



deepwater and more generally offshore developments, processing and marginal fields exploitation will be reviewed. Cost reduction considerations will also be of prime importance in the selection of the most significant upstream developments.

Market impact

This is an essential point as it represents the raison d'être of any project. Whether the field can help to improve a nation's self-sufficiency, to develop a new downstream gas market or to allow a growth in revenues for the country through exports is of particular interest.

Sustainable development

The issue of sustainable development as well as environmental and ecological concerns in producing from the reservoirs, sometimes in very sensitive regions, will be taken into account. There will be particular emphasis on gas gathering and flaring issues, CO_2 re-injection and storing and HSE aspects of the projects as well as political considerations.

Future potential

This criterion will enable us to identify the future trends in producing areas (including fields that are not yet in production) and highlight new techniques to improve production from already developed fields.

Using these criteria, while also including statistics on reserve estimates and production profiles, the case studies will provide a complete description of the original project, how it has developed and the changes which have occurred through its life. This is also an opportunity for the field operators to convince us that theirs is one of the world's most significant gas fields. At the World Gas Conference in Amsterdam in June 2006, we will reveal which reservoir has been acclaimed as the world's most significant gas field.

Study Group 1.2

Our second Study Group comprises a group of 24 professional executives from a large range of bodies including universities, petroleum institutes and national, international and independent companies. Some of these are focused on gas, others deal also with oil.

The Study Group's Leader is Dominique Copin of Total, while Muhnie Hwang of the Korea Gas Union is Deputy Leader and Mark Howard of BP is Technical Advisor. There are four representatives from Asia (Korea and Japan), one from Africa, 11 from the newly enlarged European Union and eight from eastern Europe (Ukraine, Serbia & Montenegro, Croatia and Romania). We feel that as a group, we have a quite large range of competencies particularly in reservoir engineering, processing, development architecture and chemical treatments.

The Study Group does not cover the whole world as there are no active representatives from the Americas, most of Africa and the Middle East. Similarly, our forte is production; we do not have a lot of experience in exploration. However, we feel that there are enough competencies in the institutions which we represent to overcome these handicaps. The variety of experience of the members means that we can derive a lot of personal and professional benefit. Discussions are lively and efficient owing to the ability of each to contribute actively to the debates.

Aims and achievements

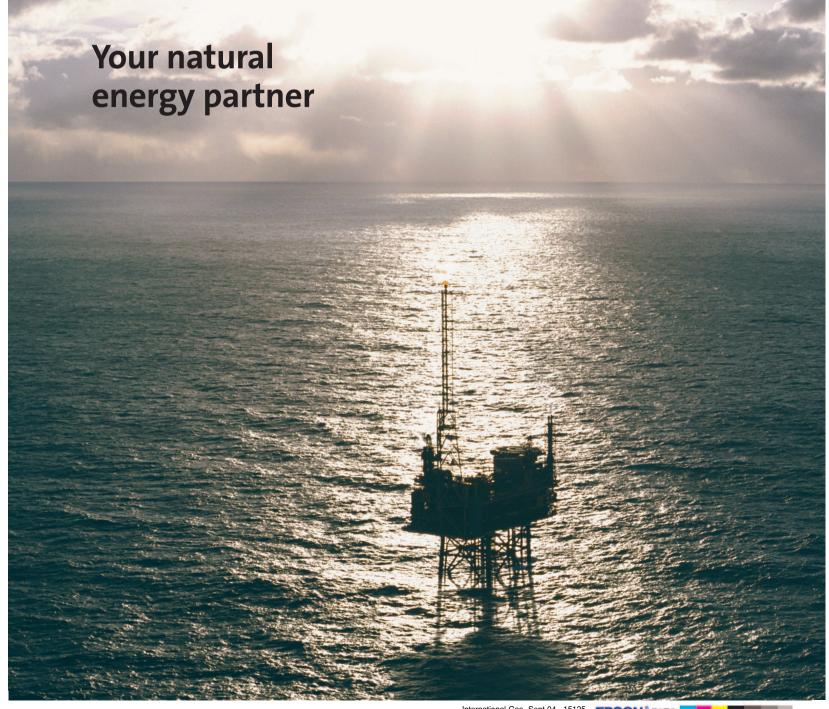
The goals, which have been previously defined for our Study Group, are interesting and diverse:

- To identify the most interesting and current developments in E&P and gas treatment,
- To look at new geographical and geological areas of gas exploration, and
- To consider new management approaches and political and commercial arrangements for licensing and for the sale of the production stream.

BG Group

All over the world the increasing demand for energy is driving the search for natural gas. BG Group has an outstanding record for finding and commercialising natural gas reserves combined with a deep understanding of gas markets. Using our industry leading skills, we are connecting gas to markets around the globe.

Natural gas. It's our business





Not many people realise that the gas conversion market is now a similar size to the global LNG trade. Sasol's slurry phase technology will be used in two new GTL plants being developed in Qatar and Nigeria.

We identified what we thought were the most relevant developments in terms of E&P and gas processing technologies. This was achieved by a very open approach whereby everyone was invited to propose his views on the matter. Unsurprisingly, the result was a long list of items which had to be selected, bearing in mind their importance to the gas industry (as opposed to E&P in general), and properly classified. The sub-group considers that the topics can be organised into five main issues. These issues often deal with E&P and gas processing technology as well as with geology and geography.

The first issue is the processing, removal and reinjection of acid gas. We will elaborate on the removal of CO₂, NO_x and other acid gases using new technologies like membrane technologies. We will also work on gas sequestration. No doubt this will be of interest to all, particularly from a sustainable development point of view.

The second one is intelligent gas reservoir management. Smart wells, under balance drilling, stimulation, new well designs and extended reach drilling will be considered.

Then there is the question of methane hydrate potential, which we have been asked specifically to address. There are different opinions around the table on this matter and the debates will be lively.

The fourth issue is called geographical and geological hotspots. It will cover deep gas reservoirs, foothill areas, tight reservoirs, the development of satellite technologies and developments in high pressure/high temperature E&P.

Finally, there is the issue of gas chemical conversions, like the well-publicised GTX conversions, X meaning many types of liquids. Not many people realise that the gas conversion market is now a similar size to the global LNG trade.

Next steps

We are preparing an agenda for these issues and should be ready to enter into more detail at the next meeting.

It has been decided that we will not work specifically on the management side of our scope of work (new management approaches and political and commercial arrangements for licensing and for the sale of the production stream). However, we intend to invite some experts to make presentations on this topic during the Amsterdam World Gas Conference in 2006.

We are looking forward to sharing our provisional findings and views with other Committees in Copenhagen. And last, but not least, we are strongly committed to spending pleasant and memorable meetings during the next two years as a Study Group.

Marie-Françoise Chabrelie of Cedigaz is Technical Advisor, Study Group 1.1, Dominique Copin of Total is the Leader of Study Group 1.2 and Rebecca Hyde of Centrica is the WOC 1 Secretary.

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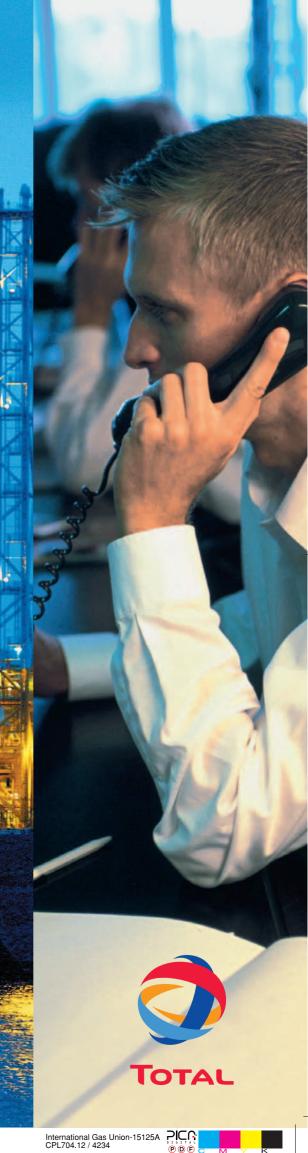
WOC 1 TAKES A NEW APPROACE



Total is a leading player in the dynamic world gas market, with experience and expertise at all stages of the gas chain, from exploration and production to pipeline transport, the LNG chain, gas distribution and electricity generation.

Through its trading expertise the Group has become a major trader of gas, in particular in the European market where development is becoming easier as a result of new directives on the opening-up of the energy markets. Supplying gas to industry requires great contractual flexibility, which Total has developed through its experience.

Our involvement in all aspects of the industry makes Total a partner of choice for gas projects worldwide.





The Benefits of IGU Associate Membership

By Yves Tournié

Last year's revision of IGU's Articles of Association created the category of Associate Member to open up the Union to more than one representative from each country. There are now 16 Associate Members and Total is proud to have been one of the first to join the new category.

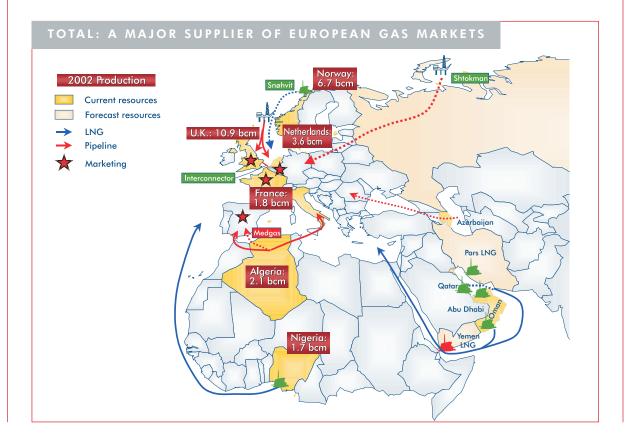
Reasons for becoming an Associate Member

Total has long been involved in IGU's work through the French Gas Association (AFG). For instance, along with Gaz de France and other AFG members we were a key organiser of the 21st World Gas Conference, which was held in June 2000 in Nice, France. During the last Triennial Work Programme (TWP), we had six delegates sitting on different Working Committees (WOCs).

Today, Total is the world's fourth-largest publicly-traded, integrated oil and gas company and a world-class chemicals manufacturer. We are present in 130 countries with operations covering the entire oil and gas chain, from exploration and production and liquefied natural gas to crude oil and petroleum product refining, marketing, trading and shipping (see *Table 1* and *Figure 1*).

Given our long-standing contribution to the IGU and our position as a top-tier global gas producer and energy supplier to Europe, Total sees Associate Membership as a natural extension of our historic role. As the gas industry evolves, especially in Europe, it is important that individual companies like Total assume a more formal, direct responsibility in IGU to guide and positively influence its development.

кібнт Figure 1.



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THE BENEFITS OF IGU ASSOCIATE MEMBERSHIP



Involvement in IGU work

Total became one of the first IGU Associate Members in March 2003 and I am honoured to have been elected to the Executive Committee to represent Associate Members. Total has also committed resources to various IGU Working Committees and has nine representatives on them (see *Table 2*).

Total will leverage its position as a major oil and gas company to support the 2003-2006 TWP.

WOC1

Total operates three gas projects that have set industry benchmarks: Elgin & Franklin in the North Sea (high pressure/high temperature development), Canyon Express in the Gulf of Mexico (ultradeepwater production and gathering), and South Pars in Iran (a world distance record for multiphase transportation). The Group is also at the forefront of sour gas production and treatment technology, which will open up huge new resources in the coming years. Our gas reserves stood at 22.3 tcf (624 bcm) at December 31, 2003, while production totalled 1.75 tcf (49 bcm) in 2003.

WOC2 & WOC3

Total operates transportation facilities that carry 800 million barrels of oil and more than 60 bcm of commercial gas each year. This includes 12,500 kilometres of natural gas transmission systems in various countries and major underground gas storage facilities in southern France. We have helped to develop gas transmission infrastructure, including pipelines to connect our North Sea production sites to the main terminals in western Europe (we have a 10% interest in the Interconnector). More recently, we have built up an extensive presence in gas transmission in South America's Southern Cone and are a partner in a large number of projects supplying Argentina, Chile and Brazil with gas from fields in Argentina and Bolivia.

WOC 5

Gas-fired power plants already account for 50% of

| KEY INDICATORS FOR | TOTAL | | |
|---------------------------------|------------|----------|-------|
| Financial results (€ billion) | 2003 | 2002 | 2001 |
| Net income | 104.7 | 102.5 | 105.3 |
| Cash flow | 12.5 | 11.0 | 12.3 |
| Capital expenditure | 7.7 | 8.7 | 10.6 |
| Operating data | | | |
| Oil and gas production (mboe/d) | 2.54 | 2.42 | 2.20 |
| Oil and gas reserves (bboe) | 11.40 | 11.20 | 10.98 |
| Workforce: 110,783 employees in | over 130 c | ountries | |

the growth in electricity demand. In addition to our stake in Humber Power, Total is also active in power generation via partnerships in plants in Argentina (Hidroneuquen and Central Puerto) and Thailand (the Bang Bo cogeneration facility). The Group operates 5357 MW of power generation capacity worldwide, including hydroelectric plants.

Closer to the cutting edge, we lead a consortium that recently acquired, upgraded and expanded the Taweelah A1 power generation and seawater desalination complex in Abu Dhabi. This industry benchmark gave us our first opportunity to

| A L | REPRESENTATIVES | |
|-----|-----------------|--|

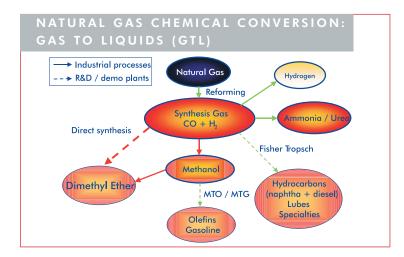
| Committee | Led by | Total representative |
|-----------|-----------|----------------------|
| EXC | N/A | Y. Tournié |
| WOC 1 | UK | D. Copin |
| WOC 2 | Russia | C. Aldebert |
| WOC 3 | Spain | M. Tallec |
| WOC 5 | France | G. Houston |
| PGC A | Argentina | J. P. Gourlia |
| PGC B | Germany | P. Sauquet |
| PGC C | Italy | J. M. Merzeau |
| PGC D | Algeria | J. M. Hosanski |
| | | |

Table 1.

LEFT Table 2.

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ABOVE Figure 2.

play a key role in a power and desalination project, from design and construction to operation and maintenance.

PGC A

Human health, operational safety and environmental protection are critical priorities for Total. We carefully integrate our operations into host communities by contributing to local economic and social development in cooperation with local authorities. These initiatives and the responsible use of resources are underpinned by our assertive commitment to sustainable development.

PGC C

Supplying gas to industry requires significant contractual flexibility, which Total has developed through our trading and marketing operations. The energy market deregulation that began in the United Kingdom in the 1980s has enabled us to become the leading supplier of gas to that country's industrial and commercial markets. Our trading and marketing experience has positioned us to capitalise on further market liberalisation across Europe, where our risk management expertise is already widely recognised.

PGC D

Total is one of the world's top three producers of

LNG, which is experiencing fast-growing demand to serve markets located far from gas production areas.

Total was a pioneer in the LNG industry, helping to set up the world's first LNG plant in Algeria in the 1960s. We are currently a partner in a number of liquefaction plants in the Middle East (in Qatar, Oman and Abu Dhabi), the Atlantic Basin (Nigeria) and Asia (Total supplies the world's largest liquefaction plant at Bontang, Indonesia). We have interests in 40% of worldwide production capacity. We are also a partner in the Snøhvit LNG plant, currently under construction, which will be the first LNG facility in Europe.

Further downstream, we also promote, via associated company Gaztransport & Technigaz (GTT), the development of membrane technology for LNG carriers, which makes optimum use of the shape of the ship's hull. Total boasts extensive know-how in the field of gas storage, and was also the first to develop spot markets, thus contributing to the growth of LNG consumption.

Total innovates in LNG technology with GTT to enable LNG shippers to enhance safety and optimise thermal efficiency. We also support gasto-liquids (GTL) technology with the development of dimethyl ether (CH₃-O-CH₃) as a new clean fuel derived from this conversion process (see *Figure 2*). Total works with JFE (formerly NKK) on direct synthesis technology, using a one-step process that improves thermal efficiency to 68%, with dimethyl ether replacing fuel oil in remote power generation and LPG for domestic applications and automotive diesel, starting with Japan and other Asian countries.

Benefits and recommendations

As a global natural gas operator, Total brings to the IGU a significant knowledge base that extends across the gas chain. However, many issues go beyond the scope of any one company and must be dealt with by the industry as a whole. This is where Total hopes to share and learn from other gas companies working directly in IGU as Associate Members, with common, pragmatic objectives for the future.

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THE BENEFITS OF IGU ASSOCIATE MEMBERSHIP



A three-year IGU session is a very short time in the life of the gas industry, since most major issues are complex and tend to evolve slowly. None-theless, Total is convinced that a shared industry approach is necessary to deal with many of the most important issues, which transcend national boundaries and individual interests. We also believe that IGU is well positioned to play an

important role in these areas and are prepared to meet our responsibilities as an Associate Member. We would encourage other gas companies to consider their position and the value of having a Union that is clearly backed by the industry.

Yves Tournié is Vice President Technology, Total. (For more information see www.total.com.)

TOTAL AT A GLANCE

Upstream

Total's oil and gas production increased by 5% to 2.54 million barrels of oil equivalent (boe) per day in 2003 and is supported by reserves of 11.4 billion boe and a portfolio of assets distributed evenly among the world's oil-producing nations. At current production rates, the Group has a reserve life of 12.3 years. The North Sea, Africa and the Middle East are our main production regions, followed by south-east Asia and the Americas. Gas production rose 6%, driven primarily by the Gulf of Mexico, Indonesia and the North Sea.

Total's gas and power business encompasses natural gas transmission and storage and power generation from combined cycle gas plants, as well as renewable energies. We are also strengthening our positions in natural gas, electricity, LNG, LPG and coal marketing and trading. These businesses are conducted mainly in Europe and the Americas, with a growing presence in Asia. Our first wind farm was inaugurated at the Les Flandres refinery in France in September 2003.

Downstream

Total is Europe's largest refiner and marketer, operating 13 of the 28 refineries in which we have interests. Our retail network comprises more than 15,800 service stations, mainly in Europe and Africa. In 2003, Total refined 2.48 million barrels of oil per day (b/d), up 6%, and sold an average of 3.65 million b/d of petroleum products.

Outside Europe, we are focusing on fastgrowing markets in Africa, where we are the second-biggest operator, with marketing activities in more than 40 countries, as well as in the Mediterranean Basin and in south-east Asia. We are pursuing a strategy of international development in specialty products, and are a front-ranking player in lubricants in 140 countries, in LPG in nearly 50 countries and in aviation fuel with stations at 550 airports. We are a leading global trader of crude oil and refined products, with volumes totaling around 5 million b/d in 2003.

Chemicals

Our chemicals business encompasses base chemicals and polymers related to our refining operations, intermediates and performance polymers, and specialties for industrial and consumer use, which include rubber processing, resins, adhesives and electroplating.

In February 2004, Total unveiled a plan to restructure the chemicals business to create a new, decentralised organisation that will eventually become independent. The new structure, provisionally called CIP, will consolidate the chlorochemical, intermediate and performance product assets currently held by Atofina, which will continue to manage petrochemicals, specialties and fertilisers.

The petrochemicals segment is continuing to develop synergies with refining and to restructure its operations in mature regions (Europe and the United States), while at the same time stepping up its expansion in Asia.

The specialties businesses are demonstrating their ability to perform satisfactorily despite a tougher environment.

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TBG: Excellence and Safety in Natural Gas Transportation in Brazil

As owner and operator of Latin America's largest gas pipeline, TBG (Transportadora Brasileira Gasoduto Bolívia-Brasil S.A.) transports natural gas from Bolivia for use in Brazil.

The company arose from a partnership between Petrobras and international energy segment majors; 51% of TBG stock is held by GASPETRO (a Petrobras subsidiary), 29% by BBPP Holdings Ltda. (BG, El Paso and Total, in equal shares), and 12% by Transredes (of which Bolivian Pension Funds have 6%, and Shell and Esae [Enron] 3% each), and finally Shell and Esae have direct holdings of 4% each.

TBG was incorporated in 1997 as Brazil's first company specifically for high-volume high-pressure natural gas transportation. Its modern and dynamic approach means it is constantly raising its sights in terms of productivity and setting increasingly ambitious targets for natural gas delivery. By June 30, 2003, it had already reached the level previously set for 2007 with its maximum transport capacity of 30 million cubic metres per day. This target had been brought forward four years in line with the Brazilian government's guidelines and to meet demand from its customer Petrobras.

Its current gas transportation contracts (on a ship-or-pay basis for two clients, Petrobras and British Gas) are being operationalised and managed through the Gas Management System (GMS), which is integrated with operating and control (SCADA) and corporate control systems (using SAP), so all procedures dealing with orders, operations and invoicing are automated.

In 2003, TBG transported a total of 5,157 million cubic metres of natural gas, corresponding to a daily average of 14.12 million cubic metres

and an 18.86% increase over 2002. On May 18, 2004, TBG recorded the highest volume of natural gas transported in one day – 23.89 million cubic metres – since commercial activities started.

Promising developments and expansion are the key features in the scenario for the natural gas market in Brazil and for TBG's prospects too. New finds last year tripled Brazil's reserves. With its new gas and chemicals complex on the Bolivian border, TBG will be meeting demand for natural gas from different regions as one aspect of progress in this promising market.

The gas pipeline crosses a region that accounts for 75% of Brazilian GDP, 82% of industrial output and 71% of energy consumption. The 135 municipalities on the route include cities and villages of all sizes with the varied climate and relief that is a feature of Brazil.

The flow of gas and all pipeline facilities are controlled by the latest generation Data Supervision, Control and Acquisition System (local acronym SCADA), and the network as a whole is run from TBG's main office in Rio de Janeiro. Trained engineers at the Supervision and Control Centre monitor flow around the clock every day of the year — from the point it reaches Brazil through to compressor stations and city gates. Three regional departments carry out routine maintenance in the field.

Twelve compressor stations control the flow of natural gas to 36 city gates where state distribution companies take over.

TBG works on the basis of respect for the environment and emphasis on quality: after only seven years in existence, it is already certified for OHSAS 18001, ISO 9001 and ISO 14001.

Bolivia-Brazil Pipeline BRASIL **Crossing borders and building** new pathways for energy. MT BOLÍVIA GO MS • 2,593 Km crossing 5 States and MG 135 municipalities in Brazil 75% of Brazilian GDP. Market: 100 x 10⁶ people Remote monitoring via satellite, 24 hours a day Supervision and Control Center - CSC PR Troughput capacity of 30 x 10⁶ cubic meters of natural gas per day URUGUAI ISO 9001:2000 ISO 14001:1996 OHSAS 18001:1999





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Gas Research Comes to Vancouver

By Mark Blacklock

Preparations are in full swing for the latest International Gas Research Conference (IGRC), which will take place in Vancouver, Canada, between November 1 and 4. Set up in 1980 as a forum for the exchange of information on natural gas R&D, the IGRC is held every three years and is a joint initiative of IGU and the Gas Technology Institute (GTI). Co-sponsors are the American Gas Association, the Canadian Gas Association, the Japan Gas Association, the European Gas Research Group and Advantica Technologies.

"The IGRC is a conference that is planned and executed in close cooperation with the gas industry," says Peter Hinstrup, President of the Danish Gas Technology Centre, who is the Chairman of the Technical Programme Committee for IGRC-2004. "The International Policy and the Technical Programme Committees have members from around the world and the IGRC has the support of the whole gas industry."

This is particularly relevant in the new gas environment with market liberalisation or full deregulation at different stages in different countries. As the process involves the break up of former monopoly gas enterprises with their traditional strength in R&D into several companies and an increased focus on cutting overheads, the gas R&D environment is evolving too. "There is no doubt that liberalisation and deregulation have had a major impact on R&D," says Hinstrup, "many R&D departments have disappeared entirely or been merged with other departments, while some independent institutes have difficulty in continuing." He feels that there has been a certain amount of over-capacity and taking Europe as an example points out that the former monopolies

each had a national R&D operation, whereas nowadays pan-European efforts are more effective. In the US, the GTI itself was created by the combination of the Gas Research Institute and Institute of Gas Technology in April 2000 in response to changes in the R&D funding environment.

"However, the fact that gas companies are being unbundled also creates new demands for R&D, particularly in terms of measuring, metering and interoperability," continues Hinstrup, "while focusing on the bottom line has created a new driver for R&D into more effective maintenance and the upgrading of installations."

All this adds up to significant interest in IGRC-2004 with around 250 papers set to be presented, divided between oral and poster sessions, and Hinstrup is very pleased with the standard of the abstracts that have been received. Papers were invited on all research topics of relevance to the natural gas industry and broadly fall into the following areas:

- Gas resources, production and processing;
- Transmission:
- Distribution;
- Residential and commercial utilisation;
- Industrial utilisation; and
- General, basic research and new topics.

Key topics

Asked to highlight some of the topics Hinstrup points to upstream issues such as extending the lifetime of existing reservoirs with improved modelling of reservoir behaviour, drilling and injection techniques, as well as the long-term feasibility of methane production from hydrates.

Downstream there are new techniques for the monitoring and surveillance of pipelines, which can help cut operational costs and enhance security, both in terms of maintaining supply and against third party interference. Then there are papers on the latest developments in pipeline construction using high-grade steels and plastics, which can

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GAS RESEARCH COMES TO VANCOUVER

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increase the effectiveness of gas transmission and distribution.

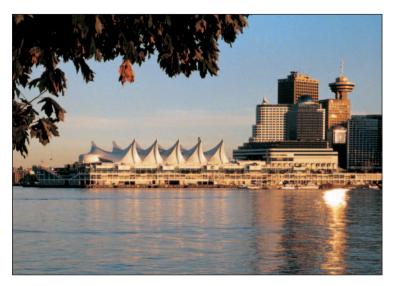
In liberalised markets several different suppliers will be using a common pipeline system and their supplies may have different calorific contents, so the most accurate metering and determination of customers' energy consumption is vital. As regards gas installations and appliances, there is interesting work being done on using the internet for safety monitoring, while the internet can also be used to improve the utilisation of gas systems.

The de-centralisation and downsizing of power generation is another important topic and links to the longer-term issue of hydrogen as a major energy source. Again, market liberalisation is a driver here and the construction, operation and maintenance of engine-based cogeneration plants is an important area of study, with research into improving efficiency and reducing levels of nitrogen oxide and unburnt hydrocarbons. At the micro level, proton exchange membrane (PEM) fuel cells are one way of bringing cogeneration to private homes and a major focus of IGRC-2004 will be the latest developments in fuel cell technology from PEM through to the solid oxide fuel cells for large-scale installations. Overall, according to Hinstrup: "Hydrogen will be a important issue and there will be a special round table to discuss developments."

There will also be a special presentation by the IGU's R&D Task Force of which Hinstrup is a member. This was set up in July 2003 to advise on technology policy in the light of the challenges facing R&D in the new gas environment.

Keynote speakers will include Rob Klein
Nagelvoort, General Manager, Gas Technology,
Shell Global Solutions International at the opening
plenary session and Tim Eggar, Vice Chairman,
Corporate Finance, ABN Amro Corporate Finance
Limited at the closing plenary.

For the first time this year the IGRC will have an associated exhibition, which by showcasing advanced technology and research bodies is



IGRC-2004 will be held at the Vancouver Convention & Exhibition Centre.

designed to provide a useful complement to the presentation of papers, as well as helping to finance the conference.

Following the conference the entire proceedings will be placed on CD Rom, supplemented by an abstract book. This approach was adopted for IGRC-2001 and was well received by delegates.

Future IGRCs

The original instigator of the IGRC was the Gas Research Institute and the GTI was happy to assume its share of responsibility for IGRC-2001 and 2004. However, there is likely to be a change in future responsibilities and IGU and the GTI are discussing the best way forward to ensure that future conferences build on the IGRC's well-earned reputation and value to the gas industry. One likely change is that the rotation of the IGRC between North American and European venues will be widened to bring the conference to major gas centres in other parts of the world.

Mark Blacklock is the Editor-in-Chief of International Systems and Communications. Readers requiring more information on IGRC-2004 are directed to the website www.igrc2004.org.

GAS RESEARCH COMES TO VANCOUVER



The Natural Gas Business in Croatia

INA d.d., a vertically integrated company, is a dominant player in the natural gas business in Croatia. At the moment INA is the only producer and supplier of natural gas, and at the same time the only wholesaler of natural gas. Today INA supplies natural gas to distribution companies, direct industrial consumers and three privileged buyers.

Current domestic production accounts for 58% of sold natural gas quantities, or 1.5 billion m³/year, and natural gas is produced from production fields in the Pannonian basin and from offshore fields in the North Adriatic.

Until 1999 all domestically produced quantities came from the north and north-east of the country. The end of 1999 marked the commencement of production from the North Adriatic offshore gas field Ivana. In 2002 production from that field amounted to approx. 300 million m³. The remaining demand is covered by natural gas imports from Russia at the level of 1.1 billion m³/year. Russian natural gas is transported from Russia via Ukraine, Slovakia and Austria to the Croatian border.

Within the scope of its gas business INA also provides natural gas storage services. The underground natural gas storage Okoli is the first such facility in Croatia. Its designed working capacity is 550 million m³.

Natural gas supply and demand projections in the near future

Analyses indicate an increase in consumption in the forthcoming years. By 2010 it is expected to reach the level of 3.8 billion m³, or about 30% of total primary energy consumption.

The highest growth is expected in the residential sector. Naturally, the development and increase of share for that consumer category will to a great extent depend on trends of economic growth and on a realistic valuation of natural gas as high-quality energy source through an appropriate pricing system. An increase of consumption is also expected in energy transformation inputs.

Unfortunately, production from our own sources is dwindling and is accompanied by the increase in consumption. We are therefore searching for new potential production capacities, but finding new supply routes for imports is also a crucial factor.

In addition INA is a profitable company with a solid credit rating and is able to raise funds for economically viable investment projects. INA will experience further growth and expansion of its gas business and so will have an even stronger role in the Central European region.

