



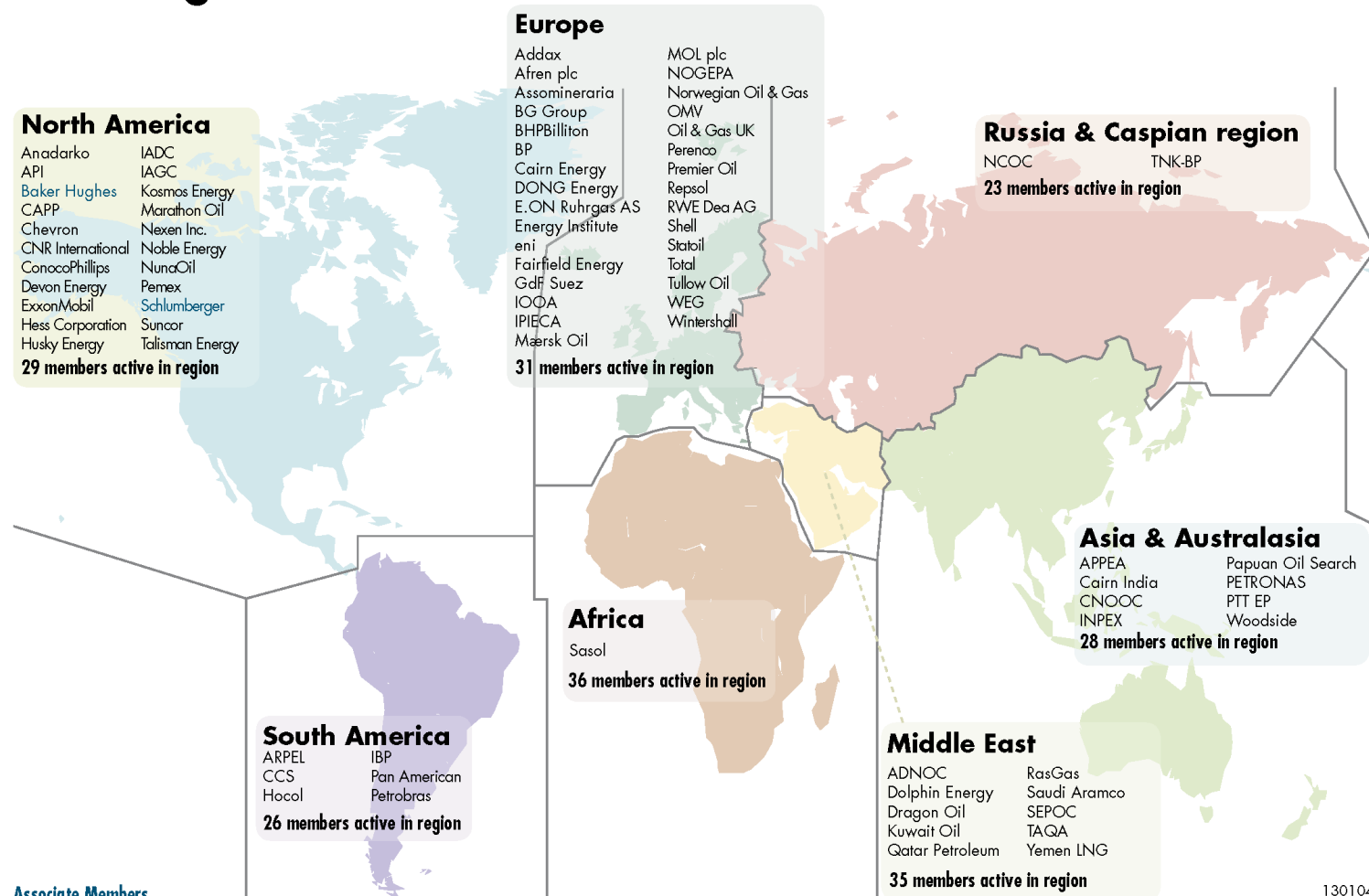
Safe oil and gas production to support Europe's energy supply

Meeting with the
European Energy Forum

Strasbourg, March 10th, 2015

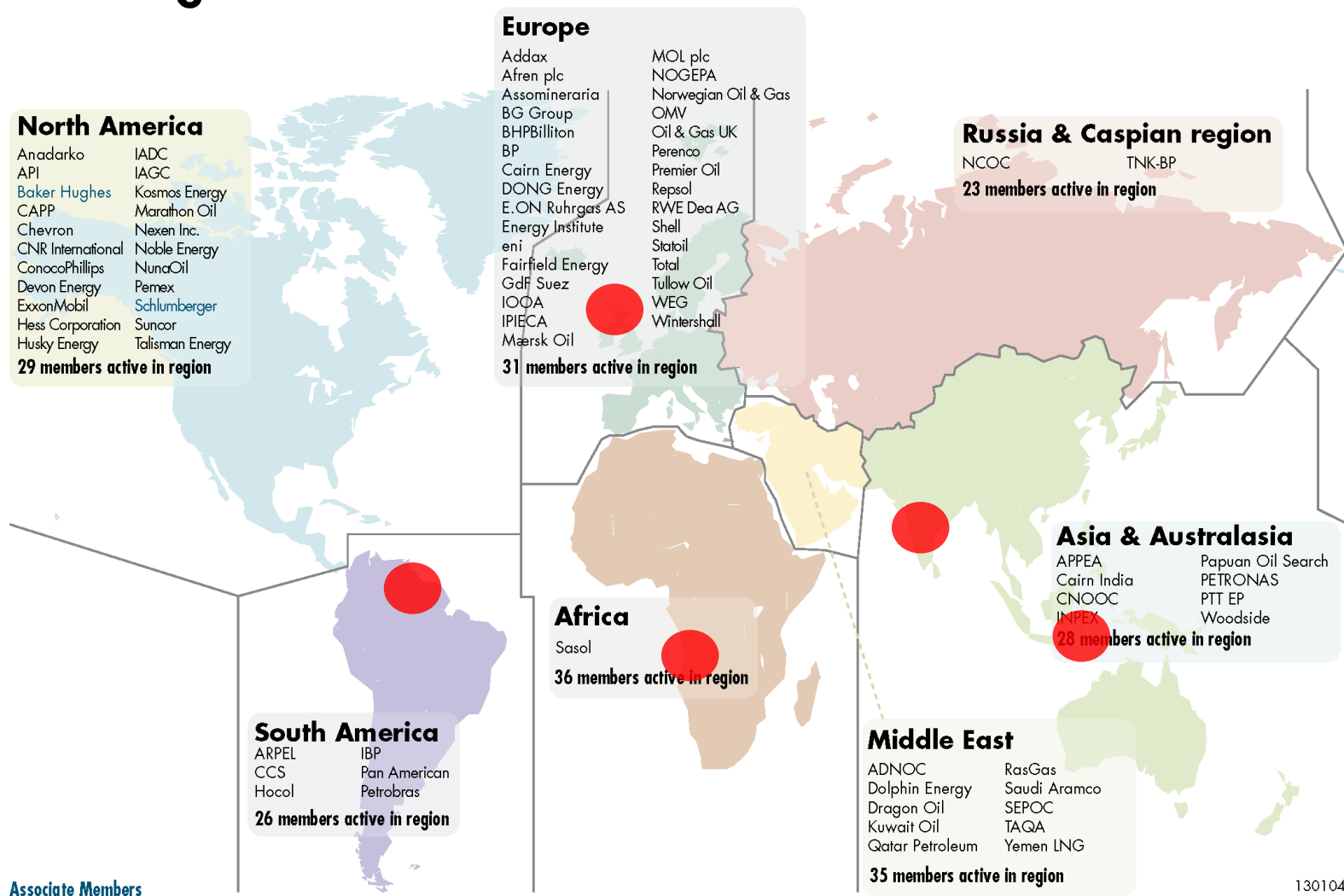
Some 80 members around the world

Base region of Members



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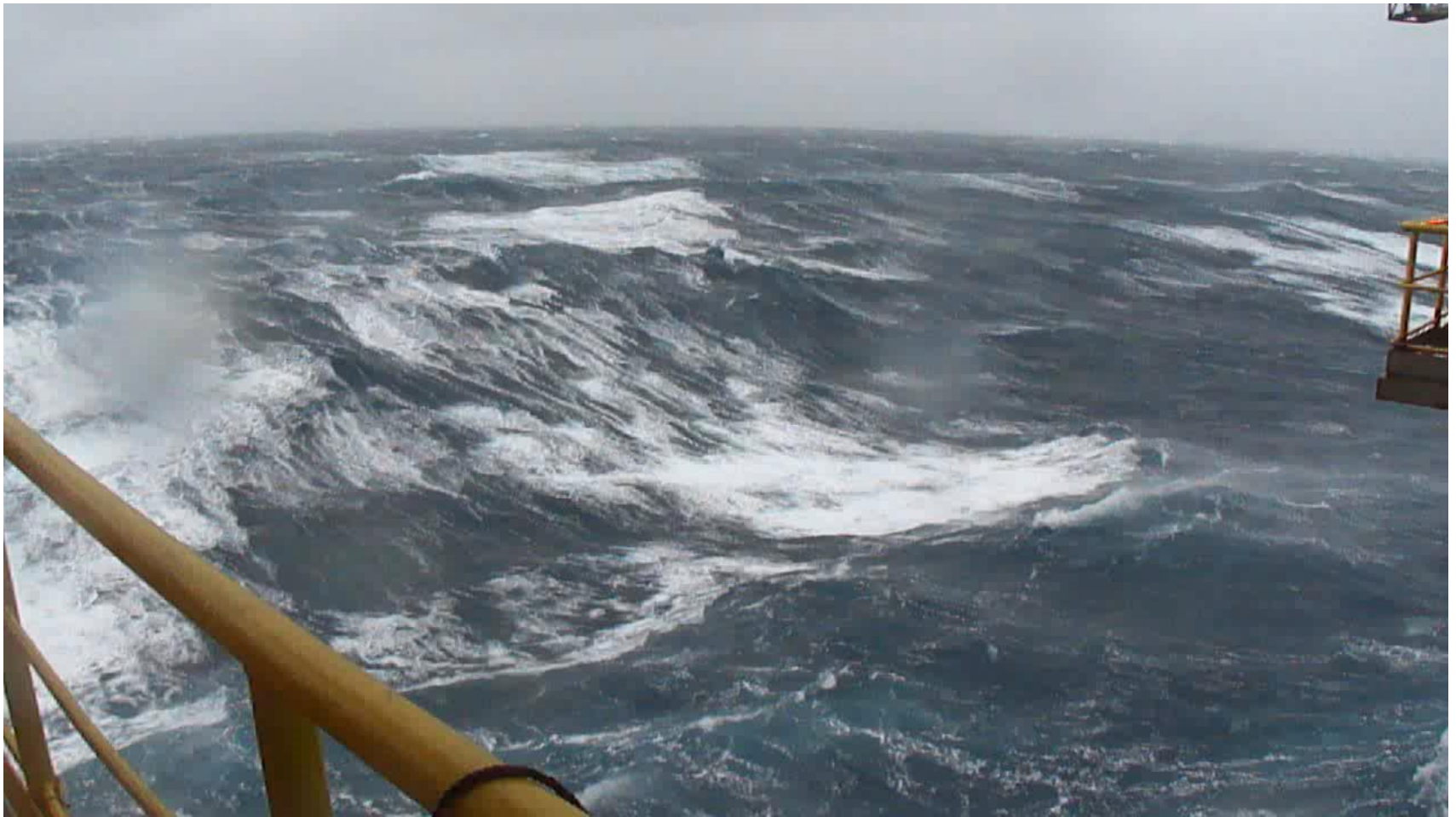
Base region of Members



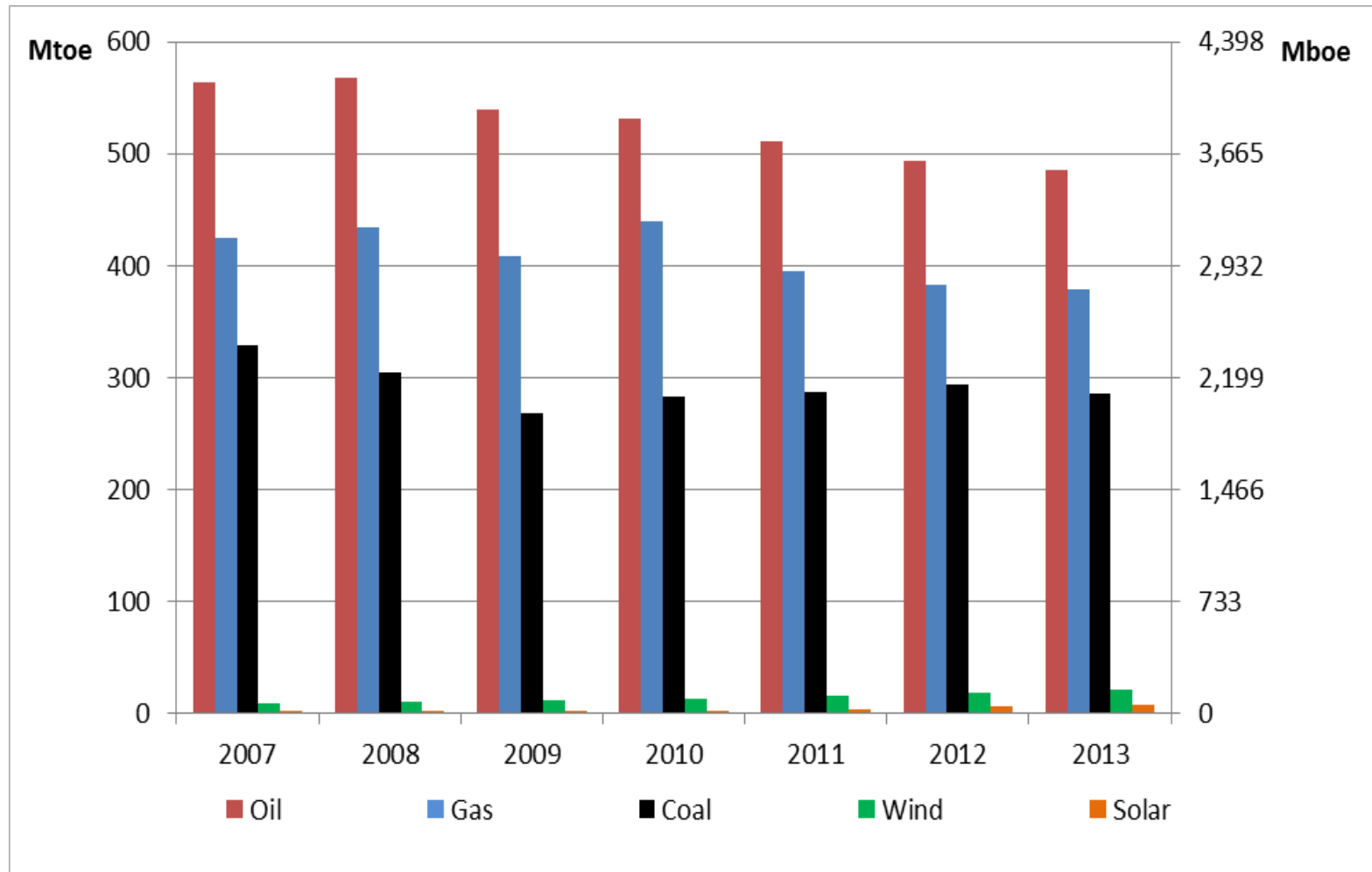
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Producing Oil & Gas in the North Sea



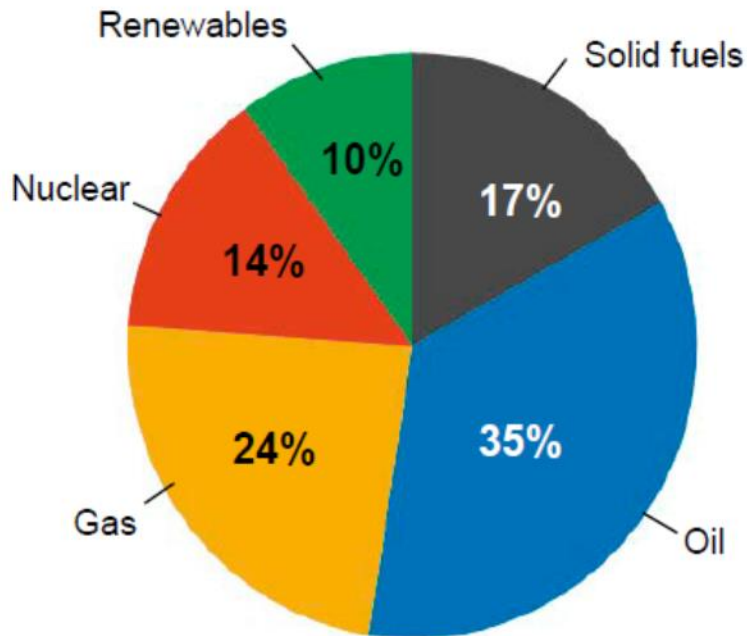


EU Primary Energy Consumption (2007 - 2011)

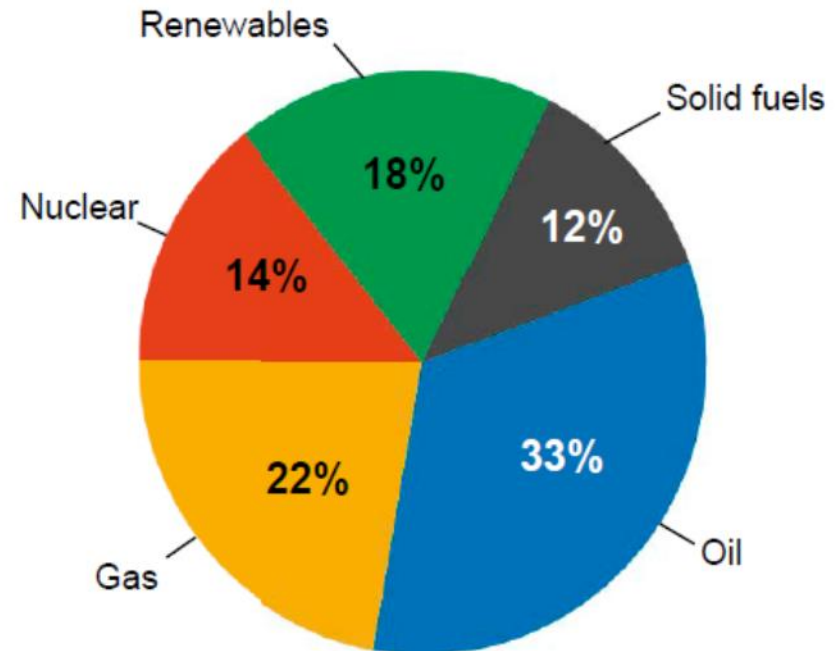


Oil & gas will remain the backbone of the EU energy mix

EU gross inland consumption
2011



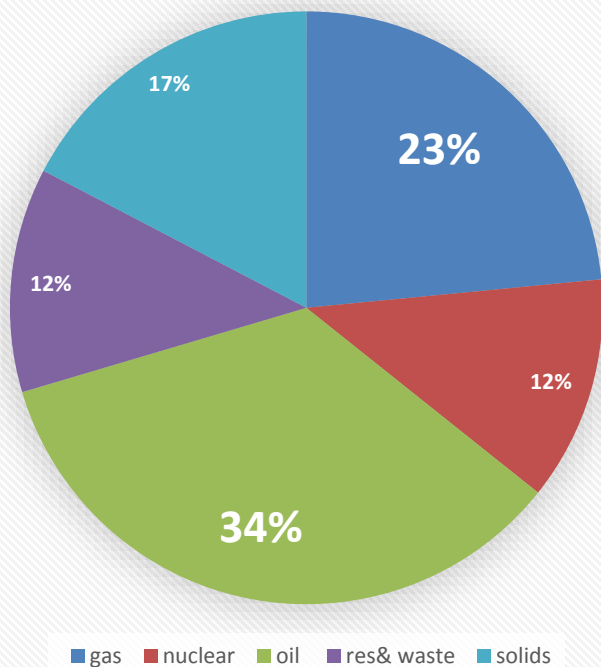
EU gross inland consumption
2030 (scenario)



Oil & Gas to remain significant in the energy mix for years to come

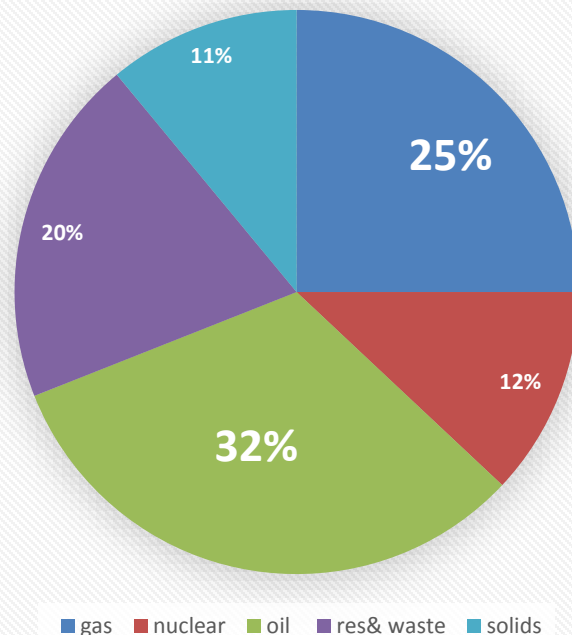
EU energy, transport and GHG emissions - Trends to 2050, reference scenario 2013

2012 Fuel Mix - statistical data



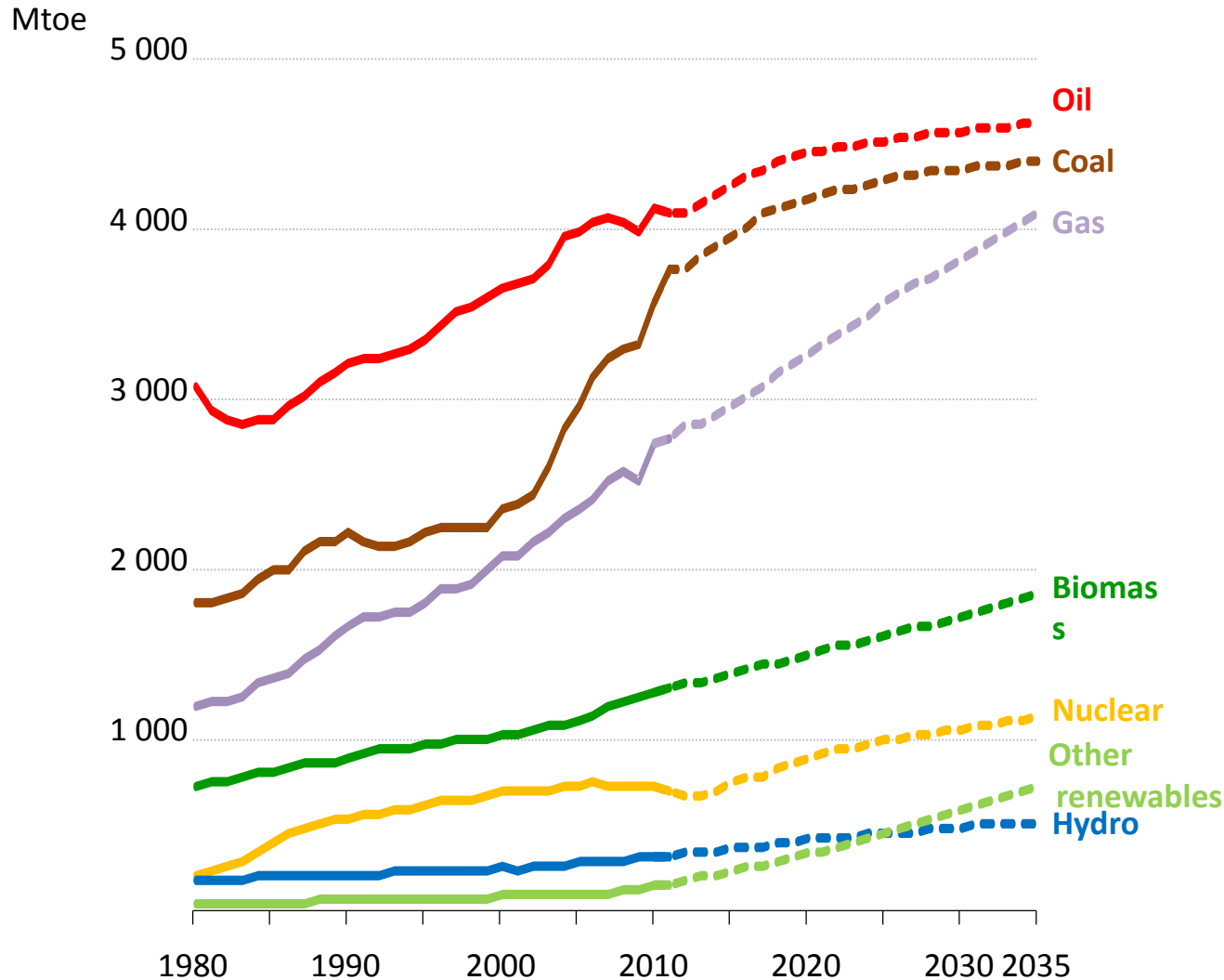
Oil and Gas 57%

2030 EU Fuel Mix - Reference scenario



Oil and Gas 57%

World energy Demand (IEA)



World energy
demand
by fuel
(IEA forecast
2014)

EU Security of Supply

- Security of supply is now an important policy issue in the EU
- Pillar 5 of the Energy Security Strategy:
Increasing energy production in the EU
 - Maximise indigenous production
 - Shale Gas
- Communication on Energy Union (Feb. 25th):
 - Need for Renewables as well as conventional and unconventional resources

Exploration in Europe

June 2014 - Exploration Activity across EU has never been at such a low level

- In UK, 157 exploration wells drilled in 1990; 14 in 2014, 8 in 2015 (potentially 20 bn barrels remaining)
- No wells offshore Italy the last three years
- 1 well drilled in Spain
- Shale gas: 20 wells in Europe/year – 30,000 wells in US, 600 in Argentina

Significant potential opportunities within the EU

- North Sea, East Mediterranean, Black Sea, Atlantic, Shale Gas
- Meanwhile, exploration boom in other parts of the world

Crude oil price: -50% in a few months

Low prices - for how long?

In 2006, low prices for one year

In 2009 low prices for 6 months

In 2015 low prices for...?



The situation is having an impact on operations

- Impact on Investment (capital spending -10%)
- Impact on jobs – lower activity
- Impact on service costs
- Impact on pays of employees (frozen or decreased)
- Disposal of non-strategic assets
- Reduction of exploration programmes (-30%)

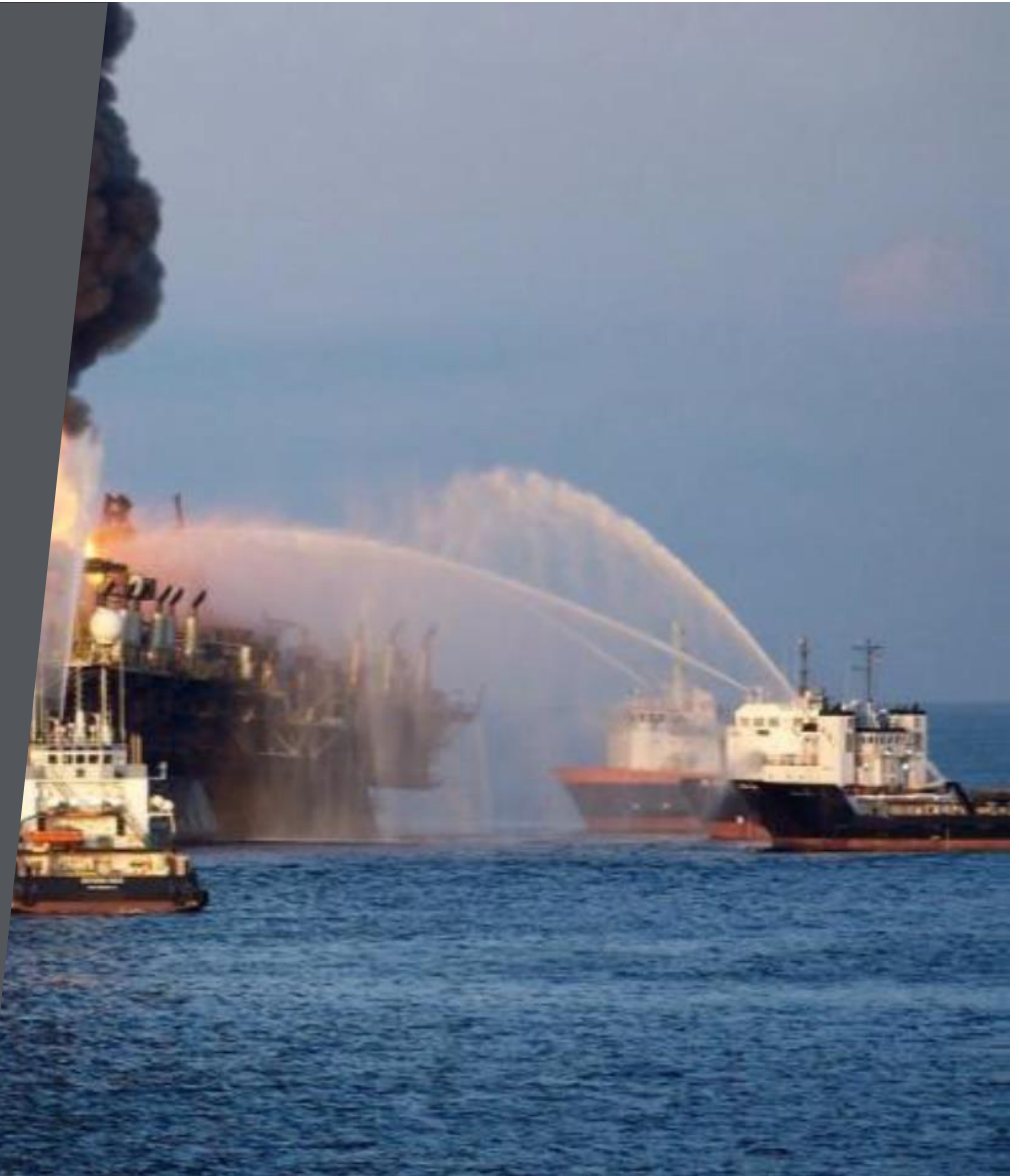
Why no exploration in the EU, when massive ops are done elsewhere?

IOGP did a report on barriers to exploration:

- Some areas are mature but many are not
- Fiscal regimes not adapted anymore
- Bureaucracy – years to wait before approval
- Regulation (34 pieces of legislation in the EU)
- No political support
- Perception of safety
- Public Acceptability – very difficult

Incidents

Macondo,
Montara,
Texas City,
Buncefield



New Offshore Safety Directive

- Issued in June 2013, implementation in MS ongoing (target July 2015)
- Goal-setting approach (evaluation of risks)
 - Competent Authority in each MS
 - Safety Case (Safety and Environment)
- Systematic incident reporting to the EC
- Tripartite mechanism to be implemented in MS (Operators, Regulators, Workforce)
- Financial responsibility must be demonstrated
 - Pure economic loss? Industry fund?

Post Macondo: industry has adopted a more collaborative approach

Global Industry Response Group (GIRG)

Prevention

Better capabilities and practice in well engineering design and well operations management

OGP Wells Expert Committee
International Association of Oil & Gas Producers



Intervention

Improved capping response in the event of an incident and to study further the need for – and feasibility of – global containment solutions

SUBSEA WELL
RESPONSE PROJECT

Oil Spill Response



Response

Effective and fit-for-purpose oil spill response preparedness and capability

OSR
Oil Spill Response
Joint Industry Programme



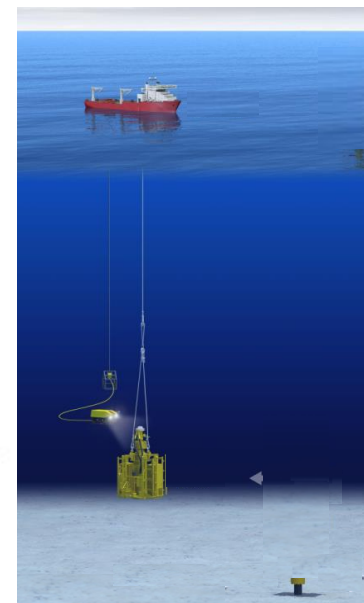
Governments, regulators, NOIAs, OSROs and industry initiatives

Post Macondo Industry action plan: Intervention

4 x capping stack toolboxes
(2 x 10k / 2 x 15k)



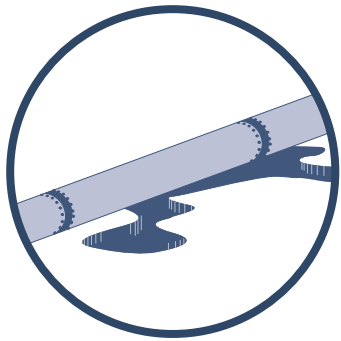
2 x subsea dispersant
hardware toolboxes



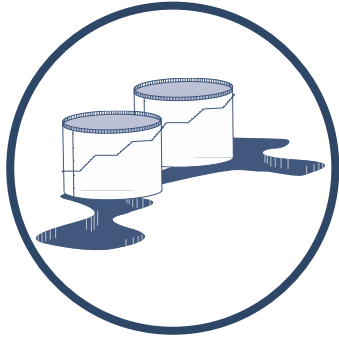
Post Macondo Industry action plan: Response

We are prepared for the unlikely event of a spill, with strategies and tools to respond to potential scenarios.

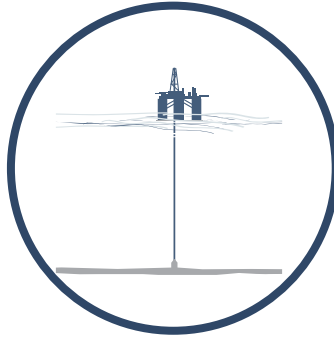
Potential Spill Scenarios



Onshore



Inland



Subsea

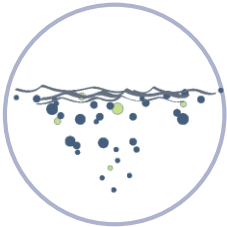


Near Shore



Offshore

Response Tools



Dispersants



In-situ Burning



Mechanical Recovery



Physical Removal



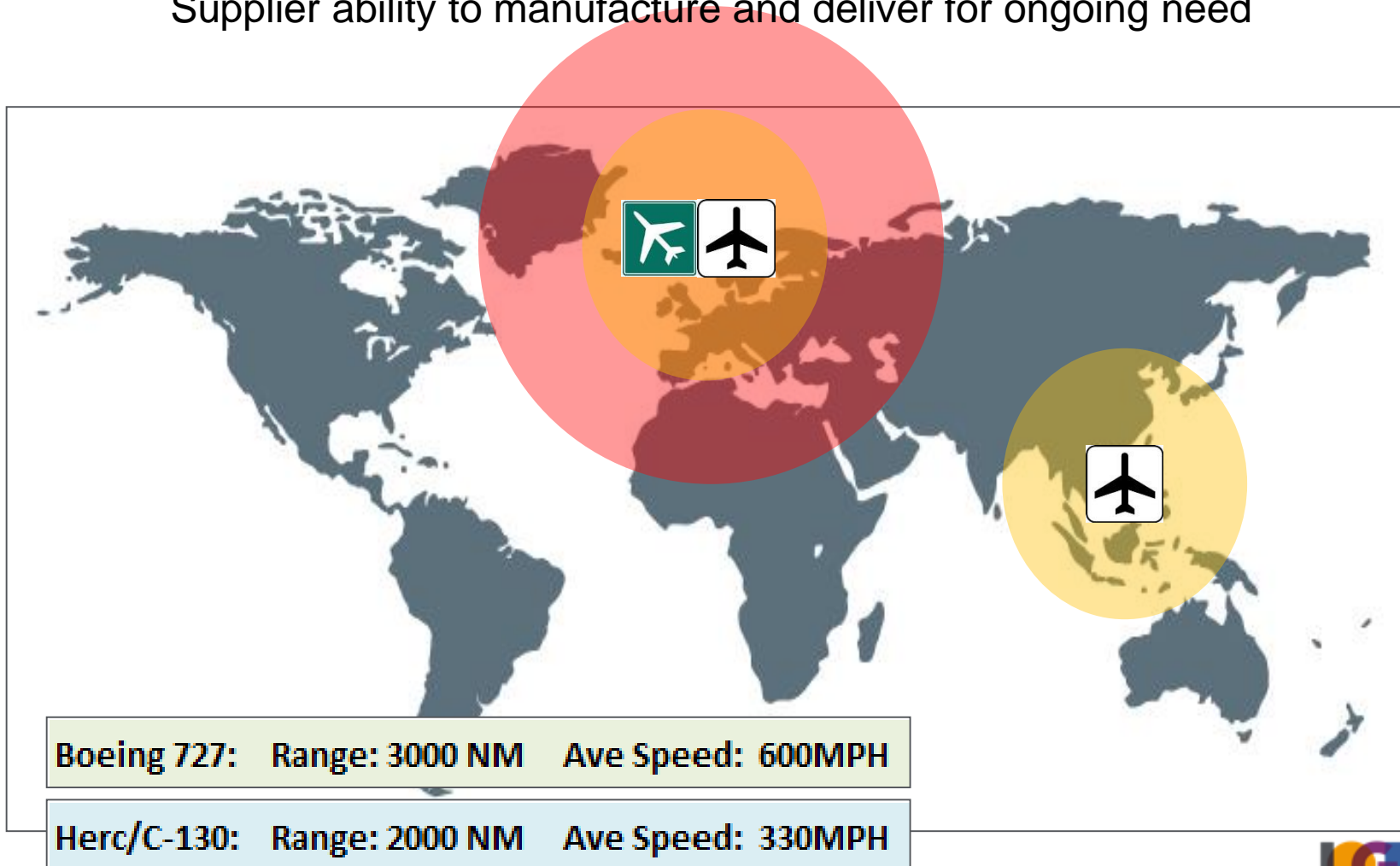
Natural Processes

Dispersant spraying- Aviation strategy

Large quantities required in short timeframe

Global Dispersant Stockpile – one month intervention capability

Supplier ability to manufacture and deliver for ongoing need



Reduction of Investment: Consequences for Safety?

- Industry clearly recommends no cost reduction on critical safety matters (linked to safety-critical elements)
- Investment on some non-urgent matters might be delayed (painting)
- Pressure to cut costs is clear, but cutting costs is not opposed to keep safety as priority #1 and as an industry value

IOGP views

- We need support: Policy makers must send strong signals to pave the way for more exploration for conventional resources and assessment of the potential of European shale gas
- Stop new additional regulations:
Hydrocarbon BREF, LCP BREF, MCPD, Financial responsibility
- Recognition of the Role of Oil & Gas to avoid emotional debates
- Safety is a key value for the Oil & Gas Industry