



International Gas Union



Global Challenges facing the Gas Industry

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Secretary General of IGU

19-22 January 2009, Jakarta, Indonesia



- **The International Gas Union**
- **Globalisation of the gas market**
- **Climate and benefits of gas**
- **Access to reserves**
- **The global financial crisis**
- **Conclusions**





IGU – serving the gas industry world wide



- World wide non–profit organisation since 1931
- Promotes technical and economic progress of the gas industry
- Geopolitics and strategy higher on the agenda
- Membership € 4,500/year

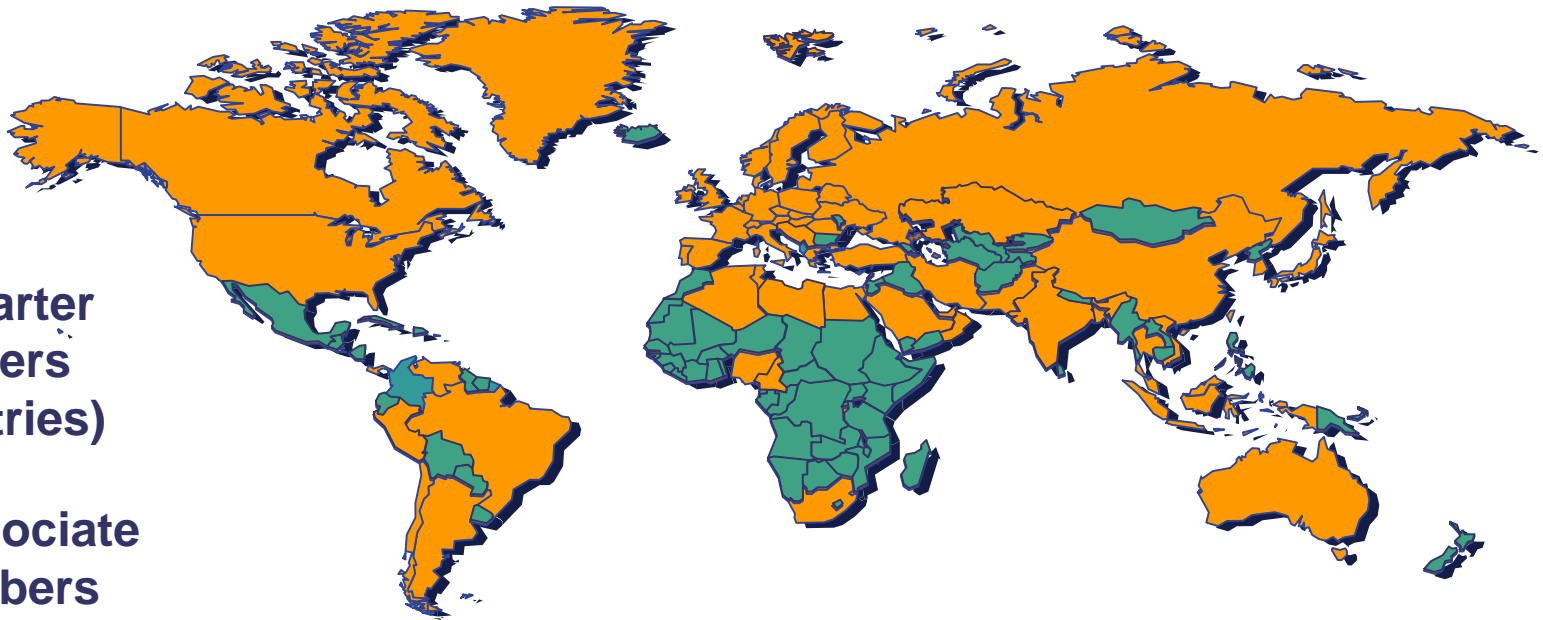


IGU represents around 95% of world wide gas sales



News, Views
and knowledge
on Gas - World Wide

■ Members ■ Non Members



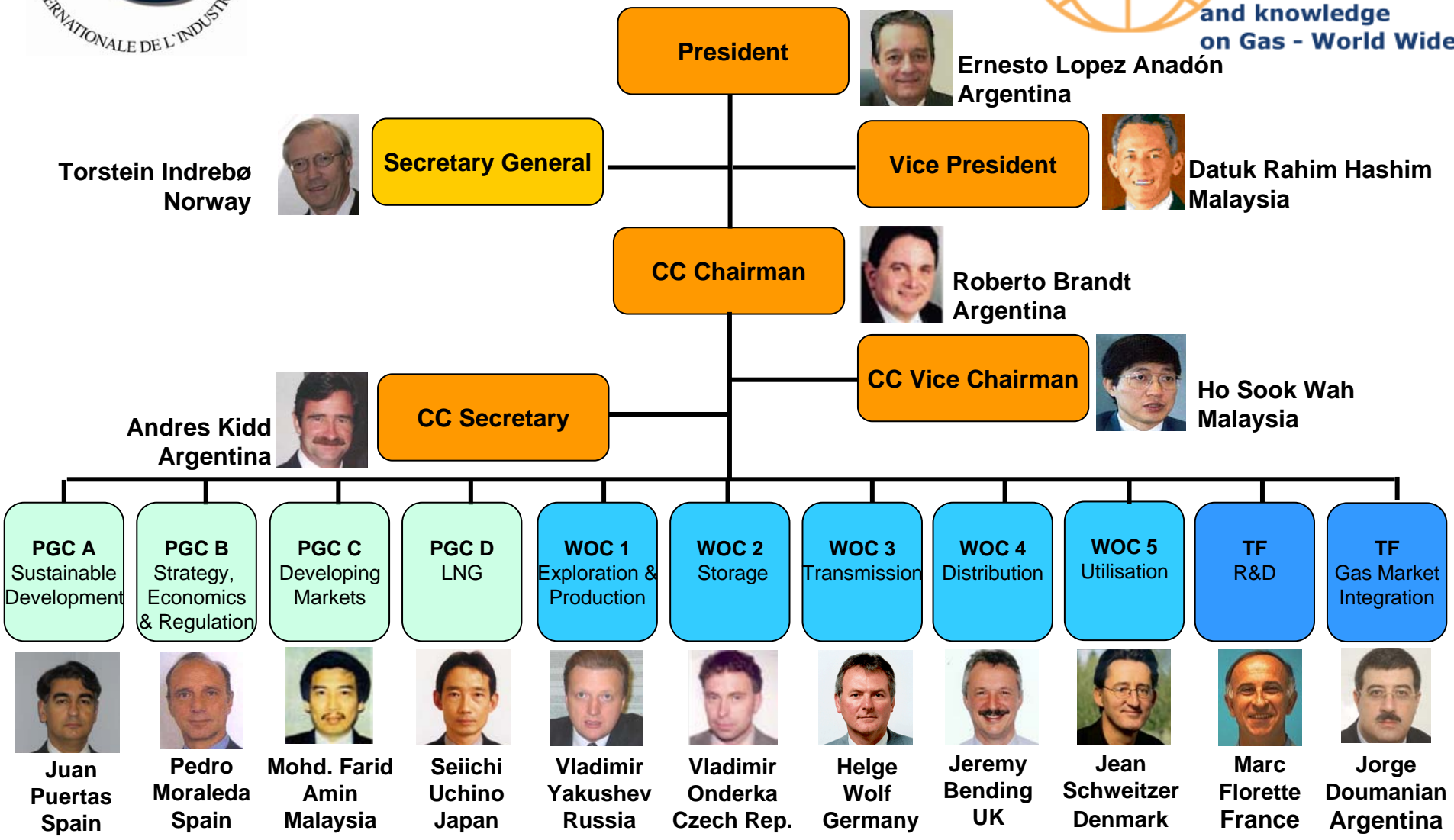
72 Charter
members
(countries)

32 Associate
members
(companies)





The organisational structure of IGU





Main IGU events



- **World Gas Conference**
 - Buenos Aires 2009
 - Kuala Lumpur 2012
 - Paris 2015
- **LNG 16 in April 2010, Oran, Algeria**
- **LNG 17 in Houston in April 2013, USA**
- **IEF- IGU Ministerial Gas Forum in November 2010**
 - Doha, Qatar
- **IGU Research Conference in October 2011**
 - Seoul, Korea

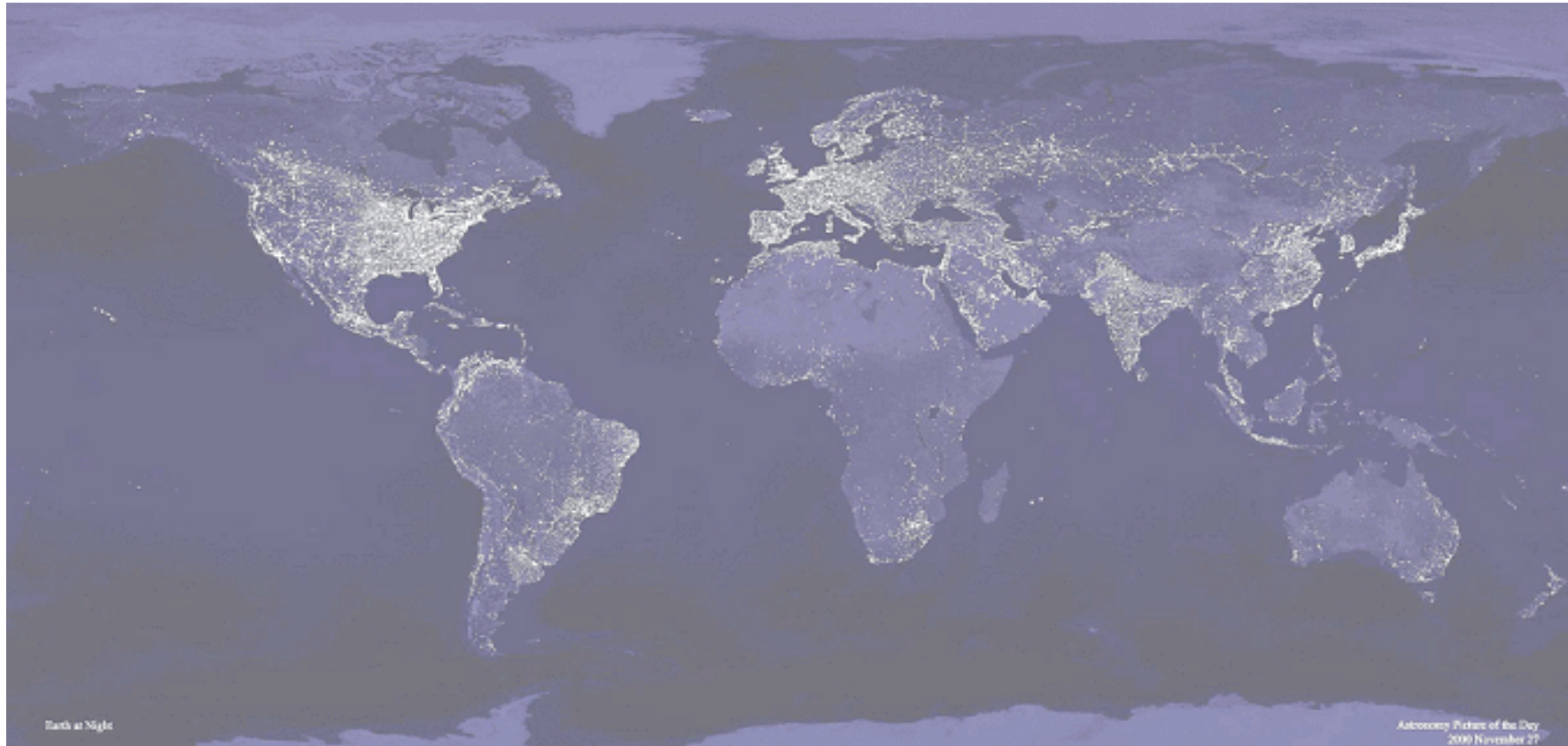




The mission is the challenge



Secure, reliable, affordable energy services with minimal environmental impact



Earth at Night

Astronomy Picture of the Day
2010 November 27

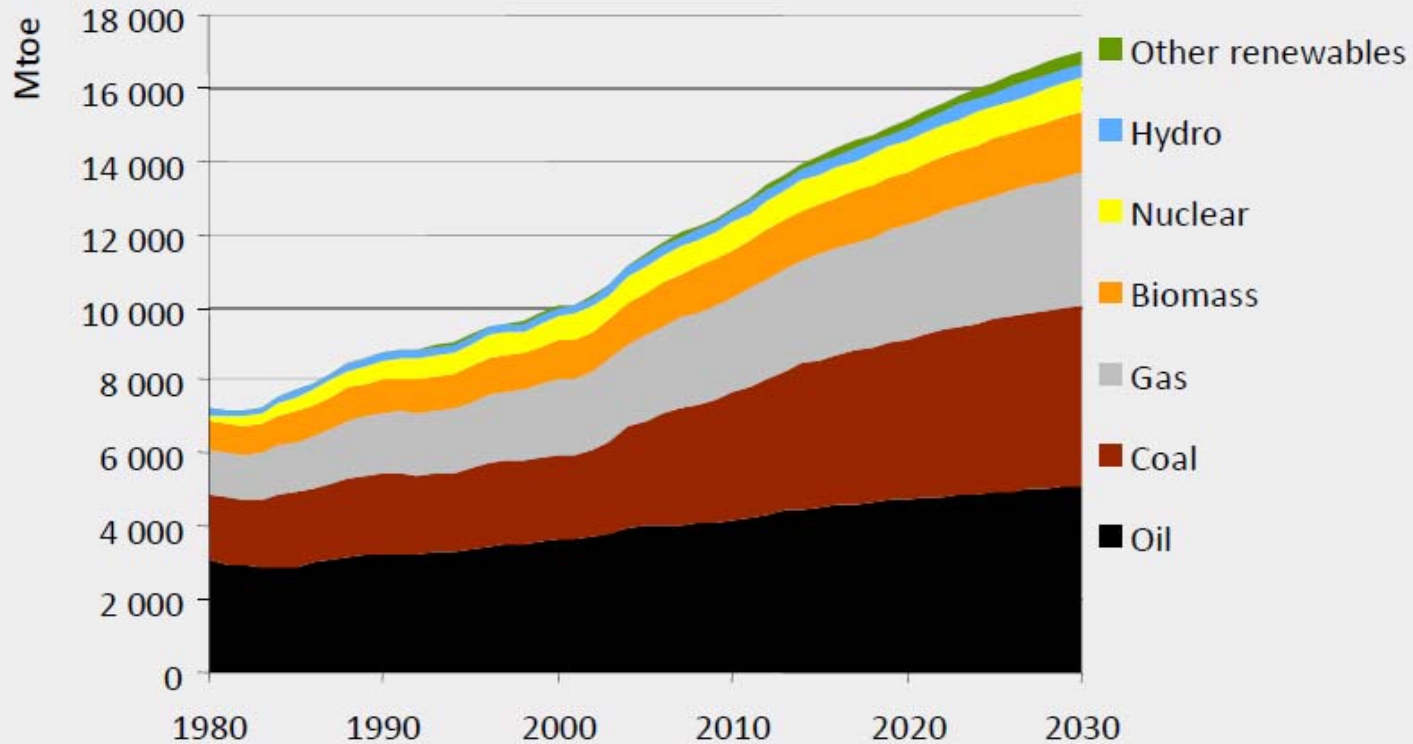
"Safe global forecasting"

- **Population growing to 9 billion in 2050**
- **Enhanced urbanisation and prosperity**
- **Environmental concerns**
- **Times of "easy oil & gas" over**
- **Fossil fuels will dominate next decades**





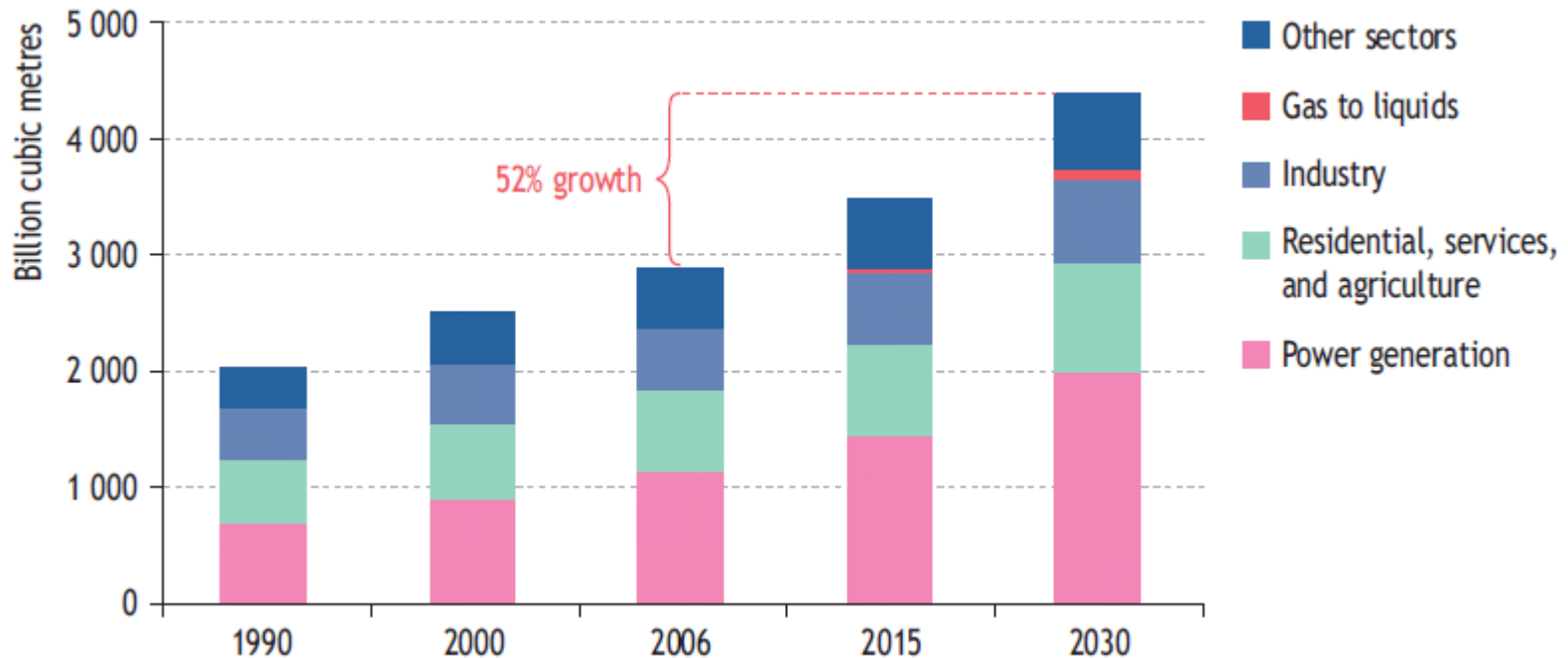
IEA forecasts growing gas demand in the future



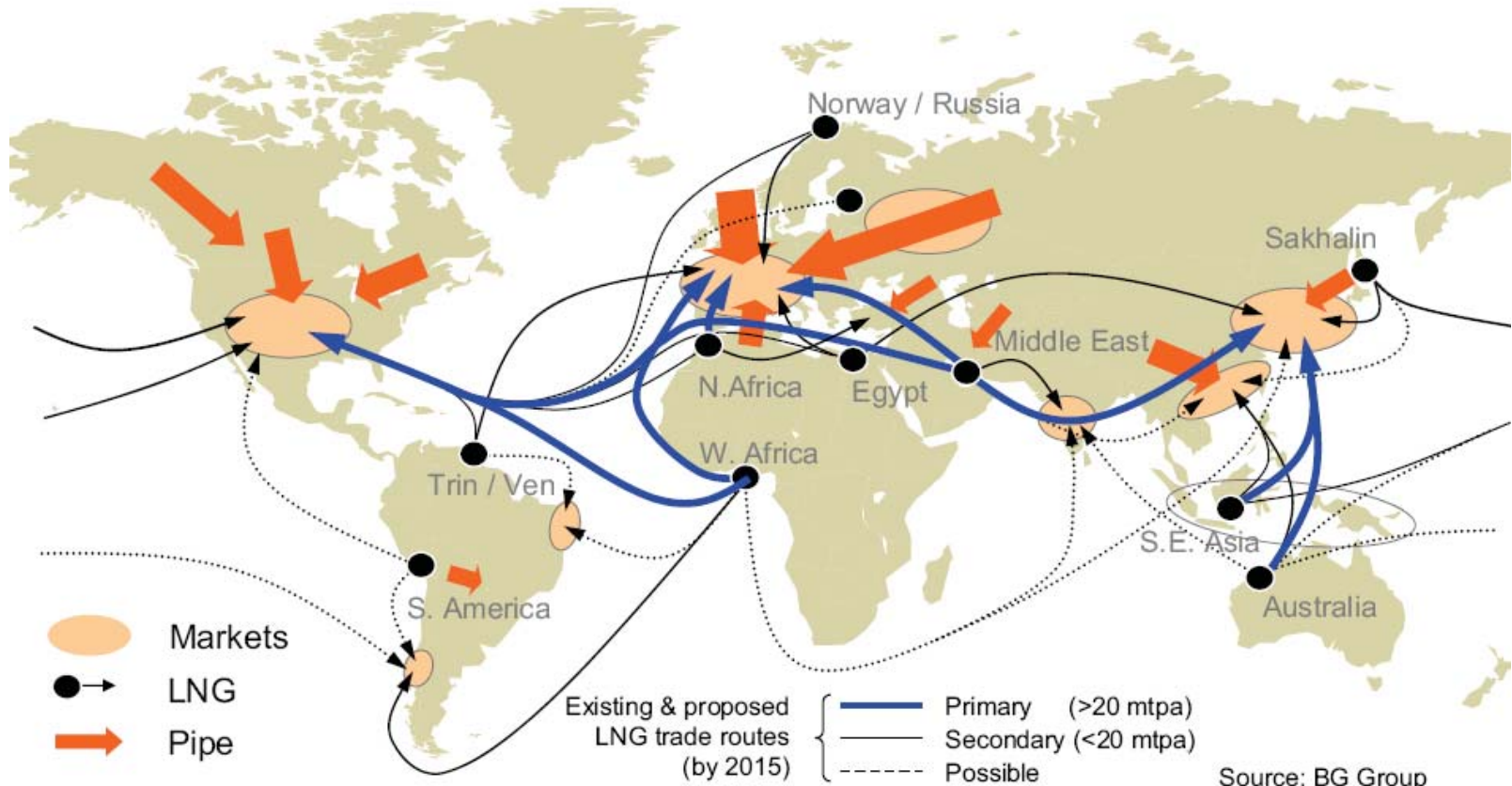
World energy demand expands by 45% between now and 2030 – an average rate of increase of 1.6% per year – with coal accounting for more than a third of the overall rise



Power generation driving the gas market

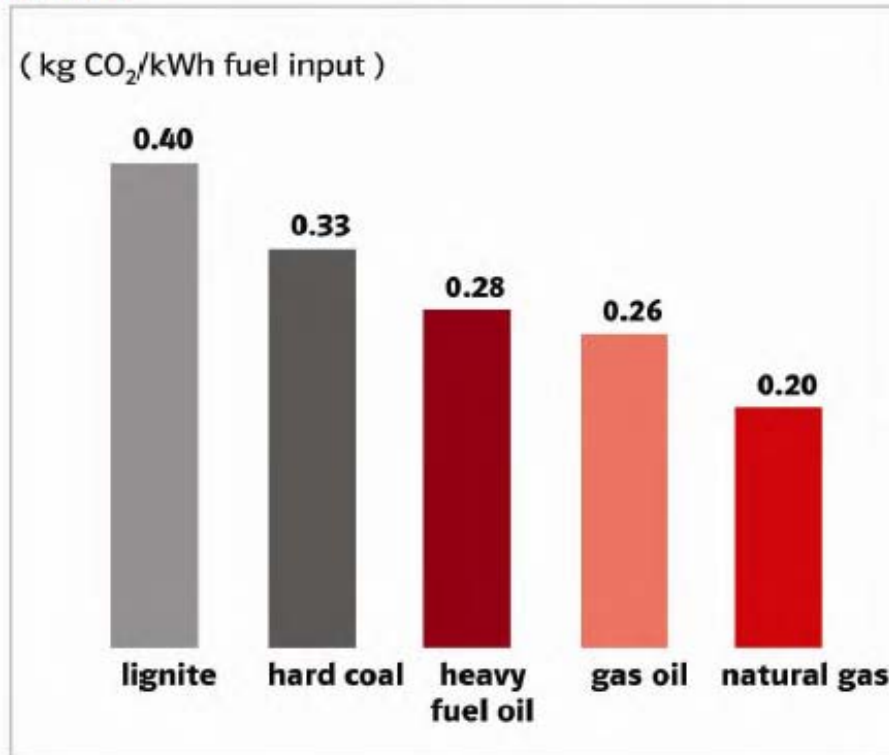


A global gas trade is evolving



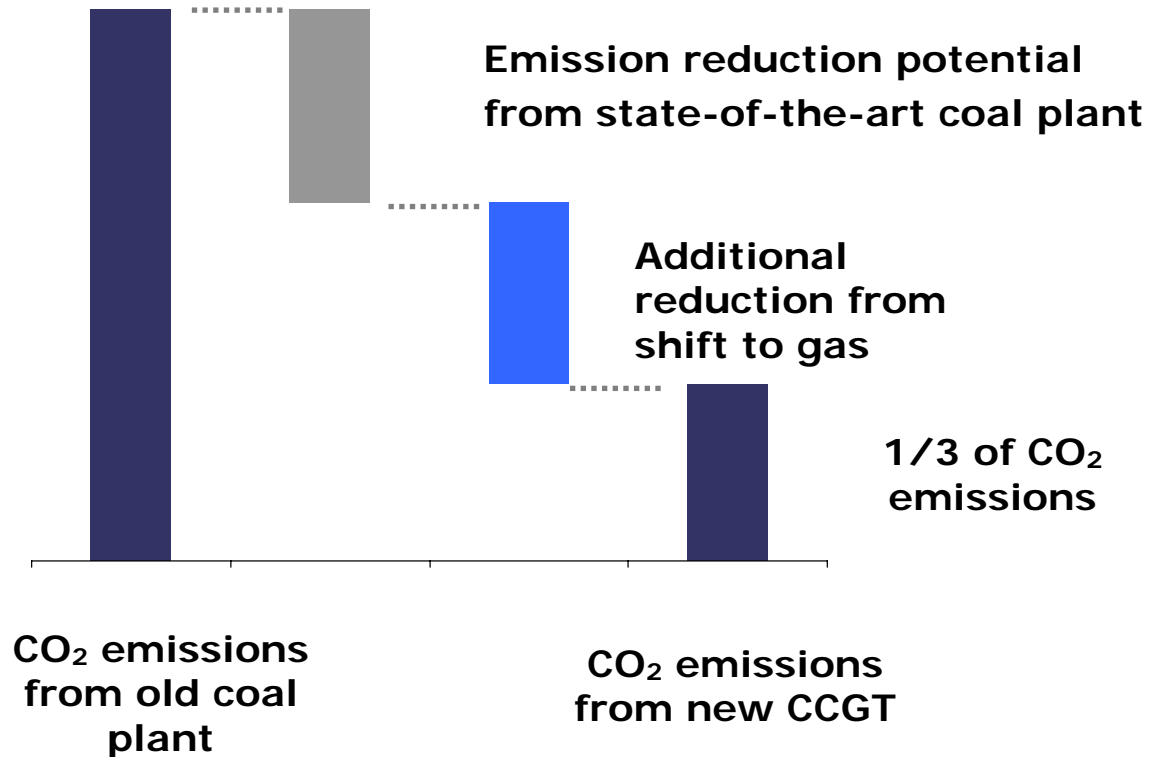
Natural gas – lowest carbon content

CO₂ formed by the combustion of fossil fuels:



Natural Gas in power generation - climate friendly fossile fuel

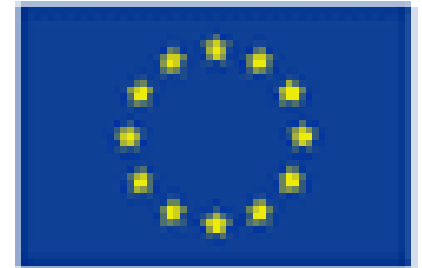
- **Replace coal with gas**
- **Green agenda and carbon emissions**
- **GHG reduction potential**



The European Union climate and energy package

- **20% reduction in GHG emissions by 2020**
- **20% of energy consumption from renewables**
- **20% increase in energy efficiency**

- **30% reduction in GHG emissions if global agreement in place**



➤ ***Climate concerns will impact energy demand***



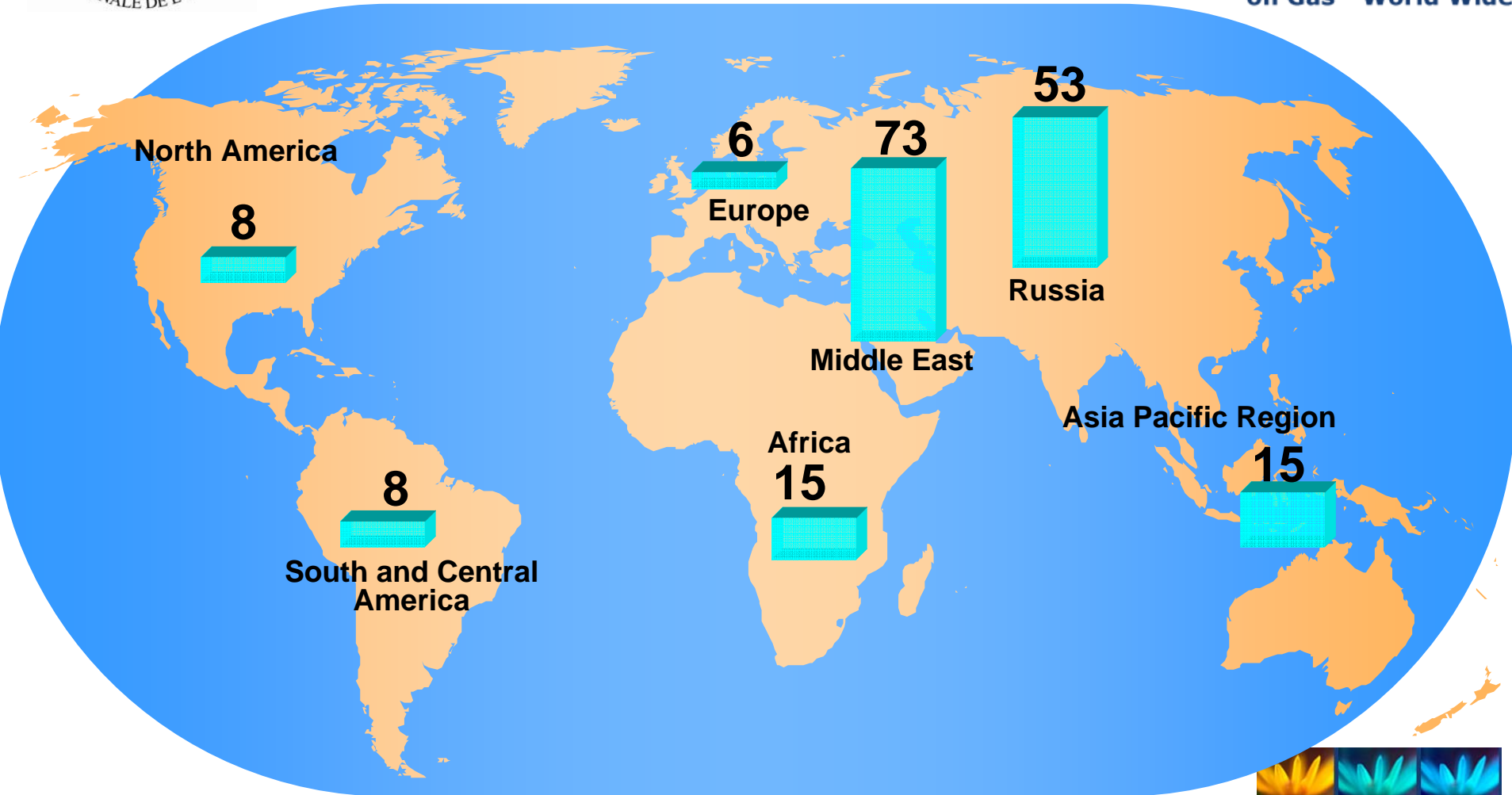
Plus factors of gas

- Low carbon dioxide releases
- Efficient with combined heat and power systems
- Use in transportation sector benefits city air quality
- Natural gas complements wind and solar energy
- Gas – part of the solution a sustainable world of energy



Location of world proven gas reserves (180 trillion m³)

in 1000 bcm



National policies impacting global gas markets



- Increased domestic demand
- Economic activity and investments
- Acreage availability
- Environmental concerns



- **Energy demand pattern changing**
- **Capital markets and financing**
- **Impact on projects**
 - Marginal projects
 - Cost control
 - Infrastructure investments

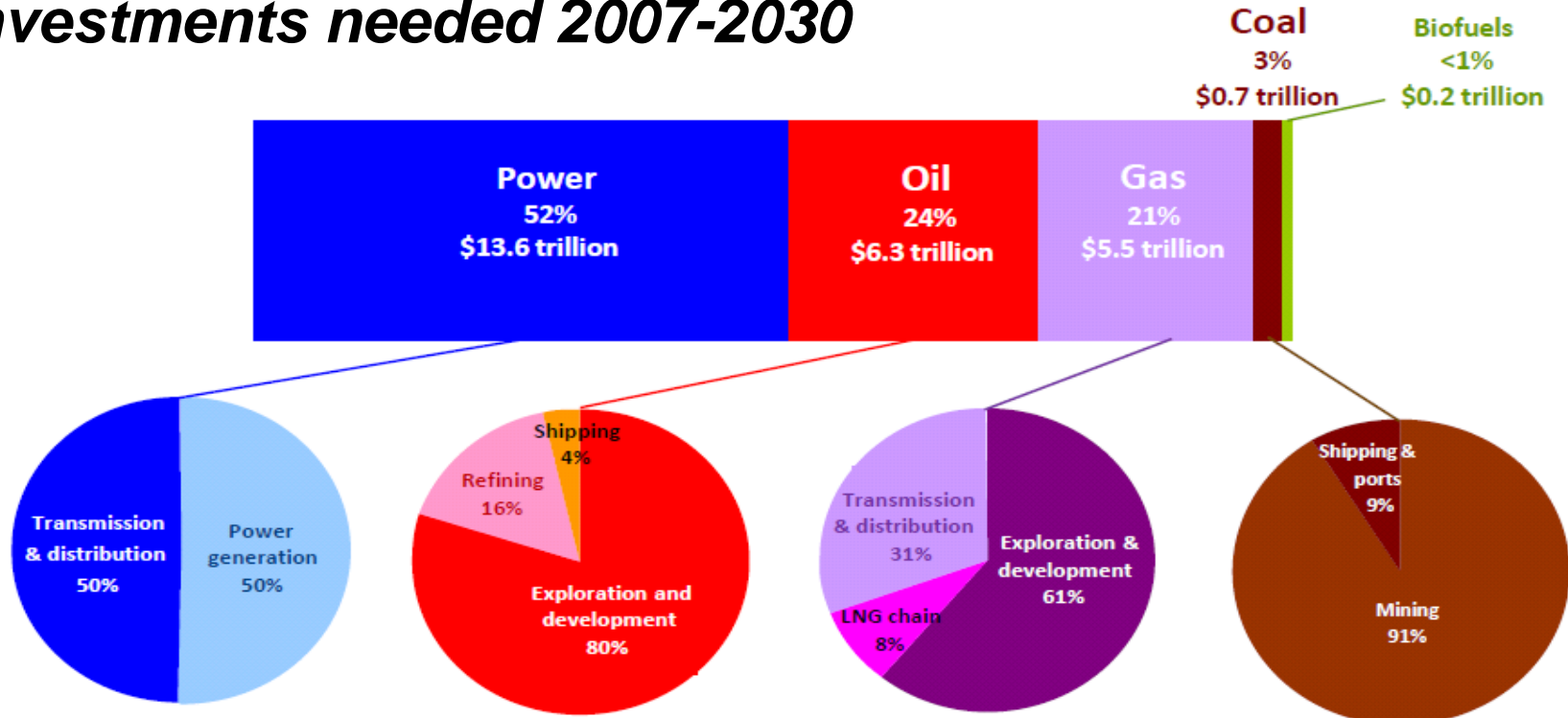
- **Risk for increased protectionism?**



Financing increasingly a challenge

Source: IEA – World Energy Outlook 2008

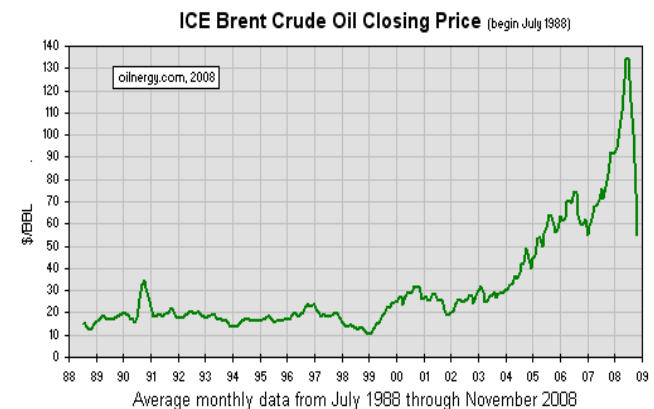
Investments needed 2007-2030



Cumulative investment in energy-supply infrastructure of \$26.3 trillion is needed, but the credit squeeze could delay spending – especially in the power sector

Risk management critical

- ➡ Long term perspective 20-40 years
- ➡ Demand and supply security
- ➡ Project risk: technical, schedule, revenue
- ➡ Regulation of business
- ➡ Environmental policies
- ➡ Geopolitics



Regulation has to reflect market reality

- Coordination of regulation along the gas chain with cross border trading and transit



Production



Transportation



Storage



Distribution



Customers

- Real dialogue among stakeholders





Ormen Lange – the new gas giant for Europe

- ~400 bcm reserves
- ~1000 m water depth
- Extreme conditions

Ormen Lange on
the Atlantic
Margin

Norway

Iceland

Scotland

Conclusions

- Global increase in demand for gas
- Environmental friendly
- Abundant reserves, safe and reliable
- Investment perspective 20-40 years
- Basis for sustainable economic growth



Natural gas

– part of the long term energy solution



**Thank you
for your attention!**

See you in Buenos Aires!

**24rd World Gas Conference
and Exhibition**

October 5 – 9 2009





www.igu.org



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