Assessing the impacts of network expansion in case of 2TSO

Case study on Hungarian Slovakian gas transmission pipeline

Gergely Éliás
Department of Gas Supervision and Price Regulation

SECURITY OF SUPPLY • AFFORDABILITY • QUALITY OF LIFE
Overview

• HU TSO tariff conditions, key aspects
• HU/SK interconnector details
• 2 TSO
  – Challenges, tariff issues
  – InterTSO compensation mechanism
• Outlook - TAR NC
HU tariff conditions, key aspects

• Regimes:
  – Entry/exit access model
  – Neither entry nor exit fees shall be paid in the connection point of the 2TSO
  – Postage stamp tariff model

• Tariff model technical parameters:
  – Capacity/commodity split: ~ 90% / 10%
  – (Capacity) Entry/exit split: 50% / 50%

• Tariff calculation:
  – Entry: separate tariffs for import, dom. production, storage (from SSO to TSO)
  – Exit fee: reflects all of the exit points
  – RO, SRB interconnector fees
HU/SK interconnector details

• Development from 2012-14
• Commercial operation from 1st of July 2015
• Technical parameters:
  – Pipe: 94 km, DN 800, PN 75
  – 1 compressor station with 2 units (3,5 MW*2)
  – Capacity: 500.000 m³/h (SK>HU), 200.000 m³/h (HU>SK)
• Financial parameters:
  – Total investment: 160 million EUR
  – Non-reimbursable EU financial support 30 million EUR
• Main regulatory challenges:
  – Within one entry/exit system 2 TSO licensees
  – Data availability: commercial operation started in July
2 TSO – challenges, tariff issues

• Different company size and asset age:
  – One entry/exit access and tariff model
    • Evaluation of economic of scale AND efficiency
    • New infrastructure vs older

• Data availability and cross-checking:
  – Accounting values ✓
  – Financial planning data ?
  – Benchmarking
To determine the tariffs, which cover both TSOs allowed revenues:

1. Determination of allowed revenue for the new TSO (OPEX, CAPEX, …)
2. Set the volumes and the capacities
3. Applying the tariff methodology (Entry/exit split, volumetric fee, …)
InterTSO compensation mechanism

The HU access and tariff model means:

- \[ \text{capacity fee}_{\text{point type}} = \frac{\text{Allowed Rev}_{\text{TSO1}} + \text{Allowed Rev}_{\text{TSO2}}}{\text{capacity}_{\text{TSO1}} + \text{capacity}_{\text{TSO2}}} \]

- \[ \text{volumetric fee} = \frac{\text{Allowed Rev}_{\text{TSO1}} + \text{Allowed Rev}_{\text{TSO2}}}{\text{volume}_{\text{TSO1}} + \text{volume}_{\text{TSO2}}} \]

In the case of using both TSOs’ system the shipper shall pay:

- Entry fee for TSO1
- Exit fee for TSO2
- And volumetric fee for TSO2

Due to the fees cover both TSOs allowed revenues, the revenues shall be split between the TSOs => interTSO compensation mechanism was set up to balance the TSO’s financial positions
InterTSO compensation mechanism

• **Regarding the capacity fees:**
  – The aggregated capacity revenue is divided:
    • According to the TSO’s share of the total allowed capacity revenues
  – The revenue based taxes are taken into account as a modifier

• **Regarding the volumetric fees:**
  – The aggregated revenue after the volume measured at the connection point is divided:
    • According to the TSO’s share of the total compressor performance
InterTSO compensation mechanism

Responsibilities of the NRA:

• Define the compensation settlement

  1. Monthly settlement: before the financial year in line with the expected capacity bookings
  2. Supervision: during the financial year cross-checking the positions of the TSOs
     • If there is a significant gap, there is an opportunity to modify the monthly compensation payments and apply one time correction
  3. Yearly settlement: After the closed financial year calculation of the real positions

• Regular data collection from the TSOs.

The settlements are taken place between the licensees.
Outlook - TAR NC

• Article 10.
• Applying the same RPM => need for setting a compensation mechanism
• The applied tariff methodology can be differ, but it is needed to be analyzed and underpinned the results
  – ie. Evade cross-subsidy
• Need for consultation
## Annex 1: Effect of the new regulatory period – change of the calculated transmission tariffs, €/MWh

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**N: -22%**

**X: -46%**

**N: -22%**

**X: -46%**

**N: -16%**

**X: -31%**
### Annex2: Numerical exercise of the interTSO compensation mechanism

#### Sold capacity > expected

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<th>Fee calculation</th>
<th>Revenue calculation</th>
<th>Compensation mechanism</th>
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<td>Expected capacity sales</td>
<td>Allow rev. / capacity</td>
<td>Sold capacity</td>
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<td>(1)</td>
<td>60 000</td>
<td>1 000</td>
<td>60</td>
<td>1 150</td>
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<td>TSO1</td>
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<td>TSO2</td>
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<tr>
<td>sum</td>
<td>66 000</td>
<td>1 090</td>
<td><strong>61</strong></td>
<td>1 200</td>
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</table>

\[
\text{Compensation settlement} = \text{Capcacy revenue}_{TSO1} - \frac{\text{Allowed rev.}_{TSO1}}{\sum \text{Allowed rev.}} \times \sum \text{Capcacy revenue}
\]

#### Sold capacity < expected

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