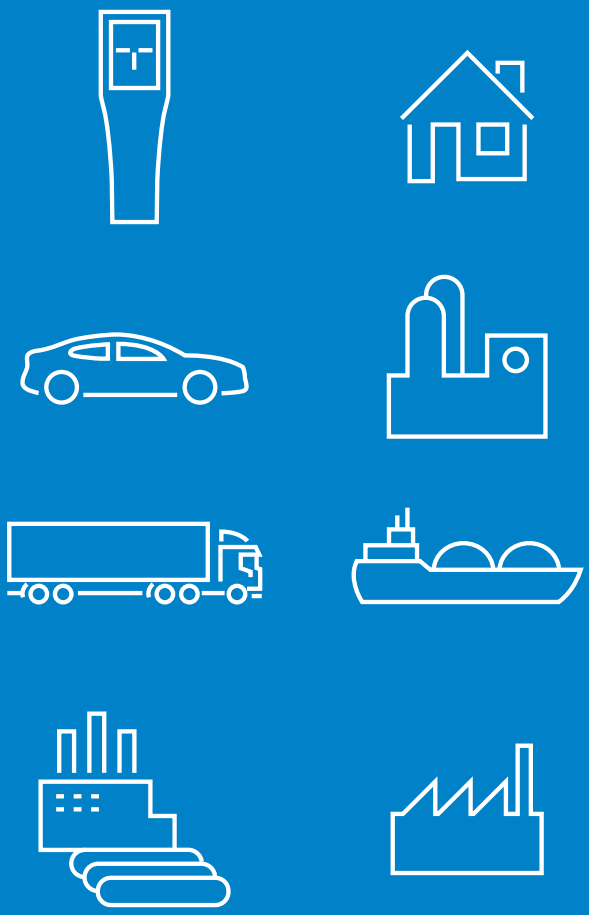
PREPAREDNESS AND OPERATION IN THE EVENT OF A POSSIBLE GAS NETWORK SUPPLY DISRUPTION



Prepared in autumn 2023 by the working group set up by Gaspool. The working group included representatives from The National Emergency Supply Agency, Gasgrid Finland Oy and the Finnish Gas Association. Finished with Gaspool's comments on 4.12.2023.

The prepared instruction is originally based on a) Kaasun toimitusvarmuuden ennaltaehkäisy- ja hätäsuunnitelma (Gas supply security prevention and emergency plan), 16.06.2023, The National Emergency Supply Agency and b) Varautuminen ja toiminta mahdollisessa maakaasun toimintahäiriössä (Preparedness and operation in the possible event of a natural gas supply disruption), Oil Pool Committee, Natural Gas Division 7.10.2013 VATO working group

Suomen Kaasuyhdistys
Finnish Gas Association

1. PREPARING FOR POSSIBLE GAS NETWORK SUPPLY DISRUPTIONS

Background

Regulation (EU) 2017/1938 of the European Parliament and of the Council on measures to ensure security of gas supply in gas networks was issued on 25.10.2017. According to the regulation, the responsibility for the security of gas supply is shared jointly by gas companies, member states, especially through their competent authorities, and the Commission, in accordance with their fields of activity and competence. In Finland, at the end of 2010, The Ministry of Economic Affairs and Employment appointed The National Emergency Supply Agency (NESA) as the competent authority.

The prevention and emergency plan for gas supply security has been updated in 2023. The gas market in Finland has been opened to competition in 2020, and Finland's gas supply security is based on delivered LNG in addition to pipeline gas. LNG will be imported to Finland (and the Baltics) through the large-scale floating import terminal in Inkoo leased from the beginning of 2023, the smaller-scale import terminal in Hamina completed in 2022 and/or the large-scale import terminal in Klaipeda in Lithuania and the Baltic pipeline connections. The Baltic gas network is still connected to the gas networks of Poland and the rest of Europe. In addition to the aforementioned diversification of supply routes, the security of gas supply in Finland is supported by the falling demand for gas.

Gas supply security setting

The demand of customers protected in Finland with regard to the supply standard defined in the gas supply security regulation can be met in all three situations according to the standard. Measures according to the prevention plan defined in the gas supply security regulation are widely used in Finland. The National Emergency Supply Agency, the gas transmission system operator Gasgrid Finland Oy as the system manager, and also the importers of gas, especially LNG, play a significant role in terms of responsibilities for preventive measures, but the authorities also take part in preventive measures. All preventive measures at the national level are market-based. Preventive measures have been divided into different categories. The identified categories are:

1. Reliable and well-functioning transmission network operation
2. Security measures of the transmission system operator
3. Preparing for pipe, device and component damage
4. Actions related to fuel logistics
5. Infrastructure projects
6. Preparedness instructions and responsibilities
7. Communication supporting preventive measures
8. Incentives and sanctions
9. Cooperation within the state administration
10. International cooperation
11. International precautionary measures

Detailed preventive measures are further defined under these main categories.

Delivery standard and protected customers

In accordance with the supply standard presented in the security of supply regulation, the competent authority must require the gas companies it has determined to implement measures to ensure gas supplies to the protected customers of the member state in the following three situations:

a) Extreme temperature during a seven-day peak period that, according to statistical probability, occurs once in 20 years;

b) Any period of 30 days during which the demand for gas is exceptionally high and which, according to statistical probability, occurs once in 20 years; and

c) a period of 30 days in the event of a disruption of the largest single gas infrastructure under average winter conditions.

According to the Gas Market Act (25.8.2017/587, update 16.2.2023/171), **protected customers** in Finland mean:

1) All household customers connected to the gas distribution network;

2) Small or medium-sized food industry companies connected to the gas distribution network, if they are unable to exchange gas for other fuels or energy sources, and;

3) Services related to health care, central social care, emergency, security, education or public administration connected to the gas distribution or transmission network.

2. OPERATION IN THE EVENT OF A POSSIBLE DELIVERY FAILURE

Three crisis levels are defined in the gas supply security regulation (early warning level, alarm level and emergency status level). In the event of a gas supply failure, the responsibility for communication and information always rests with the authority or operator in charge of the situation. In Finland, the parties leading national crisis management and communication are primarily The National Emergency Supply Agency, a separate crisis management group, and the gas transmission system operator Gasgrid Finland Oy.

The operational diagram according to the emergency plan of the gas supply security regulation starts when the amount of gas fed into the transmission network does not match the demand for gas, and if the situation continues, gas deliveries are threatened.

1. If the crisis management team identifies a situation that may lead to an alarm level or the need to limit the use of gas, NESA declares an early warning level, whereby Gasgrid Finland continues to control the market by commercial means, but uses the usual stronger balancing gas price control, encouraging gas users to switch to alternative energy sources, or to reduce their consumption in other ways, or to increase imports from available procurement channels.
2. In addition, the NESA can grant permission at all crisis levels from the early warning level, if the company-specific criteria are met for the company to utilize its obligation stocks, if the supply of gas substitute fuels from the market has become more difficult and the company is unable to obtain sufficient substitute fuel.
3. If the measures according to the early warning level are not sufficient, NESA declares the alarm level. In this case, Gasgrid Finland will, if necessary, order the balance managers to stay on their commercial balance sheets and will monitor that the actual use of gas corresponds to the purchase amount. Protected customers are supplied with gas from the transmission system operator's pipeline storage, if necessary.
4. If the alarm level measures are not sufficient, NESA declares an emergency level, whereby gas wholesalers and retailers take care of ensuring their customers' gas supply for as long as possible. Those operators who have the ability to continue supplying their commercial gas to the market can continue to operate. For others, excluding protected customers, it is ensured that use is stopped by closing the valves if necessary. At the emergency level, NESA primarily ensures the supply of gas to protected customers, as well as defines possible other prioritized users to whom gas can be supplied. If necessary, the deliveries of protected customers are ensured with the help of LNG supply.
5. If all measures at the emergency level have been used, and they are still not found to be sufficient to respond to the prevailing supply disruption situation, the NESA can, as the last point of the action plan, appeal to the introduction of joint responsibility measures from other EU member states. In practice, this means requesting joint liability from Estonia, with which Finland has a valid joint liability agreement.

Operator	Normal situation	Early warning level	>>	Alarm level	Emergency status level

NESA

Evaluated, if there is a need to restrict gas usage?

Yes

The advance warning level according to the gas supply security regulation is announced.

If the company-specific criteria are met, permission can be given to utilize the mandatory stocks if there is not enough reserve fuel and it has become difficult to get them from the market.

Evaluated, whether the measures are sufficient?

No

Yes

The end of the early warning level is announced when the supply disruption situation normalizes.

The alarm level according to the gas supply security regulation is announced.

If the company-specific criteria are met, permission can be given to utilize the mandatory stocks if there is not enough reserve fuel and it has become difficult to get them from the market.

Evaluated, whether the measures are sufficient?

No

Yes

Notification of the end of the alert level for a delivery failure situation when normalizing.

The emergency status level according to the gas supply security regulation is declared.

The gas supply of protected customers is ensured and possible other priority users to whom NESA delivers gas are defined. If necessary, deliveries are ensured with the help of LNG supply.

If the company-specific criteria are met, permission can be given to use the mandatory stocks if there is not enough spare fuel and it has become difficult to get them from the market.

Evaluated, whether the measures are sufficient?

No

Yes

The end of the emergency level is announced when the supply disruption situation normalizes.

Joint responsibility measures are asked from other member countries. Finland has a joint responsibility agreement with Estonia.

Gasgrid

No

It is observed that the amount of gas fed into the transmission network does not correspond to the demand for gas, and if the situation continues, gas deliveries are threatened.

Actions are being initiated to maintain the balance of the transmission network. Actions include e.g. utilization of pipeline inventory, limiting capacities to match technical transmission capacity, limiting the supply of interrupted capacity products, intraday utilization of balance management service contracts, and intraday trading on the gas exchange.

In addition, an analysis and review of the situation is carried out.

The market is tried to be controlled by commercial means.
Means are e.g. making purchase offers to the gas exchange for market participants at a high price (increasing the price of balance gas) and activating balance management service contracts (acquiring balance gas and controlling the price of balance gas).

Gas consumption and supply forecasts are requested from market players as authorized by the security of supply regulation.

An analysis and revision of the situation is carried out.

The balance managers are given an order to stay in the commercial balance sheet (the balance managers must adjust the use of gas within their customer groups to match the group's ability to procure gas for the Finnish system).

Monitoring is performed, that the use of gas corresponds to the agreed level and deal with possible deviations. Protected customers are supplied with gas from the pipeline warehouse of the system manager, if necessary.

An analysis and revision of the situation are carried out.

Along with deliveries from NESA, we will continue deliveries through technically available supply sources, ensuring that the gas use of protected customers is not jeopardized.

Monitoring is performed, that the use of gas corresponds to the agreed level and communicate with the distribution system operators, who are responsible for limiting the use of their own networks.

An analysis and revision of the situation are carried out.

Other actors

Gas users switch to alternative energy sources or reduce their consumption.

Each operator in the gas industry communicates with operators according to the communication diagram and exchanges key information between different operators.

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Distribution system operators limit the use of gas in their networks. Gas wholesalers and retailers take care of ensuring gas supply for protected customers.

Gas users switch to alternative energy sources or reduce their consumption.

The state's reserve stocks can be put into use if the fuels available from the market and compulsory stocks are not enough.

Each operator in the gas industry communicates with operators according to the communication diagram and exchanges key information between different operators.

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Gas operation diagram according to the emergency plan in the event of a delivery failure (1/2). **Note, the picture continues on the next page!**

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Gas operation diagram according to the emergency plan in the event of a delivery failure (2/2).

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