Global Vision for Gas: The Pathway towards a Sustainable Energy Future

Torstein Indrebø
Secretary General of IGU

European Gas Conference 2013
4-5 June, Oslo, Norway
IGU represents more than 95% of the global gas market

* Status as per March 2013

Founded in 1931
www.igu.org

IGU members

81 Charter members
40 Associate members
The global energy future

Drivers:
- Rising population & middle class
- Economic development and job creation
- Public health: urban air quality
- Environmental concerns

The world needs:
- Secure, clean and competitive energy
- Safe energy

 Balanced and robust solutions required
Natural gas resources are abundant

Technology – driving supplies

Proven conventional

Unconventional

Coal bed methane

Shale gas

Tight gas

Volume

Gas resources for more than 250 years (IEA)
World gas resources – Conventional (green) & unconventional (red)
World Natural Gas Prices

Source: World Bank
World loves electricity!

Global increase by 2035 more than 50%

Source: ExxonMobil
Natural gas in the power sector

....clean-burning and affordable

Carbon dioxide emitted during electricity generation by fuel

NOx and SOx content by fuel
Natural gas enables renewable energy

Natural Gas - Wind - Solar

Clean support for variable renewables

An ideal combination
Share of coal in electricity generation in Europe

Source: IEA 2011
Natural gas for transportation

Less
- Particles/soot
- Noise
- CO2
- NOx - smog

Fleets
Maritime

Gas price lower than oil price
Natural gas provides sustainable growth

- Economic development and job creation
- Build on existing energy infrastructure
- Gas industry contributes to public finances
Adaptability of natural gas

Gas-fired generation technology directions:
- Capture carbon through retrofit technology
- Partnership with renewables
- Greater inclusion of carbon-neutral biogas

Gas pipeline and storage systems provide future options for:
- CO₂, Biogas, Hydrogen
The Pathway towards a sustainable future

Meeting future global energy needs – whilst addressing air quality and climate change concerns

Global Emissions Trajectory Base Case
Vision Pathway highlights various CO$_2$ abatement options and technology choices

Calculation for 2050

- Base Case
- Reducing Demand
- Coal to Gas Substitution
- Oil to Gas Substitution
- Transport Oil Substitution
- Renewables and Nuclear
- Biogas
- Carbon Capture
- Emissions-level based on IGU pathway

Reductions from Greater Gas Use
Reductions from Other Technologies
Reductions from Both Greater Gas Use and Other Technologies
Pathway: Gas demand by sector

7.1 bcm
Creating Trust for Gas

- Recognition by policymakers
  - National, EU, G20, UN
- Dialogue with environmental NGOs
- Licence to operate

GHG Emissions Spectrum

Image of Gas
A robust and sustainable energy policy

- Energy efficiency & savings
- Enhance use of gas in power generation and transportation
- Phase in renewable energy
- Develop Carbon Capture and Storage technology

Gas: The fuel of today and tomorrow!
Thank you for your attention!

www.igu.org