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AGENDA

1) Regional Floating LNG Terminal to Gulf of Finland

2) Finnish/Estonian Floating LNG Terminal - Operational & Commercial Principles

3) Capacity allocation at Balticconnector

25.7.2022

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Regional Floating LNG Terminal to Gulf of Finland

General presentation and status of the project

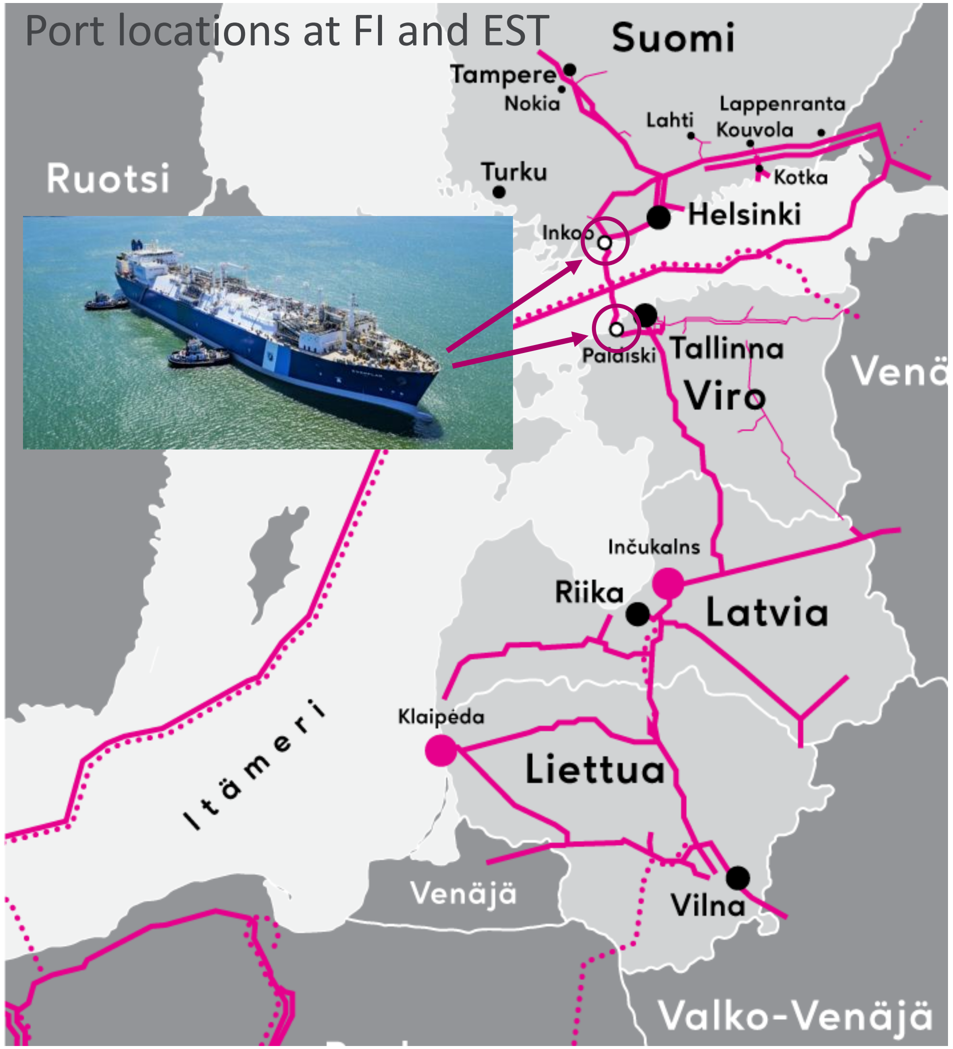
24.7.2022

Regional Floating LNG Terminal to Gulf of Finland - Background

- Due to the Russian invasion to Ukraine the regional Safe on Supply regarding Natural gas has been the main focal point of the Gas market participants, stakeholders and Nations involved in the crisis
- Later, as an outcome of the EU – Russia sanctions and contractual disputes the gas flows from Russia to Finland have been stopped since 21st of May 2022
- On 24th of April 2022 Finland and Estonia signed a memorandum of understanding (MOU) regarding leasing a FSRU vessel in order to implement a regional floating LNG Terminal
- Targets agreed at the MOU
  - Enough import capacity to secure the regional need
  - Implementation as soon as possible, latest by the end of year 2022
  - Port facilities and Injection points shall be built to both countries: Finland (Inkoo) and Estonia (Paldiski)
- It was agreed that Gasgrid Finland would be responsible of acquiring the FSRU vessel
- As a result of the endeavour Gasgrid Finland and Excelerate Energy Inc. concluded a ten year lease agreement of 'Exemplar' FSRU on 20th of May 2022

Regional Floating LNG Terminal to Gulf of Finland - Status

- Technical capacity of Exemplar is 140 GWh/d
- Terminal send-out will be connected to the existing 80 barg HP grid sections in both locations, Inkoo (FI) and Paldiski (EST)
- Inkoo port is a Brown field site, meaning that there is already a existing port and Jetty which will be expanded to accommodate the FSRU vessel. The Injection point is connected via 2,6 km onshore pipeline to Inkoo compressor station
- Paldiski is a Green field site including a new built offshore Jetty and 1,5km subsea pipeline and connection to Paldiski compressor station
- Both sites and their injection points are proceeding according the targeted commissioning schedule
- Expected commissioning by the end of Q4 of 2022



Finnish/Estonian Floating LNG Terminal Operational & Commercial Principles

Kimmo Rahkamo

July 25,2022

Terminal Services

Terminal services include

- Receiving and storing LNG for the user’s allocated time (slot)
- Regasifying LNG and injecting gas to the TS

Terminal services do not include

- LNG reloading to other vessels , e.g. bunkering vessels (future option)
- LNG truck loading

Commercial Basis

- Terminal is intended to provide base load, not suitable for peak load nor longer storage
- High utilization rate targeted, max. ≈35 TWh/year (3.4 bcm/year)
  - Capacity exceeds Finnish and Estonian aggregate demand
  - Baltic Connector may be a bottleneck part of the time
- Commercially attractive terms
- Equal access to all, no "earmarked" capacity
- Commissioning phase may have a different operating mode
  - Primary targets include supply security and mitigating start-up phase timing and availability concerns.

Terminal Rules, Main Principles

- Terminal capacity will be made available in a public process for each gas year
- In case reserved capacity exceeds terminal capacity, each user's capacity allocation will be prorated
- After capacity allocation users are requested to schedule their capacity use based on predetermined slots.
  - Slots have fixed length (summer slots may be longer)
  - During a slot a user is required to bring in an LNG cargo and regas LNG to the TS
  - In case there are conflicts in slot allocation, users are asked to negoatiate among each other to resolve such conflicts. Failing to reach an agreement, Terminal Operator will apply its allocation process for disputed slots.
- Unallocated slots will be available on a "first come, first served" basis after the annual allocation is completed
- LNG importer (=slot owner) does not have to be a shipper in the TS. However, company receiving gas on an ex-terminal basis needs to have the shipper status.
- Joint use of slots is being considered. Bilateral or multilateral trades at ex terminal will be possible.

Terminal User Requirements

- Legislative / regulatory requirements
  - Compliance with relevant laws and rules
  - Gas import license (in case terminal is located in Estonia)
  - LNG supply evidence
- Carrier acceptance
  - LNG Carrier must be approved and vetted by Excelerate Energy. List of approved vessels is available by request.
- Financial requirements
  - Unless terminal user has an acceptable credit rating, a bank guarantee or security deposit is required.
- Insurance
  - Terminal user is required to have an insurance coverage covering liabilities towards the terminal and third parties.

Thank you!

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Capacity allocation at Balticconnector

Mika Myötyri, Gas Market Manager, Gasgrid Finland Oy

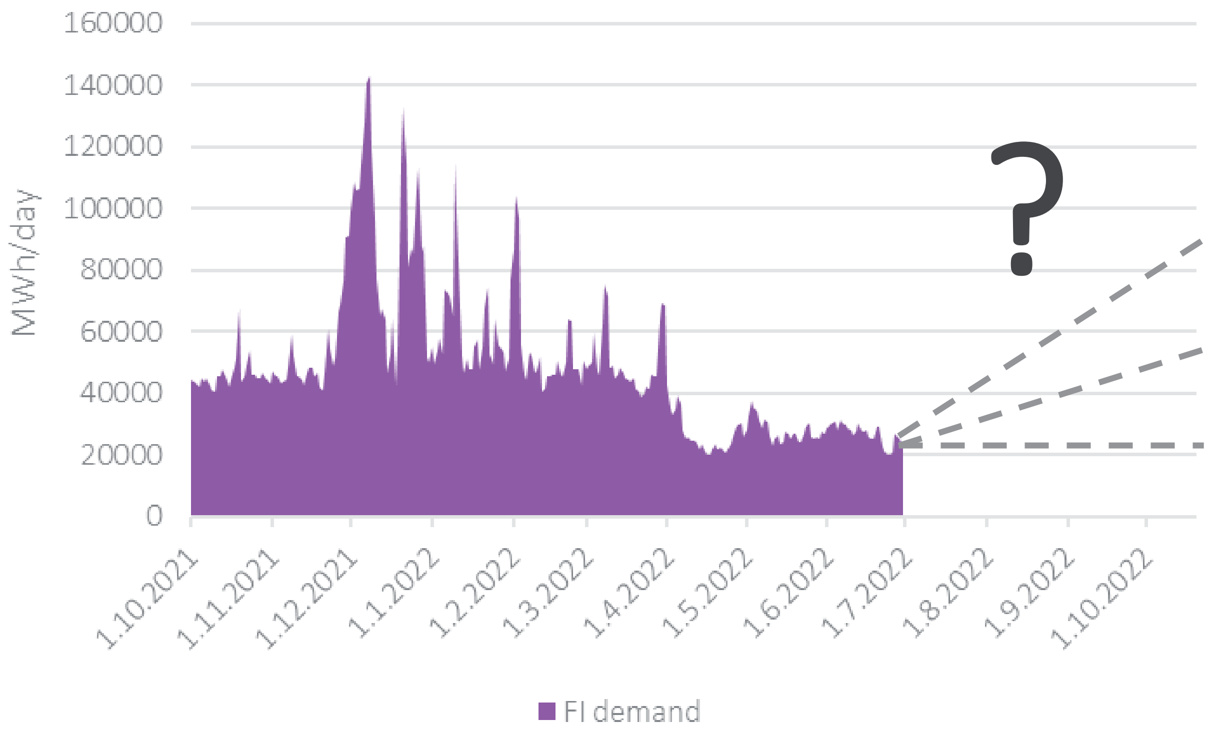
25.7.2022

Content of the presentation

1) Operating environment – scenario Floating LNG terminal in Finland
2) Operating environment – scenario Floating LNG terminal in Estonia
3) Alternative capacity allocation mechanisms
4) Assessment of current mechanism – Implicit capacity allocation
5) Assessment of alternative mechanism – Auction
6) Next steps

Flow dynamics in case the Floating LNG terminal is located in Finland

- In 2021, gas consumption in Finland was 25,1 TWh. In 2022, gas consumption has decreased due to high prices and market uncertainties.
  - H1/2021: consumption app 14,8 TWh
  - H1/2022: consumption app. 7,4 TWh
- “Baseload” in Q4/21 and Q1/22 app. 40-50 GWh/day. In Q2/22 app. 20-30 GWh/day
- The consumption peaks in Q1/2022 are caused by energy producers during the cold spells during which consumption was 2-3 times bigger than during the mild winter weather.
- In Q2/2022 consumption profile has been quite stable and gas is mainly consumed by industrial users.
- Based on the schedule, Hamina LNG terminal commissioning will be in October 2022 (max capacity 4,8 GWh/day)



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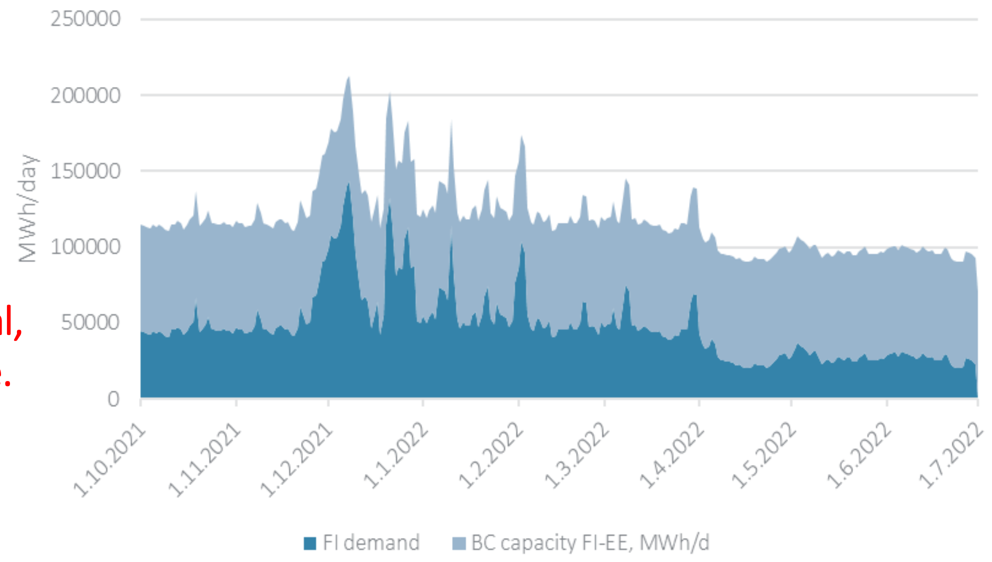
Flow dynamics in case the Floating LNG terminal is located in Finland

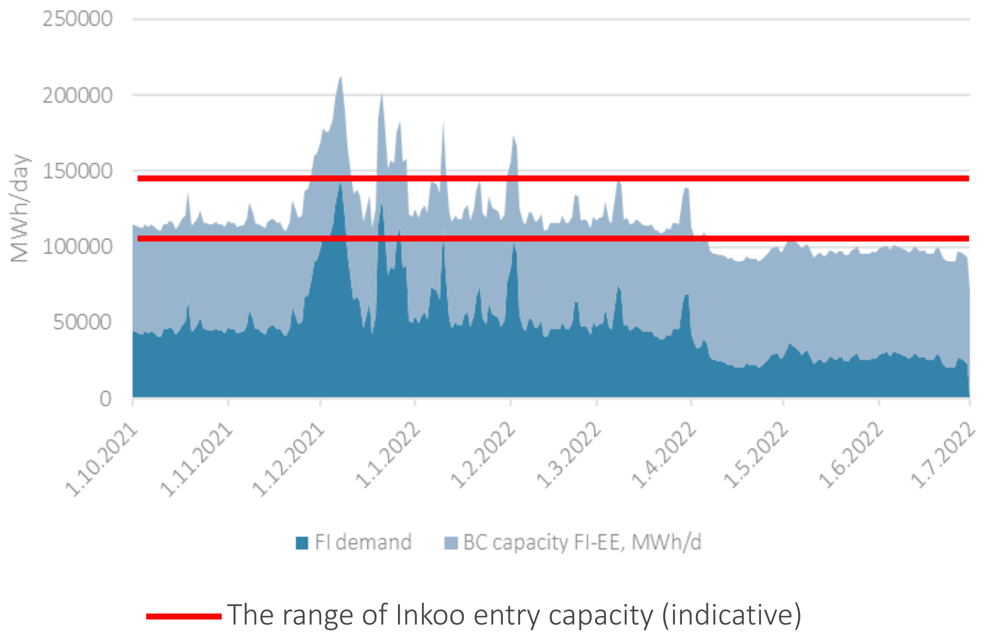
- The currently published technical capacity* for Balticconnector (direction FI-EE) is app. 47 GWh/day for the upcoming winter. Once the Floating LNG terminal is connected to the transmission network, it enables higher pressures which has increasing impact on BC capacities from Finland towards Estonia.
  - The capacity calculations are ongoing. Once the technical capacities are confirmed, **capacities will be published for all market participants at the same time through UMM platform.**
  - To illustrate the situation after commissioning of the Floating LNG Terminal, BC capacity of 70 GWh/day is used. This is only for demonstrative purpose.
- Floating LNG terminal entry capacity > BC capacity



*Technical capacity is the capacity which is offered for the market participants.

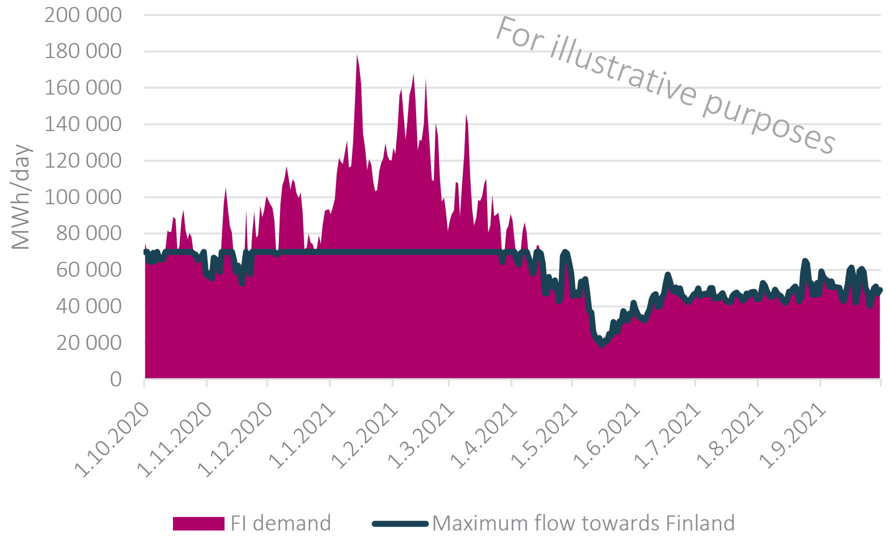
Flow dynamics in case the Floating LNG terminal is located in Finland

- It is published that regasification capacity of the Floating LNG terminal is app. 140 GWh/day.
- In normal operating conditions (no maintenance works impacting on BC capacities or deliveries to end consumption), indicative entry capacity to the transmission network may be on the range of 100-140 GWh/day.
  - The network modelling and capacity calculations are ongoing. The TSOs will offer entry capacity for the market as much as possible taking into account the system integrity and the operational requirements of the transmission network.
- **The capacities offered for the market will be published for all market participants at the same time through UMM platform once the calculations on capabilities to transport gas in the regional system are completed.**



Flow dynamics in case the Floating LNG terminal is located in Estonia

- Three contributing factors must be taken into account when assessing the maximum entry capacity from the Paldiski terminal
  - Maximum flow through Balticconnector to Finland (a function of Finnish demand and the maximum Balticconnector capacity)
  - The Estonian gas demand
  - Technical capability of the gas system of transporting gas from Estonia to the Latvian system/Incukalns gas storage
- Because the assumed flows after the LNG terminal arrival shall differ significantly from historic flows, TSOs are still assessing the technical capabilities of the grid under new conditions.
- Similarly to the case where the terminal is in Finland, in Estonia the indicative entry capacity to the transmission network may be on the range of 100-140 GWh/day.
- **The capacities offered for the market will be published for all market participants at the same time through UMM platform once the calculations on capabilities to transport gas in the regional system are completed.**



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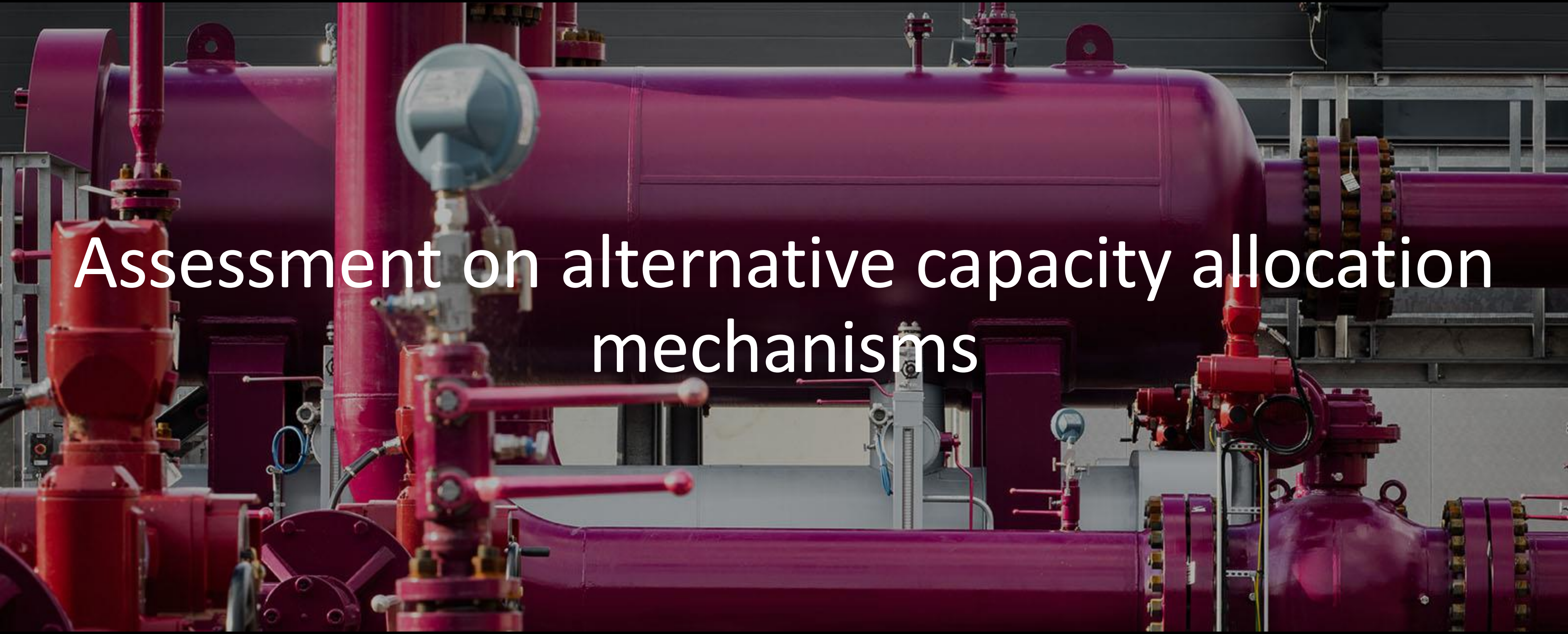
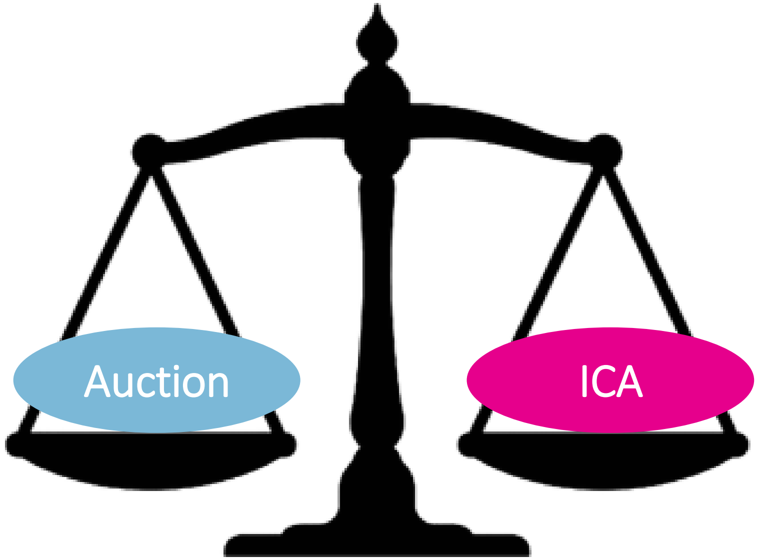


Assessment on alternative capacity allocation mechanisms

Alternatives for Balticconnector capacity allocation mechanism

- EU Regulation sets the requirements for capacity allocation mechanism at interconnection point, such as Balticconnector. There are two alternative allocation mechanism which is allowed to be applied at interconnection point:
  - Currently applicable **implicit capacity allocation (ICA) mechanism** where the capacity is allocated based on confirmed nominations
  - **Auction mechanism** according to the principles set by EU Regulation.
- Gasgrid Finland and Elering have assessed the two alternative allocation models.
- After the webinar, the public consultation will be organized where market participants are invited to provide opinions whether the implicit capacity allocation mechanism or auction mechanism should be applied at Balticconnector.



Assessment of current mechanism – Implicit capacity allocation (ICA)

Implicit capacity allocation where capacity is allocated based on confirmed nominations following the (re)nomination submission and confirmation schedule. Part of capacity allocated implicitly by the gas exchange. In case of congestion, capacity is allocated *pro rata.*

- Strengths of the model
  - High utilization of capacity → all capacity allocated is used meaning that no contractual congestion possible.
  - Flexible model → only nominations required, surrendered capacity can be reallocated within a day.
  - No additional costs for transmission.
- Strength/weakness of the model
  - Capacity is allocated for all shippers equally. However, in case of congestion, there is no mechanism which allocates the capacity for the shippers whose end consumers need gas the most urgently → who wants the capacity the most, would be willing to pay for it the most in order to get capacity.
- Weaknesses of the model
  - Predictability → Market participants can be sure that they get the capacity for the upcoming gas day not earlier than D-1 around 17:00 when nominations are confirmed.
  - Congestion/risk for congestion may lead to artificial ways to maximise capacity (nominations are not necessarily based on the actual demand)

Assessment of auction mechanism

In auction mechanism, standard capacity products are offered according to the standard principles defined by EU Regulation.

- Strengths
  - Capacity ensured for the shippers who value it the most
  - Long-term capacity products can be offered – for instance, shippers allocated by firm quarterly capacity can be sure that they have right to get corresponding quantity to be delivered during the validity period of the capacity product.
- Weaknesses
  - Inflexible allocation procedure – timing of the auctions is fixed
  - May decrease the capacity utilization rate (contractual congestion) → congestion management tools defined by EU regulation, but those do not provide dynamic tools to manage congestion
  - Inflexible capacity products – may be difficult to book exact capacity needed using yearly, quarterly, monthly, daily and intraday products.

Auction option brings out further questions

- Would there be entry and exit tariffs at Balticconnector?
  - Yes. In this case, Balticconnector entry and exit tariffs should be introduced. → What would happen to common entry tariff zone where one of the key principles is that there is no tariff at internal interconnection point (Balticconnector)?
  - No. In this case, *if possible*, the floor price for auctions would be zero having 100 % discount for BC capacity. In case of congestion, the price steps will be introduced according to EU regulation.
    - EU regulation TAR NC Article 9(2): *“at entry points from and exit points to infrastructure developed with the purpose of ending the isolation of Member States in respect of their gas transmission systems, a discount may be applied to the respective capacity-based transmission tariffs for the purposes of increasing security of supply.“* → The option would require opinion/approval from NRAs: Would it be an option to apply discount at Balticconnector?
- Which option is more valuated by the market: How does the market valuates it better to pay few euros for capacity having certainty that you have capacity?
- Impacts for regional entry tariff zone?

Questions for the market participants

- The key questions for the market where the TSOs request to consider and provide opinions from their perspective.
  - How do the market participants, especially shippers and potential Floating LNG terminal users evaluate the risk of congestion at BC and its possible impacts on their decisions on utilizing the terminal?
  - How important shippers/potential terminal users see the need to synchronise their physical delivery from the FSRU with transport capacity rights in Balticconnector and Incukalns?
  - Which option is more valuated by the market participant:
    1) Current setup – Implicit capacity allocation with common entry tariff zone and no price for BC capacity, but uncertainty on capabilities to deliver gas over Balticconnector
    2) Auction where possible only option is to introduce entry and exit tariffs which has further impacts on common tariff zone, but the market participants willing to deliver gas over Balticconnector get confirmation in advance if the shipper books longer-term capacity products.
  - Which option enables to minimize the invoice of final customers: auction may lead to increased transmission charges, but smaller risk premium than the ICA, but ICA may lead to increased risk premium, but smaller transmission costs?

Winter 22/23

- It is not yet known what will be the location of the Floating LNG terminal and when the commercial commissioning of the terminal is. In the beginning of terminal operations, there may some exceptions to "normal" terminal rules due to above-mentioned uncertainties. **Updates will be announced as soon as possible.**
- If auction mechanism would be the way forward, it will take app. 6 months from the decision of adjacent TSOs and relevant stakeholders to set-up the functionalities, create the rules and perform necessary actions (public consultations etc.). Thus, in the upcoming winter, the currently applied Implicit Capacity Allocation will be applied.

Next steps

- Gasgrid and Elering will launch a public consultation concerning the Balticconnector capacity allocation mechanism. The consultation will be launched in the beginning of this week. The market participants will be announced about the consultation by e-mail and TSOs website.
- Gasgrid and Elering are preparing the rules for “FSRU entry point” including capacity booking windows, capacity allocation mechanism and nomination principles.
- If you have any questions, do not hesitate to contact TSO team.


Thank you very much!