RasGas views its responsibility for the preservation and development of the environment as a core commitment.



RasGas is one of the premier LNG enterprises in the world.

For more than a decade, RasGas, as a subsidiary of Qatar Petroleum (QP), the Qatar state energy company, has worked together with its other shareholder ExxonMobil to bring vital energy resources to world markets. This long-term relationship has been one of mutual understanding, goodwill and fruitful cooperation.

LNG is the energy of transformation. On a global level, LNG is becoming the energy source of choice for many countries, with power companies turning to LNG as an alternative to less environmentally friendly oil and coal.

▶ **RasGas, the Corporate Family**

▶ **RasGas Company Limited (RasGas)**

Established in 2001, RasGas acts as an operating company on behalf of its project owners, to manage and supervise the design, construction and operation of various facilities under the terms of a 'Services Agreement for Operation and Maintenance' signed in 2002. RasGas is the employer of all staff working on project owner assets.

▶ **Ras Laffan Liquefied Natural Gas Company 'RL'**

The first company of RasGas' family, established in 1993 to produce 6.6 million tonnes per annum (Mtpa) of LNG and related products from its two trains; LNG Trains 1 and 2. RL's key customer is Korea Gas Corporation (KOGAS).

▶ **Ras Laffan Liquefied Natural Gas Company Limited (II) 'RasGas (II)'**

Established in 2001 to produce 4.7 Mtpa of LNG and related products from each of its Trains 3 and 4 as well as Train 5, which is scheduled to come on



line in early 2007. RasGas (II)'s key customers are Petronet of India, Edison Gas of Italy, CPC of Taiwan, Distrigas of Belgium, Fluxys LNG of Zeebrugge and Endesa of Spain.

▶ **Ras Laffan Liquefied Natural Gas Company Limited (3) 'RasGas (3)'**

Established in 2005 to produce 7.8 Mtpa of LNG and related products, from each of Trains 6 and 7, which are currently under construction. RasGas (3)'s key customers will be the United States of America, Europe and Asia.

▶ **RasGas, the Pacesetter**

RasGas' vision is to be the pacesetter in the LNG industry and it is continuously pushing industry boundaries. In May 2005, a groundbreaking agreement was signed with QP, ExxonMobil and Edison for the construction and maintenance of an LNG regasification facility – the Adriatic LNG Terminal – off the coast of Italy. A second LNG regasification terminal – The Golden Pass – is under construction on the coast of the Gulf of Mexico. These significant alliances represent Qatar's strategic move into the LNG terminal and regasification business and will maximise RasGas' value chain. A key focus for RasGas is ensuring safety, reliability and availability of terminals receiving RasGas LNG.

Development through innovation is a fundamental factor in RasGas' success in the energy industry. A major landmark in the development of Qatar's hydrocarbon diversification strategy was successfully reached when Qatar's Ras Laffan Helium Project achieved first production of liquid helium in 2005. The expansion of LNG production at RasGas has created an opportunity for Qatar to become one of the world's few producers of helium gas and by 2010, Qatar aims to be the second largest producer with a 20% share of the world market.

RasGas considers the safe and reliable transportation of LNG to be a vital link in building its reputation as a world leading LNG producer. To guarantee this safety and reliability,

RasGas works closely with its customers on fleet requirements. It is acquiring a long-term charter fleet of LNG tankers of its own to ensure the highest standards in marine transportation.

▶ **RasGas, protecting the Environment**

RasGas views its responsibility for the preservation and development of the environment as a core commitment, and engages in a range of innovative programmes, some directly concerned with the LNG industry and others more broadly affecting the natural environment of Qatar.

▶ **RasGas Health and Safety**

RasGas' ongoing focus on incident and accident prevention and its drive to continuously improve operating practices ensures the risk of accidents and incidents is minimised. As a result, the company is one of the industry leaders in safety performance. RasGas is proud of its health and safety record and remains committed to maintaining the highest level of safety for all its employees and contractors. In 2006, its achievement included one million hours of onshore production, eight million hours of drilling operations, 15 million hours of onshore construction and one million hours of offshore construction without a single lost-time incident.

For further information on RasGas and its operations, please visit our website at www.rasgas.com



The Fuwairit LNG tanker takes on supplies at Ras Laffan.



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2007

April 24-27
LNG-15
Barcelona, Spain

May 3-5
IGU Executive Committee
Montreux, Switzerland

October 22-25
IGU Council Meeting
St Petersburg, Russia

November 9-15
World Energy Congress (WEC
2007)
Rome, Italy

2008

March 26-28
IGU Executive Committee
Port of Spain, Trinidad and
Tobago

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Message from the Secretary General: Søren Svendsen.

June 29-July 3
World Petroleum Congress (WPC
2008)
Madrid, Spain

September 22-25
IGU Council Meeting
Gyeongju, Korea

October 8-9
IGRC 2008
Paris, France

2009

June 3-5
IGU Executive Committee
London, UK

October 5
IGU Council Meeting
Buenos Aires, Argentina

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The First Council Meeting of the 2006-2009 Triennium in Lima, Peru: TgP (28), Suez Energy International (29 upper), David Jumba/Perúpetro/Global Eventos (29 lower, 32, 33, 34 & 36).

IGU and AGA Forge Greater Cooperation: AGA (38), Guus Pauka/WGC2006 NOC (39).

Countdown to the 24th World Gas Conference: WGC2009 NOC.

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Qatar Starts GTL Production: Sasol Chevron (119, 120 lower & 122), Royal Dutch Shell plc (120 upper).

European Pipeline Development – Securing Energy

IGU Events and IGU-related Events 2007-2009

October 5-9
24th World Gas Conference
Buenos Aires, Argentina

You can find links to many of the above events by visiting www.igu.org and clicking on "Events". Under "Energy-related Events" in the side menu you can also find a link to the WEC Events Calendar displaying a multitude of energy-related events

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Norway Addresses CO₂ Concerns: Statoil (166 & 167), Petoro (168), Gassnova (170), Gassco (172).

Global Forum for Gas Research to Meet in Paris: Jean Schweitzer/Danish Gas Technology Centre (178), www.cite-sciences.fr (179).

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ANGVA 2007
Bangkok, Thailand 27-29 November 2007

GASTECH2008
Bangkok, Thailand 10-13 March 2008

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