

Data Hub

Guide for Using and Joining the Data Hub

Version 10.3

05.2022

VERSION HISTORY

Date	Version	Author	Description
2016	1.0	Elering	Document created – Terms of reference
2016	2.0	Elering	Document changed – additions
08.2016	3.0	Elering	Document published – amended
17.2016	4.0	Elering	Document published – amended
11.2016	5.0	Elering	Document published – amended
12.2016	6.0	Elering	Document published – amended
02.2017	7.0	Elering	Document published – additions to chapters 2, 6 and 8
08.2017	8.0	Elering	Document published – brought into compliance with the new legislation
05.2018	9.0	Elering	Document published – requests and submission of private clients' meter data and metering points data amended
10.2019	10.0	Elering	Joint invoices and mediation of client's requests, new reports (non-remotely read metering points and forecast data) covered
11.2019	10.1	Elering	Amendments
03.2020	10.2	Elering	Agreement drafts
05.2022	10.3	Elering	Client type additional choices introduced

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LINKS

Live environment: <http://gaasiandmeladu.elering.ee>

Test environment: <http://gandmeladu-test.elering.ee>

Message examples: <https://gaasiandmeladu.elering.ee/documentation.html>

1 THE DATA HUB IN THE CONTEXT OF THE GAS MARKET

Data Hub is a digital environment for information exchange in the gas market for the purpose of changing open suppliers, forwarding consumption data between market participants, maintaining the data, performing the obligations imposed on market participants by the law and ensuring the rights granted to them.

The purpose of the Data Hub is to provide an efficient information exchange process in the open gas market following the principle of equality. The Data Hub provides equal access to consumption meter data to all authorized market participants and enables a quick change of suppliers.

Elering is responsible for the development and maintenance of the Data Hub. Grid operators are responsible for the quantity and quality of the submitted data, the accuracy of meter data and its division between balancing periods, and the validity of the submitted client data. Open suppliers are responsible for the validity of the information found in the submitted gas supply agreements.

All the market participants active in the Estonian gas market are defined in the Data Hub. All the market participants and metering points are identified by a unique code (EIC code) provided by the Data Hub.

Unified data formats have been established for using the Data Hub.

Market participants can access their meter data through system administrator's web portal and download the data. The portal also provides a market participant with an overview of all information concerning the participant found on the Data Hub: terms of agreements, open suppliers, hourly or daily meter data, the market participant's EIC code, and the EIC codes of the metering points linked to the market participant.

2 DATA HUB USER AGREEMENT

Users submitting data to the Data Hub are called operators. The roles and responsibilities of the operators are divided as follows:

A grid operator is an undertaking, which provides network services via their network and is responsible for collecting meter data from their network area and transmitting it to the Data Hub. Each grid operator is a market participant with their own portfolio (network losses and gas sales).

An open supplier is a seller or buyer of gas providing a client with open supply services, i.e. selling/buying required/surplus quantities of gas or selling/buying the whole quantity of metered gas based on the agreement between the parties. The open supplier submits the data of the open supply agreement signed with the market participant to the Data Hub.

A balance provider is a higher-level open supplier that has signed a balance agreement with the system administrator.

In order to use the Data Hub, the grid operators and open suppliers must sign a Data Hub User Agreement with the system administrator, setting out the rights and obligations related to transmitting and requesting data in accordance with the law.

By signing the Data Hub Agreement, open suppliers take the responsibility that in case meter data is requested without there being no such right granted within the Data Hub, the open supplier has to have a proper written authorization from the customer as stated in the Personal Data Protection Act.

The system administrator does not control the contents of the data submitted by grid operators or the timing of the data transmission. Each grid operator is responsible for the submitted data of their network area, whereas performing the obligation to provide the necessary data for balance settlements as provided in the Natural Gas Act (§ 22).

The system administrator guarantees the use of the Data Hub for operators as follows:

- a) Guarantees the safety of the data submitted electronically;
- b) Notifies the Operator of any possible maintenance and development works affecting the use of Data Hub via e-mail or through the Data Hub at least 5 (five) working days in advance;
- c) Notifies the Operator via e-mail or through the Data Hub at least 3 (three) working days in advance of any planned maintenance works and interruptions in service;
- d) Arranges necessary maintenance and development works for the smooth operation of the Data Hub, so that such works would not be scheduled for the period of 8.00–12.00;
- e) Informs the Operator about any interruptions in the functioning of the Data Hub as soon as possible, whereas informs the operators within 15 minutes in case of such interruptions occurring during a working day;
Restores the use of Data Hub at the earliest opportunity (usually within 4 hours).

All the above-mentioned electronic notifications are sent to the Administrator as defined by the Operator in the User Agreement (see chapter 14). The Administrator has the right to delegate the above-mentioned messages to some other e-mail address by requesting a corresponding switch via an electronic notification to the system administrator's Data Hub administrator.

Additionally, all Operators are responsible for accepting and complying with the Data Hub security requirements and for adhering to the legal requirements regarding data transmission, processing and use.

3 FUNCTIONALITY OF THE GAS DATA HUB

The Data Hub as a system covers the three main processes of the gas market. These are the following:

1. The process of changing suppliers and exchange of messages describing this process;
2. The process of submitting metering point data and meter data;
3. The process of encoding.

Additionally, the Data Hub facilitates the functionality of calculation of meter data for balance settlements.

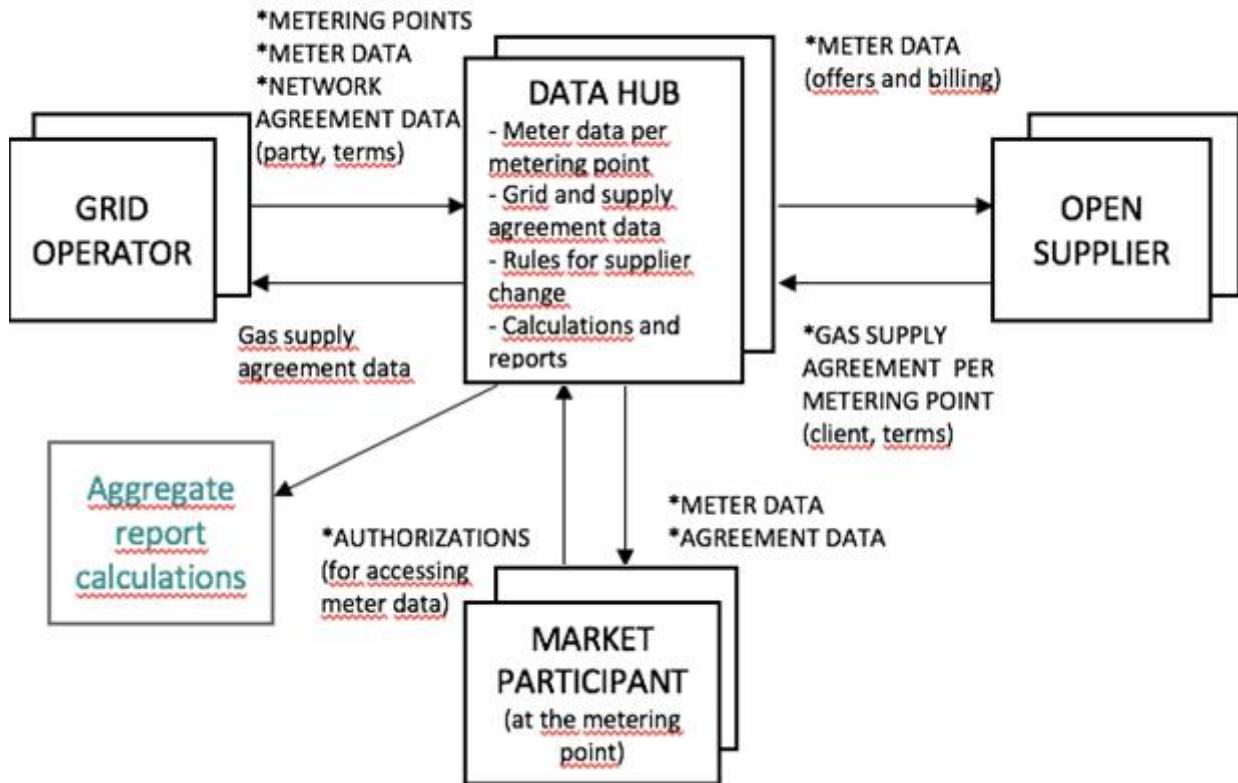


Figure 1: The main processes of the Data Hub

The roles of the Data Hub operators are as follows.

1) **Grid operator submits:**

- Market participant's data for receiving an EIC code;
- Messages linking a market participant's EIC code to new data;
- Metering point data (upon adding a new metering point or changing the data of an existing point). These include: EIC code of the metering point, metering point type, address, EIC code of the market participant signing the grid agreement, client type, start and end date of the grid agreement;
- Information regarding disconnection and connection state;
- Meter data for the metering point (kWh and m3).

2) **Open supplier submits:**

- Open supply agreement data, including the start and end dates of the agreement by metering points;
- Dates of termination/cancellation of the supply agreement;
- Queries for finding metering points of a market participant by their EIC code;
- Queries for finding a market participant's EIC code;
- Confirmation of having the market participant's authorization for accessing their 12 months' meter data;
- Queries for receiving a market participant's 12 months' meter data.

3) The Data Hub:

- Forwards the EIC code of a market participant registered at the operator's request to the grid operator;
- Forwards the meter data received from the grid operator to the open supplier currently supplying the metering point and other market participants authorized to receive the data;
- Provides an open supplier with a market participant's 12 months' meter data, if the supplier has a proper authorization, or denies the request, if they do not have such authorization;
- Forwards a confirmation of the registration of a signed agreement or failure of the registration due to invalid terms to the open supplier;
- Forwards information on the addition or amendment of an open supply agreement at a metering point to the grid operator;
- Forwards information on the addition or amendment of an open supply agreement at a metering point to the open supplier's balance provider;
- Encodes all market participants;
- Forwards the EIC code of a market participant, EIC code of a metering point, and the contacts of the person who has given authorization for making offers based on their 12 months' meter data from their metering point to the open supplier.

4) A market participant can use the web interface to:

- Manage the authorizations they have given to open suppliers for receiving their offers, i.e. for requesting the market participant's last 12 months' meter data from the Data Hub;
- Manage their contacts for receiving offers from open suppliers based on their authorization;
- Review the meter data from their metering points;
- Review the information found on the Data Hub on their open supply agreements;
- Represent a legal person whose right of representation is verified based on the list of the members of the management board presented to the Commercial Register by the undertaking.

5) The system administrator and balance provider can use the Data Hub to access:

- The balance provider's defined open balance area for balance settlement;
- Meter data from the border metering points located in the balance provider's balance area.
- Aggregated reports: by sellers, by grid operators and by balance portfolios.

6) The system administrator submits the following data to the Data Hub:

- A list of grid operators and open suppliers along with the respective rights of use of the Data Hub;
- Termination of open supply agreements upon the termination of activities by an open supplier.

7) Data Hub calculates the necessary aggregated reports for balance settlement:

- Aggregated delivered gas quantities from the grid operators' networks by open suppliers;
- Aggregated meter data in open supply portfolios per grid operator;
- Aggregated meter data of the open suppliers in balance provider's portfolio included into the portfolio (so-called "IN" metering points);

- Aggregated meter data excluded from the grid operator's balance provider's portfolio from metering points where the client's balance provider and grid operator's balance provider differ ("OUT" metering points);
- For the calculation of the grid operator's portfolio, the Data Hub calculates the gas quantities entering the grid operator's network and the quantities exiting the grid operator's network based on valid grid agreements and other open suppliers' agreements – the difference in the grid operator's portfolio.

4 GENERAL PRINCIPLES OF INFORMATION EXCHANGE

Automatic information exchange (machine interface) between the Data Hub and an operator's information system takes place using the POST function of the HTTP protocol. Information exchange between the systems is based on messages in XML format. The format of the messages used is described below.

Messages in XML format are used for information exchange between systems.

The format of the messages used is described below.

- All the described XML elements are required, i.e. they must always be added unless otherwise indicated. Missing elements will render the document unusable and it will not be accepted on the receiving side.
- If an XML element is described as „optional” in the description of the format, this indicates that the element may be omitted.
- By default, UTF-8 encoding is used for transmitting XML messages.

Rules for entering time data:

1. All time data is expressed using the ISO-8601 format¹;
2. The hour 24:00 is not used;
3. UTC (Universal Time Constant) aka GMT (Greenwich Mean Time) time must be used for transmitting meter data;
4. Generally, the meter data is transmitted per days (balancing period), but hourly data can also be forwarded with the correct time zone noted according to the standard. When transmitting the data by balancing periods, the quantities must be forwarded in the first hour of the balancing period;
5. The Data Hub calculates and presents the meter data by hours or days (according to the balancing period defined in legislation);
6. Agreement start date is expressed to the precision of a day;
7. Agreement end date is expressed to the precision of a day.

Rules for entering addresses:

1. The following fields are defined for entering an address:
 - County
 - Municipality (city, rural municipality)
 - Locality (village, small town, town, city without municipal status) or city district
 - Address (small place, name of land unit, street, address number, number of apartment or other part of building)
 - Postal code;
2. The data is entered in plain text.

Rules for transmitting meter data:

1. The metering period must be expressed in UTC time;
2. Meter data is always expressed in kWh to the third decimal point and in m³-s to the third decimal point;

¹ More details: http://en.wikipedia.org/wiki/ISO_8601

3. Meter data is always submitted bidirectionally: InQty and OutQty (both in kWh and in m³ for each time series);
4. The direction of meter data must be presented from the perspective of the measuring grid operator: InQty – gas entering the network (production); OutQty – gas exiting the network (consumption).

5 EIC CODES

An EIC code (European Identification Code) is a unique identifier assigned to a market participant or a metering point on the basis of a unified encoding system. It is used for the automation of information exchange regarding the market participants operating in the energy market.

- a. A metering point's EIC code is a unique combination of characters unambiguously identifying a metering point. The system administrator allocates a code range to be used by a distribution grid operator.
- b. A market participant's EIC code is a unique combination of characters unambiguously identifying a market participant, assigned by the system operator. The EIC code of a natural person is based on their personal identification number, while the EIC code of a legal person is based on their commercial registry code. Legal persons lacking a commercial registry code must submit an EIC code application to Elering's department of energy markets via e-mail (eic.office@elering.ee). For natural persons lacking an Estonian personal identification number, the identification number of the document provided is used instead; in the case of foreign nationals, country code and personal identification code or, in the absence of the latter, the identification number of the document provided.

The EIC code registry is located on the Data Hub. An EIC code is assigned to each market participant and metering point by the Data Hub or, in exceptional cases, by Elering based on the submitted application.

Each market participant must have an EIC code, which is linked to all of their actions in the market.

EIC code request and response (RequestCustomerEIC)

The client's EIC code is requested from the Data Hub. If the client is a new client who has not been provided with an EIC code yet, the Data Hub will create a new code and return it in response to the request.

Operator	Operation
Open supplier	Can only request a client's EIC code
Grid operator	Can register a client in the system
Data Hub	Returns the requested client's EIC code. If a code has not been assigned and the request sender is a grid operator, the Data Hub assigns a code to the client and returns the new code.

Message

Document	Name
Xml Document	RequestCustomerEIC
Xsd Document	RequestCustomerEIC.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length: 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message receiver (Data Hub)	16 characters

DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
CustomerData	Section used for submitting the data of the client whose EIC code is requested. At least 1 section must be submitted. The maximum number of sections is 32.	
OfficialIdentification	This element defines the type of registry code used for identifying the client.	
Registry	Registry ID type used	1..32 characters Possible values: 1. "isikukood" – personal identification code, for private clients; 2. "äriregister" – commercial registry code, for business clients; 3. „dok. number” – document number, for clients that are not Estonian citizens.
Country	The country of the registry defined in the previous field	2 characters The "EE" – Estonian registries „/Riigi tunnus/" – country code, if the person is a foreign national
GivenName	Private client: Given name(s) of the client Business client: Name of the business client	Optional If the client does not exist and no name was provided, the client will not be registered.
Surname	Private client: Surname of the client Business client: Not used	Optional
CustomerData	End of section	

Example: <https://gaasiandmeladu.elering.ee/docs/v2/RequestCustomerEIC.html>

Response

Section	Name
HTTP response:	
200 OK	Message received, feedback added.
Xml payload:	
Xml Document	NotifyCustomerEIC
Xsd Document	NotifyCustomerEIC.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier.	Max length: 50 characters
SenderIdentification	EIC code of the message receiver (Data Hub)	16 characters
ReceiverIdentification	EIC code of the message recipient	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
OriginalDocumentIdentification	Request document ID	Max length: 50 characters
CustomerData	Section used for submitting the data of the client whose EIC code is requested. The maximum number of sections is 32.	
OfficialIdentification	This element defines the type of registry code used for identifying the client.	
Registry	Registry ID type used	1..32 characters See the description of the message <i>RequestCustomerEIC</i> .
Country	The country of the registry defined in the previous field	2 characters See the description of the message <i>RequestCustomerEIC</i> .

GivenName	Private client: Given name(s) of the client Business client: Name of the business client	Always returns a name
Surname	Private client: Surname of the client Business client: Not used	Always returns a name
CustomerIdentification	Client's EIC code	16 characters
CustomerData	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/NotifyCustomerEIC.xml>

6 SUBMITTING METERING POINTS TO THE DATA HUB

Grid operators are responsible for the determination of the quantities of gas entering and exiting their networks (both in cubic meters and in kilowatt-hours), and for the collection and processing of meter data.

Grid operators are responsible for updating metering point data in the Data Hub for metering points located in their service area.

Grid operators submit the following data for each metering point located in their service area to the Data Hub:

1. EIC code and address of the location of the metering point;
2. Commercial registry code or, in the case of a natural person, the personal identification code of the person who signed the grid agreement;
3. Start date of the grid agreement and end date of the agreement, if defined;
4. Technical data;
5. Amendments to previously submitted data;
6. Hourly or daily bidirectional meter data;

The technical data provided for a metering point includes:

1. EIC code of the metering point;
2. Type of the metering point (remotely read, not remotely-read or virtual);
3. Data of the network agreement associated with the metering point and an indication of whether the client is a small consumer;
4. Data of consumption type:
 - 1) household consumers;
 - 2) other protected consumers as defined in the Natural Gas Act's § 26¹ paragraph 2 section 2;
 - 3) power stations using gas to produce electricity and are vital to the functioning of the power system;
 - 4) consumers providing general interest service;
 - 5) other non-protected consumers with the expected time of gas supply disconnection within six hours;
 - 6) other non-protected consumers with the expected time of gas supply disconnection exceeding six hours;
5. Address of the location of the metering point;
6. Whether the metering point is a border point of a grid operator's service area;
7. Whether the network connection is switched on or off.

The grid operator must update the technical data provided for a metering point at the first opportunity; when updating the data, the grid operator must keep in mind that changing the information retroactively is forbidden if it jeopardizes the operations of an open supplier at the metering point.

Grid operators can submit technical data for metering points to the Data Hub either via batch upload using the web interface or using automatic information exchange messages.

NB! New network agreements must be submitted at least 1 day before the agreement comes into force, but desirably 7 days in advance.

Batch upload of metering point data using the web interface

To submit the technical data of metering points via batch upload, the submitter of the data must prepare an MS Excel spreadsheet containing the following columns (order is important):

1. EIC code of the metering point
2. Metering type – one of the following: REMOTE_READING (remotely read), NON_REMOTE_READING (manually read), VIRTUAL (calculated meter data)
3. Consumption type – one of the following: CONSUMER (non-protected consumer group 1 (slowly disconnectable, more than 6h)), CONSUMER_2 (non-protected consumer group 1 (quickly disconnectable, less than 6h)), GRID_OPERATOR (grid operator), PRODUCER (producer), PROTECTED (protected consumer/household consumer), PROTECTED_OTHER (other protected customer), GENERAL_INTEREST_SERVICE_PROVIDER (consumer providing general interest service), POWER_PRODUCER_FROM_GAS (consumer producing electricity from gas)
4. Consumption quantity at the metering point: SMALL (small consumer), LARGE (large consumer)*
5. Connection status at the metering point: CONNECTED (connected), DISCONNECTED (disconnected)
6. Is it a border metering point*? yes – border metering point, no – standard metering point
7. Address
 - A. *County*
 - B. *Municipality* (city, rural municipality)
 - C. *Locality* – settlement unit (village, small town, town, city without municipal status) or city district
 - D. *Address* – street address (small place, name of land unit, street, address number, number of apartment or other part of building)
 - E. *Postcode* – postal code. If the address is without a postal code, enter 00000 as the postal code
8. Identifier of the network agreement counterparty: 11-digit Estonian personal identification code or 8 digit Estonian commercial registry code
9. For private persons, given name of the network agreement counterparty; for legal persons, business name of the client
10. For private persons, surname of the grid agreement counterparty; left empty for legal persons
11. Start date of the network agreement in format YYYY-MM-DD (if not available, then 2011-01-01)
12. End date (last day of validity) of the network agreement in format YYYY-MM-DD, left empty if not defined

The data is copied to the corresponding input field excluding the header.

Additional rules*:

- 1) A border metering point is a metering point between two grid operators (one grid operator is a client of the other operator).
- 2) A grid operator can only be a client at their border metering points.
- 3) SMALL = household consumer of gas. LARGE = business client.

Transmitting metering point data (NotifyMeteringPointData)

The descriptions of messages for submitting technical data for metering points are presented below.

Market participant	Operation
Open supplier	-
Grid operator	Registers the metering point along with the network agreement data
Data Hub	Notifies the open supplier of changes in meter data

Message description

Document	Name
Xml Document	NotifyMeteringPointData
Xsd Document	NotifyMeteringPointData.xsd

Xml element	Description	Format
DocumentIdentification	Unique message identifier	Max length: 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message receiver (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
MeteringPoint	Section used for submitting metering point data	
Identification	EIC code of the metering point	16 characters
MeteringType	Meter reading type	„REMOTE_READING“ „NON_REMOTE_READING“ „VIRTUAL“
ConsumptionType	Consumption category of the client behind the metering point	„CONSUMER“ „CONSUMER_2“ „GENERAL_INTEREST_SERVICE_PROVIDER“ „POWER_PRODUCER_FROM_GAS“ „PROTECTED“ „PROTECTED_OTHER“ „GRID_OPERATOR“ „PRODUCER“ „CONSUMER_3“ – back-up group 1 „CONSUMER_4“ – back-up group 2
ConsumptionScale	Consumption quantities	„LARGE“ „SMALL“
ConnectionState	Is the metering point connected?	„CONNECTED“ „DISCONNECTED“
BorderPoint	Is the metering point between two grid operators?	„yes“ – MP between two grid operators; „no“ – client's metering point;
Location	Section used for the address of the metering point	
County	County	
Municipality	Municipality	City, rural municipality
Locality	Settlement unit	village, small town, town, city without municipal status, city district

StreetAddress	Street address	Small place, name of land unit, street, address number, number of apartment or other part of building
Postcode	Postal code	
Location	End of section	
Agreement	Section: Start and end dates of a network agreement	
Counterparty	EIC code of the network agreement counterparty	16 characters
FirstDate	Start date of the network agreement	See rules for expressing dates
LastDate	End date of the network agreement	Optional.
Agreement	End of section	
MeteringPoint	End of section	

Response

Section	Name
HTTP response:	
204 NO CONTENT	Message received, no additional information

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/NotifyMeteringPointData.xml>

Message rules

- The EIC code of the metering point must be within the grid operator's EIC code range;
- A single metering point can only have a single network agreement at any moment in time;
- The end date of the agreement can be retroactively changed only if this does not affect an open supply agreement;
- The end date of the agreement cannot be earlier than the start date;
- A border metering point is a metering point, where the grid operator is a network service client.

Requesting metering point data (RequestMeteringPointsData)

Open suppliers have the right to use the Data Hub to request the following data on market participants that have signed a gas supply agreement with the open supplier or that have authorized them via the Data Hub to receive such data:

1. Technical data for the market participant's metering point;
2. Data on the validity of the network agreement;
3. Data on the duration of the open supply agreement associated with the market participant's metering point.

Operator	Operation
Open supplier	Requests a client's metering point data
Grid operator	--
Data Hub	--

Message

Document	Name
Xml Document	RequestMeteringPointsData
Xsd Document	RequestMeteringPointsData.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length: 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message receiver (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SSZ
CustomerIdentification	EIC code of the client whose meteringpoint data is requested	16 characters
CustomerAuthorization	Noted whether the client has given their authorization	True: Authorization has been given and is stored in a format which can be reproduced in writing by the open supplier; False: Authorization not stored by the open supplier. The Data Hub verifies whether the open supplier is authorized to request metering point data. Data is submitted if A) the client is part of their supply chain or B) the client has given their authorization in e-eling.

Example: <https://gaasiandmeladu.elering.ee/docs/v2/RequestMeteringPointsData.html>

Response

Section	Name
HTTP response:	
200 OK	Message received, feedback added.
Xml payload: (see the description of the corresponding message)	
Xml Document	MeteringPointsData
Xsd Document	MeteringPointsData.xsd

Rules for requesting and transmitting metering point data:

1) Requesting metering point data of natural persons (RequestMeteringPointsData)

1.1. Data Hub provides technical data of the metering point with its address only in the following cases:

- a) Metering point(s) that belong to the open supplier's portfolio (direct agreement or via a portfolio tree of an open supply chain) – on the basis of a valid and/or entering into force (in the future) open supply agreement;
- b) Metering points to the grid operator of their area;
- c) If a consumer has given authorization to the open supplier for accessing their data via the Data Hub client portal (e-eling).

1.2. The Data Hub provides metering point data without address concerning the following metering points:

- a) If the open supplier is not the client's open supplier, i.e. the client does not have a valid supply agreement or a supply agreement coming into force in the future signed with the

request sender and the appropriate metering point is not in their open supply chain (the so-called portfolio tree);

- b) Consumer does not have an authorization to access the Data Hub via e-elering.

2) Requesting metering point data of legal persons (RequestMeteringPointsData)

Message rules:

- An open supplier must have an authorization given by the market participant to receive their metering point data;
- There must be a valid network agreement for the metering point;
- The data may be requested by an open supplier.

Submitting an authorization (NotifyCustomerAuthorization)

The Data Hub notifies open suppliers of clients authorizing them to view meter data via the Data Hub.

Authorization data is submitted along with the contacts (phone number and e-mail address) of the market participant.

Market participant	Operation
Open supplier	--
Grid operator	--
Data Hub	Sends a message to an open supplier(s)

Message

Document	Name
Xml Document	NotifyCustomerAuthorization
Xsd Document	NotifyCustomerAuthorization.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length: 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SSZ
CustomerAuthorization	Section defining details of the authorization	
CustomerData	Section defining the data of the market participant giving the authorization	
OfficialIdentification	This element defines the type of registry code used for identifying the client	
Registry	Registry ID type used	1..32 characters Possible values: 1. "isikukood" – personal identification code, for private clients; 2. "äriregister" – commercial registry code, for business clients; 3. „dok. number" – document number, for clients who are not Estonian citizens.

Country	The country of the registry defined in the previous field	2 characters The "EE" – Estonian registries „/Riigi tunnus/" – country code, if the person is a foreign national
GivenName	Private client: Given name(s) of the client Business client: Name of the business client	
Surname	Private client: Surname of the client Business client: Not used	
CustomerIdentification	Market participant's EIC code	
CustomerData	End of section	
FirstDate	Start date of the authorization	
LastDate	End date of the authorization	
Phone	Phone number of the market participant	
Email	E-mail address of the market participant	
CustomerAuthorization	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/NotifyCustomerAuthorization.xml>

7 TRANSMITTING METER DATA TO THE DATA HUB

Grid operator provides the Data Hub with bidirectional hourly or daily meter data on gas quantities for each metering point both in volume units (m³) and energy units (kWh).

Grid operators submit meter data for metering points on the following conditions:

1. When submitting data per balancing periods (days), the data must be transmitted in the balancing period's first hour (7.00).
2. For metering points where meter data is read remotely, the grid operator submits preliminary meter data to the Data Hub by 13.00 on each business day;
3. For metering points where meter data is read remotely, final meter data for the calendar month is submitted to the Data Hub by the grid operator by the **7th day of the following month**;
4. Where meter data is read manually, final meter data for the calendar month is submitted to the Data Hub by the **7th day of the following month**.

The grid operator is responsible for sending daily or hourly meter data to the Data Hub.

In case a remote reading system is not used, the grid operator calculates the quantity of gas consumed by the market participant in the previous month for each period (hour or day) by the standard consumption scale.

- To calculate consumption quantities by periods, the grid operator uses the readings of the metering system transmitted for the beginning and end of the calendar month. If the consumer is not required to submit readings or has not submitted their readings by the deadline established by the grid operator, the grid operator must forecast the consumption for the corresponding calendar month by taking into account the past and/or predicted consumption at the consumption point.
- The grid operator corrects the meter data for the previous calendar month(s,) if the reading submitted by the client or the grid operator at the end of the month or the predicted reading is smaller or bigger than the reading for the previous month. The grid operator corrects the meter data for the months, where the submitted data for used quantities is higher than the reading at the end of the corresponding calendar month. The grid operator submits the corrected meter data to the Data Hub.
- The grid operator calculates and transmits its network meter data by metering points per each balancing period as follows:
 - 1) Remotely read meter data per metering point as measured;
 - 2) Manually read meter data per metering point based on the standard consumption scale and following the principle that manually read quantity is the total quantity entering the network minus remotely read quantities.

Meter data can be corrected retroactively for up to 12 months.

Grid operators can submit meter to the Data Hub both via batch upload using the web interface or using automatic data exchange messages.

NB! The Data Hub stores the meter data submitted by the network operators "as is". The Data Hub does not verify the contents of meter data.

Meter data can also be submitted to the Data Hub in the form of an MS Excel spreadsheet via the web interface. The following rules apply to the spreadsheets:

1. Hourly or daily meter data is presented in cubic meters (m³) and kilowatt-hours (kWh) to the precision of maximum three decimal points;
2. IN and OUT are from the perspective of the network – IN means gas entering the network (produced) and OUT means gas taken from the network (consumed);
3. In the spreadsheet downloaded from the Data Hub, metering points are ordered by EIC codes and divided into worksheets by 100 metering points;
4. Metering points can be listed in any order for submitting meter data and there is no limit to the number of submitted metering points (e.g., 1, 5 or 120 metering points);
5. The first two columns of the template spreadsheet shall not be changed. Metering points can be rearranged, ensuring that the header of the worksheet located in the first two lines (EIC code of the metering point and the IN/OUT lines) is preserved;
6. The template spreadsheet contains data previously received by the Data Hub; it can be corrected and resubmitted.

Transmitting meter data (EnergyReport)

The descriptions of messages for the transmission of meter data are presented below. Examples and rules can be found at: <https://gaasiandmeladu.elering.ee/docs/v2/EnergyReport.html>.

Used for transmitting the meter data of the metering point.

Operator	Operation
Open supplier	----
Grid operator	Sends metering point data
Data Hub	Sends data to open supplier(s)

Message

Document	Name
Xml Document	EnergyReport
Xsd Document	EnergyReport.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier.	Max length: 50 characters.
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message receiver (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
AccountTimeSeries	Section for defining the metering point for which data is transmitted	
AccountingPoint	EIC code of the metering point	16 characters
Period	Section for defining the period for which the data below is submitted	
TimeInterval	Time interval of the data transmitted	NB! The start and end date of the time interval MUST be expressed in UTC time.
Resolution	Time resolution	„PT1H“ Resolution is 1 hour.

AccountInterval	Section for submitting meter data for the interval	
Pos	Position in the interval	Number 1..X Based on the number of periods in the transmitted interval. The position may be absent, if there is no data on the position ² .
MeasurementUnit	Units used for expressing meter data	Meter data is expressed to the third decimal point "KWH" "M3"
OutQty	Quantity of energy exiting the network	May contain an empty ³ value.
InQty	Quantity of energy entering the network	May contain an empty value.
MeasurementUnit	End of section	
AccountInterval	End of section	
Period	End of section	
AccountTimeSeries	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/EnergyReport.xml>

Response

Section	Name
HTTP response:	
202 ACCEPTED	Response in a separate message
Xml payload:	
Xml document	EnergyReportResult
Xsd document	EnergyReportResult.xsd

Message rules

For grid operators:

- One message may contain the data of several metering points for the requested time interval. The interval of the meter data must be expressed in UTC time.
- Meter data is always expressed in cubic meters and kilowatt-hours (kWh) to the third decimal point;
- The submitted meter data must be bidirectional: InQty ja OutQty.
- The direction of the meter data must be presented from the perspective of the measuring grid operator: InQty – energy entering the network (production); OutQty – energy exiting the network (consumption).
- InQty and OutQty cannot be submitted separately for the same hour. They must be submitted simultaneously in the same message. If this data is submitted separately, the other direction will be left empty and the previous data will be overwritten.
- The submitted data does not have to cover the entire defined time interval.

For open suppliers:

- Open suppliers receive meter data from the metering points in their portfolio.

² The Data Hub sends an appropriate notice in the response, if there is no position.

³ The Data Hub sends an appropriate warning in the response, if there are empty values.

- Meter data is forwarded to the open supplier as soon as it has been transmitted to the Data Hub by the grid operator.
- Open suppliers receive meter data for a metering point only for the period, where they have an open supply agreement for this metering point.
- The Data Hub is not responsible for the quality of meter data. The grid operator is responsible for collecting meter data and transmitting it to the Data Hub.
- When an open supplier requests meter data for previous periods, [RequestMeteringDataHistory](#) message is used based on the same EnergyReport format.

Response for meter data transmission (EnergyReportResult)

Used for the response of the meter data of a metering point.

Operator	Operation
Open supplier	----
Grid operator	----
Data Hub	Sends a response on the success of receiving meter data to the grid operator

Message

Document	Name
Xml Document	EnergyReportResult
Xsd Document	EnergyReportResult.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier.	Max length: 50 characters.
SenderIdentification	EIC code of the message recipient (Data Hub)	16 characters
ReceiverIdentification	EIC code of the message recipient (GO)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
OriginalDocumentIdentification	Reference to the ID of the document the response is related to	Max length: 50 characters
AccountTimeSeries	Section defining which metering point's data is transmitted	
AccountingPoint	EIC code of the metering point	16 characters
Result	Notice on the success or failure of the loading of data.	
AccountTimeSeries	End of section	

Example: <https://gaasiandmeladu.elering.ee/docs/v2/EnergyReportResult.html>

Calculation of grid operator's network losses

Grid operators' network losses are calculated as follows:

- Quantity of gas entering the grid operator's network: P_{INbp} (gas entering from the network of another grid operator via border metering points)

- Quantity of gas exiting the grid operator's network: $P_{OUTclients}$ (quantity of gas provided to clients with grid agreements in the grid operator's own service area)
- Grid operator's network losses: $P_{LOSS GO} = P_{INbp} - P_{OUTclients}$

Each grid operator must have one open supplier for their network losses. The open supplier enters an open supply agreement with the grid operator to the Data Hub as a portfolio agreement, whereby all the border metering points (P_{INbp}) of this grid operator form a part of this open supplier's balance area.

8 SUBMITTING OPEN SUPPLY AGREEMENTS TO THE DATA HUB

Each market participant must sign an agreement with one open supplier that provides the market participant with open supply (open supply agreement) and maintains their balance.

Open supply means selling gas to a market participant based on meter data or selling the gas required to maintain the market participant's balance or buying their surplus gas to maintain their balance (Natural Gas Act § 11 p 5).

Balance responsibility is ensured through a continuous open supply chain in the following order:

1. The system administrator settles the open supply for the Estonian gas system and for the balance providers. Elering acts as an open supplier for its own network losses.
2. An open supplier that has signed a balance agreement with the system administrator is called a balance provider. For balance settlement, the balance provider uses meter data from those border points of their balance area where they are responsible for the balance.
3. An open supplier (except for open suppliers acting as balance providers) has an open supply agreement with a balance provider. The open supplier provides balance settlement for the market participants that they are supplying in their service area under an open supply agreement.
4. A distribution grid operator has an open supply agreement with one open supplier for their service area (for the compensation of network losses).
5. The consumer and the producer sign an open supply agreement with an open supplier, i.e. any metering point can only have one valid associated open supply agreement.

General principles for changing open suppliers

1. The procedure for changing open suppliers **does not cover fixed** transactions agreed with the supplier. Fixed deliveries are quantities of gas sold/bought over a trading period agreed on before the beginning of the trading period. Market participants can have several fixed supply agreements. The Data Hub does not hold information on fixed supply transactions.
2. The change of open suppliers takes place at the change of the calendar month in the first balancing period, provided that the procedure for changing suppliers and other relevant requirements are followed.
3. The prerequisite for signing an open supply agreement is a valid network agreement at the metering point. The network agreement is signed with the grid operator of the connection point. The open supply agreement can be signed by the same person that signed the network agreement.
4. Each metering point can have one associated grid agreement and one open supply agreement at a time.
5. The start and end dates of the open supply agreement for the metering point are submitted to the Data Hub by the open supplier.
6. If the open supplier cancels an open supply agreement or terminates the agreement in any other form, they must submit information on the termination of the agreement to the Data Hub (14 days before the end of the calendar month).
7. A new open supplier must submit a message on a new open supply agreement to the Data Hub by the statutory deadline defined in legislation (at least 7 days before the end of the calendar month).

General principles for signing an open supply agreement

1. A market participant must sign a new open supply agreement for changing their open supplier, provided that their previous open supply agreement has been terminated properly.
2. When a market participant signs a new open supply agreement with a new open supplier, then the new open supplier must submit this data to the Data Hub by the statutory deadline. The submitted data must include the validity period of the open supply agreement and the EIC codes of the metering points covered by the agreement.
3. Before signing an open supply agreement, the open supplier must use the Data Hub to verify whether a market participant has the right to change the supplier of that metering point.
4. Open suppliers must submit data to the Data Hub on the agreement periods of the market participants they are providing with an open supply service.
5. Open suppliers are changed at the change of the calendar month in the first balancing period.

Terminating an open supply agreement

1. An open supply agreement can be terminated at the change of the calendar month in the last balancing period. Open supply agreements can be terminated on other dates only if the network agreement of the market participant for this metering point is terminated.
2. If an open supplier cancels or otherwise terminates an open supply agreement, the open supplier must enter the data on the termination of the agreement to the Data Hub immediately after having made the decision to terminate the agreement.

Universal service and named supplier

1. In case an open supply agreement ends, the market participant using the open supply service must sign a new open supply agreement no later than by the end date of the previous agreement.
2. In case data on the new open supply agreement signed by the market participant has not been submitted by the new open supplier by the statutory deadline, the new open supplier of this market participant will be the grid operator whose network the installation of the market participant is connected to, or a supplier named by the grid operator.
3. A grid operator can submit a named supplier of their network area. In this case, the supplier for the clients without an open supply agreement is the supplier named by the grid operator.

Signing an open supply agreement in relation to the change of consumer

1. If the market participant changes, the new market participant at the metering point must sign a new open supply agreement no later than by the end date of the previous agreement.
2. An open supply agreement can enter into force starting from the date of the network agreement taking force. In case of the termination of a network agreement, the open supply agreement ends with the balancing period of the date of the termination of the network agreement.
3. In case data on the new open supply agreement signed by a market participant has not been submitted by the open supplier before the end date of the market participant's previous open supply agreement, the new supplier of this market participant will be the grid operator whose network the gas installation of the market participant is connected to, or a supplier named by the grid operator.

4. In case of a new grid agreement, the open supplier has the possibility to submit the data on the open supply agreement up to two days after the start date of the new grid agreement.

Discontinuation of an open supply agreement

1. The discontinuation of an open supply agreement is the termination of the agreement due to circumstances outside the control of the market participant being the client under the agreement.
2. In case of the discontinuation of an open supply agreement, the open supplier is changed at the change of the balancing period on the date of the discontinuation of the agreement.
3. In case a new open supply agreement is signed after the discontinuation of an open supply agreement, open suppliers are changed at the balancing period following the date after signing the new agreement.

Revocation of an open supply agreement

1. An open supplier can revoke an open supply agreement within 14 days of signing in case a private consumer has withdrawn from the agreement they have signed via a means of communication.

NB! SUBMITTING AN OPEN SUPPLY AGREEMENT VIA THE DATA HUB ADMINISTRATOR

1. In case an open supplier has not submitted an open supply agreement to the Data Hub due to the fact that the respective metering point has not been submitted to the Data Hub, the open supplier must submit an application to the system operator for submitting the open supply agreement to the Data Hub containing the following data:

Grid operator	Client ID	Client name	Metering point address	Open supplier	Start date	End date

- a. System administrator forwards the data to the metering point's grid operator and the grid operator's balance provider to receive confirmation and the EIC code of the metering point.
 - b. In case of confirmation, the grid operator (or the system administrator, if there is no agreement of use for the Data Hub) submits the metering point and grid agreement data to the Data Hub together with the respective open supply agreement.
2. In case the open supplier has not submitted the open supply agreement to the Data Hub due to its own delay, the open supplier must provide the respective grid operator and their balance provider with an application to accept the retroactive submission of an open supply contract for the metering point.
 - a. In case confirmation is granted, the open supplier must present the grid operator's and its balance provider's written confirmation to the system administrator as follows:

EIC code of the metering point	Grid operator	Client ID	Client name	Metering point address	Open supplier	Start date	End date
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- b. In case a confirmation is not provided, the open supply agreement cannot be submitted to the Data Hub and the open supplier must agree with the grid operator or its named supplier on the invoicing for the client.

8.1 Submission of open supply agreements using the web interface

Open suppliers can submit open supply agreements to the Data Hub either via batch upload using the web interface or using an automatic data exchange message.

Address of the web interface: <https://gaasiandmeladu.elering.ee/provider/new-supply-agreement-form>

8.2 Submission of open supply agreements via API (NotifySupplyAgreement)

The descriptions of messages, examples and rules for submitting open supply agreement data are presented below: <https://gaasiandmeladu.elering.ee/docs/v2/NotifySupplyAgreement.html>.

Used for submitting open supply agreement data.

Market participant	Operation
Open supplier	Registers the data of a new or amended open supply agreement
Grid operator	--
Data Hub	Notifies about the changes in data.

Message description

Document	Name
Xml Document:	NotifySupplyAgreement
Xsd Document	NotifySupplyAgreement.xsd

Xml element	Description	Format
DocumentIdentification	Unique message identifier.	Max length: 50 characters.
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
OpenSupplierIdentification	EIC code of the open supplier	16 characters
CustomerIdentification	Client's EIC code	16 characters
FirstDate	Start date of the open supply agreement	See the rules for entering dates
LastDate	End date of the open supply agreement	See the rules for entering dates
Reason	Reason for agreement end. Used when agreement is automatically	

	ended or restored, when grid agreement is changed	
MeteringPointIdentification	EIC code of the metering point	16 characters (Measuring may be more than 1)

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/NotifySupplyAgreement.xml>

Response

Data returned

Section	Name
HTTP response:	
200 OK	Message received, response added ⁴

Response

Section	Name
Xml payload:	
Xml document	MeteringPointsData ⁵
Xsd document	MeteringPointsData.xds

Message rules

1. An open supply agreement can be signed by the same person that signed the network agreement;
2. An open supply agreement cannot overlap another open supply agreement;
3. The start date of the agreement must be in the future;
4. The start date of the agreement can be:
 - The same as the start date of the network agreement;
 - At least 7 days before the next calendar month.
5. The end date of the agreement can be:
 - At least 14 days before the next calendar month;
 - Earlier than the start date; in that case, the agreement is revoked.

8.3 Ex post submission of open supply agreements via API (changes in start and end dates)

The approvals of the grid operator or its named supplier and the balance provider of the grid operator or its named supplier are necessary for the ex post changes in open supply agreements. Descriptions, examples and rules for coordination messages are presented below.

The process in brief:

- a) Open supplier enters a request to add or change the start and end dates of an open supply agreement;

⁴ No return data is expected from the grid operator; in this case, the response is 204 – NO CONTENT

⁵ See Transmitting metering point data (**NotifyMeteringPointData**)

- b) The request is communicated to the grid operator of the metering point or its named supplier to be approved;
- c) After that, the application is forwarded to the balance provider of the grid operator or its named supplier to be approved;
- d) Administrator of the Data Hub confirms the amendment, if all the above-mentioned approvals and other conditions of switching the supplier are met.

Sending open supply agreements change request (RequestAgreementCoordination)

Message description, examples and rules are available here:

<https://gaasiandmeladu.elering.ee/docs/v2/RequestAgreementCoordination.html>

Used to submit the details for the supply agreement change request.

Market participant	Operation
Open supplier	Registers the new or amended open supply agreement's request
Grid operator	--
Data Hub	Sends open supply agreement change requests to the grid operator (or its named supplier) and open supplier of the grid operator (or its named supplier) for approval

Message description

Document	Name
Xml Document:	RequestAgreementCoordination
Xsd Document	RequestAgreementCoordination.xsd

Xml element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient	16 characters
DocumentDateTime	Message creation time	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Client EIC	16 characters
MeteringPointIdentification	Metering point EIC	16 characters
RequestDetails	Section for defining the details of the agreement change request	
RequestIdentification	Request identifier	Max length 50 characters
FirstDate	Requested supply agreement's first date	YYYY-MM-DD
LastDate	Requested supply agreement's first date	YYYY-MM-DD
Comment	Reason for the ex post adding/changing of the open supply agreement	
AgreementId	Open supply agreement identifier	Optional (only used in case of updating an existing agreement)
Action	Requested action	Optional (used only in case of requesting the cancellation of an open supply agreement)
RequestDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/RequestAgreementCoordination.xml>

Replying to the agreement change request (ReplyAgreementCoordination)

Message description, examples and rules are available here:

<https://gaasiandmeladu.elering.ee/docs/v2/ReplyAgreementCoordination.html>

Used to reply to the open supply agreement change request.

Market participant	Operation
Open supplier	Confirms or does not confirm the changes
Grid operator	Confirms or does not confirm the changes
Data Hub	-

Message description

Document	Name
Xml Document:	ReplyAgreementCoordination
Xsd Document	ReplyAgreementCoordination.xsd

Xml element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient	16 characters
DocumentDateTime	Message creation time	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Client EIC	16 characters
MeteringPointIdentification	Metering point EIC	16 characters
RequestDetails	Section for defining the details of the agreement change request	
RequestIdentification	Request identifier	Max length 50 characters
Decision	Decision	Possible values: „ACCEPT“ – change request is confirmed „DENY“ – change request in denied
Comment	Reason for denying the change	Up to 2000 characters; comment field is mandatory, if the change request is denied
RequestDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/ReplyAgreementCoordination.xml>

Sending confirmations (ConfirmAgreementCoordination)

Message description, examples and rules are available here:

<https://gaasiandmeladu.elering.ee/docs/v2/ConfirmAgreementCoordination.html>

Used to inform about the end of the coordination chain.

Market participant	Operation
Open supplier	-
Grid operator	-

Data Hub	Sends the result of open supply agreement coordination to the grid operator and open supplier
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Message description

Document	Name
Xml Document:	ConfirmAgreementCoordination
Xsd Document	ConfirmAgreementCoordination.xsd

Xml element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient	16 characters
DocumentDateTime	Message creation time	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Client EIC	16 characters
MeteringPointIdentification	Metering point EIC	16 characters
RequestDetails	Section for defining the result of the agreement change request	
RequestIdentification	Request identifier	Max length 50 characters
Result	Result of the request	Possible values: „SUCCESSFUL“ – the agreement change has been carried out „UNSUCCESSFUL“ – the agreement change has not been carries out
Comment	Reason for the decline of the agreement change	The comments field is mandatory, if the agreement change was denied
RequestDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/ConfirmAgreementCoordination.xml>

9 PORTFOLIO AGREEMENTS AND MANAGEMENT OF BALANCE RESPONSIBILITY

Natural Gas Act references:

§ 12 (3) Each market participant has one open supplier. In order to purchase gas used for providing network services, the network operator must have one open supplier for the network border points. The customer and the producer each have one open supplier per metering point.

§ 11

(3) 'Balance portfolio' means the area of balance responsibility of the balance provider, which is determined by the metering points of the market participants whose balance is ensured by the balance provider.

'Balance provider' is a market participant that supplies gas to the transmission network or to whom gas is supplied from the transmission network through the relevant connection points, and that has entered into a balance contract with the system operator. The balance provider of household customers is their seller, or the seller designated by the network operator, if the household customer does not have an open supply contract.

(5) 'Open supply' is the sale of gas during the balance period to a market participant on the basis of meter data, or in the event of an imbalance, the sale of the missing quantity or the purchase of the surplus quantity of gas.

(6) 'Open supplier' is the system operator, seller of gas or, **in the event of an interruption of the open supply contract, the seller** to whose network the customer's gas installation is connected and **who has been designated by the network operator**, where the system operator, seller of gas or seller designated by the network operator provides an open supply.

Each grid operator and open supplier must have an open supply agreement for their portfolio with another open supplier. This agreement is called the Data Hub portfolio agreement (where consumers and producers have open supply agreements covering metering points, grid operators and open suppliers or sellers have open supply agreements covering legal persons).

A portfolio agreement can be submitted to the Data Hub only by the open supplier that signed the corresponding grid operator or seller as their client. A grid operator's portfolio agreement hereby contains open supply for their network losses and their universal service portfolio.

1. Portfolio agreement for a grid operator:

Metering points between two grid operators are defined as the grid operator's border metering points in the metering point's technical data. When an open supplier submits a portfolio agreement associated with the grid operator, all the border metering points of this grid operator where the grid operator itself is the client (based on metering point metadata) are automatically added to their open supply area.

2. Portfolio agreement for another open supplier:

When an open supplier submits a portfolio agreement associated with another open supplier, all the metering points forming a part of the added open supplier's supply chain are added to the first open supplier's supply chain. Metering points associated with the second open supplier's agreements will be balance settlement metering points to a balance provider only in case the metering point's grid operator is a part of another balance provider's area.

NB!

- 1) In case the open supplier does not have a portfolio agreement with another open supplier (including the system administrator), then this open supplier cannot act as an open supplier in the gas market.

- 2) In case the grid operator does not have a portfolio agreement with another open supplier (including the system administrator), then the Data Hub adds this grid operator to the portfolio of its upper grid operator (or its named supplier).
- 3) The system administrator publishes the grid operators' and open suppliers' affiliations to balance portfolios on its website.

Portfolio agreement message (NotifyPortfolioAgreement)

Message for submitting portfolio agreements using the machine interface. This message can only be submitted by an open supplier.

Operator	Operation
Open supplier	Registers new or changed portfolio agreement data
Grid operator	--
Data Hub	Notifies the open supplier of changes in portfolio agreement data.

Message

Document	Name
Xml Document	NotifyPortfolioAgreement
Xsd Document	NotifyPortfolioAgreement.xsd

XML element	Description	Format
DocumentIdentification	unique message identifier	Max length: 50 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
OpenSupplierIdentification	EIC code of the open supplier who the sender of the message will begin to supply with gas	16 characters
FirstDate	Start date of the open supply agreement	See the rules for entering dates
LastDate	End date of the open supply agreement	See the rules for entering dates

Named supplier agreement message (NotifyNamedSupplierAgreement)

Message for transmitting a named supplier agreement using the machine interface. This message can only be transmitted by a grid operator.

Operator	Operation
Open supplier	--
Grid operator	Registers new or changed named supplier agreement data
Data Hub	Notifies the open supplier of changes in portfolio agreement data.

Message

Document	Name
Xml Document	NotifyNamedSupplierAgreement
Xsd Document	NotifyNamedSupplierAgreement.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier.	Max length: 50 characters.
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message receiver (Data Hub)	16 characters
OpenSupplierIdentification	EIC code of the open supplier	16 characters
FirstDate	Start date of the open supply agreement	See the rules for entering dates
LastDate	End date of the open supply agreement	See the rules for entering dates

10 MANAGEMENT OF BALANCE SETTLEMENT POINTS IN A BALANCE PORTFOLIO ON THE DATA HUB

The rule for forming open supply areas for balance portfolios is as follows: a balance provider's open supply area is defined by the metering points of the market participants, where the balance provider's market participant and the grid operator do not coincide.

Whether a metering point belongs to a balance provider's open supply chain, is defined as follows:

- 1) Grid operator's border metering points are such metering points, where gas enters the grid operator's network from another grid operator (the grid operator itself is the client)
- 2) Balance settlement metering point is a metering point, where the balance provider of the client's metering point is not same as their grid operator's balance provider.
- 3) All the open suppliers and grid operators are submitted to the Data Hub with a portfolio agreement, under which all these operators belong to some balance provider's chain.

Consumer's and/or producer's metering point's affiliation to a balance provider's area is defined as follows:

Market participant's metering point is in the balance provider's open supply chain	Grid operator managing the metering point is in the balance provider's open supply chain	Metering point's affiliation to the balance provider's balance settlement (+) metering point quantities are added (-) metering point quantities are deducted
Yes	Yes	No
Yes	No	Yes (+)
No	Yes	Yes (-)
No	No	No

The grid operator's border metering point (point where the gas enters the network from another grid operator's network) affiliation to a balance provider's balance settlement is defined as follows:

Grid operator is in the balance provider's open supply chain	The balance provider is the open supplier of the hierarchically higher grid operator (manager of the metering points) of another grid operator	Metering point's affiliation to the balance provider's balance settlement (+) metering point quantities are added (-) metering point quantities are deducted
Yes	Yes	No
Yes	No	Yes (+)
No	Yes	Yes (-)
No	No	No

BALANCE PROVIDERS' AGREEMENTS

1. Portfolio agreement for a grid operator:

- a) Metering points between two grid operators are defined as the grid operator's border metering points in the metering point's technical data.

- b) When the balance provider adds a portfolio agreement with a grid operator, then all this grid operator's border metering points, where the grid operator is a client, automatically move to the balance provider's open supply area. All the metering points, where the producer or consumer in the grid operator's service area has a balance provider that differ from the grid operator's one, move to the list of metering points deductible from the open supply area.

2. Portfolio agreement for another open supplier:

- a) When the balance provider adds a portfolio agreement with an open supplier, then all this open supplier's metering points move to the balance provider's supply chain.

3. Balance provider's open supply area in the Data Hub is viewed in the following form:

- a) EIC code of the metering point;
 b) Client's EIC code;
 c) EIC code of the grid operator for the metering point;
 d) EIC code of the grid operator's balance provider;
 e) In case a metering point is part of the balance provider's supply chain: EIC code of the open supplier for the metering point and EIC code of the balance provider;
 f) In case a metering point is not part of the balance provider's supply chain: open supplier and balance provider are not visible, code of the metering point is visible;
 g) Period (start and end date of the open supply agreement).

4. The balance provider receives meter data from the Data Hub in the following form:

- a) Meter data from metering points that form a part of the balance provider's open supply chain under open supply agreements (EnergyReport);
 b) In case a grid operator's border metering points are also the border metering points of the balance provider's balance area, meter data will also be transmitted from those border metering points (EnergyReport);
 c) Aggregated meter data from metering points located in the grid operator's service area that form a part of another balance providers' portfolio must be deducted from the Balance provider's portfolio (**AGGREGATEDMETERINGDATAREPORT**). A report containing data for the previous period (xml) is submitted to the address indicated by the balance provider on the Data Hub at 14.30: URL

BALANCE PROVIDER'S MESSAGES

1. Open supply area message (*BALANCE STATE*)

- In the first hour of the day, the balance provider and the system administrator receive a message, if there have been changes in the balance provider's balance area compared to the previous day.
- The message contains new metering points in the balance area („*Added block*”) or metering points removed from the balance area (“*Removed block*”). When there have been no changes in the balance area, the message is empty (only containing the header).

2. Aggregated meter data message for grid operator's balance provider (*AGGREGATEDMETERINGDATAREPORT*)

- Each day by 14.30, the balance provider for a grid operator receives aggregated meter data for metering points located in the grid operator's service area that form part of the portfolios of other balance providers.

- The message contains meter data accounted from the beginning of the current calendar month, whereby aggregated totals of the data sent to the Data Hub for the previous day by the grid operator are added each day.
- Each day, a grid operator updates the Data Hub with data on supplies registered at metering points with remotely read meters. Quantities of energy registered using manually read meters are submitted to the Data Hub by the fifth day of the following calendar month.
- The meter data message is similar to the EnergyReport message, with the following differences:
- PortfolioCustomerIdentification contains the EIC code of the grid operator serving as the grid operator for the metering point;
- InQty and OutQty are aggregated totals of data received from meters located in the grid operator's service area that belong to other balance providers' portfolios;
- A "missing" value contains the number of metering points, the data for which has not been submitted to the DATA HUB.

11 METER DATA REQUESTS

Open suppliers have the right to use the Data Hub for requesting the last 12 months' meter data of the market participants, that have either signed a gas supply agreement with the open supplier or have authorized them to request such data on the Data Hub.

Meter data request (RequestMeteringDataHistory)

The descriptions, rules and examples of messages for submitting meter data requests are presented below: <https://gaasiandmeladu.elering.ee/docs/v2/RequestMeteringDataHistory.html>.

Used for requesting meter data for a metering point.

Operator	Operation
Open supplier	Requests meter data of a metering point
Grid operator	----
Data Hub	Sends the requested data to the open supplier

Message

Document	Name
Xml Document	RequestMeteringDataHistory
Xsd Document	RequestMeteringDataHistory.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier.	Max length: 50 characters.
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message receiver (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
MeteringPointIdentification	EIC of the metering point whose data is requested	16 characters
CustomerIdentification	EIC code of the client whose data is requested	16 characters
CustomerAuthorization	Has the client given their authorization?	TRUE FALSE
MeteringPeriod	Period of requested meter data	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
Resolution	The data can be presented by hours, days and months.	PT1H – resolution is 1 hour (by default, if not defined) P1D – resolution is 1 day P1M – resolution is 1 month

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/RequestMeteringDataHistory.xml>

Response

Data returned

Section	Name
HTTP response:	
200 OK	Response as an XML message

Xml payload:	
Xml document	EnergyReport
Xsd document	EnergyReport.xsd

Message rules

1. Meter data can be requested by:
 - Grid operators of the metering points, their open suppliers and balance providers. This includes access for open suppliers during a limited time period where there is no open supply agreement associated with the metering point;
 - Open suppliers and balance providers, based on a valid open supply agreement;
 - Open suppliers that have an authorization for requesting meter data (incl. verification period);
 - The system administrator
2. Meter data can be requested for the previous 12 months + data for the current month.
Example: On the 22nd of August 2012 the data can be requested for the period: 01.08.2011–21.08.2012
3. Meter data is only available for the period, where the market participant has a valid grid agreement.

11.1. Amendment to the RequestMeteringDataHistory rules about the meter data of private persons

- 11.1.1. The Data Hub issues meter data of the metering point about the following metering points that are related to the client's request:
 - Metering points in the open supplier's portfolio – the basis is a valid open supply agreement. NB! The meter data is not issued on the basis of a portfolio tree, if the open supplier has submitted a "prohibition" – a new development is stated in the section 11.2
 - To the grid operator the metering points in their service area;
 - A valid authorization to access data given to an open supplier by a consumer via the customer portal (e-elering)
- 11.1.2. Data Hub does not issue meter data of metering points about the following metering points:
 - Open supplier is not the open supplier of this private person in this metering point;
 - No consumer authorization provided through e-elering;
 - Open supplier has set a prohibition to his balance provider (to the upper open supplier) – new development, see section 11.2.
- 11.1.3. *Additional rules for RequestMeteringDataHistory requests:*
- 11.1.4. All those open suppliers that are not the open supplier for a client under an electricity supply agreement at the time of request must use the value "TRUE". The Data Hub checks on the basis of the value "TRUE", if the client has given authorization to the open supplier for accessing their meter data (message from the customer portal to the Data Hub): NotifyCustomerAuthorization or if the corresponding open supplier has had an open supply agreement within the period of the last 12 months;
- 11.1.5. All the open suppliers that are the open supplier for the client under an open supply agreement at the time of request must use the value "FALSE". The Data Hub checks on the basis of the value "FALSE", if the request sender has a supply agreement that is valid or that was opened

within the last 12 months. The grid operator of the metering point and also the open supplier's balance provider always have the access to the data of their service area – on the basis of section 11.2. Meter data is provided on the following terms:

- a) To the open supplier with a valid agreement – hourly meter data for previous 12 months;
- b) To the open supplier without a valid agreement, but with an agreement within the past 12 months – the hourly meter data within the agreement period, but not more than 12 months before;
- c) To the grid operator of the metering point – hourly meter data for the previous 12 months.

11.2. Submission of a new authorization agreement to an open supplier on the online application

Open supplier has the possibility to restrict access to metering data for its active balance provider via the setting "Metering data access" in the Portfolio agreements page ("Portfolio supply agreements as customer" table). Access is allowed by default. In case access is denied then the open supplier and/or balance provider do not access the meter data via RequestMeteringDataHistory message.

12 DATA HUB REPORTS

All the reports are calculated by balancing periods. In the gas system, the balancing period is **one day defined by the time intervals as follows**.

Balancing period calculation:

- a) From 1.08.2017: balancing period starts at 7:00 in the morning and ends at 7:00 in the morning of the following day.
- b) Daylight saving time changes must be considered: at the start of daylight saving time, the balancing period has 23 hours, and at the start of winter time, the balancing period has 25 hours.

Requirements for the report calculation process

- The reports must be calculated at the same time for all the operators.
- Report calculations are “launched” by an administrator. Operators themselves cannot launch the reports.

Requirements for operator settings

- Operator has the possibility to configure, whether the reports will be sent by e-mail, via API or will not be sent via the named channels at all.
- Operator can configure a separate e-mail address for the reports, if it chooses to receive the reports by e-mail. In case of API, the reports are sent as configured.
- Operator has a separate view for watching reports already generated.
- In the operator’s report view, the following details for each report are specified – the report type, period, generation time, buttons for downloading in XML or EXCEL formats, field of validity.
- Both valid and invalid reports appear in report view. The report becomes invalid, if the administrator manually generates a report of the same type for the same month again.
- Operator can filter reports by month and type.
- Operator can download each report in XML or EXCEL format.

Description of reports

Name	Grid operator’s report
Recipients	Grid operators
Frequency	Daily at 13.35. On the 8 th day of each month
Description	Contains reports for one month by balancing periods
Data	<ol style="list-style-type: none"> 1. aggregated meter data of quantities entering the network through border metering points of the grid operator. (report sheet „GO_IN_LOSSES_PORTFOLIO“); 2. Gas exiting the grid operator’s network by open suppliers + universal service portion (all metering points with valid grid agreement) (report sheet “GO_OS_OUT“); 3. Gas exiting the grid operator’s network by remotely read meters and open suppliers (report sheet “GO_OS_OUT“);

	<p>4. Gas exiting the grid operator’s network in the sum of manually read meters and by open suppliers (report sheet “GO_OS_OUT”);</p> <p>5. Total of grid operator’s grid losses (a-b) (report sheet “GO_IN_LOSSES_PORTFOLIO”);</p> <p>6. Total of grid operator’s own portfolio, by sales portfolio and grid losses (in-out) (report sheet “GO_IN_LOSSES_PORTFOLIO”).</p>
Description of columns	<p>Worksheet GO_OS_OUT:</p> <p>A) EIC of grid operator – the EIC code of the grid operator</p> <p>B) Grid operator – the grid operator</p> <p>C) EIC of open supplier – the EIC code of the open supplier</p> <p>D) Open supplier – the name of the open supplier</p> <p>E) Balance period – the time defining the beginning of the balance period (date + time)</p> <p>F) Quantity entering the network, kWh – gas entering the grid operator’s network (production)</p> <p>G) Quantity exiting the network, kWh – gas exiting the grid operator’s network (consumption)</p> <p>H) Quantity exiting the network, remotely read meters, kWh – gas exiting the grid operator’s network measured by remotely read meters</p> <p>I) Quantity exiting the network, manually read meters, kWh – gas exiting the grid operator’s network measured by manually read meters</p> <p>J) Quantity entering the network, m3</p> <p>K) Quantity exiting the network, m3</p> <p>L) Quantity exiting the network, remotely read meters, m3</p> <p>M) Quantity exiting the network, manually read meters, m3</p> <p>N) Number of metering points</p> <p>Worksheet GO_IN_LOSSES_PORTFOLIO:</p> <p>A) EIC code of grid operator – the EIC code of the grid operator</p> <p>B) Grid operator – the grid operator</p> <p>C) Balance period – the beginning of the balance period (date + time)</p> <p>D) Quantity entering the network, from the upper grid operator’s network, kWh – gas entering the grid operator’s network from border metering points, where the grid operator is the client</p> <p>E) Quantity entering the network, kWh – gas entering the grid operator’s network (production)</p> <p>F) Quantity entering the network, grid operator’s clients, kWh – gas entering the grid operator’s network from grid operator’s own open supply clients</p> <p>G) Quantity entering the network, universal service, kWh – gas entering the grid operator’s network from clients with no open supply agreement</p> <p>H) Quantity exiting the network, to the other grid operators (border metering points), kWh – gas forwarded to other grid operators (via border metering points)</p> <p>I) Quantity exiting the network, kWh – gas exiting the grid operator’s network (consumption)</p> <p>J) Quantity exiting the network, grid operator’s clients, kWh – gas consumed by the grid operator’s own open supply clients</p> <p>K) Quantity exiting the network, universal service, kWh – gas consumed by the clients with no open supply agreement</p>

	<p>L) Loss, kWh – grid operator’s losses, calculated based on columns D, E, H and I (D + E - H - I)</p> <p>M) Grid operator’s portfolio consumption, kWh – calculated by summing columns J, K and L (J + K + L)</p> <p>N) Quantity entering the network from the upper grid operator’s network, m3</p> <p>O) Quantity entering the network, m3</p> <p>P) Quantity entering the network, grid operator’s clients, m3</p> <p>Q) Quantity entering the network, universal service, m3</p> <p>R) Quantity exiting the network, to other grid operators (border metering points), m3</p> <p>S) Quantity exiting the network, m3</p> <p>T) Quantity exiting the network, grid operator’s clients, m3</p> <p>U) Quantity exiting the network, universal service, m3</p> <p>V) Loss, m3</p> <p>W) Grid operator’s portfolio consumption, m3</p>
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Name	Open supplier’s report
Recipients	Open suppliers (sellers)
Frequency	Daily at 13.35. On the 8 th day of each month
Description	Contains reports for one month by balancing periods
Data	<ol style="list-style-type: none"> 1. Aggregated meter data in open supplier’s portfolio by grid operators (report sheet “OS_GO”); 2. Gas exiting the grid operator’s network by remotely read metering points and affiliated open suppliers (report sheet “OS_GO”); 3. Gas exiting the grid operator’s network by manually read metering points and affiliated open suppliers (report sheet “OS_GO”); 4. Aggregated quantity entering the grid operator’s network via border metering points (report sheet “GO_OS”); 5. Gas exiting the grid operator’s network by remotely and manually read metering points (report sheet “GO_OS”); 6. Total of grid operator’s grid losses and its own portfolio (report sheet “GO_OS”); 7. Sales to be deducted from the grid operator’s balance provider’s portfolio, gas supply agreements within other balance providers’ portfolios (so-called OUT border metering points) (report sheet “GO_OS”).
Description of columns	<p>Sheet OS_GO: see the grid operator report sheet GO_OS_OUT descriptions.</p> <p>Sheet GO_OS (includes the data for grid operators belonging to an open supply portfolio):</p> <ol style="list-style-type: none"> A) EIC code of grid operator – the EIC code of the grid operator B) Grid operator – the grid operator C) Balance period – the beginning of the balance period (date + time) D) Quantity entering the network, from the upper grid operator’s network, kWh – gas entering the grid operator’s network from border metering points, where the grid operator is the client E) Quantity entering the network, kWh – gas entering the grid operator’s network (production)

	<p>F) Quantity entering the network from clients that belong to other balance providers' portfolios, kWh – gas entered to grid operator's network by clients that do not belong to the open supplier's balance portfolio</p> <p>G) Quantity exiting the network, to other grid operators (border metering points), kWh – gas forwarded to other grid operators (via border metering points)</p> <p>H) Quantity exiting the network, kWh – gas exiting the grid operator's network</p> <p>I) Quantity exiting the network, remotely read meters, kWh – gas exiting the grid operator's network measured by remotely read meters</p> <p>J) Quantity exiting the network, manually read meters, kWh – gas exiting the grid operator's network measured by manually read meters</p> <p>K) Quantity exiting the network to clients that belong to other balance providers' portfolios, kWh – gas consumed by those clients of the grid operator that do not belong to the open supplier's balance portfolio</p> <p>L) Loss, kWh – losses of a grid operator belonging to their open supply portfolio, calculated based on columns D, E, H and I ($D + E - H - I$)</p> <p>M) Grid operator's portfolio consumption, kWh – the open supply portfolio of the grid operator's own open supply, universal service clients' consumption and losses.</p> <p>N) Quantity entering the network from the upper grid operator's network, m³</p> <p>O) Quantity entering the network, m³</p> <p>P) Quantity exiting the network to clients that belong to other balance providers' portfolios, m³</p> <p>Q) Quantity exiting the network, to other grid operators (border metering points), m³</p> <p>R) Quantity exiting the network, m³</p> <p>S) Quantity exiting the network, remotely read meters, m³</p> <p>T) Quantity exiting the network, manually read meters, m³</p> <p>U) Quantity entering the network to clients that belong to other balance providers' portfolios, m³</p> <p>V) Loss, m³</p> <p>W) Grid operator's portfolio consumption, m³</p> <p>X) Number of metering points</p>
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Name	Grid operator's open supplier report
Recipients	Grid operator's open suppliers
Frequency	Once a day, at 13.35. On the 8 th day of each month
Description	Contains reports for one month by balancing periods
Data	<ol style="list-style-type: none"> 1. Aggregated quantity entering the grid operator's network via border metering points (report sheet "GO_OS"); 2. Quantities of gas exiting the grid operator's network by remotely read meters and open suppliers (report sheet "GO_OS"); 3. Quantities of gas exiting the grid operator's network by manually read meters and open suppliers (report sheet "GO_OS"); 4. Total of grid operator's grid losses (a-b) (report sheet "GO_OS"); 5. Total of grid operator's own portfolio, by sales portfolio and grid losses (in-out) (report sheet "GO_OS");

	<p>6. Sales to be deducted from the grid operator's balance provider's portfolio, gas supply agreements within other balance providers' portfolios (so-called OUT border metering points) (report sheet "GO_OS")</p>
Description of columns	<p>Worksheet GO_OS:</p> <ul style="list-style-type: none"> A) EIC code of grid operator – EIC code of grid operator B) Grid operator – grid operator C) Balance period – beginning of the balance period (date + time) D) Quantity entering the network, from the upper grid operator's network, kWh – gas entering the grid operator's network from border metering points, where the grid operator is client E) Quantity entering the network, kWh – gas entering the grid operator's network (production) F) Quantity entering the network from clients that belong to other balance providers' portfolios, kWh – gas entered to the grid operator's network by clients that do not belong to the open supplier's balance portfolio G) Quantity exiting the network, to the other grid operators (border metering points), kWh – gas forwarded to other grid operators H) Quantity exiting the network, kWh – gas forwarded to other grid operators I) Quantity exiting the network, remotely read meters, kWh – gas exiting the grid operator's network measured by remotely read meters J) Quantity exiting the network, manually read meters, kWh – gas exiting the grid operator's network measured by manually read meters K) Quantity exiting the network to clients that belong to other balance providers' portfolios, kWh – gas consumed by those clients of the grid operator that do not belong to the open supplier's balance portfolio L) Loss, kWh – losses of a grid operator belonging to the open supply portfolio, calculated based on columns D, E, H and I ($D + E - H - I$) M) Grid operator's portfolio consumption, kWh – the open supply portfolio of the grid operator's own open supply, universal service clients' consumption and losses. N) Quantity entering the network from the upper grid operator's network, m³ O) Quantity entering the network, m³ P) Quantity entering the network from clients that belong to other balance providers' portfolios, m³ Q) Quantity exiting the network, to other grid operators (border metering points), m³ R) Quantity exiting the network, m³ S) Quantity exiting the network, remotely read meters, m³ T) Quantity exiting the network, manually read meters, m³ U) Quantity entering the network from clients that belong to other balance providers' portfolios, m³ V) Loss, m³ W) Grid operator's portfolio consumption, m³ X) Number of metering points

BALANCE PROVIDER'S REPORTS

Name	Balance provider's report
Recipients	Balance providers
Frequency	Daily at 13.35. On the 8 th day of each month
Description	Contains reports for one month by balancing periods
Data	<ol style="list-style-type: none"> 1. Aggregated quantity from metering points belonging to the balance provider + open suppliers in the balance provider's portfolio (so-called IN metering points); 2. Sales to be deducted from the grid operator's balance provider's portfolio, open supply agreements within other balance providers' portfolios (so-called OUT border metering points).
	<ul style="list-style-type: none"> • Sheet „BP_OS“ = aggregated data from metering points belonging to the balance provider and open suppliers in this balance provider's portfolio that are included in the balance provider's balance settlement area (so-called balance settlement IN metering points); • Sheet „BP_GO“ = sales to be deducted from the grid operator's balance provider's portfolio, open supply agreements within other balance providers' portfolios (so-called OUT border metering points).
Description of columns	<p>Worksheet BP_OS:</p> <ol style="list-style-type: none"> A) EIC code of grid operator – EIC code of grid operator B) Grid operator – grid operator C) EIC code of open supplier – EIC code of open supplier D) Open supplier – name of open supplier E) Balance period – beginning of the balance period (date + time) F) Quantity entering the network, kWh – production of a market participant belonging to the balance provider's portfolio G) Quantity exiting the network, kWh – consumption of a market participant belonging to the balance provider's portfolio H) Quantity entering the network, m3 I) Quantity exiting the network, m3 J) Number of metering points <p>Worksheet BP_GO:</p> <ol style="list-style-type: none"> K) EIC code of grid operator – EIC code of grid operator L) Grid operator – grid operator M) EIC of grid operator's balance provider – EIC code of the grid operator's balance provider N) Grid operator's balance provider – name of the grid operator's balance provider O) Balance period – beginning of the balance period (date + time) P) Production to be deducted from the balance portfolio, kWh – production of the metering point that belongs to a client outside the balance provider's portfolio, Pin. <i>All metering points of the market participants (including grid operator's border metering points), where the market participant's balance provider is not the same as the grid operator's balance provider.</i> Q) Consumption to be deducted from the balance portfolio, kWh – consumption of the metering point that belongs to a client outside the balance provider's portfolio, Pout. <i>All metering points of the market</i>

	<p><i>participants (including grid operator's border metering points, where the market participant's balance provider is not the same as the grid operator's balance provider.</i></p> <p>R) Production to be deducted from the balance portfolio, m3 S) Consumption to be deducted from the balance portfolio, m3. T) Number of metering points</p>
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Aggregated reports are calculated and forwarded according to the following schedule:

- Each day by 14.00, reports containing the previous day's meter data (incl. meter data from the beginning of the current calendar month);
- On the 8th day of the calendar month, meter data is retroactively calculated for the second and third month before the new month;
- On the 8th day of the calendar month, meter data for the previous month will be calculated which will form the basis of the preliminary balance report.
- Example:

	January	February	March
Preliminary balance report is calculated:	On the 8 th February	On the 8 th March	On the 8 th April
Final balance is calculated:	On the 8 th April	On the 8 th May	On the 8 th June

NON-REMOTELY READ METERING POINTS' FORECAST REPORTS (since 11.2019)

Name	Balance provider non-remote-read MPs report
Recipients	Balance providers
Frequency	Monthly on the 28 th day
Description	Contains the list of non-remotely read metering points for the next calendar month
Data	List of non-remotely read metering points that belong to the balance provider's portfolio with grid agreement validity period and the client's EIC code.
Description of columns	<p>A) Metering point EIC – metering point EIC code</p> <p>B) MM.YYYY – Grid agreement validity period within the report month (expressed as date range)</p> <p>C) Client EIC – client's EIC code</p> <p>D) Connection state – connection status of the metering point</p>

Name	Balance provider consumption forecast report
Recipients	Balance providers
Frequency	Monthly on the 28 th day

Description	Contains forecast data for the non-remotely read metering points for the next calendar month per balancing period and grid operators
Data	Forecast data according to the methodology for the non-remotely read metering points that belong to the balance provider's portfolio
Description of columns	<ul style="list-style-type: none"> A) Grid operator EIC B) Grid operator name C) Balancing period D) Input, kWh – forecast aggregated production of the non-remotely read metering points that belong to the balance provider's portfolio for the balancing period E) Off-take, kWh – forecast aggregated consumption of the non-remotely read metering points that belong to the balance provider's portfolio for the balancing period F) Count of metering points

13 MARKET PARTICIPANT'S AUTHORIZATION AND ACCESS TO THE DATA HUB

A gas consumer can use the Data Hub web portal for viewing data related to their metering points – addresses of the metering points, as well as data on associated network service agreements and open supply agreements, and meter data. Consumption data can be viewed by persons with a valid network service agreement.

Gas consumers can use the web portal to give authorizations to open suppliers for viewing meter data from previous periods – mainly with the purpose of receiving personal offers from open suppliers. As noted above, the market participant's data can be accessed by parties having a statutory right for accessing the data, or parties authorized by the market participant. For the transmission of personal data to an open supplier whom the private consumer does not have a contract with, the authorization of the private consumer is required. The authorization must be in compliance with the requirements established in Section 12 of the Personal Data Protection Act (the authorization must be in a format which can be reproduced in writing).

Consumers can receive the following information from the Data Hub:

- Parties and terms of network agreements signed for metering points;
- Open supply agreements signed for metering points, and the terms and parties of these agreements;
- Quantities of gas registered at the metering points associated with the consumer;
- Open suppliers that are authorized to view the consumer's consumption data and that have requested the consumer's data.

Consumers can use the web portal to give one or several open suppliers authorization to access their metering point data; they can also provide their e-mail address and phone number, which the open supplier can use to contact them. The consumer can also use the portal for viewing who and when has accessed their data.

It is possible to log into the web portal using an ID card, Mobile-ID, or internet bank links.

- On the Data Hub web portal, consumers can see a list of authorizations they have given;
- An authorization is required in case the consumer does not have an open supply agreement. An open supplier with a valid agreement with the consumer has the right to request meter data for the whole contract period while the agreement is valid;
- The authorization allows the open supplier to request data for all client's metering points;
- The web portal registers all meter data requests;
- An authorization given outside the Data Hub must be in a format which can be reproduced in writing;
- Authorizations are given for a specified term. The agreement can be retracted by the authorizing person at any time;
- When a client gives an authorization to an open supplier, the open supplier receives a message to this effect; the message includes, inter alia, the term of the authorization.

14 JOINT INVOICE

The general process for network invoice forwarding is as follows:

1. Grid operator and supplier sign a joint invoicing agreement;
2. The grid operator transmits the joint invoicing agreement to the Data Hub;
3. Messages associated with the joint invoice are only forwarded to the supplier with joint invoicing agreement;
4. Basic outline of invoice transmission: Grid operator > Data Hub > Supplier > Client;
5. Required information for the forwarded network invoice is found in the E-invoice standard (https://itl.ee/public/files/Estonian_e-invoice_description_ver1.2_eng.pdf)
6. The grid operator submits a joint invoicing agreement associated with the supplier they have signed an agreement with; the Data Hub only forwards messages associated with a joint invoice to the supplier that has a registered joint invoicing agreement with the grid operator.
7. The following messages are associated with joint invoice forwarding:
 - A. Network invoice forwarding: ForwardInvoice;
 - B. Disconnection/connection request: RequestConnectionState (supplier > network operator);
 - C. Disconnection/connection confirmation: ReplyConnectionStateRequest (network operator > supplier).
8. The Data Hub allows using the messages listed in the previous paragraph via the Data Hub API, but also using the same data and fields to exchange information by uploading (the form for small grid operators) or downloading (for suppliers) data via the web interface.
 - A. Grid operators can use the web interface for forwarding network service invoices. For this purpose, the web interface contains a form, where the grid operator can choose the supplier, client and client's metering points, and upload XMLs for the E-invoice.
 - B. Grid operators can use the web interface for reviewing history of forwarded network service invoices.
 - C. Suppliers can view and download network service invoices they have received.
 - D. Suppliers have a separate view for metering point connection and disconnection (activation/deactivation) requests. In this view, the supplier can complete the corresponding form following the message specification. The described view allows the supplier to view the responses to selected requests.
 - E. The grid operator can review the received connection and disconnection requests, and respond to these using the corresponding form.
9. Technical information: the Data Hub sends all the messages listed above to the other party asynchronously. The Data Hub attempts submitting the message N times (at increasingly longer intervals). In case the submission of the message succeeds or fails (after N attempts), the original sender of the message receives a respective report (in the form of a message).

Network invoice forwarding (ForwardInvoice)

The description of the message for forwarding network invoices is presented below. Examples and rules can be found at: <https://gaasiandmeladu.elering.ee/docs/v2/ForwardInvoice.html>.

Used for forwarding network invoices.

Operator	Operations
Open supplier	----
Grid operator	Submits a network invoice
Data Hub	Forwards the network invoice data to the open supplier

Message description

Document	Name
Xml Document	ForwardInvoice
Xsd Document	ForwardInvoice.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Customer's EIC code	16 characters
MeteringPointIdentifications	Section for defining the metering points covered by the joint invoice	
MeteringPointIdentification	Metering point's EIC code	16 characters
MeteringPointIdentifications	End of section	
InvoiceDetails	Section for defining data associated with the invoice	
InvoiceData	E-invoice XML encoded in BASE64	BASE64 string
InvoiceDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/ForwardInvoice.xml>

Joint invoice agreement submission (NotifyJointInvoiceAgreement)

Used for submitting joint invoicing agreements using the API. This message can only be forwarded by a grid operator. Example and message rules:

<https://gaasiandmeladu.elering.ee/docs/v2/NotifyJointInvoiceAgreement.html>.

Operator	Operations
Open supplier	----
Grid operator	Submits a joint invoice agreement with an open supplier
Data Hub	Sends the added or changed joint invoice agreement data to the open supplier

Message description

Document	Name
Xml Document	NotifyJointInvoiceAgreement
Xsd Document	NotifyJointInvoiceAgreement.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters

DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
OpenSupplierIdentification	Supplier's EIC code	16 characters
FirstDate	Agreement start date	YYYY-MM-DD
LastDate	Agreement end date	YYYY-MM-DD

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/NotifyJointInvoiceAgreement.xml>

Disconnection/connection request (RequestConnectionState)

Used for submitting network connection activation or deactivation requests to a grid operator. The description of the request for connecting or disconnecting a metering point is presented below.

Examples and rules can be found at:

<https://gaasiandmeladu.elering.ee/docs/v2/RequestConnectionState.html>.

Operator	Operations
Open supplier	Submits a request in relation to a metering point
Grid operator	----
Data Hub	Submits data related to the network connection activation or deactivation request to the grid operator

Message description

Document	Name
Xml Document	RequestConnectionState
Xsd Document	RequestConnectionState.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Customer's EIC code	16 characters
MeteringPointIdentification	Metering point's EIC code	16 characters
RequestDetails	Section for defining connection/disconnection request data	
RequestIdentification	Unique ID of the request; defined by the sender	
RequestedState	Desired state of the metering point	Possible values „DISCONNECT“ – Disconnect the metering point; „CONNECT“ – Connect the metering point in case the seller and client are in a valid contractual relationship; „ALLOWED“ – The seller notifies the grid operator of the payment of the debt. The contractual relationship between the client and the seller has been terminated; „CANCELLED“ – The seller revokes a previously submitted connection/disconnection request that has not yet been fulfilled.
Reason	Cause of the request	Possible values

		„DEBT“ – Client has debts; „DEBT_PAID“ – Debt has been paid; „NEW_AGREEMENT“ – New agreement
PreferredDate	Desired date of disconnection or connection	YYYY-MM-DD
Comment	Free form text for additional information	
RequestDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/RequestConnectionState.xml>

Disconnection/connection confirmation (ReplyRequestConnectionState)

Used to notify of the disconnection or connection of a metering point, scheduling such operation, changes in the schedule or refusal of the request. The description of the confirmation message for connecting or disconnecting a grid operator's metering point is presented below. Examples and rules can be found at: <https://gaasiandmeladu.elering.ee/docs/v2/ReplyRequestConnectionState.html>.

Operator	Operations
Open supplier	----
Grid operator	Submits a connection confirmation message
Data Hub	Submits data related to the network connection deactivation or activation request to the open supplier

Message description

Document	Name
Xml Document	ReplyRequestConnectionState
Xsd Document	ReplyRequestConnectionState.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Customer's EIC code	16 characters
MeteringPointIdentification	Metering point's EIC code	16 characters
ResponseDetails	Section for defining disconnection/connection confirmation details	
RequestIdentification	Unique ID of the request; defined by the sender	
Decision	Section for defining disconnection/connection decision details	
Status	Request's status	Possible values "PLANNED" – Operation planned; "DISCONNECTED" – Disconnection complete; "CONNECTED" – Connection complete; "CANCELED" – Request revoked
Reason	Reason used for revoking the request; otherwise left empty	Possible values "FAULT" – Error in the message. In case of other errors in receiving the message. E.g., no reason, no

		<p>status, no unique ID, etc., or a unique ID is used but the client's data in the message is different from that in a request preceding this request;</p> <p>"NO_AGREEMENT" – The consumption point has no network agreement with this client at the time of the desired connection/disconnection;</p> <p>"AGREEMENT_END" – The client's network agreement at the consumption point is being terminated;</p> <p>"NO_SPR_MP" – The consumption point has a valid electricity supply agreement with another seller;</p> <p>"GO_DISCONNECTED" – The consumption point has a disconnection request from another seller or Elektrilevi. The consumption point will be connected when the other seller or Elektrilevi submits a connection request;</p> <p>"CANCELLED_ORDER" – Revoked during the operation;</p> <p>"NO_CANCEL" – The request cannot be revoked. The disconnection request has been scheduled for the current date and if the revocation message is received on the same day, the request can no longer be revoked. E.g., seller submits a revocation request on the date of the disconnection works.</p>
EstimatedDate	Scheduled date of disconnection or connection	YYYY-MM-DD
Decision	End of section	
Comment	Free form text for additional information	
ResponseDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/ReplyRequestConnectionState.xml>

15 CLIENT REQUEST MEDIATION

The goal of the exchange process of client requests is the forwarding of client requests that are related to the network service from the supplier to the grid operator. Transmission of client requests is used only in a form of messages between the supplier and the grid operator. Functionality of client requests contains information exchange between grid operators and suppliers in a standardized form.

Client request (SendMessage)

Used for forwarding client requests. The description of messages, examples and rules can be found at: <https://gaasiandmeladu.elering.ee/docs/v2/SendMessage.html>.

Operator	Operations
Open supplier	Submits client request data
Grid operator	----
Data Hub	Submits the client request data to the grid operator

Message description

Document	Name
Xml Document	SendMessage
Xsd Document	SendMessage.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
CustomerIdentification	Customer's EIC code	16 characters
MeteringPointIdentification	Metering point's EIC code	16 characters
MessageDetails	Section for defining the details of client requests	
RequestIdentification	Unique ID of the request, defined by the sender	
Topic	Subject of the request. One request can only contain one subject. A new message must be used for a new subject.	Possible values "DATA" – Issues related to meter or client data; "INVOICE" – Issues related to an invoice.
References	Section for defining reference to a specific invoice	
Reference	Reference to a third party/document	Currently allowed type: INVOICE.
References	End of section	
RequestStatus	Request status	Possible values "OPEN" – Request is not closed; "CLOSE" – Request is closed; "CANCEL" – Resolution of the request has been suspended.
Comment	Free form text for additional information	
MessageDetails	End of section	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/SendMessage.xml>

Client request response (MessageResult)

Used for submitting responses to client requests. Client request messages are submitted to the other party asynchronously. The Data Hub attempts submitting the message N times (at increasingly longer intervals). In case the submission of the message succeeds or fails (after N attempts), the original sender of the message receives a client request response (in the form of a message).

The description of the client request response message is presented below. Examples and rules can be found at: <https://gaasiandmeladu.elering.ee/docs/v2/MessageResult.html>.

Operator	Operations
Open supplier	----
Grid operator	----
Data Hub	Sends a client request response to the open supplier

Message description

Document	Name
Xml Document	MessageResult
Xsd Document	MessageResult.xsd

XML element	Description	Format
DocumentIdentification	Unique message identifier	Max length 50 characters
SenderIdentification	EIC code of the message sender	16 characters
ReceiverIdentification	EIC code of the message recipient (Data Hub)	16 characters
DocumentDateTime	Time of creation of the message	YYYY-MM-DDTHH:MM:SS
OriginalDocumentIdentification	Reference to the original message associated with the response	
Status	Information on whether the Data Hub was able to forward the message within the defined time.	Possible values "OK" – Message communication succeeded; "FAILED" – Message communication failed.
DateTime	Time when the Data Hub was able to transmit the message. The field is left empty, if the message sending failed (FAILED).	

Example: <https://gaasiandmeladu.elering.ee/xsd/v2/MessageResult.xml>

16 USER MANAGEMENT FOR OPERATORS

In order to use the Data Hub, operators (persons with data submission rights, including grid operators and open suppliers) must sign the Data Hub user agreement with Elering.

Under this agreement, the user must notify the system administrator about their authorized user, i.e. their administrator in a digitally signed form, along with the following data:

Role	Personal identification code	Given name	Surname	E-mail address
Administrator				

The User shall immediately notify the System Administrator of any changes related to the User's Administrator (addition of a new Administrator, removal of an Administrator, etc.) taking place after the signing of the agreement by submitting the relevant data in a digitally signed form.

The system administrator creates a personal user account for the user's administrator.

The administrator creates user accounts for other employees authorized by the user. In case of any shifts in the user's authorized employees (addition of a new employee, an employee leaving, etc.), the user's administrator shall immediately make changes in access rights, after changes in user's authorized persons have taken place.

In case the user wants the system administrator to manage the rights of authorized employees on the Data Hub, the user shall notify the system administrator of their list of authorized employees in a digitally signed form, along with the following data:

Role	Personal identification code	Given name	Surname	E-mail address
The authorized employee				