

# **Minimum Technical Conditions**

for the  
Connection of third-party facilities to the ONTRAS Gas  
Transmission System,  
including Conditions for the connection of decentralized  
biogas plants  
to the ONTRAS Natural Gas Transmission System

Contents

Foreword

- 1 Minimum Technical Conditions**
  - 1.1 General Minimum Technical Conditions
  - 1.2 Network Connection
  
- 2 Metering and Pressure Regulating Stations**
- 3 Gas Quality**
- 4 Minimum Requirements for the Connection of Biogas Plants**
  - 4.1 Connection of Biogas Plants
  - 4.2 Quality of Gas from Biogas Generation Plants
  
- 5 Miscellaneous**

Appendix

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## Foreword

Under Section 17 (1), Energy Industry Act, ONTRAS is under an obligation to connect gas users, similar or downstream gas supply systems and pipelines, production and storage facilities to its gas transmission system at conditions that are appropriate, non-discriminatory and transparent. This also includes plants for the decentralized production of biogas (biogas plants). In addition, ONTRAS is obligated to define minimum conditions for the design and operation of facilities to be connected on the basis of these conditions and to publish such minimum technical conditions on the Internet (Section 19 (2), Energy Industry Act). The minimum technical conditions must ensure network interoperability and be both objectively justified and non-discriminatory (Section 19 (3), Energy Industry Act).

This document lays down the minimum technical conditions for the connection of such networks, pipelines and facilities to the ONTRAS natural gas transmission system. For connection, itself, a separate network connection contract must be concluded between the customer concerned and ONTRAS. The network connection point must be operated on the basis of a separate network connection point or network interconnection contract between ONTRAS and the customer,

These minimum technical conditions do not include any provisions concerning the injection of natural gas or biogas into the ONTRAS natural gas transmission system by customers connected. Such provisions are stated solely in the network access conditions of ONTRAS published at [www.ontras.com](http://www.ontras.com).

## 1 Minimum Technical Requirements

### 1.1 General Minimum Technical Requirements

All technical facilities required for network connection shall be designed, constructed and operated in accordance with all applicable laws, regulations and standards, including without limitation EnWG (the Energy Industry Act), GasNZV (the Gas Network Access Ordinance), GasHL-VO (the High-Pressure Gas Pipeline Ordinance), WHG (the Water Resources Act), BImSchG (The Federal Pollution Control Act) and the related ordinances, the Pressure Vessel Code, BetrSichV (the Plant Safety Ordinance), TRBS (Technical Rules for Operational Safety) BaustellV (Construction Site Ordinance - Health and Safety Regulation for Construction Sites), the Explosionproofing Directive (ATEX), the regulations of health and safety bodies and EO (the Calibration Ordinance). All technical facilities shall be in accordance with the generally accepted rules of technology, including without limitation the standards of Deutsches Institut für Normung e. V. (DIN), the codes of practice of Deutsche Vereinigung des Gas- und Wasser-fachs e. V. (DVGW) and relevant rules and regulations of regulatory and other authorities (e.g. the codes of practice of PTB - Physikalisch-Technischen Bundesanstalt).

It is recommended to use the list of standards used by ONTRAS, which is available from Ontras on request.

All facilities which are to be transferred to the plant inventory of ONTRAS shall be in accordance with the standards used by ONTRAS.

For all new connections to its system, ONTRAS shall conduct network inspections to ensure that the integrity of its system and security of supplies are maintained in the long term.

Any third parties whose services are engaged for the design, construction and operation of facilities required for network connection shall have the qualifications required for such work under the applicable standards and codes of practice, including qualifications required by DVGW codes of practice, and shall submit evidence of such qualifications on request.

The customer shall ensure that authorized representatives of ONTRAS have unrestricted access to all network connection facilities and systems at all times.

## 1.2 Network Connection

The customer shall agree the location of the network connection point and the type and design of the connection system (branch from ONTRAS gas transmission system and connecting line) in each individual case.

Unless otherwise agreed, all connection facilities shall be designed and constructed by ONTRAS or a third party engaged by ONTRAS for this purpose for the account of the customer.

Unless otherwise agreed or otherwise required by law, all connection facilities shall become part of the plant inventory and be under the operational responsibility of ONTRAS up to the weld on the plant side of the isolating joint upstream from the connected metering and pressure regulating station.

Unless otherwise agreed in individual contracts, the connection facilities shall be operated and maintained by ONTRAS.

## 2 Metering and Pressure Regulating Stations

Unless otherwise agreed in individual contracts, the customer shall construct and operate at its own expense all facilities, which shall be fit for the purpose, required for gas pressure control and recording and for the acquisition, recording and transmission of gas flow and gas quality values at the metering and pressure regulating station.

In each individual case, the customer shall agree the design and construction of the gas metering and pressure regulating station with ONTRAS.

The type and design of equipment for gas flow metering and for the transmission of process and equipment data within the metering and pressure regulating station, the technical conditions and the procedures in the event of metering equipment malfunctions shall be in accordance with the Appendix to this document.

ONTRAS shall be entitled to inspect or have inspected by an authorized representative gas metering equipment installed at the metering and pressure regulating station at any time. Upon request by ONTRAS, the customer shall promptly grant ONTRAS or the authorized representative of ONTRAS access to such metering equipment. The customer shall be obligated to remedy promptly any

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defects detected by ONTRAS in such equipment. ONTRAS shall also be entitled to have access to the metering and pressure regulating station for work on any plant components which are the property of ONTRAS.

### **3 Gas Quality**

Natural gas injected into the ONTRAS gas transmission system from gas supply systems and pipelines, production systems and storage facilities shall be in accordance with the generally accepted rules of technology and shall be of a quality compatible with the quality of gas already present in the ONTRAS gas transmission system within the terms of Section 35 (2), Gas Network Access Ordinance.

The gas quality guidelines stated in the DVGW codes of practice, in this case the requirements of DVGW code of practice G 260, second family of gases, group H gas, shall apply to gas injected into the ONTRAS gas transmission system.

### **4 Minimum Requirements for the Connection of Biogas Plants**

Sections 41c and 41f of the Gas Network Access Ordinance of 8 April 2008 (Federal Law Gazette I No. 14, pp. 693-697), to which reference is made here, lay down special conditions for the connection of biogas plants and for the quality of gas from biogas plants. The requirements stated below apply in addition to those laid down in the Gas Network Access Ordinance.

#### **4.1 Connection of Biogas Plants**

Biogas plants shall not be connected to the ONTRAS gas transmission system unless the capacity of the gas transmission system is sufficient to take the quantities of gas to be injected by the plant without any risk to the integrity of the transmission system or security of supplies.

For the purpose of verifying the adequacy of transmission system capacity, the customer shall notify ONTRAS in advance of the location of the biogas plant and the proposed injection point, the minimum and maximum volume flow to be injected, the distribution of such capacities and flows over time and the expected gas quality. ONTRAS shall be entitled to require the customer to provide such additional information as ONTRAS may require to verify the adequacy of system capacity. ONTRAS shall investigate the adequacy of system capacity in each individual case on the basis of the written network access request submitted by the customer.

## 4.2 Quality of Gas from Biogas Generation Plants

Upon request by ONTRAS, any customer feeding biogas to the ONTRAS gas transmission system shall be obligated to demonstrate at all times compliance with the quality requirements stated in DVGW codes of practice G 260 und G 262 (2007 edition) at the injection point.

## 5 Miscellaneous

In the event of any deviation between the requirements of these minimum technical conditions and the provisions of the network connection contract, the network connection point contract, the network interconnection contract, the entry contract, the exit contract, the balancing group contract or the network access conditions of ONTRAS, the requirements of these minimum technical conditions shall prevail.

## Appendix

### 1) Laws, Codes and Standards

Gas metering and pressure regulating stations and other facilities (including buildings) shall be in accordance with

- the Energy Industry Act and the High-Pressure Gas Pipeline Ordinance,
- the DVGW codes of practice,
- the health and safety regulations (BGW),
- the Official Calibration Act and the Official Calibration Ordinance,
- the Ordinance Concerning Electrical Equipment in Potentially Explosive Atmospheres (ElexV),
- regulations of regulatory and other authorities

### 2) Metering Station

Unless otherwise agreed in individual contracts or required by law, the customer shall construct at its own expense all facilities, which shall be fit for the purpose, which may be required for the measurement of gas quantities and gas quality at the connection station. The requirements stated in this Appendix apply to metering and pressure regulating stations owned by the customer.

In accordance with the valid DVGW codes of practice, the metering equipment installed at metering and pressure regulating stations shall include:

- the gas meter and volume corrector with test connections for pressure, temperature and gas quality
- electronic pressure transmitter for inlet pressure
- measured data recording equipment for hourly values including installation of data transmission equipment and connection

ONTRAS shall be entitled to install data transmission equipment for the online transmission of additional measured values and equipment data on the plot of land in the immediate vicinity of the metering and pressure regulating station.

The customer shall ensure that the measured values and equipment data designated by ONTRAS are made available to ONTRAS in an appropriate form.

### 3) Data Transmission

1. For each meter installed at the metering and pressure regulating station, the customer shall make the following process data available in an appropriate form for online transmission:

Counter values (pulses):  $V_N$  counter: volume corrected by volume corrector (volume at normal conditions)  
 $V_{ND}$  counter;  $V_{UD}$  dispatcher signal (volume at normal conditions for dispatcher)

Alarms: Alarms from each volume corrector

Alarms from measured data recording unit

Analogue values: Current volume flow at normal conditions

Inlet pressure Inlet temperature

Density at normal conditions

2. ONTRAS shall construct at its own expense all facilities required for the transmission of the process data listed above from the metering and pressure regulating stations. Such facilities shall include
  - signal duplication system
  - telemetry and transmission equipment
  - uninterruptible power supply system.
3. Depending on local conditions, the data transmission system may be a VSAT satellite station or a GPRS radio station. A satellite radio antenna (diameter 80 cm) or a GSM radio antenna shall be installed on the façade or roof of the station for this purpose.

#### **4) Official Calibration**

1. All measuring equipment used for invoicing purposes shall be officially calibrated. Lead seals on officially calibrated units shall not be damaged or removed.
2. The customer shall ensure that ONTRAS is given proper advance notice of any work on the metering systems installed at the metering and pressure regulating stations and of any regular calibrations of such systems required by law. ONTRAS shall be entitled to delegate an authorized representative to witness any such work.
3. In the case of gas meters which may have a high-pressure offset or which are operated at more than 4 bar, a test at normal operating conditions with high-pressure gas is required in accordance with the current calibration regulations of PTB in addition to calibration with air or dry calibration in the case of ultrasonic meters.
4. This shall also apply to the regular calibrations required by law.

#### **5) Gas Meter Bypass**

1. The customer shall ensure that a valve which is gas-tight and resistant to dust, and can be tested for tightness when closed is installed in any bypass of the gas meter.
2. The valve shall be closed and shall be sealed by a lead seal applied by ONTRAS.
3. Lead seals shall not be removed from valves in gas meter bypasses without the permission of ONTRAS.
4. In the event that it is necessary in exceptional circumstances to remove any seal immediately and to open the bypass valve for the purpose of avoiding imminent danger, the customer shall immediately notify the gas control room of ONTRAS of the removal of such seal by telephone and in writing.

#### **6) Procedure in the Case of Meter Malfunctions, Official Inspections and Invoice Corrections**

1. The customer shall undertake to notify ONTRAS promptly in writing and by telephone of any irregularities in the metering facilities of the metering and pressure regulating station and any malfunctions of calibrated metering equipment.

2. In case of justified doubt concerning the proper functioning of calibrated metering equipment, either ONTRAS or the customer shall be entitled to request an official inspection, Should either of the parties avail itself of this right, the party requesting such inspection shall be obligated to notify the other party thereof in good time and to allow a representative of the other party to attend such inspection. The customer shall ensure that the official inspection can be carried out promptly in any such case.
3. If the result of such official inspection is that the error curve is within the admissible calibration error, the party requesting such official inspection shall bear the cost thereof.
4. If the result of such official inspection is that the error curve is not within the admissible calibration error, the owner of the equipment concerned shall cause the equipment to be repaired and recalibrated and shall bear the cost of inspection, repair and recalibration.
5. If the result of such official inspection is that the error curve is outside the admissible limit, invoice corrections shall be made in accordance with Section 6 of this Article 6.
6. If invoice corrections are required in accordance with Section 2 of this Article 6 or as a result of a defect detected in measurement equipment, such invoice corrections shall be made on the basis of comparison measurements and the results of official inspections taking into consideration the actual supply conditions for the period during which the measurement equipment did not function properly. The values invoiced shall be corrected to zero error.
7. If neither of the parties has sufficient measured values for invoice corrections, the parties shall mutually agree upon appropriate substitute values. Said substitute values shall preferably be formed in accordance with the provisions of DVGW.

## **7) Interference with Station**

In the event of any interference with the station which has proved to have resulted in measurement error, the parties shall be entitled to make invoice corrections to the extent required. Section 6.3 hereinabove shall not apply to such invoice corrections.

## **8) Supervision and Maintenance of Station**

1. ONTRAS shall be entitled to have the flow metering equipment at the metering and pressure regulating station inspected by an authorized representative at any time. The customer shall grant ONTRAS access to the station at all times upon request. The customer shall be obligated to have any defects in the flow metering equipment which may be detected by ONTRAS repaired promptly.
2. ONTRAS shall also be entitled to have access to the metering and pressure regulating station in accordance with Section 1 of this Article 8 for work on any plant components which are the property of ONTRAS.