International Gas Union

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Global Challenges facing the Gas Industry

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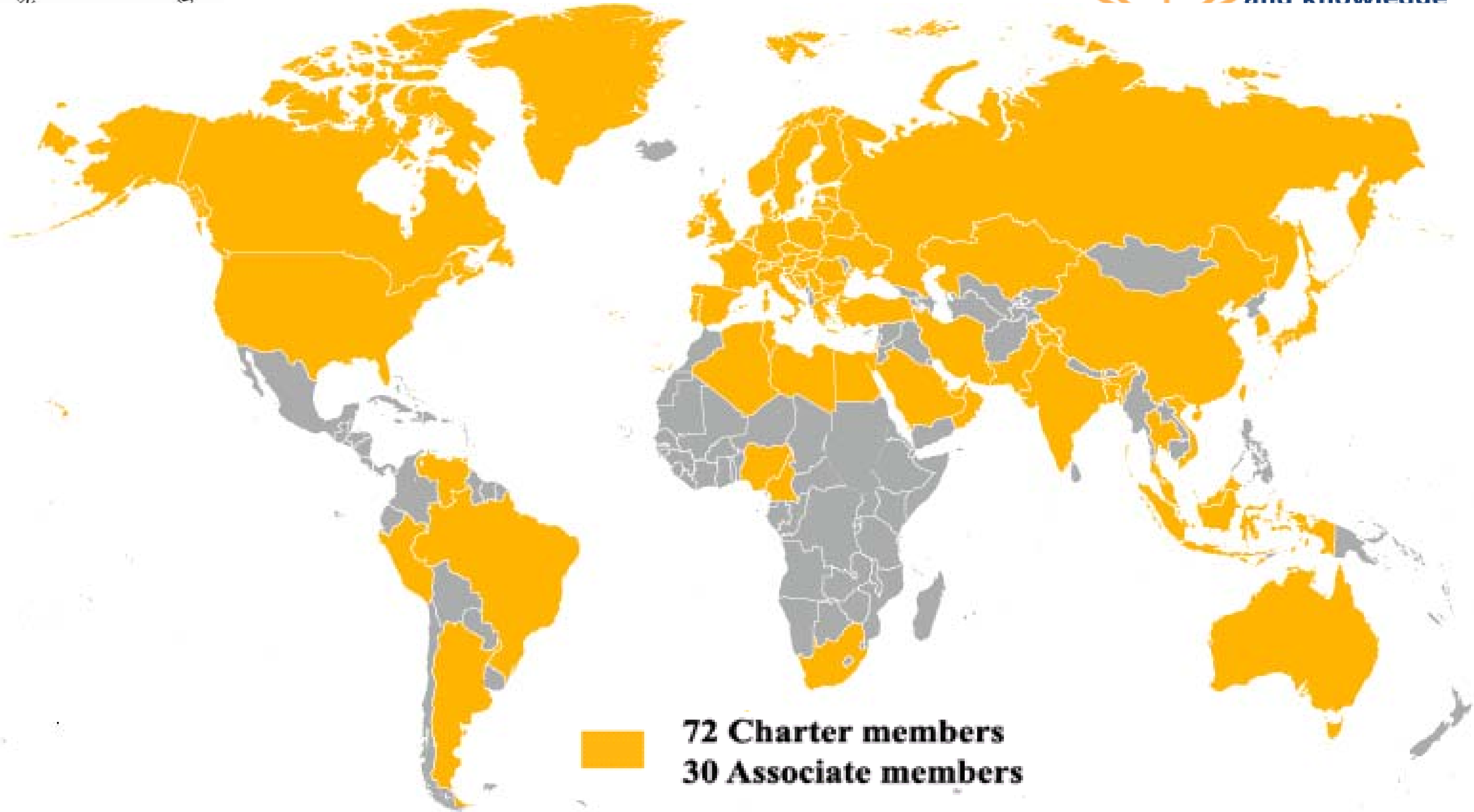
Agenda

- The International Gas Union
- Globalisation of the gas market
- Energy Security and Regulation
- Conclusions

IGU serves as a spokesman for 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
- Fee for Charter- and Associate members € 4,500
- Bosnia and Herzegovina: Charter member since 1997

IGU represents around 95 % of global gas sales



The organisational structure of IGU

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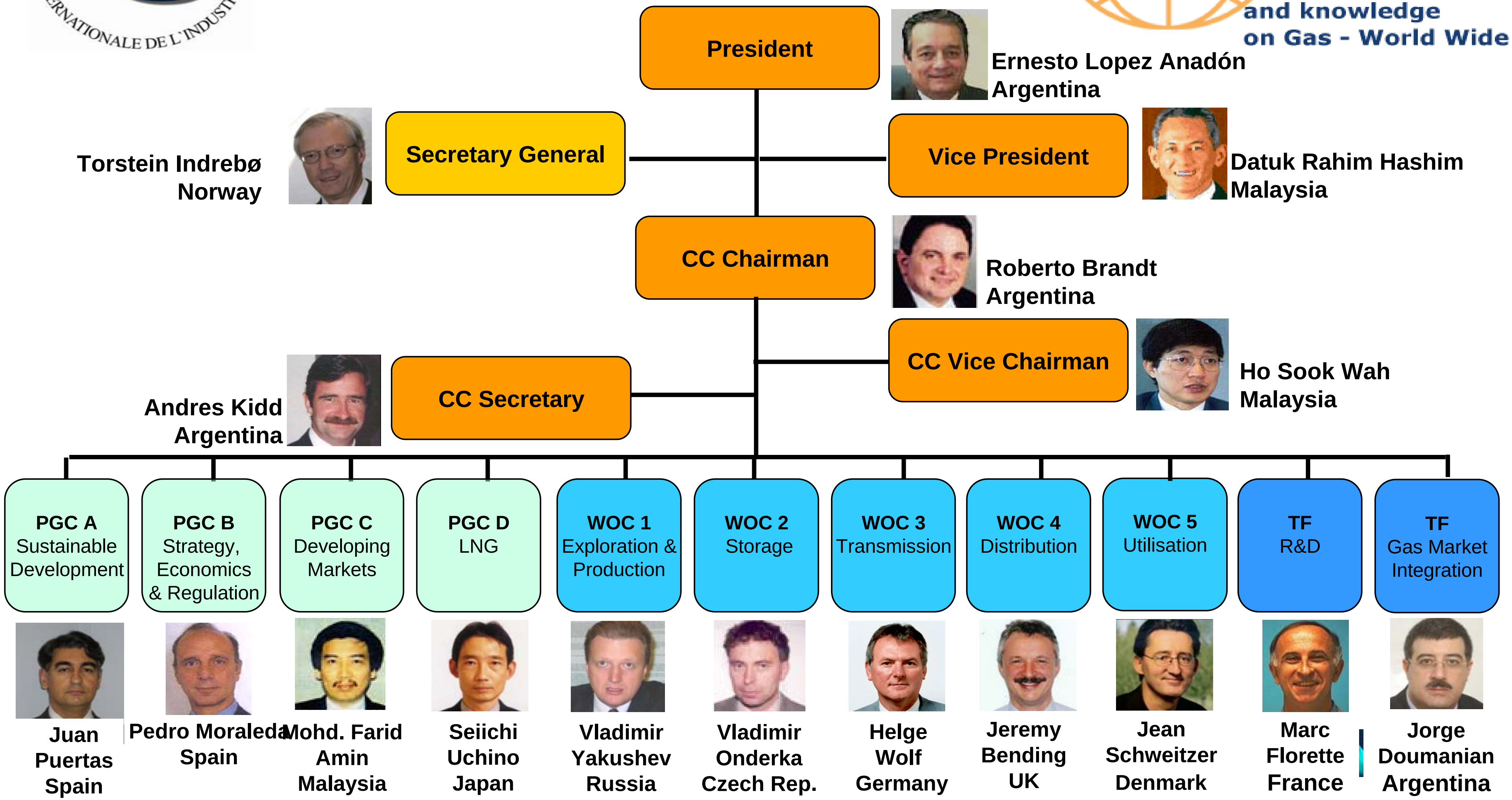

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The mission is the challenge

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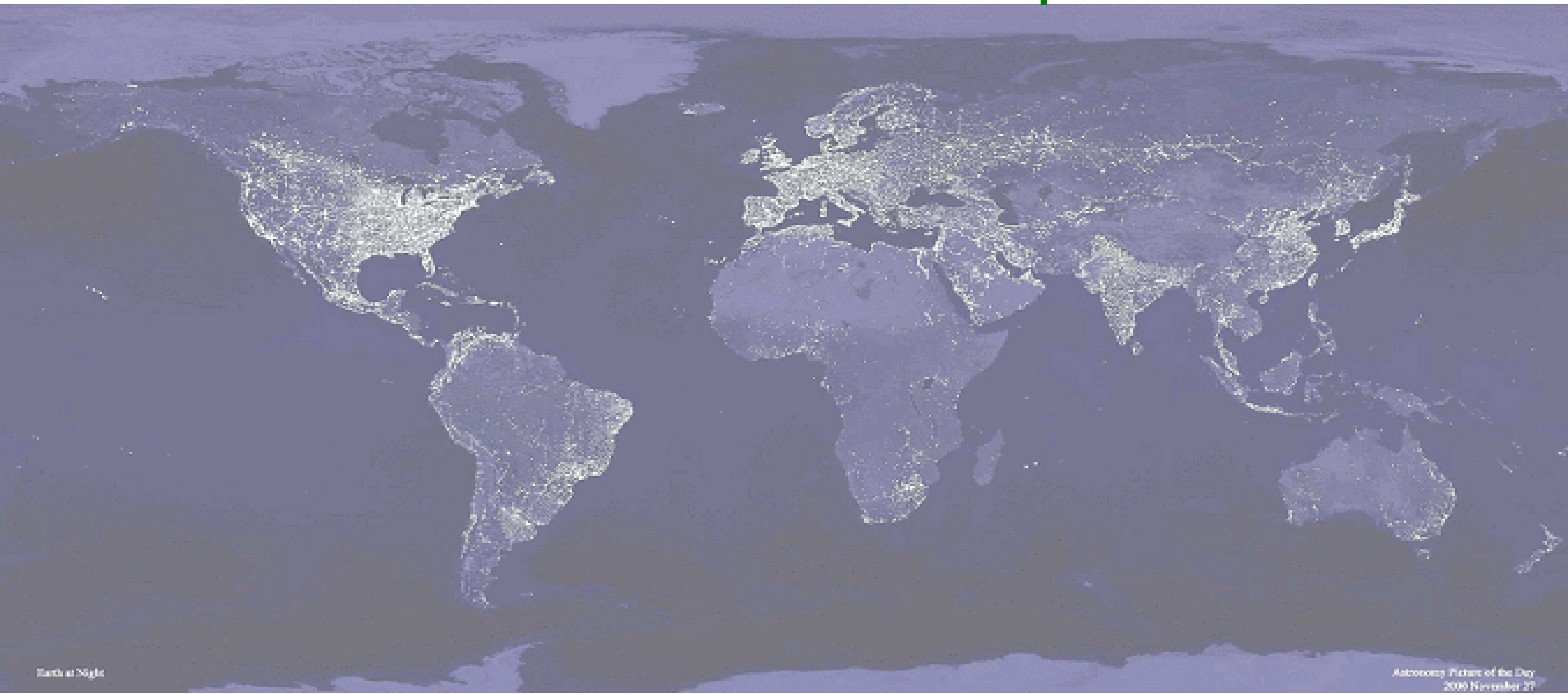
Secure, reliable, affordable energy services with minimal environmental impact



”Safe forecasting”

- Population growth from 6 in 2005 to 9 billion in 2050
- Urbanisation continues
- Increased level of global prosperity
- Environmental concerns
- Times of ”easy oil & gas” over
- Fossil fuels will dominate next decades

IEA forecasts growing gas demand in the future

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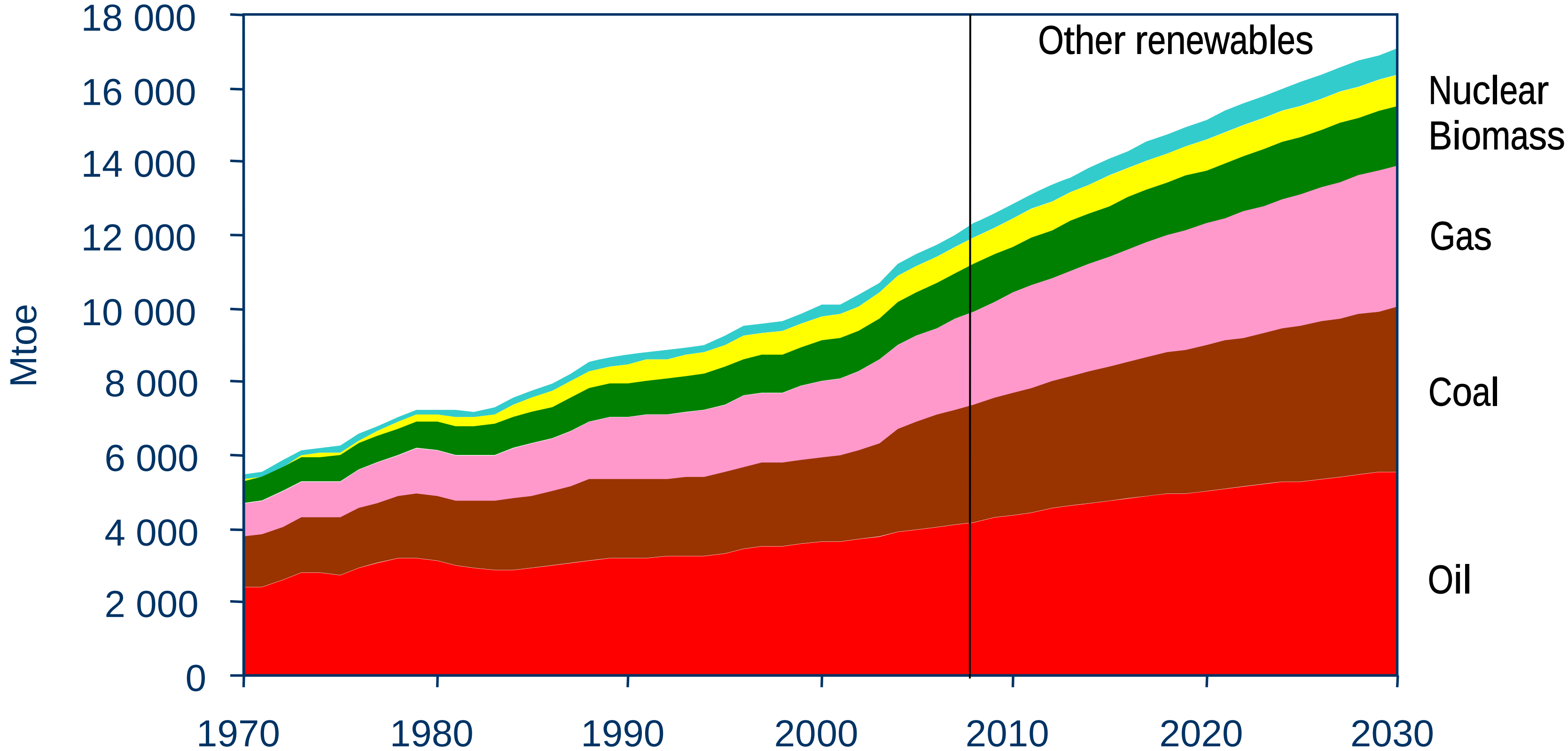

Source: OECD/IEA - 2008

Natural Gas:
Producers, exporters and importers

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Export and import include pipeline gas and LNG

Producers	MCM	%
Russia	651	21,5
USA	546	18,0
Canada	183	6,0
Islam. rep Iran	107	3,5
Norway	91	3,0
Algeria	90	3,0
Nethelands	76	2,5
UK	76	2,5
Indonesia	70	2,3
Peopl.rep China	68	2,2
Rest World	1074	35,4
World	**3032**	**100,0**

Exporters	MCM
Russia	192
Canada	106
Norway	85
Algeria	63
Netherlands	57
Turkmenistan	51
Qatar	38
Indonesia	34
Malays.	32
USA	23
Rest World	220
World	**900**

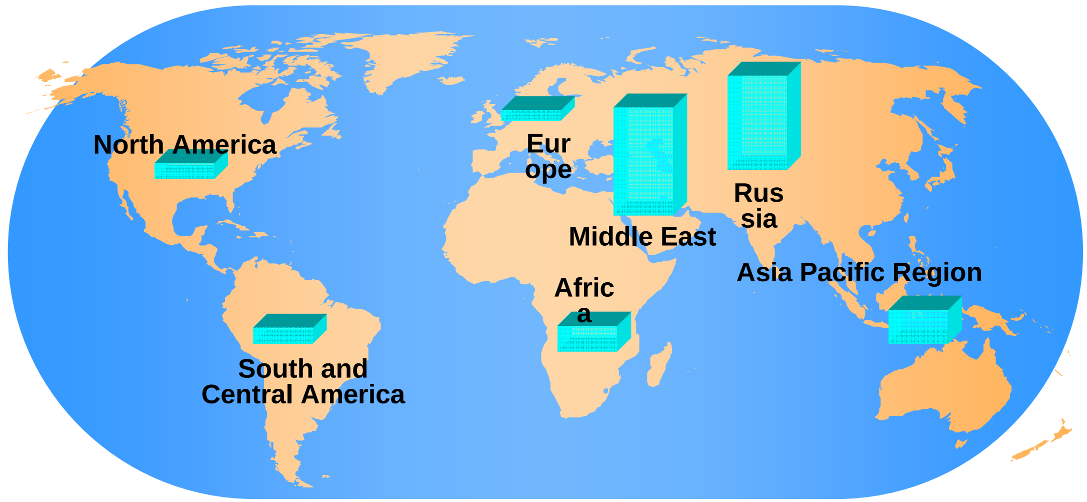
Importers	MCM
USA	130
Japan	96
Germany	88
Italy	74
Ukraine	50
France	43
Turkey	36
Spain	34
Korea	33
UK	31
Rest World	283
World	**899**

Source: IEA Key World Energy Statistics 2008

Access to Reserves

- NOCs hold the majority of gas reserves

- Concentrated on few hands, Saudi Arabia, Iran, Russia, Qatar)

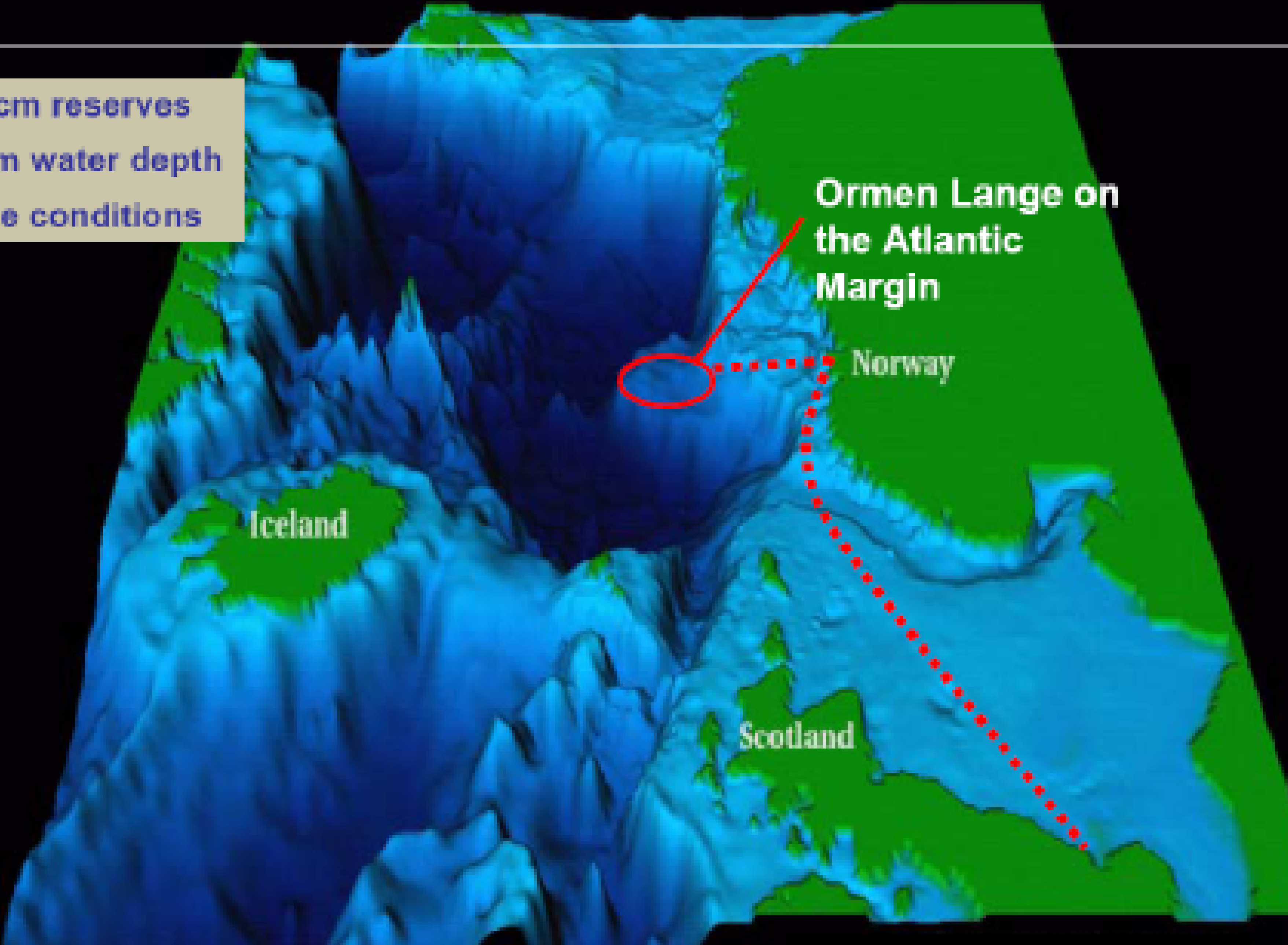


Source: Source: BP Statistical

- IOCs control 6% of world gas reserves

Ormen Lange – the new gas giant for Europe

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



Power generation driving the gas market

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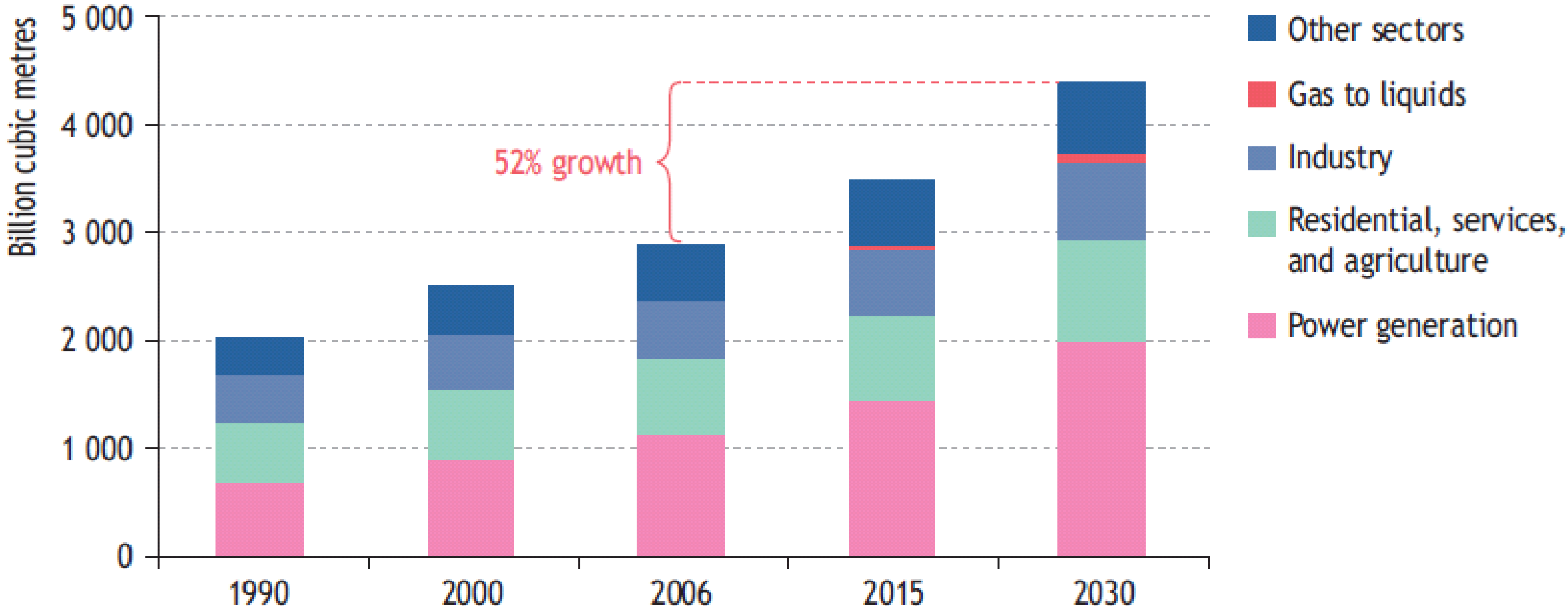

Source: IEA – World Energy Outlook 2008

A global gas trade is evolving

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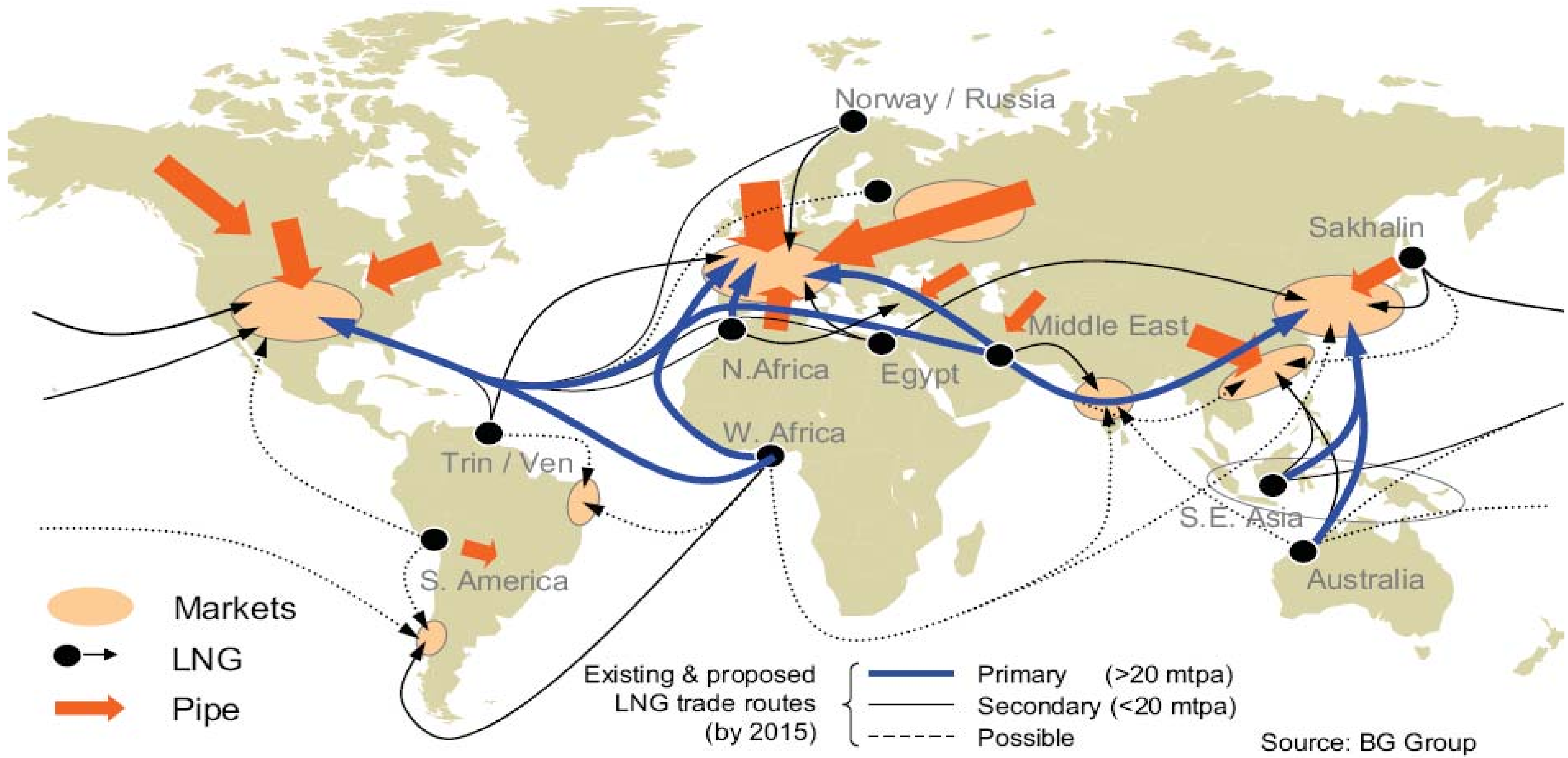

World trade Natural Gas
Inter-regional WEO (not inside regions)

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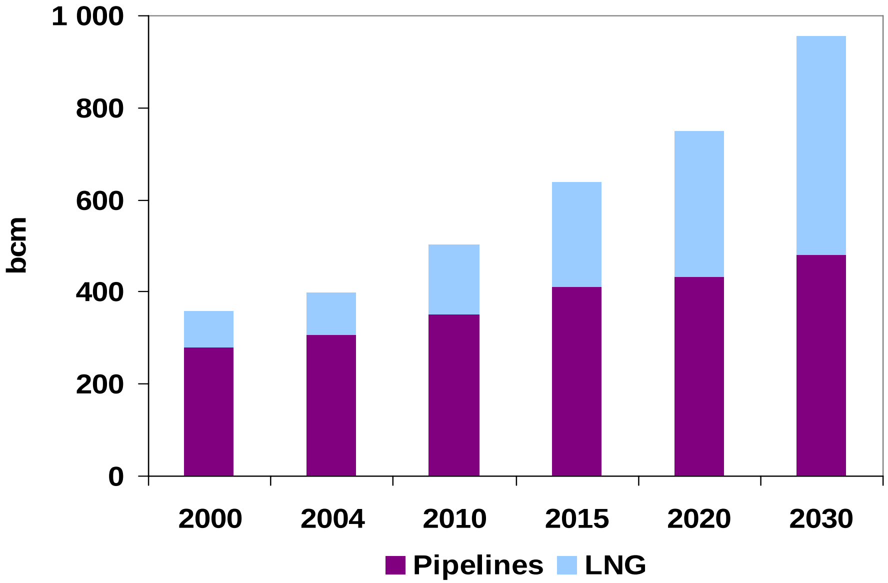

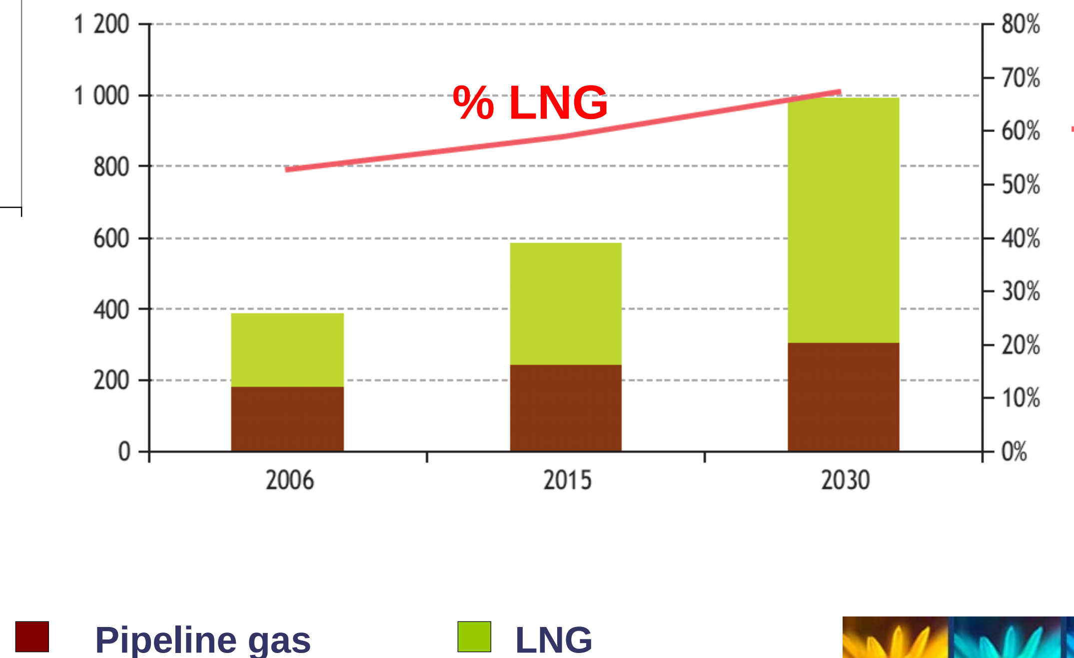

Source: IEA – World Energy Outlook 2008

Financing increasingly a challenge

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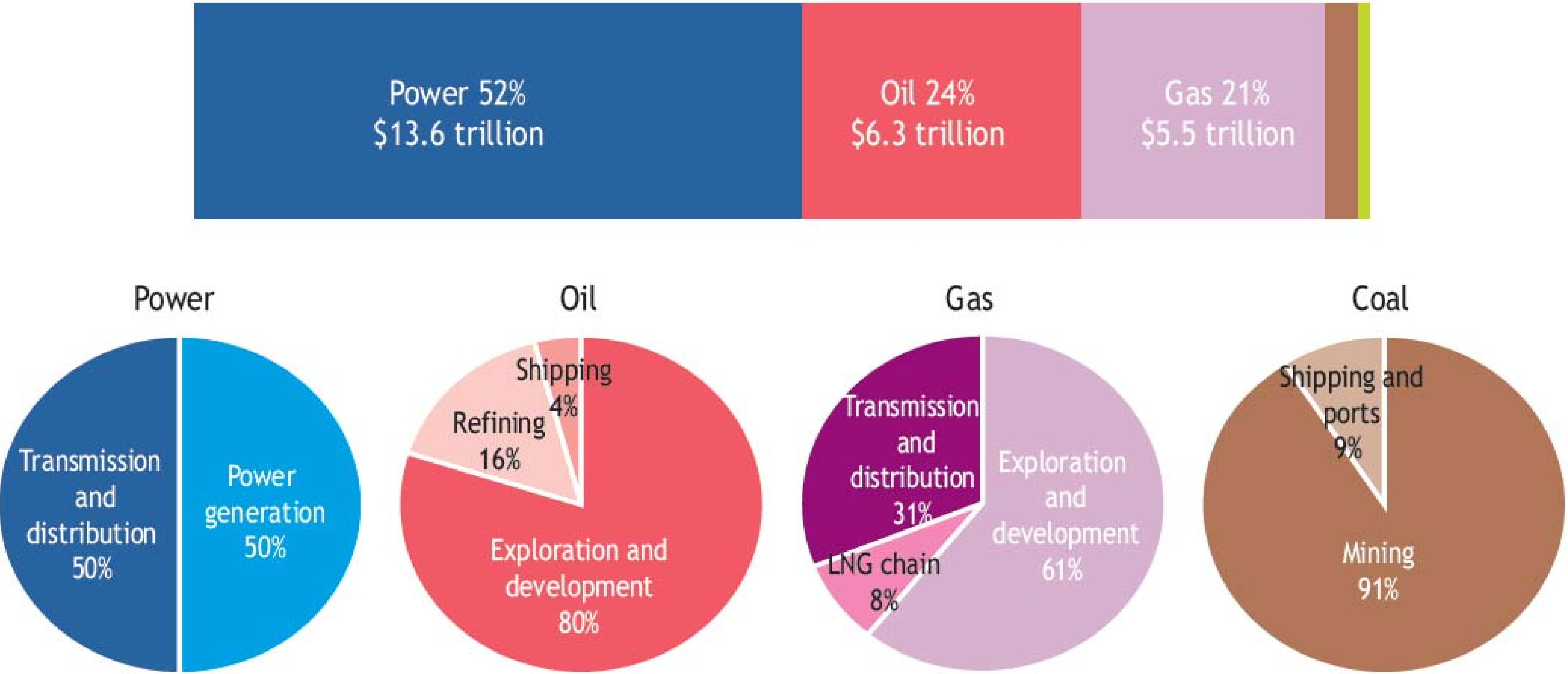

Source: IEA – World Energy Outlook 2008

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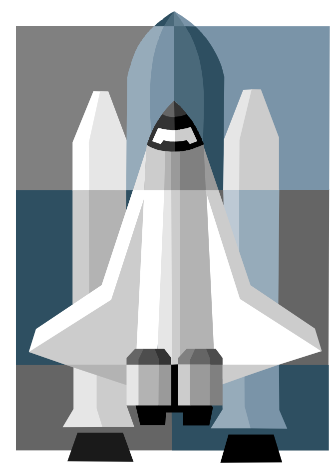
Investments in energy infrastructure

Some key risk factors

- Long term horizon of projects
- Long term contracts versus spot sales
- Regulation of business
- Return on investments
- Environmental policies
- International political issues
- Global discontinuities



Global Discontinuities

- The fall of the iron curtain
- The “experiment” of combining socialism and capitalism in the Republic of China
- The introduction of world wide web and internet
- Nine Eleven in the USA (The terror attack 11 September 2001)
- The world wide financial crisis to day.

National policies

- Domestic demand vs. export markets
- Investment levels
- Acreage availability
- Environmental concerns

Natural Gas Market Integration
The regulatory challenges

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- Large investment risk vs long term energy security
- Historical rights vs future terms
- National policies vs cross border grids/networks
- Third party access: Negotiated vs regulated terms
- International law (EU) vs national legislation
- Liberalisation vs interest of national companies
- Pipeline gas vs LNG
- Commercial opportunities vs technological development and finance capability

Strategic Statement from IGU

Gas Market Integration

- **The environmental benefits of gas**
- **Two correlated trends: Growth and globalisation**
- **Investment pace disrupting upstream, infrastructure and LNG investment**
- **The need for a shared understanding across nations and regions is needed to enable the gas industry to develop trans-national and regional markets.**
- ***The role of governments is the cornerstone in any energy integration process*** **as they are laying the ground for both clear rules and clear roles**

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Conclusions

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- **Natural gas has become a global energy source which**
  - **Is environmentally friendly**
  - **Can bridge present and future energy challenges**
  - **Has world reserves for 60+ years**

- **The success of natural gas in energy security context is**
  - **Respect for the need of balance between huge investments and predictable terms**
  - **Acknowledging the need of cooperation between governments**

Thank you
for your attention!

See you in Buenos Aires!

24rd World Gas Conference and Exhibition

October 5 – 9 2009