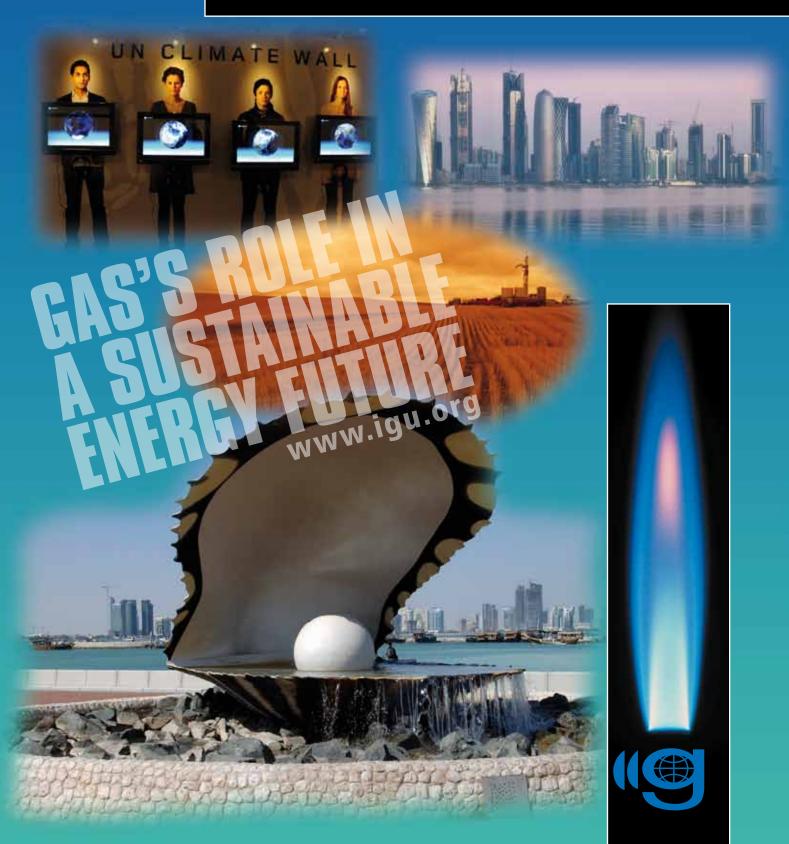
International Gas october 2010 INTERNATIONAL GAS UNION





how important is gas to the sustainability of the energy industry?

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International Gas october 2010

The IGU Magazine

Published by International Systems and Communications Limited (ISC) in conjunction with the International Gas Union (IGU).

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International Systems and Communications Limited Park Place 12 Lawn Lane London SW8 1UD England

Telephone: + 44 20 7091 1188 Facsimile: + 44 20 7091 1198 E-mail: general@isyscom.com Website: www.isyscom.com International Gas Union c/o Statoil ASA 0246 Oslo Norway

Telephone: + 47 51 99 00 00 Facsimile: + 47 22 53 43 40 E-mail: secrigu@statoil.com Website: www.igu.org



Vision, Mission and Objectives

The International Gas Union (IGU) is a worldwide, non-profit organisation promoting the progress of the gas industry. Through its many member countries representing approximately 95% of global gas sales, IGU covers all aspects of the natural gas industry.

The Vision

Recognising that natural gas has an important part to play in satisfying the global need for an environment-friendly energy source, IGU will be the most influential, effective and independent non-profit organisation, while serving as the spokesman for the gas industry worldwide.

• The Mission

IGU will actively, directly and through its members, promote the technical and economic progress of the global gas industry.

IGU will work towards improving the competitiveness of gas in the world energy markets. By promoting the development and application of new technologies and best practices, IGU will help optimise the economics of the entire gas chain, while emphasising sound environmental performance, safety and reliability.

IGU – serving as a global information clearing house – will promote transfer of technology and know-how.

In carrying out this mission, IGU will maximise value to its members and gas customers.

Objectives

In striving towards the vision and fulfilling the mission, IGU will regarding:

ECONOMY: Promote all activities within the entire gas chain, which can add to the technical and economic progress of gas;

CUSTOMERS: Encourage development of good customer services and customer relations;

TECHNOLOGY: Encourage research and development towards new and better technologies for the gas community;

SAFETY: Promote the safe production, transmission, distribution and utilisation of gas;

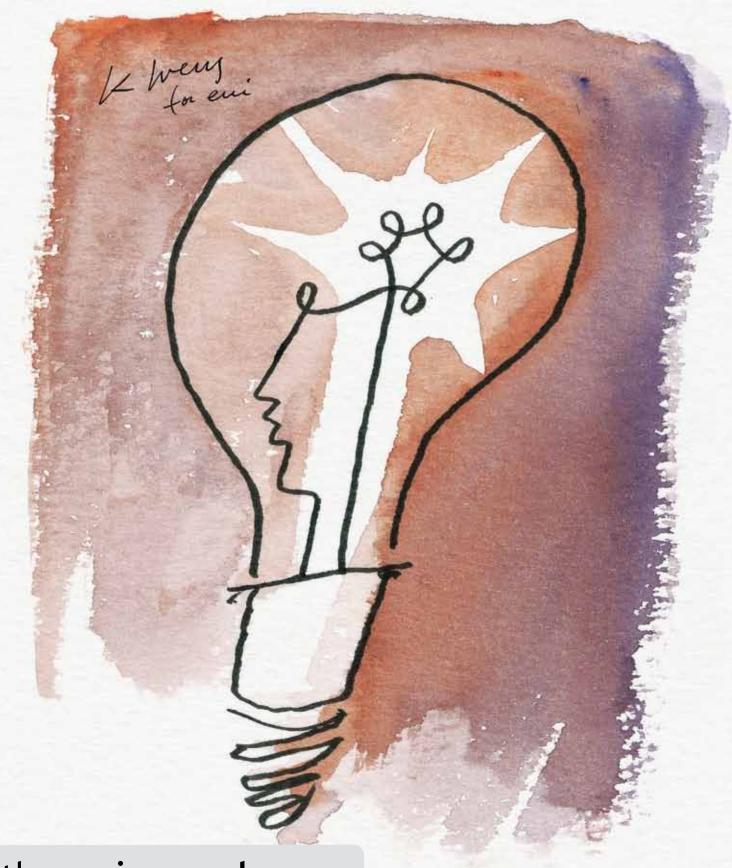
ENVIRONMENT: Encourage and promote development of clean technology, renewable energy applications and other activities, which will add to the environmental benefits of gas;

INTERNATIONAL GAS TRADE: Encourage international trade in gas by supporting non-discriminatory policies and sound contracting principles and practices;

LEGAL: Promote and contribute to the development of legislation concerning:

- the establishment of equitable, nondiscriminatory and reasonable environmental and energy efficiency regulations, and
- efforts to establish appropriate and relevant international standards,
 as well as
- the promotion of and participation in the exchange of information relating to regulatory processes;

COOPERATION: Enhance partnership with industry and manufacturers, and cooperation with governments, policy makers and international energy related organisations, and promote the exchange of information among members in order to help them in improving the efficiency and safety of gas operations.



the eni award 2010 ideas for a brighter future

eni has always promoted advanced scientific research, rewarding the most innovative projects and discoveries in sustainable energy. The eni award is a prestigious prize awarded once a year to researchers who stand out internationally for their work on the new frontiers of hydrocarbons, unconventional renewable energies and environmental protection. To build a better future out of today's brightest ideas.

Under the High Patronage of the President of the Republic of Italy.



Many parts
working together—
the only way
to solve the world's
energy challenges.

Energy demand is expected to be 35 percent higher in the year 2030 than it was in the year 2005, driven largely by people in the developing world seeking higher standards of living. Meeting this growing long-term demand requires that we develop all economic sources of energy—oil, natural gas, coal, nuclear and alternatives.

This global energy demand challenge is matched by a global environmental challenge—curbing greenhouse gas emissions and addressing the risks of climate change. No single energy technology available today solves this dual challenge, and it is very likely no single energy technology will solve it tomorrow.

We need an integrated set of solutions, powered by technology and innovation—ranging from producing energy more effectively... to using it more efficiently...to improving existing alternative sources of energy...to developing new options.

ExxonMobil is working to help meet the world's energy challenges—investing billions in additional supplies, developing technology options to improve vehicle efficiency, and testing new carbon capture technologies that could reduce emissions significantly. Because only by integrating all of our energy options—new sources and new technologies—will we solve our dual energy and environmental challenges.

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Unless otherwise stated, the dollar (\$) values given in this magazine refer to the US dollar.

In the energy business, strong working partnerships are the key to success. At every stage, from gas exploration to LNG delivery, we work closely with our partners. We share with them our technical expertise, employ local people, invest in their communities and work together to find the right markets to maximise the value of our partners' natural resources. Their potential. Our expertise. It's a partnership you can rely on.

A world leader in natural gas







Message from the President

Dear Colleagues

The first year of the 2009-2012 Triennium has been very challenging for the Malaysian Presidency with the global financial crisis and uncertainty over the pace of recovery. As we continue on our journey, we are certain that there will be even more challenges. LNG16 in Oran, Algeria, for example, was hard hit by the closure of much of Europe's airspace following the eruption of the Eyjafjallajökull volcano in Iceland. Despite this unexpected development, the 16th International Conference and Exhibition on LNG was inaugurated at the Oran Convention and Exhibition Centre on April 19. With some quick adjustment of programmes, LNG16 was successfully concluded despite a reduced turnout of delegates and speakers.

The Malaysian Triennium – the shortest in the history of IGU - is well under way and with it preparations for a successful World Gas Conference (WGC2012) in Kuala Lumpur. I am happy to inform you that we have achieved more than 800 nominations to the Study Groups from both Charter and Associate Members, a record number for IGU. The first and second meetings of the Working Committees, Programme Committees and Task Forces were very well attended, demonstrating a strong commitment from the members. The three Special Projects initiated by the Malaysian Presidency have also got off to a good start. In recognition of the fact that these Special Projects are industry initiatives, the outcome of which will benefit the industry as a whole, the Presidency has for the first time invited industry players to finance them by way of sponsorships. We are very pleased to see, at press time, the likes of Total, ENI, Gazprom, Shell, Chevron, Oman LNG, Petronas and the Royal Dutch Gas Association (KVGN) stepping forward



Datuk (Dr) Abdul Rahim Hashim, President.

to support these projects and we welcome others to do so.

The National Organising Committee (NOC) for WGC2012 is also well ahead with preparatory work to deliver a most memorable World Gas Conference. You will find in this issue the Progress Report from the various team leaders of the Committees and Task Forces as well as an article entitled, "25th World Gas Conference – Coming Together Nicely".

Issues and challenges

Energy security has always been and will remain a strategic issue in most energy consuming nations. Some of the key issues and challenges facing nations are how to secure reliable, affordable energy services with minimal environmental impact. Addressing these issues and challenges remains a priority for consuming nations' energy policymakers. The pressure will intensify as and when conventional fossil fuels are no longer able to support the growth of the world's population from



about 6.7 billion in 2010 to 9 billion by 2050, against a background of increasing urbanisation and global prosperity. There is significant scope for the gas industry to redefine the energy landscape to enhance world energy security and safety by promoting continuing growth of both the conventional and unconventional gas industry worldwide.

Natural gas provides a source of abundant, affordable and cleaner-burning energy to a world demanding stable energy prices, energy security and solutions to the climate change challenge. However, the development of both conventional and unconventional gas resources requires huge upfront capital investments to develop gas supply infrastructures from upstream to downstream.

A key issue and challenge is whether investors are willing to take the risk in making these huge capital investments if the investment climate is not attractive and a "win-win" contractual arrangement between both gas producers and consumers cannot be put in place. While energy and gas consuming nations require security of energy/gas supply, energy and gas producing nations also require security of demand. Due to increased focus on the risk of climate change and the need for sustainability, IGU launched a special gas event focusing on the role of natural gas in the transition to a sustainable energy future at the UN Climate Change Conference (COP15) in Copenhagen last December. IGU will also participate in COP16, November 29-December 10, in Cancún, Mexico.

Another major concern that has emerged is the need for a strong advocacy for the natural gas industry.

The natural gas industry is at a crossroads and is in search of a voice and a coherent and consistent message as it establishes its role in the future in a carbon-constrained world. This concern was underscored during the last WGC, where a number of challenges confronting the gas industry were identified. While it is acknowledged that natural gas with its economic, efficiency and environmental advantages, relative abundance

and expanding infrastructure is a natural choice in meeting the world's expanding energy needs, its future role and position cannot be taken for granted. Other fuels such as renewable energy, nuclear and coal, with their strong lobbies, have established clear positions with the media and politicians and have gained significant ground in terms of public acceptance and policy directions. On the other hand, natural gas appears to be "losing" ground through lack of an effective and consistent voice and this is evidenced by the absence of natural gas in many policy documents in major economies.

A workshop to discuss this issue was held during the last Executive Committee meeting in Bali on April 7. The Presidency together with PGC E is taking proactive steps to address this issue which will be further deliberated at the Council meeting in Doha on October 21. The 2nd IEF-IGU Ministerial Gas Forum that is scheduled for November 30 in Doha will provide the strategic stage for tabling this concern among ministers, CEOs and key policymakers with the aim of reaching mutual consensus on approaches to be adopted in promoting the wider use of natural gas, enhancing as well as expanding its visibility as the fundamental element in the energy mix towards a low carbon world.

The relentless drive to reduce carbon emissions and the need to address issues on climate change, world energy security and safety calls for greater collective efforts to promote wider use of this relatively clean, efficient, versatile and environmentally-friendly fuel, while efforts in commercialising various renewable energy sources will continue to be actively pursued.

Thank you.

Datuk (Dr) Abdul Rahim Hashim



At Repsol, we work efficiently to the energy





Melchorita LNG Plant, Peru

The Peru LNG liquefaction Plant was inaugurated on 6th June 2010 and entails the construction and operation of a liquefaction plant in Pampa Melchorita, in which Repsol holds a 20% stake in the Consortium made up together with Hunt Oil USA (50%), SK Energy South Korea (20%) and Marubeni Corporation Japan (10%). The Plant represents an investment of 3.8 billion euros, the biggest investment ever made in one project in the history of Peru.

The Plant, with a nominal capacity of 4.4 million tons per year, processes 620 million cubic feet of gas per day. It has the two largest storage

tanks in Peru (each storing 130,000 m³ of LNG) and a marine terminal that stretches more than a kilometre in length, able to receive tankers with a capacity of between 90,000 m³ and 173,000 m³.

Feed gas is supplied to the plant by the Camisea consortium, in which Repsol has a 10% stake, through a 408-kilometre gas pipeline that connects with the existing natural gas transportation network to the domestic market.

Repsol is the sole off-taker and world wide marketer of the total LNG plant output.

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CanaportTM LNG's facility has a year-round ice free port and is able to receive the largest LNG tankers currently designed. Through this facility, Repsol can now access the most lucrative market in North America.

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Repsol presence enables the market to accomplish its cleaner burning energy agenda now and for the long term.





Message from the Secretary General

Dear Reader

IGU has launched a "Gas Advocacy" initiative addressing our communication challenges to reach stakeholders outside the gas industry.

It is clear to us in the gas industry that natural gas can and should play a key role in meeting the dual global challenge of providing additional energy supplies and at the same time reducing emissions by replacing more polluting fuels. We are, however, finding that this is not so clear to those outside the gas industry. Policymakers and regulators are increasingly influencing the business environment of energy markets. It is important for the gas industry to keep these stakeholders well informed of the long-term benefits of natural gas and the contributions of the gas industry to society.



Torstein Indrebø, Secretary General.

The focus of the industry in the last decade has been on developing new supply infrastructure for pipeline gas and LNG. Long-term and secure gas supplies were facing bottlenecks in many markets. The successful developments in unconventional



IGU's gas event during COP15 in Copenhagen marked a significant stepping up of the Union's presence at the UN Climate Change Conferences



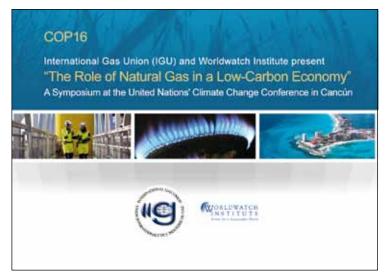
gas production and large-scale LNG projects have been impressive. The demand side, however, must also be nurtured since demand security is similarly important in a long-term and capital-intensive industry such as ours. We must not forget that energy markets are extremely competitive and that energy policy is shaping the competitive environment all over the world.

In IGU we should present gas as part of the solution to the global energy challenge. In addition to the environmental benefits and the provision of secure energy supplies we must also remember to highlight the gas industry's positive contributions to society:

- Direct and indirect job creation supporting millions of families;
- Providing governmental income to support public services and welfare programmes;
- Creating sustainable economic activity and growth, both regionally and nationally.



The focus of the industry in the last decade has been on the supply side.



An IGU-Worldwatch Natural Gas Symposium is being planned for COP16 on December 5 in Cancún, Mexico.

In times of economic difficulties these facts are of particular importance.

IGU will spend more time and resources in reaching the policymakers and regulators, non-governmental organisations and the public with our messages. Our methods of communication, strategy and messages must consequently be reviewed to reflect the challenges of a changing competitive environment.

The "Gas Advocacy" initiative aims at providing IGU and our members with a flexible communication instrument. The messages can be adapted to regional or local circumstances as we know that the image and position of natural gas varies a lot across the world.

With more than 120 members and affiliated organisations around the world covering the whole value chain, a concerted effort of the IGU community can make a difference.

T. Wdeely

Torstein Indrebø



Bringing energy to life

Qatar, 6:30 am. Abdulla's heritage is linked to his future. RasGas is there.

RasGas supplies Europe, Asia and America with liquefied natural gas, one of the world's most climate-friendly fossil fuels.

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Angola **Equatorial Guinea** Argentina Estonia Australia Finland Austria France Bangladesh Germany Belarus, Republic of Greece Belgium Hong Kong, China Bosnia and Herzegovina India Brazil Indonesia Brunei Iran Ireland Bulgaria Cameroon Israel Canada Italy China, Japan

Egypt

People's Republic of Kazakhstan
Croatia Korea, Republic of
Czech Republic Latvia
Denmark Libya

Lithuania

Macedonia

Malaysia

Monaco

Netherlands, The

Nigeria

Norway

Oman, Sultanate of

Pakistan

Peru

Poland

Portugal

Russia, Federation of Saudi Arabia Serbia Singapore Slovak Republic

Qatar

Romania

Slovenia
South Africa
Spain
Sweden
Switzerland
Taiwan, China
Thailand
Timor-Leste

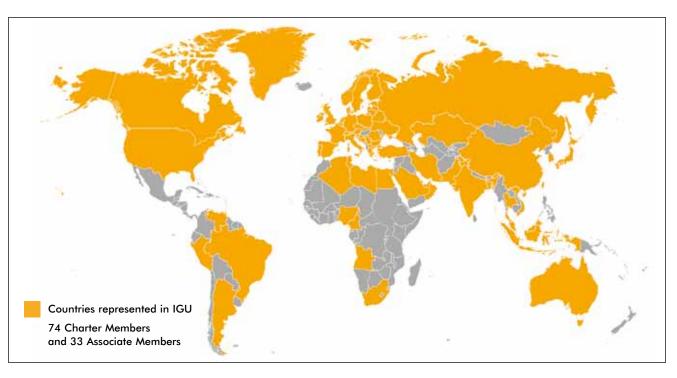
Trinidad and Tobago Tunisia

Tunisia Turkey Ukraine

United Arab Emirates
United Kingdom

United States of America

Venezuela Vietnam





BP is one of the world's largest and most experienced energy providers. Working with our partners across the value chain we produce over 8 bcfd of natural gas, and are developing new gas supplies in the Middle East, Africa, the Americas and Asia Pacific.

Expanding and investing in our global LNG business, BP is leading the new Tangguh liquefaction project in Indonesia. We are using our expertise to manage complex projects and supply chains, and are enhancing security and ensuring the flexibility our customers require.

We are an active marketer and trader in the world's most liquid markets – North America and the UK. We are also increasingly active in European and Asian markets.

Mutual advantage, experience and commercial innovation make BP, a natural gas partner.





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Association Algérienne de l'Industrie du Gaz – AIG

Angola

Sonangol Gás Natural

Argentina

Instituto Argentino del Petróleo y del Gas

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Australian Gas Industry Trust

Austria

Österreichische Vereinigung für das Gas- und Wasserfach (ÖVGW)

Bangladesh

Petrobangla (Bangladesh Oil, Gas & Mineral Corporation)

Belarus, Republic of Beltransgas

Belgium

Association Royale des Gaziers Belges

Bosnia and Herzegovina Gas Association of Bosnia and Herzegovina

Brazil

Associação Brasileira das Empresas Distribuidoras de Gás Canalizado (ABEGAS)

Brunei

Brunei Energy Association c/o Brunei LNG Sdn Bhd

Bulgaria

Overgas Inc.

Cameroon

Société Nationale des Hydrocarbures

Canada

Canadian Gas Association

China, People's Republic of China City Gas Society Croatia

Croatian Gas Association

Czech Republic

Czech Gas Association

Denmark

Dansk Gas Forening – Danish Gas Association

Egypt

Egyptian Gas Association

Equatorial Guinea Sociedad Nacional de Gas G.E.

Estonia

Estonian Gas Association

Eurogas

Finland

The Finnish Natural Gas Association

France

Association Française du Gaz (AFG)

Germany

Deutsche Vereinigung des Gasund Wasserfaches e.V. (DVGW)

Greece

Public Gas Corporation of Greece (DEPA) S.A.

Hong Kong, China

The Hong Kong & China Gas Co. Ltd

India

Gas Authority of India Ltd (GAIL)

Indonesia

Indonesian Gas Association (IGA)

Iran

National Iranian Gas Company (NIGC)

Ireland

Irish Gas Association – Bord Gais Eireann Israel

The Israel Institute of Petroleum & Energy

Italy

Comitato Italiano Gas (CIG)

Japan

The Japan Gas Association

Kazakhstan

KazTransGas JSC

Korea, Republic of Korea Gas Union

Latvia

JSC Latvijas Gāze

Libya

National Oil Corporation

Lithuania

Lithuanian Gas Association

Macedonia

Macedonian Gas Association

Malaysia

Malaysian Gas Association (MGA)

Monaco

Société Monégasque de l'Électricité et du Gaz (SMEG)

Netherlands, The

Royal Dutch Gas Association – Koninklijke Vereniging van Gasfabrikanten in Nederland (KVGN)

Nigeria

Nigerian Gas Association c/o Nigeria LNG Ltd

Norway

Norwegian Petroleum Society (NPF) – Norwegian Gas Association

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GDP – Gás de Portugal, SGPS, S.A.

Qatai

Qatar Liquefied Gas Company Ltd (Qatargas)

Romania

S.N.G.N. Romgaz S.A.

Russia, Federation of OAO Gazprom

Saudi Arabia Saudi Aramco

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Gas Association of Serbia

Singapore Power Gas Ltd

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Thailand

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Ukraine

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Vietnam Oil and Gas Group (PetroVietnam)



The IGU Secretariat is hosted by Statoil at these offices in Sandvika, Oslo.



around 80 billion m3 annually. We provide also gas related services involving capacity, quality conversion and storage. Our products reflect market categories and our prices market values. Both oil- and spot-indexation prices are offered, depending on the type of contract and risk profile that our customers prefer. GasTerra strives to maintain long-term relationships. GasTerra is committed to sustainable development as a guiding principle for its strategy and actions. The company recognises the great importance of energy transition and initiates projects in this context, like advanced combined heat-power units, cooling by natural gas and the combination of natural gas with hydrogen and so-called green gasses. GasTerra is based in the Netherlands, in the midst of Energy Valley. We buy and sell natural gas and share our knowledge. GasTerra, it's all in the name.





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GAZBİR – Association of Natural Gas Distributors of Turkey

GDF SUEZ (France)

IGDAŞ – Istanbul Gas Distribution Co. (Turkey)

Indian Oil Corporation Ltd (India)

Instituto Brasileiro de Petróleo, Gás e Biocombustíveis – IBP (Brazil)

Izgaz – Izmit Gaz Dagitim San. Ve Tic A.Ş. (Turkey)

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Thyssengas GmbH (Germany)

TOTAL S.A. (France)

Unión Fenosa Gas (Spain)

Vopak LNG Holding B.V. (The Netherlands)

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Foundation IGU Research Conferences (Foundation IGRC)

Gas Infrastructure Europe (GIE)

Gas Technology Institute (GTI)

GERG – Groupe Européen de Recherches Gazières/European Gas Research Group

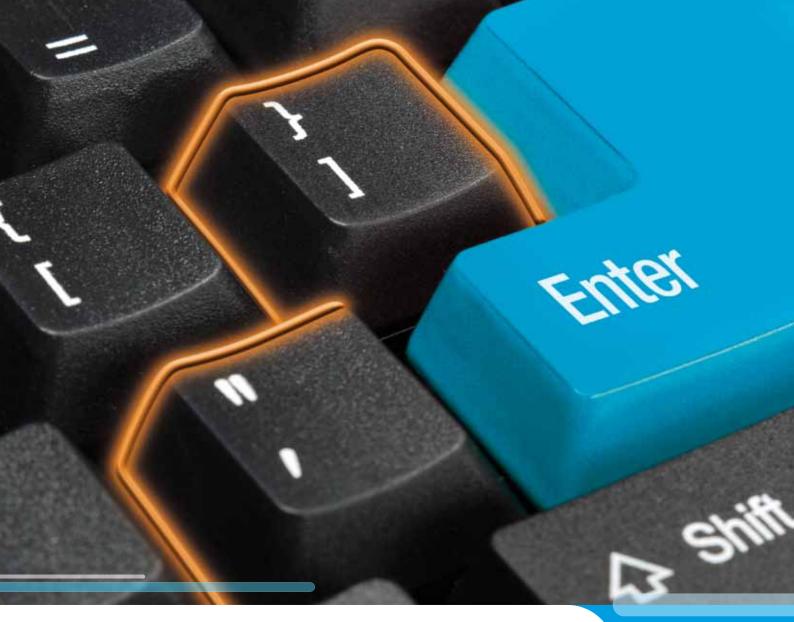
GIIGNL – Groupe International des Importateurs de Gaz Naturel Liquéfié/International Group of LNG Importers International Association for Natural Gas Vehicles (IANGV) including its regional affiliates

International Pipeline & Offshore Contractors Association (IPLOCA)

Marcogaz

Pipeline Research Council International, Inc. (PRCI)

Russian National Gas Vehicle Association (NGVRUS)



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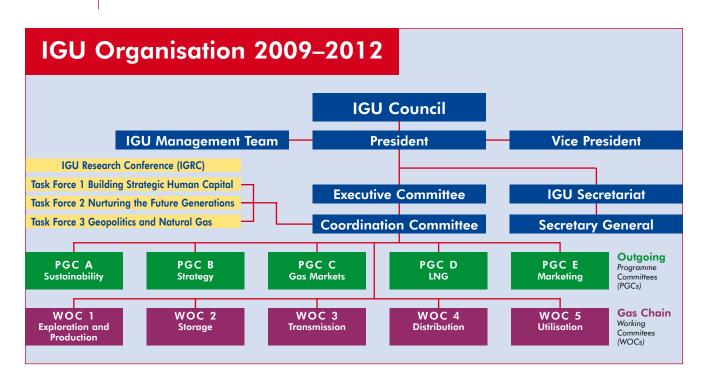
We balance all the functions of classical gas transportation with new service offers. At the same time, we will increase efficiency in the gas distribution system with innovative products. Our customers obtain more transportation flexibility while profiting from newly created savings potential.

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This photograph was taken at the first Executive Committee (EXC) meeting of the Malaysian Triennium in Bali in April.

From left to right in the back row are:

Miloš Kebrdle, Jupiter Ramirez (a guest from Qatargas, not a member of the EXC), Marcel Kramer, Evgueni Riazantsev, Walter Thielen, Kap-young Ryu, Hirofumi Kyutoku, Daniel Paccoud, Marta Margarit (who was substituting for Antoni Peris Mingot), Alaa Abu Jbara, Domenico Dispenza, Georges Liens, James Kwan, Carlos Eduardo de Freitas Brescia and Hans Riddervold (IGU Secretariat, not a member of the EXC).

From left to right in the front row are:

Colin Lyle (who was substituting for Andrew Wagg), Shahrzad Rahbar, Anton Tjahjono (President of the meeting host the Indonesian Gas Association, not a member of the EXC), Ho Sook Wah, Jérôme Ferrier, Ernesto López Anadón, Datuk (Dr) Abdul Rahim Hj Hashim, Torstein Indrebø (IGU Secretary General, not a member of the EXC), Khaled Abubakr, leda Correia Gomes, Wang Qing (who was substituting for Wang Guangjun) and João Carlos de Luca.

Chawki Mohamed Rahal, Yves Tournié, Jan Rune Schøpp and David N. Parker sent their apologies.



IGU MANAGEMENT TEAM



Datuk (Dr) Abdul Rahim Hj Hashim, President (Chairman) (Malaysia)



Mr Jérôme Ferrier, Vice President (France)



Mr Ernesto López Anadón, Immediate Past President (Argentina)



Mr Ho Sook Wah, Chairman of the Coordination Committee (Malaysia)



Mr Georges Liens, Vice Chairman of the Coordination Commitee (France)



Mr Torstein Indrebø, Secretary General

Mr Wang Guangjun,

IGU EXECUTIVE COMMITTEE (AS OF SEPTEMBER 2010)

| Mr Walter Thielen Germany |
|---|
| Mr Domenico Dispenza Italy |
| Mr Kenji Ikejima Japan |
| Mr Kap-young Ryu Republic of Korea |
| Datuk (Dr) Abdul Rahim Hj Hashim, Malaysia |
| Mr Ho Sook Wah Malaysia |
| Mr Marcel Kramer The Netherlands |
| Mr Jan Rune Schøpp Norway |
| |

| Mr Evgueni Riazantsev Russia |
|--|
| Mr Antoni Peris Mingot Spain |
| Mr Andrew Wagg United Kingdom |
| Mr David N. Parker United States of America |
| James Kwan IGU Regional Coordinator for Asia-Pacific |
| Ms leda Correia Gomes BP Gas, Power & Renew- ables, Associate Member |

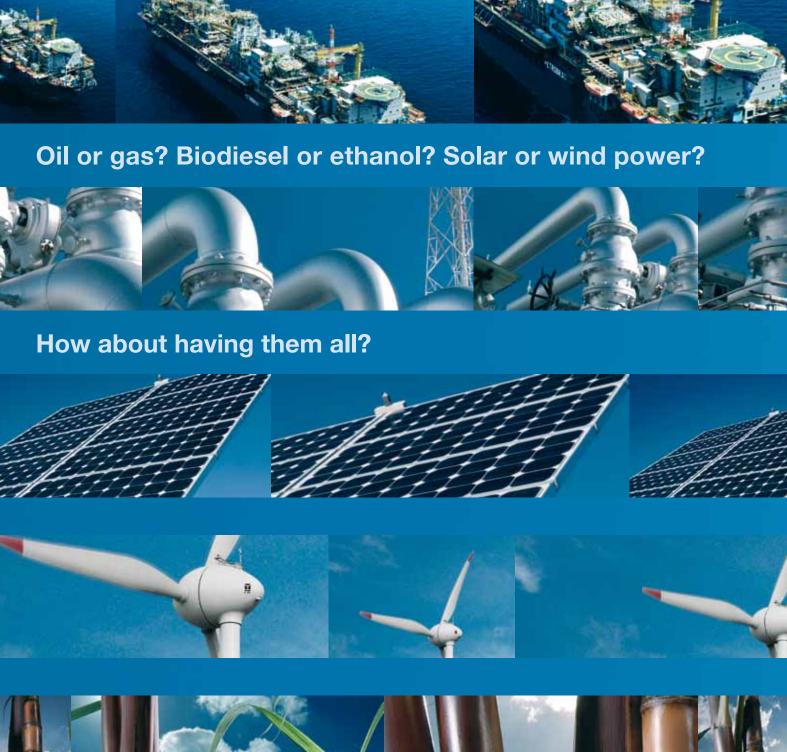
Mr Alaa Abu Jbara

Qatar

China National Petroleum
Corporation, Associate
Member

Mr João Carlos de Luca
Instituto Brasileiro de
Petróleo, Gás e
Biocombustíveis,
Associate Member

Mr Khaled Abubakr,
Taqa, Associate Member
Mr Yves Tournié
Total, Associate Member





The world's energy demand is constantly growing and one of the roles of Petrobras is to develop new ways to produce this energy. In order to attain further diversification, it makes

www.petrobras.com



continuous investments in natural gas, biofuels and other alternative, renewable energy sources like solar and wind power. If the future is a challenge, Petrobras is ready.





News from the Secretariat

The IGU Secretariat's main activities since the last edition of the IGU Magazine (April 2010) are detailed below in news items and information from the Secretary General (TI), Senior Advisor (HR), Advisor & Press Contact (EG) and the Secretary General's Advisor (JvD).

New secondee to the IGU Secretariat

Following the departure of Ms Florijana Đedović, Ms Carolin Oebel from E.ON Ruhrgas, Germany has taken up the position as a secondee to the IGU Secretariat in Oslo for a two-year period. Carolin comes from the Strategy Department of E.ON Ruhrgas and will stay with IGU until September 2012. She has the title of Assistant to the Secretary General and will be involved in a wide range of activities within the responsibilities of the Secretariat. She is 31 years old and has the degree "Diplom-Volkswirtin" from the University of Cologne and a Masters in International Management from the Community of European Management Schools.

The level of activities for the Secretariat has increased over the last few years, and we are very happy to have another well-qualified lady on board working for the global gas industry. You will meet Carolin at future IGU meetings and events.

Herzlich willkommen nach Oslo!

ΤI



Torstein Indrebø, Secretary General.



Hans Riddervold, Senior Advisor.



Erik Gonder, Advisor & Press Contact.



Jeanet van Dellen, Advisor to the Secretary General.



Carolin Oebel, Assistant to the Secretary General.



Åse Nicolaysen, Administration Assistant.





Executive Committee discusses IGU communication strategy

Acknowledging that the importance of energy policy issues has increased around the globe, IGU has launched a new initiative on further development of its communication strategy.

An enhanced communication strategy and advocacy of natural gas were the main issues addressed during the last Executive Committee meeting, which took place on April 7 in Jimbaran, Indonesia. During the workshop on advocacy of natural gas, various issues concerning the need for IGU to position gas positively in the minds of opinion makers, policymakers and world leaders were discussed.

A follow up of the above-mentioned workshop will take place during the open session of the Council meeting in Doha on October 21.

EG

• IGU publications

As part of the communication strategy, IGU has decided to convert some of the reports from WGC2009 into IGU reports. The first report to be published is one of the Special Projects from WGC2009, Natural Gas Unlocking the Low Carbon Future, prepared by PGC A – Sustain-







WGC2012 and IGU had a joint booth at LNG16.

ability. The report will be made available in printed and electronic formats for distribution during conferences and exhibitions. It will also be made available on the IGU website. The next IGU publication will be published in 2011 covering LNG issues highlighted in Argentina, but with updated figures.

A joint publication with BP was initiated this year, and the *Guidebook* to *Gas Interchangeability* and *Gas Quality* will be launched during the Council meeting in Doha in October.

All reports and proceedings from WGC2009 can be downloaded from the IGU website. An overview of publications available from the Secretariat is to be found on pages 220-221.

EG/JvD

• LNG16 was held in April...

The 16th International Conference and Exhibition on LNG took place in Oran, Algeria, April 18-21. This time it was the turn of an LNG exporting country to host the event, which is sponsored by IGU, the International Institute of Refrigeration (IIR) and the Gas Technology Institute (GTI).

WGC2012 and IGU had a joint booth at the exhibition. Please see the separate article on LNG16 on pages 148-154.

...while LNG17 is set for 2013

LNG17 will be hosted by the American Gas Association and take place in Houston, USA, April 16-19, 2013. You can find extensive information on the event at www.lng17.com.

TI/EG

• IGU Regional Coordinators

The Council at its meeting in Buenos Aires in 2009 approved the new position of Regional Coordinator (RC). The following persons elected by the Executive Committee have accepted this important role:

- Mr Marcel Kramer, The Netherlands (Europe & CIS)
- Mr João Carlos de Luca, Brazil (North and South America)
- Mr Khaled Abubakr, Egypt (Middle East & Africa)
- Mr James Kwan, Hong Kong (Asia & Asia-Pacific)



Khaled Abubakr.



João Carlos de Luca.



Marcel Kramer.



James Kwan.



It's a simple idea. To stop CO_2 adding further to global warming, we capture and store it at source. Of course, it's taken many years of technological development to make this a reality. But at Sleipner T, our gas production platform in the North Sea, we've built the world's first marine carbon capture facility. Every year, we reinject almost a million tonnes of CO_2 into the strata beneath the seabed. An amount equal to the CO_2 generated annually by 400,000 cars. Sleipner is just one of our carbon capture and storage projects around the world, and one of the many ways we're working to reduce our carbon footprint.





This will clearly strengthen IGU's position regionally and ensure that the organisation maintains a high-quality presence. The RCs will provide regular reports and advice to the IGU management on regional developments important for the Union. They may also represent IGU at conferences and energy events and further develop our network with key stakeholders at the regional level.

HR

IGU Work Group for Sustainable Development

IGU needs to enhance its visibility and image as a leading organisation regarding climate change and promote the role of gas in mitigating

Second Ministerial
Gas Forum

The Role of Natural Gas
in a Sustainable Energy Future

Grand Hyatt Hotel, Doha - Qatar
Tuesday 30 November
2010

Qatar is set to host the 2nd IEF-IGU Ministerial Gas Forum.

climate change. To this end, the Council at its meeting in Buenos Aires in 2009 approved the introduction of a Work Group for Sustainable Development (SDWG). The Management Team has now appointed the following individuals to the SDWG:

- Secretary General (Chair)
 Mr Torstein Indrebø, Norway
- Chairman of the Coordination Committee (CC)
 Mr Ho Sook Wah, Malaysia
- Chair of PGC A Sustainability
 Mr Juan Puertas, Spain
- Member nominated by the US Charter Member (AGA)
 Mr Steven Kline, USA
- Member of the Executive Committee
 Mr Wang Guangjun, P. R. China
- Member of the Executive Committee
 Mr Carlos Eduardo de Freitas Brescia, Brazil
- Mr Carlos Eduardo de Freitas Brescia, Bro
 Member of the Executive Committee
 Mr Evgueni Riazantsev, Russia

The SDWG will seek to promote IGU and natural gas more actively in the field of sustainability at events and conferences such as the UN climate change conferences. It will also cooperate with UN authorities and other international institutions and will assist and advise on such activities. The SDWG has initiated a project to prepare a report on the environmental advantages of gas aimed at informing authorities and decision makers. The report is meant to provide a tool for IGU and its members to facilitate their dialogue with stakeholders outside the gas industry when climate and environmental issues are on the agenda.

HR

• 2nd IEF-IGU Ministerial Gas Forum

Qatar will host the 2nd IEF-IGU Ministerial Gas Forum, on November 30, in Doha. The topic to be discussed among invited high-level speakers and delegates will be "The Role of Natural Gas in a Sustainable Energy Future". Natural gas, as the





most environmentally friendly fossil fuel, can make a major contribution towards a sustainable energy future.

Further details on this event have been posted on the IGU website in the folder "Ministerial Gas Forums".

The 1st IEF-IGU Ministerial Gas Forum, organised by the International Energy Forum (IEF) and IGU was held in Vienna on November 24 2008, with more than 100 participants including ministers and delegates from gas producing and consuming countries, top executives from industry and senior officials from international organisations.

EG/JvD

IGU at COP16

IGU decided to participate actively in the UN Climate Change Conference in Copenhagen in December 2009 by having a booth and organising the COP15 IGU Gas Event. The latter had more than 110 participants and included keynote speakers such as Nobuo Tanaka (IEA), Jos Delbeke (European Commission) and the CEOs of DONG Energy and Statoil.

This year, during COP16 in Cancún, Mexico, November 29-December 10, IGU will promote

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Contain, Master
PM Movember 10 December 2010

EQL - Workheath Gas Event
Standy 5 December
2010

COP16

International Gas Union (IGU) and Worldwatch Institute present
"The Role of Natural Gas in a Low-Carbon Economy"
A Symposium at the United Nations' Climate Change Conference in Cancún

IGU's Gas Event at COP16 will be held on December 5.

natural gas as the cleanest fossil fuel. The event will take place on December 5, focusing on the benefits of using natural gas in a climate change perspective including an update of recent developments in the industry. This time, IGU will organise the event together with the Worldwatch Institute (WWI), Washington DC, USA.

Readers of this magazine and IGU members present in Cancún are welcome to register for the event. Please contact Erik Gonder at the IGU Secretariat, email: ergon@statoil.com.

EG

IGU Gas Awards

After the successful introduction of the Awards in the Argentine Triennium, IGU will continue both the IGU Gas Efficiency Award and the IGU Social Gas Award in the Malaysian Triennium. They will be handed out on a triennial basis and presented at the opening ceremony of the 25th WGC in Kuala Lumpur. They have also been more integrated in the existing IGU framework. On pages 42-44 you can read in more detail about the Awards.

For inspiration you can obtain a booklet from the IGU Secretariat with abstracts of the proposals received for the IGU Gas Efficiency Award 2008/2009 and the Social Gas Award in 2009.

JvD

IGU at international events

6th Asia Partnership Summit

The President addressed the audience at the Asia Partnership Summit held on March 22-23 in New Delhi, India. IGU partnered with our Indian Charter Member in the organisation of this event.

Norwegian business delegation to Malaysia

IGU participated in a Norwegian business delegation to Malaysia headed by HRH Crown Prince Haakon of Norway. The programme included an energy section where the President





CC Chairman Ho Sook Wah discusses energy issues with the Norwegian Minister of Trade and Industry, HE Trond Giske (RIGHT), as the Secretary General Torstein Indrebø looks on.

was invited to present IGU and the activities of the Malaysian Presidency to high-ranking ministers and public servants of both countries. The energy programme discussed oil and gas issues relevant to both countries.

4th International Energy Business Forum, Mexico

The 12th International Energy Forum and 4th International Energy Business Forum took place in Cancún, Mexico on March 30-31.

IGU was represented by the President, the CC Chairman and the Secretary General at this leading energy forum where 63 countries were participating with ministerial delegations.

Gas Experts Meeting, Croatia

The Croatian Gas Centre and IGU Charter
Member the Croatian Gas Association held the
25th annual International Scientific & Expert
Meeting of Gas Professionals in Opatija, Croatia,
May 5-7. The Senior Advisor addressed the
delegates with a speech about the role of "Natural
Gas in a Sustainable Future".



The President Datuk Rahim Hashim, CC Chairman and Secretary General briefing HRH Crown Prince Haakon of Norway (SECOND LEFT) about IGU's current priorities.

Energy Dialogue: Russia-European Union

The international conference organised by IGU Associate Member the Russian Gas Society with the support of Charter Member Gazprom and entitled "Energy Dialogue: Russia-European Union



Seen at the 12th International Energy Forum and 4th International Energy Business Forum are Brunei's Energy Minister, HE Pehin Dato Haji Mohamad (LEFT), and the President, Secretary General and CC Chairman.





The President addressing the Russia-EU energy dialogue conference in Berlin on May 21.



The Secretary General met HE Mohammad Ismael Khan, Afghanistan's Minister of Water and Energy, at the OSCE conference in Turkmenistan.

Gas Aspects" has been instrumental in providing an avenue for interaction between representatives from the authorities, business and non-government organisations. This year, the IGU President was invited to present one of the keynote speeches entitled: "World Energy Security and Safety: Challenges and Opportunities" in Berlin, Germany on May 21. The Advisor & Press Contact also attended this high-level forum.

Organisation for Security and Cooperation in Europe (OSCE)

A high-level international conference on "Strengthening Regional Cooperation in Central Asia for Promoting Stable and Reliable Energy within Eurasia" was organised by the Government of Turkmenistan and OSCE in Ashgabat on May 3-4. In this conference international policymakers and regional ministerial delegations as well as international companies were well represented. The Secretary General addressed the attendees with a presentation on "Energy Security from a Natural Gas Perspective".

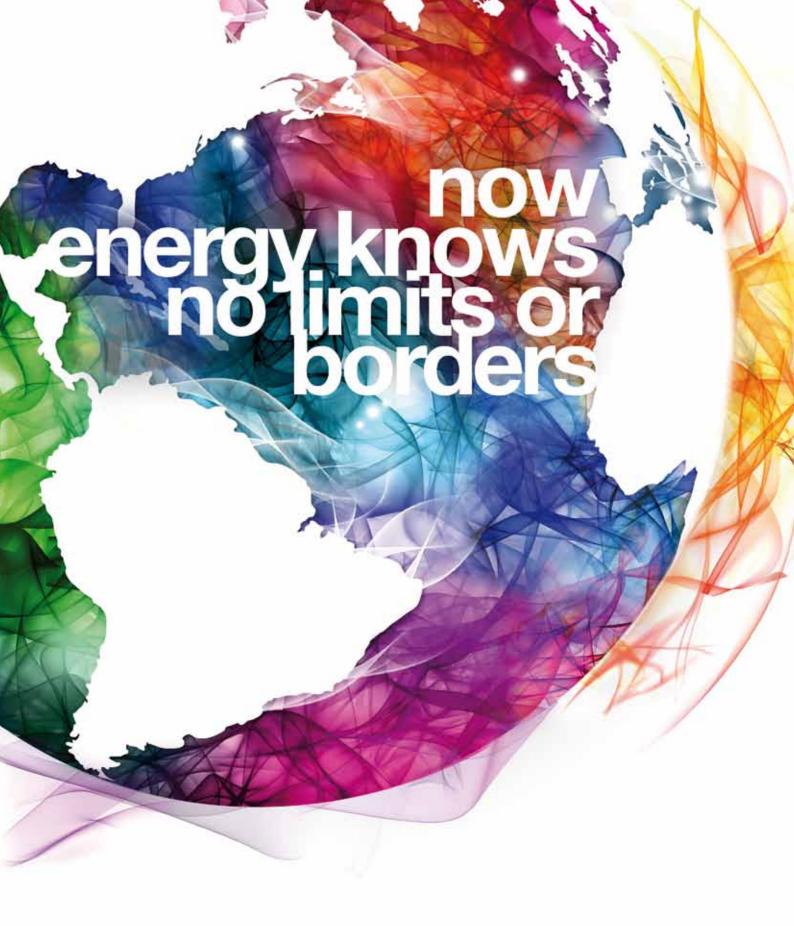
APPEA 2010, Brisbane

Industry leaders from around the world made their way to the 2010 Australian Petroleum Production & Exploration Association Conference (APPEA), which was held in Brisbane, Australia, May 16-19.

The President delivered IGU's perspective on the new energy landscape to the delegates and emphasised that gas will continue to play a major role in short- and long-term energy solutions.

State visit of the Dutch Queen to Norway

During the state visit of HM Queen Beatrix of The Netherlands to Norway, a high-level energy seminar was organised on June 2. The Secretary General and Jeanet van Dellen, Advisor to the Secretary General, participated in the seminar with ministerial and business delegations from both countries. HE Maria van der Hoeven, Minister of Economic Affairs of The Netherlands, chaired the



Two of the gas and electricity industry experts have joined forces to create the first seamlessly integrated energy company in Spain and Latin America. Now energy can adapt to your needs and to those of over twenty million clients in twenty three countries around the world. We have gone a long way together and we'll continue to work with all the energy in the world to stay by your side. Like to join us?





seminar for selected key stakeholders during which her Norwegian counterpart HE Terje Riis-Johansen, Minister of Oil & Energy, and CEOs from energy companies with tight bonds to Norway and The Netherlands gave keynote addresses.

NGV2010, Rome

The International Association for Natural Gas Vehicles (IANGV) is an organisation affiliated to IGU and organised its 12th Biannual Conference and Exhibition in Rome, Italy on June 8-10. The CC Chairman represented IGU at this occasion. You can read more about IANGV's latest developments on pages 54-56.

INDOPIPE 2010, Indonesia

The President gave a keynote speech at the 3rd International Indonesia Pipeline Conference and Exhibition (INDOPIPE 2010) which was held in Jakarta, Indonesia, June 9-10.

IGU STRATEGIC STATEMENT 2010: NATURAL GAS FOR A SUSTAINABLE ENERGY FUTURE

Natural gas is the cleanest, most efficient and versatile of the fossil fuels, making it a unique choice in the path towards a lower carbon energy mix and sustainable future. More importantly, the abundance of natural gas, its competitive cost of supply, its immediate availability and the flexibility to enable renewable energy clearly favour it as the best source to address emission reductions at the lowest cost.

The global energy industry needs to balance:

- Security of supply for energy in a growing market, particularly in developing countries; and
- Mitigating the effects of climate change arising from the intensive use of fossil fuels. Governments are increasingly focusing their energy policies towards the promotion of renewable energy with the objective of developing it as a major future supply base. However, due to a number of political, technical, economic and market related factors, the expected period leading to a substantial renewable energy base will be lengthy and will require significant subsidies. Therefore, in the foreseeable future, fossil fuels will continue to account for a major share of the world's future energy mix.

Given this outlook, and taking into account the advantages of natural gas over the other fossil fuels, the International Gas Union is working proactively with governments, regulators and the gas industry with focus on the following:

- Promote switching to natural gas in the power and industry sectors, replacing more carbon intensive fuels;
- Encourage the use of natural gas in the transportation sector, replacing liquid petroleum products;
- Improve efficiency and best practices across the value chain; and
- Implement policies and regulations enabling the development of gas infrastructure.

This can be achieved through the use of proven technologies that will give significant reductions in emissions of greenhouse gases in the short and medium term.

In line with its mission, IGU will continue to:

- Promote the exchange of know-how within the industry, catalysing the development of new technologies;
- Act as an effective interface between industry and government, promoting the advantages of natural gas as a preferred energy source that is part of a low carbon future; and
- Monitor the development of energy policies and public opinion to enable the gas industry to anticipate and prepare for both threats and opportunities.

Throughout the world natural gas should be an integral part of our sustainable energy future.



Jeanet van Dellen, Advisor to the Secretary General, addressing the RPGC conference in Moscow on June 24.

Themed "Accelerating Indonesia's Pipeline Infrastructure Development", INDOPIPE 2010 was hosted by the Indonesian Oil and Gas Pipeline Association (IAPMIGAS), and had the full support of the Ministry of Energy and Mineral Resources, Directorate of Oil and Gas, BPMIGAS, BPH Migas and Charter Member the Indonesian Gas Association.

Russian Petroleum and Gas Congress (RPGC)

The 8th RPGC was held in Moscow, Russia, June 22-24. Together with Gazprom, IGU was one of the Gas Day partners on June 24 and the Secretary General chaired the morning session entitled "Russia's Gas Industry: Strategies and Prospects".

The Advisor to the Secretary General addressed delegates on "Natural Gas from a Climate Change Perspective". The key message of the Gas Day was that natural gas can contribute significantly to a sustainable energy future; the challenge is to convince policymakers to include natural gas in the relevant policy documents.

JvD

• IGU Strategic Statement 2010

The Executive Committee approved the Strategic Statement for 2010 during its meeting in April. The Statement has now been published under the title "Natural Gas for a Sustainable Energy Future".



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IGU's Gas Efficiency and Social Gas Awards

By Jeanet van Dellen

Energy efficiency and increasing the awareness of gas efficient behaviour play a key role in achieving a more sustainable energy future, and that is why IGU launched the Gas Efficiency and Social Gas Awards in the last Triennium. Now the IGU Secretariat is inviting nominations for the Awards for the 2009-2012 Triennium, which will be presented at the opening ceremony of the 25th WGC in Kuala Lumpur, Malaysia on June 4, 2012.





The overall winner of the IGU Gas Efficiency Award 2008/9 was Paul Vloon of Bosch Thermotechnik with a project aimed at the heating and hot water sector: "A new generation of gas-fired heat pumps". The picture compares the initial development with a heat pump and condensing boiler in parallel (LEFT) to the new system in which the heat pump takes over the functions of the condensing boiler and a bypass condenser is added (RIGHT). The new system is cheaper, more efficient and takes up less space. It is currently being field tested in Germany.

• IGU Gas Efficiency Award

Under the motto "Gas Efficiency – Leading into a Sustainable Energy Future" IGU is calling for new ideas and projects aimed at obtaining greater efficiency in the use of natural gas. IGU considers energy efficiency to be one of the most important ways in achieving a more sustainable energy future, reducing greenhouse gas emissions, enhancing security of supply and reducing costs.

IGU members can propose projects related to gas efficiency that come from the gas industry, the academic sector or public or private institutions. Submissions can have all kinds of backgrounds (technical, economic, etc.) provided that they are new. They may already have been published or implemented but not earlier than two years prior to the date of submission to IGU. For projects not yet operating the submission has to detail how and when a project will be implemented. Submissions should be no more than five A4 pages in length including a half page non-technical abstract and elaborate on:

- The idea what is the "new" element;
- Costs of project implementation;
- Benefits/savings of gas which have been/will be realised by the project;
- Current project phase; and
- Project implementation.

In addition a CV of the project author covering no more than one A4 page should be included.

The deadline for submissions for the IGU Efficiency Award is February 1, 2011, and they should be sent to:

Secretariat IGRC2011 Technical Programme Committee

Attn: Mr Robert Badoux

c/o N.V. Nederlandse Gasunie

P.O. Box 19

9700 MA Groningen The Netherlands

E-mail: r.a.j.badoux@gasunie.nl

Tel: +31 50 524 8309 Fax: +31 50 524 8301



The first selection of the award submissions will be made by a committee with experts from the IGRC Technical Programme Committee at IGRC2011 in Seoul, Korea in October 2011.

This expert committee is chaired by Marc Florette, Senior Vice President Research and Innovation of GDF SUEZ. The three best proposals will be forwarded for final evaluation and selection of the winning proposal to the Evaluation Committee consisting of:

- Datuk Rahim Hashim, President of IGU;
- Ho Sook Wah, Chairman of the IGU Coordination Committee;
- Torstein Indrebø, Secretary General of IGU;
- Nobuo Tanaka, Executive Director of IEA; and
- Prof. Dr-Ing. Rainer Reimert, Engler-Bunte-Institut, Karlsruhe University, Germany.

Criteria

The submissions will be evaluated according to the following criteria:

- Innovation: what is new about the proposal (technology, process, methodology);
- Improved efficiency;
- Energy savings;
- Cost feasibility (realised benefits/savings of project vs. project costs/investments);
- Practical applicability; and
- Contribution to the image of the gas industry.

The decision by simple majority of the Evaluation Committee is final and will be made in February 2012. The best project, which is deemed new, feasible and achievable and which provides the most substantial improvements in gas efficiency will be awarded the prize.

IGU Social Gas Award

Under the motto "Encouraging Gas Efficient Behaviour" IGU is calling for new ideas and projects aimed at stimulating people to use gas more efficiently. They must have been implemented but not earlier than two years before the date of submission to IGU.





The winner of the IGU Social Gas Award 2009 was Mohammad Rezaei of Mazandaran Gas Company with a project to provide free home insulation for natural gas consumers in Mazandaran Province, Iran. (TOP) Applying insulation to a doorframe and (ABOVE) an insulated kitchen window.

IGU members can propose projects from both the public and private sectors including those developed by public authorities, schools, universities, social institutions, professional associations and companies. Submissions should be no more



than five A4 pages in length including a half page non-technical abstract and elaborate on:

- The idea what is the "new" element;
- Educational method and behavioural results;
- Costs of project implementation;
- Benefits/savings of gas which have been realised by the project;
- Current project phase; and
- Project implementation.

In addition a CV of the project author covering no more than one A4 page should be included.

The deadline for submissions for the IGU Social Gas Award is December 1, 2011, and they should be sent to:

Secretariat IGU Programme Committee (PGC) A – Sustainability

Attn: Mrs Naiara Ortiz de Mendibil Romo c/o Sedigas – Spanish Gas Association Balmes 357, 6 08006 Barcelona

Spain

E-mail: nmendibil@sedigas.es

Tel: +34 93 417 2804 Fax: +34 93 418 6219

The first selection of the award submissions will be made by a committee of experts from PGC A – Sustainability in January 2012. This expert committee is chaired by Juan Puertas, Director of T&E for Gas Networks, Energy Efficiency and Renewables at Gas Natural Fenosa. The three best proposals will be forwarded for final evaluation and selection of the winning proposal to the same Evaluation Committee as for the Gas Efficiency Award.

The submissions will be evaluated according to the following criteria:

- Innovation: what is "new" about the proposal;
- Educational and behavioural aspects;
- Energy savings;
- Cost feasibility (realised benefits/savings of project vs. project costs/investments);

- Practical applicability; and
- Contribution to the image of the gas industry.

The decision by simple majority of the Evaluation Committee is final and will be made in February 2012.

The best project, which is deemed new, feasible and achievable and which provides the most substantial improvement in gas efficient behaviour will be awarded the prize.

Prizes

For each Award there will be a cash prize of \$5,000. In addition, the authors will also be invited to WGC2012 with free registration for the conference and travel (economy class) including accommodation expenses. Both winning projects and their authors will be featured in the autumn 2012 edition of the IGU Magazine and on the IGU website.

In March 2012 the Secretariat will inform the winners of the result. The prizes for the winning projects will be handed out at the Opening Ceremony of the 25th WGC in Kuala Lumpur on June 4.

Wider aims

Apart from the direct benefit of fostering energy efficiency, organising these Awards helps to raise IGU's profile as a socially responsible organisation, strengthen ties with academia, public sector bodies and industry, and promote gas as part of the solution to a sustainable energy future.

All IGU members are encouraged to nominate entries for this Triennium's Awards and should you require any further information please do not hesitate to contact the Secretariat.

Jeanet van Dellen is Advisor to the Secretary General and can be contacted at ivde@statoil.com.

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