

# The Quiet Gas Revolution in Central and Eastern Europe

ETCSEE

ENERGY TRADING IN CENTRAL & SOUTH EUROPE

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# Executive Summary

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- In 2015, IPA Advisory pointed out that the quiet gas revolution is taking place in CE. Two years on, the increased pipeline flexibility is spreading further East
- Despite very low utilisation of reverse flows in most of the countries the actual capability already represents competition
- Gas prices have converged, even in countries where connections or reverse flows are not installed yet
- Each country has historical specific arrangements, national regulatory regimes and long-term supply contract with Gazprom, which continue to impact their markets
- In future, increased flexibility of gas flows will further reduce dependence on direct Russian gas deliveries and keep price differentials between countries more narrow

# The evolution of the gas revolution in CEE

Central and Eastern European reverse flow points (2015)

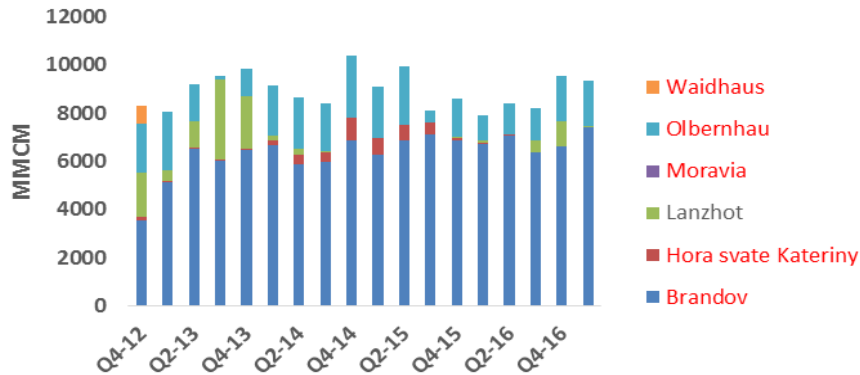


Source: IPA analysis

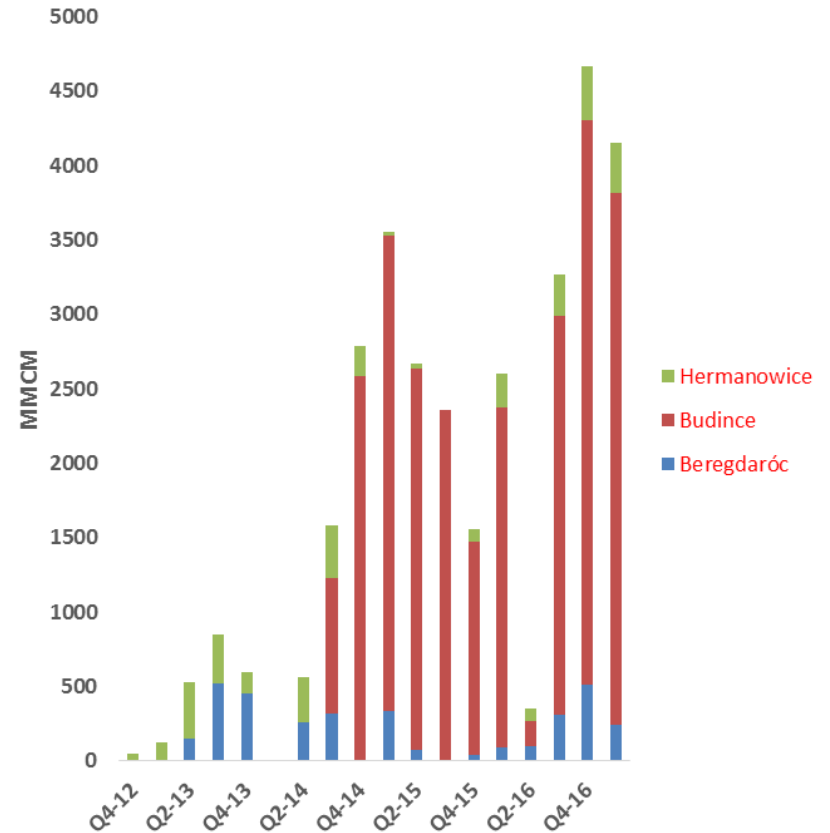
- Two consecutive cut-offs of Russian gas initiate the revolution
- Between 2011 and 2015 reverse flows were built in Czechia and Slovakia
- Since end 2011, Nord Stream 1 has enabled to bypass traditional delivery route
- The total CEE reverse flow capacity was about 147 Bcm/y in 2015
- In 2017 capacity increased to around 192 Bcm/y plus the interruptible capacity of some 111 Bcm/y in Brandov

# Reverse flows in CE corridor profoundly changed deliveries

## Gas Flows into Czechia, Q4-12-Q1-17



## Ukraine: Reverse Gas Flows, Q4-12-Q1-17

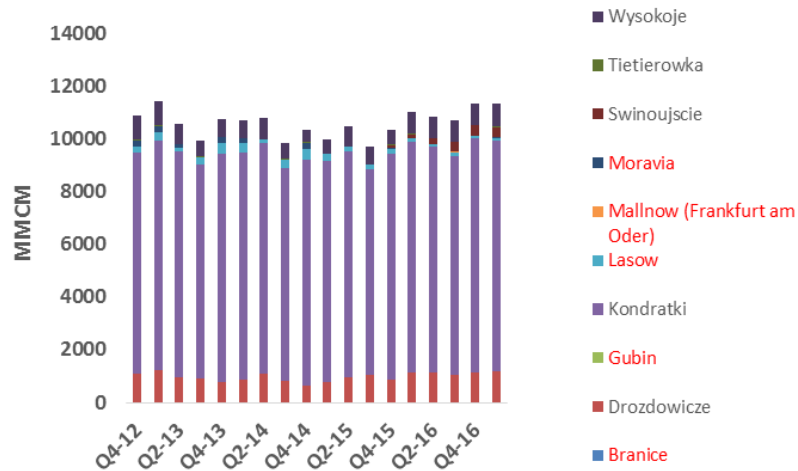


## Gas Flows into Slovakia, Q4-12-Q1-17

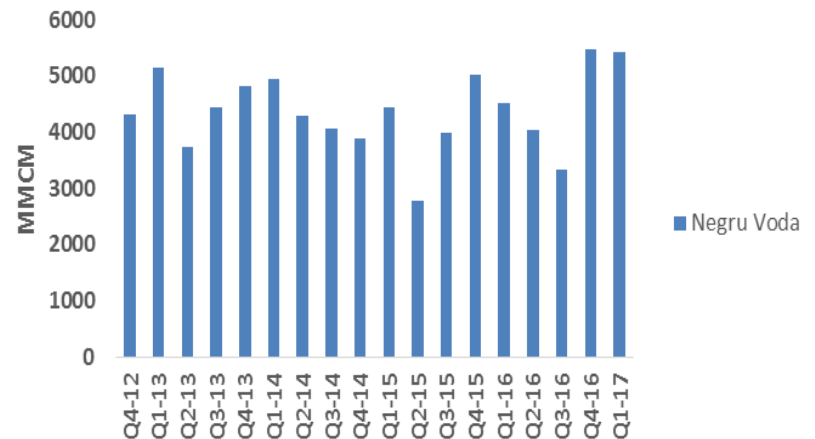


# CEE installs reverse connections but flows are sporadic

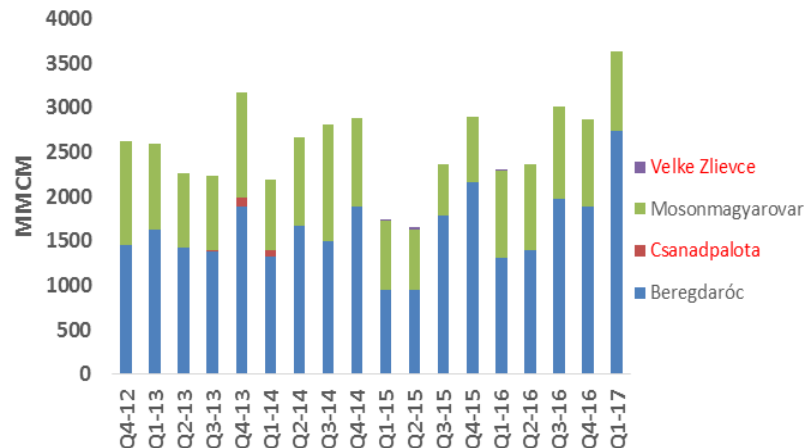
### Gas Flows into Poland, Q4-12 - Q1-17



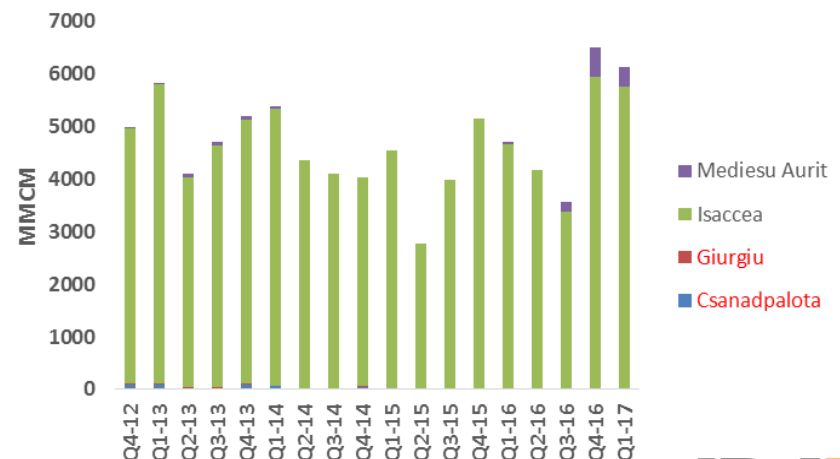
### Gas Flows into Bulgaria, Q4-12-Q1-17



### Gas Flows into Hungary, Q4-12-Q1-17

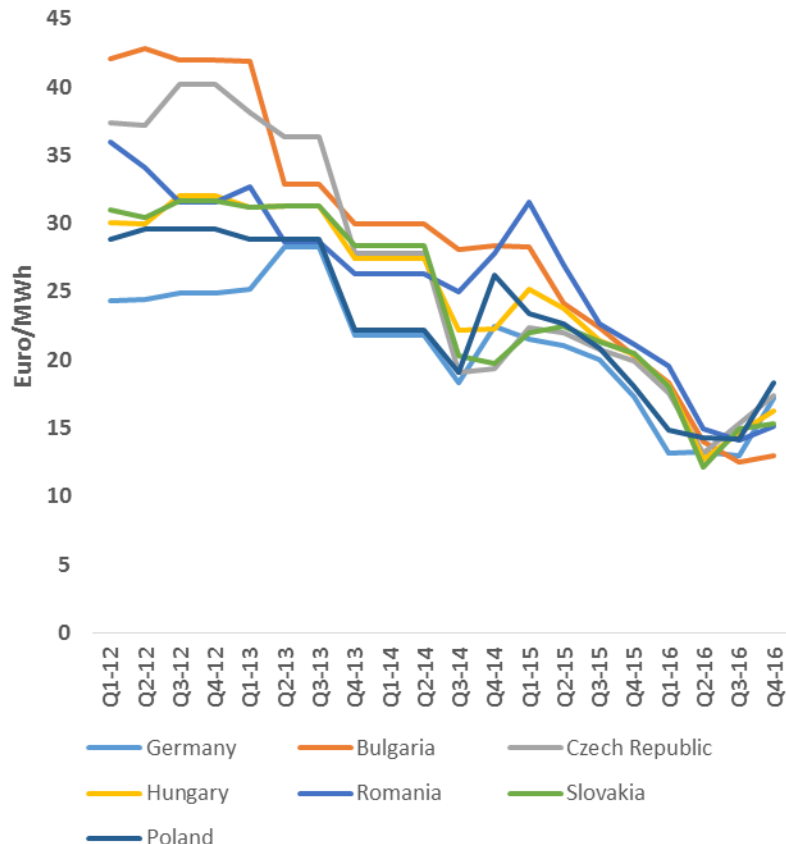


### Gas Flows into Romania, Q4-12-Q1-17



# CEE gas prices moving towards European gas hub prices

Average Wholesale Gas Prices in German Hub and CEE

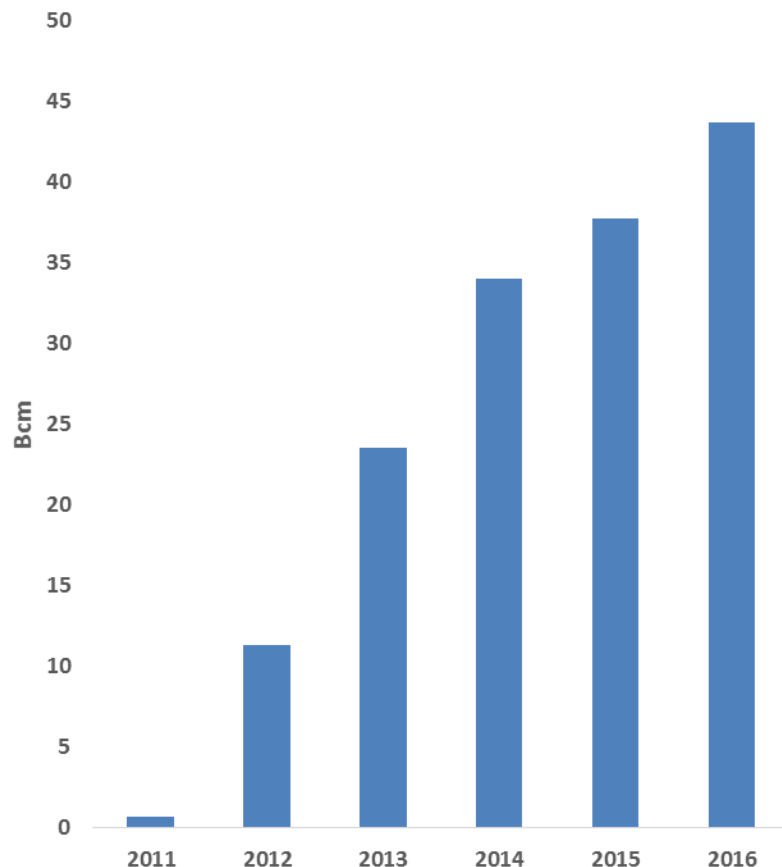


Source: Quarterly Report on European Gas Markets, DG Energy, Volume 9

- Differences in the speed of convergence have largely been influenced by:
  - Existence of reverse flows although Balkans converged even without new connections;
  - Specific historical arrangements;
  - National regulatory regimes; and
  - Long-term supply contracts with Gazprom.
- After converging in 2015 & 2016, price differences widened slightly in H2-16 as prices started to grow due to:
  - Rising oil prices;
  - Rise in West European gas hub prices due to insecurities of the UK Rough gas storage and low LNG imports in Northwest Europe;
  - Cold weather;
  - Strong demand in the power sector; and
  - The outages of several French nuclear reactors.
- In future, gas prices in CEE will be more and more influenced by:
  - West European hub prices;
  - LNG prices (LNG imports grew by 10% in Q1-17);
  - Growing competition in CEE as destination clauses from LTC are removed;
  - Gazprom losing direct control of the CEE market; and
  - Establishment of more hubs in longer term.

# Potential impact of Nord Stream II on the CEE gas markets

Nord Stream I Gas Flows, 2011-16



Source: IEA

- Nord Stream 1 has capacity of 55 Bcm/y and exports reached almost 44 Bcm last year, with utilisation at 80%
- Capacity of Nord Stream II should double the annual capacity to 110 Bcm/y, with planned start date 2019
- Restrictions on the Opal capacity by the EC remains a major problem as Polish objection is upheld due to security of supply concerns
- EU support for Ukraine will be crucial and could determine future transit flows of Russian gas to the region
- Some recent studies (Abrell 2016, TIGER 2013, REKK 2017) suggest:
  - Prices will decline in Western Europe (by about 6%);
  - But Eastern Europe will see prices rising due to bottlenecks as LTC will congest reverse flows;
  - Revenues of some CEE's TSO will shrink; and
  - Additional investment will be needed to avoid the congestion.

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