“Gas, an energy source for sustainability”

By:
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President
International Gas Union (IGU),
Malaysian Gas Association (MGA)

24th May 2011
Madrid, Spain
IGU as THE spokesman for the gas industry

- Worldwide and non-profit organisation established in 1931
- Promotes technical and economic progress of the gas industry
- Emphasising sound environmental performance worldwide
- Increased focus on strategic and policy issues
- Cooperation with IEA, United Nations, World Bank, IEF and others
IGU members responsible for 95% of Global Gas Sales

- 74 Charter members
- 35 Associate members
- 11 Affiliated members

As of April 2011
IGU Organisation Chart for the 2009 – 2012 Malaysian Triennium

**IGU MANAGEMENT TEAM**
- President, Vice President, Immediate Past President, CC Chairman, CC Vice Chairman, Secretary General

**COORDINATION COMMITTEE**
- Chairman: Mr Ho Sook Wah, Malaysia
- Secretary: Ms Ungku Ainon Ungku Tahir, Malaysia

**EXECUTIVE COMMITTEE**
- Vice President: Mr Jérôme Ferrier, France
- Immediate Past President: Mr Ernesto A. López Anandón, Argentina
- Vice Chairman: Mr Georges Liens, France

**IGU SECRETARIAT**
- Secretary General: Mr Torstein Indrebo, Norway
- Director: Mr Hans Riddervold
- Senior Advisor / Web Master: Mr Erik Gonder
The world faces twin challenges

- Increased demand for energy versus
- Need to address environmental issues & climate change
Gas utilisation is about 1/4. Will it be same in the future?
Unfavorable scenarios of gas a few years ago

- Reserve-to-production ratio, image

R/P ratio: > 60 remaining years

¾ of the world’s proven natural gas reserves are within Middle East and Eurasia

Source(s): BP Statistical Review of World Energy, IHS CERA 2010
Gas resources are becoming plentiful and geographically diverse

- Availability: 60 years to 250 years
- Abundant global gas reserves

Source(s): Shell 2011
Technology – hydraulic fracturing
The complexity of today’s global energy equation

- The increased relevance of sustainability
Gas as a vital ally in the search for sustainability

- It represents major and key solution to the world’s economic and environmental challenges
- It is a “destination” fuel
  - Triple A product: Abundant, Affordable, Acceptable
  - Triple E product: Efficient, Economical, Environmental for power generation
  - It can be an “enabling fuel” to renewables
  - Well-accepted in terms of economics, security, environment and scale
Some of conceivable impacts may include:-

- It will alter the energy mix globally
- It will increase the role of gas compared to other fuels
- It will lead to price convergence
MENA gas demand is rising and gas shortages are likely
Applying technology and innovation to drive gas for sustainability

- Fuel for Gas District Cooling
- Fuel for Residential
- Fuel for Commercial
- Fuel for Automotive
- Fuel for Industry
- Fuel for Power Generation
- Fuel for Petrochemical Feedstock

- Increasingly applied in energy utilizations
Make gas green!
- from biogas, synthetic natural gas (SNG) & landfill gas

Carbon Capture & Storage (CCS)
Fuel cells
Sustainability is attainable given that commitment from all

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Interests</th>
<th>Contributions</th>
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<tr>
<td>Governments</td>
<td>Energy security</td>
<td>Stable funding</td>
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<td></td>
<td>Increased supply</td>
<td>Sound fiscal &amp; regulatory framework</td>
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<td>Reduced carbon</td>
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<td>Businesses</td>
<td>Make profits</td>
<td>Supply goods and services</td>
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<td>Business relationship</td>
<td>Active agent of change and progress</td>
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<td>R&amp;D expertise</td>
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<td>Detailed studies</td>
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- No single part of society can achieve sustainability by acting alone!
Areas of improvement that cannot be neglected

- To intensify advocacy for rebranding gas
- To promote gas in eradicating energy poverty
It is a clean, affordable, reliable, efficient, and secure energy source.
By 2030, about 1.3 billion people do not have access to electricity despite more widespread prosperity and more advanced technology.

- Role of gas in overcoming energy poverty
Natural gas – major part of the long term energy solution
The 25th World Gas Conference (25th WGC)

“GAS : SUSTAINING FUTURE GLOBAL GROWTH”

Kuala Lumpur Convention Centre
4 to 8 June, 2012

www.wgc2012.com/, www.igu.org/

CHARMING COUNTRY, COLOURFUL CITY

THANK YOU FOR YOUR KIND ATTENTION!
BACK-UP SLIDES
What differs gas among other fuels?

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<thead>
<tr>
<th></th>
<th>Coal</th>
<th>Oil</th>
<th>Ethanol</th>
<th>Nuclear</th>
<th>Renewables</th>
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- Coal increases energy security but brings harmful impacts to environment
- Renewables have environmental appeal but doubtful on economics and scalability
- Ethanol poses potential threats on global food prices and a carbon footprint
- Nuclear offers greater supply security but carries serious public opposition

➢ Gas is likely to be the “winner” fuel!
Why gas is the fuel of choice?

- Abundant
- Economical
- Efficient
- Acceptable
- Affordable
- Environmental

- Triple A’s slogan
- Triple E’s slogan

Natural Gas