

Directorate-General  
for Energy  
and Transport



## EU Energy Security

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## 2<sup>nd</sup> Strategic Energy Review – SER2



## SER2 - Infrastructure priorities



## Infrastructure needs and the diversification of energy supplies (I)

Proposed energy security priorities:

- **Baltic Interconnection Plan**. This will encompass gas, electricity and storage, identifying the key infrastructures necessary for the interconnection of the Baltic region with the rest of the EU and a secure and diverse energy supply for the region. BEMIP Action Plan endorsed by the MS concerned (SE, FI, EE, LV, LT, PL, DE, DK and as an observer, NO) in a Memorandum of Understanding signed on 17 June 2009
- **Southern gas corridor**. The strategic target is to deliver up to 100 bcm by 2020 through the Southern Route. Several projects. Prague Summit May 2009: IGA, CDC, ITGI, Iraq, Egypt
- **Liquefied natural gas**. Sufficient LNG capacity consisting of liquefaction facilities in the producing countries and LNG terminals and ship-based regasification in the EU should be available to all Member States



## Infrastructure needs and the diversification of energy supplies (II)

- **Mediterranean energy ring**. This ring, linking Europe with the Southern Mediterranean through electricity and gas interconnections, needs to be completed. It is essential, notably for developing the region's vast solar and wind energy potential
- **North-South interconnections within Central and South-East Europe**. These need to be developed as a priority, building on the infrastructure gaps which became evident during the January gas crisis, relevant proposals in the European Economic Recovery Plan
- **North Sea offshore grid**. A blueprint should be developed to interconnect national electricity grids and plug-in the numerous planned offshore wind projects. European Coordinator active. Communication on North Sea offshore grid will be presented by end-2010



## SER2- Crisis prevention and response mechanisms

- **Oil – New Directive on oil stocks** (adopted at Energy Council of 12 June 2009)
- **Gas** – New instrument to replace the Natural Gas Supply Directive (July 2009) to include:
- **Security of Supply Standards** for market players (incl. TSOs, regulators, suppliers)
- Enhanced **level of preparedness** in case of crisis
- The right balance between responsibility and solidarity
- Predefined and transparent **emergency plans of Member States**, strong regional cooperation, better transparency, rapid response and coordination mechanism at EU level.

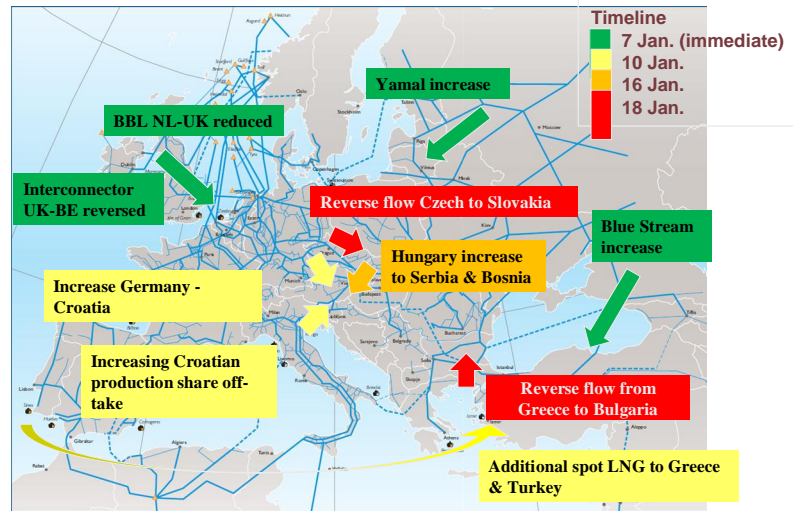


## SER2 – External relations (inter)dependence

- **Common interest** in EU energy security growing
- Market integration
  - » Norway (24% of EU gas imports)
  - » Energy Community
- « Energy interdependence » agreements: Positive message to partners – **energy interdependence** increasing, all gain from more cooperation and robust international legal frameworks
  - » Russia
  - » Eastern partnership: Belarus to Caspian
  - » Southern Mediterranean neighbourhood
  - » Africa
  - » Dialogues
    - EU-OPEC
    - Emerging suppliers (fossil and renewables)
    - Consumers (China, India, Japan USA): cooperation on energy consumption, energy efficiency, climate protection, nuclear safety
- Speak with one voice and act accordingly
  - » Transparency at EU and Member State level



## Lessons from the January gas crisis



Source: IEA

## What did work during the gas crisis?

- Benefits of the EU internal market for security of supply
- Some countries well prepared (appropriate emergency plans)
- Agreement between companies
- Gas Coordination Group and coordination by Commission
- Reverse flows benefit
- All households supplied during the entire crisis (except BG)

## Main problems identified during the gas crisis

- Lack of infrastructure bringing gas where it is needed
- Lack of preparedness to cope with gas crisis
- Lack of data transparency
- Lack of coordination of emergency measures
- Counterproductive measures affecting other countries
- No solidarity between Member States
- Insufficient risk assessment



## New security of gas supply policy Preventive Measures

- Diversification of gas supply routes
- Diversification of external suppliers
- Implement effective preventive measures based on long-term standards at national and EU level
  - The n-1 rule
  - Bi-directional flows
- Risk assessment
  - Assessment of security of supply situation done by all countries and EU to comply with common standards



## Preventive action plans

- Based on the results of risk assessments
- Addressing mitigation measures
- Includes annual winter outlooks
- Developed and monitored by regulators
- Consistent with 10 years development plan from ENTSO-G



## New security of gas supply policy Reactive Measures

- Implementing emergency measures in case of crisis
- Short term measures, but prepared in time and properly tested
- Declaration of emergency
- National emergency plans duly coordinated or joint plans
- EU emergency plan
- European emergency response mechanism (Commission + Gas Coordination Group)
- Full cooperation between all market players and public authorities



## Example: GTE+ Reverse Flow Study and ongoing work on supply disruption scenarios

- **Work on supply disruption scenarios:**

- » Several scenarios envisaged in the preliminary work, starting from the lessons learned in January
- » Winter Outlook 2009-2010 as the reference scenario
- » GCG taskforce set up in June 2009

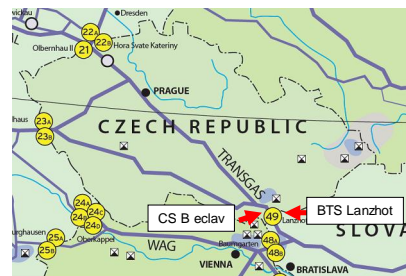
- **Reverse Flows Study:**

- » Task Force set up by GTE+ in February 2009
- » Final report expected on 15 July 2009 with maps of Europe showing detailed description of each project (about 50)



## Example: Czech Republic – Slovak border bidirectional measurement and transport, Lanžhot + CS B eclav

<b>Project Goal</b>	
Crossborder SoS, reverse flow gas compression at CS B eclav and reverse flow gas metering at BTS Lanžhot (from Czech to Slovakia).	
<b>Project Description</b>	
The modifications of the pipe yard at B eclav CS and metering facilities at BDS Lanžhot enable RWE TGN. In case of cut of supplies through Ukraine this would allow the transport of significant amounts direction Slovakia.	



<b>Capacity created in reverse flow</b>	28 mcm/d	<b>Project maturity</b>	Ready for implementation
<b>Capital expenditures</b>	1.85 M€	<b>Funds breakdown</b>	2009-2010
<b>Countries involved</b>	Czech Republic, Germany, Slovakia	<b>Commencement of operations</b>	Q4/2010

Preliminary example – courtesy of GIE



## European Economic Recovery Plan - energy infrastructure projects

- As a response to the financial crisis and to reinforce the EU's energy supply and 3X20 objectives
- Financial envelope of € 3.980 billion
  - » € 2,365 million: gas and electricity infrastructure projects
  - » € 565 million: offshore wind energy projects
  - » € 1,050 million: Carbon Capture and Storage projects



## Indicative Action Plan for EERP implementation Milestones in 2009

Tasks	Dates
• Launch call for proposals	18 May
• Info day for applicants (FAQs on the website)	3 June
• Entering into force of the Regulation (costs are eligible from the day following the adoption)	~ July
• Close call for proposals	15 July
• Evaluation for Interconnections (external)	2-11 September
• Proposal by the Commission	end September
• TEN-E Committee	October
• Decisions and contracts	end 2009/begin. 2010



## Europe preparing its energy future now

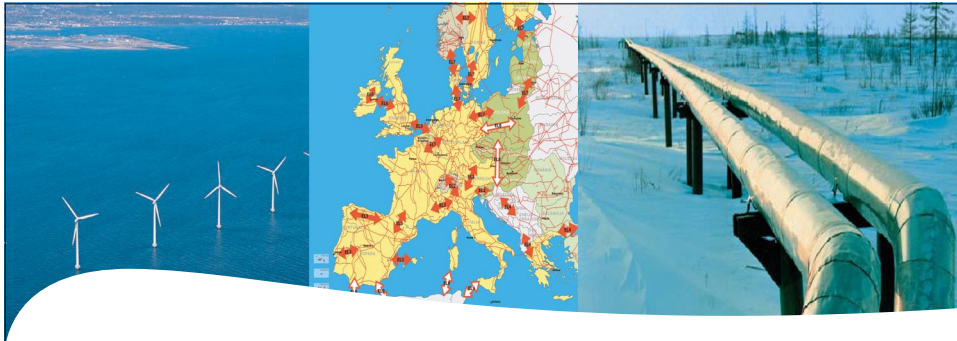
- EU's 2020 agenda set out **first steps** in transition to high-efficiency, low-carbon energy systems
- Deep structural changes, radical technological shifts require **choices today**
- Wide consultation on possible longer-term policy **objectives** by 2050



## Vision for 2050

- Technological shift to low-carbon economy
  - » carbon-free electricity: 44% → 2/3 → 100%
  - » cars without fossil fuels (from 98% today)
  - » low energy and zero emission buildings
  - » on and offshore power grid for decentralised generation
  - » ...in the EU and globally
- 2030/50 Roadmap by 2010 to be prepared, in SET-Plan framework





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Thank you for your attention