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The lessons of the SK-HU Gas Interconnector project

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Original goals of the pipeline

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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 Wester 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 ICC price and TTF was higher than the tariff
- HU demand was never below 10 bcm/year

Fact: there is no flow on the pipeline

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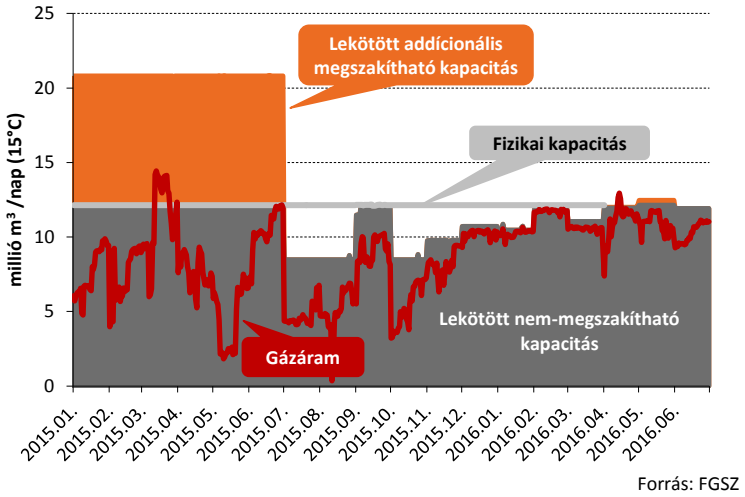
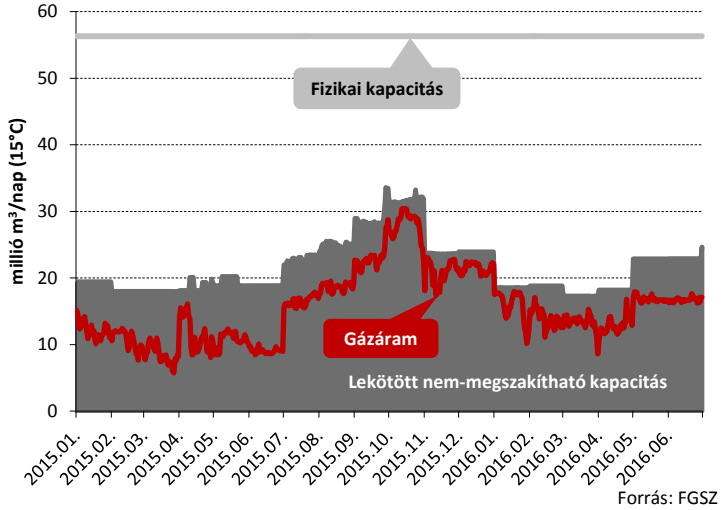
ÁHU (utilization in 2015: 63%)

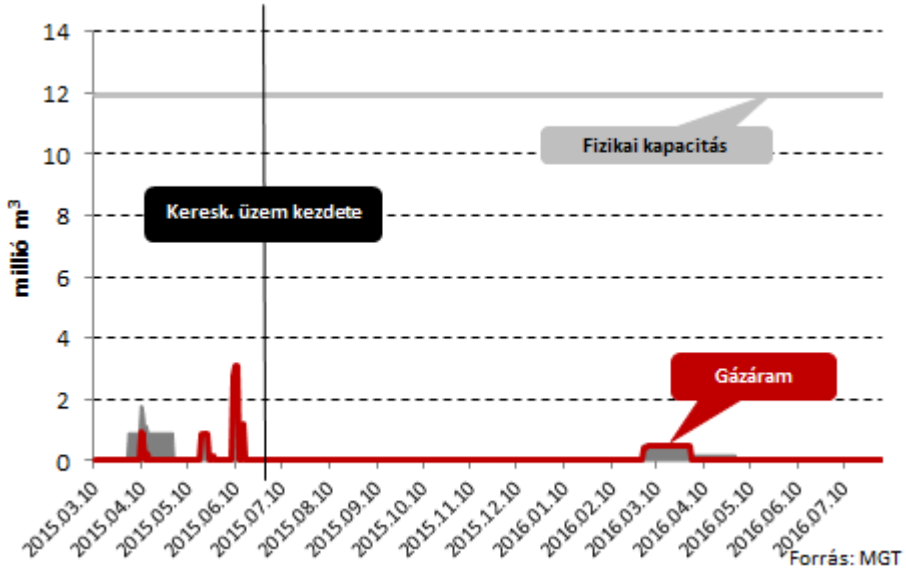


Forrás: FGSZ

UA-HU (utilization in 2015: 28%)



Forrás: FGSZ



Forrás: MGT

SK-HU (flow only March 2016
4,25% utilization)

Why?

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Hypothesis:

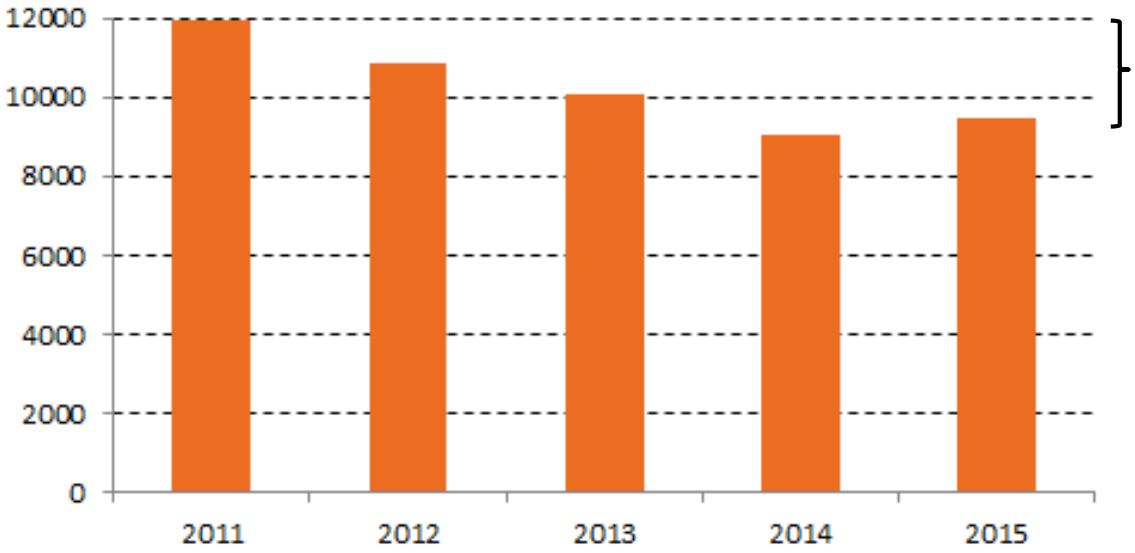
1. Market circumstances changed: demand, prices
   - Broader geopolitical context: strategic behaviour of Russian supplier: LTC price…
2. Regulated tariff on the interconnector is not competitive
3. TPA rules are harmed?

Market circumstances changed

1. HYPOTHESIS

HU demand dropped

Hungarian gas consumption (mcm)

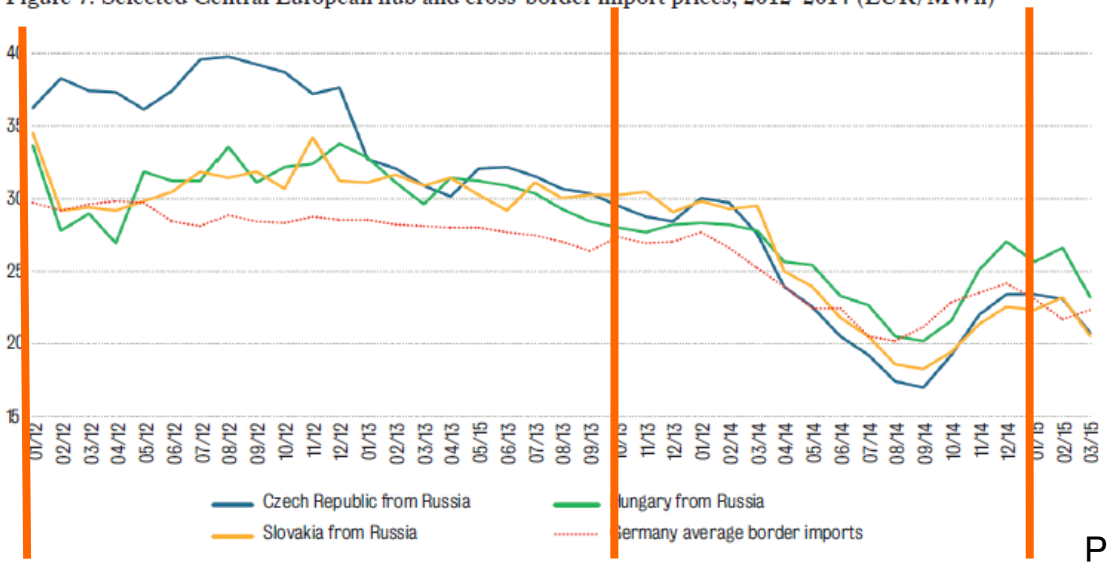


More than 20% drop

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

European gas prices converged

Figure 7: Selected Central European hub and cross-border import prices, 2012–2014 (EUR/MWh)



Source: ACER 2015

MGT established

LTC renegotiation–20% discount on oil indexed part

Planned start of operation

- In the over-supplied buyers' market, LTC holders throughout Europe renegotiated the 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

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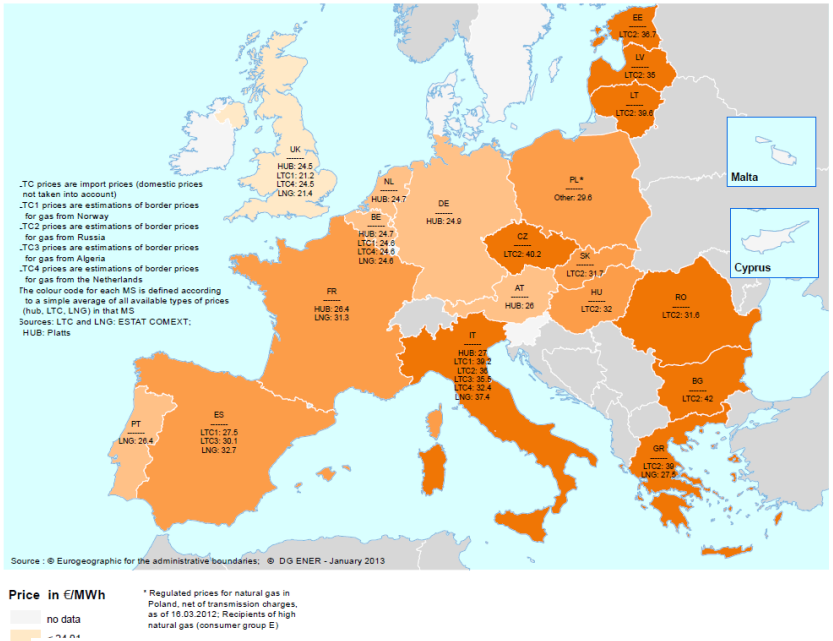
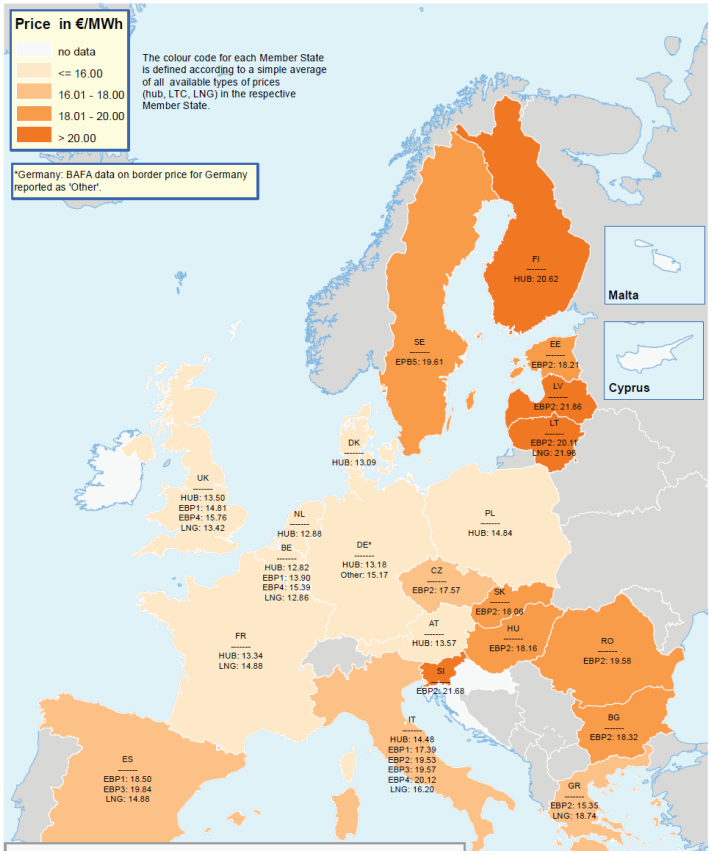
- Oil price drop had huge influence on gas prices from summer 2014
- Pipeline and LNG competition
- Price difference between West and East has significantly narrowed

FIGURE 17 – COMPARISON OF EU WHOLESALE GAS PRICES, THIRD QUARTER OF 2012



DE: 24.9 €/MWh, HU: 32 €/MWh

MAP 2 - COMPARISON OF EU WHOLESALE GAS PRICES IN THE FIRST QUARTER OF 2016



DE: 15.17 €/MWh, HU: 18.16 €/MWh

Source: EU Quarterly 2012Q4 and 2016Q1

Regulated tariff on the interconnector is not competitive

2. HYPOTHESIS

Tariff (exit+entry)

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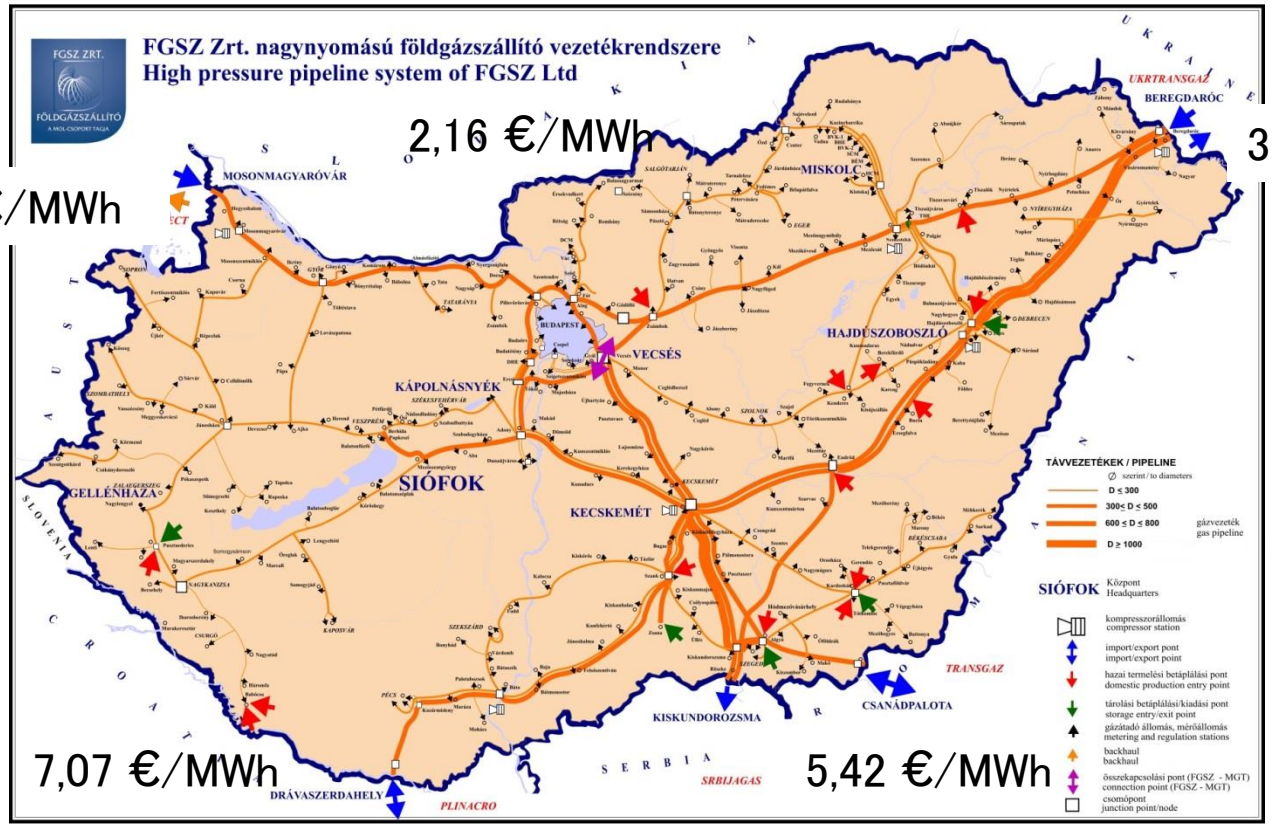
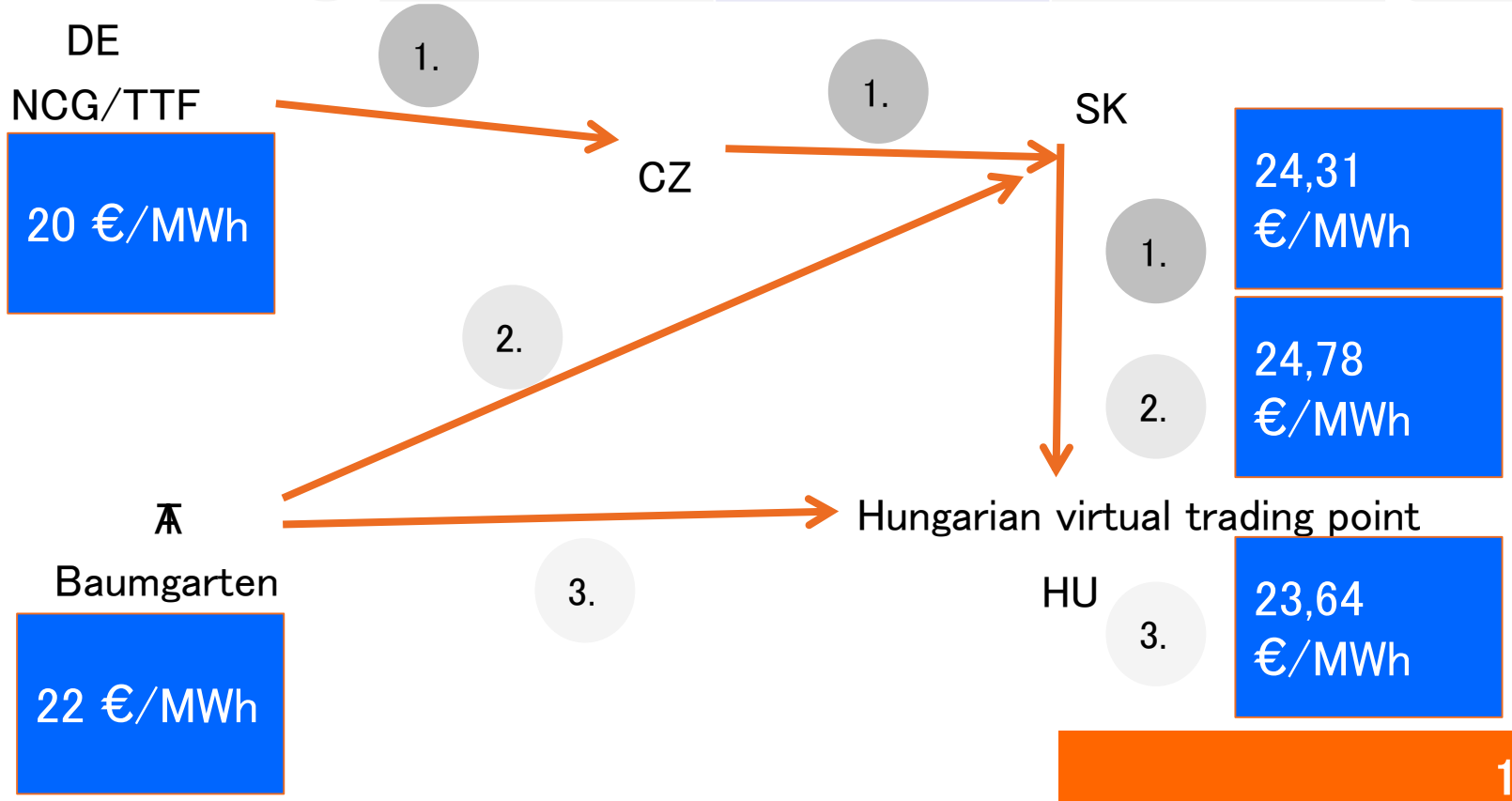
2015



(LF: 56,2%)	2013			2014			2015			2016		
	exit	entry	**sum**	exit	entry	**sum**	exit	entry	**sum**	exit	entry	**sum**
AT-HU	0,39	2,02	**2,41**	0,39	1,39	**1,78**	0,39	1,25	**1,64**	0,39	1,25	**1,64**
SK-HU							0,90	1,25	**2,16**	0,90	1,25	**2,16**
UA-HU		2,02	**2,02**	2,16	1,39	**3,55**	2,55	1,25	**3,80**	6,14	1,25	**7,40**
AT-SK	0,32	0,39	**0,70**	0,32	0,39	**0,71**	0,32	0,39	**0,71**	0,32	0,40	**0,71**

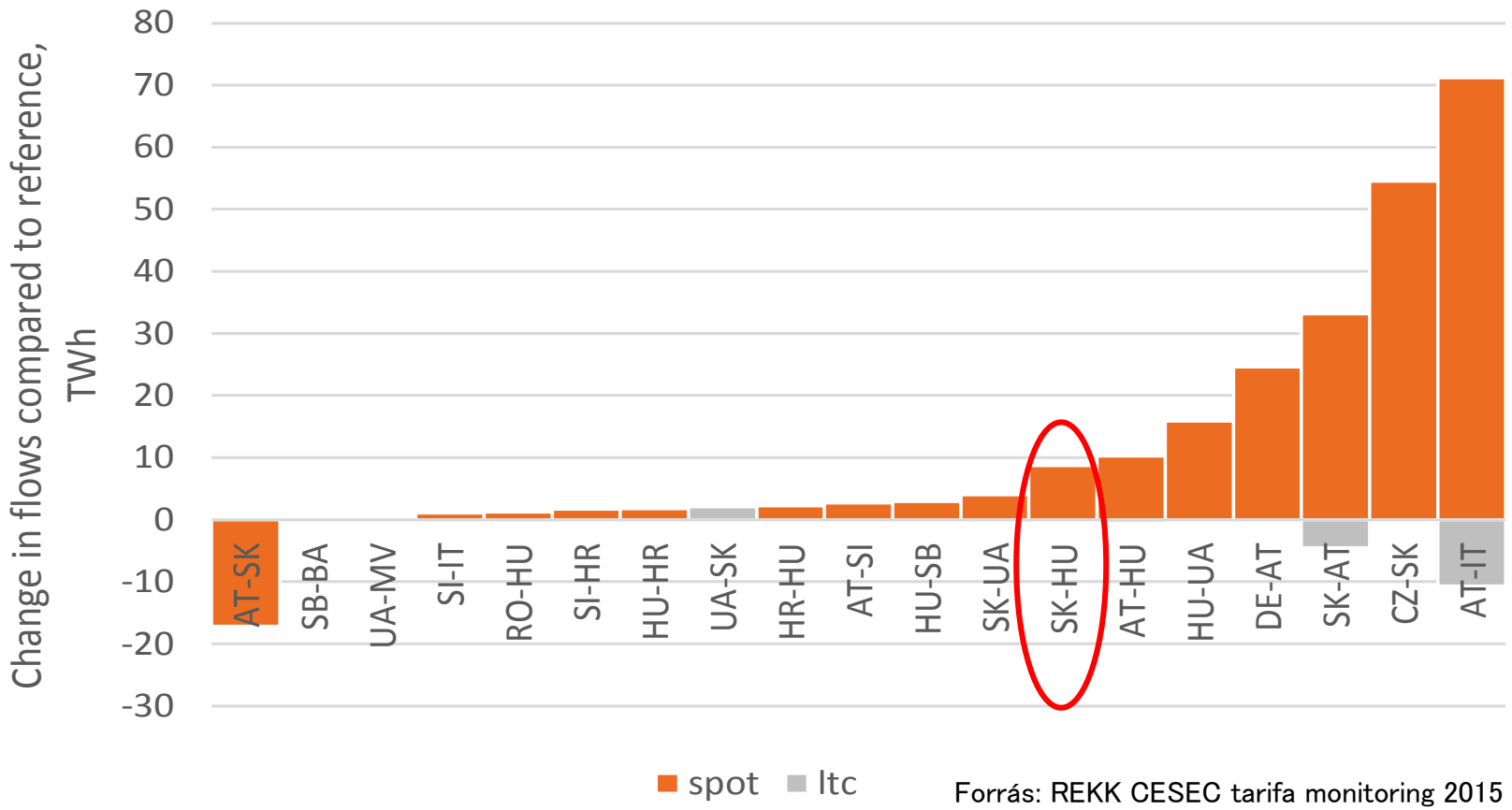
SK-HU and AT-HU compete

1.	DE-CZ: 0,78	CZ-SK: 1,38	SK-HU: 2,15	4,31
2.	ÆSK: 0,63	SK-HU: 2,15		2,78
3.	ÆHU: 1,64			1,64



Entry-exit tariff benchmark

REKK-modelling a uniform, 0,13 EUR/MWh regional entry-exit tariff has an impact on pipeline flows



Forrás: REKK CESEC tarifa monitoring 2015

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

Are TPA rules harmed?

3. HYPOTHESIS

Regulatory aspects

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- 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 transfered 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 capacites were offered
  - 40 mcm/day was booked until 2019, undercutting the potential SK-HU-UA route

Regulatory aspects

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- 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

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- 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

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- 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:

    NPV of binding commitments / NPV of total net social benefit; 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

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- 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 sufficiantly 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

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Thank you for your attention!