



● EU Commission: State of play of actions taken

ITRE, 5th October 2011

Jean-Arnold Vinois

Director Security of supply, Energy markets & Networks (acting)

Manfred Rosenstock

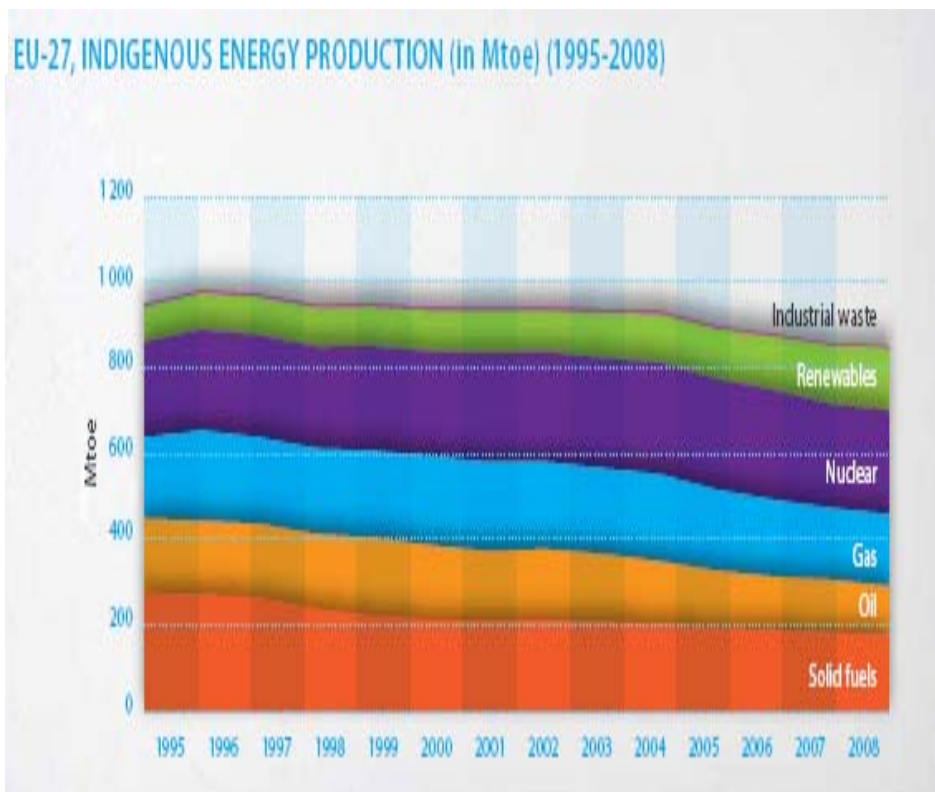
Deputy HoU Chief Economist, Impact assessment & Evaluation

Directorate-General for the Environment

Challenge: Security of Supply

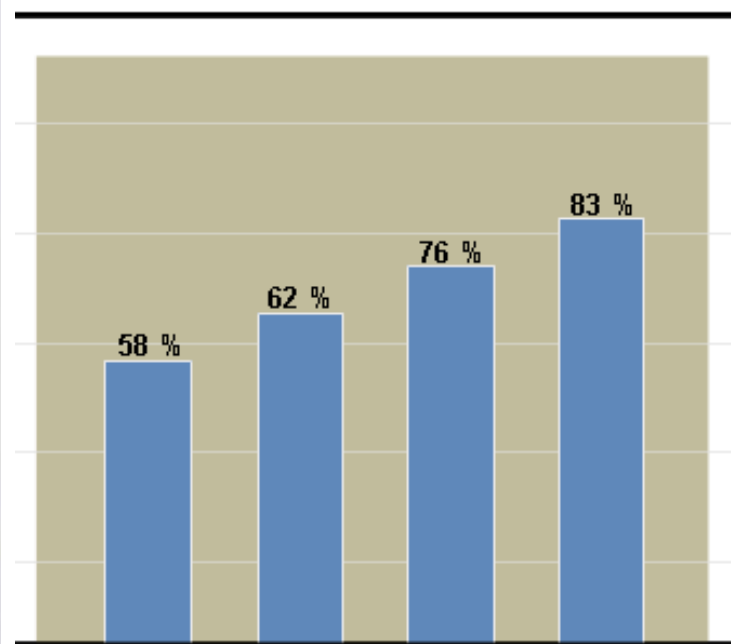


Market
Observatory
for Energy



GAS

2005 2008 2020 2030



- Indigenous production declined in previous years
- Import dependency is expected to rise

Directorate-General
for Energy

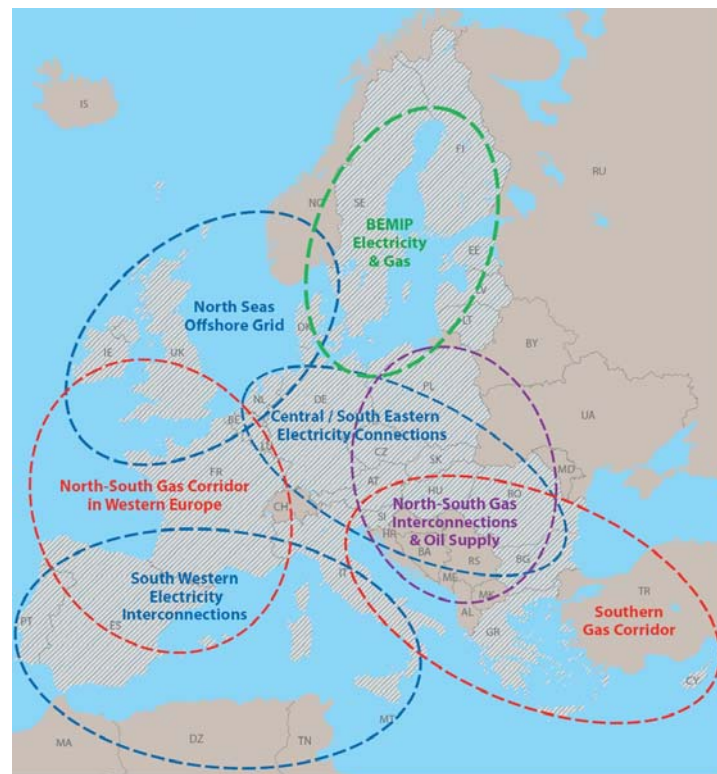


● Important for Shale Gas: Access to Market

- Completion of the EU internal energy market
 - » “Getting to 2014”



- Improving gas infrastructure
 - » Energy Infrastructure Package Nov. 2011
 - » Energy Infrastructure Legislative Proposal



© European Union – Directorate-General for Energy – November 2010

● DG Energy: Specific Activities

- **No assessment available on economically recoverable potential yet**
 - » Explorations just started, results only in a few years
 - » DG ENER follows ongoing projects and Member States efforts
- **JRC literature study on the economic impact (early 2012)**
 - » What do the available sources say and how reliable is the underlying evidence ?
 - » Based on reliable evidence and using energy models: What could be the future economic impact ?
- **Legal study on regulatory frameworks in selected Member States and their relation to EU legal framework (end of October 2011)**
 - » Will contribute to further assessment of EU legislation
 - » Identification of possible good regulatory practices which could be disseminated with help from the Commission e.g. in the framework of the Berlin Fossil Fuels Forum and its working groups

Possible environmental impacts and risks - Uncertainties & Information Needs

Cross-cutting interactions with environmental media

(Surface & ground water, air quality, soil/land, biodiversity)

- Complexity of exploration / extraction processes
- Novelty of technological combination
- Scale of operations required
- Limited experience in the EU
- Limited data available, essentially based on North-American experience with different conditions
- Very strong information asymmetry
 - » Knowledge base must be improved & information be shared among all concerned parties
 - » COM needs to obtain a clearer picture of potential risks / impacts to the environment

DG Environment: on-going activities

- **Monitoring of scientific and project developments**
- **Build up scientific basis:**
 - » Desk study on potential risks to the environment and human health; best practices; where appropriate, risk management recommendations;
 - » ECHA: review of selected chemical substances generally used in shale gas operations
 - Initial findings: REACH registration dossiers for the selected substances do not contain references to representative key words
 - Review to be followed-up for more details...
 - » JRC: (i) Quantification of water and land impacts of large-scale shale gas development scenarios (2nd quarter of 2012) and
(ii) LCA of the environmental impact of unconventional fossil fuels (2012)
 - » Exchange of information with US EPA (in collaboration with other DGs)
- **Legal analysis:**
 - » Assess the effectiveness of the EU environmental Acquis to prevent, eliminate & reduce potential risks arising from the increasing use of novel technologies

Conclusions

- In principle, the EU has a clear interest in relying on indigenous energy sources
 - » Shale gas could contribute to security of gas supply, although the share of imports is nevertheless likely to rise
 - » Natural gas from shale formations will need to find its place in the market
 - » Potential environmental impacts/risks must be taken seriously by operators and permitting authorities
 - » Citizens should be consulted and informed about projects early on
- Although technologies are not completely new, their use would be of a different scale should commercial production start in a few years time
 - » Important: use current exploration phase to check and if necessary improve regulatory frameworks to be prepared for possible commercial scale production in the future
 - » COM will follow scientific and project developments closely to ensure that the applicable legislative framework, in particular as regards environmental protection, remains appropriate and provides a high level of safety
 - » Industry needs to use the opportunity to improve technologies and operating practices