Energy Island No More?

The Changing Baltic Gas Market

Energetika XXII, St Petersburg
10th November 2016

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The Baltic Energy Island

• Longstanding Baltic dependence on Russian gas imports
• EC recognised Baltic as an ‘Energy Island’ with BEMIP (2009):
  – Financial support for new infrastructure
  – Aims for significant development by 2020
• What new infrastructure is being developed in the Baltic region to integrate these states into the broader EU gas market, and give these states access to alternative supplies?
LNG Terminal & Interconnectors

- Following adoption of BEMIP, each Baltic government wanted to host an LNG terminal and act as a regional ‘hub’
- Lithuania first to act – Klaipeda LNG launched Dec 2014
- Klaipeda LNG could meet demand of Lithuania, Latvia & Estonia
- New Gas Interconnector POL-LIT (GIPL) by 2018:
  - POL → LIT: 2.6 bcm per year
  - LIT → POL: 1.0 bcm per year
- Combination of Klaipeda LNG and GIPL could meet Baltic regional demand of 6.5 bcm in 2015
LNG Terminal & Interconnectors

- In order for Klaipeda and GIPL to meet demand in all countries, cross-border interconnections have to be upgraded or built.

- Upgrades of existing cross-border interconnections by 2020:
  - Lithuania-Latvia: From 2.6 bcm to 4.4 bcm per year
  - Latvia-Estonia: From 2.2 bcm to 3.6 bcm per year

- New interconnection between Estonia and Finland
  - BalticConnector, 2.6 bcm per year

- Flow of natural gas from south to north
Finland-Estonia BalticConnector

• Proposed bi-directional pipeline, by Dec 2019
• Estonian participant is state-owned TSO, Elering
• Finnish state-owned Gasum withdrew in Oct 2015
• Gasum replaced by state-owned company, Baltic Connector Oy
• July 2016: EC announced it would fund 75% of the BC project
• Finland and Estonia to ‘share’ a new LNG terminal
• New terminal would be necessary if Lithuania exported gas south to Poland instead of north to Latvia
Proposed LNG Terminals

• Gasum abandoned 2.5 bcm Finngulf LNG terminal in Oct 2015:
  – Switched focus to small-scale, off-grid LNG import terminals
  – Pori (Sept 2016), Tornio, Rauma, and Kotka (2017-18)

• Two Estonian LNG terminals remain ‘on the table’:
  – Paldiski LNG (2.5 bcm) by Alexela vs Muuga LNG (4 bcm) by Vopak
  – Projects are competing for EU funds (application deadline: Nov 2016)
  – Only one will actually be built
  – Limited Estonian gas demand means that new terminal will be used for exporting gas to neighbouring countries (primarily Finland)
  – New LNG terminal dependent on completion of BalticConnector
Future of Russian Gas in the Baltic Region?

- Gazprom’s LTC with Latvijas Gāze valid until 2030, limiting demand for alternative supplies in Latvia
- In Dec 2015, Gazprom extended its LTC with Gasum from 2025 to 2031 in exchange for more favourable pricing formula
- In March 2016, Eesti Gaas extended its Gazprom contract until 2018
- Also in March 2016, Gazprom sold gas at auction, mostly to Lithuanian consumers, for delivery in winter 2016/17
- Gazprom can afford to be flexible and price competitive in order to retain market share in the Baltic region
  - Flexibility & competitiveness stimulated by changing market conditions
Gas imports 2015:
- Finland: 2.7 bcm
- Estonia: 0.5 bcm
- Latvia: 1.2 bcm
- Lithuania: 2.0 bcm

Map showing gas import routes and capacities.
**Conclusions**

- By 2020, new infrastructure could ensure access to new import sources and connection with the European market
  - Value of interconnectors and LNG is to stimulate competitive pricing and contractual flexibility, rather than replace Russian gas entirely
  - This means that new infrastructure may not be used at full capacity
- EU funding and state support are crucial
  - Interconnectors are often not commercially attractive for investors
- But LTCs limit demand for new gas supplies in Finland & Latvia
  - Consequences for BalticConnector and Estonian LNG terminal
Thank you for your attention

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Appendix
<table>
<thead>
<tr>
<th>State (2015)</th>
<th>Import Dependency</th>
<th>Imports (bcm)</th>
<th>From Russia (bcm)</th>
<th>From Other (bcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>100%</td>
<td>2.71</td>
<td>2.71</td>
<td>0.00</td>
</tr>
<tr>
<td>Estonia</td>
<td>100%</td>
<td>0.47</td>
<td>0.47</td>
<td>0.00</td>
</tr>
<tr>
<td>Latvia</td>
<td>100%</td>
<td>1.23</td>
<td>1.23</td>
<td>0.00</td>
</tr>
<tr>
<td>Lithuania</td>
<td>100%</td>
<td>2.02</td>
<td>1.61</td>
<td>0.41</td>
</tr>
<tr>
<td>Baltic Total</td>
<td>100%</td>
<td>6.43</td>
<td>6.02</td>
<td>0.41</td>
</tr>
<tr>
<td>Poland</td>
<td>75%</td>
<td>12.6</td>
<td>8.2</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Contracts and Shareholdings

• Contracts:
  – Poland: PGNiG gas supply contract with Gazprom until 2022
  – Lithuania: LDT contract with Gazprom expired at end of 2015
  – Latvia: Latvijas Gāze contract with Gazprom until 2030 (since Feb 2009)
  – Estonia: New 3-year contract signed in March 2016, expires 2018
  – Finland: In Dec 2015 contract extended from Dec 2025 to Dec 2031, balanced by change in gas price formula (reportedly 50-50 oil-indexed/spot)

• Shareholdings:
  – Gazprom sold its shares in Lietuvos Dujos (2014), Gasum, & Eesti Gaas (2016)
  – Gazprom retains 34% stake in Latvijas Gāze, along with Itera Latvia (16%)
  – But Latvian gas market due for liberalisation by April 2017