

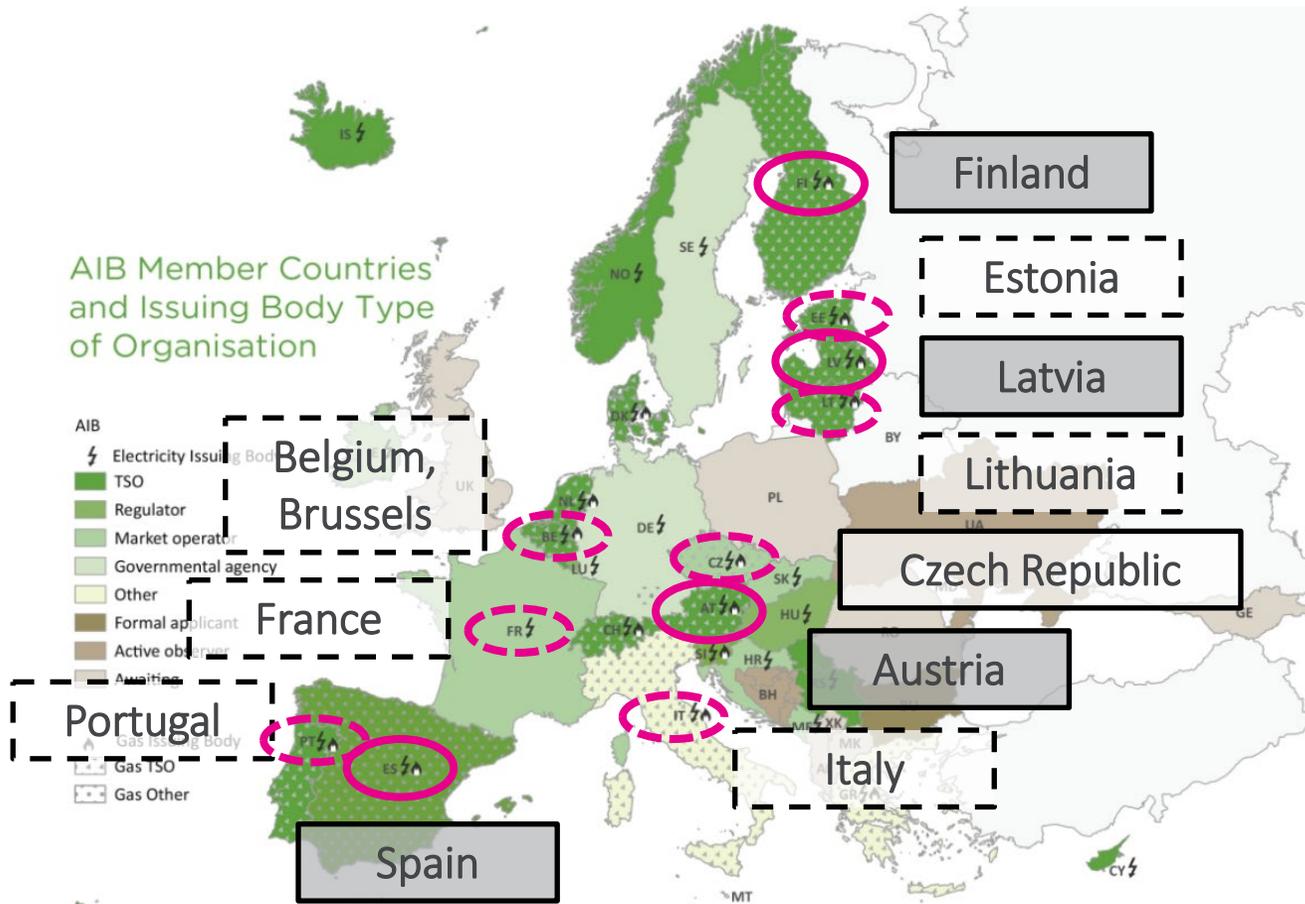
A photograph of an industrial site, possibly a water treatment or energy plant, featuring prominent red pipes and machinery. The site is situated in a natural setting with a dense forest of green trees in the background and a field of tall grasses in the foreground. The scene is captured during the day, with soft lighting. A semi-transparent dark banner is overlaid across the middle of the image, containing the text "Market Development Forum 22.5.2024".

Market Development Forum 22.5.2024

Agenda

- Opening of the Forum
- Guarantees of Origin
- Topicals from Transmission business unit
- Gas market overview
- Terms and Conditions of BC capacity allocation
- Gas market service development
- Topicals from the Inkoo terminal Floating LNG Terminal Finland Satu
- Mentimeter
- Closing of the forum

National and European EECS GOs – Main Points



Lähde: <https://www.aib-net.org/facts/aib-member-countries-regions>

<https://www.aib-net.org/>

- Gasgrid Finland is authorized to issue **both national and European EECS** (European Energy Certificate Systems) GOs for renewable gas and hydrogen.
 - EECS GOs are based on a unified European system developed by the Association of Issuing Bodies (AIB).
 - EECS GOs are *transferred* (import and export) electronically through the AIB Hub between AIB's so-called gas member countries, which are Finland, Latvia, Austria, and Spain (5/2024), Czech Republic is joining next.
- For other GOs, manual Ex-Domain Cancellation can be agreed upon between EU/EEA countries, provided the transferred GOs meet the legislative requirements. Gasgrid Finland handles Ex-Domain Cancellation requests on a case-by-case basis.
 - Contact customerservice@gasgrid.fi well in advance
- GOs are separate from the physical gas flow
 - However, the (tax) benefits of renewable gas can only be obtained if there is a physical connection and sustainable biogas.

A photograph of an industrial gas processing facility at sunset. The scene is dominated by large, horizontal cylindrical vessels and complex piping systems. The sky is a mix of orange and blue, with the sun low on the horizon, creating a lens flare effect. In the foreground, a metal walkway with railings leads towards the equipment. The overall atmosphere is industrial and serene.

Topicals from the Gas Business Unit

Janne Grönlund, SVP Gas Business



Strategic focus areas of the gas business unit



DEVELOPER OF A FLEXIBLE MULTI-GAS PLATFORM

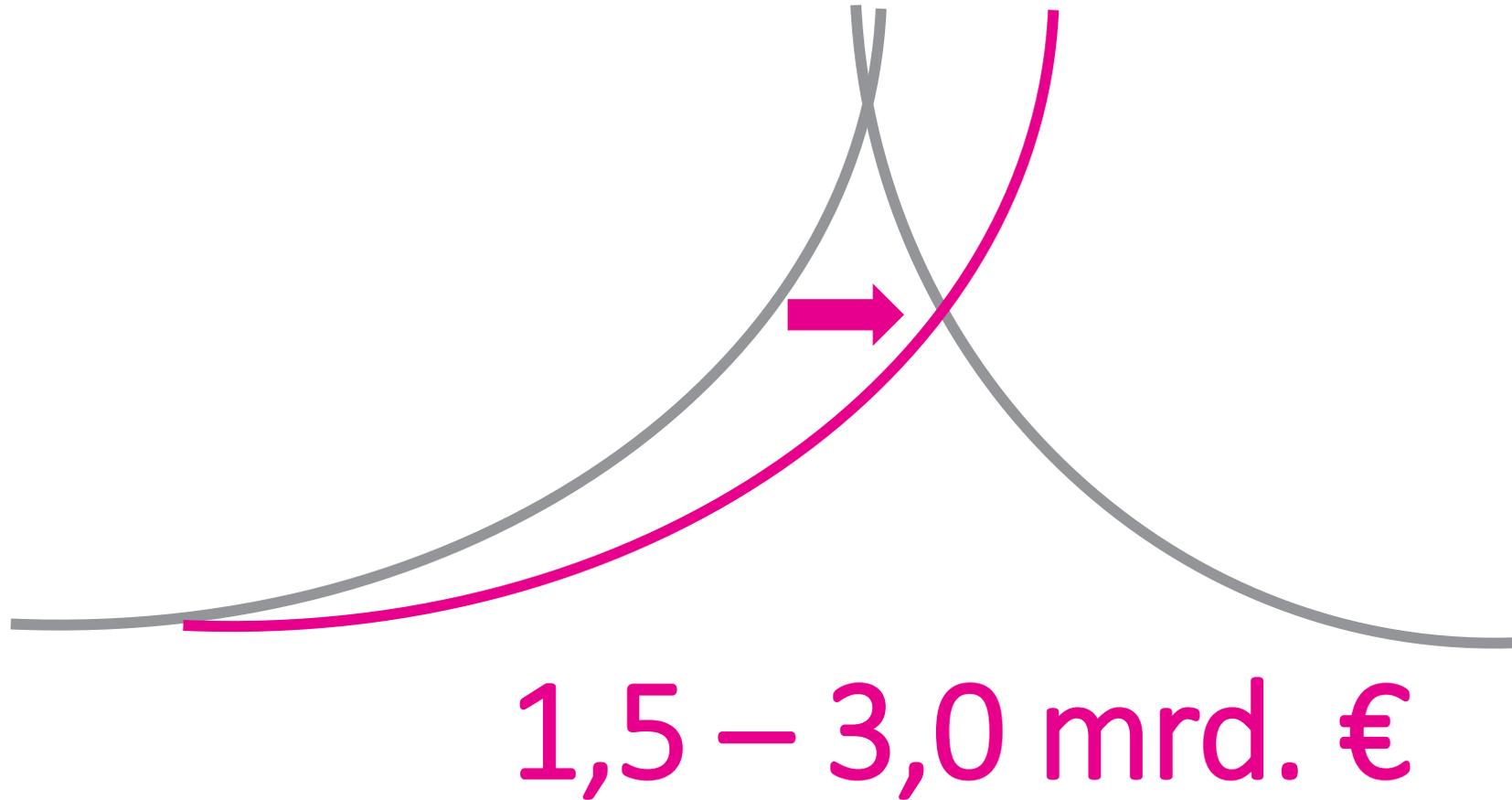
- Our products and services meet the changing needs of our customers and provide security of supply to society.
- We utilize the full potential of the methane network and LNG terminals and are able to meet the flexibility and storage needs of a carbon-neutral energy system.
- We have created technical infrastructure and market services to support the growth of all clean gases towards carbon-neutral Finland 2035.



Gas Business Unit organization

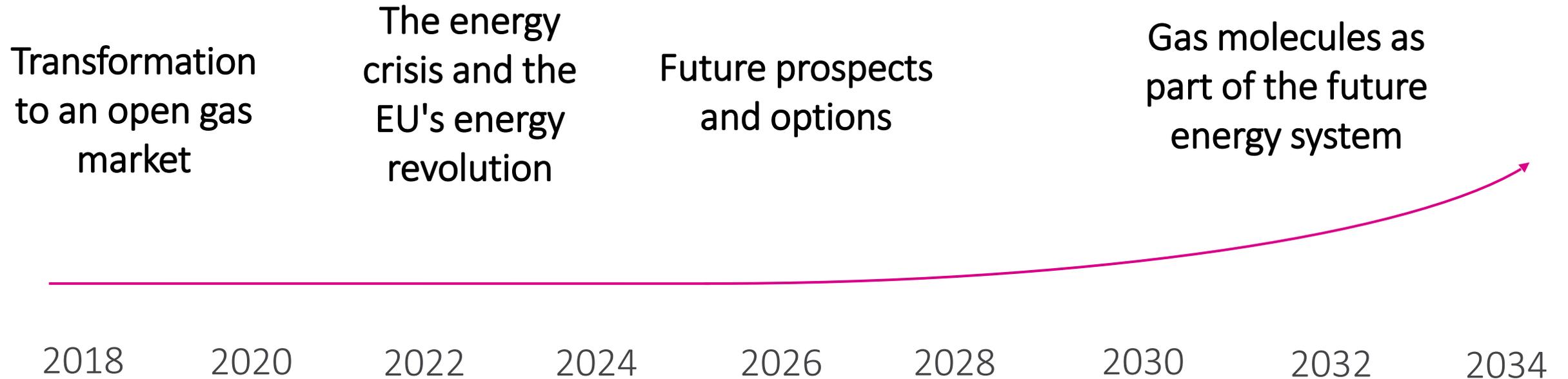


The value of the gas system and the Inkoon LNG terminal to the national economy in the first week of January 2024



The production and supply capacity
of renewable gases will increase
tenfold by 2030

Gas system change as part of the future energy system



The transformation of the gas system into a multi-gas platform supporting the use of clean gases will accelerate as the 2030s approach.

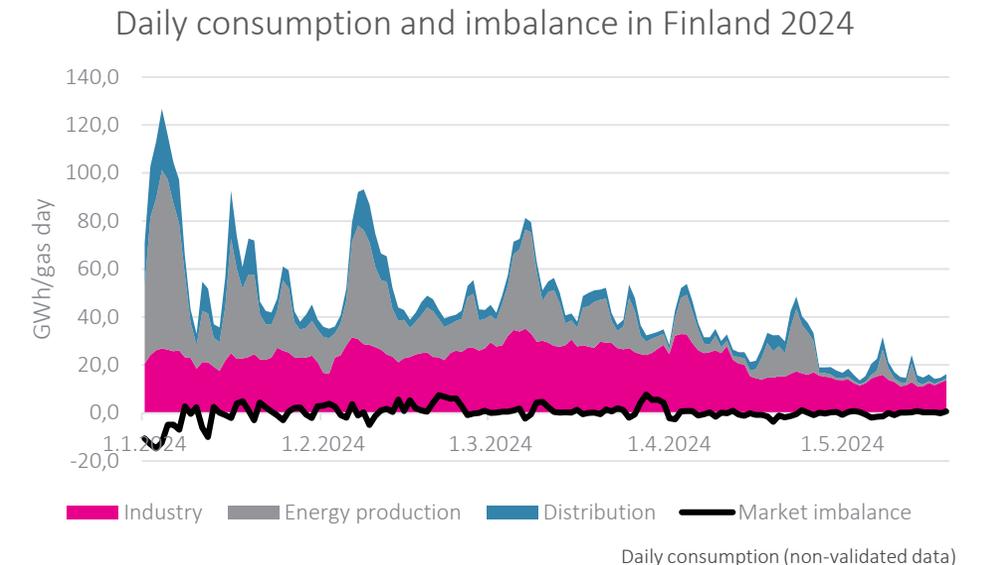
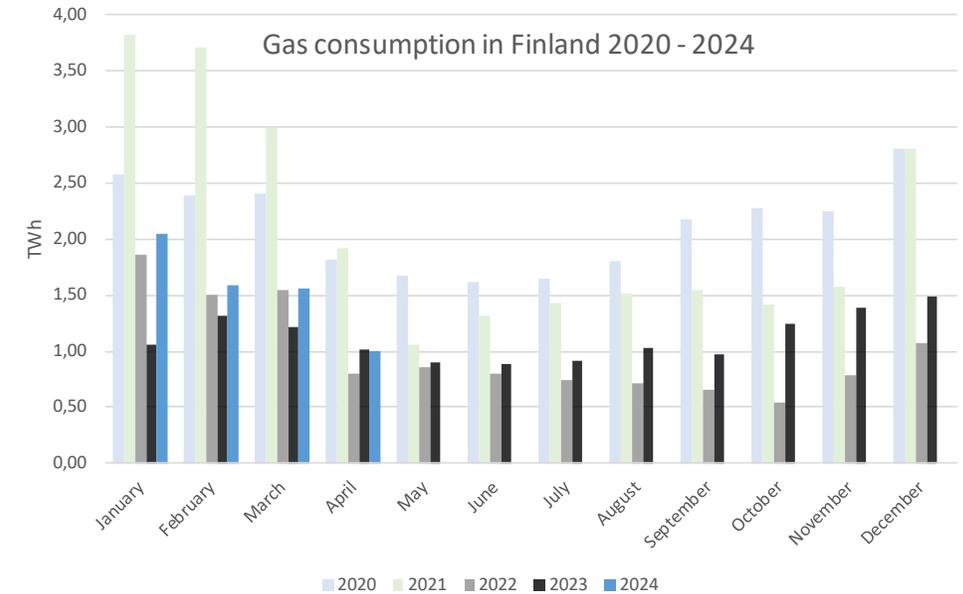
A photograph of an industrial gas processing facility. The scene is dominated by large, dark-colored pipes and machinery. In the foreground, a large pipe curves from the left towards the center. To the right, a large cylindrical vessel is visible. The background shows a clear sky with a bright sun setting,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

Gas Market Overview

Aaro Piirainen, Gas Market Specialist

Gas market overview

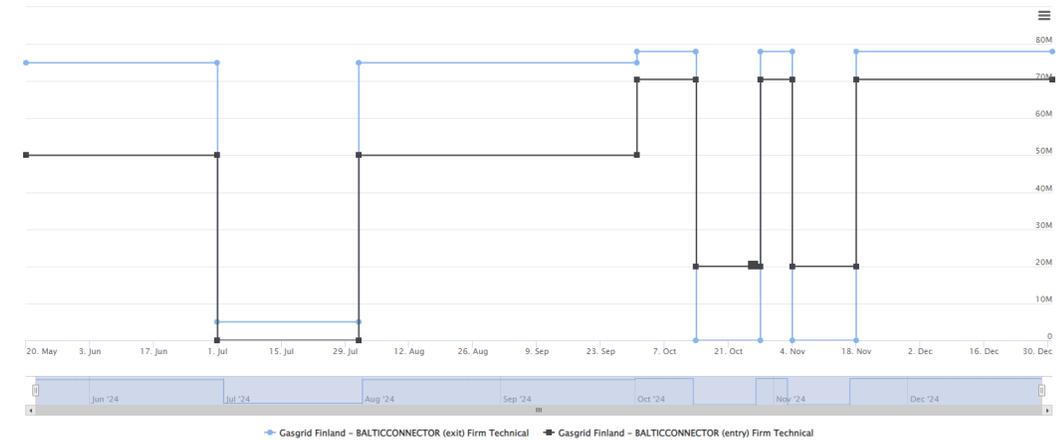
- Finnish consumption has increased this year compared to 2022/2023 levels, but remains lower than pre-energy crisis levels
 - Q1/24: +45 % vs Q1/23 and +6 % vs Q1/22
- Major variation in the consumption during last winter
 - In January cons. peaked to 130 GWh/day and a week later only 35 GWh/day
- Last winter challenging from balance management perspective as Balticconnector was not in use and all market demand was covered by LNG
 - reduced flexibility
 - Major demand fluctuation – demand forecasting challenging
 - Some heavier balancing actions required from Gasgrid to maintain the system balance
- After the winter and recommissioning of Balticconnector (Apr. 22nd) market status has been stable and market participants well in balance
- Low consumption during this May, mostly below 20 GWh/day
 - Industrial sector maintenance works lowering the baseload since mid. April
 - Temperature and electricity price changes causing variation to the energy production sector demand



Gas market overview

- During the winter and unavailability of BC, Finnish market area price in GetBaltic increased significantly compared to LV-EE and LT prices
- After the winter and recommissioning of BC, Finnish market price fell back to same level with the Baltic area prices
- BC has been working as planned. No technical challenges since recommissioning
- After recommissioning of BC there has been a high demand for the Fi-exit OTC capacity and at the same time the capacity allocated for the GetBaltic was not fully utilized
 - Re-allocation between OTC and GetBaltic capacity shares in Fi-exit direction: 95 % for OTC and 5 % for GetBaltic since May 14th. No changes to the Fi-entry direction allocations
 - Based on current gas system state after recommissioning, BC exit technical capacity increased to 75 GWh/d since May 17th helping transporting higher gas quantities southwards from Finland
 - Other possible measures to further enhance the capacity utilization of BC under discussion and evaluation with Baltic TSOs
- BC capacity restrictions end of year 2024 (More detailed information available at Entso-g transparency platform, [link](#))
 - now – end of June and August-October: Fi-exit capacity 75 GWh/d, Fi-entry 50 GWh/d
 - July: Fi-exit capacity 5 GWh/d, Fi-entry 0 GWh/d
 - October-November, 2 separate 2-week periods: Fi-exit capacity 0 GWh/d, Fi-entry 20 GWh/d

GetBaltic daily avg. prices 2024



Terms and Conditions of BC capacity allocation

- Gasgrid has proposed changes to the terms and conditions of Balticconnector capacity allocation mechanism regarding the virtual reverse flow capacity calculation method and launch of the shipper group concept.
- **At the time of the Market Development Forum no decisions have been confirmed by the Finnish energy authority (Energiavirasto) regarding the proposed changes and the discussions regarding the changes are still ongoing between Gasgrid and Energiavirasto.**
- Finnish Energy Authority (Energiavirasto) organized a public consultation regarding the proposed changes which ended April 5th, 2024
- Gasgrid Finland has reviewed the received comments and is currently discussing the topics with the Finnish Energy Authority
- No decisions have been confirmed yet regarding the proposed changes and the process is currently ongoing
- Schedule of the next steps will be announced as soon as it is available

Terms and Conditions of BC capacity allocation / virtual capacity calculation method

- In the proposed changes Gasgrid suggests that in the future Gasgrid could offer virtual capacity based on the virtual reverse flow at BC to increase the available capacity and thereby enhance the capacity utilization at BC
- Volume of virtual capacity offered = total amount of confirmed nominations in the opposite direction
 - For example, if confirmed nominations from EE → FI = 10 GWh, virtual capacity offered to FI → EE = 10 GWh
 - In the currently effective model where the virtual capacity based on the virtual reverse flow is not offered, if for example the technical capacity allocated for the bilateral trading to exit direction would be 75 GWh, total entry nominations = 10 GWh and exit nominations = 75 GWh, the physical transportation is $75 - 10 = 65$ GWh to the exit direction
 - In the new proposed model, as the entry nominations = 10 GWh, we could offer extra virtual capacity for that amount to be nominated to the exit direction and accept nominations in total of $75 + 10 = 85$ GWh to the exit direction, resulting in 75 GWh transportation to the exit direction and full utilization of the BC technical capacity
 - During congestion, this would mean that Gasgrid will not be able to confirm downward renominations in full, partially or at all to the non-congested direction since this capacity has been already booked as virtual capacity
 - Downward nominations to the congested direction and upward nominations to the non-congested direction however could be confirmed within the acceptable nomination limit (technical capacity allocated for bilateral trading)

Terms and Conditions of BC capacity allocation / virtual capacity calculation method

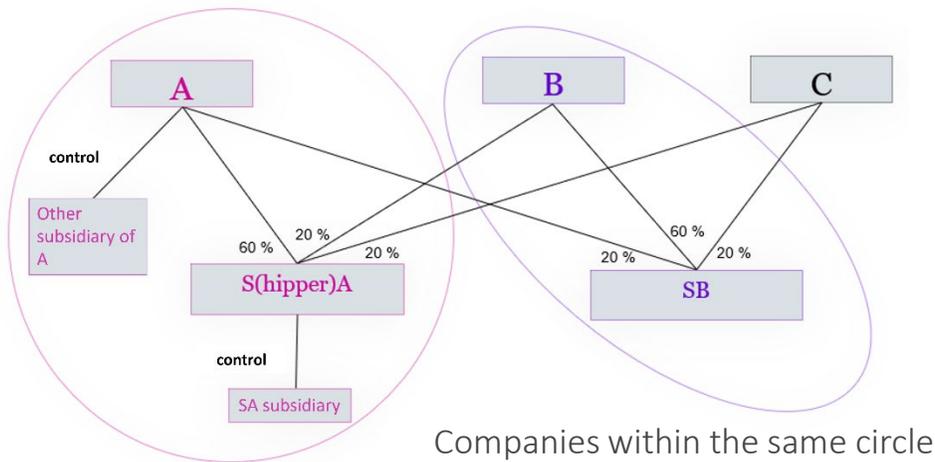
- In the proposed changes Gasgrid also suggest that in case the technical capacity allocated for bilateral trading is below 24 GWh/day, the maximum allowable nomination quantity that can be submitted by the shipper or shipper group is 1 GWh/h (24 GWh/d except on clock shift days 23/25 GWh/day)
- Accepted total quantity will then be based on the virtual capacity (if there are nominations to the opposing direction) and the technical capacity allocated for bilateral trading to the net flow direction as presented in the previous calculation example
- If the netted total nominations or renominations of all the shipper's or shipper group's exceed the available capacity after the virtual capacity calculation, then Gasgrid reduces the (re)nominations pro rata similar to the current model during congestion

Terms and Conditions of BC capacity allocation / Shipper group

- Gasgrid has proposed a concept of shipper group to be implemented in the terms and conditions in order to ensure equal access to the gas transmission network as well as fair and non-discriminative treatment of all market participants.
- Purpose of the shipper group concept is to prevent attempted market manipulation, capacity hoarding, unfair allocation of the transmission capacity and potential breach of competition law

Shipper Group is considered to consists of:

- (a) the Shipper;
- (b) those companies in which the Shipper directly or indirectly:
 - i. owns more than half the capital or business assets, or
 - ii. has the power to exercise more than half the voting rights, or
 - iii. has the power to appoint more than half the members of the supervisory board, the administrative board or bodies legally representing the companies, or
 - iv. has the right to manage the company's affairs;
- (c) those companies which have in the Shipper the rights or powers listed in (b);
- (d) those companies in which a company as referred to in (c) has the rights or powers listed in (b);
- (e) those companies in which two or more companies as referred to in (a) to (d) jointly have the rights or powers listed in (b).



Companies within the same circle belong to the same shipper group

Terms and Conditions of BC capacity allocation / Shipper group

- If shipper directly or indirectly has links to companies described in the previous slide, those companies are to be regarded as part of its Shipper Group
- Nominations and renominations of the shipper's belonging to the same shipper group will be aggregated by Gasgrid and may not exceed the maximum allowable nomination quantity (technical capacity allocated for bilateral trading or 1 GWh/h if the technical capacity allocated for bilateral trading is below 24 GWh/d)
- Shipper shall maintain updated information on its links to other shippers
- Gasgrid will provide instructions and notification template for the shippers belonging to the same shipper group to inform Gasgrid

A photograph of an industrial gas processing facility at sunset. The scene is dominated by large, horizontal pipes and complex machinery, all painted in a vibrant red color. The sun is low on the horizon, creating a bright lens flare and casting a warm, golden glow over the entire scene. In the background, there are silhouettes of trees and industrial structures under a clear sky. A metal walkway with railings is visible in the foreground, leading towards the machinery.

Gas market service development and solutions

Tiina Niinimäki, Head of Gas Market Systems and Solutions

Gas market service development and solutions

- Brief overview of recent implementations
- Current development
- Goals, why, how we progress
- How these and collaboration benefits the gas market and customers

Brief overview of recent implementations

- Recent achievements in both services and the organization
 - Formed service development-unit
 - Four people are working in the development of services and support.
 - Improved internal processes so that operational activities become clearer and more efficient. As a result of these follow up actions, we can focus on things and services that also create values for customer and market in whole.
 - Widen environment the platform to the management of operation (ops), where we currently implemented the billing of capacities and imbalance
 - Updated the available platform versions to receive the latest security updates and features
 - Updated new product version ARC23 / Cdata which act as platform for all integrations
 - Gasdatahub data has new monitoring report to observe misuse or missing data or contract

The progress of matters has clarified in terms of responsibilities. Target is able systematically develop and improve our current operational activities to make them more usable, efficient, and of higher quality of data and services.

Organization in development model and continuous collaboration with customers and end users



Scrum Master
Testing, documentation
Raine Hyppänen

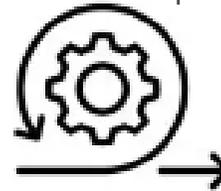
Development team
Use cases,
documentation, plan,
and testing

Anni Nuppunen

Aaron Virkkunen (retail
market and gas datahub)

Development team
Technical solution,
lead developer and
full stack
developers

Backlog, sprints,
sprint backlog, retro,
sprint review and
implementation



AGILE DEVELOPMENT

Market rules, new model,
market changes, ideas and
improvements

Product Owner
Tiina Niinimäki

User stories

Tasks

Review where the team presents their
completed work to stakeholders and
seeks feedback (September 2024 BC
model)

In progress and Roadmap

- In progress
 - Balticconnector new model of capacity allocation calculation
 - Changes and improvements in nomination-process
 - New way handling edigas-messages
 - Trade notification for several gas days
 - Confirmed results, VTP and other matching processes will be merge to be handle in management of operation (ops) which is part of customer portal of Gasgrid
- Later on, there will be also imbalance and energy calculation, correction rounds and so on.
- This all means we have evaluated existing systems. Roadmap is built to migrate existing processes, data to cloud services and consolidate one infrastructure

Goals, why, and how we progress

1. Objective:

1. We aim to create a more streamlined model in the gas market.
2. The goal is to improve clarity and efficiency in our systems.

2. Scope Our focus areas include:

1. **Gas Market Alignment:** Aligning our processes with gas market requirements of customers, rules and future possibilities.
 2. **System Consolidation:** Reducing the number of systems we use and integration.
 3. **Cloud Migration:** Moving our processes to the cloud platform. (inc. backup data and manual processes inhouse)
 4. **Customer Portal:** Creating a user-friendly portal for our customers and co-operate with other TSOs, and stakeholders.
 5. **Management of Operation Center:** Establishing a central hub for computations, operations, and monitoring called “ops”.
 6. **Publication:** Sharing relevant information with stakeholders.
3. Steps: most important issues first and operate and backup processes by using legacy system as long as all risks has minimized.

Benefits

1. Improved efficiency, transparency, and customer experience.
2. Reduced maintenance costs, and time and have inspirational working methods due to system consolidation.
3. Handle error more flexible way.
4. Scalability and flexibility through cloud adoption.
5. Archive good quality of data and accurate information, real time and forecasts.
6. To combine data from different sources and produce information for markets in collaboration with other actors.

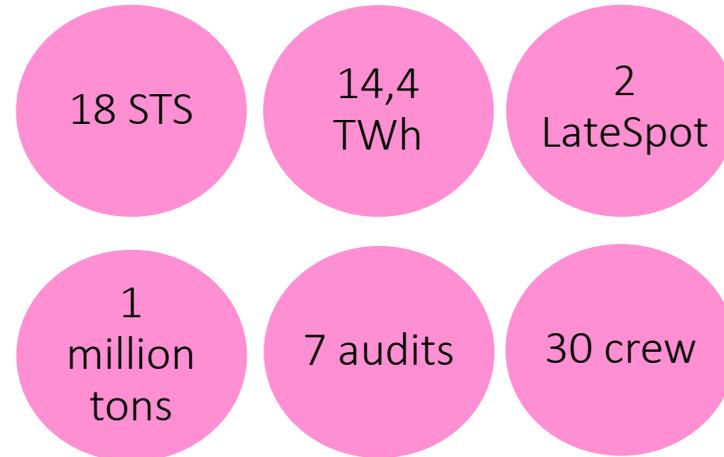


Inkoo LNG terminal

Smooth first year with a twist of drama

- Commercial activities and operations up and running
- Early development of routines

- Solid base for succeeding in important role during special winter time after BC damage



Safety and responsibility

Learnings to take with us for next year

Learnings from winter time

- Importance of cooperation
- Market based operations
- Constant communication
- Winter Navigation
 - Correct information
 - Planning already for winter 2025

New terminal rules 2025

- New more flexible terminal rules
 - Flexible late spot slots
 - Renomination possibilities
 - Slot extension possibilities
- Terminal schedule optimisation
 - Taking into account first year experience and feedback from market participants
- Reloading activities

Capacity thoughts 2025

- Calendar year instead of Gas Year
- Spot allocation procedure for Q4/2024 ongoing
- Yearly capacity reservations for 2025 will be opened 07/2024
- Assumptions:
 - New terminal users
 - Winter capacity reserved as well
 - Joint use concept has an important role

Transparent – Equal – Flexible

Mentimeter

Go to www.menti.com

Code 1732 3297

Thank you for participating to Market Development Forum!

Next forum will be held in fall 2024