Development of cross-border gas infrastructure in Northwest Europe

ENERGETIKA

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Even if future NWE gas demand remains flat, the import gap will increase significantly

- Future Northwest European gas demand is uncertain but will likely remain flat during the next decades
- Nevertheless, the import gap could nearly triple due to declining indigenous production
- Incremental import volumes will predominantly come from Russia and from global LNG

**Gas Balance NWE**

- Total Consumption
- Import Gap
- Indigenous Production

NWE: GE, DK, NL, BE, LU, FR, UK, IE
Import Gap: Imports minus NL, UK, NO
Source: IHS Energy (2014), own analysis
Main Entry Points for Gas Supply into the EU

- Algeria & Libya
- Norway
- Russia
- Caspian
- LNG
- TAP
- Eustream
- Nord Stream
- Yamal
- TurkStream

Graph showing TWh/y for 2015:
- Lybian gas
- Algerian gas
- LNG
- Norwegian gas
- Russian gas
- EU Indigenous production
Total Dutch gas production down from 85 BCM (2013) to 48 BCM (2017)
Large-scale LNG liquefaction capacity is underutilized

- Total send-out capacity of European LNG terminals is 208 bcm/a
- In comparison, EU gas consumption is 400 bcm/a
- Terminal utilization levels have dropped from 45% to around 20%
- Increased availability of LNG over the next years, but whether this will enter the EU market is a price issue
- Outside of NWE, EU investment in additional regas capacity mainly for import diversification

Source: GLE Investment Database, IEA Gas Trade Flows, own analysis
Future infrastructure investments will be driven by supply developments

- Sufficient pipeline capacity is in place to accommodate future gas demand
- Gas infra capacity NWE has been resilient, sufficient, and reliable during the high demand levels of the previous decade
- However, supply sources will shift (e.g. Groningen volumes reduction) and markets will be converted from L-gas to H-gas
- As a result, grid optimization and some new investment will be required

Source: ENTSOG TYNDP 2017
These developments point to maximising the use of existing infrastructure where possible

- Uncertain market demand in NWE due to (European) energy policies and (intra-fuel) market competition; risk of stranded assets
- Uncertain investment climate due to i.a.: depreciation allowances, TPA-exemptions, permitting, and short-term bookings & auctions
- Infrastructure capacity coming available because of decreasing indigenous supply (e.g. Groningen volumes) should be used maximally
Economic perspective

- It is obvious from an economic perspective that utilization of existing infrastructure should be optimised before constructing new capacity, as new capacity is relatively expensive and could cause other infrastructure to be underutilised.
- The interest of TSOs is to maximise the utilisation of their existing assets and, if needed, to combine existing assets with new infrastructure plans.
- The interest of shippers is low transport costs, as they will in the end pay the bill for new infrastructure.
- Regulation does not always provide the right incentives for cross border optimisation, but this is not in the scope of this presentation.
In conclusion

- Europe needs additional infrastructure to secure future gas supply
- It is in the interest of both TSOs and shippers to find the right balance between using existing infrastructure and constructing new infrastructure
- There is room for further optimisation between existing and new infrastructure, based on capacities becoming available in existing European infrastructure and conversion of L-gas pipelines into H-gas pipelines