REKK Regional Centre for Energy Policy Research

Where are we with developing entry-exit tariffs in the region that stimulate cross-border trade

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Gas Forum
20 September, 2017
Ljubljana

Outline

REKK Regional Centre for Energy Policy Research

- Transmission tariff benchmarking methodology
- Tariff outlook in the CESEC region
- Regional outlook of EU tariffs
- Developments - 2015-2017
- Summary of findings

Context

CESEC Tariff benchmarking study May 2016

CESEC Action Plan 2.0

Sept 2016

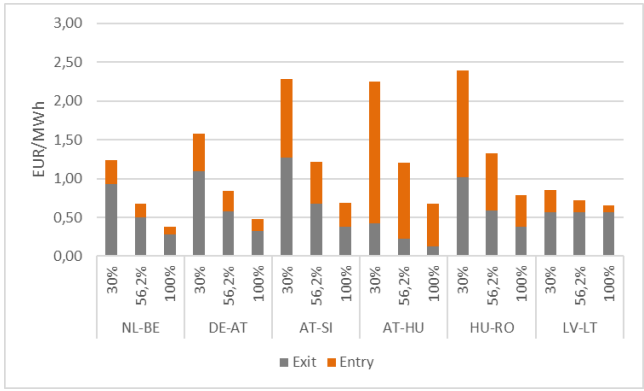
New tariffs published in the region in 2017

„A working group shall be set up consisting of NRAs and TSOs and relevant stakeholder organizations to further identify cross-border trade- and competition-distorting aspects of current and planned tariffs in the CESEC region."

Benchmarking methodology

Measurement units	EUR/kWh/h/year BGN/1000m3/month, EUR/ths.nm3x100 km etc.
Date of tariff changes	Jan, Febr, Apr, Okt
Capacity and Commodity elements	Both on exit; both on entry; only capacity type; only commodity type, etc.

EUR/MWh



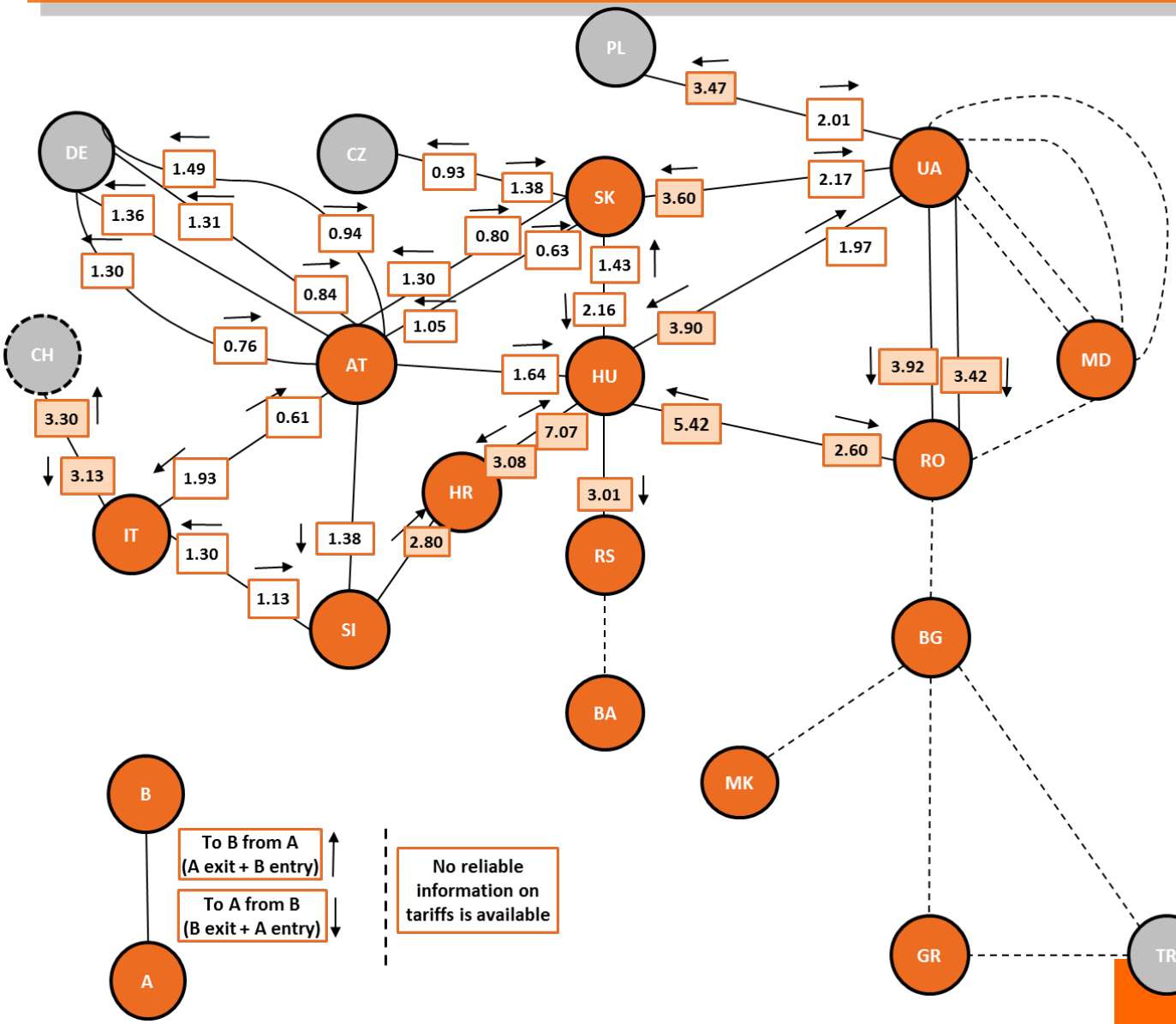
The duration of transmission contracts is one year

Contracts refer to firm transportation services

The booked maximum hourly capacity is 10 000 kWh(/h/y)

Applied booked capacity usage ratio is 56.2%

Tariff outlook - 2016

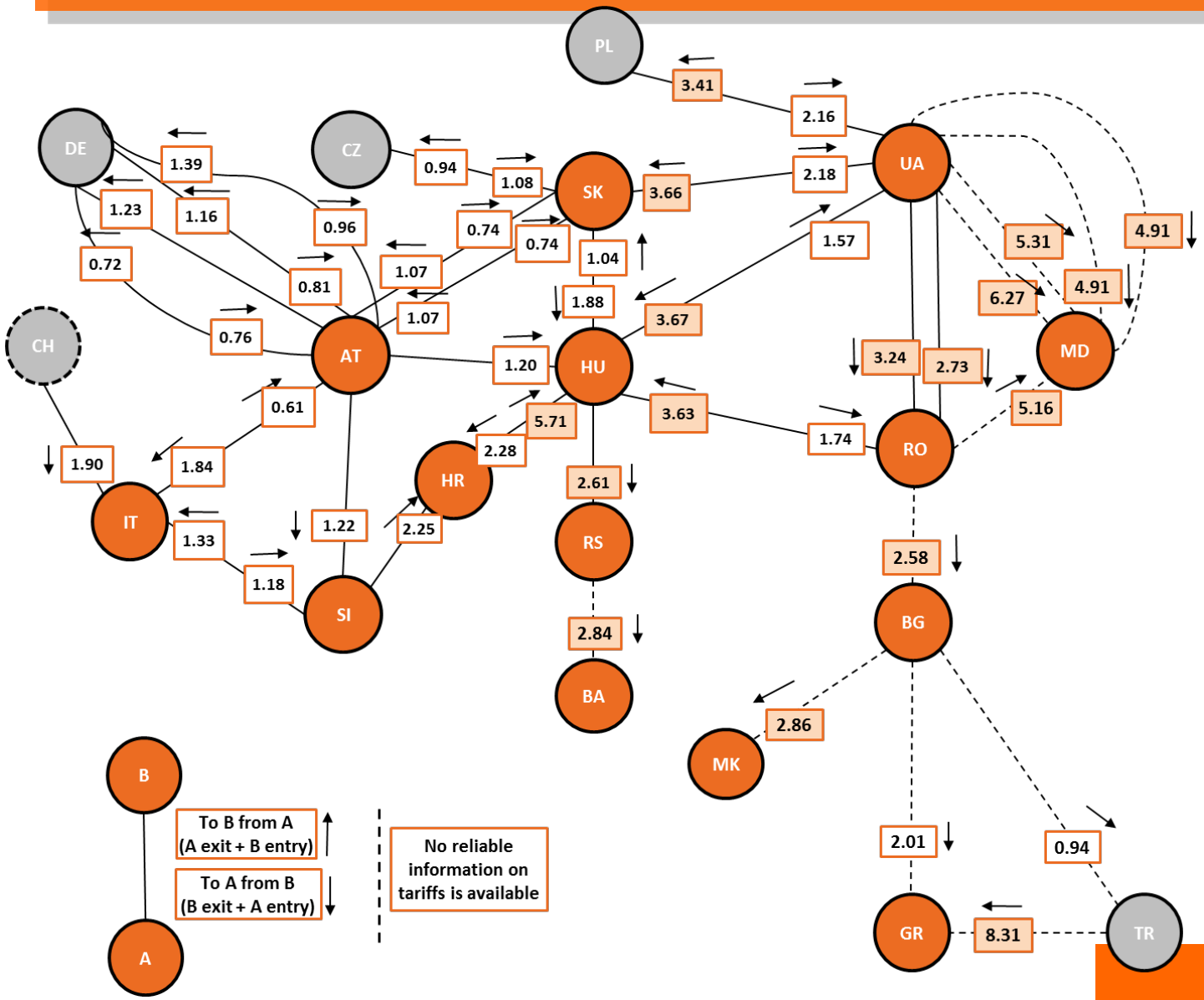


KEY MESSAGES

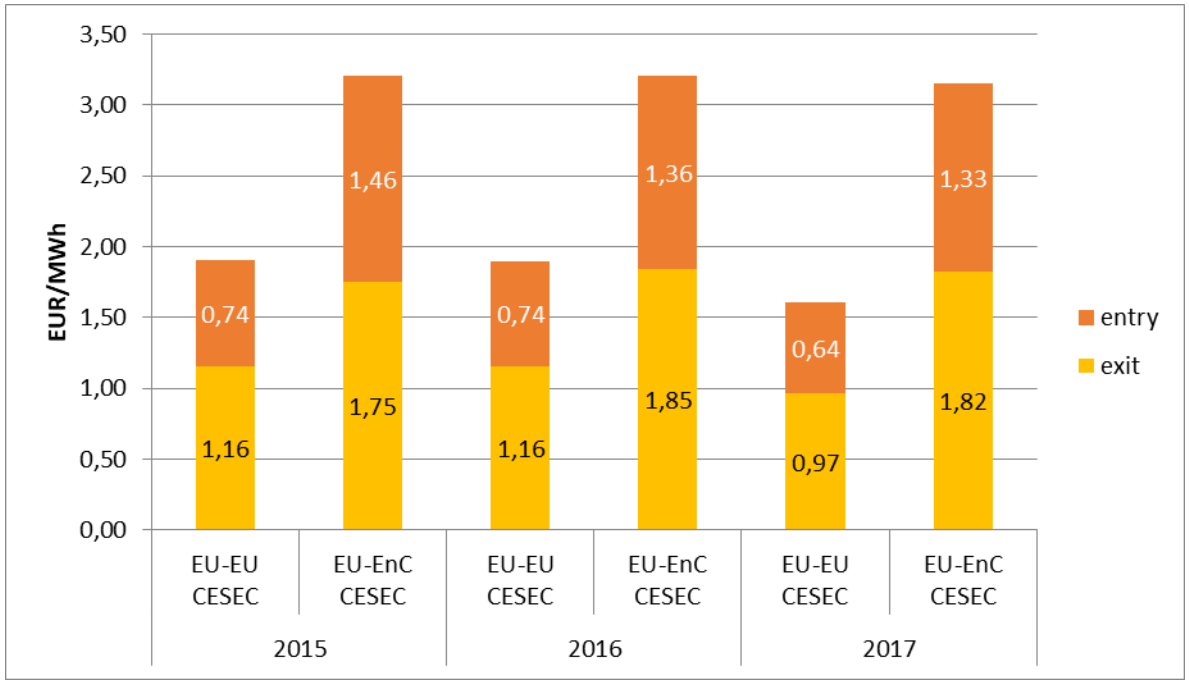
1. market distortions
2. coordinated tariff reforms to improve regional welfare
3. key IPs bringing spot gas to the region are critical
4. win-win tariff changes

Source: REKK, CESEC Tariff paper 2016

Tariff outlook - 2017



EU-EU and EU-EnC borders in the CESEC region



Average exit + entry in EU28 EU-EU borders is even lower than EU-EU CESEC tariffs

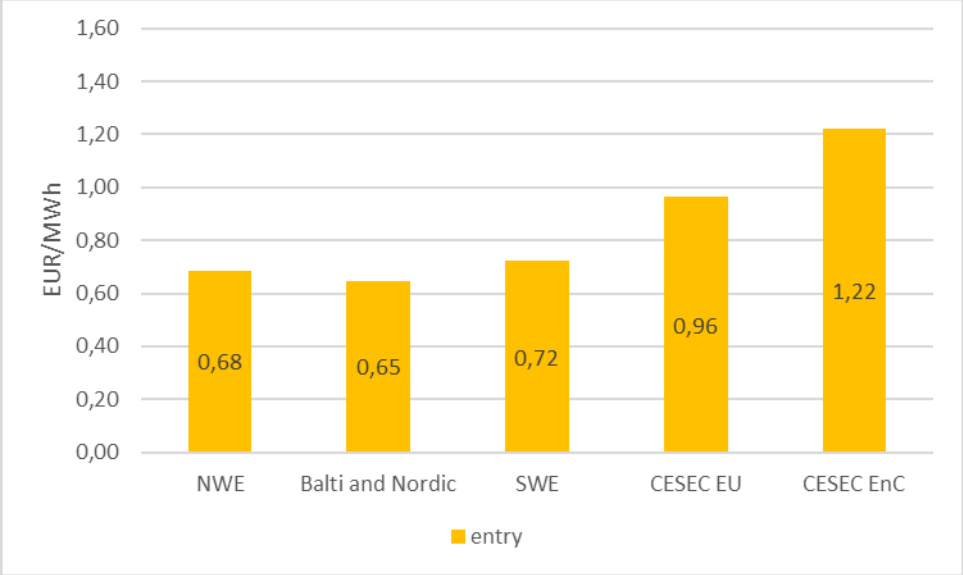
0.79 + 0.69 = 1.48
EUR/MWh

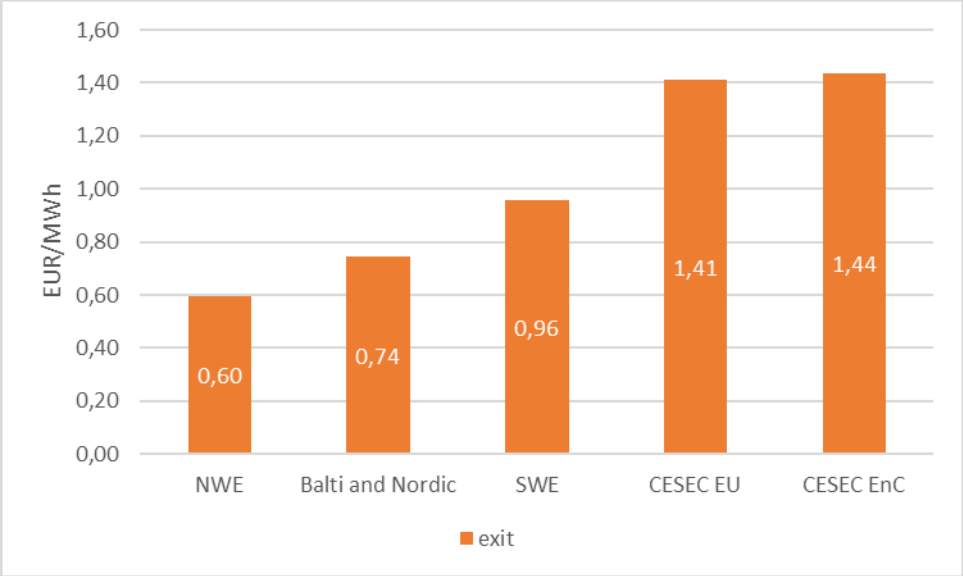
IP tariffs on EU-EU borders (within CESEC region) are significantly lower than on EU-EnC CP border points

Reduction on EU-EU IPs – in EnC on a much smaller scale

EnC in tariff terms seems to be a Third country to the EU

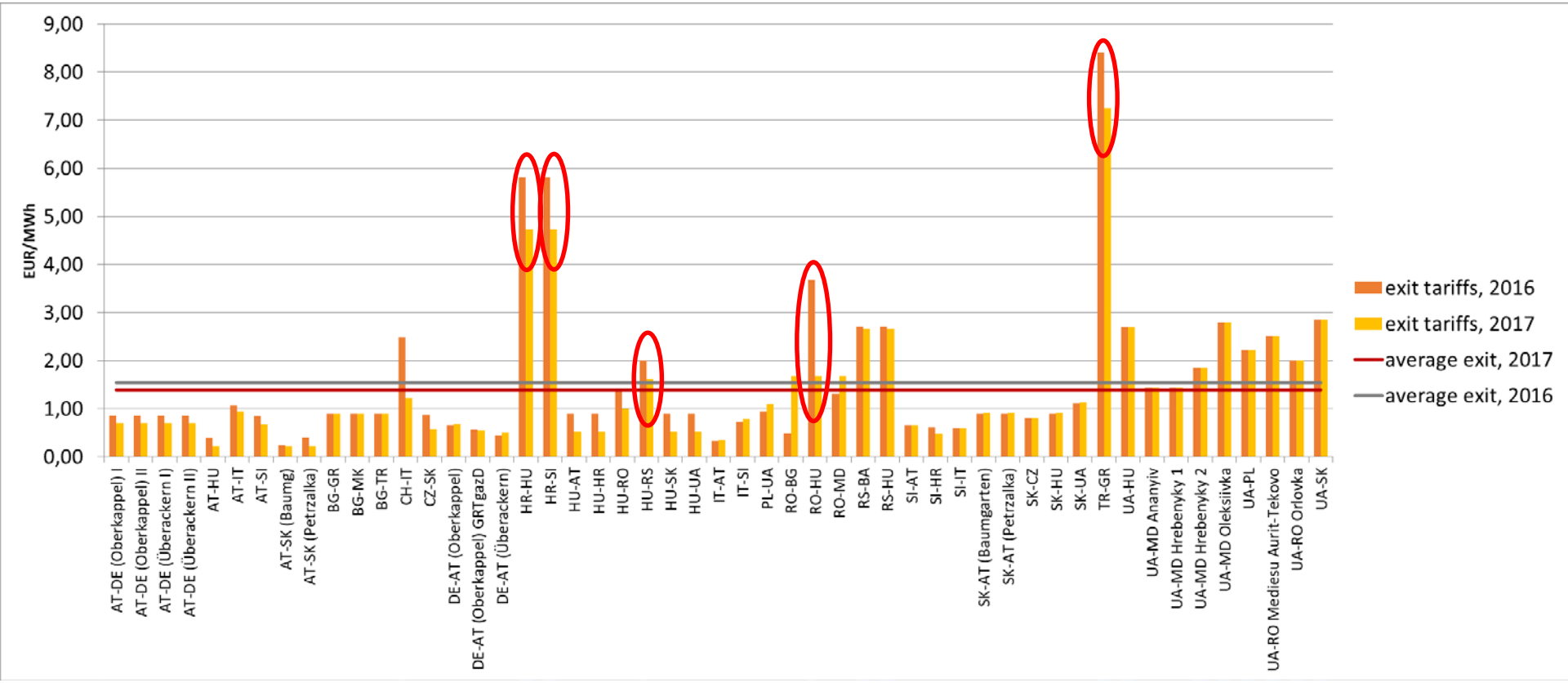
Regional benchmark in a broader sence





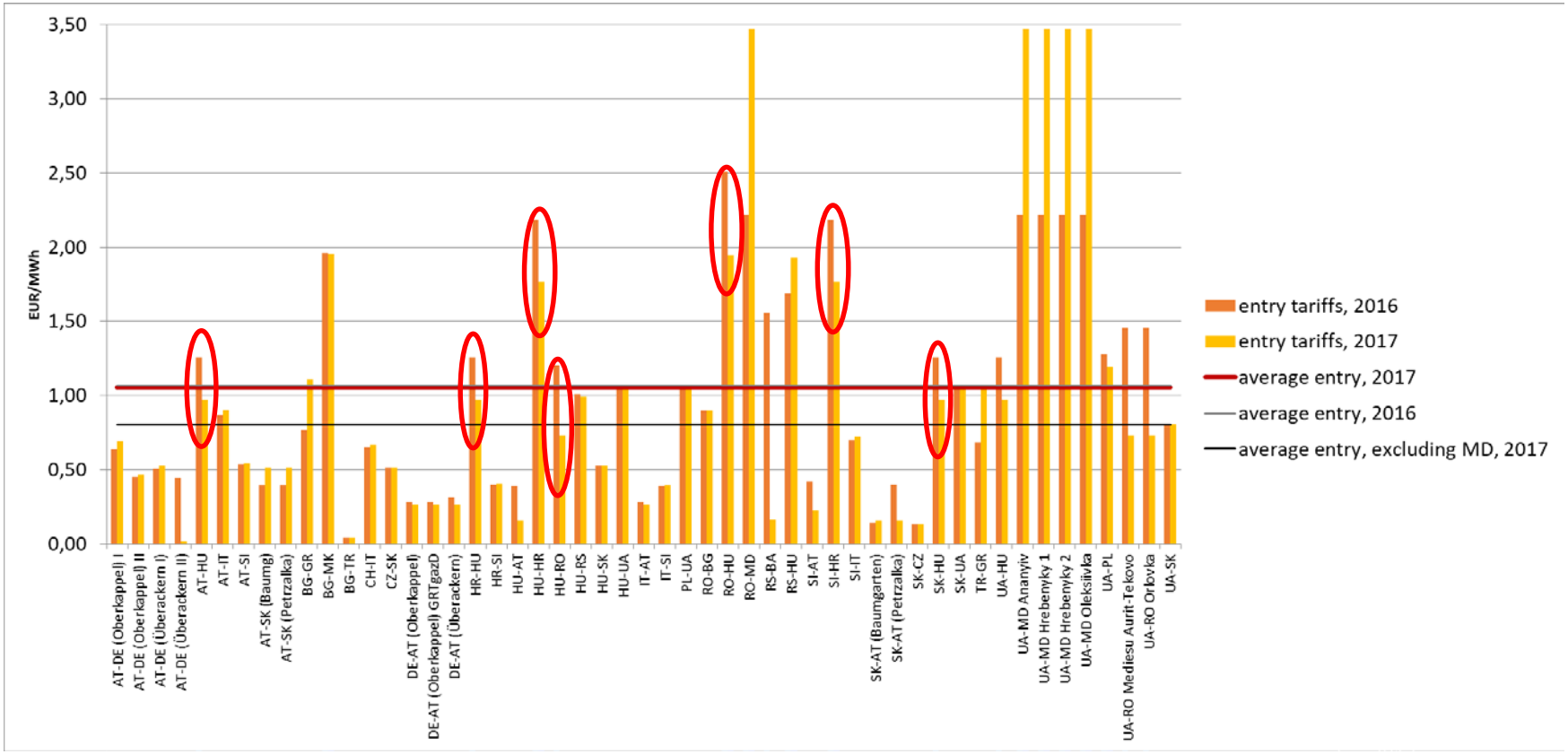
- There are significant regional differences even inside the EU
- EU countries in the CESEC region have the highest tariffs in the whole EU
- CESEC EnC tariffs are even higher
- On average exit tariffs are higher than entry tariffs (except in the NWE region)
- Transmission tariffs are the lowest in countries with the most developed gas markets

2016 vs. 2017 exit tariffs



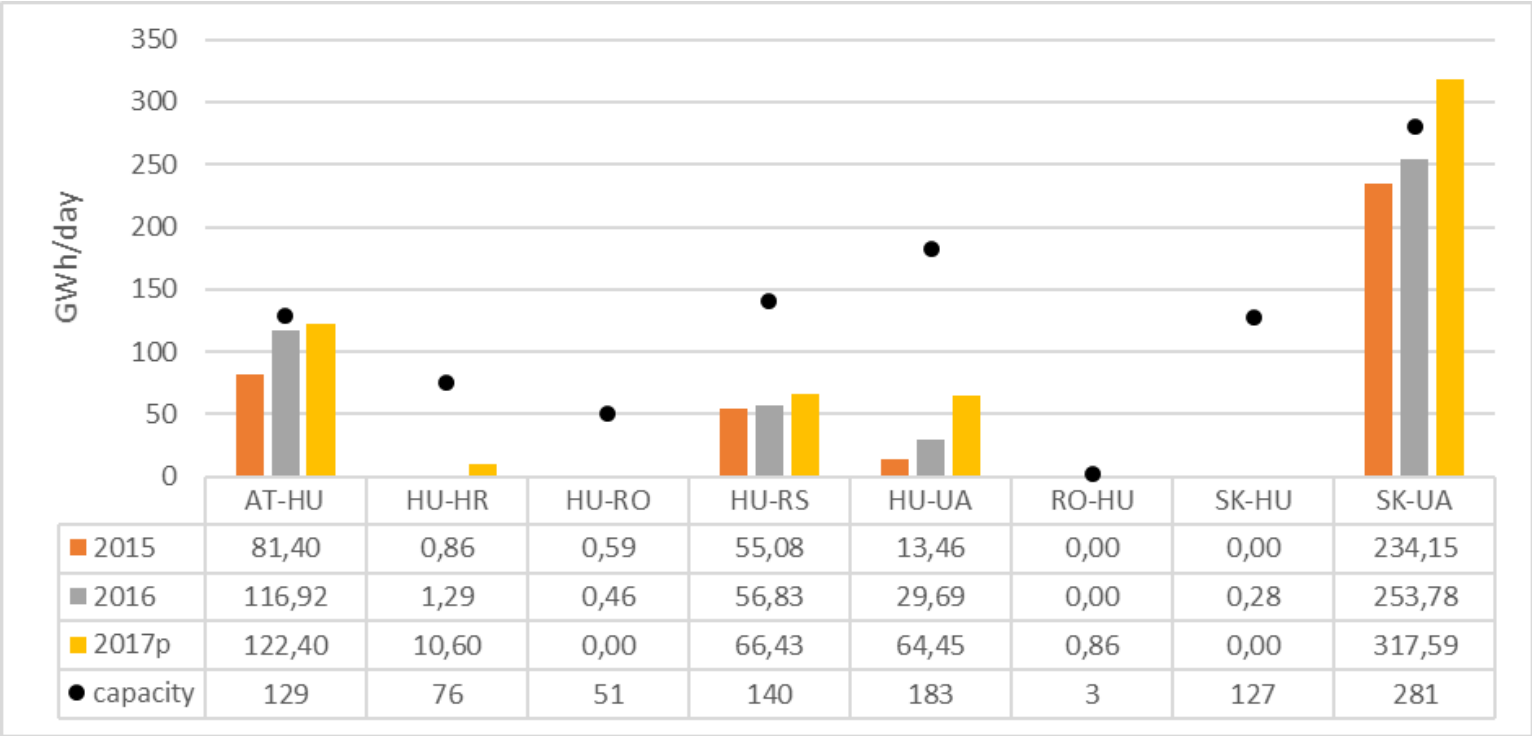
We see significant decrease in the outlier tariffs, including key infra: Hungarian exits (to HR, RO, RS, SK, UA), Croatian exit (to HU, SI), Romanian exit to HU.

2016 vs. 2017 entry tariffs



- We see significant decrease in the outlier tariffs, including key infra: Hungarian entries (from AT, HR, RO, SK), Croatian entries (from HU, SI), Romanian entries from HU and Austrian entry (from HU).
- Coordinated tariff decrease in the region implemented!

Cross border flows on chosed IPs 2015-2017



	AT-HU	HU-HR	HU-RO	HU-RS	HU-UA	RO-HU	SK-HU	SK-UA
2015	81,40	0,86	0,59	55,08	13,46	0,00	0,00	234,15
2016	116,92	1,29	0,46	56,83	29,69	0,00	0,28	253,78
2017p	122,40	10,60	0,00	66,43	64,45	0,86	0,00	317,59
capacity	129	76	51	140	183	3	127	281

	AT-HU	HU-HR	HU-RO	HU-RS	HU-UA	RO-HU	SK-HU	SK-UA
2015	1,64	3,11	2,60	3,06	-	5,42	2,16	-
2016	1,64	3,08	2,60	3,01	1,97	5,42	2,16	2,17
2017	1,20	2,28	1,74	2,61	1,57	3,63	1,88	2,18

Cross border tariffs, exit + entry, €/MWh

Increase in utilisation – not only the effect of tariff changes, flow also increased when tariffs remained the same.

Summary

- Transmission tariff decreased in the last two years on most of the analysed IPs
- Tariffs on identified key infra (AT-HU, HU-RS, SK-HU, HU-HR) decreased significantly, with around 0,5 €/MWh on average
- However EnC is still a „3rd country" for EU members: EU-EU border tariffs are much lower than EU-EnC tariffs
- Yearly figures will help to assess tariff decrease impacts
  - Until august 2017 utilisation increased mostly on the key IPs – however it is not evident how much of this was an effect of tariff decrease

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Thank you for your attention

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Transmission Tariff calculation methodology I.

Benchmarking methodology

In order to make baseline comparisons, transmission fees are estimated as a standardized transportation service for each relevant cross-border point and expressed in a common measurement unit (€/MWh).

The assumed standard transportation service has the following characteristics:

- The duration of transmission contracts is one year
- Contracts refer to firm transportation services
- The booked maximum hourly capacity is 10 000 kWh (/h/y)
- Applied booked capacity usage ratio is 56.2% [1]
- Tariffs are expressed in €/MWh

[1] calculated as: (Average flow)/(Average booked capacity). Average booked capacity utilization in Europe is reported in the Acer Market Monitoring Report 2015, pp. 251-252.

Transmission Tariff calculation methodology II.

- Using our assumed capacity reservation level of 10 000 kWh/h for the yearly firm transmission service contract, we calculate the overall transportation fee (in €) that would be incurred by a shipper at each interconnection point (IP), making all the necessary conversions regarding gas reference conditions and currency units.
- Once we have arrived at the total fee corresponding to the standardized service, tariffs can be determined on a per MWh basis (€/MWh), dividing total payments by the yearly transported volume (using the booked capacity usage ratio (56.2%)). The fee consists of the relevant exit plus entry fees due at the two sides of the border (including the commodity fee at the relevant point). [2]

- From 2017 onwards domestic exit points and production entry points are included in the model. Tariffs are calculated with the same methodology as in the case of IPs.

- [2] Where tariffs are set on an auction, reference price is included in the model, model calculates auction revenues