The lessons of the SK–HU Gas Interconnector project

Borbála Tóth and Ákos Beöthy
19. 05. 2017
Original goals of the pipeline

Market integration:
• Better interconnection with the Western markets (if HAG is congested)

Enhance competition on the wholesale level:
• To reduce the market power of the dominant supplier (esp. during the renegotiation of the long term gas supply contract)

Security of supply:
• To allow the supply of gas from the Western direction in case of supply interruption on the UA route

Expectation: Gas price on the Hungarian market will converge with the Western European hub prices

This criteria is met by definition
REKK modelling results before the pipeline was built (2012)

- In the modelling HU wholesale gas prices dropped
- Most of the time the pipeline was highly utilized
- There was only spot based flow on the pipeline

Important previous assumptions:
- Tariff 2 €/MWh
- Price difference between Hungarian IIC price and TTF was higher than the tariff
- HU demand was never below 10 bcm/year
Fact: there is no flow on the pipeline
Hypothesis:

1. Market circumstances changed: demand, prices
   - Broader geopolitical context: strategic behaviour of Russian supplier: LTC price…

2. Regulated tariff on the interconnector is not competitive

3. TPA rules are harmed?
1. HYPOTHESIS

Market circumstances changed
HU demand dropped

Hungarian gas consumption (mcm)

- EU consumption dropped by 10%
- Falling oil prices from June 2014
- Competition on wholesale level increased − price difference between EU countries decreased

More than 20% drop
European gas prices converged

- In the over-supplied buyers’ market, LTC holders throughout Europe renegotiated the terms of their contracts.
- The Hungarian LTC is one of the successful renegotiations:
  - From October 2013, the oil-indexed price component of the Hungarian LTC was discounted by 20%.
  - As a result of an Orbán–Putin meeting in early 2015, the timeframe for the uptake of not consumed TOP volumes was extended and price corridors were introduced.
General drop in EU prices

- Oil price drop had huge influence on gas prices from summer 2014
- Pipeline and LNG competition
- Price difference between West and East has significantly narrowed

Source: EU Quarterly 2012Q4 and 2016Q1
Regulated tariff on the interconnector is not competitive

2. HYPOTHESIS
Tariff (exit+entry)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>exit</td>
<td>entry</td>
<td>sum</td>
<td>exit</td>
</tr>
<tr>
<td>AT-HU</td>
<td>0.39</td>
<td>2.02</td>
<td>2.41</td>
<td>0.39</td>
</tr>
<tr>
<td>SK-HU</td>
<td></td>
<td></td>
<td></td>
<td>0.90</td>
</tr>
<tr>
<td>UA-HU</td>
<td>2.02</td>
<td>2.02</td>
<td>2.16</td>
<td>1.39</td>
</tr>
<tr>
<td>AT-SK</td>
<td>0.32</td>
<td>0.39</td>
<td>0.70</td>
<td>0.32</td>
</tr>
</tbody>
</table>

(LF: 56.2%)
**SK–HU and AT–HU compete**

<table>
<thead>
<tr>
<th>1.</th>
<th>DE–CZ: 0,78</th>
<th>CZ–SK: 1,38</th>
<th>SK–HU: 2,15</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>SK: 0,63</td>
<td>SK–HU: 2,15</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>HU: 1,64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.</th>
<th>20 €/MWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Baumgarten: 22 €/MWh</td>
</tr>
<tr>
<td>3.</td>
<td>Hungarian virtual trading point: 23,64 €/MWh</td>
</tr>
</tbody>
</table>
Entry–exit tariff benchmark

REKK—modelling a uniform, 0.13 EUR/MWh regional entry–exit tariff has an impact on pipeline flows

Tariff is not the main reason for underutilisation, with close top 0 tariff the utilization is still below 20%
3. HYPOTHESIS

Are TPA rules harmed?
Regulatory aspects

- Initial problems with implementing 3rd package rules
  - Unsuccessful open season procedures in 2009 and 2010 – Hungarian TSO FGSZ withdraws from the project, state-owned MVM is appointed to implement it
  - 2013: E.ON–MVM transaction
    - MGT was transferred to direct state ownership, overviewed by the Ministry of Internal Affairs
  - Cannot allocate capacity until EU approval of ownership unbundling
  - Open season in December 2014 – no need for TSO licence
    - Pipeline was constructed
    - Tariff was set
    - Regulation 984/2013/EU prefers auction
    - Open season was withdrawn

- In 2015 Q1, SK–UA capacities were offered
  - 40 mcm/day was booked until 2019, undercutting the potential SK–HU–UA route
Regulatory aspects

- June 2015: TSO permit
  - Capacity auction for yearly firm capacity (only for one year)
  - Monthly capacities were offered on the MGT platform as unbundled products
  - From December 2015: booking on FGSZ Regional Booking Platform as bundled products

- MGT–FGSZ no additional tariff

- No problems with access to the pipeline
The SK–HU project in light of the new CAM NC

- CAM NC on incremental capacity:
  - Assessing market demand (non-binding & binding phase) → economic test
  - ‘Open Season’ procedures are not defined in the Regulation, but Article 30 deals with alternative allocation mechanisms
    - The favored allocation method is the ascending clock algorithm through the integrated offer of existing and new capacity
    - An alternative allocation mechanism can only be considered if it involves more than two entry-exit systems and bids are requested along several interconnection points during the allocation procedure

- Conclusions
  - Obtaining binding commitments from network users before deciding on a project is mandatory – did not happen
  - Binding commitments have to be secured through the CAM auction algorithm – did not happen
  - Economic test based on binding commitments have to be positive – there was no economic test
The SK–HU project in light of the new CAM NC

- The economic test
  - As described in CAM NC, the economic test assesses the commercial viability of the project in the first place (NPV of TSO costs and TSO revenues)
  - The $f$–factor allows for taking into account positive externalities
    - What are positive externalities? – no definition in CAM NC
      Examples cited in ACER Guidance: improvement of competition, improvement of security of supply, and investment useful for other points in the network and not just the one where it creates capacity
    - How are they taken into account? – no methodology in CAM NC

- A possible solution
  - For PCIs, an economic test pursuant to CAM NC should be positive if and only if the cost–benefit analysis pursuant to Regulation 347/2013 is positive
  - A cost–benefit analysis measures social welfare, which includes consumer surplus, producer surplus, trader profit, SSO profit, and TSO profit as well
  - Calculating the $f$–factor:
    \[
    \text{NPV of binding commitments} / \text{NPV of total net social benefit}; \text{ i.e. binding commitments should be required to cover the cost of the project (NPV of CAPEX+OPEX) according to their expected share of the total benefit}
    \]
    - NPV of total net social benefit includes expected TSO revenues beyond binding commitments: $f$–factor can be lowered if more revenues are expected from short–term capacity bookings, as also allowed by CAM NC
The SK–HU project in light of the new CAM NC

- The problem of long-term bookings
  - Long-term bookings make it easier to pass an economic test pursuant to the CAM NC
  - But in the current market environment only suppliers are willing to make long-term commitments, and this might hinder competition
  - Incremental capacity projects whose main goal is to foster competition will not be backed by long-term bookings
  - For these projects to pass an economic test, a sufficiently low f-factor is needed
  - There are at least two criteria the SK–HU project potentially meets that could have substantiated a low f-factor:
    - Focus on spot trading – setting aside more than the minimally required 10% of capacities for short term booking (the Hungarian regulator forbid any long term booking in the March 2017 auction for fear of market foreclosure)
    - Assessing the expected positive externalities with a cost–benefit analysis
Thank you for your attention!