SET Plan 2016 - CEEC X conference

Market integration II: Emerging Central European gas market

View from Central European TSO

Milan Sedláček, eustream, a.s.
1. **Introduction**

2. CEE/SEE situation - rapid development

3. CEE future cannot be decoupled from Ukraine

4. Gas infrastructure development in CEE/SEE

5. Conclusions
Eustream is a gas TSO operating transit corridor in CEE

Yamal (33 bill. m³/year)

UA corridor I (80 bill. m³/year)

Nord Stream (55 bill. m³/year)

UA corridor II (16 bill. m³/year)

Blue Stream (16 bill. m³/year)
Agenda

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Usual rhetorics - gas market in CEE

Market less developed and:

- Russian gas dependency
- No access to LNG
- Fragmented markets
- CEGH the only liquid hub
- Only East - West interconnections
- Russia – Ukraine relations is the issue

Missing integration and diversification

Natural gas import dependency by Member State (intra+extra-EU imports), 2012, %
But: European Hubs are developing
Network codes provide path for removing cross border barriers

<table>
<thead>
<tr>
<th>Year of Network Code Application</th>
<th>2013</th>
<th>2015</th>
<th>2015</th>
<th>2017?</th>
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</thead>
<tbody>
<tr>
<td><strong>Capacity allocation</strong></td>
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<td><strong>Congestion Management</strong></td>
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<tr>
<td>• Release of unused capacity by oversubscription &amp; buy-back, UIOLI mechanisms</td>
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<td><strong>Gas Balancing</strong></td>
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<tr>
<td>• Auctions of bundled standard capacity products at IPs</td>
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<td>• Daily cash-out</td>
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<td><strong>Interoperability</strong></td>
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<tr>
<td>• Removing bottlenecks for free gas flows: e.g. addressing common unit issue, odourisation, gas quality, interconnection agreements, data exchange</td>
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<td><strong>Gas tariff structures</strong></td>
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<td>• Non-discriminatory, stimulus to x-border trade</td>
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<td>• Harmonizing cost allocation in e/e zones</td>
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<td>• Enabling auctions introduction inter alia via harmonized revenue recovery</td>
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<td>• Harmonizing setting of reserve prices</td>
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</table>
As result - Some of old myths are no longer true

### European Wholesale Gas Pricing 2014 (%)

*Source: IGU Wholesale Gas Price Survey 2015, June 2015, pp.27-28*

<table>
<thead>
<tr>
<th>Region and approx % total European demand</th>
<th>OPE</th>
<th>GOG</th>
<th>RCS (BIM)</th>
<th>RSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>North West Europe 50%</td>
<td>12</td>
<td>88</td>
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<tr>
<td>Central Europe 10%</td>
<td>32</td>
<td>53</td>
<td>(2)</td>
<td>15*</td>
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<tr>
<td>Medit’nean Europe 30%</td>
<td>64</td>
<td>30**</td>
<td>(6)</td>
<td></td>
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<tr>
<td>South East Europe 10%</td>
<td>38</td>
<td>4</td>
<td>52</td>
<td>4</td>
</tr>
</tbody>
</table>

*Hungary and Poland **mainly in Italy*

NW Europe: Belgium, Denmark, France, Germany, Ireland, Netherlands, UK
Central Europe: Austria, Czech Rep, Hungary, Poland, Slovakia, Switzerland
Mediterranean Europe: Greece, Italy, Portugal, Spain, Turkey
SE Europe: Bosnia, Bulgaria, Croatia, FYROM, Romania, Serbia, Slovenia

European Hub Price Correlation 2012-14

Source: Petrovich/OIES based on Tankard data

Remanining issues:

Wholesale price in part of the region

Security of supply in part of the region

Source: DG ENER Quarterly report Volume 8., 2015
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In addition
As of 1/4/2016, Budince is:
- Technically available to export from Ukraine
- OBA regime is in place
Ukraine on the Cross-road

- Ukraine transmission system is an important part of the overall European gas infrastructure

- Currently irreplaceable but possible to be completely bypassed in the future

- Total deterioration of Ukraine Energy Market

- Modernization process and reforms are an integral part of Ukraine’s future competition within European Energy Market
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**Flexibility and interoperability**

- **Poland**
  - SK/PL interconnector
  - Access to LNG (Świnoujście)

- **Czech republic**
  - High bidirectional capacity at Lanžhot border point

- **Austria**
  - CEGH for sourcing
  - Physical reverse flow

- **Hungary**
  - SK/HU interconnector
  - Access to LNG (Krk)

- **Ukraine**
  - Bidirectional flow at Budince
  - Access to storages

- **Eastring**

Network indicators: Traditional flows, New options, Potential net development projects.
Eastring – Connecting Markets

Eastring is the Pan-European bi-directional transmission pipeline connecting Western Europe liquid hubs with Turkey – an area with a potential to be high-liquidity region offering new gas sources from Caspian region, eastern Mediterranean and Middle East region.

Eastring is located in the area identified by EC stress test as the most vulnerable part of the Europe.

www.eastring.eu
For more information  www.eustream.sk
Backup slide: Market integration in CEE

- Súčasné toky ruského plynu do južnej Európy
- Plánovaný projekt BACI
- Virtuálna kapacita (Eustream)

Virtual capacity (EUS)

Lanžhot

Baumgarten

Planned BACI