

A photograph of industrial gas processing equipment, featuring large red cylindrical tanks and complex piping systems. The scene is brightly lit, highlighting the metallic surfaces and various valves and gauges.

Gas Market Info

Finlandia Hall
12th February 2020
#gasgridinfo

Gas Market Info session 12th February 2020 - program

12.00

CEO's greetings

Olli Sipilä, Gasgrid Finland

Market opening - lessons learned and first improvements & Next steps in market development

Janne Grönlund, Ville Rahkonen and Anni Sarvaranta, Gasgrid Finland

Presentation by GET Baltic gas exchange

Gintaras Buzkys, GET Baltic

Tariff Process 2020 and other current topics from the Finnish Energy Authority,

Heikki Mannermaa and Meri-Katriina Pyhäranta, Energy Authority

Current topics from the Ministry of Economic Affairs and Employment of Finland

Arto Rajala, TEM

A coffee break is included in the program ~ 14.30

16.00

Event ends



Flowing Finnish Gas Market



Safety – January 2020



| | |
|--------------------------|---|
| Accidents: | 0 |
| Injuries (MTI/LTI): | 0 |
| Close calls: | 1 |
| Unauthorized excavation: | 0 |

Reliable energy transmission platform



Open Finnish gas market

58 Registered market participants

115 market roles

Imatra

> 1

BC

> 10



Experiences from the 1st month

Positive and constructive feedback
from Clients

Team's commitment

Commercial functions running securely

Balticconnector bidding pattern
changed mid-month

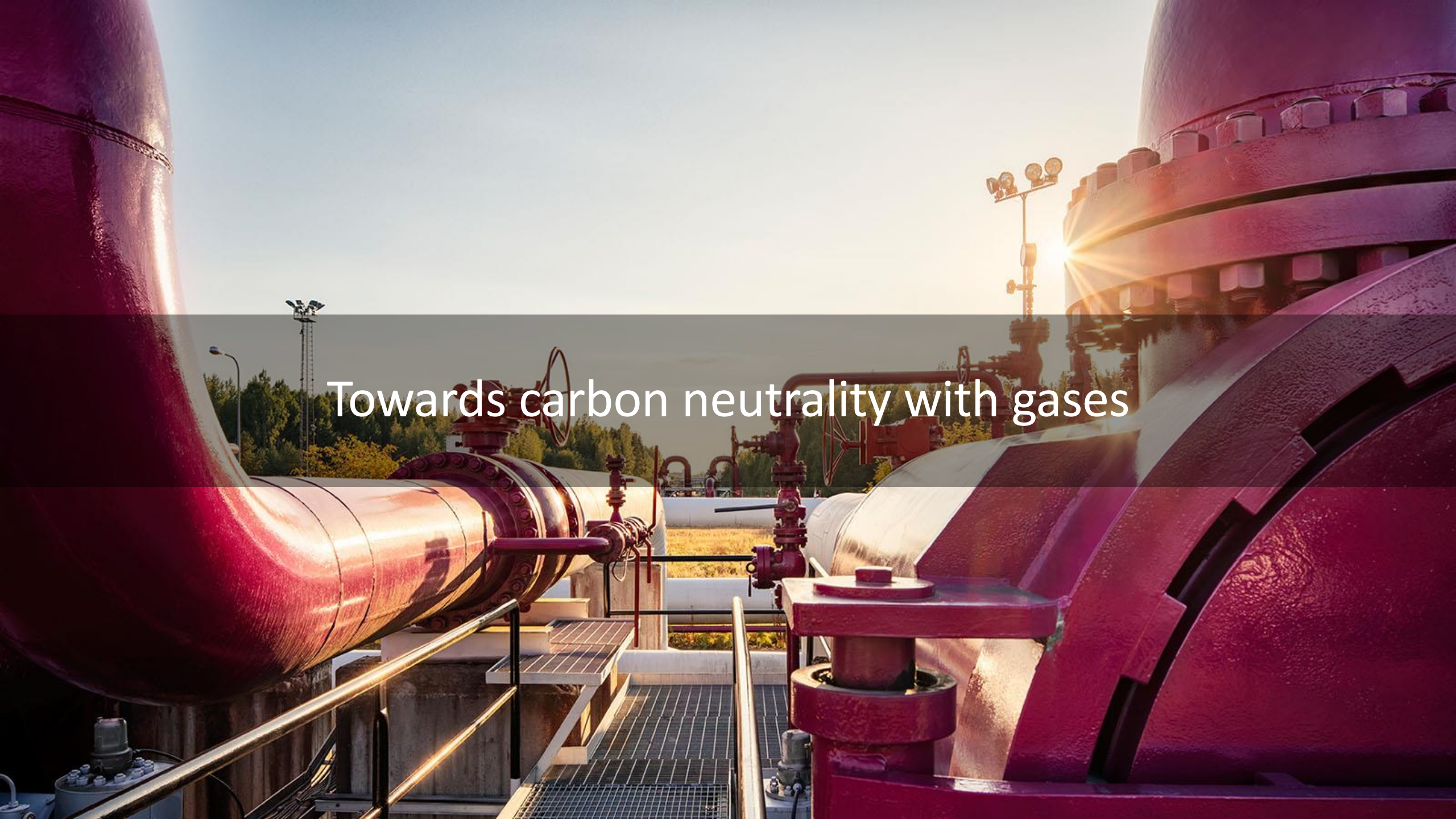
A photograph of an industrial facility, likely a power plant or refinery, featuring large, dark-colored pipes and machinery. The scene is set against a bright sky, possibly during sunrise or sunset, with a lens flare effect on the right side. The image is overlaid with a semi-transparent dark blue rectangle containing white text.

Engage customers and stakeholders for further development

Improve interplay of rules and operations of the market

Finalize information sharing to the market

Improve user-friendliness of systems

A photograph of an industrial facility, likely a gas processing plant, during sunset. The scene is dominated by large, dark-colored pipes and machinery. In the foreground, a large, dark pipe curves from the left towards the center. To the right, a large, dark, cylindrical vessel is visible. The background shows a clear sky with the sun setting, creating a bright glow and lens flare. A tall light tower is visible in the distance. The overall atmosphere is industrial and serene.

Towards carbon neutrality with gases

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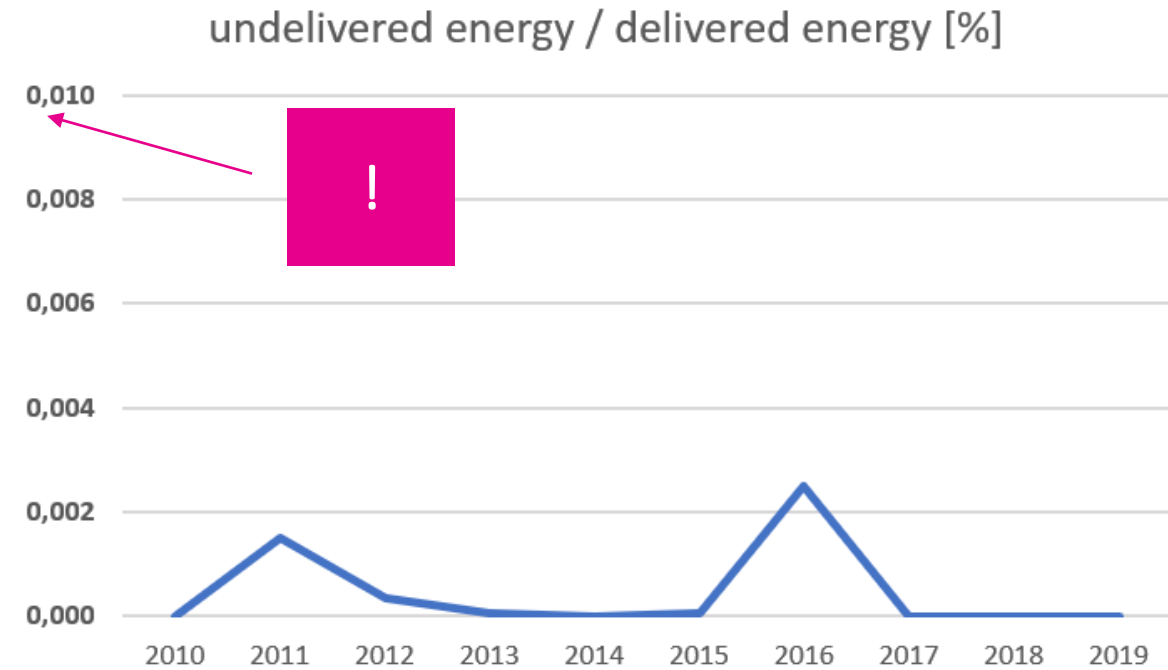
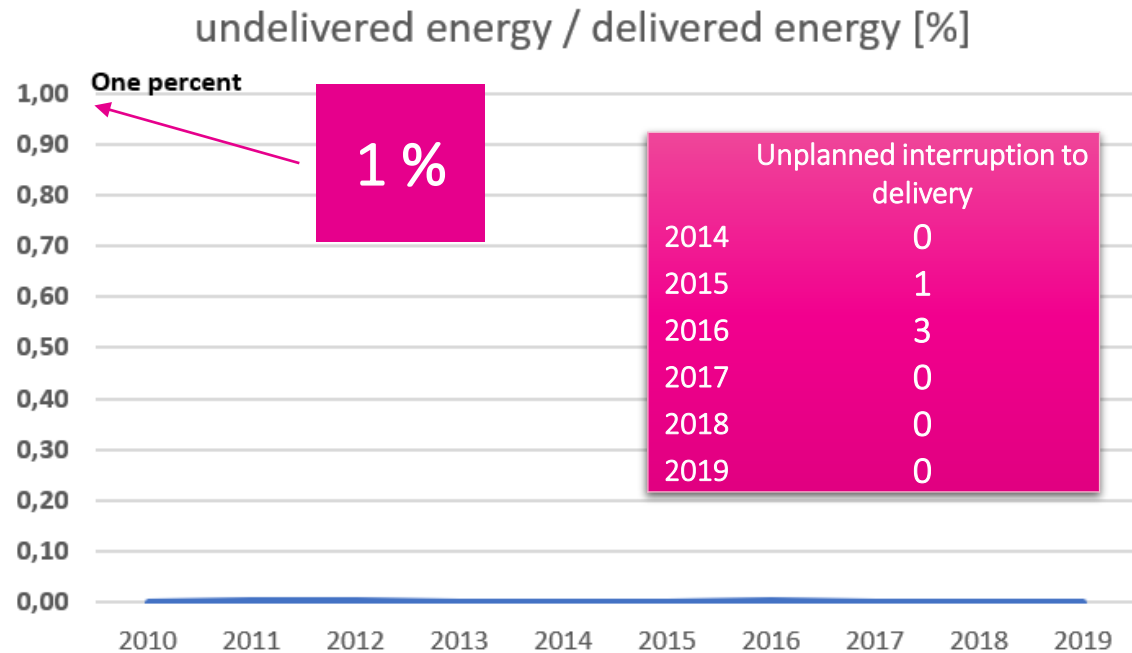
Transmission platform performance

Achievements and Next Steps

Principles for operations

SAFETY / SECURITY OF SUPPLY / COST-EFFICIENCY

Security of Supply - History



Technical integration with Baltic

- Integration to Baltic's gas system was ready for commercial use as planned on 1.1.2020.
- Due to restricted capacity in Balticconnector, transported volume in January was 35,2 % compared to technical maximum capacity.
- Interconnection infrastructure has been used with high availability since operation started – Inkoo technical availability in January was 99,6 %.
- Operational balancing agreement with Elering AS has bring flexibility stability to Balticconnector usage.



Balancing services

- Balancing service contracts for January were tendered in December 2019 and Gasum was the only one to offer a contract.
- In January TSO organized tendering for February contracts and Gasum was only one to offer services.
- TSO will organize next tendering period for balancing services this week.
- Due to warm weather and reliable performance of the transmission system, TSO has not have a need to activate balancing actions.



Next steps

- Evaluation of the balancing principles and mechanisms together with the NRA – possible changes to market rules.
- Emphasizing cost-efficiency of the gas transmission from the national and regional perspective.
 - Cooperation with Baltics to find more optimized solutions to operate integrated networks
- Cooperation with Elering AS to minimize commercial influence of the published maintenance works in 2020 and 2021.

Technical questions?

Please contact:
technical@gasgrid.fi

Market opening

Lessons learned and first improvements

Registered market roles

| Market role* | Amount |
|--------------------------------|--------|
| Shippers | 22 |
| Traders | 15 |
| Retailers | 22 |
| Distributions system operators | 18 |
| Transmission system end users | 37 |
| Biogas injecting parties | 1 |
| Total | 115 |

*Same company can act in several market roles

Feedback regarding market opening

- We received 13 responses to the feedback survey
- Average rating of TSO's performance was **3/5**

“Very good support and system development progress by TSO, but still some important competition facilitation issues not tackled.”

“I was satisfied for TSO's work. Good job guys :)”

“Positive, constructive, transparent promotion opening, even while unbundling was ongoing.”

“Real time data of Finnish gas consumption is needed”
“consumption data from DSOs is coming in D+2”

“Information to market regarding Imatra connection point is missing”

“Technical implementation of TSO's systems ran until late autumn and user interface was unfinished”

Examples of developments made / to be expected

- We've got a lot of feedback regarding Portal user interface usability and data visualisation (e.g. thousand separator, sorting, headings etc.)
- Optimisation of data flow between systems
- DSO level data arriving too late from shipper's point-of-view. D+2 requirement for DSO's to deliver measurement data doesn't help in within-day balancing. We are working on estimation done by TSO already within-day
- Collateral status should be made visible to shipper in the Portal. TSO to investigate flexible ways to adjust collateral.
- Transparency data regarding Balticconnector and Imatra was published on Gasgrid website for January. Data connection to **transparency.entsog.eu** will be established during February
- Visibility of final balance settlement and invoicing status to be improved
- User instructions of Portal and Gas Datahub to be improved
- Secondary capacity trading platform to be created during 2020 in cooperation with GETBaltic

Step-by-step improvement to be continued, please continue giving us feedback

Statistics from the retail market (datahub) in January 2020

| Sites/events | Pcs |
|-----------------------------|------------|
| Daily read sites in datahub | 6431 |
| Change of retailer events | 32 (0,5 %) |

We will establish development forums for our customers

1. **Wholesale market development group (language English)**
 - For registered shippers, traders and transmission system end users and biogas/LNG injecting parties
 - Discussion forum which helps Gasgrid Finland in developing its services (e.g. Portal) and the wholesale market
 2. **Retail market development group / Vähittäismarkkinoiden kehitysryhmä (language Finnish)**
 - For registered retailers and DSOs
 - Discussion forum which helps Gasgrid Finland in developing the gas datahub and the retail market data exchange
- One representative per **registered market role** in each group
 - Materials of the meetings will be available on Gasgrid Finland's website
 - **How to join?** Sign up by sending group, person name(s), market role(s) and contact details to **commercial@gasgrid.fi**
 - In addition webinars, when needed, regarding e.g. the Gasgrid Portal, Gas Datahub, Tariffs and other current topics

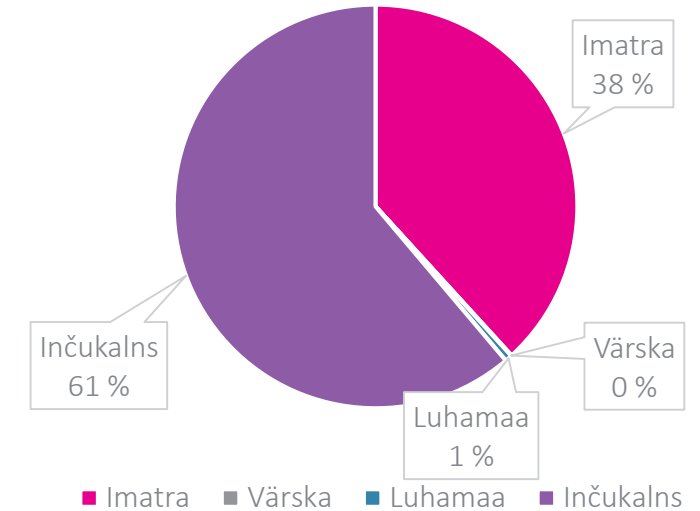
Market integration

Achievements and Next Steps

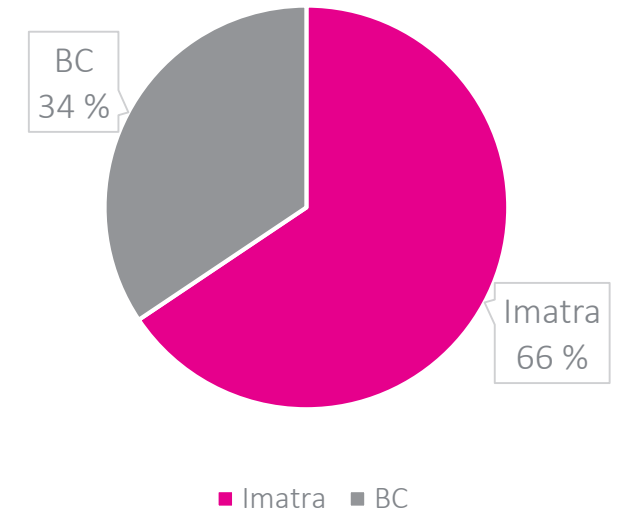
Achievements

- Common tariff area for Finland, Estonia and Latvia 1.1.2020
- Common balancing area for Estonia and Latvia 1.1.2020
- First month of operations and market feedback show that the direction in market integration and development has been on a right path, however there is still lot of room for improvement
- Next steps in market development and deeper integration:
 - Customer feedback will be carefully considered in further development of services, operations and transparency in the established tariff and balancing areas
 - Active work to finding an optimal solutions towards deeper four-country-integration has been re-ignited in good co-operation between the TSOs of Estonia, Finland, Latvia and Lithuania

Sources of gas for FinEstLat region based on physical flows (accounted for flow towards LT) (January 2020)*



Sources of gas for Finland based on physical flows (January 2020)*



Outline of market integration development plan 2020



Gasgrid Finland strategy update 2020

Introduction

Gasgrid Finland to update **strategy** in 2020.

An integral part of the strategy work is an **interactive process with customers and stakeholders** that explores the **key uncertainties and critical questions of the gas sector in Finland.**

Questionnaire - February

- **Objective**

- To gather insights into available developments of the operating environment of the gas sector in Finland in the coming years.
- Questions are related to identifying critical questions and key phenomena/influencing factors.
- The time frame under assessment reaches until 2030.

- **Process**

- Questionnaire sent to a selection of customers and stakeholders and interested parties by the end of this week (14.2.)
- Answering time 1-2 weeks

Scenario-workshop – April

- **Objective**

- To deep-dive into the **alternative future scenarios of the Finnish gas sector** and further develop them via interactive group work and discussion.
- The group assignments in the workshop include **assessing and enriching the scenarios, and crafting storylines.**
- Participants of the workshop will have **improved knowledge and understanding of scenario methodology and the future scenarios of the gas sector in Finland.**

- **Process:**

- Organised in April
- Goal to have 30-50 participants including both Gasgrid Personnel and Stakeholder involvement

Key results of the scenario process will be shared and discussed with customers and stakeholders openly.

The resulting scenarios will act as a key input to Gasgrid Strategy.

Results to be expected in May-June.

More information and interested in participating?

Contact:

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anni.sarvaranta@gasgrid.fi

+358 50 348 2071

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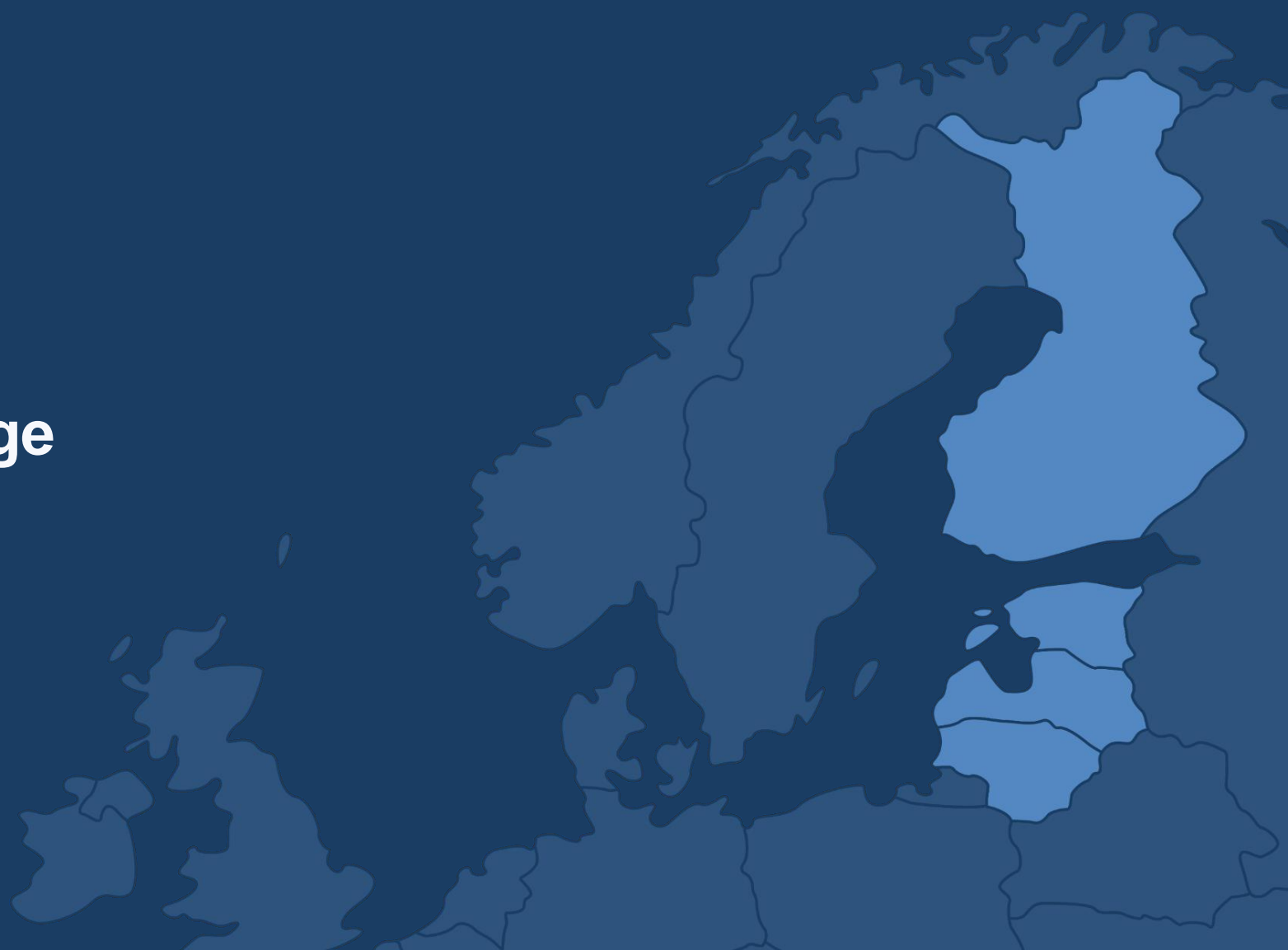
Event ends



Regional Gas Exchange Development in 2020

GINTARAS BUZKYS
Chief Business Development Officer

2020-02-11
Gas Market Info Session



HISTORY

- Established in 2012
- 100% owned by Amber Grid (Lithuanian Gas TSO)
- Awarded as the *Energy Project 2018* for the development of Market Integration Solution

EU REGULATION:

- OMP status provided by ACER
- Regulated by ACER and Baltic NRA's

SERVICES PROVIDED:

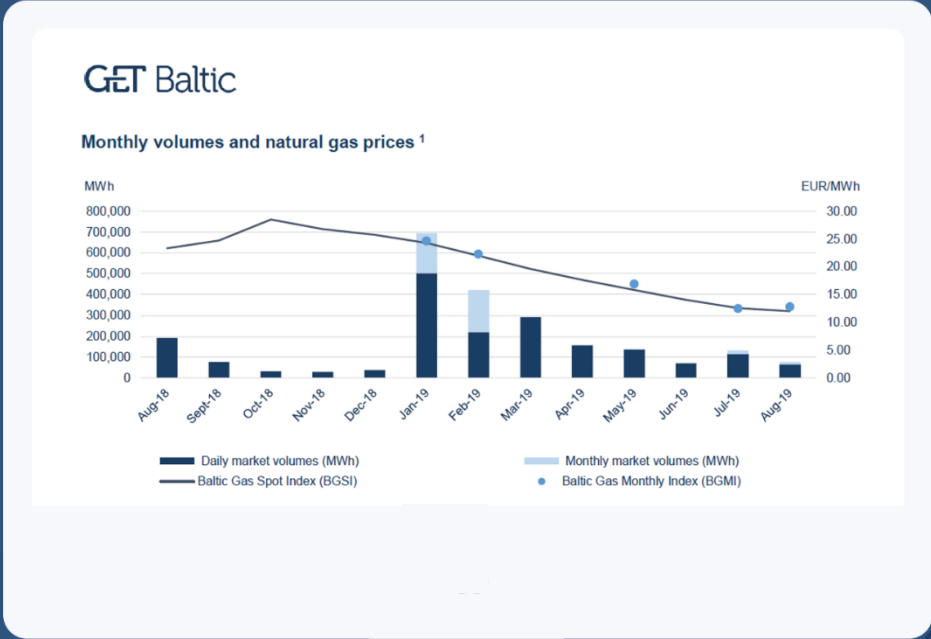
- Administration of the Baltic-Finnish Gas Exchange
- ICA on Kiemenai and Balticconnector IP's
- REMIT data reporting to ACER
- UMM data reporting to ACER

EXPERTS IN:

- Energy trading, IT projects management
- EU regulation (REMIT, MiFID II, Network Codes)
- International business development, risk management, sales and marketing

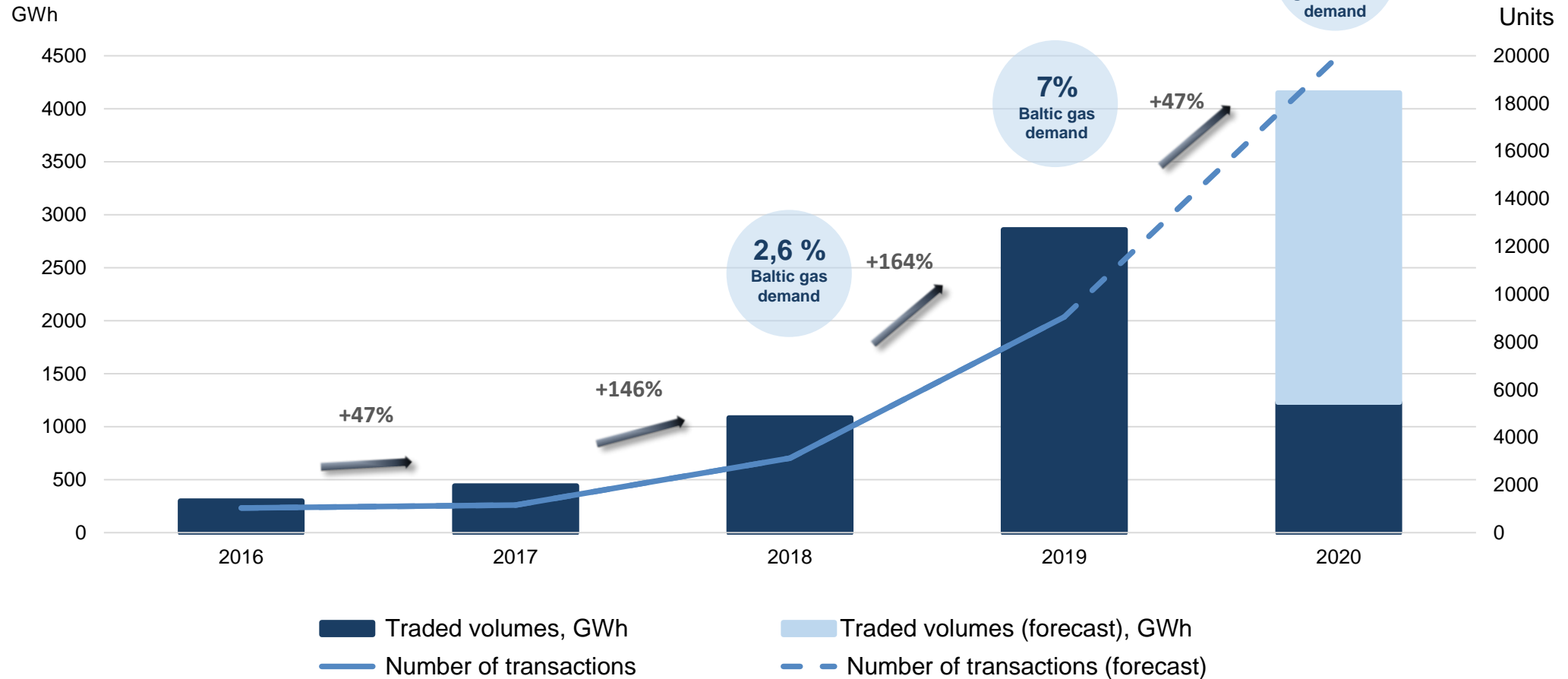


Market Dynamics

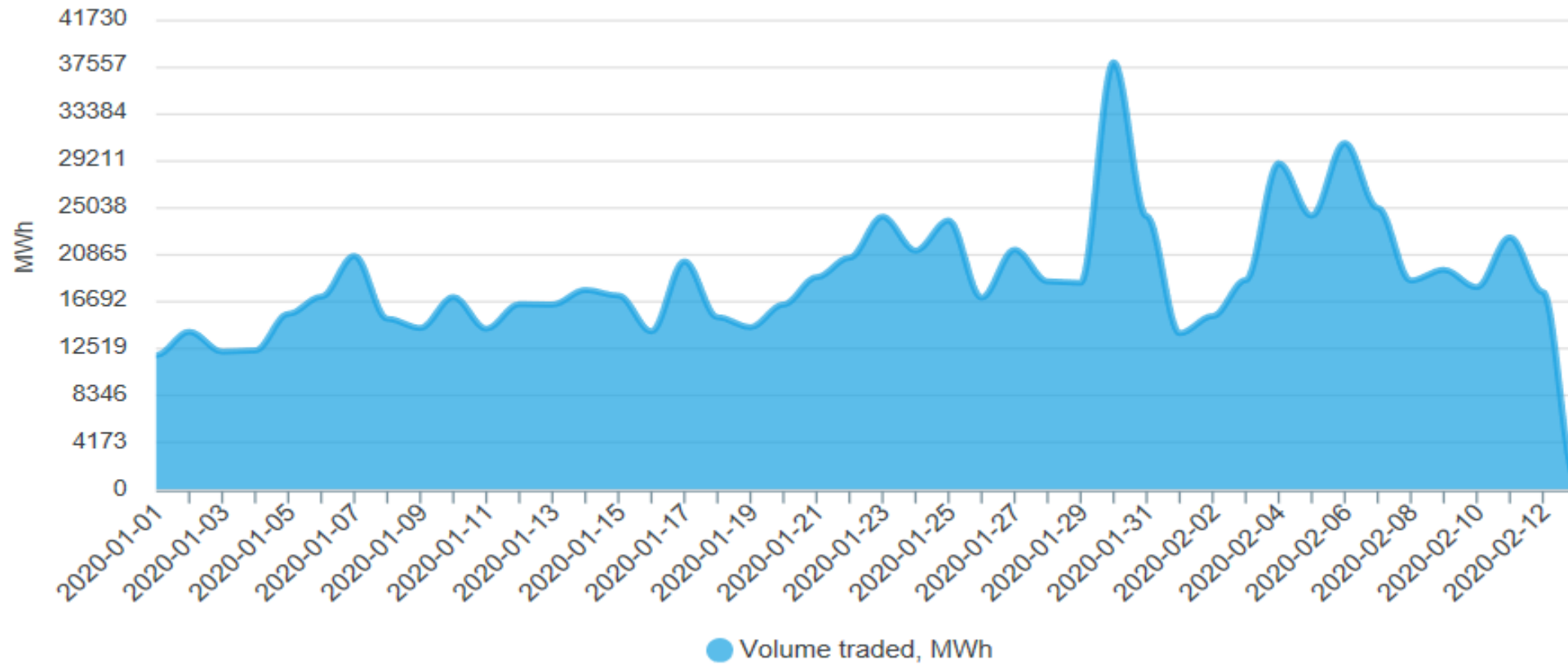


Trading volumes and number of trades

YEARLY VOLUMES

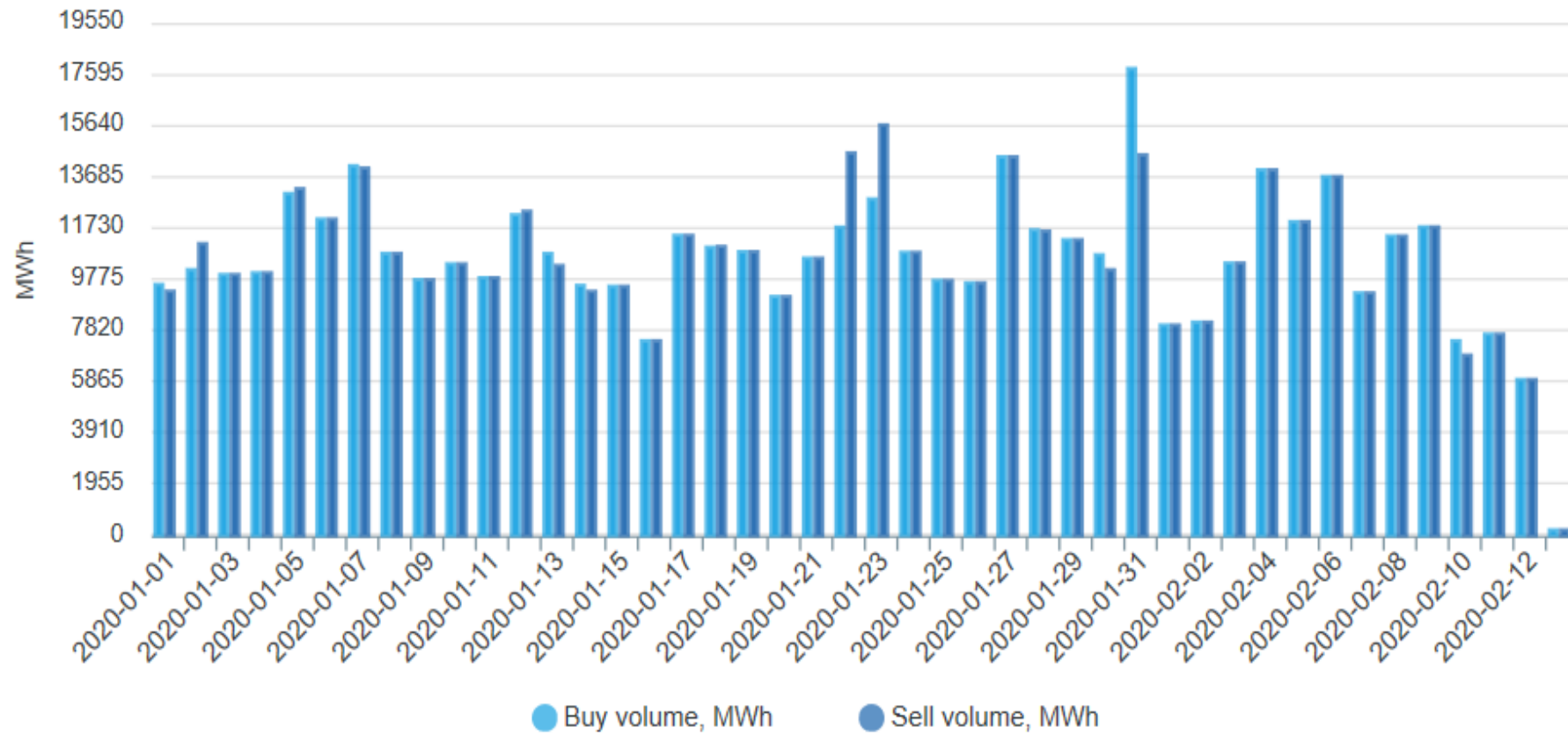


BALTIC – FINNISH MARKET AREAS



Traded volume | Daily Market

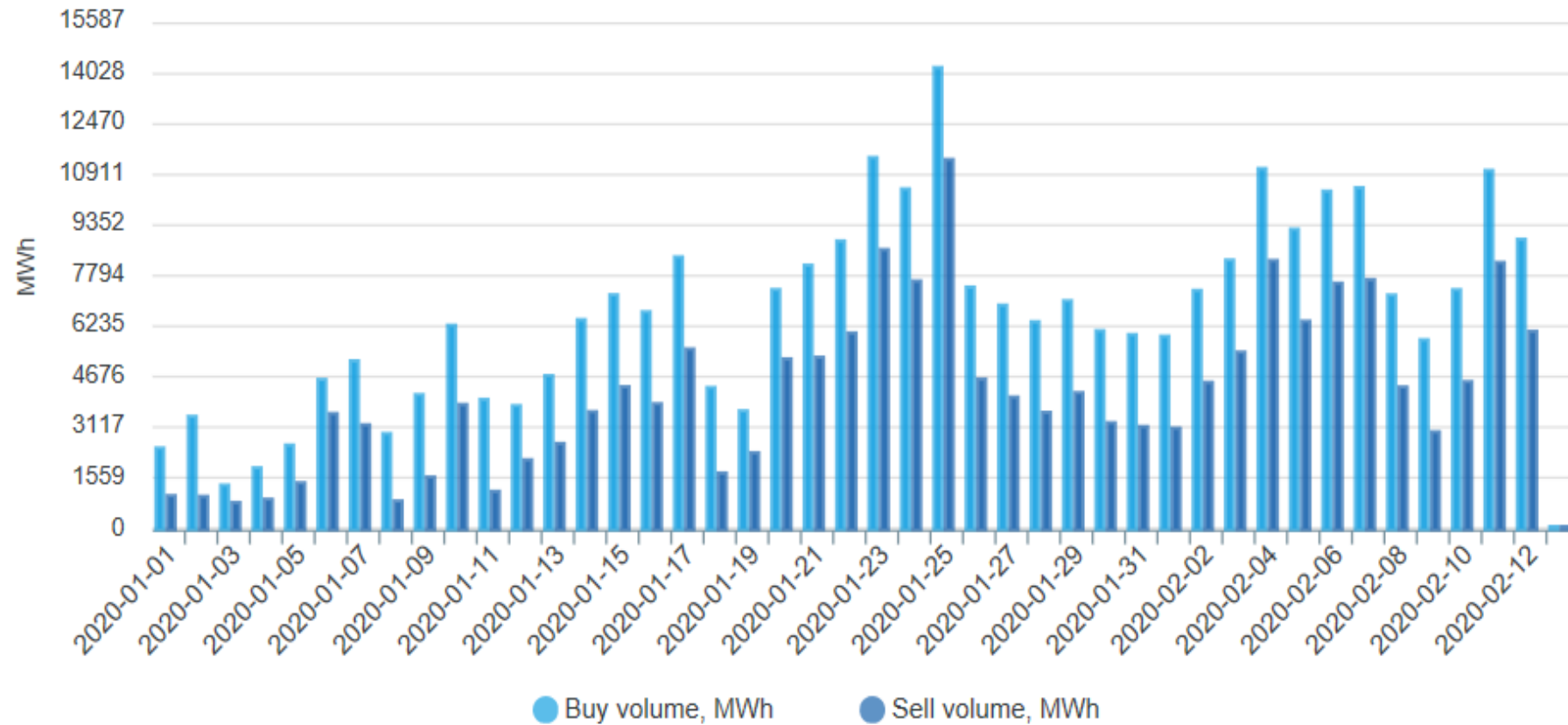
LITHUANIAN MARKET AREA



| Market share | |
|--------------|-------------|
| BUY | SELL |
| 60% | 60% |

Traded volume | Daily Market

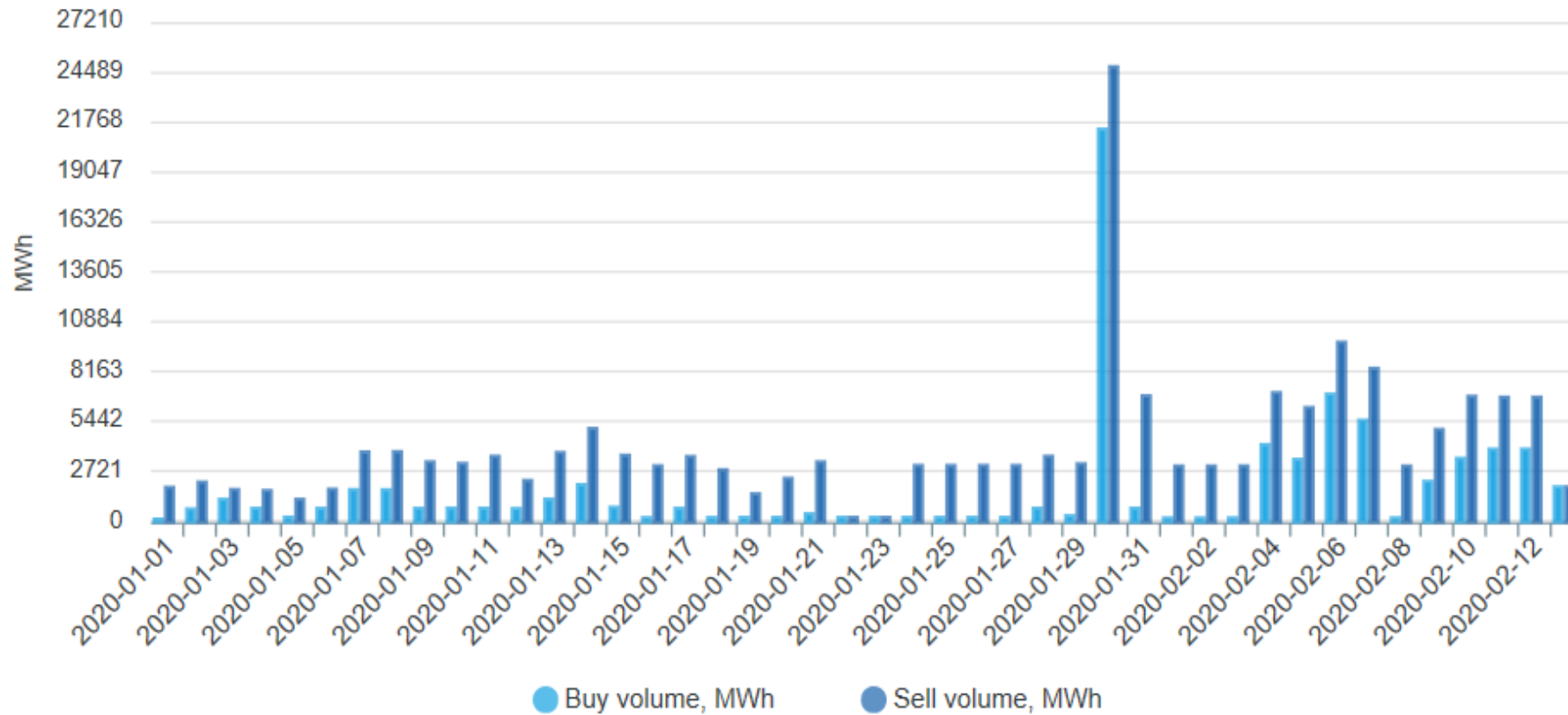
FINNISH MARKET AREA



| Market share | |
|--------------|------|
| BUY | SELL |
| 34% | 21% |

Traded volume | Daily Market

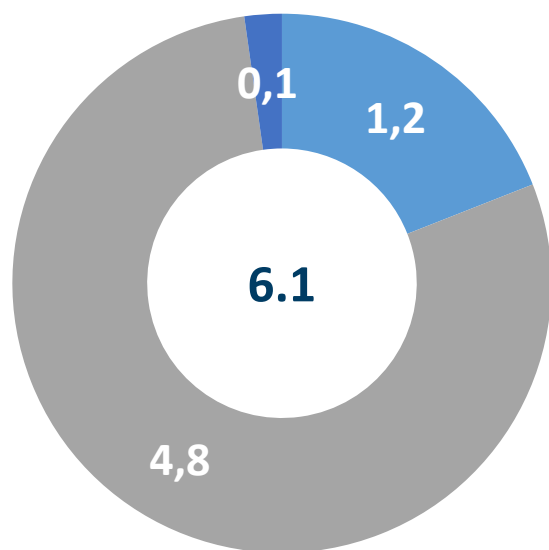
LATVIAN-ESTONIAN MARKET AREA



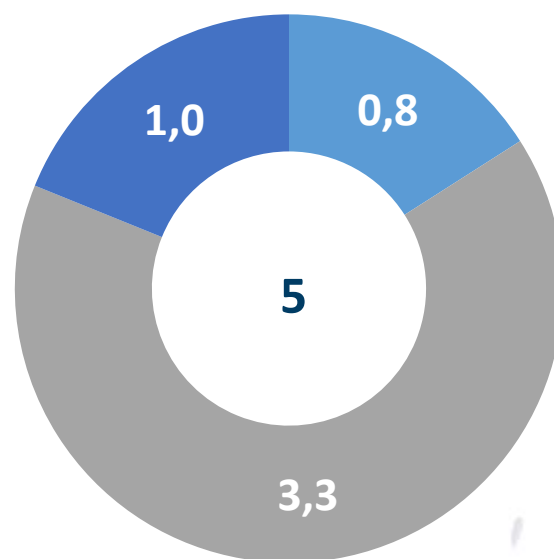
| Market share | |
|--------------|------|
| BUY | SELL |
| 6% | 19% |

Available volume

Buy volume, TWh

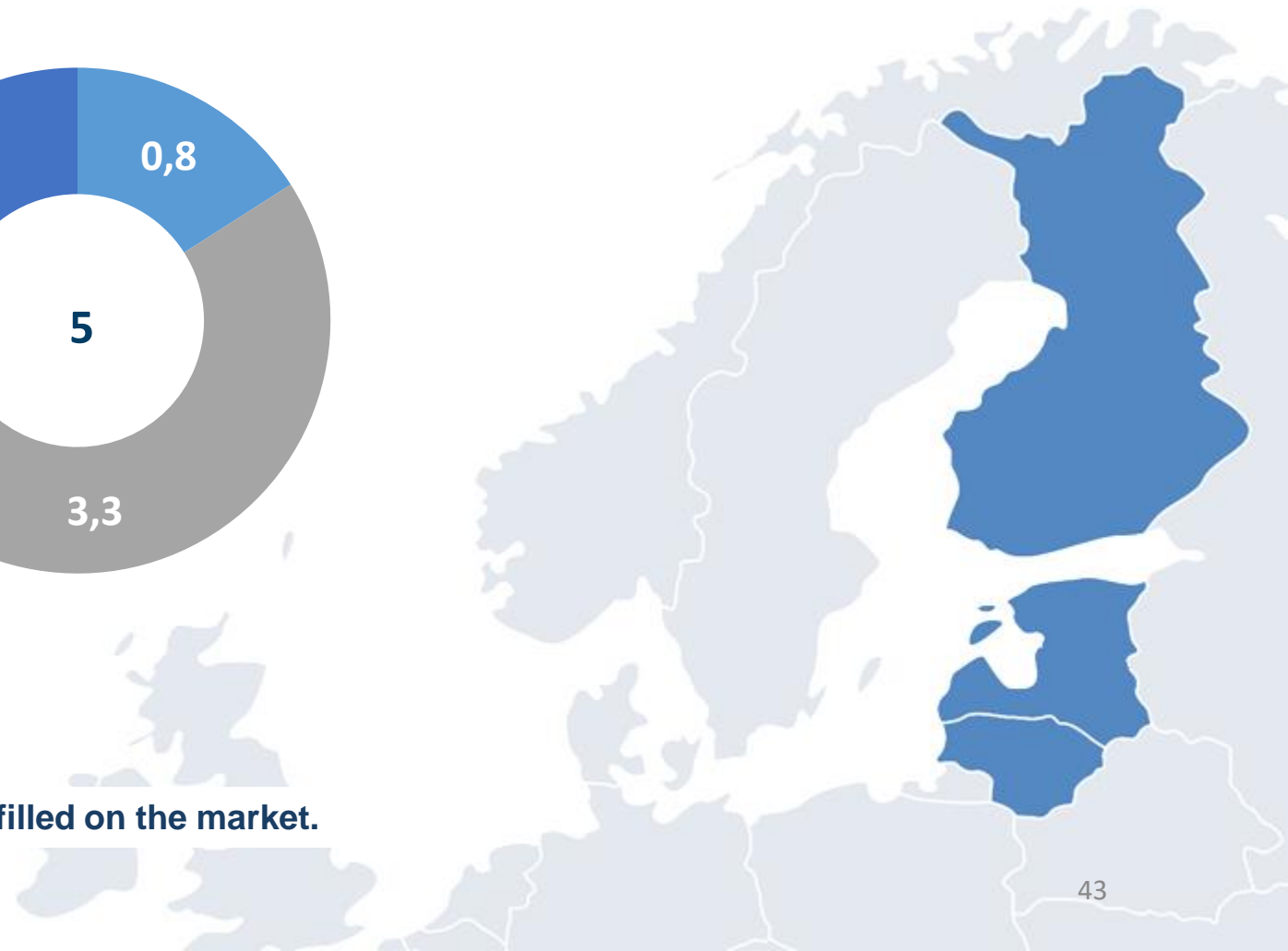


Sell volume, TWh



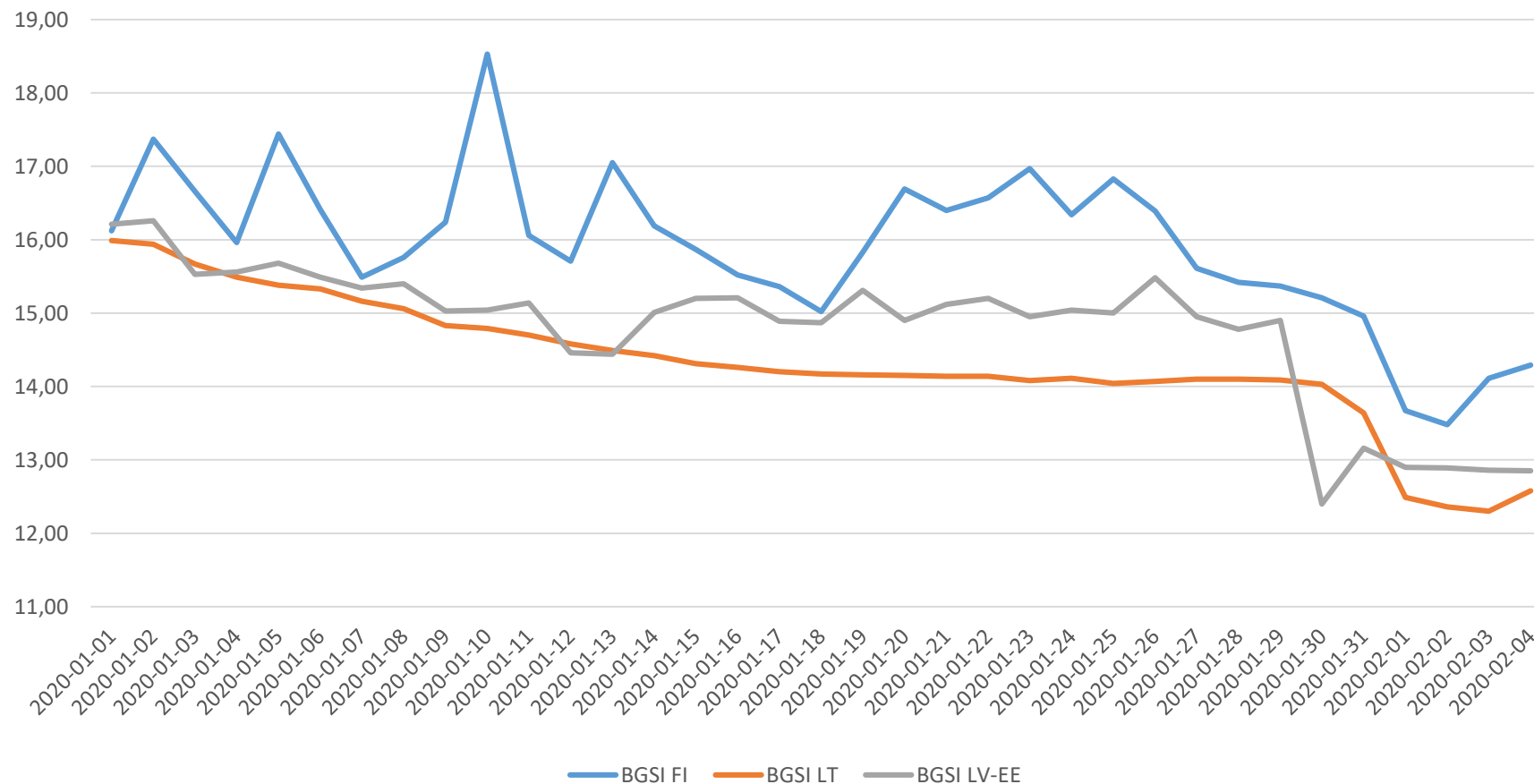
■ Finland ■ Lithuania ■ Latvia-Estonia

20-25% of all submitted buy and sell bids were fulfilled on the market.



Price dynamics

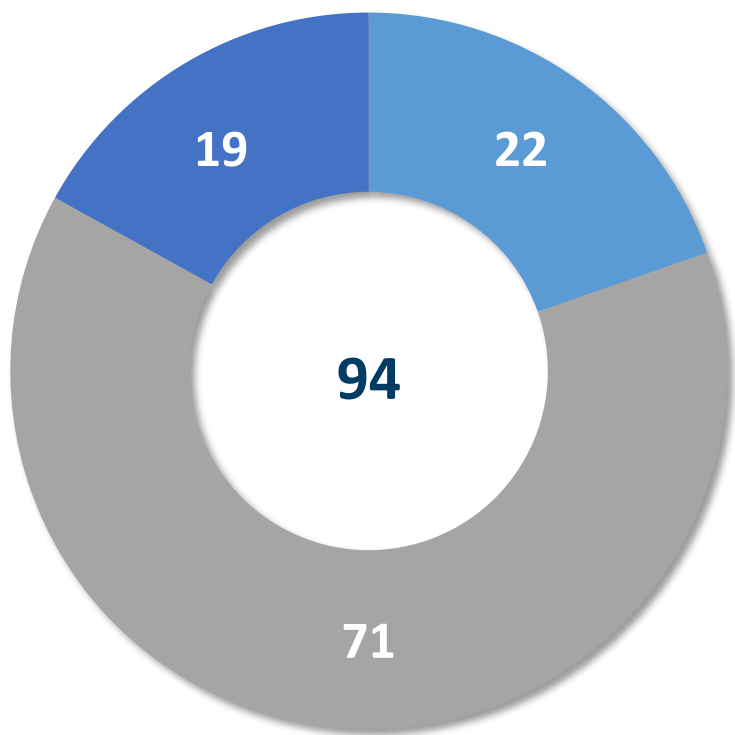
EUR / MWh



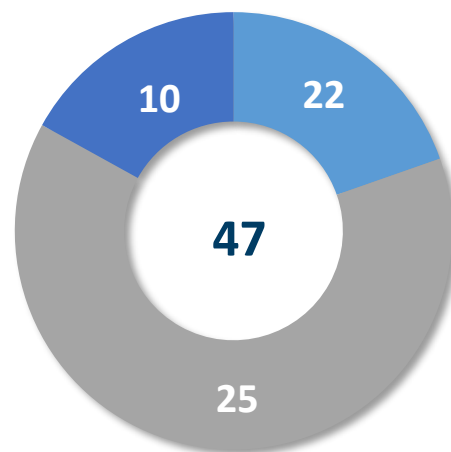
| 2020-01 | |
|------------------|-------|
| BGSFI | 16,20 |
| BGSILT | 14,54 |
| BGSILV-EE | 14,38 |

Exchange participants

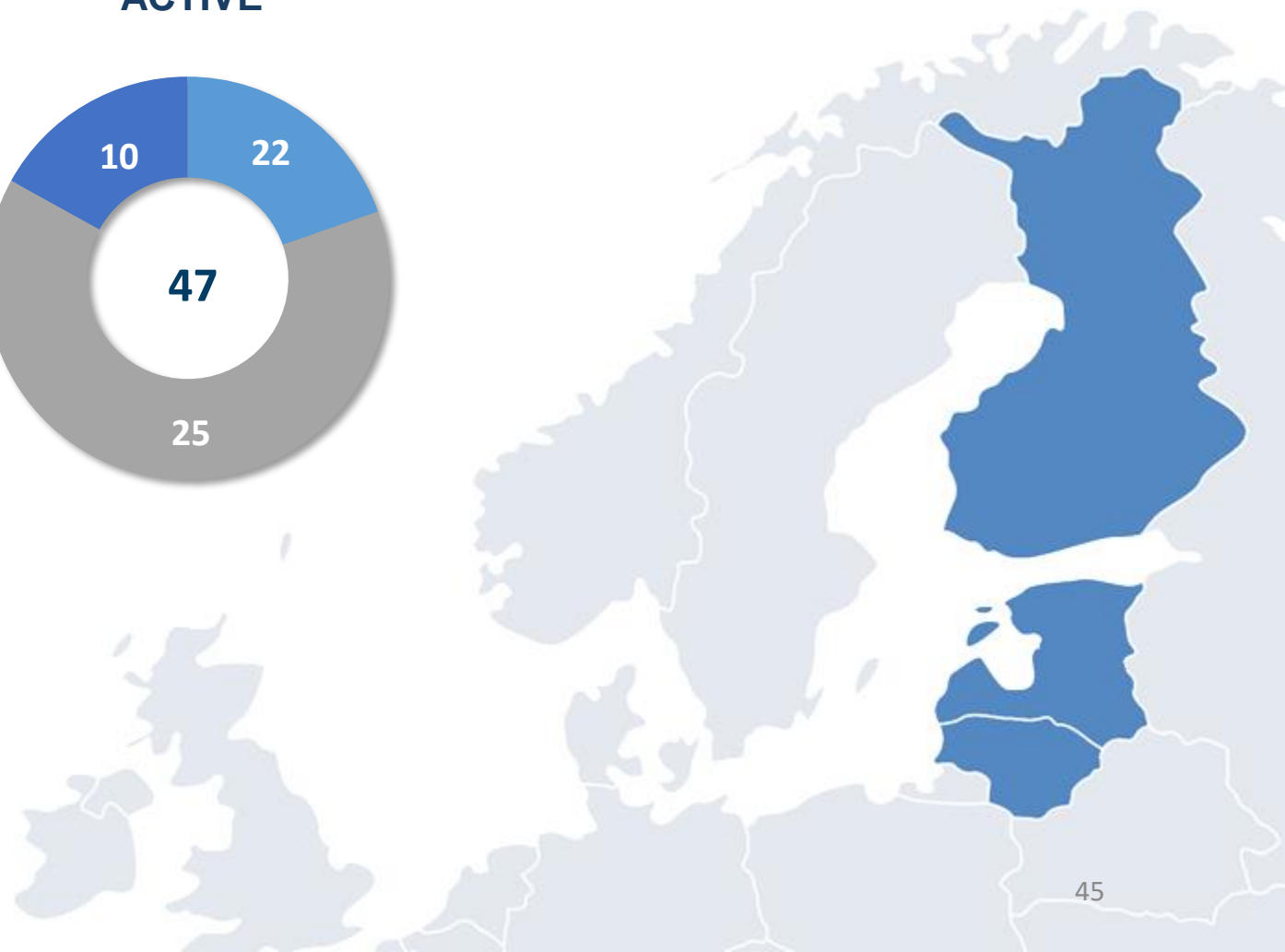
REGISTERED



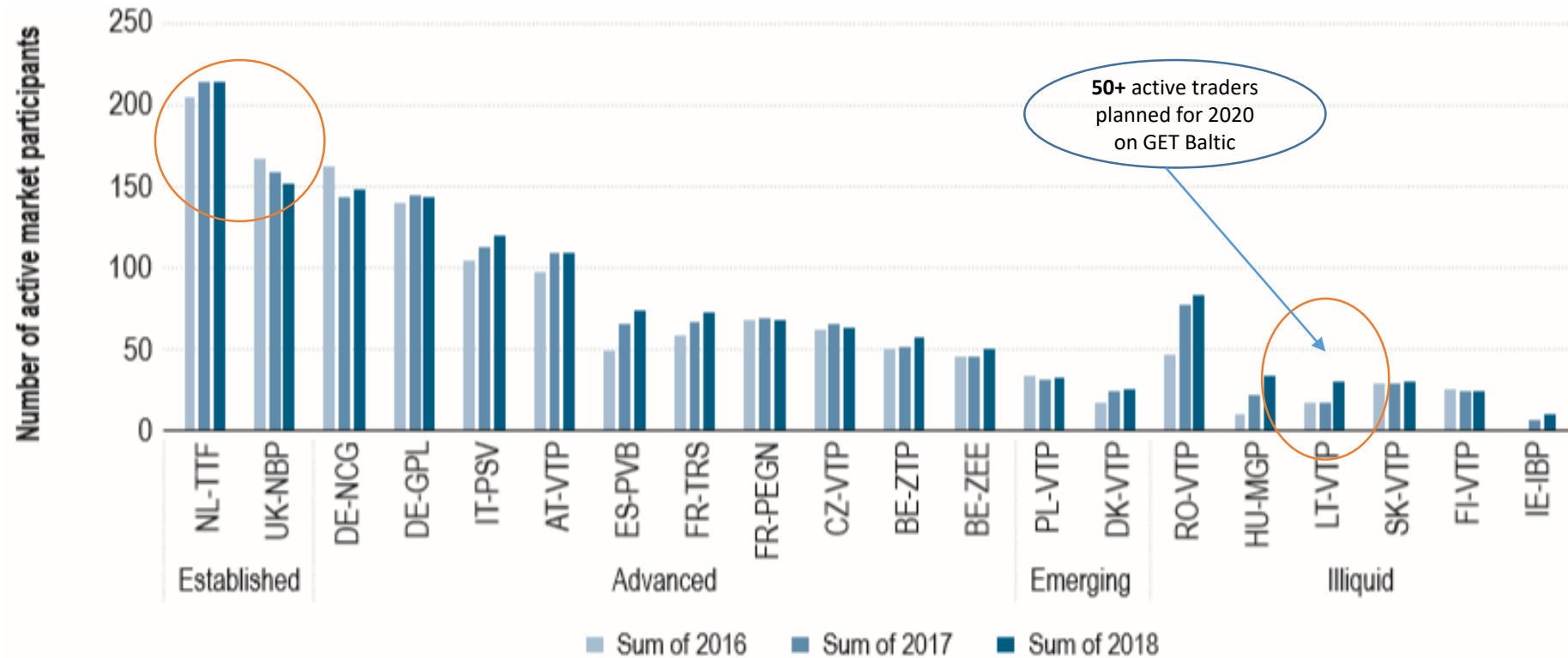
ACTIVE



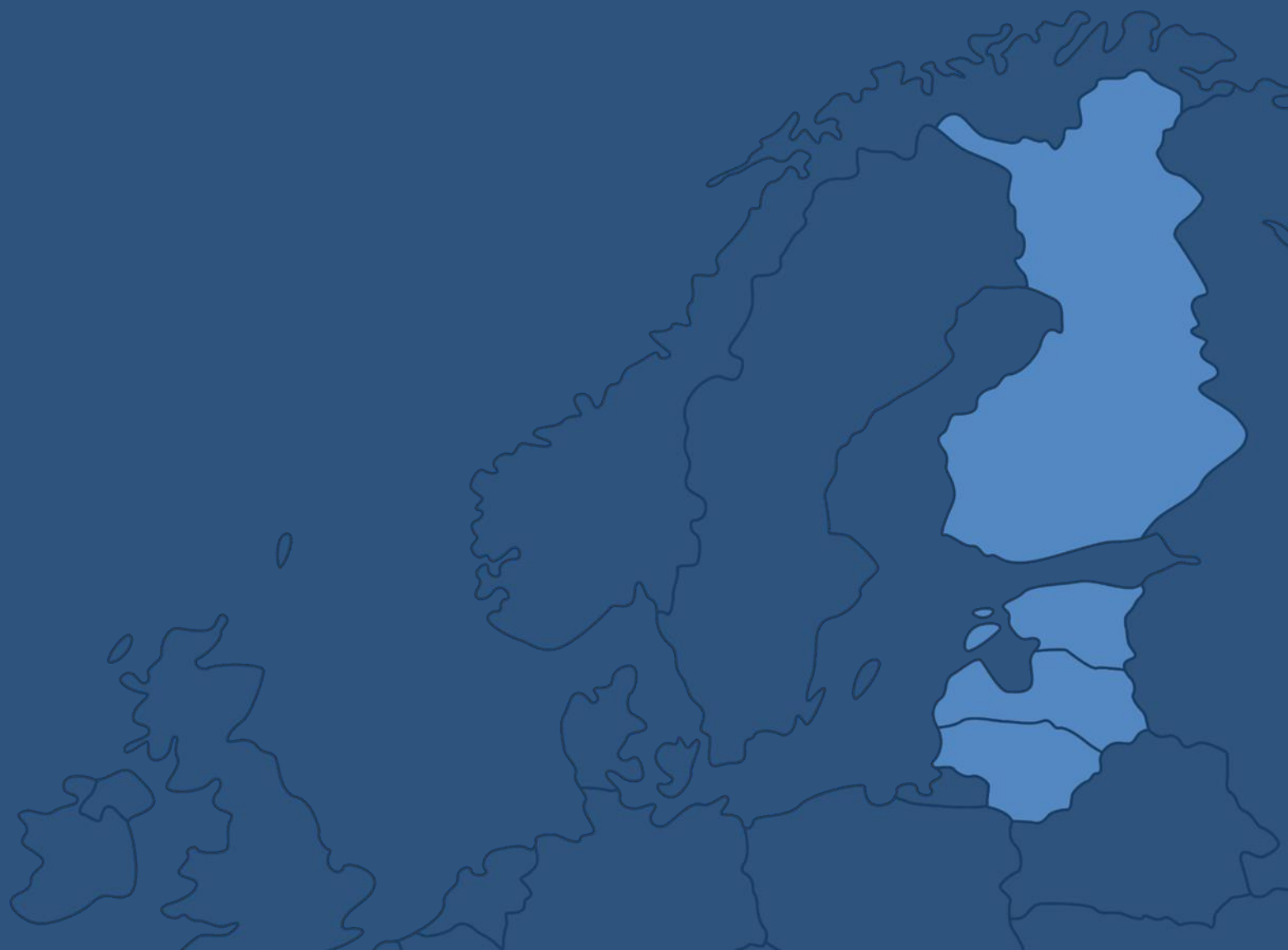
■ Finland ■ Lithuania ■ Latvia-Estonia



Estimated number of active market participants – 2016 to 2018



Trading principles from 1st of January 2020



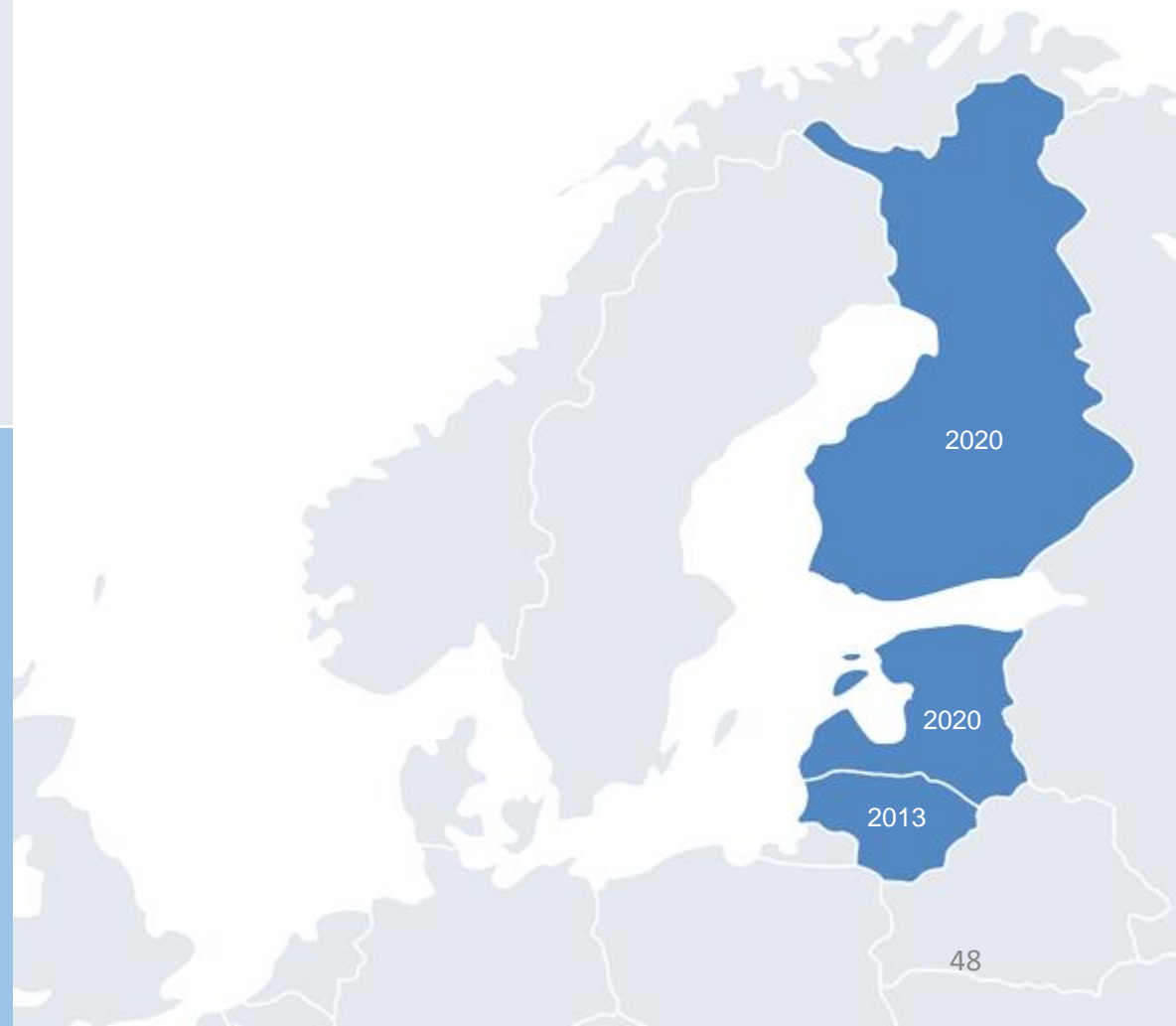
Market areas

Lithuanian market area

Finnish market area

Regional
Baltic-Finnish
Gas Exchange

Latvian-Estonian market area



2020

2020

2013

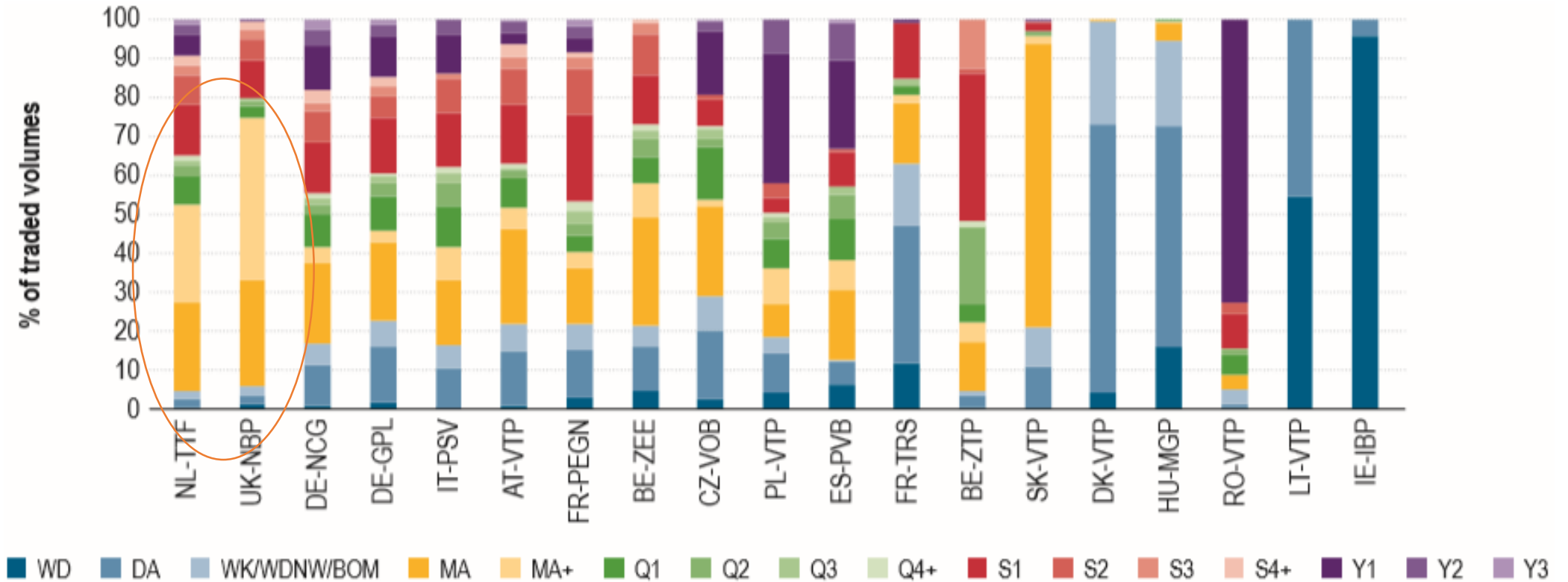
48

Trading products

AVAILABLE PRODUCTS FROM 1ST JANUARY 2020:

| Available products | Trading at VTP | Trading with CAPACITY | Market Area |
|---|----------------|-----------------------|---------------|
| Previous Day (D+1) | YES | NO | LT |
| Within Day (D-0) | YES | YES | LT, LV-EE, FI |
| Day Ahead(D-1) | YES | YES | LT, LV-EE, FI |
| Individual days (D-2, D-3, ... D-30) | YES | NO | LT, LV-EE, FI |
| Monthly | YES | NO | LT, LV-EE, FI |

Traded volumes per product at EU hubs – 2018 – % of traded volumes



Trading hours

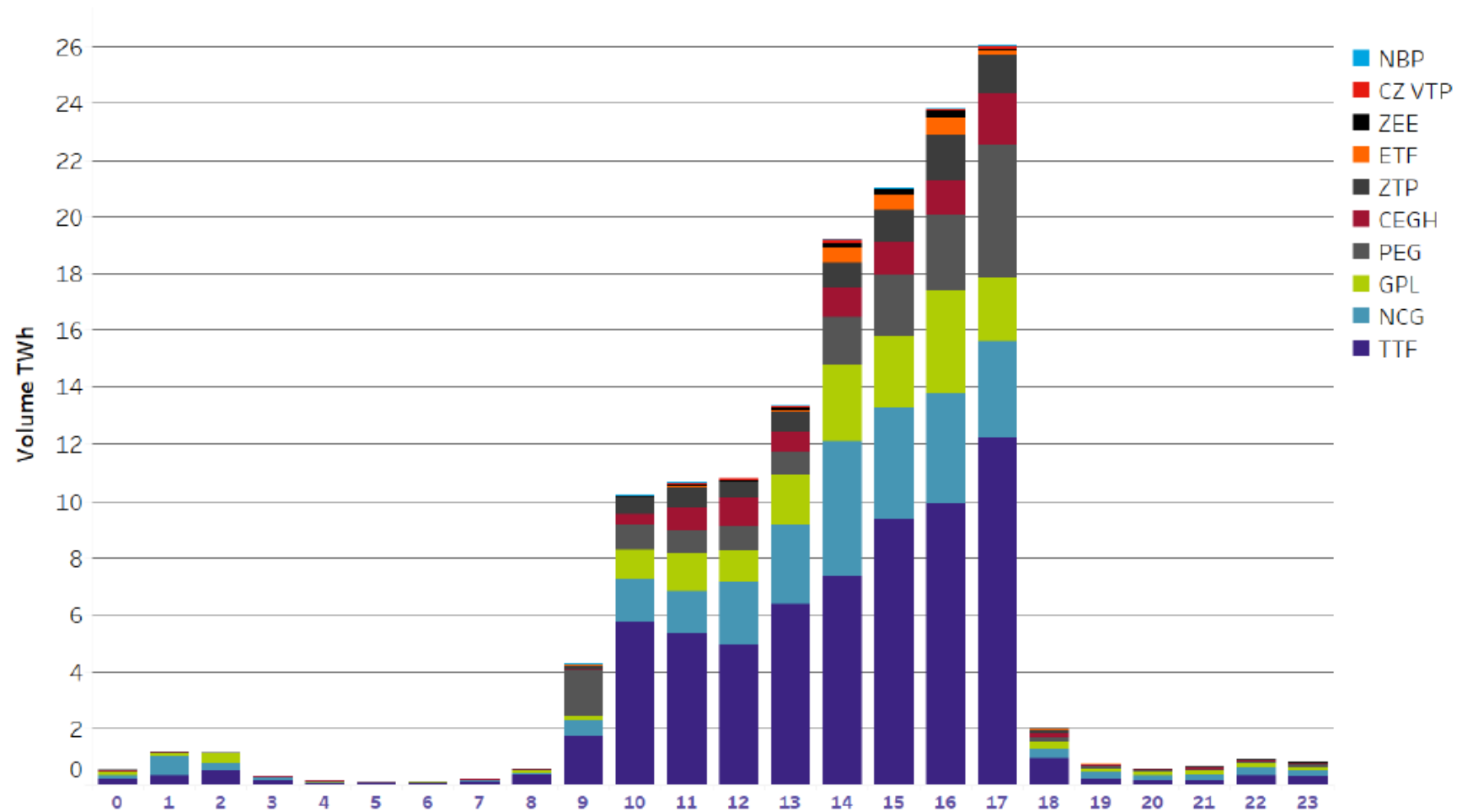
TRADING HOURS ON A DAILY MARKET: 24/7 (EET/EEST) every day

| Market Area | GOT | Product (delivery period) | GCT |
|----------------|----------------|------------------------------|---------------|
| Finland | D-30 (07:00 h) | D-0 (07:00 – 07:00 h) | D-0 (05:30 h) |
| Latvia-Estonia | | | D+1 (14:00 h) |
| Lithuania | | | |

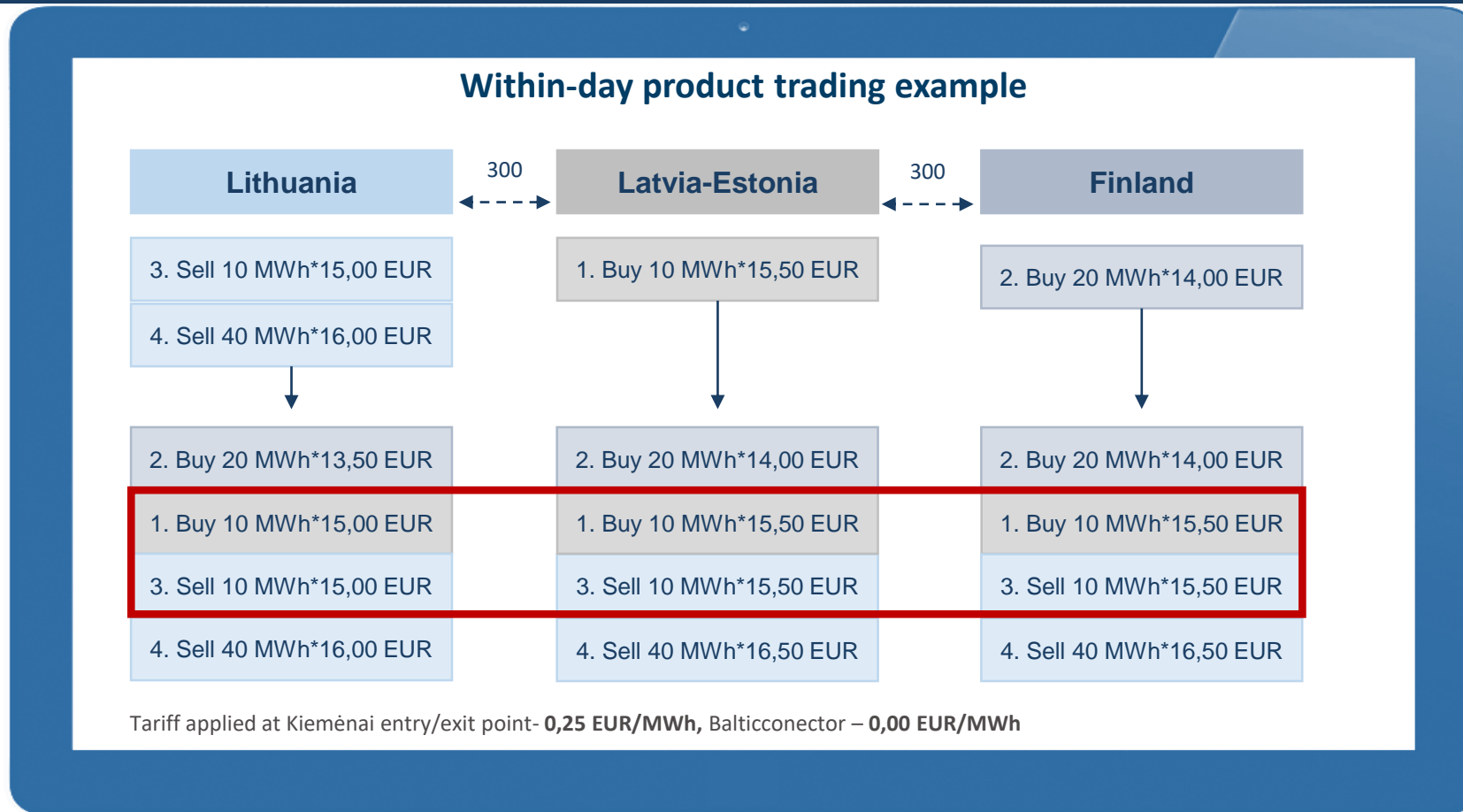
TRADING HOURS ON A MONTHLY MARKET: from 09:00 to 16:00 (EET/EEST) every day

| Market Area | GOT | GCT |
|----------------|---------|---------|
| Finland | 09:00 h | 16:00 h |
| Latvia-Estonia | | |
| Lithuania | | |

Distribution of trading volumes along the trading hours on PEGAS



Market integration (ICA) principles (1)



Market integration (ICA) principles (2)

Trading hours for ICA from 1st January 2020:

| Trading product | Implicit capacity allocation hours | |
|------------------|------------------------------------|--------------|
| Day Ahead (D-1) | 10:00 – 14:00 | 17:30 – 7:00 |
| Within Day (D-0) | 7:00 – 4:00 | |

Dedicated capacity volumes:

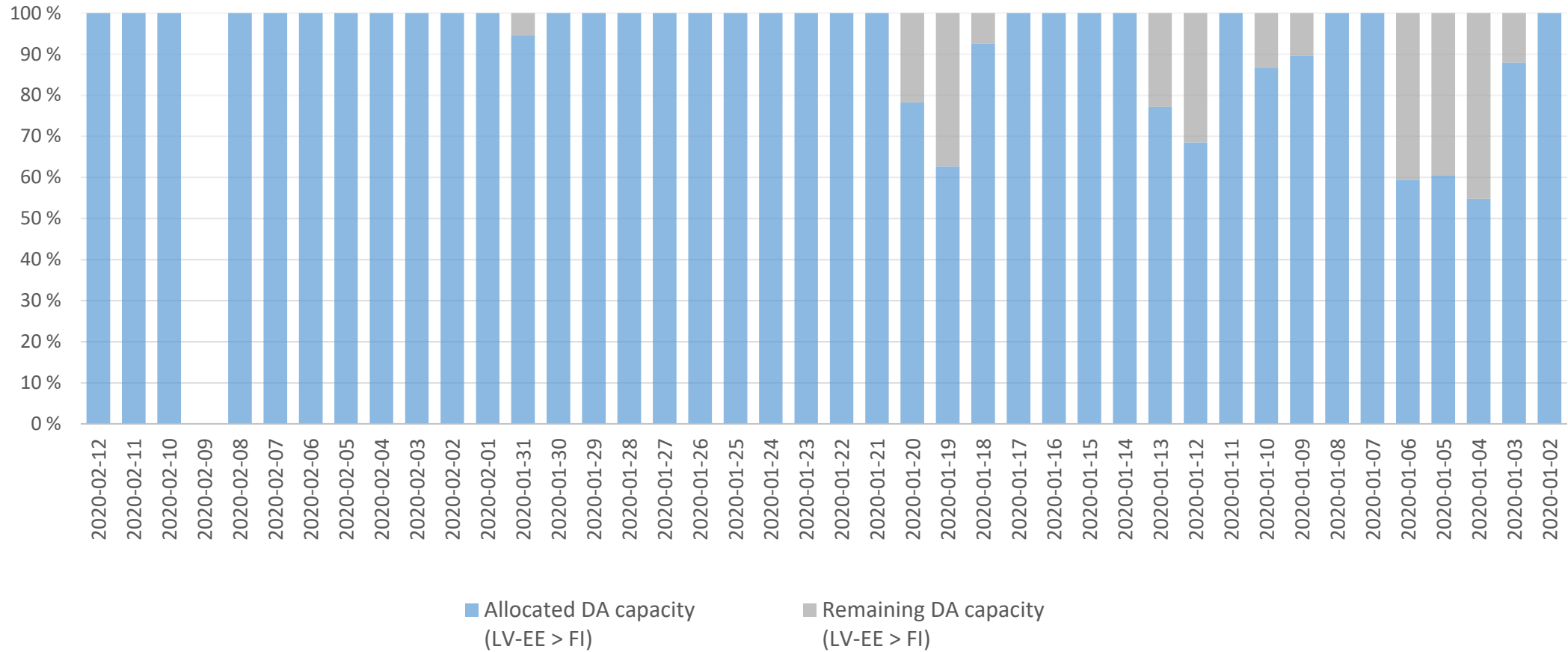
Kiemenai IP:

80% from available (remaining) capacity.

Balticconnector IP:

10 % from technical capacity.

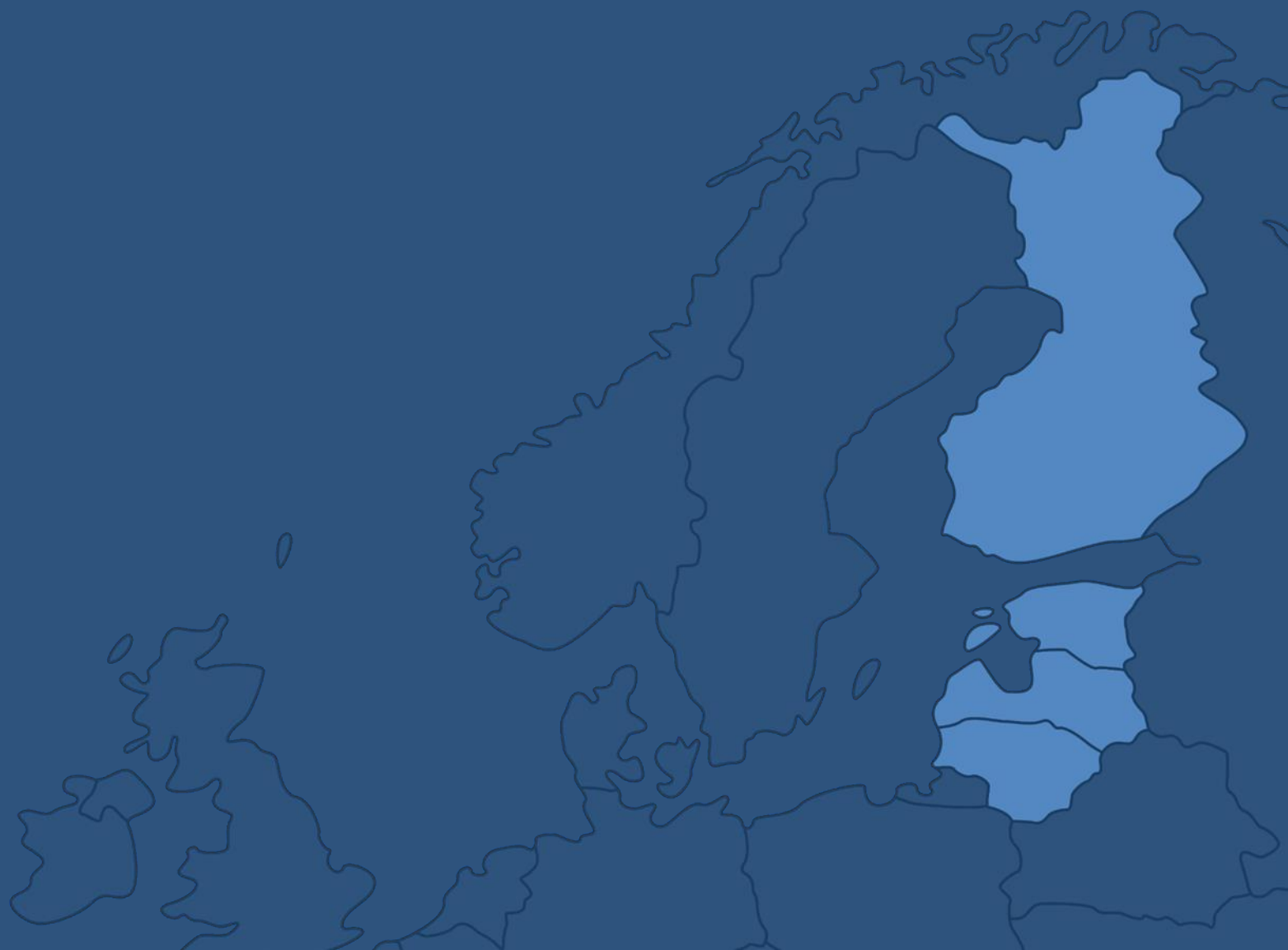
Allocated capacity volumes



What is next?

**Trading process
automation,
and new products
development**

GET Baltic



Thank You

Contact

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www.getbaltic.com

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energiavirasto

Tariff process 2020

Heikki Mannermaa, Accounting Advisor

Reilua energiaa

Reference price methodology

- Finland has adopted a network code on harmonised transmission tariff structures on 1.1.2020 ((EU) 2017/460)
 - transmission tariffs need to be based on a reference price methodology
 - the reference price methodology shall be approved by Energy Authority as set out in Article 27
- In accordance with article 26, one or more consultations shall be carried out by the national regulatory authority or the transmission system operator, as decided by the national regulatory authority
 - Energy Authority has decided that this consultation shall be carried out by Gasgrid Finland Oy
 - Upon launching the consultation, TSO also forwards the consultation documents to ACER

Reference price methodology

- In accordance with Article 28, at the same time as the consultation is carried out, the Energy Authority shall conduct a consultation with the national regulatory authorities of all directly connected Member States and the relevant stakeholders on the following:
 - The level of multipliers
 - The level of seasonal factors
 - The level of discounts

Consultation

- The consultation will be carried out in Finnish and English
- The consultation shall be open at least two months
- Within one month after consultation has ended TSO shall publish the consultation responses and their summary

The content of consultation

- The consultation shall include:
 - the description of the proposed reference price methodology
 - the justification of the parameters used that are related to the technical characteristics of the system
 - the value of the proposed adjustments for capacity-based transmission tariffs (Article 9)
 - the indicative reference prices
 - the results, the components and the details of these components for the cost allocation assessments (Article 5)
 - the assessment of the proposed reference price methodology (Article 7)
 - the comparison against CWD-model

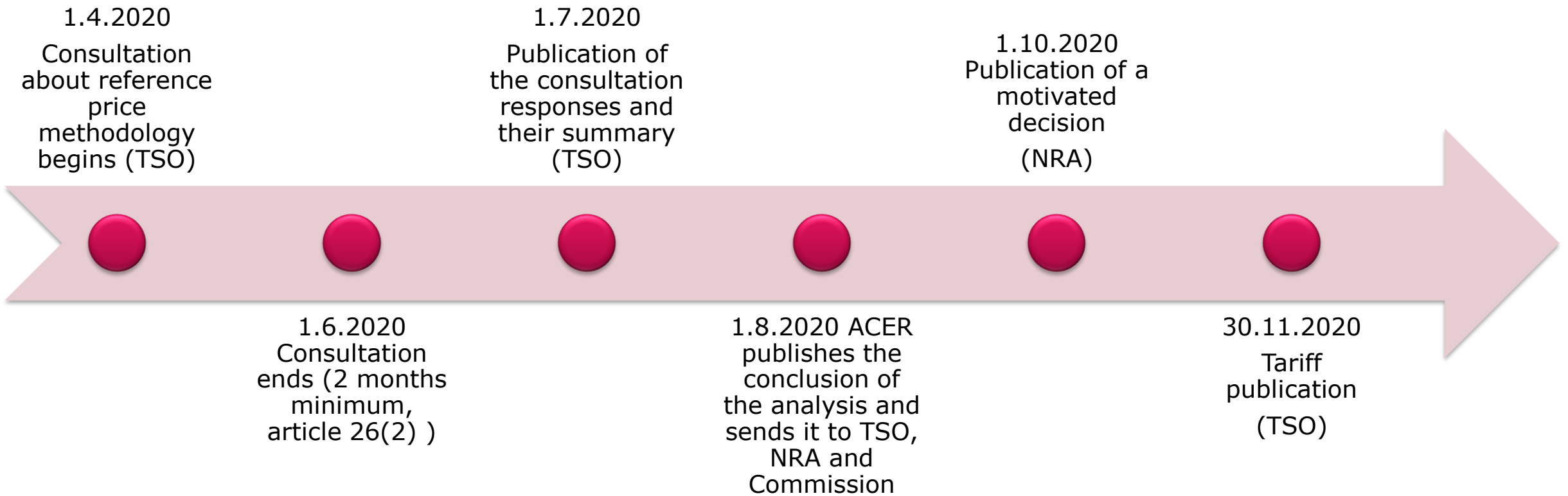
The content of consultation

- The consultation shall include:
 - the allowed revenue of the transmission system operator;
 - the transmission services revenue;
 - the following ratios
 - capacity-commodity split
 - entry-exit split
 - intra-system/cross-system split

The content of consultation

- The consultation shall include
 - commodity based transmission tariffs
 - the manner in which they are set
 - the share of the allowed revenue forecasted to be recovered from such tariffs
 - the indicative commodity-based transmission tariff
 - non-transmission services
 - the non-transmission service tariff methodology
 - the share of the allowed revenue forecasted to be recovered from such tariffs
 - the manner in which the associated non-transmission services revenue is reconciled
 - the indicative non-transmission tariffs

Timetable



Entry-/Exit tariffs for 2020

- Later in this year Energy Authority will launch a consultation about gas transmission tariffs and other terms at international entry-/exit points in accordance with Gas Market Act 100 §
- After consultation Energy Authority will give a motivated decision about these entry-/exit tariffs and other terms
- TSO shall publish these tariffs latest 30.11.2020

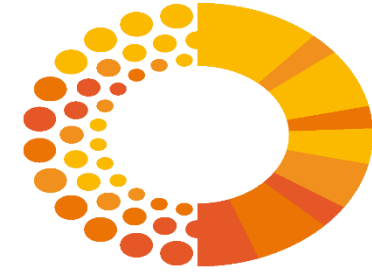
Thank you!

Heikki Mannermaa
Accounting Advisor

heikki.mannermaa@energiavirasto.fi



energiavirasto



energy authority

Approval of the market terms and conditions in 2020

12.2.2020

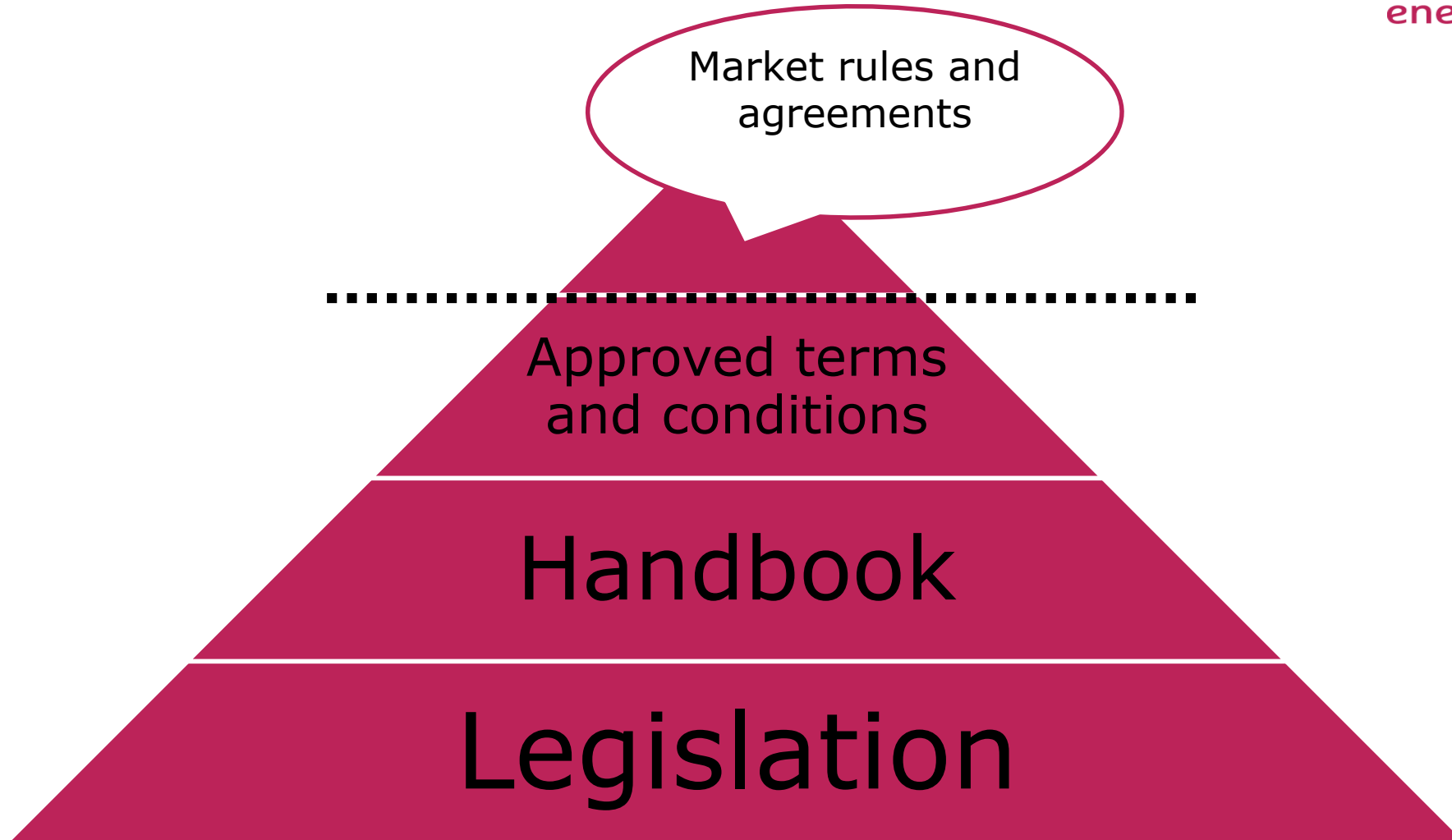
Meri-Katriina Pyhäranta

Fair energy

Hierarchy of rules



energy authority



Legislation and regulation



energy authority



Gasgrid -portal

Datahu

News Our Services Gas Market Gas Network Our Company

Natural Gas Market Act

Government Decree on the Settlement and Measurement of Natural Gas Delivery

Gas market terms and conditions

Natural Gas Market Directive of the European Parliament and of the Council

Network codes

Gas market terms and conditions

As the regulatory authority, the Energy Authority confirms the terms and conditions for the gas market under the Act on the Regulation of the Electricity and Gas Markets (590/2013). The market rules are subordinate to the gas market terms and conditions and, under the Market Regulation Act, the Energy Authority may address any violations of the terms and conditions. In terms of content, the market rules are larger entities from which components under the Market Regulation Act have been formulated into separate documents containing terms and conditions.

- Terms and Conditions of Transmission Service ([confirmation decision](#))
- Terms and Condition of Balancing ([confirmation decision](#))
- Terms and Conditions of Retail Market Balance Settlement ([confirmation decision](#))
- Terms and Conditions of Capacity Allocation Mechanism Applied at the Balticconnector Interconnection Point ([confirmation decision](#))

Approval of the terms and conditions

- Handbook on the Settlement and Measurement of Natural Gas
- Other terms and conditions approved by the Energy Authority
 - Transmission Services
 - Balancing
 - Balance Settlement in the Retail Market
 - Capacity Allocation Mechanism Applied at the Balticconnector Interconnection Point
- Terms and conditions regarding the use of LNG facilities
- Review and approval process starting in the beginning of fall 2020

- Natural Gas Datahub services
 - Government proposal on amending Natural Gas Act
 - Approval of the terms and conditions regarding the natural gas datahub services, as well as the principles determining the fees related to the centralized data information exchange

Thank you!

Meri-Katriina Pyhäranta

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Tel. +358 29 505 0093



energy authority

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Gintaras Buzkys, GET Baltic

Tariff Process 2020 and other current topics from the Finnish Energy Authority,

Heikki Mannermaa and Meri-Katriina Pyhäranta, Energy Authority

Current topics from the Ministry of Economic Affairs and Employment of Finland

Arto Rajala, TEM

A coffee break is included in the program ~ 14.30

16.00

Event ends

Gas Market Info

Gasgrid Finland
12 February 2020

Arto Rajala
Energy Department
Energy Market Division



Ministry of Economic Affairs
and Employment of Finland



Current status

- **Finnish Gasmarket Opening – mission completed successfully, or even better**
- **The steering group, which was set up in summer 2017 to coordinate market development work, with representation from Gasum, Baltic Connector, Energy Authority and Ministry also completed its work in December**
- **The first stage reached, but the work continues**
- **A new steering group was set up to continue the coordination work, as the old steering group proved to be a very useful instrument and a gathering force in very complex project implementation**
 - Adoption of more strategic approach in market development
 - Composition:
 - Arto Rajala, Elina Hautakangas, Ministry
 - Anni Sarvaranta, Ville Rahkonen, Mika Myötyri, Gasgrid Finland
 - Timo Partanen, Meri-Katriina Pyhäranta, Buket Yüksel, Energy Authority



Current status of legislative actions

- **Government bill (HE 104/2019) for amendments for the gas datahub currently in handling of the Parliament's Committee for Economic Affairs**
 - The hearing of competent authorities was very promising
 - The hearing of branch organizations will be held on Friday
 - I expect smooth and brisk handling by the Parliament
- **Government bill for curbing increases in tariffs for electricity distribution**
 - The public hearing will end on Friday
 - The government bill is expected to be submitted to the ministers for decision on week 13
 - Includes a minor amendment also in the regulatory system for gas TSO and DSOs
- **Government bill for implementation of the amended gas directive**
 - Includes only few technical amendments in the Finnish gas legislation
 - Public hearing expected to be launched in early April
 - The government bill is expected to be submitted to the ministers for decision on week 16 at the earliest



Focus on the regional gas market integration

- **The RGMCG made last week a breakthrough in a road map exploring options, steps for decision-making and a timetable for the full market merger of Finland and Lithuania with the regional gas market**
 - Tariffs and 4-country ITC -> towards a joint tariff area for 4 countries
 - Full market merger -> towards a joint balancing area for 4 countries
- **Also LT Ministry, NRA and Amber Grid supported the draft road map**
- **A strong support and commitment by the Commission**
- **I expect the road map to be finalized in couple of weeks**
- **The proposed road map aims at**
 - Exploring a regional market model during 2020
 - Decision on the market model endorsed at political level based on a RGMCG proposal by the end of 2020
 - Necessary decisions to be adopted in Q3-Q4 2020 and Q1-Q2 2021
 - Implementation by the TSOs and the NRAs during 2021
 - A joint tariff area and a full market merger for four countries from 2022



Thank you!

**Contacts for further information:
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Gas Market Info

Finlandia Hall
12th February 2020
#gasgridinfo