

Natural Gas Developments

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- Technical trends, challenges and solutions
- Issues related to global warming and what are the solutions
- Role of government and industry

Natural Gas Developments - Issues

Global consumption trends

Climate change

Role of natural gas

Technological trends

Role of government and industry





This is StatoilHydro

- Established on 1 October 2007 following a merger between Statoil and Hydro's oil and energy business
- 31,000 employees in 40 countries
- Large oil and gas producer with 1.7 million barrels of oil equivalent (boe) per day and 6.3 billion boe in proven reserves
- The world's largest deep-water operator and the second largest gas supplier to Europe
- A world-leader in the use of deepwater technology
- A world-leader in carbon capture and storage

Integrated and flexible infrastructure

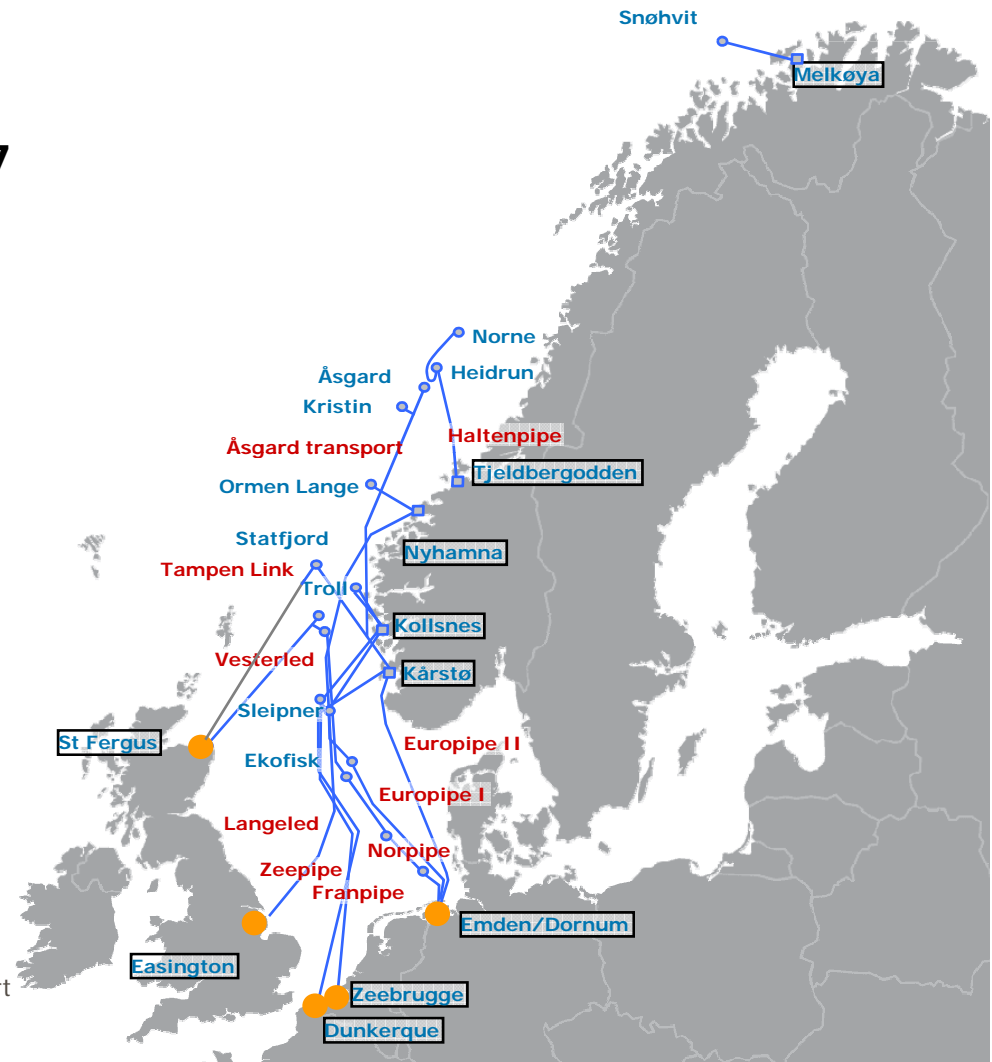
Norwegian Continental Shelf 2007

Export pipelines to Germany, Belgium, France and the UK

~ 7.800 km of gas pipelines
~ 120 BCM of capacity

Gassled* operated by Gassco, StatoilHydro share 32,1%

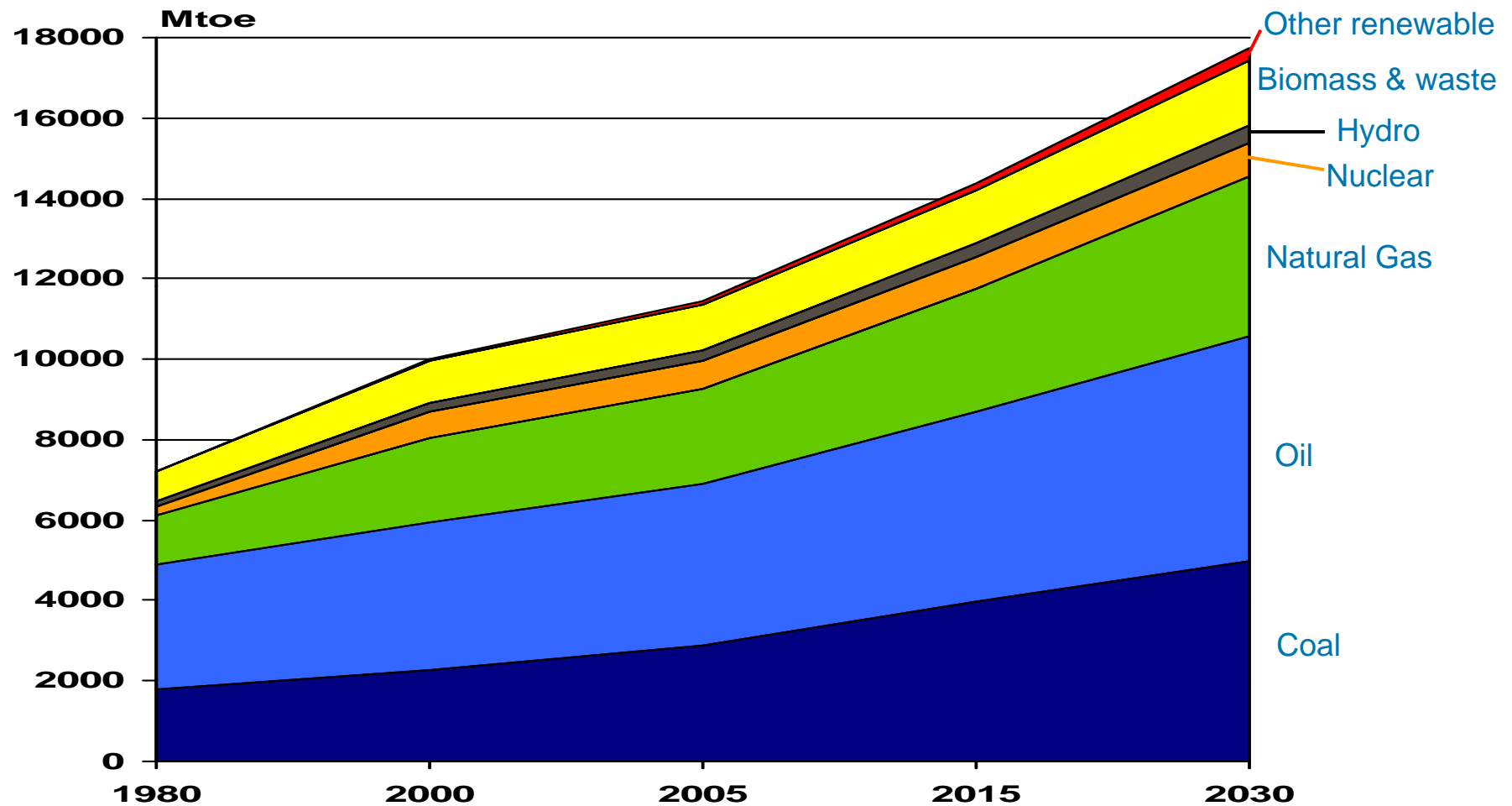
StatoilHydro is Technical Service Provider and developer for the bulk of the gas infrastructure



*Includes Zeepipe, Europeipe I, Europeipe II, Franpipe, Statpipe, transport related facilities at Kårstø, Vesterled, Oseberg gas transport, Åsgard Transport, Norpipe, Kollsnes, Langedled, Tampen Link

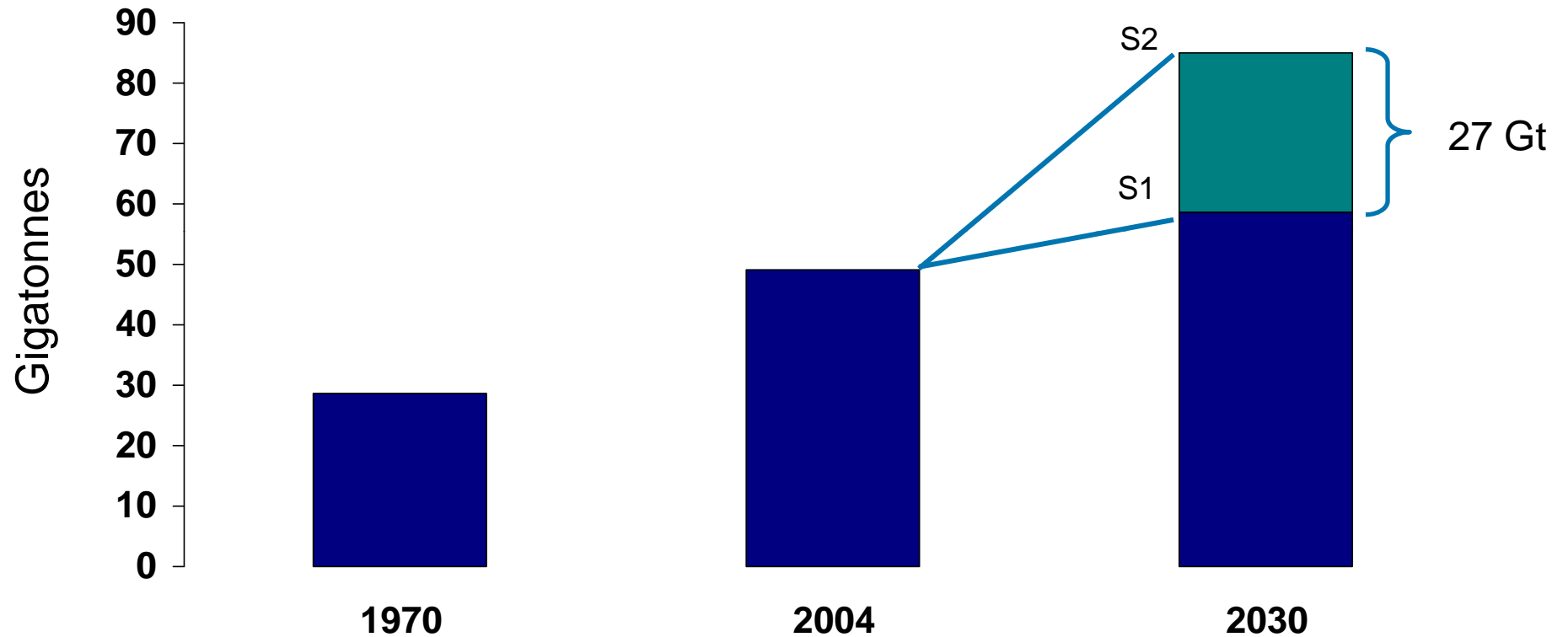
World: Total primary energy demand

Demand keeps increasing - Natural Gas increases its share



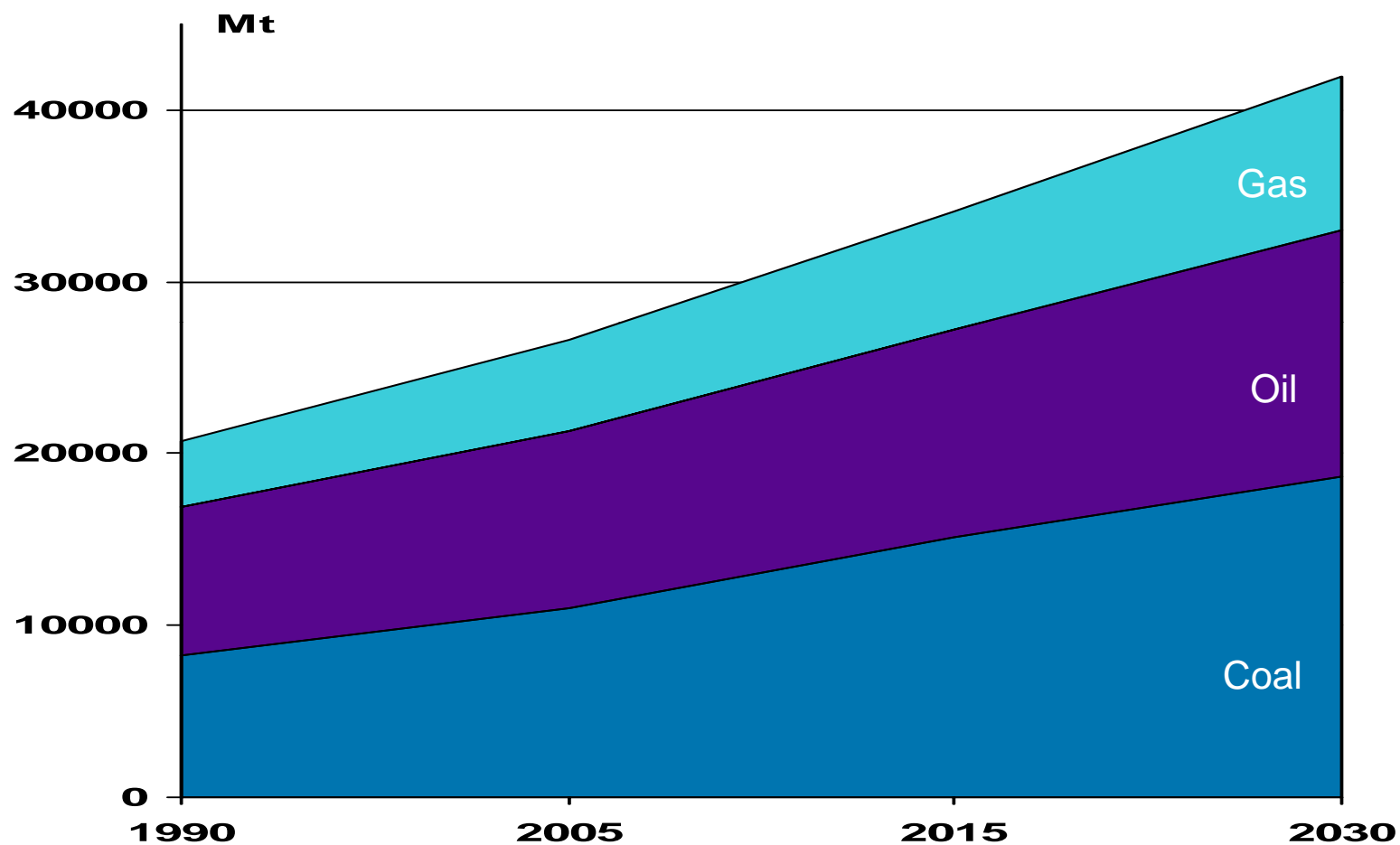
Source: IEA WEO 2007 Reference Scenario World

Human GHG emission trends



*) IPCC FAR, WG III, 2007. S1 and S2 are two of IPCC's emission projection scenarios

Global CO₂ emissions



Source: IEA WEO 2007 Reference Scenario World

What can we do?

ENERGY EFFICIENCY

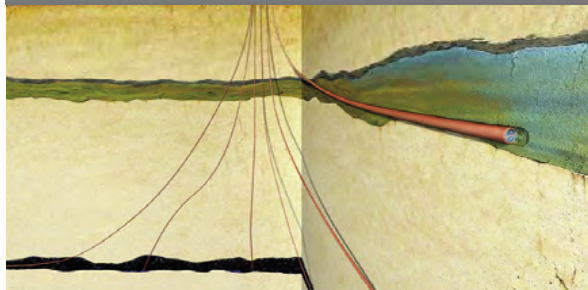
- REDUCE CONSUMPTION
- MORE EFFICIENT ENERGY USE
- MORE EFFICIENT ENERGY CONVERSION

TOOL-BOX GLOBAL WARMING MITIGATION

RENEWABLES



CO₂-STORAGE



NUCLEAR POWER



EU's Climate Change Targets for 2020

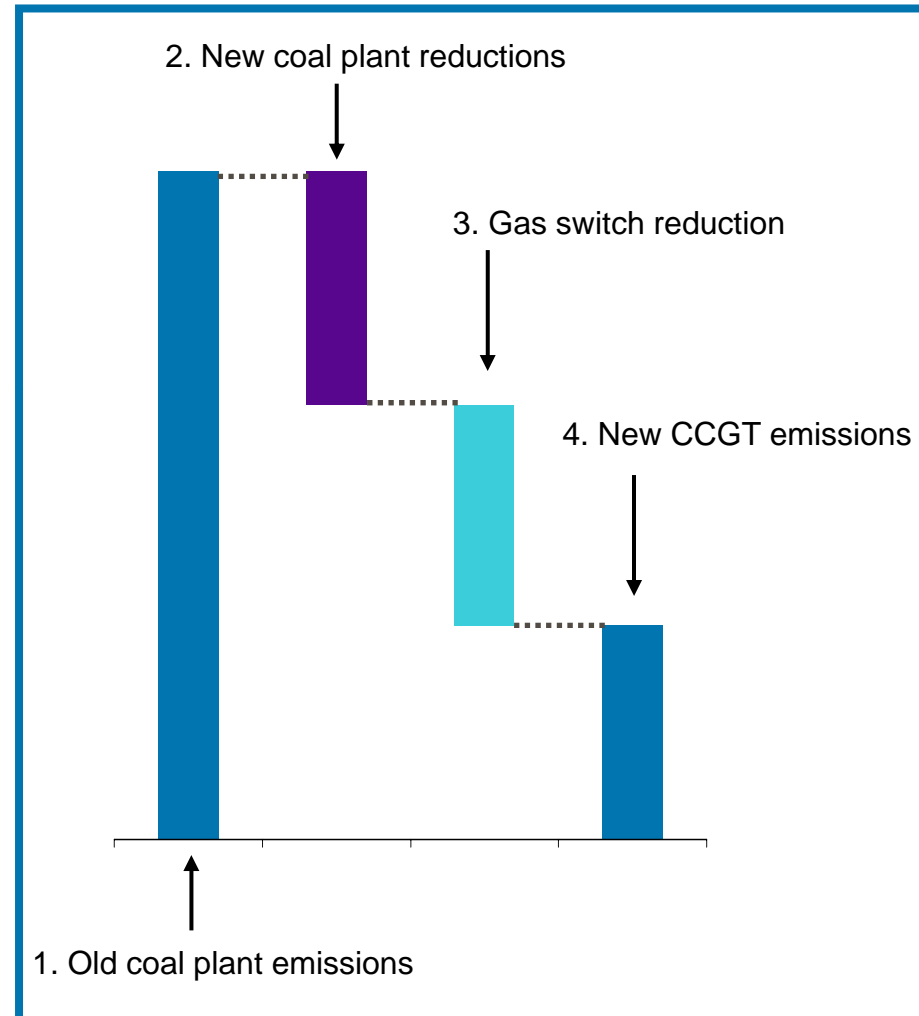
- 20% less climate gas emissions
- 20% renewables
- 10% bio fuels
- 20% more energy efficient



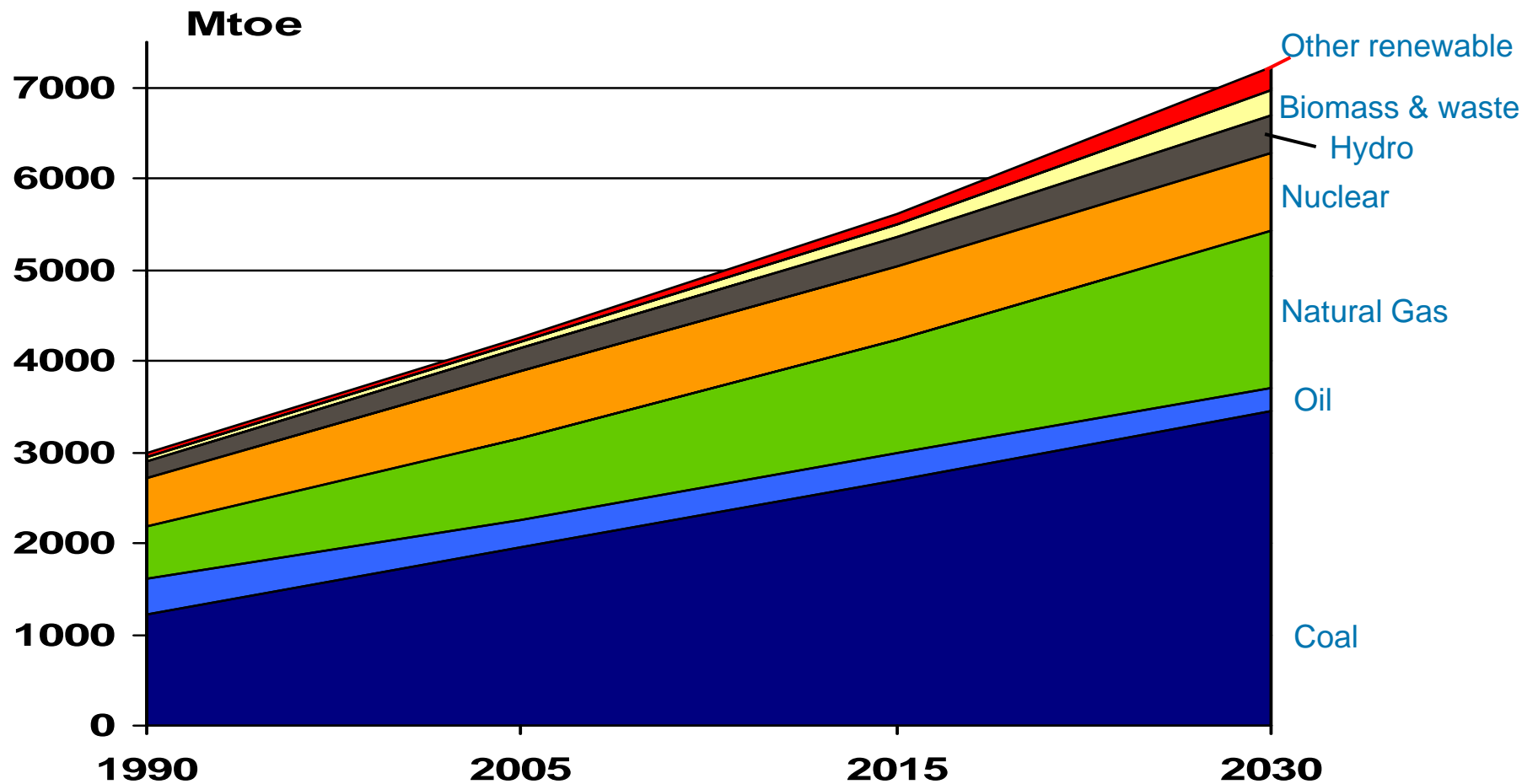
Emissions effect of gas

Illustrative Example

- Significant CO₂ reductions from new plants
- A cleaner alternative to coal
- An important part of reaching the EU's climate goals



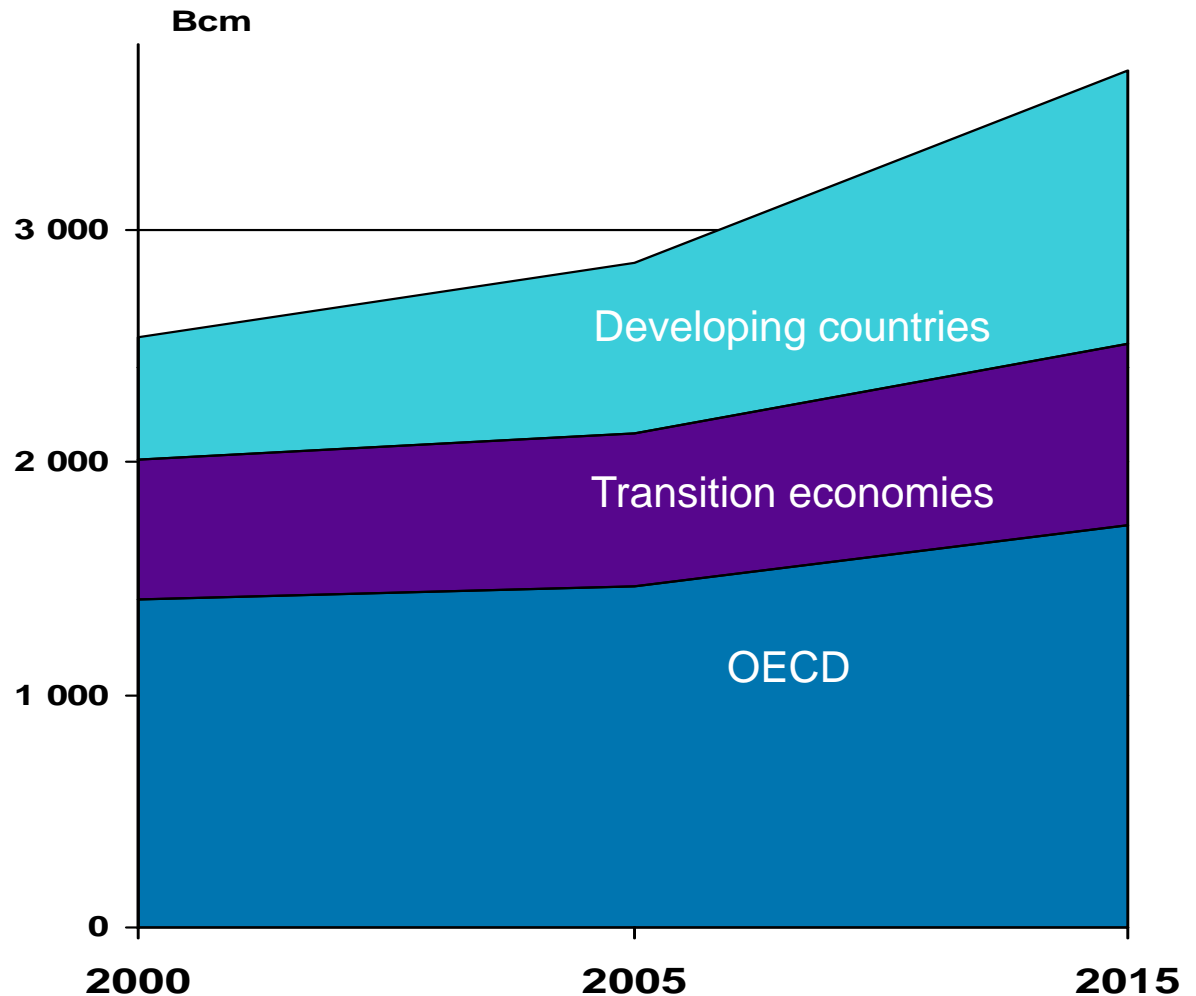
The future of gas in power generation – steady increase



Source: IEA WEO 2007 Reference Scenario World

World: Primary natural gas demand

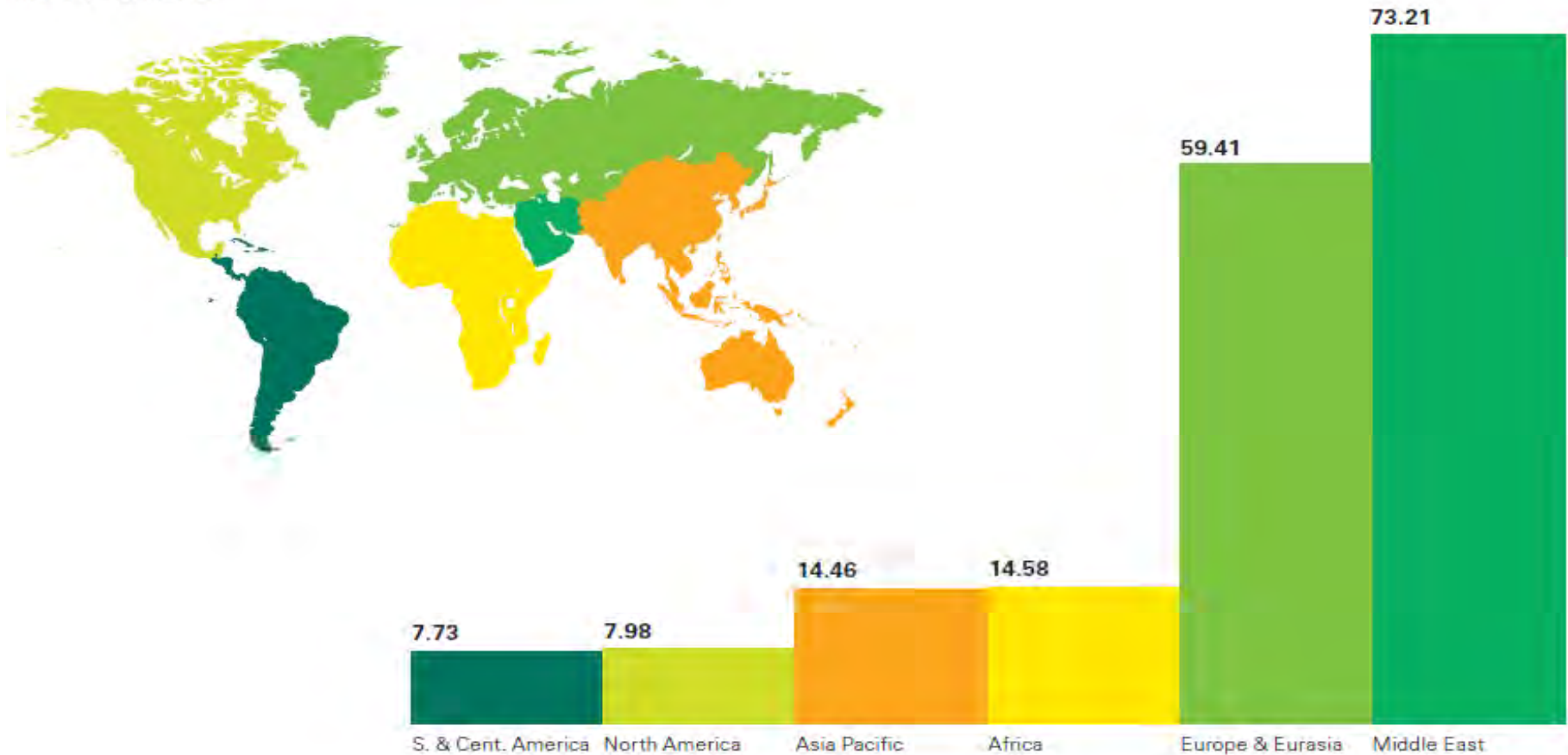
- Increasing demand in developing countries
- Over 1000 bcm demand increase 2000-2015



Source: IEA WEO 2007 Reference Scenario World

Natural gas - World proved reserves

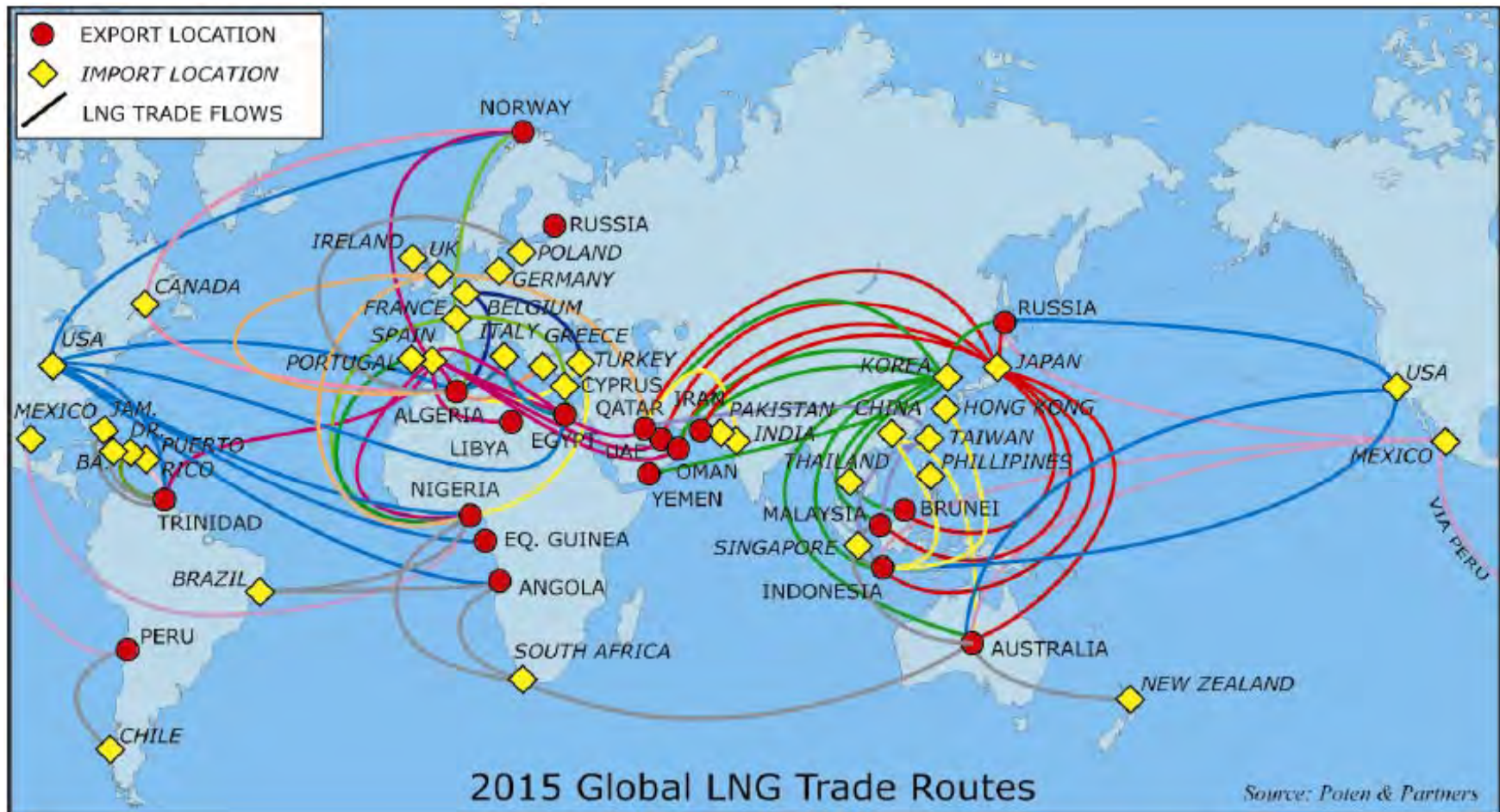
Proved reserves at end 2007
Trillion cubic metres



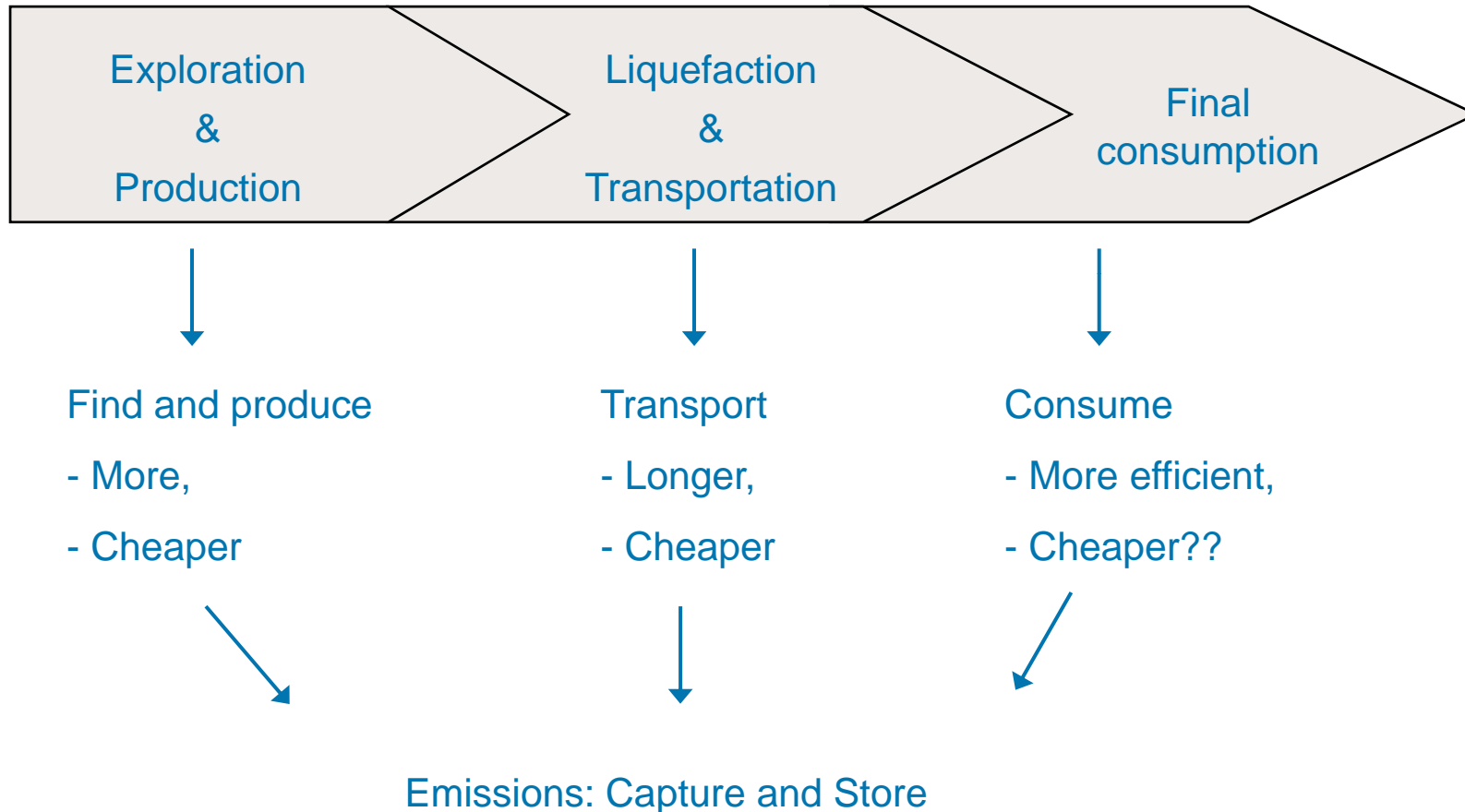
Source: BP Statistical Review 2008

StatoilHydro

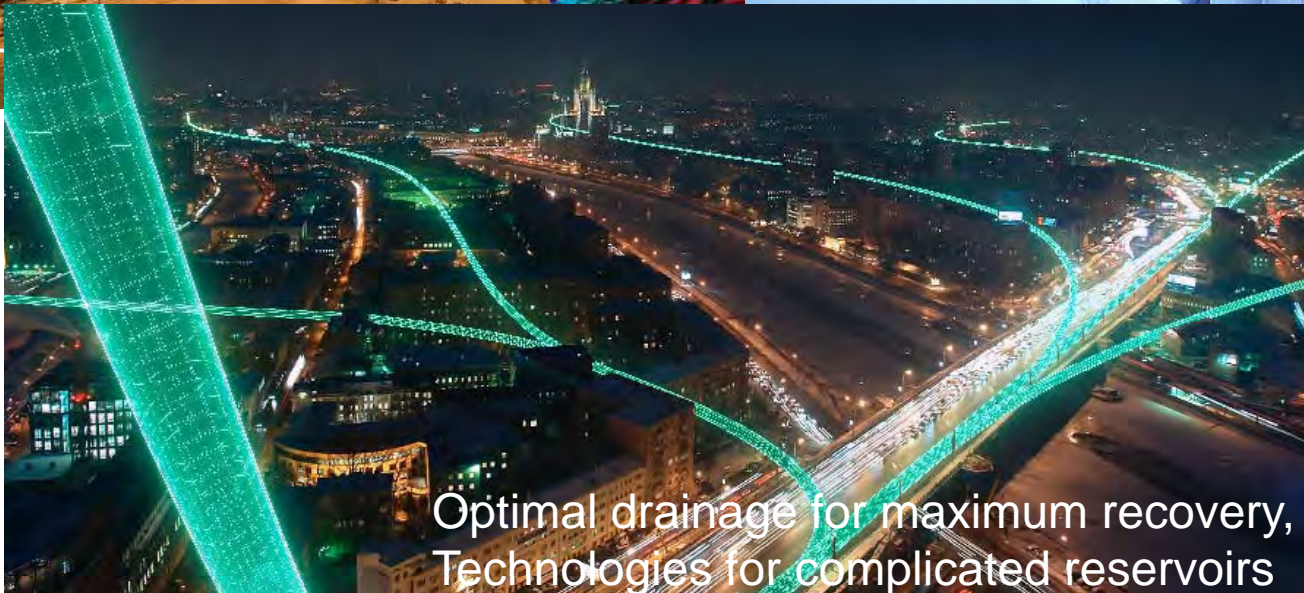
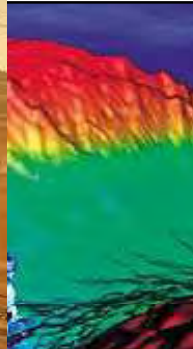
Increasing the need for intercontinental transportation



Key technology themes in the gas value chain



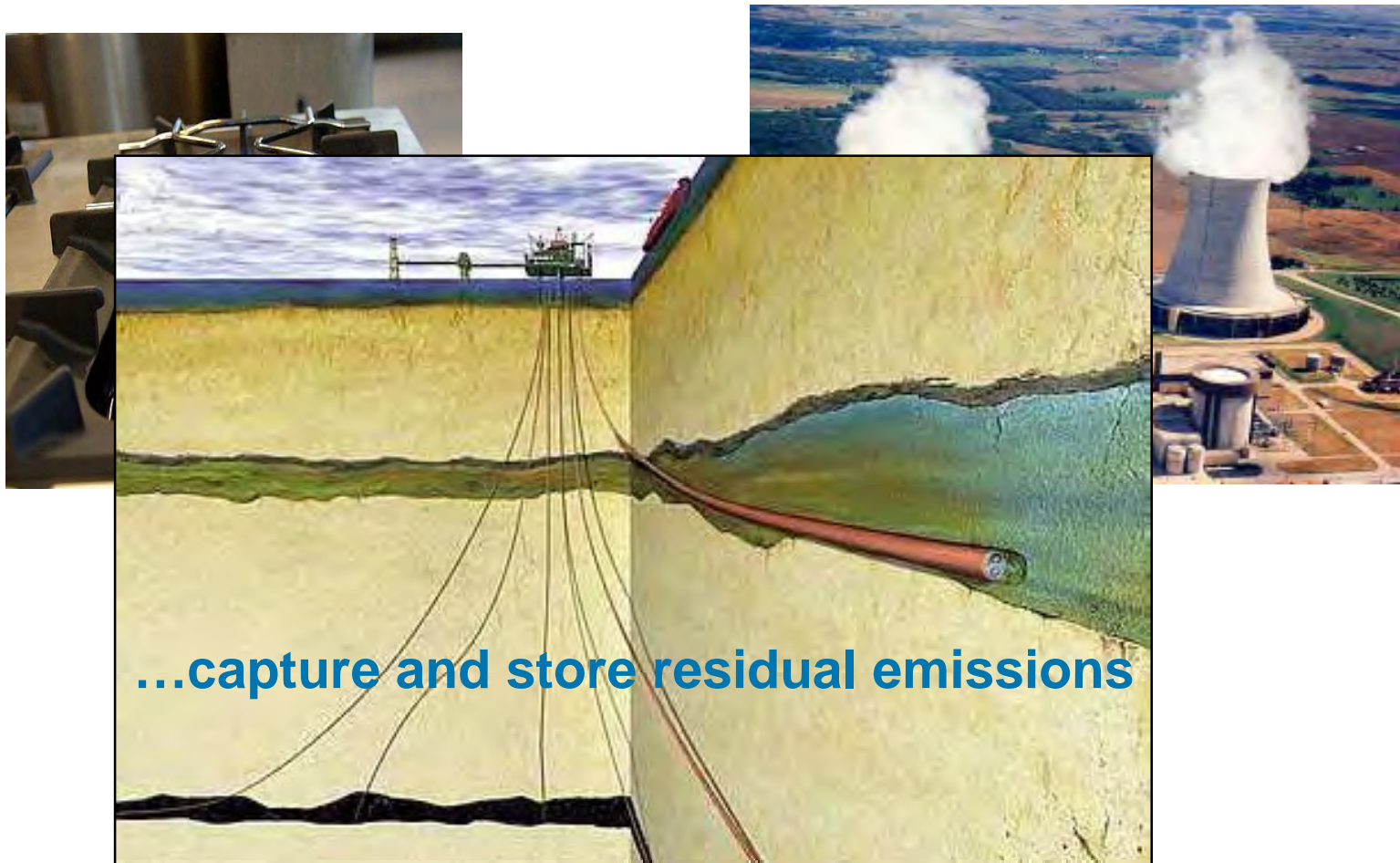
Find and produce more gas - cheaper



Transport the gas longer - cheaper

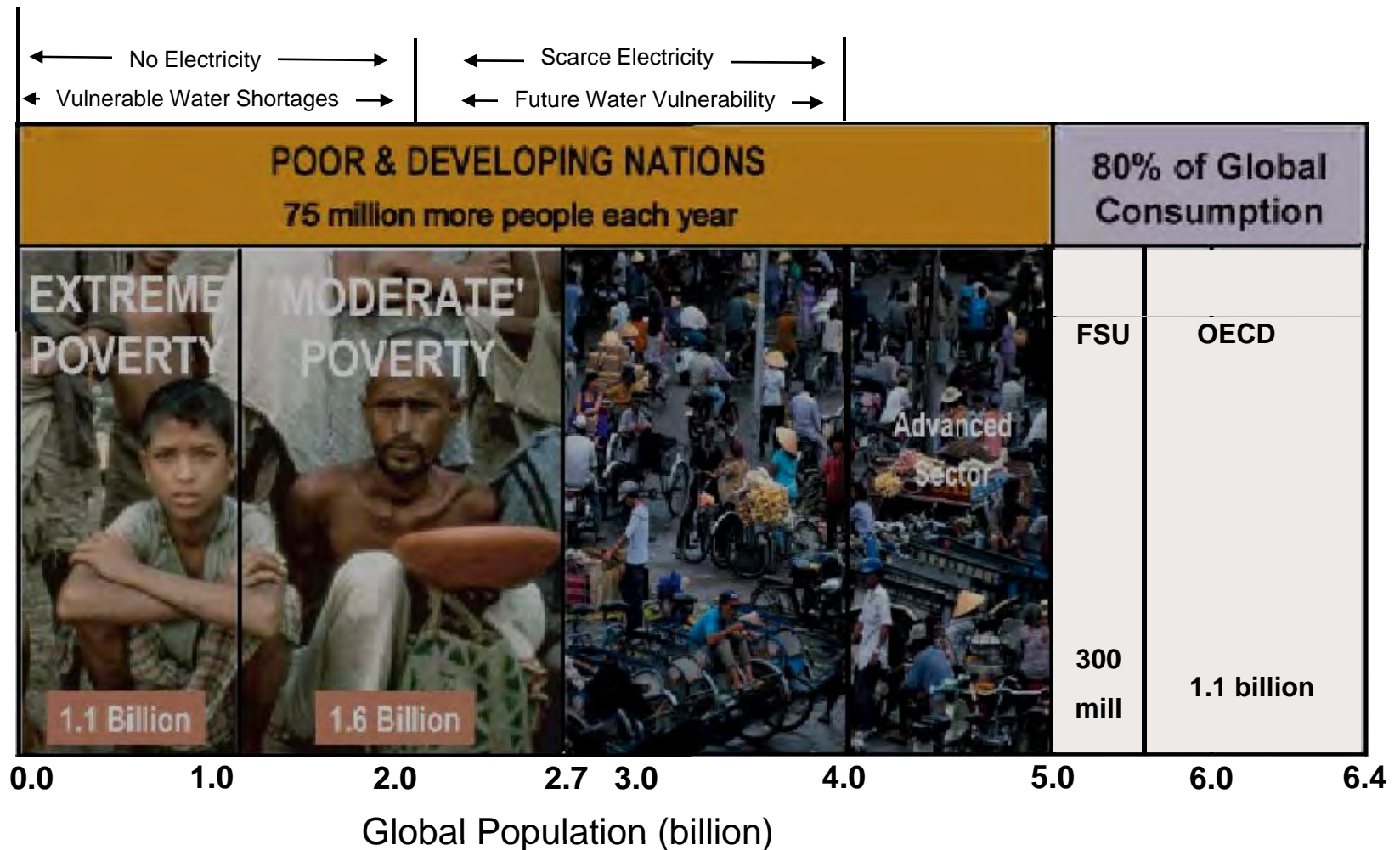


Increase efficiency in use...



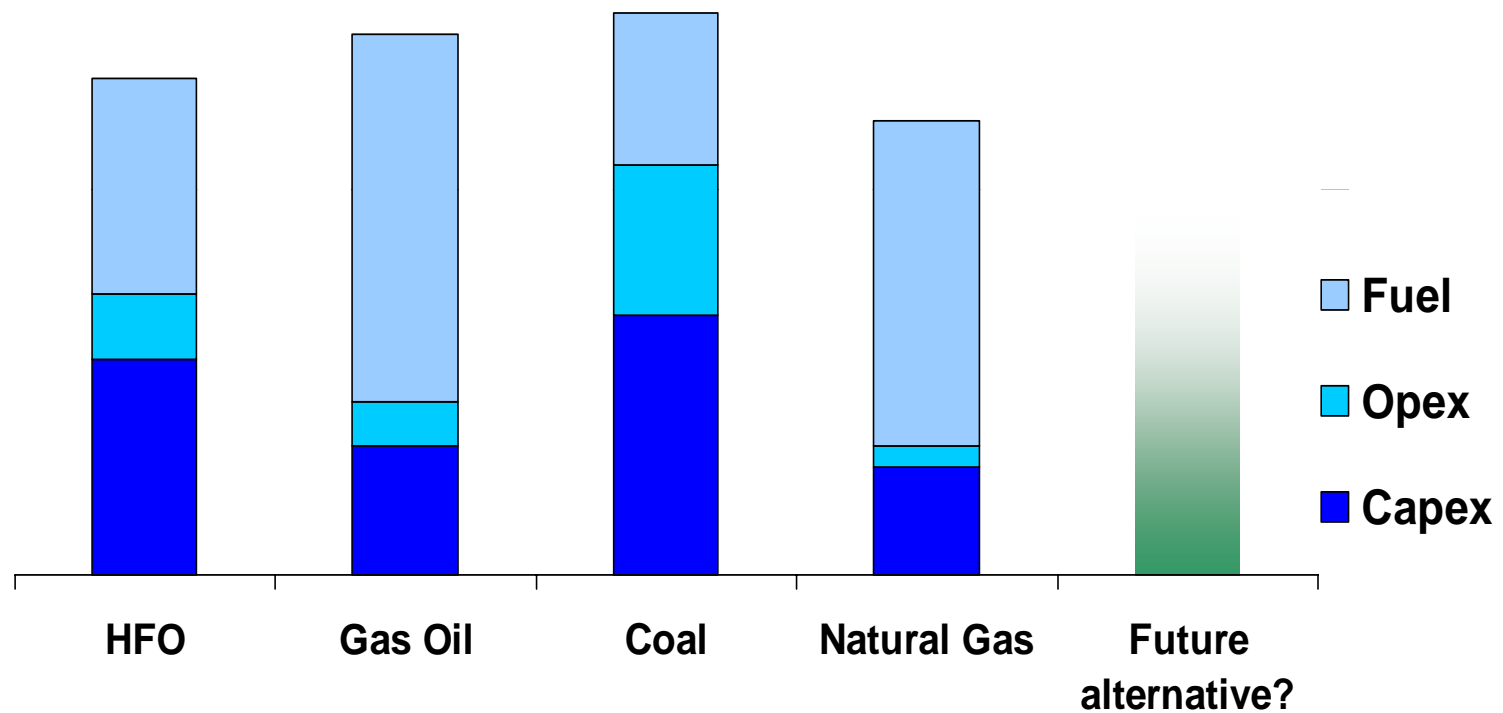
Role of Government and Industry

A complicated challenge...



Source: WNA 2006

Indicative cost comparisons - Who pays for the conversion?



Different roles

Government

- International commitments, treaties, commercial framework
- National implementation
 - Directives
 - Incentive schemes
- Promotion and support for new technology and solutions
- “Right of way”
- Intergovernmental cooperation / agreements

Industry

- Corporate Social Responsibility
- New technology
 - Reduced costs
 - Higher efficiency
 - Break through alternatives
- Commercial solutions
 - Cooperation
 - Balanced sharing of risks

The path ahead...



- The future will be fossil, but emissions must, and can, be reduced
- Natural gas can serve as a bridge to low carbon emissions
- A complex mix of approaches
 - Social policies
 - Economic policies
 - Technological development
- Cooperation is key
 - Government to Government
 - Business to Business
 - Government and Business