

Operations Manual

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1 Definitions used

Unless otherwise indicated by the context, the terms and definitions used in this Operations Manual shall be as defined in Clause 2.1, General Terms and Conditions Gas Storage ("GTCGS"), version 17.

2 Options for communication

Storage Customers may use the following methods to Nominate/Renominate to GSD:

- a) Edig@s messages in XML format as described in Edig@s XML 5.1 by using AS4 protocol for transfer and security ("XML Nomination System"); and/or
- b) Customer Portal.

To Nominate/Renominate by using the XML Nomination System, the Storage Customer shall undertake the necessary test procedures before starting communication as further described in the Nomination Guide published on GSD's website¹.

To Nominate/Renominate by using GSD's Customer Portal the Storage Customer shall conclude the Online Agreement (Appendix 4) published on GSD's website².

2.1 Communication via the XML Nomination System

If submitted via the XML Nomination System, the Nomination/Renomination shall be made using the Shipper Code assigned to the relevant Storage Customer' sub-account, specifying the Natural Gas quantity per Hour in a collective Nomination/Renomination message and shall cover a validity period of at least 1 (one) Gas Day. The validity period shall be divided into time intervals of not less than one Hour and not more than the entire validity period.

For each time interval the Storage Customer shall request either withdrawal or injection of Natural Gas quantity. The time intervals shall cover the total validity period and shall not overlap.

It is possible to nominate/renominate for more than one Gas Day at a time, provided that the Gas Days are in immediate succession, and the Nomination/Renomination complies with the above-mentioned terms and conditions.

¹ <https://gasstorage.dk/Contact-and-communication>

² <https://gasstorage.dk/Rules>

2.2 Communication through GSD's Customer Portal

If submitted through GSD's Customer Portal, the Nomination/Renomination shall be specified per Shipper Code and the related Counterparty's Shipper Code in the Transmission System Pair, and the direction being:

- a) Injection; or
- b) Withdrawal.

When renominating in a specific Hour through the Customer Portal, the Storage Customer may change the direction from injection to withdrawal or vice versa by performing two transactions: (i) changing the original nomination to zero and (ii) renominating the desired direction, both by selecting the appropriate Shipper Codes in the Gas Storage and in the Transmission System.

Guidelines for how to use the Customer Portal are published on GSD's website³.

3 Nomination/Renomination

Storage Customers are entitled to use their Firm and Interruptible Capacities for Injection or Withdrawal in an Hour subject to submitted Nomination/Renomination in respect of that Hour.

The Storage Customer may change already Accepted Nomination for an Hour by using a Renomination.

3.1 Deadline for Nomination

No later than at 14:00 on each Gas Day, the Storage Customer may submit a Nomination providing information about the Natural Gas quantities, expressed in kWh/Hour, which the Storage Customer requests GSD to inject into or withdraw from the Gas Storage during each Hour of the following Gas Day with effect from 06:00 on the following Gas Day ("Nomination").

The Storage Customer may conduct a Nomination for each Hour for an extended period (e.g., weekend, week, month or year) before the expiry of the abovementioned deadline.

³ <https://gasstorage.dk/Contact-and-communication>

3.2 Accepted Nomination

Before 16:00 on each Gas Day, GSD notifies the Storage Customer whether:

- (i) The Nomination has been approved;
- (ii) The Nomination has been reduced or refused; or
- (iii) The Nomination has been reduced in GSD's Matching with System Operator.

Nomination approved in accordance with this Clause 3.2 (i) or reduced in accordance with this Clause 3.2 (ii) or (iii), is considered by GSD as Accepted Nomination.

3.3 Deadline for Renomination

At 16:00 the day prior to the Gas Day and from 18:00 on the day prior to the Gas Day until 03:00 on the Gas Day ("Renomination Period"), the Storage Customer may revise fully or partly an Accepted Nomination with 1-Hour lead time prior to the requested effective commencement for the Renomination ("Lead Time"). For example, a Renomination received at 18:25 shall be confirmed and executed at 20:00 on the same Gas Day.

3.4 Accepted Renomination

Within the Lead Time after the beginning of each whole Hour, GSD shall notify the Storage Customer as to whether:

- (i) The Renomination for the Hour have been approved;
- (ii) The Renomination for the Hour has been reduced or refused; or
- (iii) The Renomination for the Hour has been reduced in GSD's Matching with the System Operator.

Renomination approved in accordance with this Clause 3.4 (i) or reduced in accordance with this Clause 3.4 (ii) or (iii), is considered by GSD as an Accepted Renomination.

3.5 Zero Nomination

If the Storage Customer has not submitted a Nomination at 14:00 on each Gas Day in respect of the following Gas Day, GSD shall nominate 0 (zero) on behalf of the Storage Customer.

3.6 Compliance with the Nomination Guide

If the Nomination/Renomination submitted by the Storage Customer does not comply with GSD's Nomination Guide⁴, the Nomination/Renomination shall be deemed null and void and treated as it has not been received.

3.7 Latest received Nomination

If the Storage Customer sends multiple Nominations/Renominations prior to the deadline for GSD's receipt hereof, the latest received Nomination/Renomination shall apply.

3.8 Automatic procedures

All Nomination/Renomination procedures are fully automatic. Therefore, GSD cannot meet a Storage Customer's extraordinary request for changes to Nominations, Accepted Nominations/Renominations.

If the Storage Customer has chosen to communicate Nominations/Renominations to GSD by using the XML Nomination System, in addition to the messages required in Clauses 3.1 and 3.3 and the terms described in Clause 3.2 and 3.4 in this Operations Manual, the Storage Customer and GSD must exchange APERAK messages – e.g. the party receiving a Nomination message shall within 10 minutes after receipt confirm the receipt and inform whether the message complies with the requirements of the XML Nomination System by returning an APERAK message to the party who submitted the Nomination message.

If the party who submitted the Nomination message does not receive an APERAK message within such deadline, such party shall contact the other party for clarification i.e., the submitting party carries the submission risk.

4 Matching

Concurrently with the submitted hourly Nomination/Renomination to GSD, the Storage Customer' Counterparty in the Transmission System shall also submit hourly Nomination/Renomination to the System Operator.

GSD and System Operator shall compare the quantities of the Nominated/Renominated Natural Gas in each Hour of the Gas Day by matching the most recent Nomination/Renomination received by GSD and System Operator from respectively the Storage Customer and its Counterparty in the Transmission System ("Matching").

⁴ <https://gasstorage.dk/Contact-and-communication>

Matching will occur continuously before and during the Gas Day in respect of each Hour of the Gas Day.

If the Storage Customer's latest Nomination/Renomination does not correspond to the latest Nomination/Renomination made by the Storage Customer's Counterparty in the Transmission System (the Shipper) in respect of the Storage Point, the Storage Customer's latest Storage Nomination/Renomination shall be reduced in accordance with the "Lesser of" Principle.

Matching shall be based on the parties' intention, which means that Matching, due to Renomination on the part of the Storage Customer or the Shipper shall be based on the Counterparty's latest Nomination/Renomination and not on the Counterparty's latest Matched Nomination/Renomination. For example, if Counterparty A's latest Nomination of 250 was reduced in accordance with the "Lesser of" Principle to 200 due to a lower Nomination on the part of Counterparty B, is followed by a Renomination, where Counterparty B adjusts upwards to 250, the new matching result after the Renomination of Counterparty B shall be based on Counterparty A's original nomination of 250, admitting the Matched Nomination of 250 to Counterparty A.

5 Allocation of Natural Gas

The Natural Gas quantity allocated to a Storage Customer at the Storage Point in each Hour ("Allocation") shall be equal to the Accepted Nomination/Renomination in this Hour.

At the end of each Gas Day before 06:00 a.m. Danish time, GSD shall inform the Storage Customer of the Natural Gas quantities allocated for the Gas Day by sending a MARSIT⁵ message containing the hourly Allocation in each Hour of the Gas Day.

GSD shall also send a status on the Storage Customer's account for Stored Natural Gas, ACCPOS⁵ or MARSIT 94G⁵ message, at the same time as the MARSIT message.

The final allocation of Natural Gas quantities at the Storage Point forms the basis of GSD's settlement of charges for Injection Capacity, charges for used Interruptible Capacities and, if relevant, GSD's crediting of purchases of Natural Gas.

⁵ cf. Edig@s XML 5