An assessment of the Gas and Oil Pipelines in Europe
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Supply Characteristics

Natural Gas in Pipelines

- Inflexible
- Expensive
- Infrastructure services are regulated
- Natural gas transmission is regulated by provisions on Third Party Access (TPA)
- LNG and CNG is more flexible

Oil in pipelines

- For the oil sector transportation and storage is cheaper and more flexible
- General EU competition rules apply for transportation of oil products
An assessment of the Gas and Oil Pipelines in Europe.
Gas Pipelines

- Gap between the EU-27 gas consumption and own production
- New supply patterns both internally in the EU-27 and from outside the EU-27
- Strengthening of existing supply corridors and establishment of new infrastructures will be important
- The 20-20-20 climate objectives will affect the gas demand significantly
- Gas demand could increase due to the need for gas-fired power plants to cover the increased demand and phasing out of coal
- How climate objectives will affect the future demand patterns and pipeline infrastructure should be investigated further
Oil Pipelines
An assessment of the Gas and Oil Pipelines in Europe
Oil Pipelines - Planned

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Oil Pipelines

- Only a small fraction of oil products import and transportation uses pipelines. 80% are transported by vehicle, ship and train.
- The oil pipeline link between Eastern and Western Europe is weak.
- Eastern Europe is vulnerable to the supply of Russian oil and changes in Russian means of transportation and export terminals.
  - An increasing share of the Russian export will be exported by vessels.
- Should oil be integrated in the internal market because of security of supply reasons?
Issues in relation to Pipelines

- Gas pipelines are technically more complex and the cost of handling higher than those for oil
- Gas systems need large storage facilities to be efficiently operated
- There are restrictions on the reserve flow in the main pipeline systems – affects security of supply for many countries
  - Spain – France, Hungary – Czech – Slovakia - Austria a.o.
- Technical standards and operational procedures used across Member States - both for technical construction and daily operations – are different
  - Balancing modalities
  - Capacity allocation procedures
Issues in relation to Pipelines

- Pipelines are locked in physically between two points
  - No alternative use
  - High investment and low operational cost
- While the market for oil transmission services has generally been considered open, efforts have been required for the legislator to regulate free access to the market for gas transmission services
- The framework ensuring fair and non-discriminating access to natural gas networks and a free flow over national borders that has gradually been established by the EU Commission and is continuously being developed
- Third Party Access applies to gas infrastructure (pipelines, storages, LNG facilities)
Issues in relation to Pipelines

- To enhance security of supply and develop the market for natural gas, there is a need to improve networks
  - Measures should be taken to ensure efficient transnational allocation of available pipeline capacity
  - The transparency of available pipeline capacity needs to be improved
  - Security of supply concerns related to transit routes crossing unstable countries, poses a big challenge
- Should oil be integrated in the internal market because for security of supply reasons?
Interconnections Internally

Source: COWI-produced background from COWI Mapping Division.
Security of Gas Supply for the EU

- There is a need for harmonisation of security of supply standards among Member States and solidarity in solving supply crisis.
- A diversification of suppliers is needed to reduce the EU dependency on Russia and unstable transit countries.
- Reverse flow possibilities on existing pipelines.
- A number of infrastructure projects have been launched (including the Nabucco pipeline project, the Nord Stream and the Amber project) under Trans European Networks - Energy and European Energy Recovery Programme.
- Commitments are lacking are from exporters.
Isolated regions

- The Baltic countries and Finland are not integrated in the EU-27 gas network, and although they are solely supplied by Russia, they are considered as isolated.

- The northern parts of Poland and central Sweden are undeveloped with regard to gas infrastructure.

- There are political and economic benefits from providing access to isolated regions:
  - employment
  - industrial development
  - environmental benefits by fuel switches.
Thank you for your attention!