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MEMO

INFORMATION ABOUT GAS SUPPLY AND DEMAND 2022-2023

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1. Background

This memo is an update on the possible supply and demand situation during the Tyra redevelopment phase focused on the gas year 2022-2023. This memo follows up on the memos and supplementary graphics published on Energinet's webpage in September 2019, October 2020, and November 2021¹.

2. Summary

The European gas supply situation is highly affected by the war in Ukraine and the reduction in gas supply from Russia. The European situation dominates the Danish supply situation with strong connections to Germany and Poland.

Most of the Danish gas production in the North Sea is closed until Winter 2023-2024, as announced in August 2022. This leaves the Danish gas transmission system less flexible and more vulnerable to potential incidents. On the other hand, commissioning of the Baltic Pipe (hereafter BP) and the connection to Norway via Europipe II (hereafter EPII) in Autumn 2022 provide additional import capacity to the Danish gas transmission system. It is, therefore, Energinet's assessment that the Danish and Swedish consumers will continue to experience a robust Danish gas transmission infrastructure until and after the reopening of the Tyra platform in Winter 2023-2024.

Nevertheless, the European gas supply situation as well as high and volatile gas prices at the beginning of the gas year 2022/2023 in October 2022 call for increased attention. A long and hard winter could be challenging, and careful planning and focusing on the optimal use of the capacity in the system will reduce the risk of supply challenges. This statement is in line with the declaration of the crisis level Early Warning on June 20, 2022, by the Danish Energy Authorities (hereafter DEA)².

Several parameters will influence the actual situation until Tyra's expected recommissioning in Winter 2023-2024. Based on the now known prerequisites the market players must continue to:

- prepare themselves by sufficient storage reservations to ensure safe supply during a winter with possible gas deficit in Europe,
- keep gas in storage to secure own obligations with special attention to the period from February to April where storage filling can be critical,
- consider uncertainties related to variation in demand, supply, and potential other incidents affecting the gas infrastructure.

These actions will reduce the risk of severe imbalances in the transmission system which could lead to crisis level Emergency and possibly even interruption of non-protected customers.

3. Possible supply and demand situation in 2022-2023

From October 2019 and until commissioning of the connection to Norway via EPII, gas to Denmark and Sweden has been supplied from South Arne, biogas, Germany, and gas storage facilities in Lille Torup and Stenlille. Only Germany and the gas storage facilities have been able to deliver the necessary flexibility, and Germany has been the main source of gas supply. In

¹ <https://en.energinet.dk/Gas/Tyra/Supply-situation>

² <https://ens.dk/presse/energistyrelsen-erklarer-early-warning>

Autumn 2022, import from Norway via the connection to EPII and export to/import from Poland via BP are introduced into the Danish gas transmission system.

The actual supply and demand situation for 2022-2023 will depend on several important parameters including capacity utilization, storage filling, actual weather, and consumption, as well as the overall European supply situation. These factors should be considered by the commercial players.

4. Development since November 2021

Since the memo published in November 2021, the main developments are the following:

- The general European energy market and supply situation have been strongly affected by e.g., the war in Ukraine.
- On June 20, 2022, the DEA declared Early Warning for the Danish gas system.
- The BP and connection to Norway via EPII are both in operation from Autumn 2022. However, the firm capacity for export to Poland via BP is reduced in October-November 2022. Full operation will start at the end of November 2022³.
- The reopening of the Tyra platform has been postponed from June 2023 to Winter 2023-2024⁴.
- Energinet has introduced the possibility to utilize existing capacity contracts at different entry points from October 2022⁵.
- The absolute storage filling is higher at the beginning of the gas year October 1st, 2022, compared to the absolute storage filling at the beginning of the gas year October 1st, 2021; approx. 8.750 GWh in 2022 versus approx. 7.500 GWh in 2021. The total storage filling for all storage customers can be followed on the Energinet Webpage⁶.
- An 80 % filling of the Danish gas storages is required on November 1st, 2022, by the EU filling targets⁷. On November 1st, 2023, the filling target is increased to 90 % of the technical storage capacity.
- The European Commission has published a regulation⁸ implementing the possibility for declaration of Union Alert as well as a voluntary 15 % reduction in gas consumption in the period August 2022 to March 2023 compared to the average consumption in the same period in the preceding five years. The consumption reduction will be mandatory upon declaration of Union Alert.
- New tariffs for the gas year 2022/2023 have been published⁹.
- The gas prices have been driven to historically high levels and volatility.
- The Danish consumption is reduced compared to previous years.
- In September, the share of biomethane production compared to gas consumption in Denmark seen over the past 12 months reached 29,7 %¹⁰.

³ <https://www.baltic-pipe.eu/energinet-baltic-pipe-can-be-put-into-full-operation-one-month-ahead-of-planned/>

⁴ <https://tyra2.dk/en/opstart-af-tyra-feltet-forsinket-til-vintersaesonen-2023-24/>

⁵ <https://en.energinet.dk/Gas/Gas-news/2022/09/28/Utilisation-of-Entry-capacity-at-different-points>

⁶ <https://en.energinet.dk/Gas/Security-of-Supply/Storage-level>

⁷ https://ec.europa.eu/commission/presscorner/detail/e%20n/ip_22_4080

⁸ <https://www.consilium.europa.eu/en/press/press-releases/2022/08/05/council-adopts-regulation-on-reducing-gas-demand-by-15-this-winter/>

⁹ <https://energinet.dk/Gas/Tariffer-for-gastransport/Gaeldende-tariffer>

¹⁰ <https://en.energinet.dk/Gas/Biomethane#Info>

5. What happens in case of Emergency?

According to the EU Regulation concerning security of gas supply¹¹, three crisis levels exist: Early warning, Alert and Emergency.

If the Danish gas transmission system reaches a critical imbalance it will be necessary to declare Emergency. The declaration of Emergency allows access to the Emergency storage volumes and other non-market-based instruments such as possible interruption of non-protected customers.

If crisis level Emergency is declared, it might lead to different consequences depending on the actual incident:

- Emergency for shorter periods and use of Energinet's emergency storage. No interruption of customers.
- Emergency for 30 days or more with full or partial interruption of non-protected customers¹² in Denmark (25% of the market) and Sweden (98% of the market).

Energinet will adapt actions to the level required by the actual incident.

Energinet's stored volume reservation (emergency gas) is based on EU requirements and is reserved for emergency purposes. According to the regulation it must be secured that the protected customers can be supplied with gas for a period of at least 30 days in long term incidents. In 2022/2023 Energinet System Operator has reserved 1.700 GWh in Emergency storage filling from Gas Storage Denmark and bought additional filling requirements from storage customers. The reserved storage volumes can secure sufficient storage withdrawal capacity to handle short term technical incidents on a day with extraordinary high demand occurring with a statistical probability of once in 20 years ("hydraulic incidents").

6. Final remarks

Based on the now known prerequisites it is up to the commercial players to prepare themselves through sufficient capacity bookings, supply contracts and storage reservations. The commercial players must consider a broad variety of uncertainties in order to fulfil their obligations in regard to security of supply. The development in the gas demand and supply situation on European level should be closely followed by all commercial players.

¹¹ <https://eur-lex.europa.eu/eli/reg/2017/1938/oj>

¹² <https://energinet.dk/Gas/Forsyningssikkerhed/Ikke-beskyttede-kunder>