

Wholesale gas market forum 25.11.2021



Agenda

- 12:00 Opening and introduction of participants
- Competition law guidelines (informative)
 - Greetings from transmission business unit (informative)
 - Customer Service development (discussion)

Coffee break

- Creditworthiness requirements (discussion)
- Overview concerning future gases (informative)
- Market and Service Development (discussion)

Coffee break

- Market and Service Development continues (discussion)
- Gas market overview (informative, if time)
- Mentimeter and final words

- 15:00 Closure of the Forum



Competition law guidelines for Gasgrid Finland and its market forums

Guidelines for the market forum meetings

1. The meeting materials sent in advance must clearly indicate both the matters for which discussion and the participation of the participants are expected, as well as matters that are for information only.
2. Meeting agenda is adopted by the participants as the rules of procedure of the meeting and is maintained throughout the meeting.
3. Meeting materials are published on Gasgrid Finland's [website](#) simultaneously for members of market forums and all stakeholders.
4. Meetings and meeting materials are to be carefully planned so that they do not deal with non-public or sensitive information.
5. Competition guidelines for meetings are reviewed at regular intervals in market forums, in particular when new members and / or representatives join.
6. No sensitive information nor the accuracy of the information provided to the market by others will be discussed or speculated about at meetings.
7. No more detailed information on Gasgrid Finland's financials than what is publicly available is provided (interim reports and financial statements).
8. Statistical summaries and market reviews do not contain any comments, analyzes or observations that may be used to infer company specific information on future prices or market developments.
9. The meeting will be adjourned, if the conversation moves to a prohibited subject/area.
10. Names of the participants and the topics discussed in the meeting will be recorded in the meeting minutes in a factual and clear manner.

Prohibited restrictions of competition

- Generally speaking, all **agreements, decisions** and **other arrangements** which have as their **object** or **effect** the **prevention, restriction** or **distortion** of competition are prohibited.
- In particular, those which:
 1. directly or indirectly fix purchase or selling prices or any other trading conditions;
 2. limit or control production, markets, technical development, or investment;
 3. share markets or sources of supply;
 4. apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage
- This so-called the cartel prohibition requires, inter alia, that **competitors**:
 - do not exchange, directly or indirectly, **confidential** or **sensitive information** which may **have an effect** on the future competitive and market behavior of the companies.
- However, general cooperation and lobbying to enhance the functioning of the market (e.g. joint market research, joint preparation of general rules of the game affecting the functioning of the market) may be allowed under certain conditions.

Competitively sensitive information

- Generally, information that **is not available** from public sources is considered sensitive, such as:
 - purchasing areas, sales areas;
 - market share information;
 - sales volumes;
 - cost structures;
 - information about customers and their purchases;
 - information relating to tenders; and
 - customer-specific discounts or discount policies.
 - The more **detailed, company-specific**, and **up-to-date** the information, the more likely the information is to be **considered sensitive**.
- In the **context** of Gasgrid Finland's market forums:
 - Unpublished information, such as:
 - gas sales and purchase prices or information from which prices can be deduced;
 - gas production volumes, production plans, maintenance, etc. decommissioning plans, investment plans, plant decommissioning plans;
 - gas consumption plans, expansion / reduction plans affecting consumption;
 - Gas import / export plans;
 - Gas transmission disruptions, planned outages not announced to the market, network construction plans.

Ensuring compliance with the guidelines




Guidelines are reviewed in the market forums



New members must always familiarize themselves with the guidelines



Compliance is supervised, in particular, by the chairperson of the market forums and the Gasgrid Finland staff participating in the meetings



Greetings from transmission business unit

Greetings to gas market parties

- General from Transmission BU – New persons have joined to Gasgrid team
 - Gas Market Unit:
 - Esa Hallivuori – VP, Head of Gas Market Unit
 - Heli Haapea – Service Manager, Guarantee of Origin Services
 - Niina Heiskanen – Customer Service Manager
 - Research, Development and Innovation Unit:
 - Venla Partanen – Development Engineer
- Gas Market Unit - Focus areas on 2022
 - Implementation of new Customer service process and procedures during H1/2022
 - Implementation of the Guarantee of Origin registry and ramp-up the services by 1st of April 2022
 - Internal regulatory compliance review and development plan
 - Contract renewal process:
 - Connection Agreements Q4/2021 - Q1/2022 – All physical connection points and the relevant appendixes including the utilities compensation
 - Framework agreements Q1/2022 – Q2/2022 – All contracts between the TSO and market parties will be reviewed and re-signed

Greetings to gas market parties

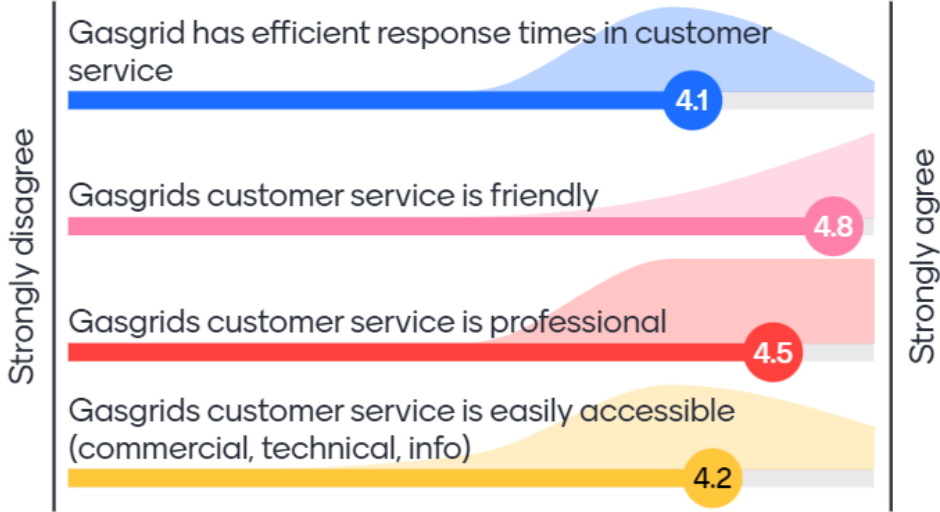
- **Market consultations H2/2021**
 - **Completed** – Tariff consultation process is completed. Gasgrid has received Energy Authority's decision on 23rd of November 2021 regarding the tariff coefficients, seasonal factors and price reductions related to transmission services. Revised tariffs will be published 26th of November 2021 (Today) on Gasgrid website.
 - **Completed** – Consultation regarding the Transmission service Terms and Conditions has ended. Gasgrid has received Energy Authority's decision on 24th of November 2021 regarding the Transmission terms and Conditions. Revised terms will be published no later than 1st of December 2021.
 - **Ongoing** – Public hearing regarding Baltic connector Terms and Conditions has ended. The revised terms are currently under Authority review. Terms will be confirmed and published no later than 1st of December 2021. Presentation regarding the consultation and discussion point later during the event.
- **Foreseen market consultations 2022**
 - FI – EST – LV – LT TSO's have jointly initiated a process targeting to implement a new ITC (Inter TSO Compensation) model
 - The process includes NRA's review and public consultation process. The public consultation process is planned to be started during December 2021 and completed by the end of Q1/2022. Target to the implementation is set to 1st of January 2023.
 - As a one part of the regulatory compliance review process Gasgrid will review the existing Balance management procedures
 - The review process might initiate a need to update the existing Terms and Conditions regarding Balancing services
 - Possible changes of Terms and conditions would initiate a public hearing process



Customer Service Development

Questionnaire

Evaluate next claims



Feedback and development ideas to customer service

Add the main contacts for different topics to your front page of portal

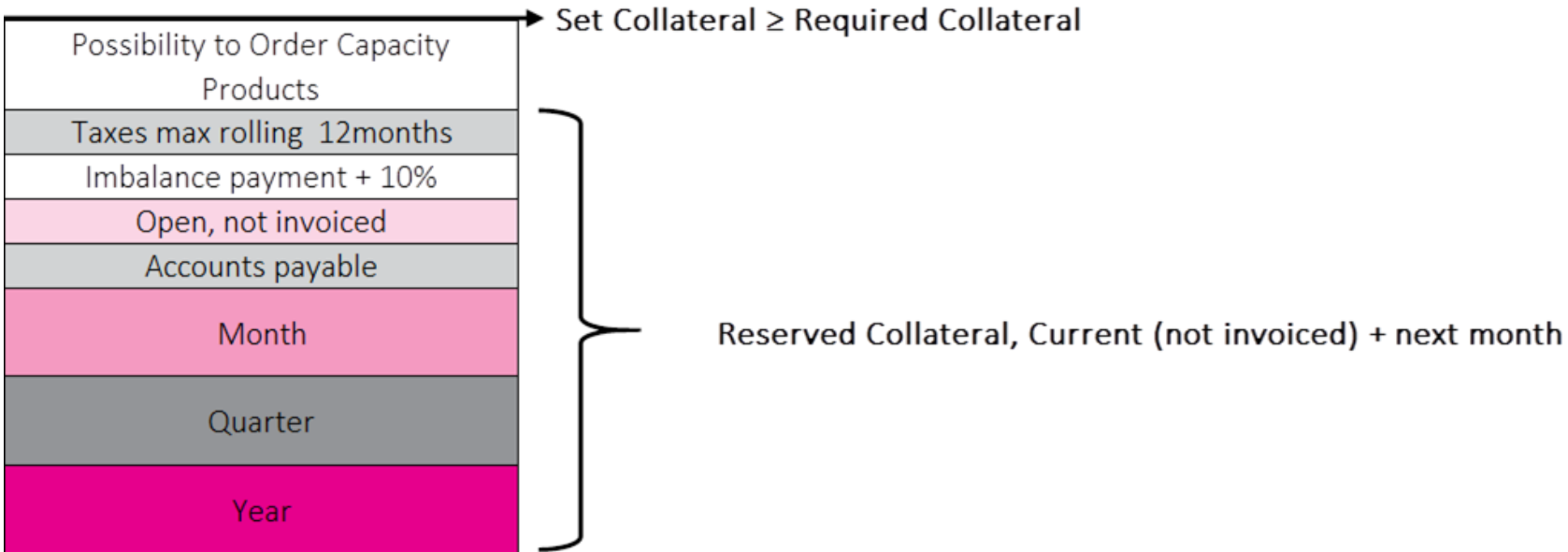
Important to go through new agreements with the customers.



Creditworthiness requirements– Gasgrid Finland Oy

Update on the collateral process (30.9.2021)

COLLATERAL PROCESS GASGRID FINLAND OY



Required Collateral = Historical rolling 12 months maximum invoiced capacity x 1,5 + (historical rolling 12 months maximum taxes invoiced + (imbalancepayments + 10%))

Collateral by market roles

Collateral type	Shipper/Trader	Balance responsible Shipper/Trader	Transmission network end user	Distribution system operator
Capacity invoice (rolling 12 months) multiplied by 1,5	X			
Tax invoice (rolling 12 months)			X	X
Imbalance payments + 10%		X		

Collateral mechanisms

- The Transmission System Operator with System Responsibility shall accept as security
 - on-demand guarantees of an A-rated (Moody's or Standard & Poors) financial institution registered in an EU Member State
 - cash deposits into a bank account designated by the Transmission System Operator with System Responsibility.
- Market Participant can also monitor and evaluate the efficiency of the free collateral and regulate the amount of free collateral by paying the invoices which releases the reserved collateral by the amount of the paid invoice

Creditworthiness

The Transmission System Operator with System Responsibility shall have the right to use the security for the payment of any invoice payable by market participants remaining unpaid when **seven days** have elapsed from the due date of the invoice

Security shall be released within 7 days of the completion by the market participant of all of its payments to the Transmission System Operator with System Responsibility and the expiry of the period of notice for the termination of the Framework Agreement.

Collateral process: program and service development

- Email notification monthly to every customers collateral situation (required collateral and reserved collateral)
- Gasgrid Portal development for collateral deposit
- Forecast for collateral demand calculation to customers
- Future development of Gasgrid Portals forecast module



Overview of future gases

Wholesale Market Forum 25.11.2021



Content

- Research, Development and Innovations (RDI) operations at Gasgrid Finland
- RDI activities 2021
- Upcoming RDI activities

RDI operations at Gasgrid Finland

Background and focus areas

- Research, Development and Innovations operations has been launched in autumn 2020.
- From the start until the spring 2021, the principles and structure of RDI operations in Gasgrid Finland were developed.
- Also first RDI projects were planned and executed.

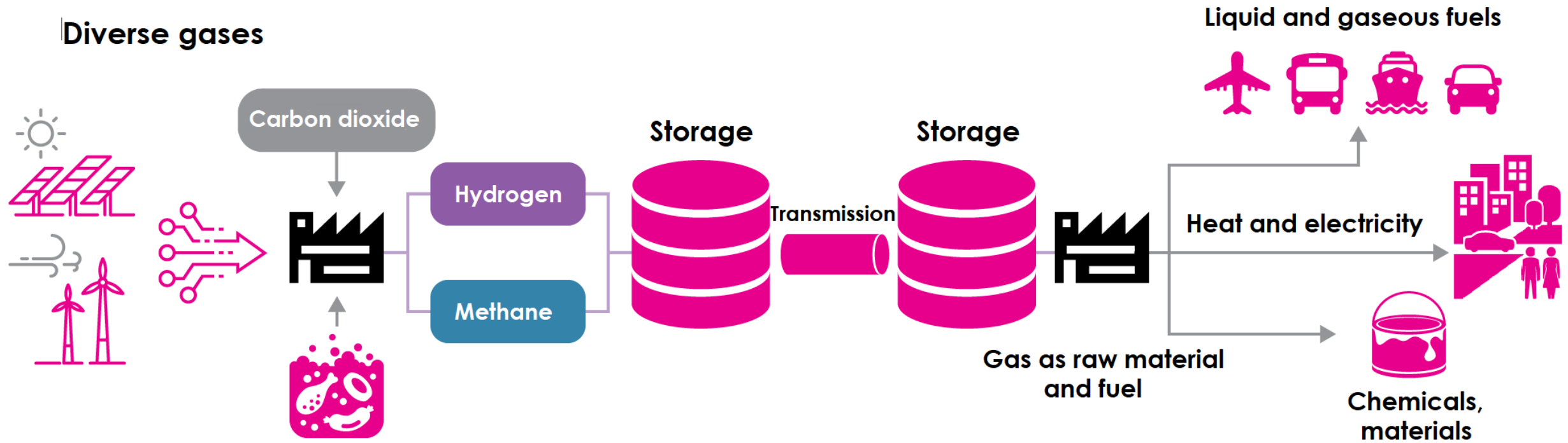


Operating principles

- In RDI activities, our aim is to be an *active and "larger than our size" -actor that is transparent, unbiased, enabling and forward-looking.*
- Our RDI activities are based on *open discussion, networking and cooperation with industry.*
- *We develop products, solutions, services and markets in a customer-oriented manner and aim to act as one of the enablers of energy revolution.*
- We are neutral towards different technologies and promote the operating conditions of the industry by sharing and developing our expertise.
- We support open science approach and publication of RDI project results.
- We are a *reliable and professional partner in co-development projects.*

Diverse gases in the center of RDI operations

Diverse gases





RDI activities 2021

- European Hydrogen Backbone vision work
- Gasgrid-Fingrid research cooperation and wider cooperation as part of the HYGCEL consortium
- Hydrogen injection to natural gas network – cooperation with Baltic Gas-TSOs
- Customer surveys regarding hydrogen development

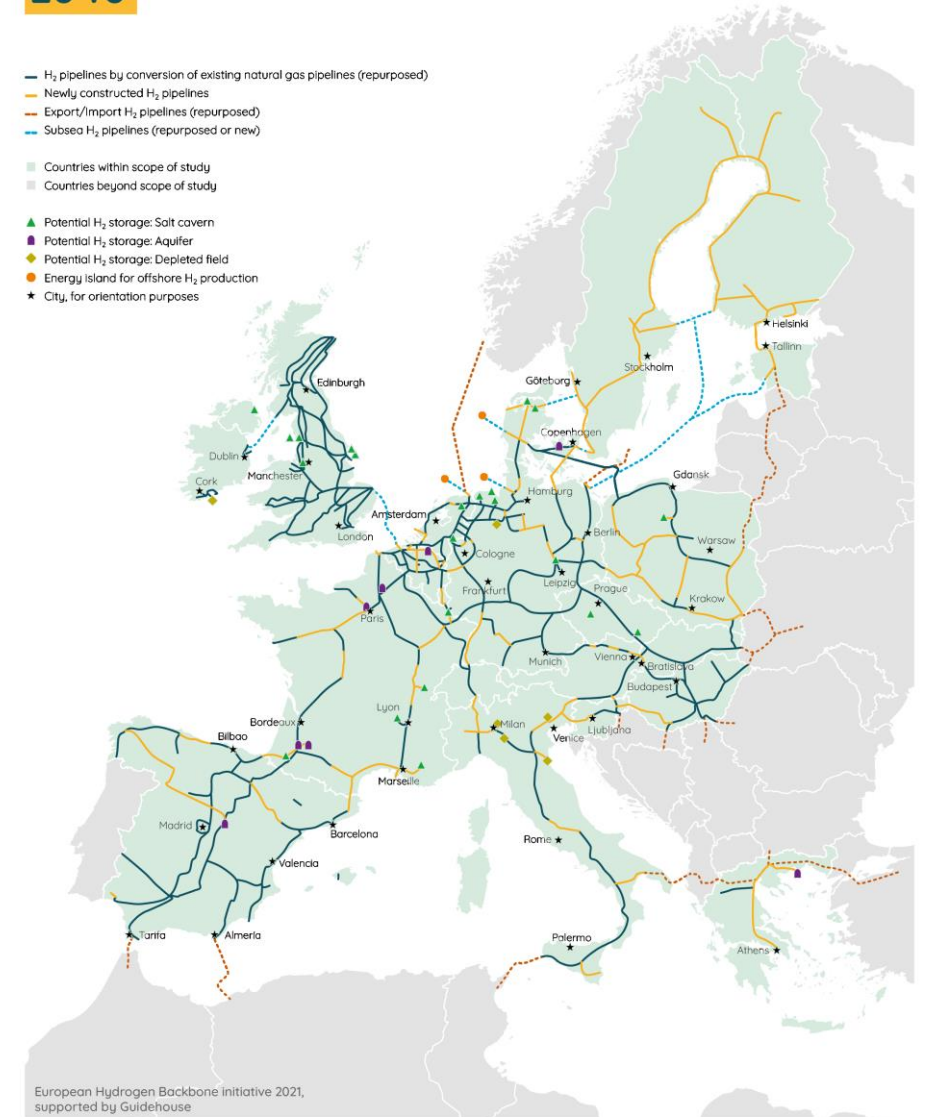
European Hydrogen Backbone

Initiative, that consist of 23 gas-TSOs, aims to study and promote the development of infrastructure to support the hydrogen economy

- 2021 activities
 - Vision for trans-European hydrogen network by 2040
 - Gasgrid took part to the vision work and created a vision for hydrogen network development in Finland – Feedback regarding the sketch was collected via Hydrogen cluster Finland during the spring 2021
 - Thorough analysis of hydrogen demand, supply and transmission competitiveness
- More info: Gas for Climate / European Hydrogen Backbone → Downloads: <https://gasforclimate2050.eu/ehb/>

Figure 4

Mature European Hydrogen Backbone can be created by 2040



Gasgrid-Fingrid cooperation & HYGCEL consortium

Gasgrid and Fingrid started a joint R&D project to identify opportunities for the hydrogen economy in Finland and clarify the role of energy infrastructure as an enabler of the hydrogen economy.

- The joint project examines the future pathways for the development of hydrogen production and consumption in Finland. The scenarios are based on the views gathered from stakeholders.
- The aim is to concretely identify the further developments that will be needed to enable the hydrogen economy from the standpoint of energy systems and market development.
- In addition, the project is studying the feasibility of building a hydrogen transmission network and developing the foundations for a hydrogen market and sector integration.
- The project's key results will be published.
- The project will be completed by the end of 2022.

Hydrogen and Carbon Value Chains in Green Electrification so called HYGCEL consortium

- The public research investigates energy system change at the system level and aims to identify Finland's competitive edges. In addition, study aims to find out how new infrastructure should be built in an optimal way, and which value chains will be best suited for Finland.
- The public research project is led by LUT together with the University of Tampere and the University of Eastern Finland.
- The consortium consists of companies ABB, St1, Sumitomo, Gasgrid Finland, Fingrid and Vaasa ETT with their own projects.
- Additionally, UPM, Valmet, Gasum and Finnsementti are supporting public research.
- 5thInnovation, Ucont, Hexion, FennoSteel, Hannes Snellman and Bird & Bird attorneys are participating in kind.

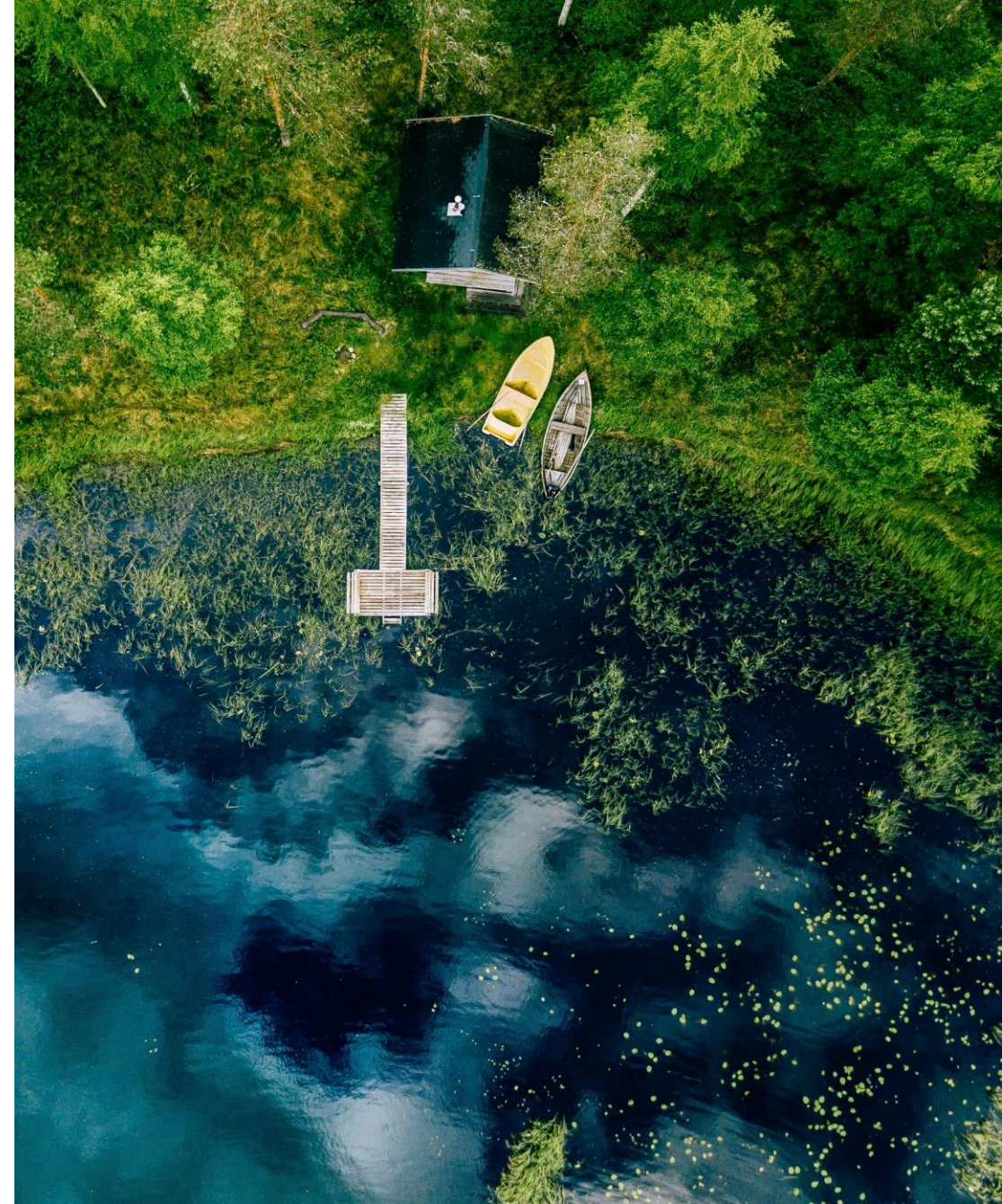
Hydrogen injection to natural gas network

Co-operation with Baltic gas TSOs

- Gas TSOs of Finland, Estonia, Latvia and Lithuania has decided to determine the technical requirements and possible investment effects of hydrogen injection.
- Gas TSOs of Estonia, Finland, Latvia and Lithuania carried out a joint cross-border public procurement procedure for the preparation of a Project Plan.
 - Project Plan will be prepared by the procurement winner GRTGaz's dedicated Research & Innovation Center for Energy (RICE)
 - The Project plan will be ready by the end of 2021
- The project is scheduled to begin in 2022
- The project plan and the R&D project will create the basis for TSOs to develop their infrastructure to enable a wider range of hydrogen injection into the network also considering the requirements of customers and users.

Future RDI actions

- Research around Hydrogen Economy and Sector integration will continue
- Study the potential of biogas, CO₂, synthetic gases and the circular economy
- Advance the research/study activities that possibly arise from the ongoing carbon neutrality roadmap work.
- Process the RDI requirements that arise from the customer and market interface.





Kiitos

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A photograph of an industrial facility, likely a refinery or chemical plant. The image is dominated by large, horizontal red pipes and complex valve assemblies. In the foreground, a large red pipe runs horizontally across the frame. To its left, a vertical pipe features a large, red, cylindrical valve actuator. Various smaller pipes, flanges, and instruments are visible throughout the scene. The background shows more industrial structures and a gravel-covered ground. A semi-transparent dark red horizontal band is overlaid across the middle of the image, containing the text "Market and Service Development" in white.

Market and Service Development

Terms and conditions of transmission services & tariffs in 2022

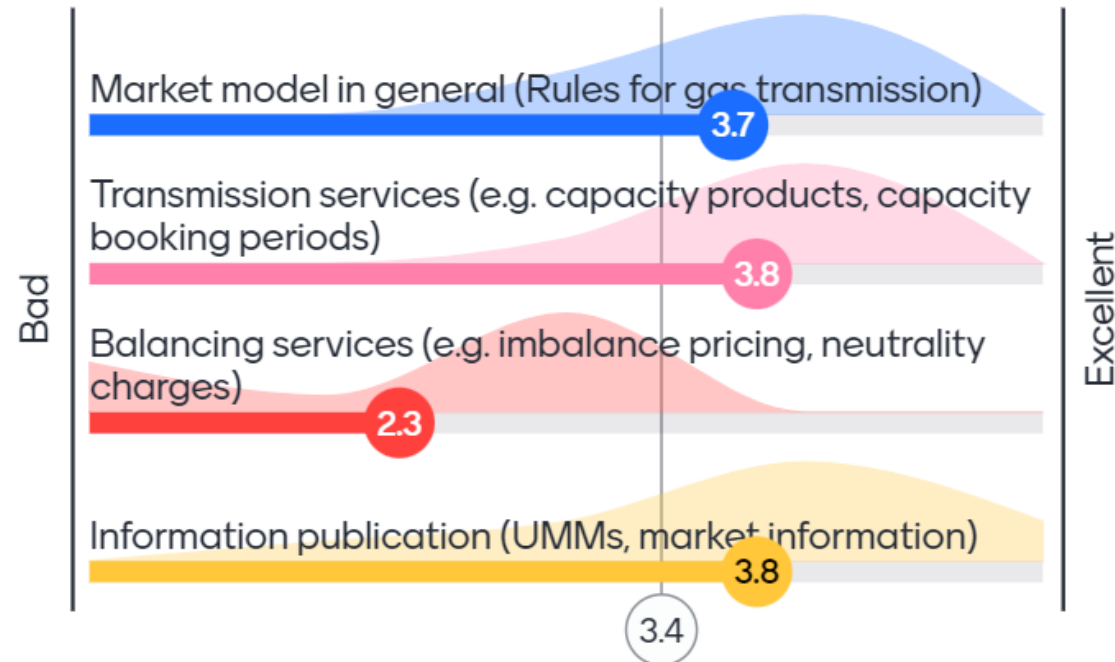
- The Terms and Conditions of Transmission Services will be approved by the Energy Authority by the end of November.
 - The most significant amendment is the change in creditworthiness principles.
- The final transmission and service tariffs for 2022 will be published by tomorrow 26th of November.
 - Entry capacity tariff and its multipliers will be the same as this year. Annual entry capacity is $\approx 0,39$ €/MWh.
 - Exit capacity tariff will decrease. The multipliers will be the same as this year. Annual exit capacity is $\approx 2,29$ €/MWh (in 2021 $\approx 2,87$ €/MWh).
 - Couple of reasons are the high shares of short-term capacity bookings especially in Q1/2021 and higher gas consumption in 2020 compared to the volume used in tariff setting according to the postage stamp methodology.



Questionnaire

Functioning of Finnish gas market

Mentimeter



10

Questionnaire

What is working well in the Finnish wholesale market?

Mentimeter

communication and developments

Clear rules for everybody

TSO responsiveness and communication

Communication

clear transparent rules

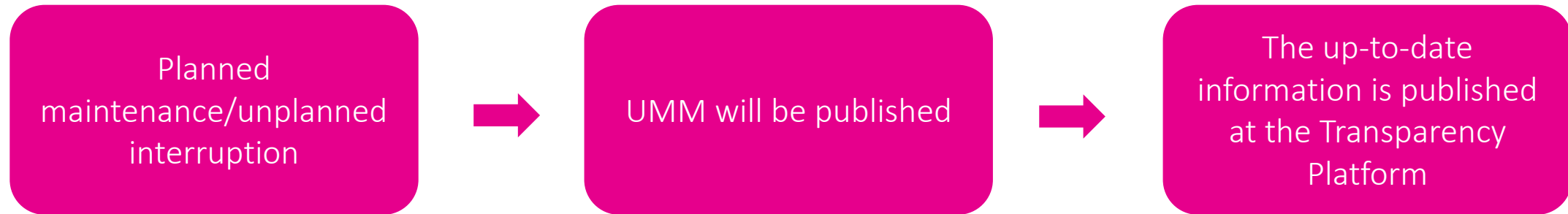
balancing costs

Where do you see room for improvements?

Mentimeter

Balancing pricing is rather exaggerated and not harmonized with Baltics

Technical capacity publication process at Balticconnector



- If the interruption/maintenance is located in Finnish market area, Gasgrid Finland publishes the UMM and updates the values to the Transparency Platform accordingly. If the interruption/maintenance works are performed in Russian gas network impacting on capacities at Imatra entry point, Gasgrid publishes UMM.
- If the interruption/maintenance is located in EE-LV market area, Elering/Conexus publishes the UMM. Gasgrid updates the values to the Transparency Platform accordingly taking into account the change in capacity values due to maintenance/interruption in the neighboring market area.

Technical capacity publication process at Balticconnector

- Maintenance works will be coordinated in Finnish-Baltic region by the end of June each year. The planned maintenance works coordination concerns the following year and the technical capacities for the upcoming year will be updated based on the maintenance plans. The UMMs will be published accordingly.
- According to the Gas Regulation, the planned maintenance works impacting on the technical capacities shall be published at least 42 days in advance. Gasgrid follows the principle where the technical capacities are published without undue delay when the maintenance work is agreed to be performed.
- Predictability and reliability are the principles which will be highlighted in Gasgrid information publication.
- Technical capacities will be published for entry and exit points 10 years ahead meaning both in hourly (kWh/h) and daily resolution (kWh/day).

Message Information

Message ID ⓘ

GAS-UMM-TRANSU-0000000722_001

Event status ⓘ

Active

Publication date/time (UTC) ⓘ

2021-07-16 08:04:59

Type of event ⓘ

Transmission system unavailability

Type of Unavailability ⓘ

Planned

Event start (UTC) ⓘ

2022-05-16 04:00:00

Event stop (UTC) ⓘ

2022-05-23 04:00:00

Capacity

Unit of measurement ⓘ

kWh/h

Unavailable capacity ⓘ

976667 kWh/h

Available capacity ⓘ

2415000 kWh/h

Technical capacity ⓘ

3391667 kWh/h

Additional Information

Affected Asset or Unit ⓘ

Balticconnector EE-FI

Balancing zone ⓘ

66Y-00000000001F

Reason for the unavailability ⓘ

Inkoo compressor station - yearly maintenance

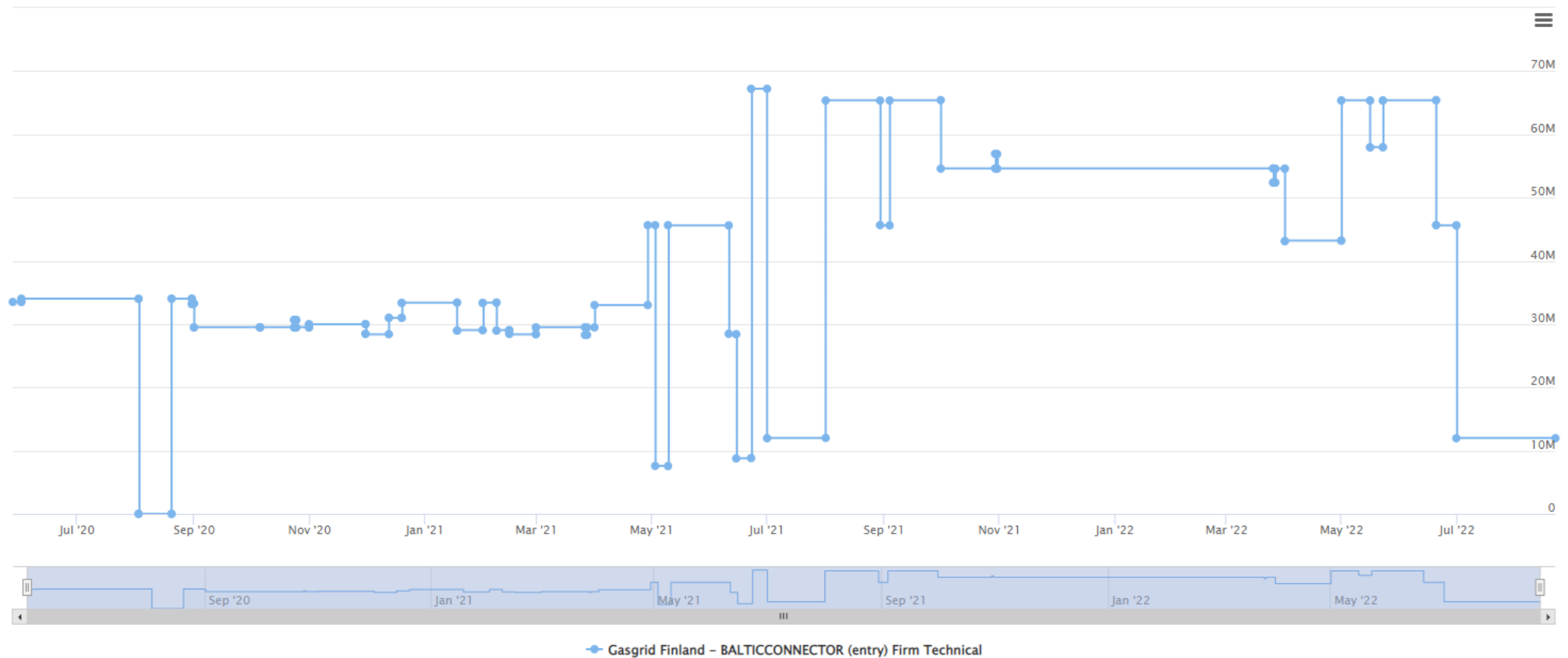
Remarks ⓘ

Affected Asset or Unit EIC ⓘ

21Z0000000004952

Direction EE-FI means entry to Finnish market area and exit from EE-LV market area.

Balticconnector technical capacity at Transparency Platform



<https://transparency.entsog.eu/#/points/data?from=2020-01-01&indicators=Firm%20Technical&points=fi-tso-0003itp-00550entry>

Balticconnector capacity allocation principle

- The Energy Authority organized a public consultation concerning Balticconnector capacity allocation mechanism. The terms and conditions are under Energy Authority's review.
- Based on the coordination between Energy Authority and Gasgrid, several opinions were received concerning the tolerance which will be applicable if Balticconnector is congested. Downward renominations exceeding the tolerance are subject to underutilization fee in case Balticconnector is congested. Based on the opinions received, Gasgrid has proposed the norm to be adjusted.
 - Gasgrid emphasizes that the tolerance will be 50 000 kWh/h in normal operational conditions also in 2022.
 - The TSO has proposed to reserve the right to adjust the tolerance between the range of 10 000 - 50 000 kWh/h, if systematic downward renominations during congestion situation cause uncontrollable physical imbalance leading to the situation where the TSO has to perform physical balancing actions. Reserving the right is a subject which belongs to the basket of system responsibility of the TSO defined in the Finnish Natural gas market act.
 - Due to the capacity with no price, Gasgrid sees the increased risk for such situation during congestion period. However, Gasgrid is not proposing to apply tolerance and underutilization fee when there is no congestion. During congestion, one of Gasgrid's priorities is to ensure high utilization of BC capacity.
 - Deviations in physical and commercial gas transmission volumes at Balticconnector will be allocated to so-called Operational Balancing Account (OBA), which is an account between Gasgrid Finland and the Estonian TSO. The quantities of gas allocated to the OBA shall remain between the limits agreed by the TSOs. If the differences in commercial and physical flows are systematically different, this may result in OBA's operating limits being met and TSO has to start physical balancing action (measures to buy and sell physical gas).
- The confirmation decision will be given by the Energy Authority by 1st of December.

Balticconnector capacity allocation principle

- New functionality will be introduced in Gasgrid Portal. The Portal shows the Technical Capacity of Balticconnector allocated for bilateral trading (= Available Capacity = maximum quantity which may be nominated by the Shipper).
- In the example, the Technical Capacity allocated for bilateral trading is 86,4 GWh/day. Starting from the beginning of 2020, it has been agreed with Elering AS that 90 % of Technical Capacity is allocated by the TSO for bilateral trading. The rest 10 % is allocated for the gas exchange(s).
- Gasgrid will start publishing the shares of Technical capacity allocated for the market participants to be nominated and renominated and the Technical capacity allocated for the gas exchanges(s) on the webpage of the TSO. Any changes in the shares will be published through UMM platform.
- At the Transparency Platform, the total Technical Capacity is published which is in this example 86,4 GWh/day / 0,9 = 96,0 GWh/day

NEW NOMINATION

NOMINATION DETAILS

Point

Baltic Connector

Direction

Entry

Gas delivery date

27.11.2021

Counterparty

☐ External counterparty

Available capacity D-1: 86 400 000 kWh/day
For nominations made before 2021-26-11 15:00

Nominations in Balticconnector have to be equal ("flat") for each effective hour of the gas day (effective hour = hours of the day for which a nomination can be effective excluding lead time).

Note that the shipper's aggregated nominations per direction shall not exceed the technical capacity of Balticconnector.

HOURLY GAS AMOUNT (KWH)

Balticconnector capacity allocation principle

- From the proposed terms and conditions of Balticconnector: *“The Shipper’s aggregated Nominations must not exceed the Technical Capacity allocated for bilateral trading.”*

Case example	Current principle	Principle in 2022
Technical Capacity	50 GWh/day	50 GWh/day
Technical Capacity allocated for bilateral trading	45 GWh/day	45 GWh/day
Technical Capacity allocated for gas exchange(s)	5 GWh/day	5 GWh/day
Maximum quantity which can be nominated by the Shipper	50 GWh/day	45 GWh/day

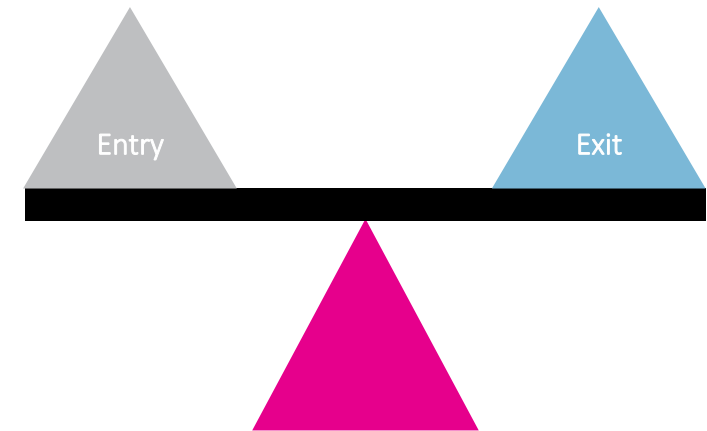
Note that the capacity allocation principle is not proposed to be changed. The only difference is the maximum quantity which can be nominated.

The maximum quantity which can be nominated is proposed to be changed in order to align the maximum quantity which can be nominated to the Technical capacity allocated for bilateral trading by the TSO.

Case example		
Technical capacity	50 GWh/day	Published at the TP; any change in future capacities shall be published through UMM platform and updated to the TP accordingly.
Technical capacity allocated for bilateral trading	45 GWh/day	Shown in Gasgrid Portal; the share shall be published primarily through UMM platform, but also on the gasgrid webpage.
Technical capacity allocated for gas exchange(s)	5 GWh/day	To be implicitly allocated for market participants by GET Baltic; the share shall be published primarily through UMM platform, but also on the gasgrid webpage.

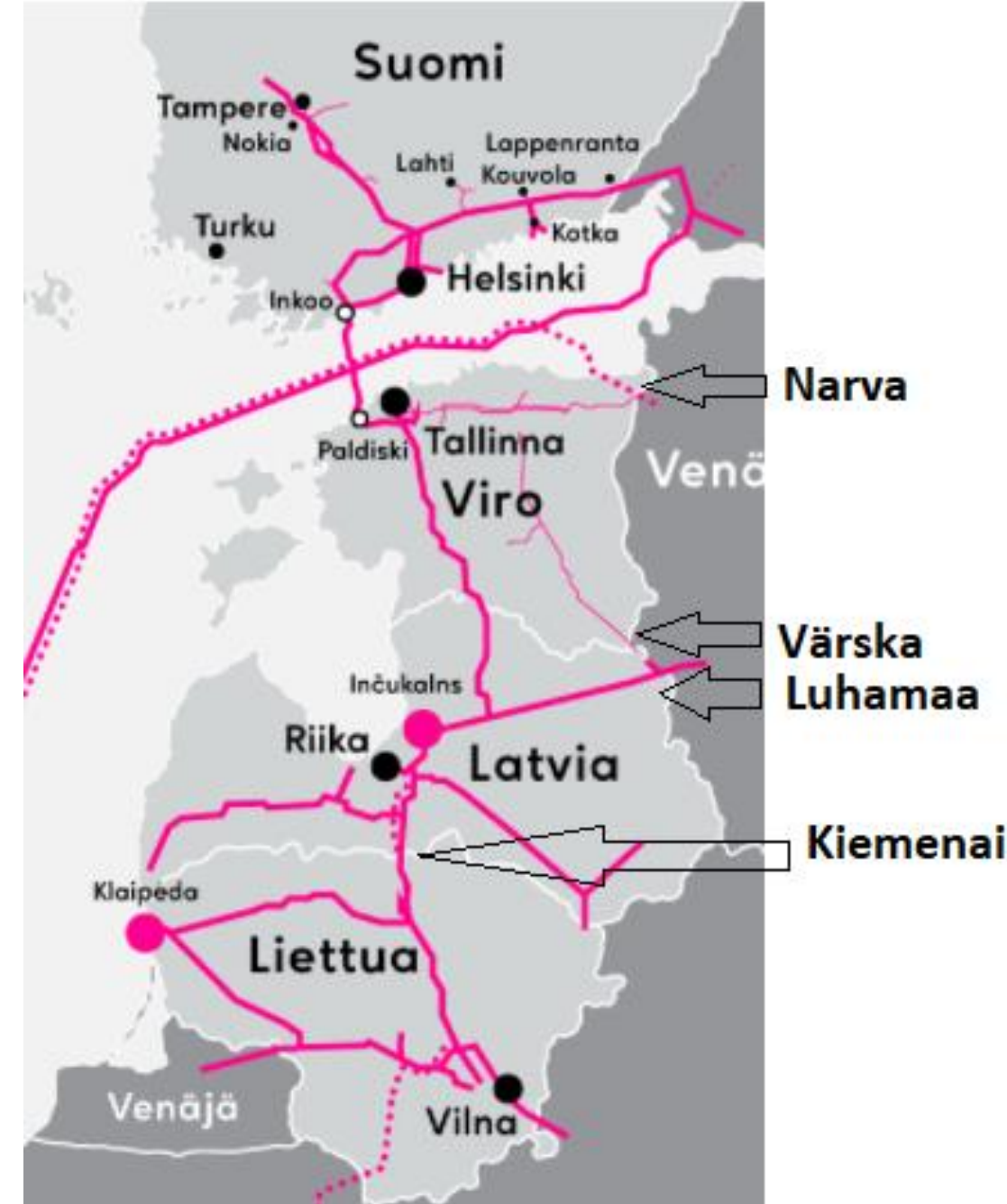
Action plan concerning *balancing services* for 2022

- During 2021 Gasgrid has received several opinions related to balancing services (neutrality charges, imbalance charges).
- Gasgrid has identified the need to assess the current balance management principles as a whole. Thus, the assessment of the current balancing service package and its development have been set in Gasgrid's action plan for 2022.
- Part of the project, imbalance charges principles and neutrality charging principles, among others, shall be assessed.
- Gasgrid will implement the balance management development project in a participatory manner so that market participants will have possibility to provide their views on the topics covered.



Regional market development – 4 country common tariff zone

- The TSOs of Finnish-Baltic region have found a solution for 4 country common tariff zone. The target set by the TSOs is to launch the common tariff zone of FINESTLAT+LIT from the beginning of 2023. Expanded tariff zone means:
 - No transmission tariffs at Kiemenai entry-exit point between Latvia and Lithuania.
 - Harmonised entry tariffs also in Lithuania (discount for Klaipeda LNG terminal will be applied which is taken into account in the Inter-TSO-Compensation (ITC) model).
- The TSOs have submitted application concerning the ITC for the NRAs and relevant stakeholders. The public consultation on the ITC model will be organized starting from December 2021.
- In 2022, after the relevant consultations, ACER will be involved in the process through reference price methodology consultation.
- The negotiation concerning the ITC agreement will begin after the results gathered from the market participants and relevant stakeholders in 2022.

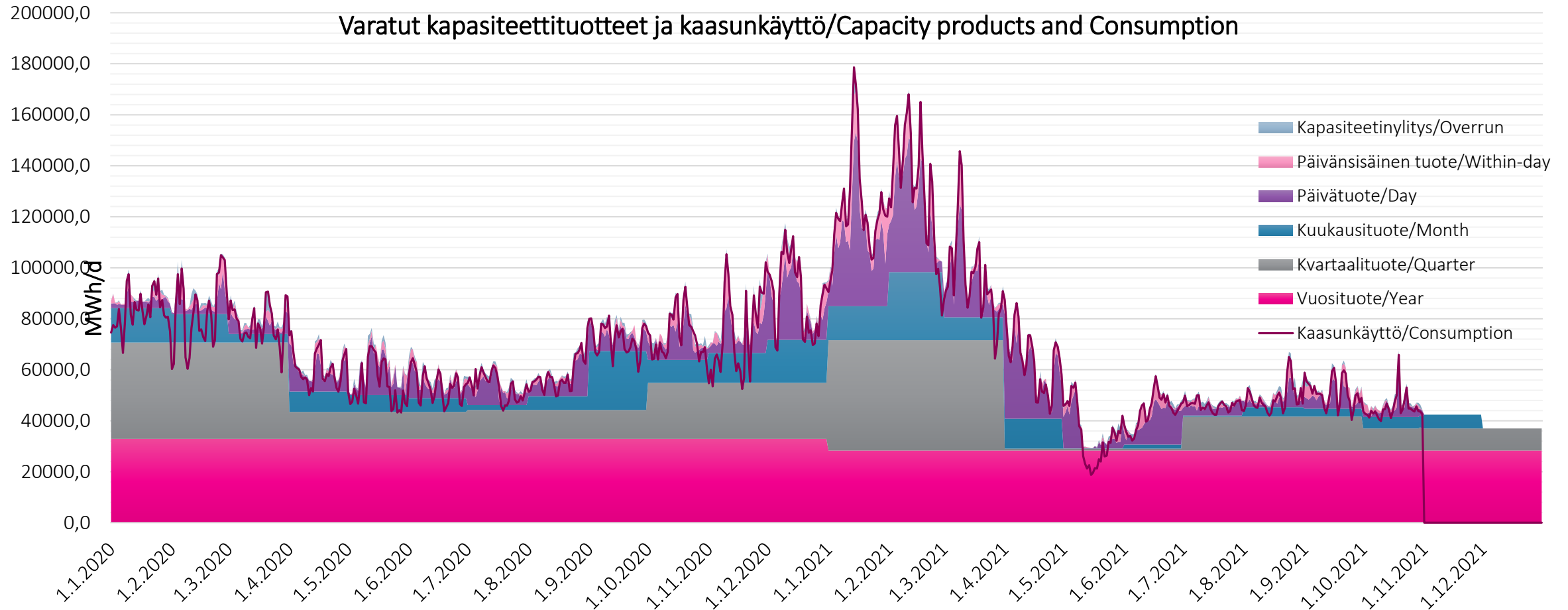


The image shows a complex industrial gas processing system. Large horizontal red pipes dominate the scene, connected by various valves, flanges, and smaller vertical pipes. A prominent pressure gauge is visible on the left side. The equipment is situated outdoors on a gravel surface, with concrete foundations and other industrial structures in the background. The lighting is bright, suggesting a sunny day.

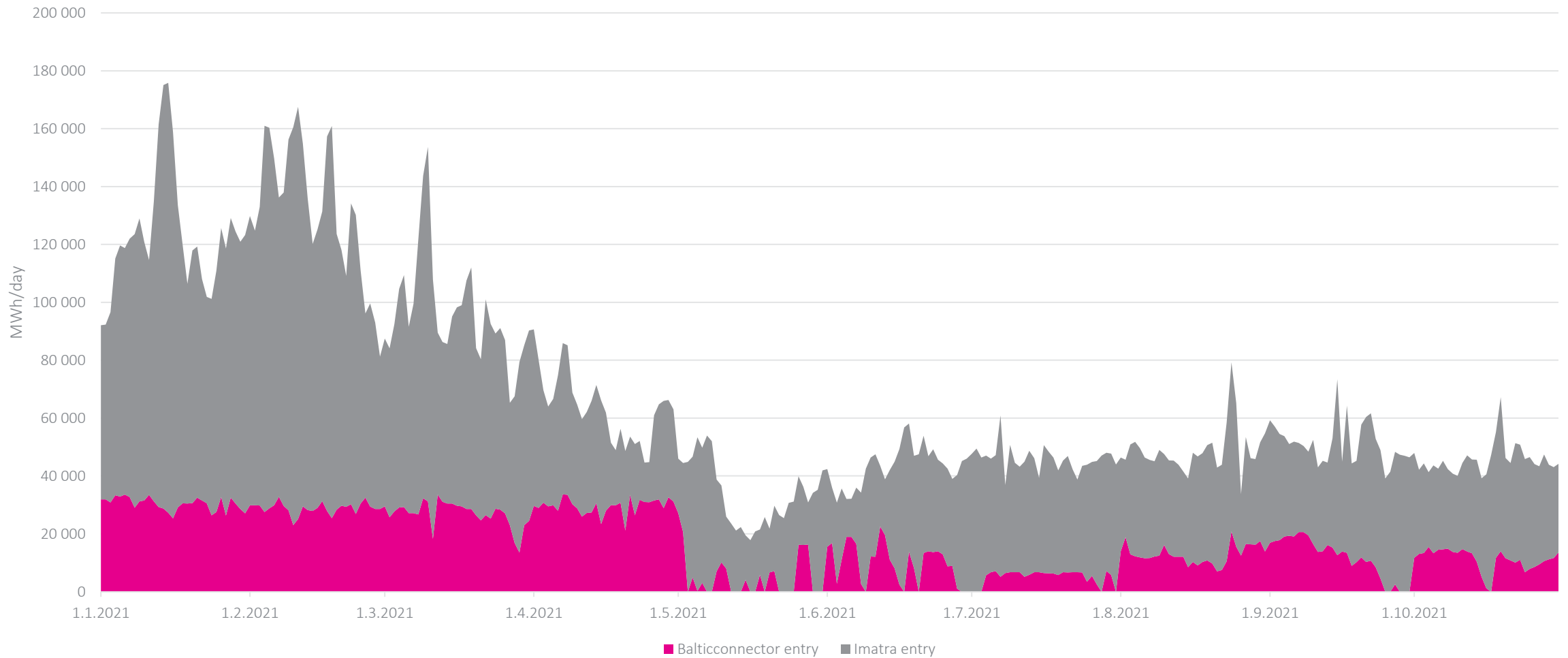
Market data overview

Overview

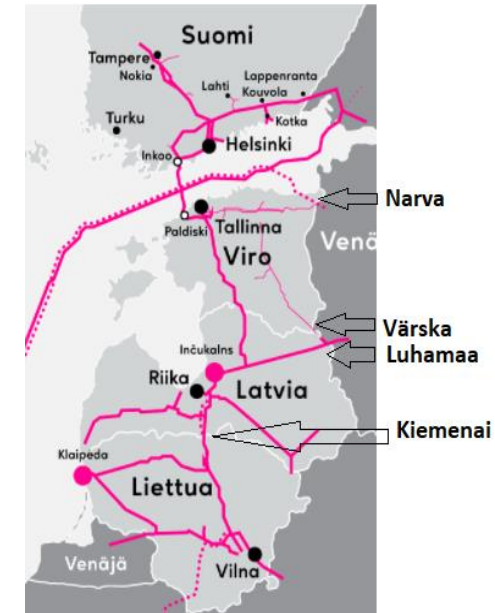
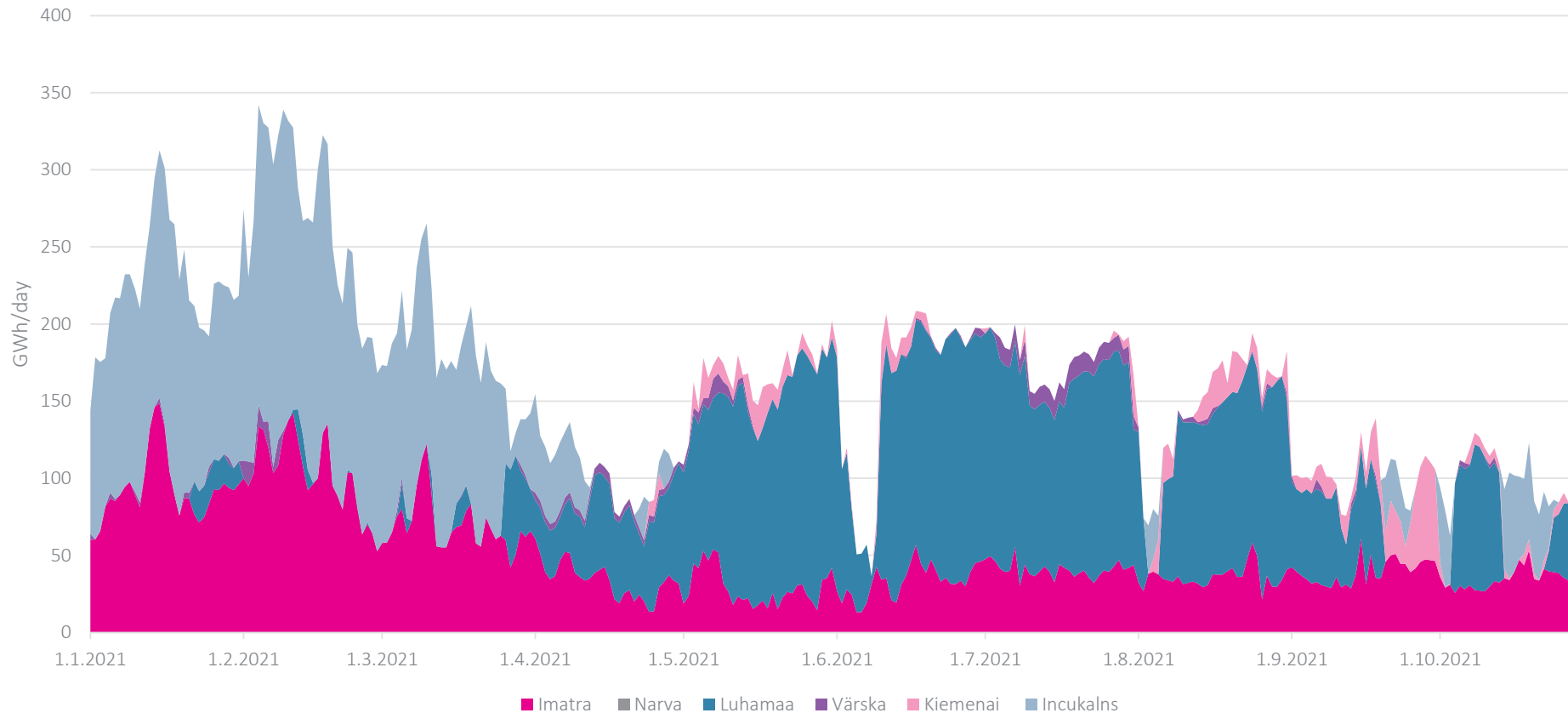
- 1) Gas consumption in October 2021 app. 1,4 TWh (in October 2020 app. 2,3 TWh).
- 2) Cumulative gas consumption in 2021 (1.1.-31.10.2021) app. 20,6 TWh.



Physical entry flows to the Finnish gas system

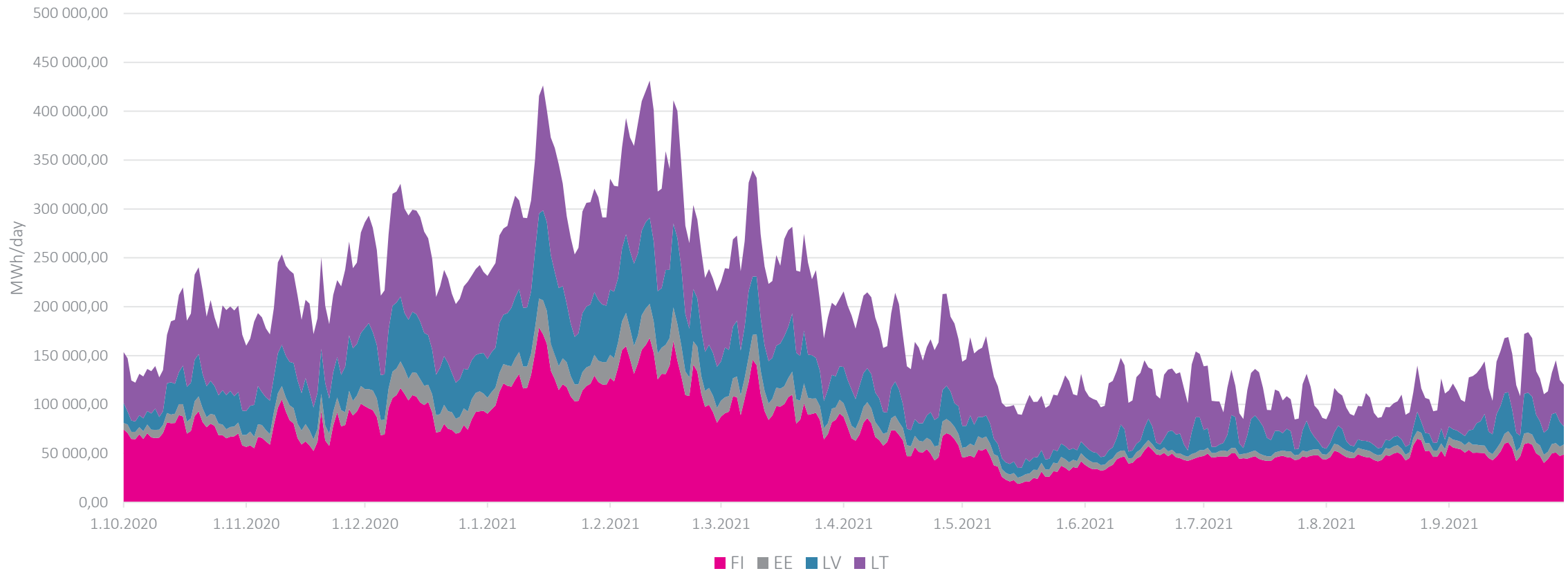


Physical entry quantities to FINESTLAT common tariff zone



Source: ENTSOG Transparency Platform + AGSI

Gas consumption in gas year 2021



FIN: 26,5 TWh
EST: 4,9 TWh

LAT: 12,3 TWh
LIT: 25,9 TWh

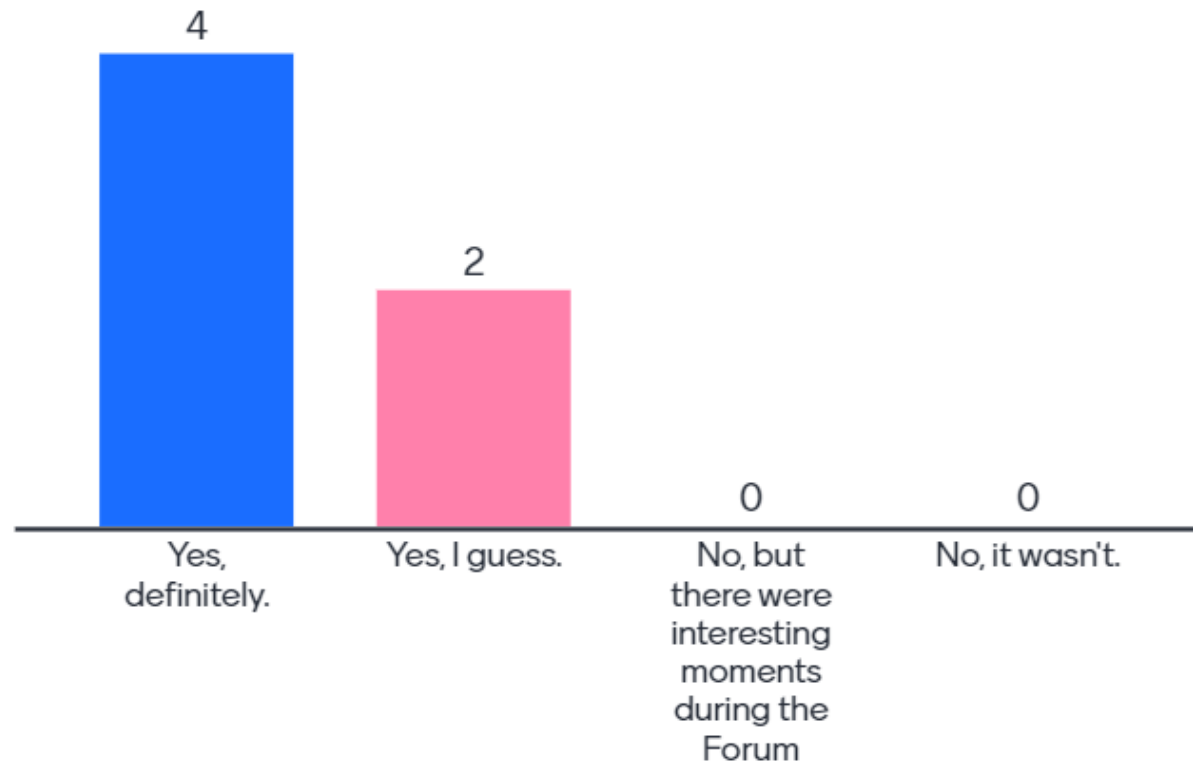
Total in the Finnish-Baltic region:

69,6 TWh

Questionnaire

Was this Forum worth your valuable time?

Mentimeter



The background of the slide is a photograph of industrial gas infrastructure. It features large, horizontal, cylindrical vessels painted in a vibrant red color. These vessels are interconnected by a network of pipes, valves, and smaller components, also in red. Some parts of the equipment are painted a darker shade of red or black. The scene is set outdoors, with a grey metal structure visible in the background. The overall lighting is somewhat dim, suggesting an overcast day or a shaded area.

Thank you very much!

Any market related topics you want to discuss, please contact commercial@gasgrid.fi