Natural Gas Supplies to Central Europe

Changing Dynamics Since 2010

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Visegrad Gas Supplies

• Four major developments in the Central European gas market, and why they matter:
  – Declining Russian gas transit via Ukraine
  – Shift from ‘East-West’ to ‘West-East’ gas flows in the Czech Republic and Slovakia
  – Hungary extends its contract with Gazprom until 2018
  – Poland’s gas imports: Virtual reverse flows from Germany and new supplies via LNG import terminal at Swinoujście
Declining Russian Gas Transit via Ukraine
Russian Gas Exports to Europe (minus Turkey & Baltics) By Route (2010-2015)
Russian Gas Exports to Europe (minus Turkey & Baltics) by Route (2010-2015)
Impact of Declining Ukrainian Transit

• In 1990s, 95% of Russian gas exports to Europe delivered via Ukraine
• Yamal-Europe (2006) shifted some transit from Ukraine to Belarus
• Since 2010, use of Nord Stream has reduced Ukrainian transit further
• Result is ‘divided Europe’:
  – Western Europe receives Russian gas via Yamal & Nord Stream
  – Central & SE Europe receives Russian gas via Ukraine
  – Poland, Hungary, Serbia, Slovakia, Austria, Slovenia, Croatia, Italy, Romania, Bulgaria, Greece, FYRM
  – But what about the Czech Republic?
Czech Republic
Gas Flows in the Czech Republic and Slovakia, bcm (2010-2015)
Gas Flows in the Czech Republic

• In 2010, CZ received gas from Russia via Ukraine & Slovakia, of which CZ transited most onwards to Germany (‘East to West’)
• In 2015, CZ received no gas from Slovakia
• Instead, CZ received gas from Germany, of which more than half was sent on to Slovakia and Ukraine
• CZ now imports Russian gas via Nord Stream
  – RWE-Gazprom contract runs until 2035
• “Since January 1, 2013, gas volumes previously transported to Lanžhot through the Uzhgorod transit corridor have been completely rerouted to the Nord Stream gas pipeline” (Gazprom Export)
Hungary
Share of Russia in Hungarian Gas Imports

- 94.1% in 2010
- 99.2% in 2011
- 98.0% in 2012
- 100.0% in 2013
- 100.0% in 2014

Eurostat: Blue line
Eurogas: Red line
Hungary’s Gas Imports By Route (2010-2015)

- Ukraine
  - 2010: 60.1%
  - 2011: 56.8%
  - 2012: 54.8%
  - 2013: 61.7%
  - 2014: 60.5%
  - 2015: 67.8%

- Austria
  - 2010: 39.9%
  - 2011: 43.2%
  - 2012: 45.2%
  - 2013: 37.0%
  - 2014: 38.9%
  - 2015: 32.2%
Trends in Hungary’s Gas Imports

• Dramatic decline in import volumes 2010-2015 (9.4 bcm → 6.2 bcm)
• Share of Ukrainian transit in imports is rising
  – Reduction of Russian gas deliveries to CZ, Austria & Germany via Ukraine
• Gazprom remains dominant supplier to Hungary (PanRusGaz)
  – In 2015, existing contract was extended to 2018
  – Hungarian gas market dominated by MVM (shareholder in PanRusGaz)
• Hungary has annual imports of 6.2 bcm (2015), and 4.2 bcm p.a. import capacity from Baumgarten (Austria)
• If Hungarian market is liberalised, spot purchases from Baumgarten would be possible – But does the Hungarian govt want liberalisation?
Poland
Poland’s Gas Imports By Route (2010-2015)
Poland’s Gas Imports By Source (2010-2014)

<table>
<thead>
<tr>
<th>Year</th>
<th>Eurogas - From Russia</th>
<th>Eurogas - From Others</th>
<th>Eurostat - From Russia</th>
<th>Eurostat - From Others</th>
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<tbody>
<tr>
<td>2010</td>
<td>89,9%</td>
<td>10,1%</td>
<td>89,5%</td>
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<td>2011</td>
<td>85,5%</td>
<td>14,5%</td>
<td>85,5%</td>
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<td>2012</td>
<td>79,8%</td>
<td>20,2%</td>
<td>79,8%</td>
<td>20,2%</td>
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<td>2013</td>
<td>77,7%</td>
<td>22,9%</td>
<td>77,1%</td>
<td>22,9%</td>
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<tr>
<td>2014</td>
<td>76,3%</td>
<td>24,3%</td>
<td>75,7%</td>
<td>24,3%</td>
</tr>
</tbody>
</table>
Trends in Poland’s Gas Imports

- Increased imports & transit via Yamal-Europe pipeline
  - Linked to ‘virtual reverse-flow’ imports from Germany?
- Share of imports delivered via Ukraine rather stable (28-34%)
- Q1 2016 shows beginning of LNG imports
  - Terminal cap of 5 bcm p/a and contract with Qatargas for 1.3 bcm p/a
- PGNiG is reducing dependence on Gazprom. In 2014:
  - 73% of imports (8.1 bcm) sourced from Gazprom
  - 27% of imports (2.9 bcm) sourced from other companies (German spot market)
  - But contract with Gazprom runs until 2022 – Limited options until then
Conclusions
Trends in Visegrad Gas Supplies

- Nord Stream has divided Europe into those countries which receive Russian gas via Ukraine and those which do not.
- But is also facilities West-East flows to Ukraine via CZ & SLK.
- Hungarian situation will remain stable until 2018 & much will depend on the development of competition on Hungarian market.
- Poland has relatively stable import volumes, and is using Yamal-Europe to access ‘virtual reverse’ imports from Germany.
- LNG terminal offers new supplies for Poland & interconnectors will make small volumes of LNG from Poland available to CZ and SLK.
Thank you for your attention

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