Navigating the Roadmap for Clean, Secure and Efficient Energy Innovation

SET-Nav
Strategic Energy Roadmap

Future of gas in the SEE region

Switching from coal in the Balkans: how current infrastructure developments affect the gas consumption

Peter Kotek, REKK

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OUTLINE

1. Global gas market developments and outlook
2. Infrastructure and regulatory developments in SEE
3. Modelling power sector gas consumption

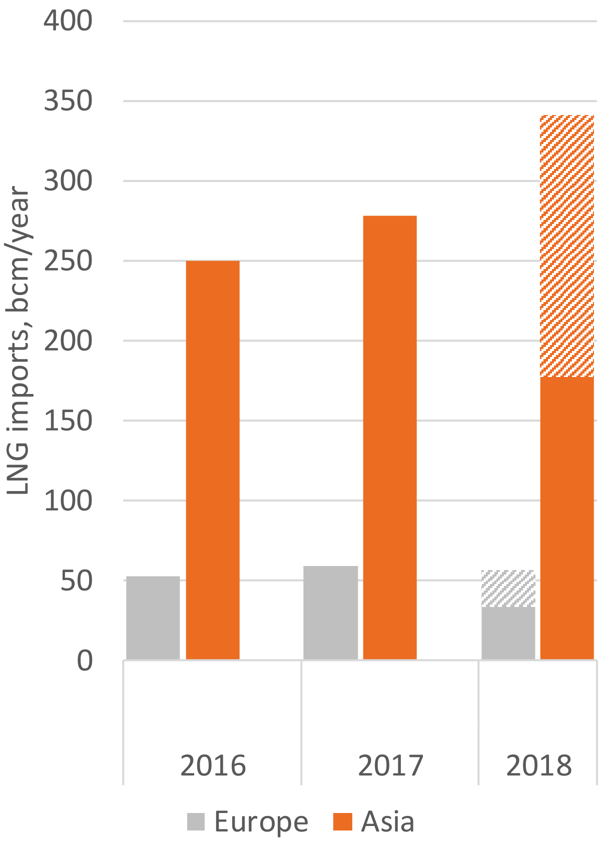
2016-2018: Years of natural gas oversupply to Europe

Gas price drop due to

- Legacy LTC oversupply
- Falling European consumption
- Brent crude price
- Low Asian demand

What does the future bring?

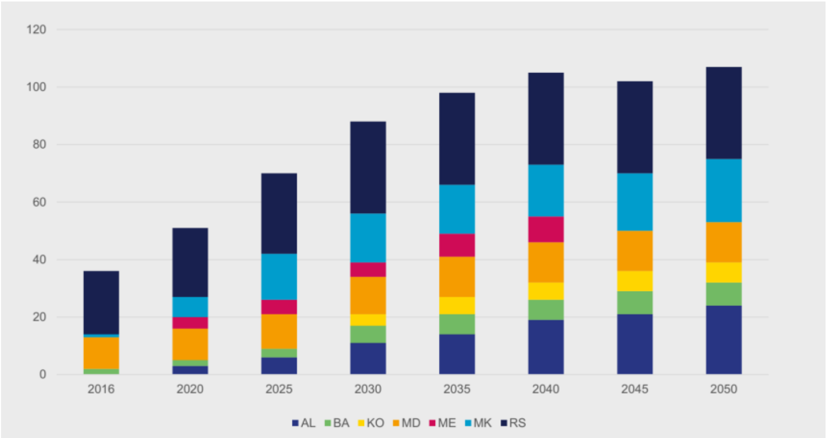
- Brent price increase
- High demand increase in Asian markets
- Tightening of LNG shipping capacity
- Stronger correlation of European and Asian prices



FUEL SWITCHING ALREADY OCCURED IN NWE

- Lower gas prices and oversupplied market were not enough on their own to turn gas-fired generation competitive with coal in NWE
- CO_2 quota price recovery in early 2018 made the switch possible
- Gas demand recovering, but not at the 2008 level
- Consumption growth may come only from power sector
- Fuel switching to come in SEE?
- Increasing gas demand expectations in the West Balkans (EnC CPs)

Gross gas consumption in WB6, TWh/year



Predrag Grujičić (EnC): Clean energy package - reality check for the Energy Community. ,13th Gas Forum, 20 Sept 2018 Ljubljana

POTENTIAL NEW SOURCES

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- Backbone projects
  - Black Sea offshore
  - TAP and TANAP +IGB
- WB6 connection to TAP via IAP?
- TurkStream and Southern Corridor
- LNG terminal in Northern Greece (PCI)
- What is happening in gas infrastructure in Europe is happening in this region

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INTERCONNECTIVITY AND REGULATORY OBSTACLES

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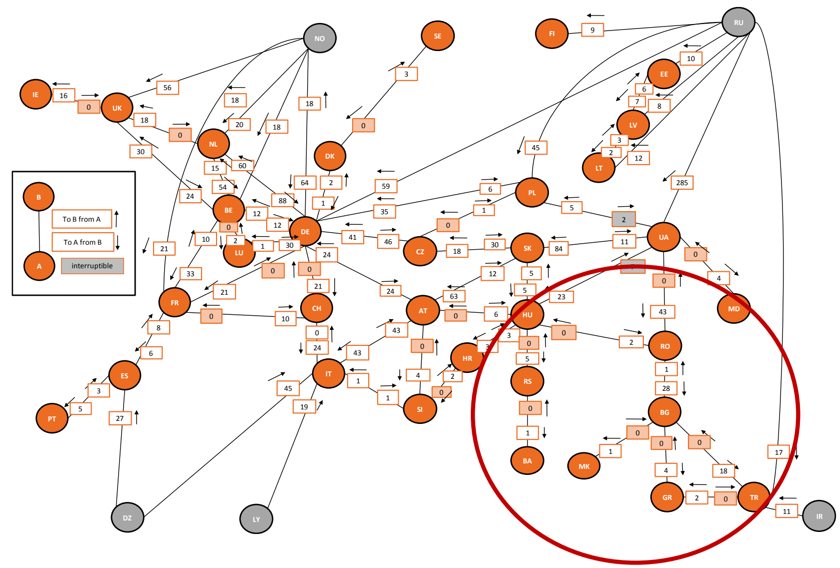
- Compared to NWE: fragmented, loosely interconnected SEE gas markets
  - Lack of bidirectionality
  - Prohibitive Exit tariffs
  - TPA access issues on Trans-Balkan
  - Limited option for trade
- The future is bright for gas projects
  - PCIs targeting the region (Greek terminal, IGB, TAP, IBS, rehabilitation of Bulgarian network)
  - Transgaz tariff commitments
  - Bookings to expire on the Trans-Balkan by mid-2020



[Source: EY & REKK Quo Vadis EU gas regulatory framework]

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Future of gas fired generation

South East Europe Electricity Roadmap

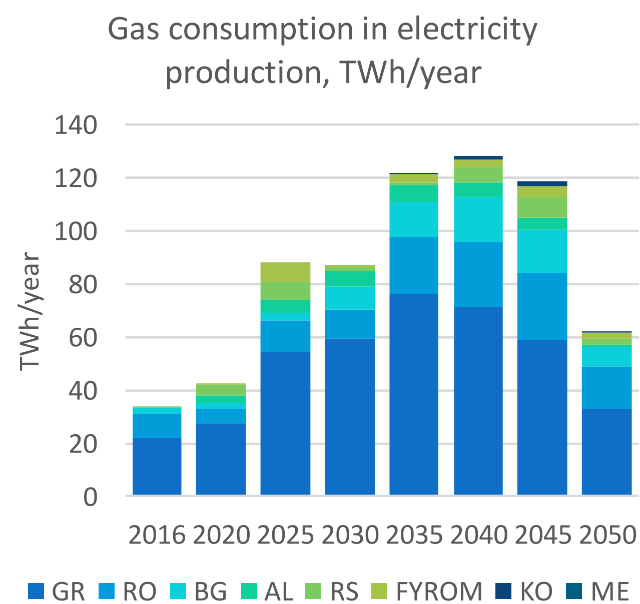
SEERMAP region: BG, GR, RO, WB6 (AL, RS, BA, KO*, ME, FYROM)

EEMM-EGMM model interaction

EGMM gas market model providing prices assuming FID projects

EEMM electricity market model deciding on endogeneous investment in the SEERMAP region

Substantial gas-fired investment in Greece, Romania and Bulgaria



CONCLUSIONS

- Gas switching in the power sector occured in NWE, bringing higher volumes to Europe
- SEE has a high potential, switching from existing coal-fired generation to gas
- WB6 countries keen on introducing gas to their primary energy mix (local emmisions)
- New pipeline projects bring new sources
- Option for gas to replace coal-fired power generation and possible gasification of new markets

Thank you!

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LNG Oversupply to tighten only after mid-2020s