



6TH IEF-IGU MINISTERIAL GAS FORUM

INCLUSIVE GROWTH TOWARDS A SUSTAINABLE ENERGY FUTURE: THE ROLE OF GAS TECHNOLOGIES AND INNOVATION

Hosted by Naturgy

**at
The Hotel Arts Barcelona**

**Barcelona, Spain
21 - 22 November 2018**

6TH IEF-IGU MINISTERIAL GAS FORUM
INCLUSIVE GROWTH TOWARDS A SUSTAINABLE ENERGY FUTURE:
THE ROLE OF GAS TECHNOLOGIES AND INNOVATION

AGENDA

WEDNESDAY 21 NOVEMBER 2018

19:00 - 21:00

WELCOME RECEPTION & REGISTRATION

Hotel Arts Barcelona - Lokal Restaurant
Dress Code: Business Casual

THURSDAY 22 NOVEMBER 2018

7:30 - 8:30

REGISTRATION

Meeting Venue: Hotel Arts Barcelona - Pau Casals

8:30 - 9:00

WELCOME AND OPENING REMARKS

- H.E. Teresa Ribera Rodriguez, Minister of Ecological Transition, Spain*
- Mr Francisco Reynés Massanet, Executive Chairman, Naturgy
- H.E. Joe Kang, President, International Gas Union
- H.E. Dr Sun Xiansheng, Secretary General, International Energy Forum

9:00 - 9:30

KEYNOTE SPEECH

Gas for Climate 2050: The role of gas in a decarbonized energy system

The interface between gas, climate, and innovation will become more important in future to for government and industry to deliver a secure and sustainable energy future. Is there a vision on gas and climate that can unite policy makers and natural gas business leaders around the world?

- Mr Kees van der Leun, Director, Navigant, Gas for Climate

9:30 - 9:45

FAMILY PHOTO

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PANEL SESSION 1

The Role of Gas Technologies in Resilient Low Carbon Energy Systems

The importance of natural gas in achieving sustainability and successful energy sector transformations is now more widely acknowledged. Natural gas supports the greater deployment of renewable energies and in comparison to other fossil fuels produces much less greenhouse gas emissions, and negligible sulphur dioxide and airborne particulate matter and very low nitrogen dioxide emissions, critical to air quality. The challenge for the future is how energy systems will evolve to meet greenhouse gas emission, and more stringent fuel quality standards while at the same time respond to growing demand for affordable access to reliable energy services. Governments and industry are sharpening focus on the technologies and innovations needed to capitalize on the environmental benefits gas offers for inclusive growth towards sustainable futures.

- *How are new low carbon technologies for gas strengthening long-term sustainability?*
- *How can greater levels of energy efficiency be met through the use of gas?*
- *What are the potentials for excess renewable to develop hydrogen and improve system resiliency?*
- *What levers will ensure investment in Carbon Capture and Storage gains momentum?*
- *By what means are industry and governments addressing methane emissions?*
- *How are industry and governments facilitating the integration of renewable gas (biogas and biomethane) in existing transport, storage and power infrastructure?*

9:45 - 11:15

Moderator: Adam Sieminski, President, King Abdullah Petroleum Studies and Research Centre (KAPSARC)

Presentations by Panelists followed by roundtable discussion

- **H.E. Suhail Mohamed Al Mazrouei, Minister of Energy and Industry, President of the OPEC Conference, United Arab Emirates**
- **H.E. Thembisile Majola, Deputy Minister of Energy, South Africa**
- **Mr David Carroll, President and Chief Executive Officer, Gas Technology Institute**
- **Mr Narendra K Verma, Managing Director and Chief Executive Officer, ONGC Videsh**
- **Mr Li Luguang, Vice President, Petrochina & President, Petrochina Exploration and Production Company**
- **Mr Jefferson Edwards, General Manager, Shell Energy Global Integration**
- **Dr Jochen Penker, IEF Representative of Austria, Federal Ministry for Sustainability and Tourism**

11:15-11:30

COFFEE BREAK

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PANEL SESSION 2

Gas Demand Growth Beyond Power Generation

In 2017, global gas demand grew by almost 4% due to strong demand growth in Asia and Europe. While the outlook for gas is bright in view of its abundance, New infrastructure developments in Europe from the Baltic to the Mediterranean, rising North American LNG exports and Asian gas demand growth illustrate both the opportunities and hurdles that remain for the world to fully capitalise on the benefits that readily available gas resources and new and innovative technologies bring. The share of gas in the energy mix has remained largely unchanged until very recently as a consequence. In order to encourage the necessary investments in infrastructure and trade flows, there is a need to focus on pricing, cost, and acceptance issues to realise new growth potentials.

- *Will power generation and industrial use remain the anchors for investment and demand growth in the future?*
- *What market and policy measures strengthen the role of gas as baseload and flexibility provider in the power sector?*
- *What levers do governments and industry use to spur growth in other sectors such buildings, petrochemicals, and transport?*
- *How do clean air, climate and energy access goals depend on these: Where will government cooperation with the gas industry achieve the most?*
- *What options do gas technologies offer in relation to renewable energies, and other energy sources to make energy supply chains more efficient, secure and reliable across sectors?*
- *How can producer consumer initiatives match abundantly available gas resources with new technologies for competitive, prosperous and sustainable economies?*

Moderator: Ivan Martén, Senior Partner and Managing Director, Vice Chairman Energy Practice, The Boston Consulting Group (BCG), IEF Knowledge Partner

Presentations by Panelists followed by roundtable discussion

- **H.E. Mustapha Guitouni, Minister of Energy, Algeria**
- **H.E. Dr Tawfiq E Chowdhury, Adviser (Minister) to the Prime Minister, Bangladesh**
- **H.E. Tarek El Molla, Minister of Petroleum and Mineral Resources, Egypt**
- **Mr Dominic Emery, Vice President Group Strategic Planning, BP**
- **Mr Manuel Fernández Álvarez, Chief Operating Officer Gas & Power, Naturgy**
- **Mr Olav Skalmereas, Country Manager and Vice President, Marketing and Trading, Regulatory and Government Affairs, Equinor Deutschland**

11:30 - 13.00

LUNCH

Hotel Arts Barcelona - Lokal Restaurant

13:00 - 14:30

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PANEL SESSION 3

Enhancing Gas Supply Security and Diversification: New Sources and Markets

Producers and consumers cooperate to strengthen security of gas supply on international markets and benefit from greater resource availability and new market opportunities. This involves investment in gas infrastructure, ranging from pipeline systems, on land LNG terminals and floating facilities, cross-border and inland interconnections, as well as storage. Co-dependencies between importers and exporters are increasingly governed by flexible arrangements in the current well supplied market. Yet to boost resilient and healthy growth in Asia, or respond to the rising import dependencies in Europe, long-term investment must accelerate over the next decade. Predictable and transparent market mechanisms including reliable price signals and regulation will be required to enhance gas market security in a more diverse and rapidly changing environment.

- *Most gas pipeline and storage infrastructure is located in North America and Europe: How will investment leap forward to reliably meet rising gas demand in Asia?*
- *LNG trade flows and cross border pipelines remain a function of international relations: How do producers and consumers enable investment?*
- *Rapid development of LNG markets enabled greater international gas trade: What role will new LNG volumes play in building a more resilient global gas market?*
- *How will LNG markets balance short-term flexibility requirements of consumers with acceptable returns on long-term investments for producers?*
- *Which gas technologies and business models will help to reduce transmission and delivery system costs and extend the reach of gas supplies in new markets?*
- *How do international gas trade and investment terms affect climate and development goals?*

Moderator: Dr Kamel Ben Naceur, Chief Economist, Abu Dhabi National Oil Company (ADNOC)

Presentations by Panelists followed by roundtable discussion

- H.E. Aziz Rabbah, Minister of Energy, Mines and Sustainable Development, Morocco
- Mr Safa Uslu, General Director of Foreign Relations and International Projects, Ministry of Energy and Natural Resources, Turkey
- Dr Houda Allal, Director General, Observatoire Méditerranéen de l'Énergie (OME)
- Mr S Thangapandian, Chief Executive Officer, Essar Energy
- Mr Massimo Mantovani, Chief Gas & LNG Marketing and Power Officer, ENI
- Mr Francisco de la Flor, Director, International Organizations, Enagas

14:30 - 16:00

CONCLUDING REMARKS

- H.E. Luis Bertran Rafecas Secretary General, International Gas Union
- H.E. Dr Sun Xiansheng, Secretary General, International Energy Forum

16:00 - 16:15

COFFEE BREAK

16:15 - 16:45

JOINT PRESS CONFERENCE

Press Conference Venue: Hotel Arts Barcelona - Granados

16:45- 17:15

NETWORKING AND BILATERAL MEETINGS

17:15 - 19:00

CULTURAL TOUR & GALA DINNER

Museu Nacional d'Art de Catalunya (RSVP Email Required)

Dress Code: Business attire

19:00 - 23:00

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BACKGROUND

The International Energy Forum works closely with the International Gas Union on matters of mutual interest in accordance with the IEF Charter (Riyadh, February 2011). The role of natural gas in secure and sustainable energy markets has increased significantly since the 1st IEF-IGU Ministerial was held on 24 November 2008 in Vienna, Austria. The contribution that natural gas stands to make over the coming decades in support of energy security and orderly transitions towards lower emission energy systems and healthy living environments is now more widely acknowledged as a consequence of ongoing and inclusive dialogue.

Moreover, the role of natural gas will grow as producer and consumer countries implement their nationally determined contributions and sustainable development requirements in interaction with evolving market requirements across new and well established gas supply and demand centres. As policy priorities and market conditions differ across interrelated markets, successful decisions will depend more on these increased interactions between different markets and technology choices and point at the enduring importance of dialogue for investment and trade to move forward:

- The 5th IEF-IGU Ministerial Gas Forum (November 2016 | New Delhi, India) focused on gas for growth and improving prosperity and living standards in Asian growth markets. Ministers concluded that an energy technology neutral, inclusive and ongoing dialogue will help to ensure gas markets make an optimal contribution to energy matrices. This will allow for governments and industry to deliver on economic growth, climate change, and energy transition goals.
- The 7th IEF Asian Ministerial Energy Roundtable (November 2017 | Bangkok, Thailand) noted that the share of gas in the global energy mix could double by 2040 driven by consumers in non-OECD Asia. To overcome hurdles to the “Age of Gas” Ministers encouraged deepening dialogue to balance consumers interest in competitive and flexible natural gas supplies, with producer interest in unfettered market access.
- The 16th IEF International Energy Forum Ministerial (April 2018 | New Delhi, India) acknowledged that more dialogue is needed on new policy and technology deployment to facilitate cost-effective transitions. Ministers called for reliable, and realistic transformations that all can afford to place emphasis on access and affordability and make supply chains more efficient and sustainable acknowledging the indispensable role of clean energy and natural gas technologies.
- The 6th IEF-IGU Ministerial Gas Forum (21-22 November 2018 | Barcelona Spain) will debate the interactions between evolving energy and climate policies on one hand, with recent developments in gas markets that are increasingly driven by new gas technologies and innovative business practices. These play a significant role in optimising energy supply chains and responding to higher standards. To help make energy security, affordable access, and environmental options more transparent, dialogue on new gas technologies and innovation will help governments and industry create more efficient and reliably integrated energy markets, and stimulate rational investment, trade, and technology transfers among them.

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The 6th IEF-IGU Ministerial Gas Forum aims to sharpen a collective focus on the energy policies, market trends, and technology options that enable the gas industry to deliver inclusive growth and successful transformations for a secure, inclusive and sustainable energy future. Energy and climate policies, gas technologies and innovations as well as market fundamentals are ever more co-dependent but also vary across geographies. The 6th IEF-IGU Ministerial Gas Forum calls for more engagement among government and industry to shape reliable pathways for future gas sector trade and investment by placing emphasis on the opportunities gas technologies and innovation offer.

New conventional and unconventional resources, pipelines and LNG technologies diversify gas trade and investment flows among world regions, and create a more abundantly supplied and competitive gas market environment. The value gas supply chains offer to consumers has steadily improved through technology advancements, cost reductions and efficiency gains, as a consequence. In the current setting, natural gas market functioning depends more on technology, innovation and effective supply chain management, than extraction or off-take requirements. New gas technologies and innovations in gas market development are also coming into sharper focus as the need for clean air in major cities and greenhouse gas emission reductions grow. While implementation of the 2015 United Nations Paris Agreement and Agenda 2030 Sustainable Development Goals requires sustained and stepped-up efforts globally, policy choices and investment decisions take on a different character in distinct energy market settings.

Taking place in the context of these new gas market trends that create significant new market opportunities and enable enhanced ambition for climate resilient development on the eve of the 24th UNFCCC Conference of Parties in early December 2018, the 6th IEF-IGU Ministerial Gas Forum will build on the dialogue among government and industry stakeholders. This will support well informed decisions in light of greater interconnectivity and more stringent energy and climate policy requirements.

To ensure readily available opportunities are not lost to future generations, government and industry participants at the 6th IEF-IGU Ministerial Gas Forum in Barcelona are invited to consider efforts that accelerate technology advances and scale up business innovations. Dialogue outcomes will help ensure that currently abundant gas resources serve as a catalyst for change and successful transformations, while facilitating investment and trade through a better understanding of the varied requirements for energy security, climate change, and inclusive and sustainable development among IEF and IGU members.

The 6th IEF-IGU Ministerial Gas Forum takes a Mediterranean perspective on gas market trends between Europe, the Middle East, North Africa, Asia Oceania, and the America's. Three plenary sessions will focus on the role of technology and innovation in:

- Role of Gas Technologies in Resilient Low Carbon Energy Systems
- Gas Demand Growth Beyond Power Generation
- Enhancing Gas Supply Security and Diversification

Plenary sessions will be chaired by ministers. Dialogue among ministers, CEOs and senior level government and industry representatives will be guided by invited moderators and informed by IEF-IGU Background papers and session documents developed in partnership with IEF Knowledge Partners.



INTERNATIONAL ENERGY FORUM (IEF)

The IEF is the neutral facilitator of informal, open, informed and continuing global energy dialogue. Covering all six continents and accounting for around 90% of global supply and demand for oil and gas, the IEF is unique in that it comprises not only countries of the IEA and OPEC, but also key players including China, India, Mexico, Russia and South Africa. The Forum's biennial Ministerial Meetings are the world's largest gathering of Energy Ministers. Through the Forum and its associated events, IEF Ministers, their officials, energy industry executives, and other experts engage in a dialogue of increasing importance to global energy security. The IEF and the global energy dialogue are promoted by a permanent Secretariat of international staff based in the Diplomatic Quarter of Riyadh, Saudi Arabia. For more information visit www.ief.org



INTERNATIONAL GAS UNION (IGU)

International Gas Union (IGU) was founded in 1931 and is a worldwide non-profit organisation. As the global voice of gas, IGU seeks to improve the quality of life by advancing gas as a key contributor to a sustainable energy future. The Union has more than 150 members worldwide on all continents, representing approximately 97 % of the world gas market. The members of IGU are national associations and corporations of the gas industry worldwide. The IGU's working organisation covers all aspects of the gas industry from exploration and production, storage, LNG, distribution and natural gas utilisation in all market segments. For more information visit www.igu.org

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