



Finnish gas market operations in the event of supply disruptions

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The purpose of the material is to describe the functioning of the wholesale gas market during technical or commercial supply disruptions of varying severity, thus improving operators' capabilities to prepare for disruptions in their own supply chains.

Finnish market operations during a disruption in the gas supply

Responsibilities of the TSO with system responsibility in an emergency

- It is the duty of the TSO with system responsibility to keep Finland's gas system in balance both physically and commercially in all circumstances
- A market-based approach will be followed for as long as possible
- Customers will be treated equally as long as market-based conditions prevail
- In an emergency or a situation provided for in the Emergency Powers Act, gas is distributed in the region as instructed by the national authorities
- Supplies to gas users protected under the regulation on the security of gas supply must be secured

Finnish market operations during a disruption in the gas supply

Why is it important to achieve balance in the gas system quickly?

- Gasgrid Finland's pipeline storage can support a significant physical imbalance in the system from a few hours to approximately one day, depending on the situation.
- A sufficient level of gas in pipeline storage is a technical requirement for all gas grid customers to be able to use gas.
- If the system is not in balance physically and gas use exceeds the entry of gas into the system for a long time, it jeopardises the gas use of all gas system customers, with the exception of protected customers.

How has market steering changed since the market opened, and why?

- Before the gas market was opened, a single operator was responsible for wholesale gas deliveries and all deliveries came from a single source. In that system, it was justified to divide the shortage equally over the whole market in the event of gas supply disruptions and cut the confirmed deliveries of all gas users.
- After the opening of the market, the system has been supplied by several wholesale suppliers, and gas can be delivered from several supply sources. Therefore, a possible supply disruption affecting a single supply source is not a reason for dividing the shortage according to the previous model. The TSO cannot interfere with the supplies of the remaining supply source, but the market must realign itself on market-based terms between the operators themselves.

Finnish market operations during a disruption in the gas supply

EARLY WARNING LEVEL

- There is a disruption in gas deliveries that creates an imbalance between the amounts of gas entering Finland and used in Finland. The event is of such magnitude and foreseen duration that the TSO with system responsibility has to initiate commercial market steering to achieve balance.
- The TSO with system responsibility notifies the market immediately of the matter with an UMM message on Get Baltic's UMM platform.
- The TSO with system responsibility restricts border transfer nominations to correspond to the changed circumstances. The TSO with system responsibility cannot approve nominations that have not been confirmed by both the gas supplier and importer. Restricting nominations causes a commercial imbalance in the Finnish system if gas imports are not increased from other sources or gas consumption does not adapt to the new level.
- The TSO with system responsibility seeks to steer the market to balance by trading on the Get Baltic gas market or acquiring gas with balancing service contracts where possible. These measures will increase the selling price of balancing gas, steering the market towards balance.

The market operates purely on market terms, and no gas use restrictions are set for operators; rather, balance is sought through commercial steering of the operations.

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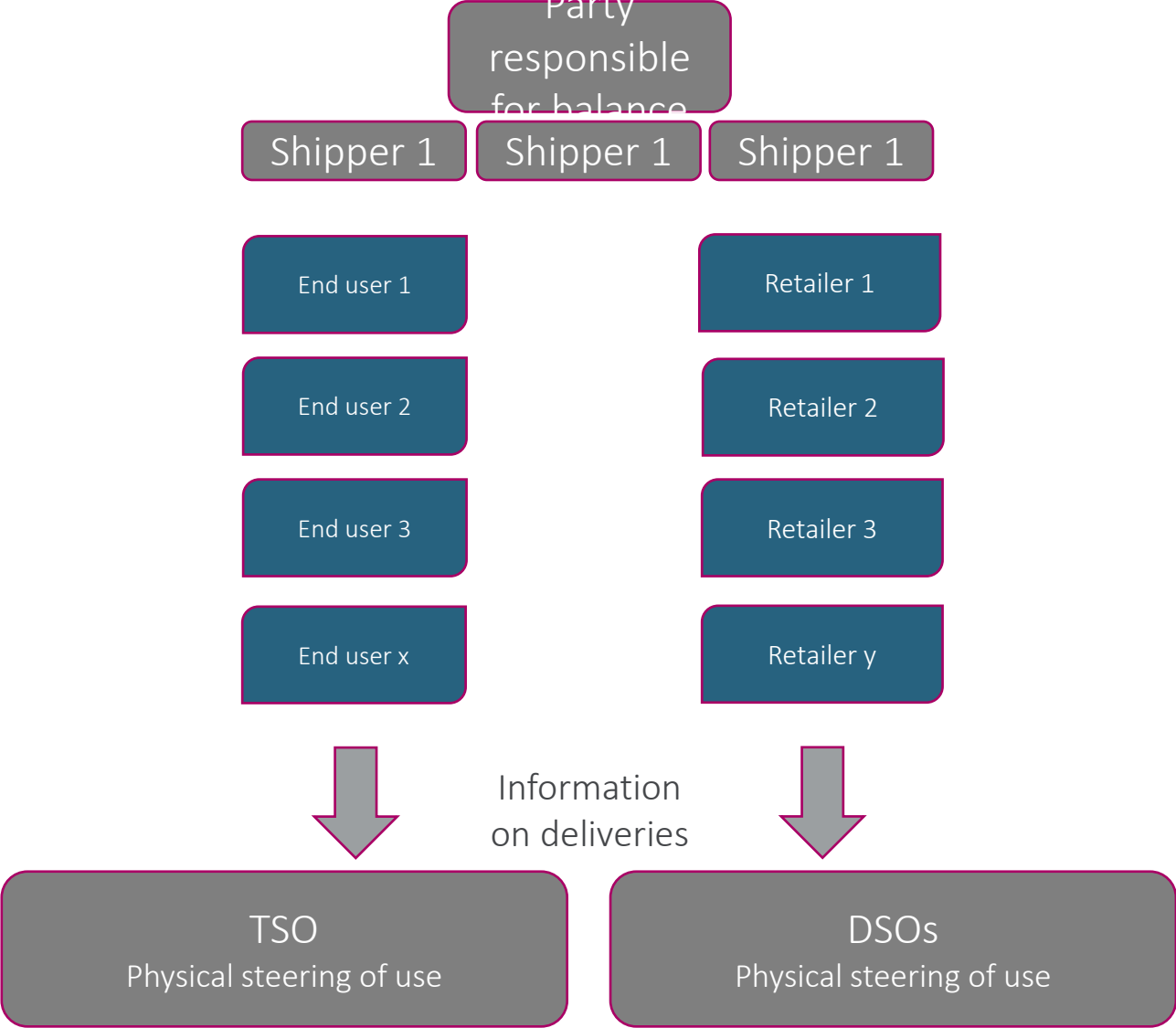
ALERT

- If system balance cannot be achieved through commercial steering methods employed by the TSO with system responsibility, the system will be moved to alert status, in which the TSO with system responsibility orders the parties responsible for balance to balance their gas use in proportion to the gas supply.
- The alert level can be activated very rapidly if required by the circumstances, if the system imbalance is high in proportion to the assumed effectiveness of commercial steering measures and if the TSO with system responsibility is not able to deliver sufficient quantities of balancing gas to the market.
- The TSO and DSOs monitor gas use in proportion to the information provided to the TSO with system responsibility on the continuity of deliveries. If necessary, the system operators will cut physical deliveries to customers without confirmed deliveries who do not adapt to the situation.
- Market operators are obliged to balance their positions as accurately as possible – minor deviations from the balance will be handled with the TSO with system responsibility through balancing gas purchases/sales according to the balancing terms and conditions. If a price cannot be set for balancing gas, the parties will seek to agree on an alternative model, in which the previous day's balance deviation is transferred to the next day.
- The TSO with system responsibility secures the gas supply of customers protected under the security of gas supply regulation from its pipeline storage if the obliged supplier of such customers is incapable of delivering gas due to technical reasons (preparedness is LNG-based). In such cases, the TSO with system responsibility agrees on how the gas taken from pipeline storage will be compensated to the TSO with system responsibility.

The market will continue to operate on market terms – operators with purchased gas are free to use or sell it. Parties can trade gas energy over the counter (OTC) or through a marketplace.

TSO with system responsibility

System ordered to stay in balance



Finnish market operations during a disruption in the gas supply

EMERGENCY

- If system balance is still not achieved or the functioning of society is threatened, the National Emergency Supply Agency can declare an emergency.
- If necessary, gas deliveries to protected customers will be secured through the Mäntsälä LNG entry point. Gasgrid offers protected customers within the scope of obligatory storage with sufficient input power into the system when the transmission system pressure has dropped below 10 barg.

Responsibilities of the parties in an emergency

The transmission system operator (TSO) with system responsibility (Gasgrid Finland) is responsible for maintaining the balance of the Finnish gas system. Seeks to obtain balancing gas for the market in order to avoid more serious measures for steering use.

The transmission system operator (TSO, Gasgrid Finland) offers gas transmission services within the capacity of the physical transmission system. If the TSO with system responsibility has to order the parties responsible for balance to stay within their balances, the TSO prepares for the need to restrict gas deliveries to individual end users in the transmission system with no confirmed delivery information.

The parties responsible for balance are responsible to the TSO with system responsibility for the operations of their own balance group. If the TSO with system responsibility is forced to order the parties responsible for balance to stay within their balances, the parties must assess the availability of gas within their own balance groups in relation to the purchase of available gas energy.

Retailers: If the TSO with system responsibility is forced to order the parties responsible for balance to stay within their balances, retailers in the transmission system must assess the deliveries under their responsibility in relation to the information provided by the balance-responsible party or the

shipper about their own gas availability. The retailers must inform Gasgrid Finland and the concerned distribution network operator of the continuity of supply for each end user.

DSOs: If the TSO with system responsibility is forced to order the balance-responsible parties to stay within their balances, the DSOs must increase their readiness so that they will be able to restrict gas deliveries to individual end users with no confirmed delivery information if required.

End users (with the exception of protected users) are responsible for their own preparedness for various scenarios through gas purchases and/or flexibility in demand. **We encourage gas users to discuss gas deliveries under different scenarios with their suppliers.**

Communications in an emergency

- Gasgrid notifies the market without delay through the Get Baltic UMM platform of significant market developments, such as:
 - the transmission capacities offered to the market and their changes both in Imatra and Balticconnector;
 - possible disruptions in the gas supply and their immediate effects on market steering – restriction of nominations; and
 - market steering measures taken by the TSO with system responsibility.

<https://umm.getbaltic.com/public-umm>

- In addition to the UMM messages, information on emergencies will be published on Gasgrid's website: www.gasgrid.fi
- Gasgrid seeks to contact all necessary parties by telephone to ensure the sufficiently rapid adaptation of the market.
- **Gas users should primarily discuss the future of operations with their own suppliers.** Gasgrid will contact gas users if risks are identified to the technical delivery of gas to individual end users due to reduced pressure in the transmission system or other technical reasons.

Q&A

1) How is it possible to stay accurately in balance since the metering data from the distribution networks is only received after the gas day? The accuracy of forecasts determines how close to the consumption (balance) we get

Answer: With regard to staying in balance, we are aware of the challenges created by inaccurate and delayed data. However, it would be important from the perspective of the Finnish gas system that consumption does not exceed the amount of gas entering the system, so the parties responsible for balance should strive to stay within their balances. In such situations, the goal would be to achieve strong commercial steering for maintaining balance by increasing the price of balancing gas to a very high level. Cumulative monitoring of the balances of balance-responsible parties, so that any imbalance in the previous day would be transferred to the next, could also be an option.

2) What does "If necessary, physical deliveries to customers for which the balance-responsible parties have not confirmed deliveries" mean?

Answer: closing the valves, thereby ensuring that gas use stops.

3) How will deliveries be restricted in practice, with what concrete measures?

Example scenario: there is a shortage of gas, but deliveries to unprotected customers can continue, at least partially: e.g. by delivering only 80% of gas to all unprotected customers (100% to protected customers, of course). On what grounds / how deliveries to unprotected customers, individual end users will be restricted in practice?

Answer: if the balance group decides to cut deliveries, for example to all unprotected customers in a certain section, the restriction of use must be implemented by ordering the end users to operate at a specific power level, meaning that the use must also be monitored in some way.

Q&A

4) A scenario in which transmission system pressure drops and we enter the phase where the gas supply of protected customers needs to be secured. Does the term “confirmed deliveries” also include customers who have purchased gas from reserve supplies for such circumstances? How is the DSO notified of such customers?

Answer: Gasgrid secures the technical aspects of deliveries to customers protected under the security of supply regulation insofar as the party subject to the storage obligation cannot avail themselves of their chosen protection solution due to the technical status of the transmission system – i.e. if the transmission system pressure prevents the entry of LNG-based gas into the system.

Furthermore, if the authorities such as the ELY Centre specify delivery requirements to other end users as well, Gasgrid will support the transmission of gas according to these requirements.

If gas users have purchased a separate protection service from the supplier, the supplier is responsible for the implementation of such protection by sourcing the energy and transmission to the customer as normal – gas of this kind cannot be delivered from Gasgrid’s pipeline storage.

5) Protected customers = household customers. The users connected to the distribution system include various small and medium-sized nursing homes, including service housing, enhanced service housing, institutional care facilities and short-term accommodations. Are these also included in the “household customers” category?

Answer: National Emergency Supply Agency

Q&A

6) What is the order that the ELY Centre defines under the Emergency Powers Act if the gas supply has to be regulated? "ELY Centres specify the purposes for which natural gas may be used in their areas of responsibility under chapter 5, section 42, subsection 1 of the Emergency Powers Act." Is this function-specific, e.g. hospitals first and then the rest, or a company-specific order, or something else? We asked our ELY Centre, but they could not answer and referred the matter to the ministry for comment.

Answer: National Emergency Supply Agency

7) Our customers have asked a lot of questions about how much gas is stored in Finland and how long it will last, questions like that.

Answer: There is only a limited amount of usable gas stored in the transmission system, and the market thus has to be balanced fairly quickly to maintain transmission ability to all customers connected to the transmission system.

Energy in obligatory storage: National Emergency Supply Agency

Q&A

8) It would be useful to clarify down to the concrete details the roles, obligations and operating models of the various operators in emergencies:

- TSO with system responsibility
- balance-responsible parties
- retailers
- gas distributors

This would allow us to prepare for the operations in advance, eliminate redundancies and, at the very least, avoid a situation in which everyone is waiting for someone else to do something, with the result that nobody is doing anything.

Answer: we will discuss these insofar as this presentation has not answered any open questions.

9) Is there a significant risk that possible gas restriction measures will result in legal/financial consequences to retailers/distributors? The industry's communications and operating model should be as consistent as possible in this regard in order to avoid misunderstandings.

Answer: as the TSO, we are unable to comment on this, because we are not familiar with the contents of supply agreements on the market.