

# **Terms and conditions for a one-time connection to the Elering AS gas transmission network at Pakrineeme**

Approved by the decision of the Management Board of Elering AS No.  
51-4/2025 of 19.06.2025

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## 1. GENERAL PART

- 1.1. These terms and conditions for a one-time connection to the Elering AS (hereinafter: network operator) gas transmission network (hereinafter: transmission network) at Pakrineeme (hereinafter: connection conditions), together with annexes, establish the procedure for connecting to the network operator's transmission network at the Pakrineeme inlet point (hereinafter: connection point) a vessel transporting gas or an LNG cargo with regasification capability, which complies with the requirements of the Maritime Safety Act and with the provisions of Chapter V of the International Convention for the Safety of Life at Sea (SOLAS) (hereinafter also: vessel), for the purpose of a one-time connection of the vessel's gas installation and for injecting the gas cargo owned by the connecting party (hereinafter: client) on the vessel into the transmission network. The connection conditions form an integral part of the connection agreement. The connection procedure is subject to the connection conditions valid at the time of initiation of the connection procedure.
- 1.2. Connection to the transmission network at the Pakrineeme connection point means connecting, upon the client's connection, the vessel's gas installation to the gas loading equipment located on the quay of the Pakrineeme cadastral unit (43101:001:1889), at the address Paldiski City, Lääne-Harju Parish, Harju County, Pakrineeme Port (port code: EEPAK), to the gas loading facility located on the quay at coordinates X 6583797.22 and Y 504284.86g (hereinafter: Marine Loading Arm or MLA) via the MLA connection flange and the MLA connection module spool piece (hereinafter: connection module) that enables one-time injection of the gas cargo (hereinafter: gas) from the vessel into the transmission network.
- 1.3. At the Pakrineeme connection point, the network connection established for the purpose of one-time injection of an existing gas cargo from a vessel into the transmission network may be used only for a limited period and for a production direction. The fixed-term network connection period for one-time cargo injection shall not exceed 60 days. The fixed-term network connection shall also not exceed the period of the client's right to use the port granted for the purpose of connection.
- 1.4. The network operator ensures network connection at the Pakrineeme connection point for only one client at a time.
- 1.5. Under these connection conditions, when connecting at the Pakrineeme connection point, the client is not permitted to provide terminal services, within the meaning of § 17<sup>1</sup> of the Natural Gas Act, using the vessel connected to the connection point.
- 1.6. The client may submit an inquiry to the network operator for an initial estimate of the available transmission capacities for gas injection at the Pakrineeme connection point:
  - 1.6.1. The principles for forecasting the transmission capacities of the Pakrineeme connection point are set out in the guideline "Calculation of transmission capacity at the Pakrineeme connection point" published on the network operator's website.
  - 1.6.2. The network operator issues an initial estimate of the transmission capacities at the Pakrineeme connection point for a period not exceeding five (5) months from the date of

submission of the inquiry.

- 1.6.3. The network operator's initial estimate of transmission capacities is not binding and will be refined depending on the efficient operation of the gas system.

- 1.7. The client may submit a transmission capacity reservation application after the connection application has been accepted by the network operator. The submission and confirmation of a transmission capacity reservation application to the network operator shall be carried out in accordance with the document Common Regulations for the Use of the Natural Gas Transmission System.
- 1.8. Physical gas flows at the Pakrineeme connection point shall be determined in accordance with the applicable market rules and the agreement concluded with the system operator on a day-ahead nomination basis.
- 1.9. The parameters of the gas injected as a result of the connection must comply with the quality requirements set out in the annex "Quality requirements for gas injected into the gas system" to the Network Code on Gas Market Operation and in Annex 4 to the connection conditions (hereinafter jointly: gas quality requirements).
- 1.10. A client may not have more than one valid connection application or connection agreement per one connection to the network. Only one connection application may be submitted, and one Network Operator and Pakrineeme Gas Facility Operation Agreement (hereinafter: operation agreement) may be concluded per one connection.
- 1.11. The terms used in these connection conditions shall have the meanings assigned to them in the applicable legislation and in these connection conditions.
- 1.12. In matters not regulated by the connection conditions, the configuration and technical parameters of the transmission network shall be determined by the network operator.
- 1.13. The network operator ensures gas injection for the client at the Pakrineeme connection point in accordance with the existing technical throughput capacity of the transmission network, and no works shall be carried out within the connection point to increase the transmission network's capacity as part of the connection.
- 1.14. The maximum technical transmission capacity at the Pakrineeme connection point corresponds to the value published by Elering in the latest urgent market message (UMM) on the ENTSO-G Transparency Platform. Due to the constraints of the transmission network, the network operator cannot guarantee the client the possibility to use the maximum transmission capacity of the connection point throughout the entire connection period.
- 1.15. For the allocation of transmission capacity and injection of gas into the transmission network, the client must conclude with the network operator the Estonian–Latvian joint gas zone network agreement based on the document Common Regulations for the Use of the Natural Gas Transmission System and the Estonian–Latvian joint gas zone balancing agreement based on the document Common Regulations for the Natural Gas Balancing of Transmission Systems.
- 1.16. If more than one client submits a connection application for the same network connection period, the network operator shall accept the connection application that was submitted earlier in time.
- 1.17. A client wishing to connect at the Pakrineeme connection point, by submitting the respective connection application, grants consent for the transmission by the network operator of the

data provided in the connection application to the Pakrineeme Port Operator.

- 1.18. The network operator has the right to publish on its website the period of the network connection reserved at the Pakrineeme connection point.

- 1.19. The client shall ensure that the vessel to be connected to the Pakrineeme Port connection point is compatible with the existing equipment installed by the network operator at Pakrineeme Port for receiving gas.
- 1.20. The network operator has the right to refuse or terminate the gas flow if it is determined that the gas owned by the client and stored on the vessel originates from a country subject to a gas import ban.
- 1.21. The client is responsible for ensuring the safety of the vessel to be connected to the Pakrineeme connection point and its gas installations, and for compliance with the applicable safety conditions.

## **2. CONNECTION PROCEDURE**

### **2.1. Connection application**

- 2.1.1. To connect to the transmission network, the client shall submit to the network operator a duly completed connection application as stipulated in the connection conditions by e-mail to: [kliendihaldur@elering.ee](mailto:kliendihaldur@elering.ee), with the technical data of the client's gas installation attached in accordance with the connection application form established by the network operator, together with other documents and confirmations required by legislation. A document certifying the right of representation shall be attached to the connection application if the applicant's right of representation is not evident from the commercial register. The connection application form and the data to be submitted with the connection application are provided in Annex 1, Clause 1.1 of the connection conditions.
- 2.1.2. In addition to what is set out elsewhere in the connection conditions, the connection application referred to in Clause 2.1.1 must include the following documents:
  - 2.1.2.1. Confirmation from the Pakrineeme Port Operator, at least in a form reproducible in writing, that during the network connection period requested in the connection application the client is able to bring to the port the vessel to be used for the connection and use it for connection to the gas network and for handling gas, including using the berth in the port necessary for the connection.
- 2.1.3. The network operator registers the client's connection application and notifies the client thereof. The network operator issues, pursuant to Clause 2.3.3 of the connection conditions, an invoice for the processing fee within three (3) working days.

- 2.1.4. Verification of the connection application shall commence after receipt of the processing fee. The network operator verifies the data submitted with the connection application and notifies the client of any deficiencies in accordance with the deadlines set out in Clauses 2.1.5 and 2.1.6. If no deficiencies are found and after receipt of the processing fee, the connection application shall be deemed accepted by the network operator on the working day following receipt of the processing fee. The network operator shall notify the client of acceptance of the connection application within three (3) working days after receipt of the processing fee and inform the client of the deadline by which the connection agreement offer will be submitted.
- 2.1.5. If the data provided in the connection application are incomplete, the network operator shall, no later than three (3) working days from receipt of the processing fee, send the client a notice indicating all deficiencies present in the connection application.
- 2.1.6. Within three (3) working days from receiving the respective notice from the network operator, the client must bring the connection application into compliance with the requirements, including submitting all missing data.
- 2.1.7. Within three (3) working days after the client submits the corrected application, the network operator shall send the client a notice of the application's compliance or a list of deficiencies found in the corrected application. The application shall be deemed accepted as of the submission by the network operator of the compliance notice.
- 2.1.8. If the client has not brought the connection application into compliance with the requirements presented by the network operator within the time limit specified in Clause 2.1.6 or does not remedy all deficiencies identified by the network operator by the third correction of the application, the connection process shall be deemed terminated. The network operator shall inform the client in writing of the termination of the connection process and, in such case, shall refund 50% of the processing fee to the client.
- 2.1.8.1. If, due to deficiencies in the connection application and the time spent remedying those deficiencies, it is not possible for the network operator to offer the client a connection by the requested start of the network connection period indicated in the connection application, the start of the network connection period shall be postponed by the number of days spent on the corrections. If the network connection period thus changed under this clause cannot be postponed due to maintenance works at the connection point or another client's connection, the network connection period shall be shortened by the number of days indicated in the connection application.

- 2.1.9. All changes requested by the client to the data provided in the connection application after acceptance of the connection application and/or after signing the connection agreement must be submitted to the network operator with a digital signature. If the changes requested by the client concern the desired capacity, the client must submit a new connection application, which renders the previous connection process terminated.
- 2.1.10. The connection application and its annexes form an integral part of the connection agreement.
- 2.1.11. The client has the right to terminate the processing of the connection application by a signed written declaration of intent. In such a case, the network operator is not obliged to make a connection agreement offer to the client.
- 2.1.12. The network operator has the right to reject the client's connection application and refuse the connection if:
  - 2.1.12.1. For the network connection period indicated in the connection application, another connection application has been accepted or a connection agreement has been concluded at the Pakrineeme connection point by another client.
  - 2.1.12.2. Maintenance works are scheduled at the Pakrineeme connection point during the network connection period indicated in the connection application and it is not possible to change the period for carrying out the maintenance works.
  - 2.1.12.3. If the already confirmed planned gas flows in the region during the network connection period requested by the client, taking into account the technical constraints of the gas system, do not allow injection of gas into the transmission network at the Pakrineeme connection point.
  - 2.1.12.4. If, after acceptance of the connection application, the client wishes to change the fixed-term network connection period indicated in the connection application, the client must submit a new connection application, except where an application is submitted to shorten the network connection period indicated in the application. Submission of a new connection application renders the previous connection process terminated.
  - 2.1.12.5. At the Pakrineeme connection point, it is possible to submit a connection application no more than 18 months before the start of the desired network connection period.

## **2.2. Offer of connection agreement**

- 2.2.1. Unless agreed otherwise, following acceptance of the connection application the network operator shall prepare and submit to the client, within fifteen (15) working days, a connection agreement offer in accordance with the template in Annex 2 to the connection conditions, which includes, inter alia, the following data:
  - 2.2.1.1. location of the connection point;

- 2.2.1.2. the client's minimum and maximum production capacity at the connection point for the network connection;
- 2.2.1.3. the client's gas installation minimum and maximum operating pressure at the connection point;
- 2.2.1.4. location and description of the metering system, incl. types of measuring instruments;
- 2.2.1.5. network service boundary;
- 2.2.1.6. connection fee;
- 2.2.1.7. deadline for performance of the agreement;
- 2.2.1.8. network connection period;
- 2.2.1.9. energy quantity to be injected into the network;
- 2.2.1.10. other necessary conditions.
- 2.2.2. The connection agreement offer is valid for 60 days. Upon submitting the connection agreement offer to the client, the network operator shall inform the client of the deadline for submitting acceptance. The client must, within the validity period of the connection agreement offer, submit acceptance for concluding the connection agreement by signing the connection agreement and sending it to the contact person specified in the connection agreement. If the client does not submit acceptance within the deadline, the connection agreement offer becomes invalid and the processing of the connection application ends.
- 2.2.3. Within 30 days of receiving the connection agreement offer, the client may submit proposals to amend the connection agreement offer. Changes relating to an increase in the energy quantity to be injected and to an extension of the network connection period are not permitted. With regard to the remaining amendment proposals, the network operator shall, no later than 3 working days from receipt of the request, inform the client whether the network operator agrees to the client's proposals.
- 2.2.4. The connection process shall be deemed terminated and the connection agreement offer invalid if:
  - 2.2.4.1. the client withdraws from the connection agreement offer before concluding the connection agreement, notifying the network operator thereof; or
  - 2.2.4.2. the changes requested by the client in accordance with Clause 2.2.3 are not acceptable to the network operator and the client and the network operator do not reach agreement, within the validity period of the connection agreement offer referred to in Clause 2.2.2, on amending the terms of the connection agreement offer, in which case the network operator shall send the client a written notice to that effect together with the reasons for refusal; or
  - 2.2.4.3. the connection agreement is not concluded for another reason within the prescribed period;

- 2.2.4.4. the vessel to be used for the connection as referred to in the connection application belongs to a third party and the client does not provide the network operator, by the end of the validity period of the connection offer, with proof that the client has a valid agreement for the use of the vessel throughout the requested network connection period.
- 2.2.4.5. After submitting the connection agreement offer to the client, the network operator has the right, with the client's written consent, to change the technical solutions of the connection provided that the forecast connection fee does not increase and the technical parameters set out in the connection agreement offer do not deteriorate.
- 2.2.4.6. The connection agreement is concluded when the network operator receives, no later than on the last day of validity of the connection agreement offer, the acceptance of the offer and when the client has submitted to the network operator, together with the connection application, all required data and documents, and the network operator's contact person has sent a confirmation letter to that effect.

### **2.3. Connection fee**

- 2.3.1. The client shall pay the network operator a connection fee that covers all actual justified costs related to the connection. In calculating the connection fee, the network operator follows the document "Elering AS methodology for calculating the connection fee to the gas transmission network" (hereinafter: methodology), coordinated with the Competition Authority, unless the connection conditions provide otherwise. The methodology is available on the network operator's website. The connection fee consists of the following components:
  - 2.3.1.1. costs of works related to connecting the vessel's gas installation, and to verification of the network connection and the communication link;
  - 2.3.1.2. costs related to disconnecting the vessel's gas installation;
  - 2.3.1.3. processing fee – the cost of issuing the connection offer based on the connection application and arranging its signing;
  - 2.3.1.4. operations fee – the cost of arranging the actions following the concluded connection agreement, incl. the cost of opening the initial gas flow.
- 2.3.2. the forecast amount of the cost of works performed for the connection fee shall be presented to the client together with the connection agreement offer.
- 2.3.3. The amount of the processing fee is EUR 1,300.
- 2.3.4. The amount of the operations fee is EUR 6,400.
- 2.3.5. The operations fee shall be paid with the second and third instalments of the connection fee, in accordance with the scope of the actions carried out by the network operator at different stages of the connection, pursuant to Clause 2.4.3 of the connection conditions.

- 2.3.6. If the opening of the initial gas flow fails due to reasons attributable to the client, the network operator shall charge an operations fee of EUR 1,500 for each subsequent performance of the initial gas flow opening.
- 2.3.7. Value-added tax shall be added to the connection fee at the rate provided by law.
- 2.3.8. Additional costs shall be added to the connection fee if they arise due to delays in the vessel's readiness for connection (including costs incurred by the network operator as a result of postponing the agreed date for ensuring the vessel's readiness for connection) and/or due to reconnection of the vessel's gas installation if a hazardous situation or technical failure necessitates emergency disconnection.
- 2.3.9. If the client uses the connection module belonging to the network operator, the client must pay to the network operator, as a security deposit to the network operator's bank account, the amount of EUR 120,000 no later than seven (7) days before the handover of the connection module to the client.

#### **2.4. Payment of the connection fee**

- 2.4.1. The client shall pay the costs related to connecting the vessel's gas installation to the Pakrineeme connection point, to disconnecting it, and any other costs related to the connection as follows:
  - 2.4.1.1. The network operator shall issue to the client the invoice for the first instalment of the connection fee no later than three (3) working days after conclusion of the connection agreement, and it shall be payable by the client within fourteen (14) days after presentation of the instalment invoice, but not later than seven (7) days before the start of the network connection period indicated in the connection application. The first instalment is 70% of the forecast amount of the connection fee in the connection agreement;
  - 2.4.1.2. The network operator shall issue to the client the invoice for the second instalment of the connection fee within five (5) working days after completion of the works necessary to connect the vessel to the connection point, and it shall be payable by the client within fourteen (14) days after presentation of the invoice. The first and second instalments of the connection fee together constitute 100% of the forecast and actual costs known at that time for the works to be carried out for performance of the connection agreement. If necessary, the network operator shall adjust the amount of the connection fee by amending the connection agreement.

- 2.4.1.3. The network operator shall issue the invoice for the third instalment of the connection fee within five (5) working days after disconnecting the vessel from the connection point, and it shall be payable by the client within fourteen (14) days after presentation of the invoice. The amount of the third instalment is the remaining part of the cost of the works performed for the connection fee, from which the amounts paid by the client in accordance with Clauses 2.4.1.1 and 2.4.3 are deducted, pursuant to the invoices issued by the network operator.
- 2.4.2. The network operator shall issue to the client the invoice for the processing fee within three (3) working days from the date of registration of the connection application. The processing fee invoice must be paid within 3 days.
- 2.4.3. The operations fee shall be paid with the second instalment of the connection fee in the amount of EUR 4,100 and with the third instalment in the amount of EUR 2,300.
- 2.4.4. If the sum of the first and second instalments of the connection fee paid under the connection agreement exceeds the actual cost of the works performed by the network operator for performance of the connection agreement for the connection fee, the amount of the connection fee shall be adjusted to the actual costs, and the network operator shall refund the client the overpaid connection fee within thirty (30) days after disconnecting the vessel from the connection point and returning the connection module to the network operator, if the client used it.
- 2.4.5. If, upon termination of the connection agreement, including withdrawal from and cancellation of the connection agreement, and in the cases provided in the connection agreement at the request of the network operator, the network operator has already incurred, or is unavoidably required to incur in the future, such expenses for performance of the connection agreement that exceed the connection fee actually paid by the client to the network operator, the client shall, upon the network operator's request, reimburse those expenses.
- 2.4.6. Upon withdrawal from the connection contract, the system operator shall refund to the client the amounts paid by the client as the connection fee, after deducting all justified and proven costs already incurred by the system operator for the performance of the connection contract and the costs inevitably incurred for the termination of contracts for services already concluded by the time of receipt of the withdrawal notice, as well as any claims for damages or any other payments due from the client to the system operator under the connection contract. The client shall not be obliged to pay to the network operator, in total under this agreement, more than the amount of the connection fee specified in the agreement, except where the client has caused damage to the network operator by breaching the connection agreement.

2.4.7. The network operator shall return to the client the security deposit paid for the use of the connection module within 30 days after the client returns the connection module to the network operator.

**2.5. Technical conditions for connecting the vessel's gas installation to the transmission network**

2.5.1. The client shall ensure the vessel's readiness for connection to the Pakrineeme connection point no later than 5 working days before the start of gas flow opening.

2.5.2. On the basis of the client's connection application, the network operator shall, for the connection fee, carry out the necessary activities at the Pakrineeme connection point to connect the vessel's gas installation to the network operator's MLA flange connection and Ship-To-Shore Link (hereinafter: SSL), if this is technically possible and the following conditions are ensured:

2.5.3. The vessel's dimensions must be suitable for interfacing with the equipment of the network operator located on the quay at Pakrineeme Port;

2.5.4. The location of the vessel's gas installation outlet pipe on the vessel must be suitable for the MLA working area;

2.5.5. The vessel must be compatible with and technically capable of being connected to the Trelleborg GEN3 SSL system, whose quay-side connectors also serve as the data exchange interface between the network operator and the client. Connection of the vessel to the SSL equipment belonging to the network operator shall be carried out by the client in the presence of the representative of the network operator;

2.5.6. The vessel shall have ensured a sufficient quantity of nitrogen for purging the connection module when connecting to and disconnecting from the connection point before and after unloading;

2.5.7. The equipment on the vessel shall ensure the capability to increase gas pressure at a rate of up to 5 bar/hour from an initial pressure of 16 bar, i.e. a gas flow of approx. 1000 nm<sup>3</sup>/h, which is necessary to equalise the pressures of the vessel and the gas network before starting operation into the network

2.5.8. The onboard metering system must enable measurement, under measurement conditions, of the quantity of gas (volume m<sup>3</sup>) with a gas meter in the gas injection pressure range (16–75 barg) and convert it, with a contract quantity meter, to a volume (m<sup>3</sup>) and energy (kWh) corresponding to base conditions, using the gas composition determined by the chromatograph and the gas temperature and pressure measurement results measured by the transducers of the gas passing through the gas meter;

2.5.9. Lifting equipment for installation of the connection module shall be ensured by the client;

- 2.5.10. Other obligations of the client stipulated in the connection agreement, arising from the specifics of the connection, for connecting the vessel's gas installation to the Pakrineeme connection point.
- 2.5.11. The following additional conditions must be observed for the connection:
  - 2.5.11.1. The vessel's gas installation must be capable of limiting the amount of gas injected and of shutting off the gas flow in the event of injection of gas not meeting the quality requirements, loss of SSL connection and/or in a hazardous situation (incl. risk to human life, the environment and/or operation of the transmission network);
  - 2.5.11.2. In a hazardous situation that necessitates interruption of the gas flow and, if necessary, the network connection, the vessel must be capable of disconnecting safely from the connection point and, if necessary, leaving the quay.
  - 2.5.11.3. The client shall, at its own expense, ensure the transmission to the network operator's information system of the data volumes specified in Annex 1 Clause 1.3.
- 2.5.12. The connection point is located at the network operator's MLA connection flange (in Figure 1 "Layout plan of the Pakrineeme connection point")

GAS INFRASTRUCTURE CONNECTION POINT	
FRAGMENT "A"	

Figure 1. Layout plan of the Pakrineeme connection point

2.5.14. The following equipment has been installed at Pakrineeme Port for connecting the vessel's gas installation and injecting gas into the transmission network:

2.5.13.1. Pipe supports and cable ladders with cables and pipelines;

2.5.13.2. ESD (Emergency Shutdown) system with SDV (Shut Down Valve) quick-closure safety valve and related auxiliary equipment;

2.5.13.3. HIPPS (High Integrity Pipeline Protection System) with related auxiliary equipment;

2.5.13.4. Quay kiosk with data communication and control equipment;

2.5.13.5. SSL (Ship-To-Shore Link) Trelleborg GEN3;

2.5.13.6. Emco Wheaton 80300 loading arm (MLA) with service platform and loading arm control system (hydraulic cabinet). MLA technical basic data:

- 2.5.13.6.1. The MLA pipe connection to the vessel is a horizontal flange connection;
- 2.5.13.6.2. The MLA flange connection size is NPS 12" ANSI 900 Lbs; RF;
- 2.5.13.6.3. Maximum operating pressure of gas through the MLA up to 75 bar;
- 2.5.13.6.4. MLA gas reception temperature range 14°C to 18°C;

ALLOWABLE WORKING ENVELOPE	
PRE ALARM STAGE	
ESD 1. STAGE	
ESD 2. STAGE	
MAXIMUM ENVELOPE	
MAXIMUM MECHANICAL REACH	
PROPOSED BASEPLATE FOR MARINE LOADING ARM AT JETTY BASELINE	
SCALE 150	
DETAIL "X" SCALE 1:20	
TSA SERVICE POSITION MLA-1 TOP VIEW (SCHEMATICALLY. PROPOSAL)	
EXISTING PEDESTAL FOR OPERATION AND MAINTENANCE AND TSA SERVICE (SUPPLIED BY OTHERS)	
IN THIS AREA THE MAINTENANCE PEDESTAL FOR TSA SERVICE PEDESTAL DESIGNED FOR A LOAD OF 85000 N	
VT VESSEL ONG MANIFOLD DETAIL	
PRODUCT DATA	
TSA SERVICE POSITION MLA-1 SIDE VIEW	

Figure. 2 MLA working area

2.5.15. Technical data of the connection module owned by the network operator:

- 2.5.14.1. Connection size: NPS 12"
- 2.5.14.2. Pressure class 900 lbs
- 2.5.14.3. Connection type: Welded neck R.F.
- 2.5.14.4. The technical parameters of the connection module are presented in Figure 3. „Technical data of the connection module“.

THE LIMIT SWITCHES, CABLES AND SOCKETS FOR THE VALVE ARE INDICATED ON THE E-PLAN NR. M5257353-220.	
HYDR CONNECTION 3/8"	
ACTUATOR AND SENSORS CONTROLLED BY THE LOADING ARM VIA BREAKAWAY COUPLERS	
LIFTING LUGS (2x) TYPE "A"	
Haupt-Flussrichtung RECOMMENDED FLOW DIRECTION BUT VALVE IS ABLE FOR BI-DIRECTIONAL FLOW!	
ADJUSTABLE +/-100mm	
TRANSPORT ACCESSORIES (CLOSINGS)	
-x ACHTUNG Vor dem Schweißen Dichtfläche abdecken!! ATTENTION: BEFORE WELDING SEAL SURFACE TO BE SECURED - * ACHTUNG: Dünne Lagen mit geringer Wärmeeinbringung schweißen ATTENTION: THIN LAYER WITH LOW HEAT INPUT HAVE TO BE WELDED - Ausführung der Schweissnahte gemäß EMCO vurgeprüfter WPS/POR WELDING ACCORDING APPROVED WELD PROCEDURE AND MAP -Toleranzen/ TOLERANCES DIN EN ISO 13920-BF/DIN EN ISO 5817 C - Schweissnaht vorbereitung entsprechend DIN EN ISO 9692-1 PREPARATION OF WELD ACCORDING DIN EN ISO 9692-1 - Alle Ecken und Kanten mit R2-R3mm gerundet (Bohrungen ausgenommen) ALL EDGES AND CORNERS ROUNDED WITH R2-R3mm (EXCEPT DRILLS/HOLES)	
LIST OF CONNECTIONS ON SPOOL PIECE	
SPECIAL FLANGE	
FLANGE	
LOAD DATA:	

MAXIMUM LOAD OF EACH SINGLE H-BEAM LEG	
NORMAL OPERATION F_vertical: 25 kN	
ACTUATOR ASSEMBLY: 1600 kg	
COVER PLATE: 56 kg	
MAXIMUM NOZZLE LOADS ACTING AT SPECIAL FLANGE N10	
EXCLUDING ANY INTERNAL PRESSURE	
FORCES NORMAL OPERATION F_axial +/- 25kN F_vertical +/- 25 kN F_lateral +/- 25 kN	
MOMENTS M_axial +/- 20 kNm (Tursion) M_vertical +/- 25 kNm M_lateral -25 kNm	
Produktdaten / PRODUCT DATA	
Leader No.	
PRODUCT	
SURFACE TREATMENT AND COATING CS - CORROSIVITY CATEGORIES	
DIN EN ISO 12944-2 C5 (REF TD SCOPE OF SUPPLY CLAUSE 61	
Zugehörige Stückliste / ASSOCIATED MATERIAL BOM ZS1241791	
SPOOL PIECE ASSY. 12"	

## **2.6. Actions for opening the gas flow at the connection point**

- 2.6.1. *In this chapter, the initial opening of the gas flow of the gas installation is understood as the first use of the network connection by the network operator under the connection agreement to direct the gas flow from the vessel's gas installation to the network operator's gas installation.*
- 2.6.2. The client must submit the vessel's valid classification certificate to the network operator no later than 3 working days before starting the operations for connection to the connection point, and it must remain valid until the end of the network connection period. The network operator shall notify the decision on approval or non-approval within 3 working days after submission of the vessel's classification certificate to the network operator.
- 2.6.3. The client shall submit to the network operator the protocol of the vessel's gas metering system testing and calibration operations (SAT - Site Acceptance Tests) at the earliest opportunity, but no later than 14 days before gas injection. The network operator has the right to verify the compliance of the vessel's gas installation metering system with the submitted documents, for which the client shall provide the network operator access to the vessel's metering system 5 days before the initial gas flow opening.
- 2.6.4. In the event of inconsistencies in the calibration certificates of the vessel's measuring instruments, the network operator has the right to challenge the measurement results, in which case the parties shall promptly agree on the measurement method for determining the quantity of gas discharged from the vessel.
- 2.6.5. Before the initial opening of the gas flow, the client must ensure the readiness of its gas installation for injecting gas into the transmission network and must have met the following conditions no later than 3 working days before the start date of the network connection period set out in the connection agreement:
  - 2.6.5.1. The client must submit to the network operator a declaration for opening the gas flow according to the form provided in Annex 1 Clause 1.2 at least 30 days before connecting the vessel to the connection point;
  - 2.6.5.2. The client must have concluded, with the network operator, the Estonian–Latvian joint gas zone network agreement based on the document Common Regulations for the Ilse of Natural Gas Transmission System and the Estonian–Latvian joint gas zone balancing agreement based on the document Common Regulations for the Natural Gas Balancing of Transmission System;
  - 2.6.5.3. The client has concluded an operation agreement for injecting gas at the Pakrineeme connection point, under which the conditions for provision of the network service between the client and the network operator are additionally regulated;

- 2.6.5.4. The client has provided the network operator in writing with its dispatcher contact details.
- 2.6.6. At the connection point, the network operator shall arrange the connection of the MLA to the connection module installed on the vessel.
- 2.6.7. If the date for connecting the vessel to the MLA changes due to the client, the client shall immediately submit a new declaration to the network operator. If the client informs the network operator of the change in the date of the vessel's connection to the MLA at least 30 days before the work is carried out, the network operator will not apply an additional fee for the connection. If the client informs the network operator of the change in the date of the connection less than 7 days in advance, the client must pay the amount specified in Clause 2.3.6.
- 2.6.8. In addition to what is set out in Clause 2.6.5, all of the following conditions must be met before the initial opening of the gas flow:
  - 2.6.8.1. The client has submitted a transmission capacity reservation application and a nomination for the use of transmission network capacities, and these have been approved by the network operator in accordance with the document Common Regulations for the Use of Natural Gas Transmission System;
  - 2.6.8.2. The client has submitted to the network operator the documentation proving the origin of the gas to be injected from the vessel no later than 7 days before the initial opening of the gas flow;
  - 2.6.8.3. The client must submit to the network operator a gas quality certificate with a specification on the basis of which the network operator shall assess the compliance of the gas intended for delivery to the network operator with the gas quality requirements. The gas quality certificate with specification must be submitted to the network operator no later than 7 days before the initial opening of the gas flow;
  - 2.6.8.4. Within 5 working days before the opening of the gas flow, the transmission of data volumes from the vessel via the SSL to the network operator's information systems and the functioning of all control commands between the network operator's control centre and the vessel and quay equipment must have been successfully tested;
  - 2.6.8.5. The client has paid to the network operator all required payments and has duly fulfilled all other obligations set out in legislation and in the connection agreement concluded between the client and the network operator;
  - 2.6.8.6. The client has submitted to the network operator the data of its gas installation to the extent required in the connection agreement and in the connection conditions, and these have been approved by the network operator;
  - 2.6.8.7. Before the initial opening of the gas flow, the client has carried out purging of the connection module.

- 2.6.8.8. Other obligations of the client stipulated in the connection agreement, arising from the specifics of the connection, for opening the gas flow.
- 2.6.9. For the conclusion of the operation agreement at the Pakrineeme connection point, the client must confirm that the vessel's gas installation to be connected to the connection point has been tested and that the gas to be injected into the network operator's pipeline complies with the applicable gas quality requirements. At the same time, the transmission of data and signals between the network operator's control centre and the vessel's gas installation must have been finally tested.
- 2.6.10. The network operator has the right at any time to verify the compliance of the vessel's gas installations with the requirements.
- 2.6.11. If the client's gas installation does not comply with the requirements, the network operator has the right to require elimination of deficiencies, to refuse the initial opening of the gas flow and/or to disconnect the network connection.

## **2.7. Quality of gas injected into the transmission network**

- 2.7.1. Compliance of the client's gas injected into the network with the established requirements shall be assessed at the connection point between the network operator and the client.
- 2.7.2. The network operator has the right to establish technical restrictions on the use of the gas system for performance of system responsibilities.
- 2.7.3. The network operator shall apply the gas quality requirements for gas injected into the network arising from the legislation in force at the time of entry into force of the connection conditions, including the annex to the Network Code on Gas Market Operation. In the event of changes to legislation, the assessment of values shall be based on the parameters set out in the legislation in force.
- 2.7.4. Gas quality measurements mean the client's determination of gas quality parameters using the metering system located on the vessel.
- 2.7.5. The client must ensure that at all times the gas injected by it into the transmission network complies with the quality requirements. If the gas injected by the client does not comply with the gas quality requirements, the network operator has the right, if necessary, to shut off the gas flow or to oblige the client to limit the injection of gas into the transmission network.

## **2.8. Termination of the connection agreement**

- 2.8.1. The connection agreement terminates after the expiry of the network connection period set out in the connection agreement if the parties have duly fulfilled the obligations set out in the connection agreement, including that the vessel connected to the connection point has been disconnected from the Pakrineeme connection point and the client has returned the connection module belonging to the network operator if it was used.
- 2.8.2. The network operator confirms in writing the fulfilment of the obligations of the connection agreement.
- 2.8.3. The network operator may terminate the contract concluded with the client for the provision of the transmission service as a result of the connection procedure for connection at the Pakrineeme connection point if:
  - 2.8.3.1. the client provides terminal service to third parties at the Pakrineeme connection point; or
  - 2.8.3.2. the vessel is not connected to the gas transmission network during the term-limited network connection period set out in the operation agreement for at least 30 consecutive days or another period agreed between the network operator and the client, except where the need to disconnect the vessel from the gas transmission network arises from the network operator itself or from a technical failure of the vessel that cannot be remedied within 30 days; or
  - 2.8.3.3. the vessel has not injected gas into the transmission network during the term-limited network connection period set out in the operation agreement for at least 30 consecutive days or another period agreed between the network operator and the client, except where the interruption of the ability to inject gas into the network arises from the network operator itself or from a technical failure of the vessel that cannot be remedied within six months;
  - 2.8.3.4. the network operator or the company responsible for the state's strategic stockpiles, AS Eesti Varude Keskus, needs to use the connection point during the term-limited network connection period set out in the operation agreement in an emergency to ensure the continuity of vital services and/or security of supply; the right of use of the Pakrineeme port by the connected vessel ends before the end of the network connection period set out in the connection agreement and/or the operation agreement before the end of the term-limited network connection period set out in the domestic transmission service operation agreement the right of use of the Pakrineeme port.
  - 2.8.3.5. it is established during verification of the origin of the gas that the gas in the vessel's cargo originates from a country subject to a ban on gas imports

# 3. REQUIREMENTS FOR THE CLIENT'S GAS INSTALLATION DATA EXCHANGE

## 3.1 General part

- 3.1.1.1. The client's gas installation must enable fault-free data exchange with the network operator's control centre. Data exchange means the sending of measurements, status and alarm signals from the gas installation to the network operator's control centre.
- 3.1.1.2. The data exchange points are located on the quay-side connectors of the cables located on the berthing quay at Pakrineeme Port.
- 3.1.1.3. Verification of the functionality of the data volumes of the gas installation includes both initial data communication testing of the gas installation with the network operator's control centre and testing of specific data points (measurements, signals) with the network operator's control centre. The parties shall agree on the test plan for testing no later than 14 days before the vessel berths at Pakrineeme Port. The client must ensure at its own expense the correct transmission from the vessel of all information volumes into the network operator's information systems.
- 3.1.1.4. The client is obliged to ensure, throughout the entire network connection period, an active ESD discrete signal operating between the vessel and the SSL.
- 3.1.2. Real-time information:
  - 3.1.2.1. The client's gas installation must enable the transmission of all real-time measurements and signals to the network operator's control centre in accordance with the data volumes set out in Annex 1 Clause 1.3 (hereinafter: the data volumes table). The network operator has the right, during performance of the connection agreement, to supplement the data volumes table and to add information objects without additional costs.
- 3.1.3. Requirements for data communication connections:
  - 3.1.3.1. The client's gas installation must be compatible with the Trelleborg Gen 3 Ship-to-Shore link located on the quay. The data communication protocol is Modbus.
  - 3.1.3.2. The client is obliged to ensure 24/7 dispatcher duty for the entire validity of the connection agreement

- 3.1.3.3. In the event of interruption of the data communication connection, the network operator has the right to shut off the gas flow if the connection cannot be restored no later than 5 hours after the interruption and data exchange for gas cannot be ensured via other information channels.
- 3.1.3.4. In the event of interruption of the data communication connection, the client is obliged to transmit the measurement data in the volume required in the data volumes table once per hour.

## **4. STANDARDS AND REQUIREMENTS**

- 4.1 When handling standards and requirements, the version of the document in force at the time of conclusion of the connection agreement shall be followed.
- 4.2 In matters not regulated by the legislation of the Republic of Estonia, the directives of the European Community, EVS and EN standards or, in the absence thereof, ISO standards and, in the absence thereof, ASME and ANSI shall be followed.
- 4.3 In the design and construction of the network operator's transmission network and the client's production-oriented gas installation, as well as in the subsequent verification of compliance with rules and requirements, the following directives and standards must be observed:
  - 4.3.1. Pressure equipment directive (PED) 2014/68/EU;
  - 4.3.2. Potentially explosive atmosphere directive (ATEX) 2014/34/EU;
  - 4.3.3. Machinery directive (MSD) 2006/42/CE;
  - 4.3.4. Electro-magnetic compatibility directive (EMC) 2004/108/CE;
  - 4.3.5. Low voltage directive (LVD) 2006/95/CE;
  - 4.3.6. SOI-AS - International Gas Carrier Code (IGC Code)
- 4.4. In the design and construction of the network operator's transmission network and the client's production-oriented gas installation, as well as in the subsequent verification of compliance with rules and requirements, in addition to the directives and standards listed in Clause 4.3, the requirements of the following standards must be observed:
  - 4.4.1. EVS-EN 1776 Gas infrastructure - Gas measuring systems - Functional requirements;
  - 4.4.2. EVS-EN 12261. Gas meters - Turbine gas meters;
  - 4.4.3. EVS-EN 12405-1. Gas meters - Conversion devices — Part 1: Volume conversion
  - 4.4.4. EVS-EN 12405-2. Gas meters - Conversion devices — Part 2: Energy conversion;
  - 4.4.5. EVS-EN 12405-3, Gas meters — Conversion devices — Part 3: Flow Computers;
  - 4.4.6. ISO 17089-1. Measurement of fluid flow in closed conduits. Ultrasonic meters for gas. Meters for custody transfer and allocation measurement;
  - 4.4.7. EVS-EN ISO 6326. Natural gas - Determination of sulfur compounds;

- 4.4.8. EVS-EN ISO 19739. Natural gas - Determination of sulfur compounds using gas chromatography;
- 4.4.9. EVS-EN ISO 6327. Gas analysis - Determination of the water dew point of natural gas - Cooled surface condensation hygrometers;
- 4.4.10. EVS-EN ISO 11541. Natural gas - Determination of water content at high pressure;
- 4.4.11. EVS-EN ISO 10101. Natural gas - Determination of water by the Karl Fischer method;
- 4.4.12. EVS-EN ISO 6570. Natural gas - Determination of potential hydrocarbon liquid content - Gravimetric methods;
- 4.4.13. ISO/TR 11150. Natural gas - Hydrocarbon dew point and hydrocarbon content;
- 4.4.14. ISO 23874. Natural gas -Gas chromatographic requirements for hydrocarbon dewpoint calculation;
- 4.4.15. ISO 12213-2. Natural gas - Calculation of compression factor - Part 2: Calculation using molar-composition analysis;
- 4.4.16. EVS-EN ISO 6974-Part1 to 6. Natural gas - Determination of composition and associated uncertainty by gas chromatography;
- 4.4.17. EVS-EN ISO 6976. Natural gas - Calculation of calorific values, density, relative density and Wobbe index from composition;
- 4.4.18. EVS-EN ISO 10723. Natural gas - Performance evaluation for on-line analytical systems;
- 4.4.19. EVS-EN ISO 6142. Gas analysis - Preparation of calibration gas mixtures - Gravimetric method;
- 4.4.20. EVS-EN ISO 6143. Gas analysis - Comparison methods for determining and checking the composition of calibration gas mixtures EVS-EN ISO 6141. Gas analysis - Requirements for certificates for calibration gases;
- 4.4.21. EVS-EN 16726 Gas infrastructure - Quality of gas - Group H;
- 4.4.22. EVS- EN 60079. Electrical apparatus for potentially explosive atmosphere:
  - 4.4.22.1. Part 0 - Equipment - General requirements;
  - 4.4.22.2. Part 1 - Flameproof enclosure „d“;
  - 4.4.22.3. Part 7 - Increased safety „e“;
  - 4.4.22.4. Part 10-1 - Classification of hazardous areas - explosive gas atmosphere;
  - 4.4.22.5. Part 11 - Equipment protection by Intrinsic Safety “i”;
  - 4.4.22.6. Part 14 - Electrical installations design, selection and erection;
  - 4.4.22.7. Part 17 - Electrical installations inspection and maintenance;

- 4.4.23. ISO/TR 7871. Cumulative sum charts - Guidance on quality control and data analysis using CUSUM techniques;
- 4.4.24. EVS-EN 60529 - Degree of protection provided by enclosures (IP code);
- 4.4.25. EVS-EN 60079 (all parts). Explosive atmospheres;
- 4.4.26. EVS-EN 62305 (all parts). Protection against lightning;
- 4.4.27. EVS EN 61508. Functional safety of electrical/ electronic/ programmable electronic safety related systems;
- 4.4.28. EVS-EN 61511. Functional safety. Safety instrumented systems for the process industry sector;
- 4.4.29. EVS-EN 60204-1. Safety of machinery - Electrical equipment of machinery;
- 4.4.30. EVS-EN 1012-1. Compressors and vacuum pumps - Safety requirements. Compressors;
- 4.4.31. EVS-EN 61000-6-2. EMC Generic standards - Immunity for the industrial environment;
- 4.4.32. EVS-EN 61000-6-4. EMC Generic standards - Emission for the industrial environment;
- 4.4.33. EVS-EN 13463-5. Non-electrical equipment for Ex atmosphere - Protection by constructional safety „c“;
- 4.4.34. EVS-EN 13463-6. Non-electrical equipment for Ex atmosphere - Protection by control of ignition sources „b“;
- 4.4.35. EVS-EN 13463-8. Non-electrical equipment for Ex atmosphere - Protection by liquid immersion „o“;
- 4.4.36. EVS-EN 50267. Common test methods for cables under fire conditions - Tests on gases evolved during combustion of materials from cables - Part 1: Apparatus;
- 4.4.37. IEC 60228. Conductors of insulated cables;
- 4.4.38. IEC 60332. Tests for electrical and optical fibre cables under the conditions - All parts;
- 4.4.39. ASME 8.31.3. Process Piping Guide;
- 4.4.40. ASME B31.8. Gas Transmission and Distribution Piping Systems;
- 4.4.41. SIGTTO / SGMF - Standards and Guidelines for Natural Gas Fuelled Ship Projects;
- 4.4.42. SIGTTO - LNG Operations in Port Areas;
- 4.4.43. SIGTTO ESD System. Recommendations for emergency shutdown and related safety systems;

- 4.4.44. SIGTTO - ESD Arrangements and Linked Ship / Shore Systems for Liquefied Gas Carriers;
- 4.4.45. SIGTTO - Site Selection and Design for LNG Ports and Jetties;
- 4.4.46. OCIMF Mooring Equipment Guidelines;

## **5. ANNEXES**

**Annex 1    Forms**

**Annex 2    Template of Connection Agreement**

**Annex 3    Requirements for vessel gas metering system**

**Annex 4                    Gas quality conditions at the entry point    ANNEX**

**1 - Forms**

## Connection application form

### 1.1. Electrical apparatus for potentially explosive atmosphere:

APPLICANT'S BUSINESS NAME:	REGISTRATION CODE:
CONTACT ADDRESS:	
TELEPHONE:	E-MAIL:
APPLICANT'S REPRESENTATIVE'S NAME:	
BASIS FOR REPRESENTATION (POWER OF ATTORNEY TO BE SUBMITTED WITH THE APPLICATION):	
CONTACT PERSON'S TELEPHONE:	E-MAIL:
TYPE OF GAS TO BE INJECTED INTO THE NETWORK:	TYPE OF GAS (SELECT ONE): REGASIFIED LNG REDUCED CNG
GAS INSTALLATION PARAMETERS:	FILL IN ANNEX "Vessel gas installation parameters"
EXPECTED PARAMETERS OF GAS TO BE INJECTED PARAMETERS:	FILL IN ANNEX "Daily production profile at peak time"
VESSEL TECHNICAL DATA:	FILL IN ANNEX "Technical data of the vessel used for connection"
DESIRED PERIOD FOR GAS INJECTION INTO THE NETWORK PERIOD:	
DOCUMENTS TO BE ATTACHED TO THE APPLICATION:	1. Annex 1; 2. Annex 2; 3. in a reproducible written form confirmation issued by the Port Operator (AS Eesti Varude Keskus) regarding the possibility of the vessel's berthing during the network connection period of the vessel

By submitting this application, the applicant acknowledges that

- as of 24.06.2024, the import of liquefied natural gas from Russia is prohibited (Council Regulation (EU) 2024/1745, points 10–13), which may entail additional customs entry formalities;

- Elering has the right, for the purpose of implementing the EU Council Regulation, to request documentation proving the origin of the gas and/or confirmation from the Estonian Tax and Customs Board that all required documents have been submitted;
- the applicant is obliged, in cooperation with the port operator, to obtain an assessment from TTJA and the Rescue Board as to whether operating in Pakrineeme Port constitutes a major accident hazard establishment within the meaning of the Port Act, which may entail obligations arising from the Chemicals Act, and to forward this assessment to the network operator;

By signing this application, the applicant confirms that

- all information provided is accurate;
- the applicant holds all necessary permits and agreements to operate in Pakrineeme Port in accordance with the issued activity licence;
- it fulfils all obligations and requirements arising from legislation (including Port Act § 31 (5) and (6), Chemicals Act § 20 (1) and (2), § 22 (7), § 23 (2)) and from the concluded agreements;
- the FSRLI will not be connected as a floating terminal, but only on a short-term and one-time basis.

Signatory's name

/Digitally signed/

**Vessel gas installation parameters**

<b>Preferred connection point location</b>		Description and geo. coordinates		MLA connection located on the quay of Pakrineeme Port with coordinates X 6583797.22 and Y 504284.86													
<b>Planned connection time</b>		Date															
<b>Planned connection period</b>		Period															
<b>Producer connection (Input capacity)</b>		<b>D ay 1</b>	<b>D ay 2</b>	<b>D ay 3</b>	<b>D ay 4</b>	<b>D ay 5</b>	<b>D ay 6</b>	<b>D ay 7</b>	<b>D ay 8</b>	<b>D ay 9</b>	<b>D ay 10</b>	<b>D ay 11</b>	<b>D ay 12</b>	<b>D ay 13</b>	<b>Da y 14</b>	<b>D ay 15</b>	<b>D ay 16</b>
Peak production capacity	MW																
Peak daily production capacity	MW h/d																
Average production capacity during the period	MW																
Minimum production capacity	MW																
Possible minimum inlet pressure to the network operator's pipeline	bar(g)																
Possible maximum inlet pressure to the network operator's pipeline	bar(g)																
Average production profile during the period																	



Propane	% mol																
n-Butane	% mol																
2-Methylpropane	% mol																
Nitrogen	% mol																
Carbon dioxide	% mol																
2,2-Dimethylpropane	% mol																
2-Methylbutane	% mol																
n-Pentane	% mol																
Hydrocarbon fractions	% mol																
Oxygen	% mol																
Hydrogen	% mol																
Hydrogen sulphide	% mol																
GCV (higher calorific value)	kW h/m <sup>3</sup>																
NCV (lower calorific value)	kW h/m <sup>3</sup>																
Wobbe index	kW h/m <sup>3</sup>																
Gas temperature	K																

*The data provided on the composition and parameters of natural gas must be given under standard conditions, i.e. at a gas temperature of 293.15 K (20°C) and an absolute pressure of 101.325 kPa.*

*\*The production profile refers to the average percentage distribution of production over a 24-hour period.*

**Production daily profile at peak load**

<b>Time</b>	<b>Production [%]</b>
0:00	
1:00	
2:00	
3:00	
4:00	
5:00	
6:00	
7:00	
8:00	
9:00	
10:00	
11:00	
12:00	
13:00	
14:00	
15:00	
16:00	
17:00	
18:00	
19:00	
20:00	
21:00	
22:00	
23:00	
<b>TOTAL</b>	<b>100%</b>

### Technical data of the vessel used for connection:{5}

- Year of construction: .....
- Overall length of the vessel:.. m
- Beam of the vessel:..... m
- Draught of the vessel: .. m
- Maximum regasification capacity:..... MW
- Maximum daily regasification capacity: ..... GWh / day
- Maximum regasification capacity:..... Nm<sup>3</sup>/h
- Minimum regasification rate: ..... Nm<sup>3</sup>/h
- Cargo quantity (LNG/CNG):..... T
- Tank working volume (LNG/CNG): ..... m<sup>3</sup>
- Tank working volume (Gas): ..... GWh
- Maximum gas operating pressure at the connection point: . bar (g)
- Minimum gas operating pressure at the connection point: bar (g)
- Normal gas operating temperature at the connection point:..... °C
- Minimum gas operating temperature at the connection point: .....°C
- The vessel is equipped with a gas quantity measurement system: yes
- The vessel is equipped with a gas chromatograph: yes
- Description of the vessel's gas installation ("REGAS" – regasification unit) technology with a drawing

**1.2.** Customer declaration for opening the gas flow

Elering AS  
Kadaka tee 42  
12915 Tallinn

**Application for opening the initial gas flow**

I hereby confirm that all obligations set out in the connection conditions and connection agreement have been fulfilled and that the vessel's \_\_\_\_\_ (name of the vessel) gas installation is properly prepared for connection to the connection point and is safe for use. I request that the network operator connect the gas installation to the equipment of Pakrineeme Port (SSL and MLA) \_\_\_\_\_ (date in the format DD.MM.YYYY) and open the initial gas flow (date \_\_\_\_\_ in the format DD.MM.YYYY).

/digitally signed/

Type here SIGNATORY'S NAME

Type here SIGNATORY'S TITLE

### 1.3. Data volumes table

Parameters read out from the flow computer		SCADA User Interface Alarm Limits		Modbus		
Gas components	Unit	min	max	Object Type	Data Type	Address
CO2	mole %	-	2.5	Input Register	32bit Float	need to be specified
Methane	mole %	80	99	Input Register	32bit Float	need to be specified
Ethane	mole %	-	10	Input Register	32bit Float	need to be specified
Propane	mole %	-	5	Input Register	32bit Float	need to be specified
N-Butane	mole %	-	1	Input Register	32bit Float	need to be specified
i-Butane	mole %	-	1	Input Register	32bit Float	need to be specified
N-Pentane	mole %	-	1	Input Register	32bit Float	need to be specified
i-Pentane	mole %	-	1	Input Register	32bit Float	need to be specified
Neo Pentane	mole %	-	0.5	Input Register	32bit Float	need to be specified
Hexane	mole %	-	0.5	Input Register	32bit Float	need to be specified
Oxygen	mole %	-	0.02	Input Register	32bit Float	need to be specified
Hydrogen	mole %	-	0.1	Input Register	32bit Float	need to be specified
<b>Gas properties</b>	<b>Unit</b>					
/REAL CV SUP/ (superior calorific value GCV)	kWh/m3(n)	10.41	-	Input Register	32bit Float	need to be specified
/REAL CV INF/ (inferior calorific value GCV)	kWh/m3(n)	-	-	Input Register	32bit Float	need to be specified
/WOBBE INDEX/	kWh/m3(n)	14.02	15.5	Input Register	32bit Float	need to be specified
/NORMAL DENSITY/ (gas	kg/m3(n)	-	-	Input	32bit	need to be

density at base condition)				Register	Float	specified
Relative density	-	0.55	0. 75	Input Register	32bit Float	need to be specified
<b>Gas flow parameters</b>	<b>Unit</b>					

/GVOL FR/ (volume flow rate at measuring condition)	m <sup>3</sup> /h	need to be specified		Input Register	32bit Float	need to be specified
/NVOL FR/ (volume flow rate at base condition)	m <sup>3</sup> (n)/h	need to be specified		Input Register	32bit Float	need to be specified
/ENERGY FR/ (energy flow rate)	kWh/h	need to be specified		Input Register	32bit Float	need to be specified
/METER PRESS/ (gas pressure in metering line)	bar (abs)	need to be specified		Input Register	32bit Float	need to be specified
/METER TEMP/ (gas temperature in metering line)	°C	0	40	Input Register	32bit Float	need to be specified
<b>Statuses of measuring system devices</b>	<b>alarm status Information</b>					
Ultrasonic meter		need to be specified		Discrete Input	Single Bit	need to be specified
Flow Computer		need to be specified		Discrete Input	Single Bit	need to be specified
Chromatograph (C6+)		need to be specified		Discrete Input	Single Bit	need to be specified

Note: The base conditions for volume shall be 0 °C and 1,01325 bar(a). For GCV, energy and Wobbe-index the default combustion reference temperature shall be 25 °C

## **ANNEX 2 - Template of Connection Agreement**

### **CONNECTION AGREEMENT No. 11-4/20xx/xxx**

**Elering AS** (hereinafter: the network operator), registry code 11022625, located at Kadaka tee 42, 12915 Tallinn, represented under the Articles of Association by the Chairman of the Management Board .... and Member of the Management Board .....,

and

....., (hereinafter: the client) registry code ....., location ....., represented under the Articles of Association by Member of the Management Board .... and Member of the Management Board .....,

(hereinafter the network operator and the client separately and jointly also referred to as a Party and the Parties)

have entered into this connection agreement (hereinafter: the Agreement) as follows:

#### **1. Subject of the Agreement**

- 1.1 By concluding the Agreement, the Parties have agreed that the network operator shall ensure the gas loading equipment owned by the network operator located on the berth at Pakrineeme Port (hereinafter: Pakrineeme connection point) and the gas installations on the gas transmission network (hereinafter also: the transmission network) side in accordance with the Agreement (hereinafter jointly: the connection) and shall connect them at the connection point to the client's compliant gas installation with the aim of establishing a network connection for the client. The network operator shall ensure a time-limited network connection for the client to inject gas into the transmission network at the Pakrineeme connection point from xx.xx.20xx until xx.xx.20xx, in connection with which the Parties shall, after connecting the client's gas installation to the connection point, conclude a time-limited Network operator - Gas facility operation agreement (hereinafter: the operation agreement).
- 1.2 The Agreement sets out the conditions for connecting the client's gas installation to the transmission network, including:
  - 1.2.1 the rights, obligations and liability of the client and the network operator arising from the connection;
  - 1.2.2 the principles for calculating and the procedure for paying costs related to the connection;
  - 1.2.3 the gas injection regime at the connection point;
  - 1.2.4 the ownership of the client's and the network operator's gas installations and the location of the connection and metering system;
  - 1.2.5 the deadline for performance of the Agreement;
  - 1.2.6 the conditions for amending and terminating the Agreement;
  - 1.2.7 the conditions for ensuring and confirming the conformity of the client's gas installation;
  - 1.2.8 other conditions necessary for the performance of the Agreement.
- 1.3 In performing the Agreement, the Parties shall, in addition to the Agreement, be guided by the documents "Elering AS-i Pakrineemes gaasi ülekandevõrguga ühekordse liitumise tingimused" (hereinafter: the connection conditions), unless the Parties have agreed otherwise compared to the standard conditions, and "Elering AS gaasi ülekandevõrgu liitumistasu arvestamise meetodika" (hereinafter: the methodology), which form an integral part of the Agreement.

- 1.4 A precondition for gas injection following the establishment of the network connection is the conclusion of the following agreements between the client and the network operator:
  - 1.4.1 the operation agreement;
  - 1.4.2 a network agreement for the common gas area under the document “Common Regulations for the Use of Natural Gas Transmission System” (hereinafter: the common gas area transmission service network rules);
  - 1.4.3 a balancing agreement for the Estonian–Latvian common gas zone under the document Common Regulations for the Natural Gas Balancing of Transmission System.
- 1.5 By signing the Agreement, the client confirms that it has read and understood the referenced documents.
- 1.6 The description of the client’s gas installation and the technical parameters of the network connection are provided in Annex 1 to the Agreement.
- 1.7 The forecast calculation of the connection fee (hereinafter: the connection fee), which covers the cost of connecting, inspecting and disconnecting the installations located in Pakrineeme Port owned by the network operator and the client’s gas installation, as well as any other works related to the connection, is provided in Annex 2 to the Agreement, and the payment schedule of the connection fee is provided in Annex 3 to the Agreement.
- 1.8 The connection conditions applicable to the Agreement are provided in Annex 4.
- 1.9 Meetings between the Parties related to the performance of the Agreement shall be minuted, and the respective minutes signed by the Parties shall be used in interpreting the Agreement.
- 1.10 The network operator shall ensure performance of the Agreement for the client within 5 working days after the berthing in Pakrineeme Port of the vessel to be connected at the Pakrineeme connection point, provided that by that time the client has paid the instalments of the connection fee, has submitted the required documents on time, which have been duly approved by the network operator on time, and the vessel berthed in Pakrineeme Port is ready for connection. The said deadline shall be extended by the period of the delay in the vessel’s readiness for connection to the Pakrineeme connection point.
- 1.11 Verification of the conformity of the client’s gas installation (including the metering system) shall be carried out in accordance with the connection conditions, for which the client shall ensure access for the network operator and the right to visit the vessel.

## **2. Rights and obligations of the Parties**

- 2.1 The network operator shall place an order for the works necessary for the performance of the Agreement no later than 3 working days after payment by the client of the first instalment of the connection fee. The network operator has the right to use for the performance of the Agreement also the procurement contracts concluded as a result of the network operator’s procurement procedure carried out before the conclusion of the Agreement.

- 2.2 The network operator shall inform the client in writing within five (5) working days of the determination of the cost of the works ordered for the performance of the Agreement.
- 2.3 The client has the right to receive from the network operator information about the works arranged for the performance of the Agreement, as well as to demand documentary proof from the network operator of the costs to be incurred for the performance of the Agreement and payable by the client as a connection fee, to the extent that the network operator is able to provide such to the client by law or with the consent of the contractor with whom a contract for work has been concluded for the performance of the Agreement. The network operator shall notify the client in writing of the completion of the connection point.
- 2.4 The client is obliged to cooperate with the network operator in obtaining the permits necessary for connecting the gas installations set out in Annex 1 to the Agreement and for establishing servitudes. The client is also obliged, at its own expense, to clear, before the start of the works, the area located in Pakrineeme Port and on the vessel necessary for connecting the said gas installations of any items and circumstances that interfere with or may interfere with connection to the connection point. If no agreement is reached on the erection of gas installations or if other permits or consents necessary for the performance of the Agreement are not obtained (including obstacles arising from planning), or if the client's actions or inaction hinder the performance of the Agreement, the network operator has the right to suspend performance of the Agreement for the period required to obtain the agreements, permits or consents, or until the hindering circumstance ceases to exist. The network operator shall initiate the procedure for establishing a compulsory right of use or apply to the court only with the client's consent and coordination. The costs related to obtaining agreements shall be included in the connection fee.
- 2.5 The network operator is obliged to inform the client immediately of any circumstance that prevents or may prevent the proper performance of the network operator's obligations arising from the Agreement or circumstances that necessitate the suspension of the performance of the Agreement.
- 2.6 An interruption of the communication link between the vessel's gas installation and the SSL belonging to the network operator shall not be deemed a breach of the network operator's obligations.
- 2.7 The network operator has the right to require limitation of gas injection or to disconnect the network connection without prior notice if the limitation or disconnection of the network connection is due to a threat to human life, health, property or the environment, or if this is necessary for the fulfilment of system responsibility.
- 2.8 In addition to the obligations under clauses 2.5.10 and 2.6.7.7 of the connection conditions, the client is obliged to fulfil the following additional obligations:
  - 2.8.1 to provide the network operator's contractual contact person on an ongoing basis with information about the arrival of the vessel at the port;
  - 2.8.2 if the client uses the connection module belonging to the network operator to connect the vessel to the Pakrineeme connection point, the client shall arrange the transport of the connection module and its connection (including the necessary preparations) to the vessel's gas installation;
  - 2.8.3 the client shall arrange the connection of the vessel to the SSL equipment belonging to the network operator, which must take place in the presence of the network operator's representative;

- 2.8.4 the client undertakes to provide the network operator's contractual contact person with the contact details of the vessel to be connected at the Pakrineeme connection point after the Agreement enters into force;
- 2.8.5 the client shall ensure 24/7 dispatcher service for the exchange of information between the vessel connected to the Pakrineeme connection point and the network operator's control centre for the entire duration of the connection agreement. The Parties are obliged, no later than three (3) working days after the conclusion of the connection agreement, to provide the other Party in writing with their dispatcher contact persons and contact details (telephone number, e-mail address, etc.);
- 2.8.6 the client is obliged, in the event of an interruption of gas supply due to technical reasons caused by the client, to ensure readiness to eliminate the network connection fault within 1 hour from becoming aware of the fault;
- 2.8.7 the client must ensure a functioning data communication link between the vessel connected to the Pakrineeme connection point and the SSL belonging to the network operator.:

### **3. Calculation of the connection fee and payments**

- 3.1 The client is obliged to pay the connection fee to the network operator by the due dates indicated on the invoices. The client is obliged to refer to the reference number indicated on the invoice when paying the invoice.
- 3.2 Value added tax shall be added to all payments in accordance with the legislation.
- 3.3 The client shall pay the network operator a connection fee for the connection, which must cover all actual and justified expenses incurred by the network operator for the client's connection. The forecast expected amount of the connection fee is set out in the calculation provided in Annex 2 to the Agreement. Upon conclusion of the Agreement, the Parties have agreed that the said amount of the connection fee and the cost lines are only a forecast, in which case the network operator has relied on the best available knowledge and practice, and the actual exact amount of the connection fee will be determined during the performance of the Agreement; items not listed in Annex 2 may also be added. The Parties undertake to inform each other immediately of all circumstances that may affect the forecast amount of the connection fee.
- 3.4 The client shall pay the connection fee in accordance with the payment schedule in Annex 3 to the Agreement, taking into account the special provision set out in clause 3.6. The Parties have agreed that the payment schedule underlying the payment of the connection fee is drawn up—and shall be amended if necessary—on the principle that all reasonable and justified expenses incurred by the network operator for the client's connection must be paid by the client to the network operator in advance in instalments according to the works performed by the network operator and the payment schedule drawn up on that basis (except for the last instalment under the payment schedule).
- 3.5 If the initially forecast amount of the connection fee changes, the client undertakes, at the request of the network operator, to conclude a written agreement with the network operator to amend the connection fee calculation and/or the payment schedule set out in Annex 2 to the Agreement, in accordance with clauses 3.3–3.5 of the Agreement.

- 3.6 The network operator has the right to demand from the client, against the connection fee set out in the Agreement, reimbursement of the actual, justified and reasonable expenses incurred for the performance of the connection agreement before the due date for payment of the connection fee, if, at the client's request and by agreement with the client, the network operator commences the works necessary for the performance of the Agreement before receipt of the first instalment of the connection fee. Reimbursement of the said expenses shall be made once a month within ten (10) days after submission to the client by the network operator of a report on the above connection-related works performed in the previous month and their cost. The amounts paid by the client under this clause shall be taken into account in calculating the amount of the last instalment of the connection fee payable under the Agreement.
- 3.7 If, upon completion of the works carried out for the connection fee, it is established that the client has paid the network operator a greater amount of the connection fee on the basis of forecasts than the actual costs incurred for the performance of the connection agreement, the network operator shall refund the overpaid amounts to the client within thirty (30) days from the signing of the final act regarding the completion of the works performed for the connection fee.
- 3.8 If the client does not pay the connection fee to the network operator by the payment due date, the client shall pay the network operator interest for late payment of 0.05% (zero point zero five percent) of the unpaid amount per day until full payment has been received in the network operator's bank account.
- 3.9 If the network operator is late in paying the fee referred to in clause 3.7, the network operator shall pay the client interest for late payment of 0.05% (zero point zero five percent) of the unpaid amount per day until full payment has been received in the client's bank account.
- 3.10 If the client pays the instalments of the connection fee arising from the Agreement, the first instalment of the connection fee shall be deemed to be paid first, then the second instalment, and then the remaining instalments. The described order of payment applies regardless of the client's unilateral intent.
- 3.11 If the client has paid the network operator a security for the use of the connection module owned by the network operator to connect the vessel to the connection point and to inject gas into the transmission network, the network operator shall return the security paid by the client as a deposit within 30 days after the connection module is returned to the network operator.

#### **4. Ownership of gas installations**

- 4.1 The Parties have agreed that the boundary of ownership of the client's and the network operator's gas installations is determined by the respective connection point in accordance with Annex 1 to the Agreement.
- 4.2 The description of the location of the gas installations owned by the network operator and the client is provided in Annex 1 to the Agreement. By signing the Agreement, the client confirms that it has sufficiently familiarised itself with the technical data of the connection point and the description of its location, and has assessed the vessel's suitability for connection to the connection point. In the event of the said change, the Parties are obliged to sign a new Annex 1 to the Agreement within ten (10) working days after the network operator has submitted it to the client.

- 4.3 Each Party undertakes to ensure the preservation, maintenance and compliance of the gas installation owned or possessed by it with the applicable legislation and the agreements concluded between the Parties, unless otherwise agreed.

## **5. Performance of the Agreement and liability**

- 5.1 The network operator has the right to suspend the Agreement and the performance of its obligations if the client materially breaches obligations arising from the Agreement or legislation (including where the client has not ensured the conformity of its gas installation or has failed to fulfil other obligations arising from the connection conditions) or if the right to suspend performance arises from other provisions of the Agreement. The network operator shall issue the suspension notice in writing and the suspension of the Agreement begins upon submission of the notice. Where possible, the network operator shall inform the client of the suspension of the Agreement at least seven (7) calendar days in advance and shall suspend if the client has not eliminated the circumstances causing the suspension within the aforesaid period. If the right to suspend the performance of obligations arises from other provisions of the Agreement, the network operator has the right to suspend the Agreement and the performance of its obligations without prior notice to the client upon becoming aware of the relevant ground for suspension. In the event of suspension of performance of the Agreement, the client shall reimburse the network operator for the costs already incurred, as well as the justified additional costs related to the suspension and the resumption of performance. In the event of suspension of performance of the Agreement, the deadline for completion of the network connection shall be extended by the time during which the performance of the Agreement was suspended. Upon cessation of the ground for suspension, the network operator shall continue performance of the Agreement, informing the client thereof.
- 5.2 A Party shall not be liable for failure to perform and/or improper performance (breach of obligation) of its obligation arising from the Agreement or legislation and is therefore not, inter alia, obliged to compensate the damage caused to the other Party by the breach of obligation, nor does the other Party have the right otherwise to rely on the breach of obligation in the exercise of its rights, if the breach is excusable and is a circumstance that the breaching Party could not influence, or whose occurrence or consideration at the time of conclusion of the Agreement, prevention, or overcoming of consequences could not reasonably be expected from the breaching Party, including:
- 5.2.1 natural disasters;
  - 5.2.2 fires;
  - 5.2.3 strike, act of sabotage or unrest;
  - 5.2.4 declaration of a state of emergency or state of war;
  - 5.2.5 breach of obligation by the other Party;
  - 5.2.6 action or inaction of the other Party;
  - 5.2.7 economic blockade between countries operating in an interconnected system with the gas system;
  - 5.2.8 weather conditions (including storm) that do not allow connecting the vessel to the connection point or necessitate disconnecting the vessel from the connection point;
  - 5.2.9 upon activation of ESD (Emergency Shutdown) and/or HIPPS (High Integrity Pipeline Protection System) to close the gas flow;
- 5.3 If the circumstance, event, action or omission referred to in clause 5.2 is only temporary, the Party shall not be liable for the breach of obligation only for the period during which such circumstance, event, action or omission affected the performance of the obligation.

- 5.4 The Parties are obliged to inform each other at the earliest opportunity of the occurrence of the circumstance specified in clause 5.2, its impact and extent on the Party's ability to fulfil its obligations, as well as of the cessation of the circumstance. In case of breach of this obligation, the Party that has materially breached the obligation loses the right to rely on the obstructing circumstance from the occurrence of the obstructing circumstance or from its cessation until the fulfilment of the corresponding notification obligation.
- 5.5 The occurrence of the circumstance, event, action or omission referred to in clause 5.2 shall not release the Parties from the obligation to take all possible measures to prevent or reduce the damage and other negative impact caused by the breach of obligation.
- 5.6 The client shall immediately notify the network operator of a hazardous situation, accident or other circumstance that threatens or may threaten the performance of the obligations assumed under the Agreement.
- 5.7 The Agreement ends after the contractual obligations have been duly performed by the Parties, the vessel has been disconnected from the connection point and the connection module has been returned to the network operator if the client used it.

## **6. Compensation for damage**

- 6.1 The Parties are obliged to compensate the other Party for damage caused in the performance of the Agreement or otherwise in connection with the Agreement only in the cases, to the extent and under the conditions set out in this chapter. Liability limitations do not apply in the case of intentional damage.
- 6.2 The Party in breach shall compensate only for the other Party's direct proprietary damage to the other Party's gas installations or other direct proprietary damage arising from the breach.
- 6.3 The Parties have the right to request from each other the evidence, other documents and information necessary to establish the existence and amount of the damage to be compensated and the basis for compensation.
- 6.4 The client is in no case entitled to claim from the network operator compensation for damage arising from the network operator's exercise of rights provided by law or from the network operator's activation of ESD (Emergency Shutdown) and/or HIPPS (High Integrity Pipeline Protection System) to close the gas flow and issuance of an order for emergency disconnection of the vessel from the connection point to ensure safety and/or the reliability of the transmission network.
- 6.5 Upon closure of the gas flow referred to in clause 6.4, the network operator has the right to submit to the client a claim for compensation for damage caused by the closure of the gas flow and the emergency disconnection of the vessel if the need to close the gas flow and to disconnect the vessel in an emergency is due to the client's action or inaction.

## **7. Validity of the Agreement**

- 7.1 The Agreement is concluded together with 4 annexes.
- 7.2 The Agreement is digitally signed and may be amended only by agreement of the Parties.
- 7.3 The Agreement terminates:
  - 7.3.1 upon proper performance of the obligations stipulated in the Agreement by the Parties;
  - 7.3.2 by written agreement of the Parties
  - 7.3.3 if at least one of the cases specified in Chapter 2.8 of the standard conditions occurs;
  - 7.3.4 upon withdrawal from or termination of the Agreement in the cases provided for in the Agreement upon application by one Party.
  
- 7.4 The network operator has the right to terminate the Agreement by giving the client seven (7) days' prior written notice and provided that the client has not remedied the deficiencies also within the aforementioned 7-day period, if:
  - 7.4.1 the client has not paid the payments agreed under the Agreement (including the connection fee) by the agreed due date; or
  - 7.4.2 the client materially breaches other obligations provided in the Agreement or legislation; or
  - 7.4.3 one or more of the circumstances referred to in clauses 8.7.1–8.7.4 of the Agreement occurs and, due to this or another circumstance notified by the client in accordance with clause 8.7.5, it is evident that the client will not be able to perform the Agreement properly;
  - 7.4.4 the performance of the Agreement has been suspended and the total duration of the suspension is thirty (30) days or more.
  
- 7.5 The client has the right to withdraw from the Agreement by giving the network operator thirty (30) days' prior written notice.
  
- 7.6 Upon withdrawal from the Agreement by either Party on the grounds provided in the Agreement or in legislation, the network operator shall refund to the client the amounts paid by the client as the connection fee, deducting in advance all costs already incurred by the network operator for the performance of the Agreement and the justified and proven costs unavoidably incurred for the termination of the contracts for work already concluded for the performance of the Agreement as at the moment of receipt of the notice of withdrawal, as well as other payments payable by the client to the network operator under the Agreement. The client shall not, however, be obliged to pay to the network operator in total more than the amount of the connection fee stipulated in the Agreement.
  
- 7.7 If, upon withdrawal from the Agreement under the basis provided in clause 7.4 of the Agreement, the network operator has already incurred, or at the moment of receipt of the notice of withdrawal is unavoidably obliged to incur, such justified and proven expenses for the performance of the Agreement that exceed the connection fee actually paid by the client to the network operator by that moment, the client shall, at the request of the network operator, reimburse such expenses exceeding the amounts paid as the connection fee within thirty (30) days from receipt of the corresponding justified claim.
  
- 7.8 The network operator shall pay to the client the amount to be refunded to the client under clause 7.6, the amount of which is undisputed, within thirty (30) days after the termination of the Agreement. In the event of delay in payment of the said amount or any other amount payable to the client under this Agreement, the network operator shall pay the client late-payment interest of 0.05% (zero point zero five percent) of the unpaid amount per day until the full payment has been received in the client's bank account.

- 7.9 Upon termination of the Agreement on any basis other than proper performance of the obligations stipulated in the Agreement, the main grid operator shall refund to the client the amounts paid by the client as the connection fee, deducting in advance all costs already incurred by the main grid operator for the performance of the Agreement and the costs unavoidably incurred in connection with the termination of the Agreement, including the costs incurred under the contracts for work concluded for the performance of the Agreement and the costs unavoidably incurred for the termination of such contracts for work, as well as other payments payable by the client to the main grid operator under the Agreement. The client has the right to request from the main grid operator information and evidence regarding the existence and amount of the costs forming the basis for the deduction to be made under this clause.
- 7.10 If, upon termination of the Agreement on any basis other than proper performance of the obligations stipulated in the Agreement, the network operator has already incurred expenses for the performance of the Agreement, including under contracts for work concluded for the performance of the Agreement, or must unavoidably incur expenses in connection with the termination of the Agreement, including for the termination of the contracts for work concluded for the performance of the Agreement, and such expenses exceed the connection fee actually paid by the client to the network operator, the client shall, at the request of the network operator, reimburse such expenses exceeding the amounts paid as the connection fee within thirty (30) days from receipt of the corresponding justified claim.

## **8. Other agreements**

- 8.1 As of the entry into force of the Agreement, the Parties' previous agreements in respect of the connection points stipulated by the Agreement shall terminate.
- 8.2 By signing the Agreement, the client confirms that it has been given sufficient opportunity to familiarise itself with the content of the Agreement and that it has familiarised itself with it and understood its content. The client also confirms by signing the Agreement that it has submitted to the network operator the permits and approvals required by legislation and that these are valid at the conclusion of the Agreement and throughout the term of the Agreement.
- 8.3 The client is aware that a time-limited network agreement will be concluded with the client and that the client's gas installation will be connected to the network, and that the network operator shall ensure a proper network connection (establishment of the network connection) only if the client's gas installation complies with the requirements specified in the Agreement, the connection conditions and legislation (a compliant gas installation), including that all documents required by the Agreement, the connection conditions and legislation have been submitted.
- 8.4 If any provision of the Agreement is wholly or partly contrary to legislation and is therefore void or declared invalid, or is not part of the Agreement under the law, this shall not affect the validity of the Agreement as a whole, and the Parties undertake to perform the Agreement insofar as it is not void or declared invalid, or insofar as it forms part of the Agreement under the law. The Parties are also obliged to commence negotiations without delay and, within a reasonable time, conclude an agreement to replace the void or invalid provisions with provisions that are valid and create for the Parties a balance of rights and obligations as similar as possible compared to the balance of rights and obligations that existed between the Parties under the aforementioned void or invalid provisions.

- 8.5 The Parties shall have no right to assign rights and/or obligations arising from the Agreement to third parties or to encumber them in favour of third parties without the other Party's written consent. The network operator is nevertheless entitled at any time to transfer all rights and/or obligations arising from the Agreement to a subsidiary of the network operator to which the network operator is transferred into ownership or possession, and by signing the Agreement it shall be deemed that the client has given its written consent to such transfer of rights and/or obligations and undertakes, if necessary, to conclude the relevant agreements.
- 8.6 The Parties are obliged, during the term of the Agreement as well as after its termination, to keep confidential any information about the other Party that has become known to them in connection with the conclusion and performance of the Agreement, the disclosure of which may harm the other Party's interests or which the other Party is presumed to have, or may have, an interest in keeping confidential. A Party may disclose information to its advisers who are under a duty of confidentiality, as well as to a court or authorities at their request.
- 8.7 The client is obliged to notify the network operator immediately in writing:
- 8.7.1 if the person or body competent to do so has decided to wind up the client as a legal person, including compulsory dissolution;
  - 8.7.2 if a statement of claim has been filed against the client in an amount exceeding twenty per cent (20%) of the client's equity;
  - 8.7.3 if a petition for the client's bankruptcy has been filed or a bankruptcy warning has been issued to the client;
  - 8.7.4 if the client, as a legal person, is merged, divided or reorganised;
  - 8.7.5 of all circumstances that affect or may affect the performance of the client's obligations set out in the Agreement.
- 8.8 A Party has the right to set off a payment due from it to the other Party only by agreement of the Parties.
- 8.9 At the client's request, the network operator is obliged to provide the client with information on the performance of the Agreement, including on the completion of the network connection and on the technical data concerning the client's connection (that is, the connection point diagram, equipment specifications and other technical indicators/diagrams/drawings related to the client's connection).

## **9. Dispute resolution**

- 9.1 Disagreements and disputes arising from the performance, amendment or termination of the Agreement shall be resolved by the Parties primarily through negotiations.
- 9.2 A Party may lodge a written complaint with the Competition Authority regarding the other Party's act or omission that is contrary to the Natural Gas Act or legislation established on the basis thereof.

- 9.3 If disputes arising from the Agreement cannot be resolved through negotiations between the Parties, the dispute shall be resolved in Harju County Court.

## **10. Notices**

- 10.1 All notices, consents, approvals and other declarations of intent related to the performance of the Agreement or disputes arising from the Agreement, as well as other information (hereinafter: notice) that has legal significance, must be submitted in written form to the other Party's contact person. Informational communications that do not have legal consequences upon delivery to the other Party may also be submitted in a form reproducible in writing.
- 10.2 A notice shall be deemed received if it has been delivered to the other Party against signature or by e-mail to the e-mail address indicated in the Agreement or notified in writing to the other Party. All notices related to the performance of the Agreement that do not deviate from the terms of the Agreement shall be deemed validly given and binding on the Parties only if given by the persons named in the Agreement or by persons directly authorised by them for that purpose.

## 11. Parties' contact addresses and persons

11.1 For the resolution of issues related to the performance of the Agreement or disputes arising from the Agreement, except for the amendment of the terms of the Agreement, the Parties designate the following persons as their contact persons:

### Network operator

Elering AS  
Contact address:  
Kadaka tee 42,  
12915 Tallinn  
telephone: 715 1222  
e-mail: [info@elering.ee](mailto:info@elering.ee)

Contact person:

.....

.....

telephone:.....

e-mail:.....

### Client

.....

Contact address:

.....

.....

telephone: .....

e-mail: .....

Contact person:

.....

.....

telephone: .....

e-mail: .....

11.2 A Party must immediately notify the other Party of changes to the contact persons and data specified in clause 11.1.

### Signatures of the Parties:

#### Network operator

/digitally signed/

.....

Chairman of the Management Board

/digitally signed/

.....

Member of the Management Board

#### Client

/digitally signed/

.....

Member of the Management Board

/digitally signed/

.....

Member of the Management Board

### *Connection Agreement No. 1.1 -4/2 Oxx/xxx Annex No. 1: Connection point and gas installations*

*description and technical parameters of the network connection together with the connection diagram*

1. Location of the gas installation to be connected: On the Pakrineeme cadastral unit (43101:001:1889), the address of which is Paldiski town, Lääne-Harju municipality, Harju county, at Pakrineeme Port (port code: EEPAK), the berth located there and its connection up to the connection point.
2. Description of the gas installation to be connected: On the vessel to be connected to the Pakrineeme connection point gas installation.
3. Location of the connection point: On the Pakrineeme cadastral unit (43101:001:1889), the address of which is Paldiski town, Lääne-Harju municipality, Harju county, at the flange of the gas loading equipment located on the berth on the gas installation with coordinates X 6583797.22 and Y 504284.86g (hereinafter: Marine Loading Arm (MLA) connection flange. The connection point is also the service boundary between the client and the network operator.
4. Gas flow parameters at the connection point:
  - 4.1 The network operator shall ensure for the client a technical maximum throughput:
    - 4.1.1 Permitted maximum production capacity1: ... MW;
    - 4.1.2 Permitted minimum production capacity: ... MW;
    - 4.1.3 Maximum operating pressure: 75 bar(g);
    - 4.1.4 Minimum operating pressure: 16 bar(g);

- 4.1.5 Maximum gas temperature: 40 °C;  
4.1.6 Minimum gas temperature: 5 °C.  
4.2 4.2 Quantity of energy of gas injected into the network by the client: ... GWh.

5. In the event of changes in the vessel's technical data, the network operator has the right to change the gas flow parameters at the connection point.
6. The use of the network connection shall be in accordance with the conditions set out in the operation agreement, the common gas area transmission service network rules and, where necessary, other rules arising from the relevant documents established by the network operator. The usable capacity of the network connection is calculated taking into account system integrity and the operational requirements of the transmission network and is published by the network operator as the capacity of the entry-exit point. Inter alia, gas consumption and gas flows at other entry-exit points affect the capacity of the entry-exit point.
7. For the connection fee, the network operator shall perform:
- 5.1 Interconnection between the MLA and the connection module connected to the vessel;
- 5.2 Configuration of the SSL and verification of the functioning of the connection.

1- within the meaning of this Agreement, production capacity means the transmission of gas from the connection point towards the network

8. The metering system of the gas installation shall be provided by the client and shall comply with the requirements set out in the connection conditions.
9. The client shall ensure the transmission of the measured data on gas quantities and quality to the network operator's information system via the SSL in accordance with the connection conditions.
10. The client shall ensure that the quality of the gas injected into the gas network complies with the requirements set out in the Annex "Conditions for the quality of gas injected into the gas system" to the Network Code for the Functioning of the Gas Market established by the Minister of Economic Affairs and Infrastructure on 28.07.2017 and in Annex 4 to the connection conditions (hereinafter jointly: gas quality requirements). The conformity of the quality of the gas injected into the network by the client shall be assessed on the basis of the client's metering system.
11. Limitation of the network connection:
  - 11.1 The client is obliged to limit gas injection at the connection point if this is required due to the technical constraints of the transmission network's throughput capacity, if the gas does not meet the quality requirements, or in another situation set out in the connection conditions;
  - 11.2 The network operator shall inform the client's 24/7 dispatcher contact person at the earliest opportunity of the need to limit gas injection at the connection point;
  - 11.3 The client is obliged to limit the quantity of gas injected no later than 2 hours from the network operator's delivery of the respective command;
  - 11.4 The client is obliged to inform the network operator of the client's limitation of gas injection at the earliest opportunity, but no later than 2 hours after the limitation is applied.
12. Closure of the network connection:
  - 12.1 The network operator has the right to close the network connection without prior notice to the client if the communication link between the vessel and the SSL is interrupted and the transmission of the ESD (*Emergency Shutdown Valve*) and/or HIPPS (*High Integrity Pipeline Protection System*) signal is interrupted, which triggers the automation of the shut-off valves in the network operator's gas installation;
  - 12.2 The network operator has the right to close the network connection if the client has not limited gas injection within 2 hours from the network operator's notification of the order to limit gas;
  - 12.3 The network operator has the right to close the network connection if the data communication link between the vessel and the SSL is interrupted and has not been restored within 5 hours, and the client does not provide the data required in the connection conditions through other information channels.
  - 12.4 The network operator shall inform the client's 24/7 dispatcher contact person of the closure of the gas flow 2 hours in advance, except where the closure of the network connection is in the situation referred to in clause 12.1, or where there is a threat to human life, the environment and/or the operation of the transmission network.

13. Principle diagram of the connection

GAS INFRASTRUCTURE CONNECTION POINT	
FRAGMENT "A"	

Figure 1. Principle diagram of the Pakrineeme connection point

**Signatures of the Parties:**

**Network operator**

/digitally signed/

.....

Chairman of the Management Board

/digitally signed/

.....

Member of the Management Board

**Client**

/digitally signed/

.....

Member of the Management Board

/digitally signed/

.....

Member of the Management Board

**Forecasted connection fee calculation for connection at the Pakrineeme connection point**

<b>Work and materials</b>	Price EUR (excluding VAT)
Service fee	6 400
Connection of the vessel with the network operator's MLA and SSL	xxxxx
Any other costs related to the connection	xxxxx
Total	XXXX

The total estimated connection fee is **XXXX euros**, to which VAT shall be added as provided by law. The final cost of the estimated connection fee (excluding the service fee) will be determined after the vessel has been disconnected from the Pakrineeme connection point.

**Signatures of the Parties:**

**Network operator**

/digitally signed/

.....

Chairman of the Management Board

/digitally signed/

.....

Member of the Management Board

**Client**

/digitally signed/

.....

Member of the Management Board

/digitally signed/

.....

Member of the Management Board

**Forecasted estimated connection fee payment schedule**

<b>Payment schedule</b>	<b>Amount (excluding VAT) EUR</b>
Connection fee 1st instalment (20% of the forecasted connection fee) – issued within 3 working days from the conclusion of the Agreement and payable within ... days after the invoice is issued.	... EUR
Connection fee 2nd instalment (constituting the remaining 90% of the actual connection fee) – issued within 5 working days after the vessel is connected to the connection point and payable within 14 days after the invoice is issued.  A service fee of 4,100 EUR is added to the 2nd instalment of the connection fee	... EUR 4,100 EUR
Connection fee 3rd instalment (remaining part of the actual costs, minus the part of the connection fee previously paid by the client) – issued within 5 working days after the vessel is disconnected from the connection point and payable within 14 days after the invoice is issued  A service fee of 4,100 EUR is added to the 3rd instalment	.... 2,300 EUR
<b>TOTAL</b>	<b>... EUR</b>

**VAT shall be added as provided by law.**

**Signatures of the Parties:**

**Network operator**

/digitally signed/

.....

Chairman of the Management Board

/digitally signed/

.....

Member of the Management Board

**Client**

/digitally signed/

.....

Member of the Management Board

/digitally signed/

.....

Member of the Management Board

# **ANNEX 3 – Requirements for the vessel's gas metering system**

## **1. General requirements for the metering system**

- 1.1. The metering system is a set of measuring instruments and auxiliary devices designed to measure, under measurement and base conditions, the quantity of gas transmitted at the connection point in energy units and to determine the gas quality parameters. The documentation of the metering system must specify the measuring ranges, climatic conditions, mechanical conditions, electromagnetic conditions of all measuring instruments, and their compliance with operating conditions and hazardous areas. The measuring range of the metering system must meet the operating conditions of gas meters, and it must be designed so that the actual gas flow is within the range from  $q_{max}$  to  $q_{min}$ , except when there is no gas flow.
- 1.2. The metering system must be equipped with devices capable of displaying, transmitting, and recording measurement results. The metering system must provide at least the following information:
  - 1.2.1. gas quantity (volume) at base conditions and energy;
  - 1.2.2. gas quantity (volume) at measurement conditions;
  - 1.2.3. corrected quantity (volume) at measurement conditions, if applicable;
  - 1.2.4. correction value, if applicable;
  - 1.2.5. gas pressure, temperature;
  - 1.2.6. faults;
  - 1.2.7. conversion factor value;
  - 1.2.8. compressibility factors  $Z$  and  $Z_b$ ;
  - 1.2.9. all entered data affecting metrological results.
- 1.3. The metering system equipment and connections must be sealable to protect all parts of the metering system against actions that may affect measurement accuracy. Sealing of devices must prevent alteration of parameters used in determining measurement results.

## **2. Measurement of gas quantity (volume) under measurement conditions, special requirements for gas meters**

- 2.1. Gas meters must have undergone proper conformity assessment and be marked with appropriate inscriptions.
- 2.2. Gas meters must be installed in the gas pipeline in accordance with:
  - 2.2.1. conditions specified in the meter type approval certificate;
  - 2.2.2. manufacturer's instructions;

- 2.2.3. operating conditions;
- 2.2.4. requirements in EN 12261 or ISO 17089-1 and EN 1776;
- 2.2.5. the above general requirements for the metering system.
- 2.3. Ultrasonic and turbine meters must be calibrated with gas having a relative density at base conditions in the range 0.55 to 0.75 and pressure corresponding to that defined in EN 12261. Calibration must be carried out according to OIML R137 in a laboratory accredited under ISO 17025.
- 2.4. Meter errors at calibrated flow rates must be smaller than the maximum permissible systematic deviations (MPD) specified in Table 3.

### **3. Conversion of measured gas quantity (volume) under measurement conditions to base conditions and energy**

- 3.1. The quantity (volume) of gas measured under measurement conditions must be converted to base conditions and energy.
- 3.2. Calculation of the higher heating value must comply with ISO 6976 using the physical properties and calculation rules corresponding to individual components at base conditions.
- 3.3. Conversion of gas quantity (volume) measured under measurement conditions to base conditions and energy must be performed continuously based on the signals of absolute gas pressure (P), gas temperature (T), and gas composition/heating value transmitted to the input of the flow computer calculation block (hereinafter: flow computer).

### **4. Special requirements for flow computers, pressure and temperature transmitters**

- 4.1. Depending on the type of flow computer according to EN 12405:
  - 4.1.1. a type 1 flow computer as an integrated system must have undergone proper conformity assessment in accordance with legislation. A type 2 flow computer consisting of separate devices (calculation block, pressure and temperature transmitters) must have each device properly conformity-assessed and marked with appropriate inscriptions.
- 4.2. Regardless of the type of flow computer, the following requirements apply:
  - 4.2.1. gas compressibility factor Z must be calculated in accordance with ISO 12213;
  - 4.2.2. If the gas meter does not include a systematic error correction, the flow computer must allow the use of a correction function to compensate for the meter error based on the meter calibration certificate;

- 4.2.3. The flow computer must allow data exchange with the gas chromatograph and calculate heating value and energy according to ISO 6976 based on the composition transmitted from the chromatograph;
- 4.2.4. The flow computer pressure transmitter must measure the absolute pressure of the gas;
- 4.2.5. all operations of the flow computer (e.g., configuration changes) must be traceable and electronically recorded;
- 4.2.6. there must be separate counters for the quantity measured under measurement conditions, corrected quantity (if applicable), quantity converted to base conditions, and energy.
- 4.3. The flow computer and associated devices must be installed according to:
  - 4.3.1. conditions specified in the type approval certificates of the flow computer or separate devices;
  - 4.3.2. requirements in EN 12405 and EN 1776;
  - 4.3.3. manufacturer's instruction(s);
  - 4.3.4. operating conditions;
  - 4.3.5. the above general requirements for the metering system.

**5. Determination of gas composition, density, relative density, heating value, and Wobbe index, special requirements for chromatographs**

- 5.1. The chromatograph must be capable of determining at least the following components:
  - 5.1.1. Nitrogen
  - 5.1.2. Carbon dioxide
  - 5.1.3. Methane
  - 5.1.4. Ethane
  - 5.1.5. Propane
  - 5.1.6. Iso-butane
  - 5.1.7. N-butane
  - 5.1.8. N-pentane
  - 5.1.9. Iso-pentane
  - 5.1.10. Neo-pentane
  - 5.1.11. Hexanes and higher hydrocarbons
- 5.2. The chromatograph must meet the following requirements:
  - 5.2.1. the sampling system must comply with ISO 10715;
  - 5.2.2. installed in accordance with the manufacturer's instructions;

- 5.2.3. calculation of heating value, Wobbe index, density, and relative density must comply with ISO 6976 using the physical properties and calculation rules corresponding to individual components at base conditions;
- 5.2.4. the accuracy of heating value determination must be at least  $\pm 0.1$  MJ/m<sup>3</sup>;
- 5.2.5. the uncertainty of gas chromatograph measurement results must be evaluated according to ISO 6974-1, ISO 6974-2, ISO 10723;
- 5.2.6. the purity level of helium used as carrier gas must be traceably documented and at least 99.995%;
- 5.2.7. the composition of calibration gas(es) must be as close as possible to the gas being measured, and the certificate must traceably indicate composition, density, heating value and comply with ISO 6143; preparation, determination of component measurement uncertainties and certification of calibration gas must comply with ISO 6142 and ISO 6141;
- 5.2.8. storage and use conditions of calibration gas(es) must comply with those specified in the calibration gas certificate.

## **6. Pre-commissioning inspection of the metering system**

- 6.1. The purpose of the visual inspection of the metering system and associated measuring instruments is to verify that:
  - 6.1.1. the functionality of the metering system and the measurement installation comply with the submitted documentation;
  - 6.1.2. the measuring instruments are installed in accordance with the requirements set out in the instruments' type-examination certificates, the manufacturers' instructions for use and the applicable international standards;
  - 6.1.3. the measuring instruments have undergone proper conformity assessment under Directive 2014/32/EU of the European Parliament and Council or national regulations presented by the manufacturer and are marked with appropriate inscriptions;
  - 6.1.4. the measuring instruments operate in accordance with the manufacturer's specifications ensuring compliance with the connection conditions for gas measurement via the connection point;
  - 6.1.5. the metering system and equipment are fully assembled and undamaged (including seals);
  - 6.1.6. user and maintenance manuals are available for all measuring instruments;
  - 6.1.7. type approval certificates, calibration certificates, and reference material certificates are available for all measuring instruments.

- 6.1.8. all constants entered into the measuring instruments and the calculations used are appropriate for the intended purpose;
- 6.1.9. all certificates of reference materials used for calibration of the measuring instruments comply with the requirements set out in international standards;
- 6.1.10. After successful completion of visual inspections, a full functional test of the metering system shall be carried out to confirm the proper operation of the entire metering system, including all sensors and alarms, signal transmission, and the accuracy of the energy quantity determination results.

## ANNEX – 4 Gas quality requirements for gas injected into the connection point

Table 1. Reference conditions are given at base temperature conditions (combustion/measurement) 25/20°C, pressure 101.325 kPa

Parameter	Unit	Minimum value	Maximum value
Higher heating value – Hs	kWh/m <sup>3</sup>	9.69	-
Wobbe index – XVI	kWh/m <sup>3</sup>	13.06	14.44
Relative density – d	-	0.55	0.75
Nitrogen content – N <sub>2</sub>	mol/mol	-	3%
Carbon dioxide content – CO <sub>2</sub>	mol/mol	-	2.5%
Oxygen content – O <sub>2</sub>	mol/mol	-	0.02%
Hydrogen content – H <sub>2</sub>	mol/mol	-	0.1%
Total sulphur content excluding odorant – S	g/m <sup>3</sup>	-	0.03
Hydrogen sulphide and carbon sulphide content – H <sub>2</sub> S - H <sub>2</sub> S + eos	g/m <sup>3</sup>	-	0.007
Mercaptan sulphur content excluding odorant – RSH	g/m <sup>3</sup>	-	0.016
Particulate contaminant content	g/m <sup>3</sup>	-	0.001
Water and hydrocarbon liquid particle content	g/m <sup>3</sup>	Not allowed	
Methane number	-	65	-
Hydrocarbon dew point temperature at pressure (0.1–7) MPa – HC DP	°C	-	-2
Water dew point temperature at pressure 7 MPa – H <sub>2</sub> O DP	°C	-	-8
Temperature of injected gas	°C	0	40

Table 2. Reference conditions are given at base temperature conditions (combustion/measurement) 25/0°C, pressure 101.325 kPa

Parameter	Unit	Minimum value	Maximum value
Higher heating value – Hs	kWh/m <sup>3</sup>	10.41	-
Wobbe index – XVI	kWh/m <sup>3</sup>	14.02	15.55
Relative density – d	-	0.55	0.75
Nitrogen content – N <sub>2</sub>	mol/mol	-	3°/»
Carbon dioxide content – CO <sub>2</sub>	mol/mol	-	2.5%
Oxygen content – O <sub>2</sub>	mol/mol	-	0.02%

Hydrogen content – <b>82</b>	mol/mol	-	0.1 %
Total sulphur content excluding odorant – <b>8</b>	g/m3	-	0.03
Hydrogen sulphide and carbon sulphide content – H2S - <b>828 + eos</b>	g/m3	-	0.007
Total mercaptan sulphur content excluding odorant – <b>RSH</b>	g/m3	-	0.016
Particulate contaminant content	g/m3	-	0.001
Water and hydrocarbon liquid particle content	g/m3	Not allowed	
Methane number	-	65	-
Hydrocarbon dew point temperature at pressure (0.1– 7) MPa – <b>HC DP</b>	°C	-	-2
Water dew point temperature at pressure 7 MPa – <b>H2O DP</b>	°C	-	-8
Temperature of injected gas	°C	0	40