“Regional Gas Market Integration Italy-Austria“

Prague

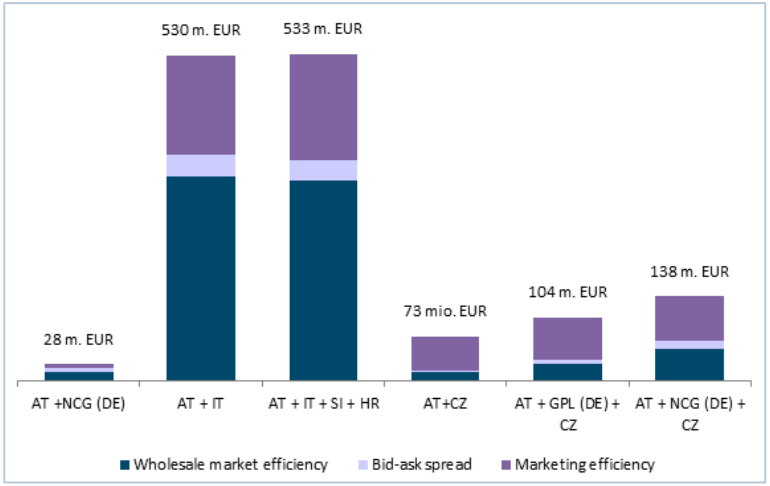
GRI SSE

27.11.2019

E-Control

Starting point: Key results of a „market integration study" commissioned by E-Control

Simplified monetary assessment*



Metrics-based assessment*

Status Quo

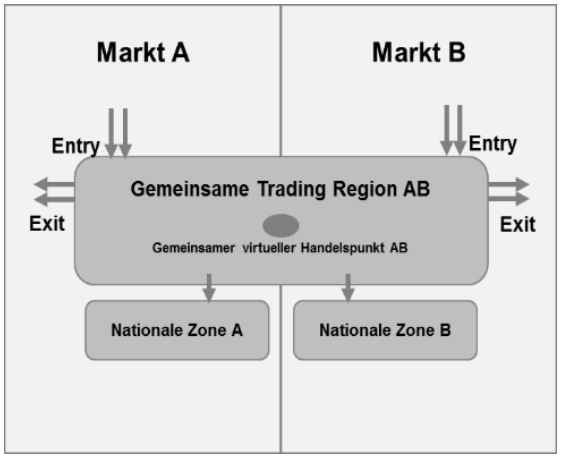
Scenarios incl. IT

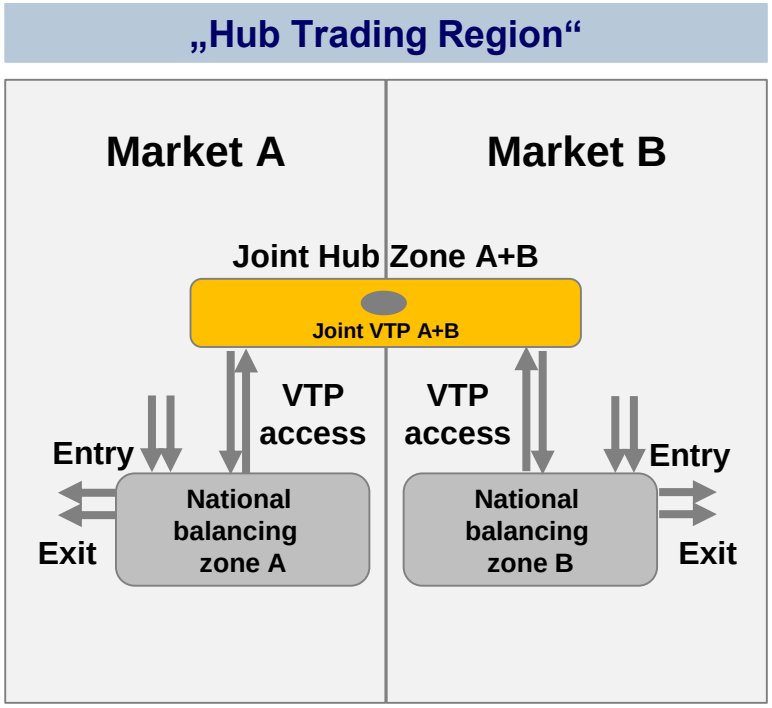
		Quantitative indicators						
	Threshold	AT	AT+NCG(DE)	AT+IT	AT+IT+SI+HR	AT+CZ	AT+GPL(DE)+CZ	AT+NCG(DE)+CZ
AGTM Market Health Metrics								
Number of supply sources	≥ 3	100%	100%	100%	100%	100%	100%	100%
HHI	≤2000	36%	70%	77%	78%	32%	50%	66%
RSI	≥110% of demand	100%	89%	100%	100%	100%	100%	100%
Security of supply								
N-1	≥100%	100%	100%	100%	100%	100%	100%	100%
IRD	≤ 2000	33%	97%	93%	95%	38%	93%	76%
SDC	% of demand	78%	31%	31%	31%	62%	47%	33%
SRC	% of peak demand	131%	99%	72%	70%	98%	115%	95%
Storage								
HHI for storage	≤ 2000	90%	100%	48%	51%	100%	100%	100%
Capacity metrics								
Max. DMA (% of net dom. demand)			18%	99%	99%	13%	13%	31%
New direct sources			4	5	5	1	3	4
Individual markets TID TWh/a of freely allocable entry cap.			AT: 440 NCG: 240	AT: 188 IT: 231	AT: 188 IT: 293 SI: - HR: 19	AT: 460 CZ: 102	AT: 605 GPL: 324 CZ: 34	AT: 440 NCG: 21 CZ: 102
Individual markets TCRR % of freely allocable entry cap.			AT: 77% NCG: 29%	AT: 27% IT: 23%	AT: 27% IT: 29% SI: - HR: 70%	AT: 67% CZ: 31%	AT: 88% GPL: 44% CZ: 18%	AT: 77% NCG: 18% CZ: 31%
Aggreg. TID TWh/a of FAEC			679	419	501	562	963	563
Aggreg. TCRR % of FAEC			48%	25%	29%	55%	60%	37%

- Integrated market area IT+AT (+ potentially SI and HR) appears attractive due to:
  - Potential to create **welfare for end-users** in the integrated area
  - **Improvement of market functioning** (add to compensation of identified issues)
  - Represent a starting point for further bottom-up developments leading to a **competitive regional market**

Introduction of „Hub Trading Region“ concept

*Ideal-type **AGTM trading region model***





Fundamental characteristics:

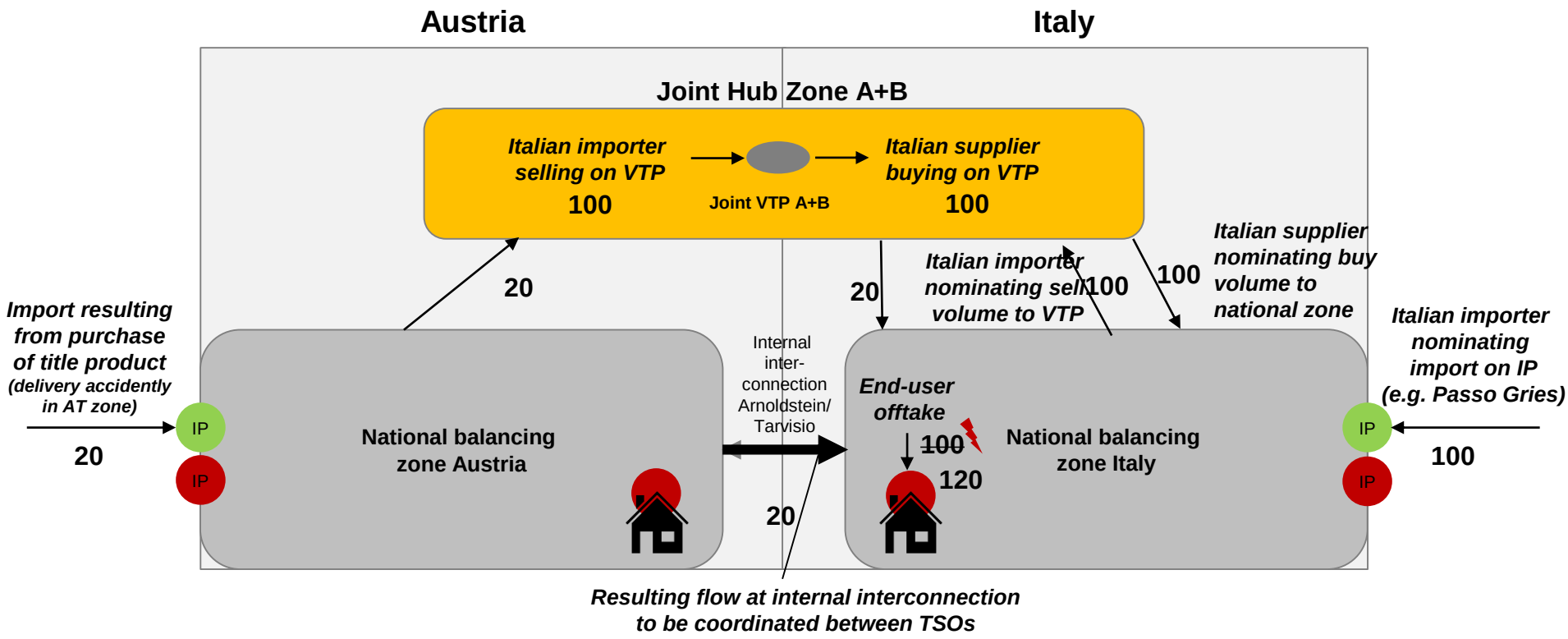
- Integrated capacity model, but **balancing widely only in remaining national zones**
- Integrated **VTP with congestion-free access** as central place of delivery for all transactions
- Reduction of **harmonization needs to a minimum**
- Comparable effect on AGTM metrics as ideal-type trading region model

Integrated entry/exit system

Integrated entry/exit system

- **Bookable points** between currently national market zones to **disappear** for network users
  - IP Tarvisio/ Arnoldstein
  - **Inter TSO compensation**
- Remaining network points form the integrated entry/exit system
- **New marginal price for commodity**

Case study: Italian Supplier is buying gas on integrated VTP (from Italian Importer)



Add-On: End-user offtake not 100 as expected but actually 120

→ **difference to be settled in commercial balancing of IT supplier**

→ **Italian system short→need to buy phsical balancing gas**

→ **If bought via title products and delivery in AT, this triggers a flow AT>IT at the internal interconnection**

IT Balancing Portfolio Italian importer

Entry	Exit
100	100

IT Balancing Portfolio Italian supplier

Entry	Exit
100	120
Imbalance>	20

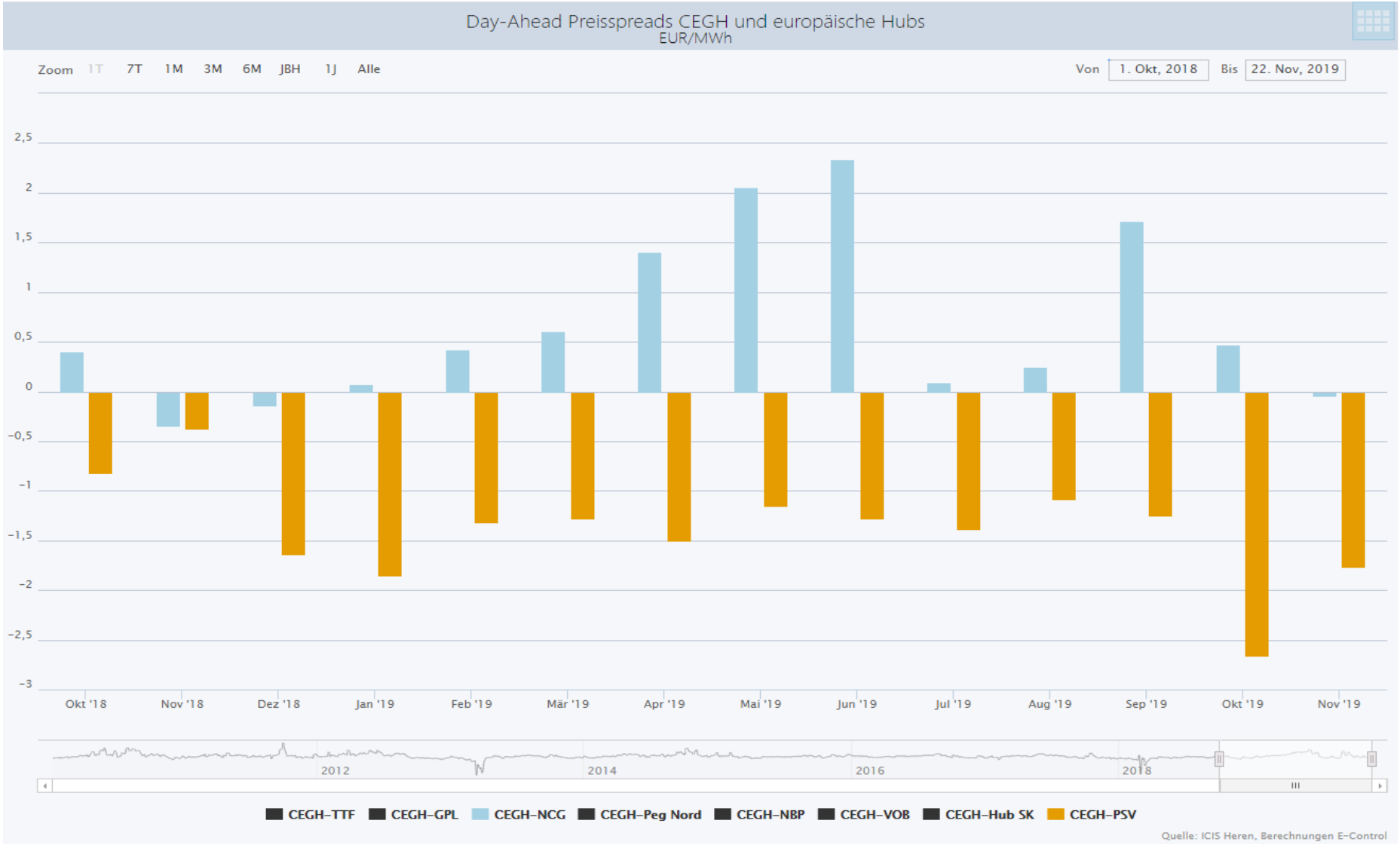
Entry point for network user Exit point for network user

Where are we now?

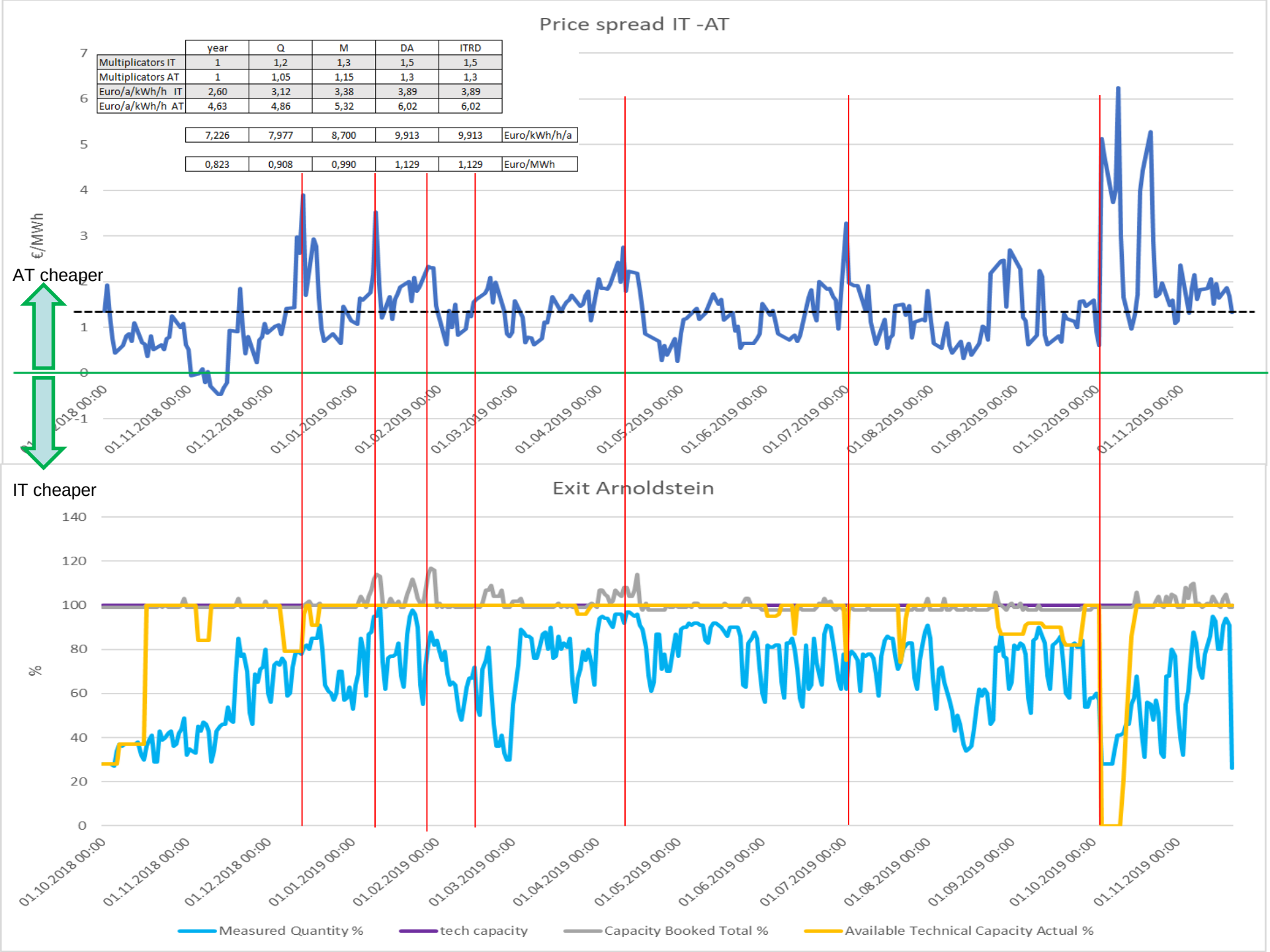
- ARERA and E-Control decided to decision to tender a study regarding the **wholesale price formation** in order to identify the **marginal route** of the two market areas separated and in the light the integration

The goal is to gain insights of the potential benefits of market integration and to better plan the next steps

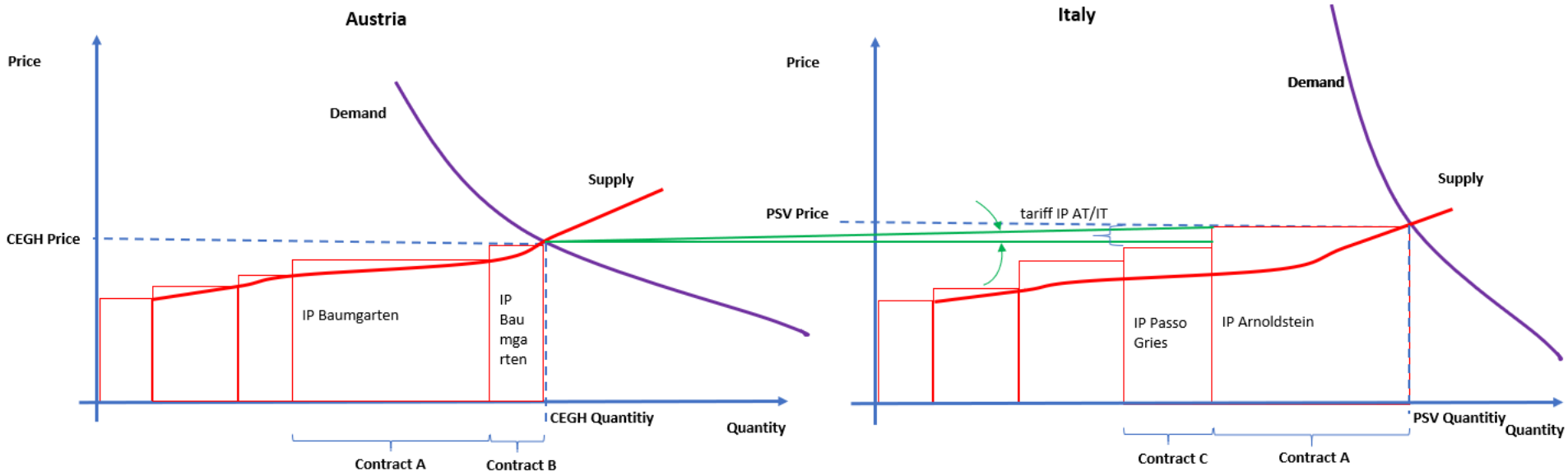
Marginal Route Analysis



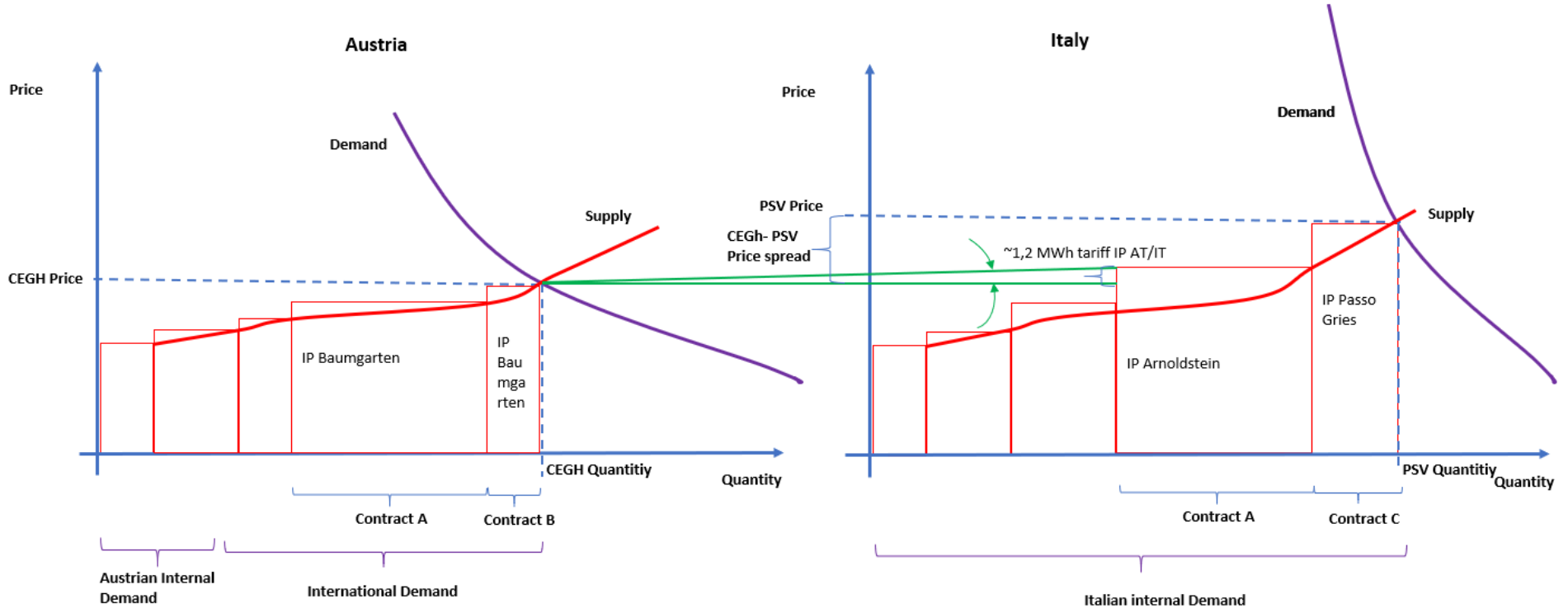
Marginal Route Analysis


Price spread IT -AT
year Q M DA ITRD
Multiplicators IT 1 1,2 1,3 1,5 1,5
Multiplicators AT 1 1,05 1,15 1,3 1,3
Euro/a/kWh/h IT 2,60 3,12 3,38 3,89 3,89
Euro/a/kWh/h AT 4,63 4,86 5,32 6,02 6,02
7,226 7,977 8,700 9,913 9,913 Euro/kWh/h/a
0,823 0,908 0,990 1,129 1,129 Euro/MWh
€/MWh
AT cheaper
IT cheaper
Exit Arnoldstein
%
Measured Quantity %
tech capacity
Capacity Booked Total %
Available Technical Capacity Actual %

Marginal Route Analysis



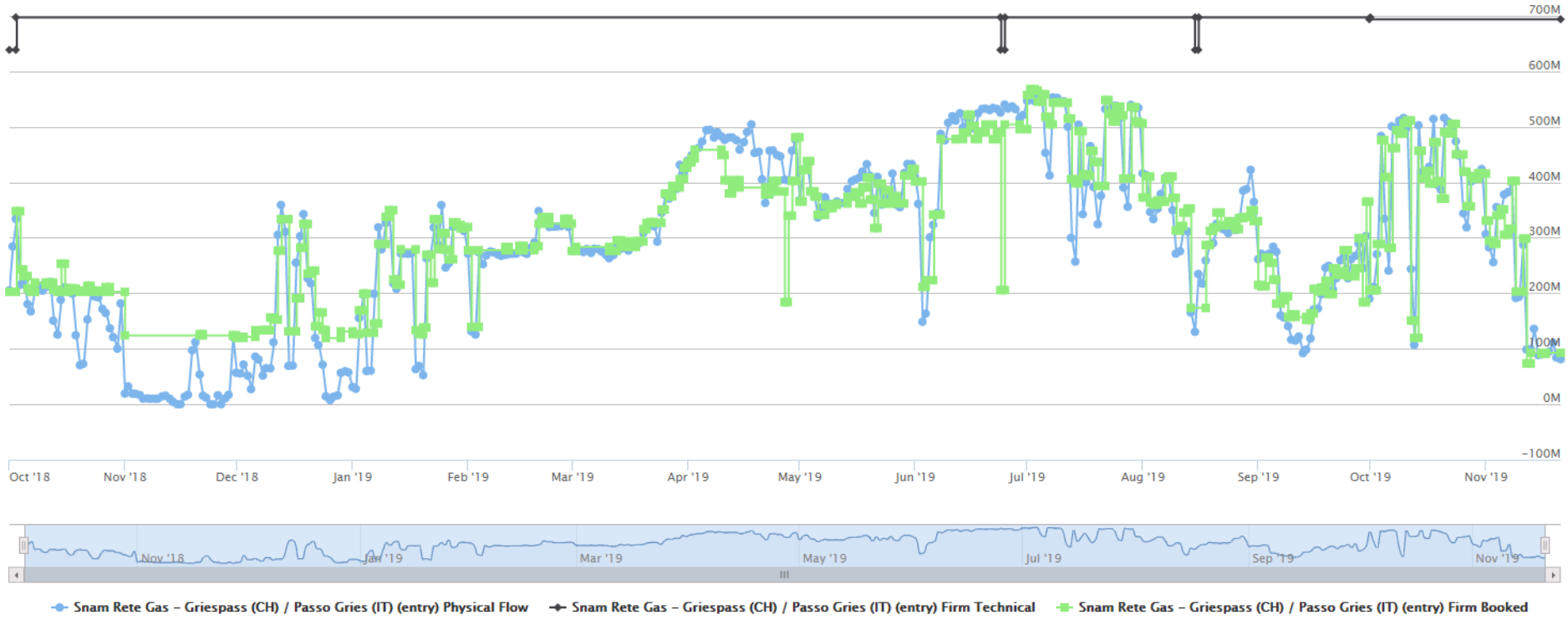
Marginal Route Analysis

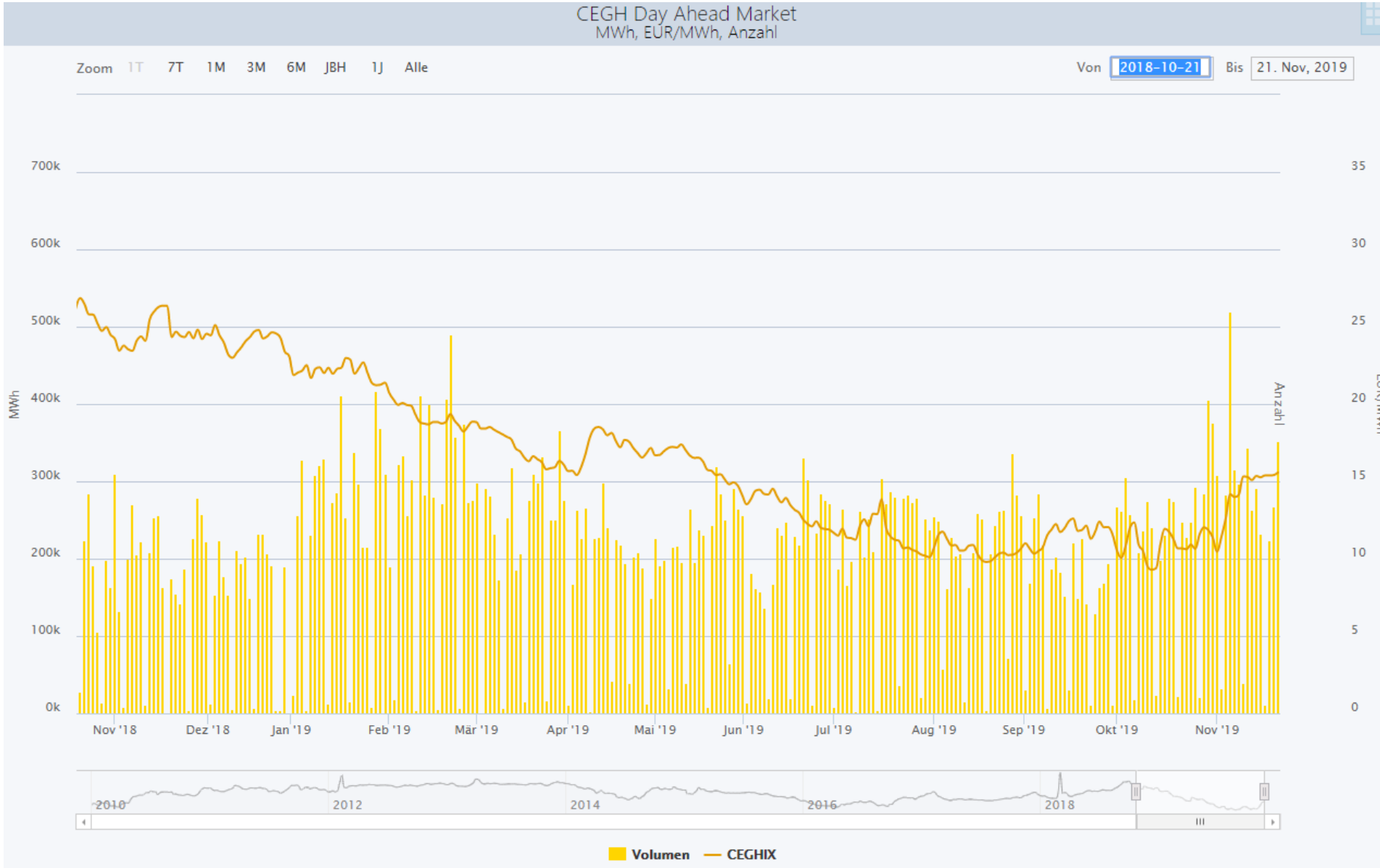


ARERA
Autorità di Regolazione per Energia Reti e Ambiente

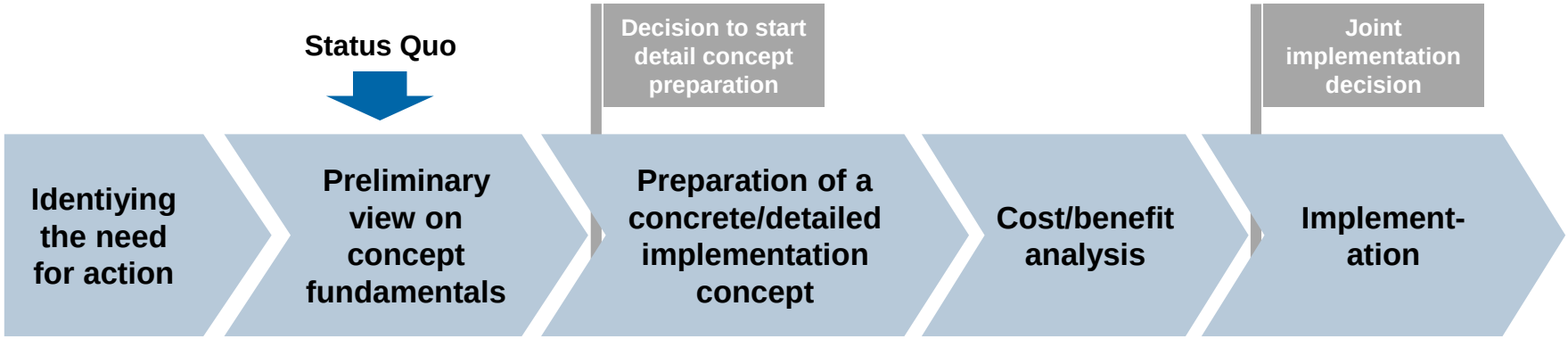
E-CONTROL

Entry Italy from CH




CEGH Day Ahead Market
MWh, EUR/MWh, Anzahl
Zoom 1T 7T 1M 3M 6M JBH 1J Alle
Von 2018-10-21
Bis 21. Nov, 2019
MWh
Anzahl
700k
600k
500k
400k
300k
200k
100k
0k
35
30
25
20
15
10
5
0
Nov '18
Dez '18
Jan '19
Feb '19
Mär '19
Apr '19
Mai '19
Jun '19
Jul '19
Aug '19
Sep '19
Okt '19
Nov '19
2010
2012
2014
2016
2018
Volumen
CEGHIX

Way forward



Current stage – with the objective to:

- *develop early on the basic principles of the concept*
- *allow at an early stage the decision whether the preparation of a detailed concept (with subsequent CBA) should start*
- *However, without prejudice to any implementation decision*

Detailed cost benefits analysis as prerequisite for market integration

- Any actual implementation must be based on **detailed analyses of the costs and benefits** for each of the involved markets
- Integration concepts that uphold most benefit potentials while **reducing implementation complexity** and cost should be in focus
- Market integration may only **"go live" based on a positive cost-benefit evaluation** (CBA as AGTM requirement)
- Increase of **social welfare**

In order to be a reliable basis for decision making, such a CBA must rely on a concrete, sufficiently detailed implementation concept:

- developed together with stakeholders
- recognizing and reflecting the characteristics of the participating markets and regulatory systems

Rationale for selection of integration/balancing model

- Learning from past initiatives: even implementation of a **trading region** as sketched in the AGTM can be a **substantially complex task**
- General approach for integration/balancing model:
  - Based on AGTM trading region
  - However:
    - focused on crucial aspects to exploit potential benefits
    - leaving aspects beyond that as much as possible on the national agenda and thus reducing implementation complexity, harmonization needs, etc.

„Hub Trading Region“ as possible model

Integrated VTP

- An integrated **VTP in the *Joint Hub Zone*** serves as **central place of delivery for all transactions** within the integrated entry/exit system
- **No VTP in National Balancing Zones** anymore
- Integrated VTP to be **operated in cooperation of VTP operators** in currently national zones
- Exchanges use this VTP for the **physical settlement of exchange trades**; the same applies for broker trading, etc. (concentration of liquidity)
- Default rule: **Congestion-free VTP access to/from any network point** in the integrated entry/exit system