

Order on the safety of gas installations¹

Pursuant to Section 5(1), no. 1 and 3, and (2) and (3), Section 7(3), Section 8(2), Section 26(1) and (2), Section 27, Section 28 and Section 31(2) of Consolidated Act No. 257 of 9 February 2026 on the safety of gas facilities, gas installations and gas pipelines (Gas Safety Act), the following is hereby authorised:

Chapter 1

Scope and Definitions

Section 1. This order applies to the establishment, modification, operation and maintenance of gas installations.

(2) This order also applies to internal pipelines at gas installations.

(3) Requirements for gas installations that are not mentioned in this order, but are covered by the scope of the Gas Safety Act, may be determined individually by decision of the Danish Business Authority.

Section 2. In special cases, if the requirements in this order do not provide a sufficient level of safety and where circumstances so require, the Danish Business Authority may impose additional requirements beyond those set out in this order.

(2) The additional requirements referred to in the first paragraph may only be laid down by decision and only in exceptional cases.

Section 3. The following definitions apply for purposes of this order:

1) Landfill gas installation: Installation used for the extraction of biogas by anaerobic digestion of organic materials, mainly resulting from landfill. Depending on the waste composition, in addition to methane and carbon dioxide, there may be components of freon and solvent vapours in the biogas collected.

2) Biogas production facility: Facility for the production of biogas through anaerobic digestion of organic materials, including manure, sludge from sewage treatment plants, energy crops and organic waste. Methane and carbon dioxide are the main components of the biogas produced.

3) Biomethane: Biogas that has been upgraded to natural gas quality.

¹ A draft of this order has been notified in accordance with Directive 2015/1535/EU of the European Parliament and of the Council, laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification).

- 4) Hydrogen filling station: Facility for hydrogen refuelling of vehicles, e.g. tube trailers.
- 5) Hydrogen production facility: Facility for producing hydrogen.
- 6) Wells and pits: All types of recesses where gas technical components, such as valves and filters, are located.
- 7) CNG: Compressed natural gas comprising all variants of methane, including compressed biomethane.
- 8) CNG filling station: Facility with CNG for filling or fuelling.
- 9) Liquefied gas facility: Industrial facility for the production of F-gas, filling of gas cylinders and supply of gas installations, as well as local facilities for the filling of cylinders and fixed gas tanks or cylinders in e.g. recreational vehicles.
- 10) Gasification facility: Facility that produces flammable gas when heating biomass, including straw, energy crop willow or sewage sludge, etc., with limited supply of oxygen. Nitrogen, carbon monoxide, hydrogen and carbon dioxide constitute the essential components of gasification gas.
- 11) Gasification reactor: Biomass heating and gasification reactor.
- 12) Supply of fresh air: Supply of air to rooms, such as via a piping system comprising air for room ventilation.
- 13) Gas installation: Facility used for the production, supply, extraction, upgrading, blending or filling of gas. Also includes stations or facilities for processing, storage, measurement and regulation of pressure and compression.
- 14) Gas mixing plant: Facility for mixing gas, including the mixing of gas and atmospheric air to town gas quality and the mixing of F-gas and atmospheric air for supplying natural gas facilities, etc.;
- 15) Industrial control system: Control, regulation and monitoring systems used in the automation and monitoring of technical systems.
- 16) Pipeline: A pipe or conduit, including pipe systems, used to transport gas from a source of production or supply point. Pipelines can be part of a pipeline network, gas plant or gas installation, etc., and include both above-ground and underground pipes and lines.
- 17) Internal pipelines: Pipelines located after the shut-off valve from a supply line to a facility, in facilities equipped with one, and pipelines located at the total notified gas installation up to the shut-off valve exiting that facility.
- 18) Gas filling station: Gas filling facility for vehicles, where the gas is used as a vehicle propellant.

- 19) LNG: Liquefied natural gas, encompassing all variants of liquefied methane, including liquefied biomethane.
- 20) Onshore LNG facility: Facility for producing LNG, LNG filling stations and bunkering facility for refuelling ships.
- 21) Upgrade facility: Facility where the gas quality is upgraded to a higher gas quality in accordance with the Order on gas quality.
- 22) Reactor tank: Tank or container in which a chemical or biological reaction takes place.
- 23) Infrastructure: All pipelines, except internal pipelines and service pipes of 4 bar or less, covered by the Order on pipelines.
- 24) Permanent jointing: Pipes or components joined together with metal or plastic welding. Welding is a process in which two or more materials are fused into a homogeneous material through melting of the basic material, pressure, filler material or a combination of these.
- 25) Pipe assembly: Joining of pipes by a method other than welding.
- 26) Ventilation openings: Openings for room ventilation and fresh air supply.
- 27) Pyrolysis plant: Facility that produces flammable gas through a thermochemical process involving heating organic materials under oxygen-poor or completely oxygen-free conditions.

Chapter 2

Fulfilment of safety requirements

Section 4. Gas installations constructed in accordance with the requirements of this order and the norms or standards referred to in the order are deemed to comply with the safety requirement in Section 3 of the Gas Safety Act.

(2) If the norms or standards referred to in the first paragraph are not applied or are only applied in part, the owner of the installation must ensure that there is documentation proving that the chosen solution has a level of safety that corresponds at least to the level of safety in these norms or standards, by which the safety requirement in Section 3 of the Gas Safety Act is deemed to have been met.

(3) If there are no norms or standards for the gas installation, the owner of the installation must ensure that documentation is available to prove that Section 3 of the Gas Safety Act and the requirements of this order are met.

Chapter 3

Notification of gas installation

Section 5. All new or significantly modified gas installations, cf. Section 24(2), must be reported to the Danish Business Authority using the form available in the business portal virk.dk before the start of construction or modification of the gas installation.

Section 6. Notification pursuant to Section 5(1) must be sent to the Danish Business Authority as early as possible before the start of construction or modification and at a sufficiently early stage to allow for any comments regarding safety issues to be made. The notification must be submitted at least 14 days before the start of the construction or modification of the gas installation.

(2) The notification must include:

- 1) A detailed and final design report for the gas installation;
- 2) Comprehensive risk assessment, cf. Section 15;
- 3) Timetable for the construction or modification of the gas installation;
- 4) Other relevant documentation, such as third-party verification.

(3) The owner of the gas installation is responsible for ensuring that the notification referred to in the first and second paragraphs takes place.

Section 7. The start of operations of new or substantially modified gas installations, cf. Section 24(2), must be notified to the Danish Business Authority no later than 14 days before operations start via the business portal virk.dk, without prejudice to Sections 9 and 10.

(2) The notification must include the following at a minimum:

- 1) Reference to previous notifications under Section 6;
- 2) Relevant documentation for the construction of the gas installation, e.g. as-built documentation;
- 3) Relevant verification and/or inspection reports for the gas installation;
- 4) Relevant strength and density test reports;
- 5) Start-up procedure;
- 6) Any deviation reports.

(3) Notification pursuant to the first paragraph may take place at the earliest when the gas installation is ready for gas connection.

(4) The owner of the gas installation is responsible for ensuring that the notification referred to in the first and second paragraphs takes place.

(5) During the period from the notification pursuant to the first paragraph until the start of operations, gas may be supplied in connection with testing, adjustments and start-up of the gas installation.

Section 8. Notification pursuant to Sections 5-7 may also include notification of the pipelines established or modified in connection with the gas installation, cf. Section 8 of the Order on the safety of gas pipelines.

Section 9. In the event of an interruption in the gas supply or gas production due to emergency situations, e.g. leaks or similar issues, operations may start once the cause of the interruption has been rectified and verified in accordance with the applicable requirements.

(2) Interruptions as referred to in the first paragraph are exempt from notification under Section 6.

(3) Notification under Section 7(1) and (2) must take place once full documentation is available.

Section 10. In the case of planned interventions in critical gas supplies where there can be no interruption to the gas supply or where any interruption can only be for a short period, notification of the start-up of operations may be exempted from the 14-day deadline, cf. Section 7(1), by agreement with the Danish Business Authority.

(2) Notification under Section 7(1) and (2) must take place once full documentation is available.

Chapter 4

Design of the gas installation

Section 11. Gas installations must be designed and constructed of materials and components that are suitable and intended for the purpose and the chemical composition of the gas.

Section 12. Gas installations must be designed and constructed so that the installations have the necessary strength to withstand the expected impacts throughout the expected lifetime of the installation, including protection against internal and external impacts.

Section 13. When designing gas installations, consideration must be given to the fact that the inspection, operation and maintenance of the installation must

be able to be carried out safely and without danger to persons, domestic animals or property.

(2) There must be no gas leak at the gas installation in a concentration that could lead to a risk of poisoning, explosion or fire.

Section 14. Gas installations must be fitted with safety devices that protect the gas system in question from unsafe conditions, both during use and at standstill. The safety devices must be able to bring the installation to a safe state and a continuous power supply must be ensured by means of an emergency power supply when necessary for the proper operation of the safety devices.

(2) Gas installations must also be equipped with fittings and equipment that indicate when abnormal conditions occur.

Section 15. The owner of a gas installation must ensure, in connection with the design and prior to the construction of the facility, that a systematic and comprehensive risk assessment has been prepared.

(2) The risk assessment must be stored in a safe manner, so that it can be presented to the Danish Business Authority and other relevant public authorities at any time on request.

(3) The risk assessment must be updated in the event of changes, so that it reflects the actual conditions at the gas installation.

Section 16. The owner of a gas installation must ensure and document that appropriate consideration has been given to the risk of major accidents that extend beyond the owner's area of influence.

(2) The owner must ensure that an adequate safety distance is maintained between the gas installation and nearby industry, residential areas and areas used by the public.

Section 17. Gas installations must be equipped with the necessary number of shut-off valves to ensure rapid and effective closure of the individual sections of the facility.

(2) The position of the shut-off valves must be clearly indicated by markings or signage.

(3) There must be easy and unobstructed access to shut-off valves at all times, even in situations involving fire or accidents.

Section 18. Gas installations must be designed in a way that ensures that the installation has the necessary access conditions and escape routes.

Section 19. Gas installations must be designed in such a way that unintentional gas return flows cannot occur.

Section 20. Gas installations and internal pipelines, etc., must be protected against accidental aeration.

(2) The air supply to injectors and ejectors in connection with gas mixing facilities must also be secured against gas penetration.

Section 21. In gas installations where wiring is required from a zone-classified room to a room with a different or no zone classification, the wiring must be carried out in a way that ensures that there is no risk of gas entry.

Section 22. The cooling and heating systems of the gas-carrying parts of a gas installation must be secured against mixing of gas with the cooling and heating media.

(2) Safety measures must be taken by installing safety components that activate automatic shut-off valves and alarms when mixing is detected.

Section 23. The design of cylinder gas installations must ensure that tanks can be emptied without releasing gas into the open air.

Section 24. In the event of a significant change to an existing gas installation, any change must comply with the applicable regulations.

(2) Expansions, dismantling, conversions and changes affecting the original safety properties and safety profile are considered a significant change.

(3) When carrying out a significant change, it must be ensured that the rest of the gas installation maintains its original safety profile and properties as far as possible.

Design pursuant to norms and standards

Section 25. All gas installations must be designed, constructed and maintained in accordance with applicable recognised norms and standards in the field for the individual types of installations to the extent that norms and standards exist in the field.

Section 26. Onshore LNG facilities, including the design, construction, inspection, operation and maintenance of the facilities concerned, are presumed to comply with the requirements of this order and the essential safety requirements, cf. Section 3 of the act, if the facilities comply with DS/EN ISO 16924 and DS/EN 1473.

Section 27. CNG facilities, including the determination of the design, establishment, inspection, operation and maintenance of the facilities concerned, are presumed to comply with the requirements of this order and the essential safety requirements, cf. Section 3 of the act, if the facilities comply with DS/EN ISO 16923.

Section 28. Cylinder gas filling stations, including the design, establishment, inspection, operation and maintenance of the facilities concerned, are presumed to comply with the requirements of this order and the essential safety requirements, cf. Section 3 of the act, if the facilities comply with DS/EN 14678-2.

Section 29. Recognised norms or standards with an equivalent level of safety for the type of installation may be used other than those referred to in Sections 26-28.

Section 30 Gas installations in connection with hydrogen infrastructure, including the design, manufacture, construction and operation of such installations, are presumed to comply with the requirements of this order and the essential safety requirements, cf. Section 3 of the act, if the installations comply with the latest version of ASME B31. 12 Hydrogen Piping and Pipelines.

(2) In cases where the use of Danish or European standards is required by other legislation, these must be used instead of the norms referred to in ASME B31. 12 Hydrogen Piping and pipelines.

(3) In addition to the second paragraph, the American norms and standards referred to in ASME B31 may be replaced by 12 Hydrogen Piping and Pipelines, international and European recognised norms and standards are applied when equivalent levels of safety and design can be achieved.

Section 31. Gas installations in connection with infrastructure for natural gas and other methane-based gases, etc., including the design, manufacture, construction and operation of the pipelines in question, are presumed to comply with the requirements of this order and the essential safety requirements cf. Section 3 of the act, if the installations comply with the latest version of ANSI/GPTC Z 380.1, GPTC Guide for Gas Transmission and Distribution Piping Systems.

(2) In cases where the application of Danish or European standards is required by other legislation, these must be used instead of the norms referred to in ANSI/GPTC Z 380.1, GPTC Guide for Gas Transmission and Distribution Piping Systems.

(3) In addition to the second paragraph, the American norms and standards referred to in ANSI/GPTC Z 380.1, the GPTC Guide for Gas Transmission and

Distribution Piping Systems, may be replaced by international and European recognised norms and standards if equivalent levels of safety and construction can be achieved.

Chapter 5

Construction of gas installation

Section 32. Gas installations must be protected against impact, overload, other external damage and weather influences.

Section 33. The location of the gas installation must take into account the appropriate distance to surrounding persons, domestic animals and property.

Section 34. If a gas installation is constructed or put into operation by several parties jointly or through subcontractors, the owner's documentation must include a description of the division of responsibilities among the parties handling the gas-related parts, so that there is a responsible party for all parts of the installation.

Section 35. Gas installations must be provided with sufficient potential equalisation.

Section 36. An analysis of pressure fluctuations in the system and their impact on the life cycle of the materials must be carried out at gas installations containing hydrogen.

Section 37. The owner of a gas installation must ensure that the relevant procedures for the construction of the gas installation are established and upheld.

Section 38. The owner of a gas installation must ensure that appropriate procedures are established and maintained to ensure traceability of the materials that form part of the gas installation and contribute to pressure containment.

(2) The procedures under the first paragraph must identify the materials from receipt to establishment and finally, to the final testing of the gas installation.

Section 39. The owner must ensure that material documentation is available for materials used that contribute to pressure containment.

(2) For metallic materials, material documentation must be available in accordance with DS/EN 10204.

(3) For pipes and components in steel, material documentation must be available in accordance with inspection document type 3.1 in DS/EN 10204.

(4) For critical components and pipelines with a significant impact on the pipeline's ability to avoid or mitigate major accidents, an evaluation must be carried out to determine whether it is appropriate to use materials with material documentation according to inspection document type 3.2. of DS/EN 10204.

(5) For bolt materials, gasket materials and instrument tubes, and steel fittings with a diameter of DN 25 or less, material documentation must be available in accordance with inspection document type 2.2. of DS/EN 10204.

Section 40. Periodic inspections must be carried out on tools and other equipment used in connection with the construction of gas installations.

(2) Periodic inspections must be carried out in accordance with the manufacturer's instructions or more frequently if a need for this has been identified.

Section 41. The owner must ensure that the joining of pipes and components on the gas installation is planned, performed and verified by an appropriate and recognised method that ensures an adequate level of quality before, during and after the joining work.

Section 42. The owner must ensure that, prior to the commencement of welding work and for any welding process used, there is a welding procedure and a repair welding procedure approved as an accredited service by a relevant accredited third-party organisation. The procedures must include the dimensions, material thickness, materials and types of welding to be carried out.

(2) Standard welding procedures may be used for welding in steel with a design pressure of less than 0.5 bar.

Section 43. Welding personnel must have a recognised welding or operator certificate issued by a relevant accredited third-party organisation, covering the welding processes, filler material groups, dimensions, material thickness and welding types used.

Section 44. During welding, the owner must ensure compliance with the established welding procedures and that the welding process is monitored at appropriate intervals spread evenly over the production period, taking into account the gas installation dimensions, welding procedures, welders and welding situations.

Section 45. Pipe joints must be designed in accordance with appropriate standards and relevant documentation of compliance must be prepared.

(2) Joining must be carried out by suitably qualified personnel.

Section 46. Relevant documentation for the manufacture of the gas installation must be easily available throughout the lifetime of the gas installation.

Chapter 6

Ventilation and detection

Section 47. Adequate ventilation must be ensured in a gas installation, supplemented by gas detection where relevant, which takes into account the properties of the gas where a build-up of flammable or toxic gases may occur. There must not be any concentration of gas at any time that could lead to a risk of poisoning or ignition of the gas.

(2) Adequate ventilation must be carried out in accordance with the Order on the classification of potentially explosive areas, the Order on work in connection with explosive atmospheres and the Order on work with substances and materials (chemical agents).

Section 48. If pressure boosters or compressors are placed in production facilities and filling stations, ventilation must be carried out in accordance with Section 47 (1).

(2) Pressure boosters or compressors for gas above 4 bar must be placed in a separate room or outdoors.

Chapter 7

Control, regulation and monitoring of gas installations

Section 49. The gas installation's control, regulation and monitoring system must be designed so that all system sections forming part of the gas system are effectively monitored and controlled.

(2) The owner of the gas installation must ensure that appropriate attention is given to the safety and reliability of systems for the control, regulation and monitoring of the entire gas installation that may influence the risk of major accidents at the installation.

(3) Safety systems must be verified according to the manufacturer's instructions or an identified need, but at least every four years.

Section 50. Hard-wired safety systems must be established which, independently of the control, regulation and monitoring system, monitor safety-

critical components that form part of the gas installation, without prejudice to the second paragraph.

(2) Programmable safety PLC or other equipment of a similar nature may be used as an alternative to fixed safety equipment.

Section 51. It must be ensured and documented that remote connection to the safety circuit of the gas installation is not possible.

(2) A controlled remote shut-down may be carried out if the remote shut-down does not affect the gas safety circuit.

Section 52. The owner of the installation must ensure that any person inside or near the gas installation is instructed to behave in a safe manner.

Section 53. The owner of an installation must ensure that unauthorised persons cannot access safety-critical parts of the gas installation.

Section 54. The owner must ensure that gas installations can spontaneously be brought into a safe state in a proper manner if abnormal conditions or emergency situations occur.

(2) If necessary for a specific condition or emergency situation, the gas installation must be blown down and it must be possible to shut down the energy supply, with the exception of the supply to safety systems.

Chapter 8

Gas flare

Section 55. The use of a gas flare must not endanger persons, domestic animals or property.

Section 56. Gas flares must be suitable and intended for use in the specific gas installation.

(2) Gas flares must be suitable and designed to burn the varying gas qualities and quantities handled at the gas installation.

Section 57. When installing a gas flare, safety distances to other parts of the installation, other installations, boundaries and the presence of persons inside and outside the gas installation must be taken into account, according to the manufacturer's references.

Section 58. The gas flare must be fitted with the following equipment:

- 1) Manual shut-off valve;
- 2) Gas filter;

- 3) Gas pressure regulator;
- 4) Pressure relief valve that ensures that the pressure cannot exceed the maximum permissible operating pressure of the flare at any time. The safety device must be a safety shut-off valve and may be combined with the gas pressure control unit provided that the control and safety functions are independent of each other;
- 5) Two automatic safety shut-off valves of class A in DS/EN 161;
- 6) Protection against flashback;
- 7) High and low gas pressure monitoring;
- 8) Separate emergency stop.
- 9) The flare must be secured against the back-flow of air into the gas system by mechanical injection of combustion air and must be equipped with air pressure monitoring;
- 10) Flame monitoring and automatic ignition mechanism, which must be included in the installation's control, regulation and monitoring system.

Chapter 9

Specific requirements for certain types of gas installations

Specifically for biogas production facilities and landfill gas installations

Section 59. The owner must ensure that reactor tanks are designed for the expected biomass and gas composition.

Section 60. Untreated biogas may not be fed into pipelines with a design pressure of four bar or more.

Section 61. The owner must ensure that reactor tanks and gas storage tanks are protected against overpressure and vacuum.

Section 62. The area of the reactor tank overflow pipe must be sufficient to prevent damage to the reactor tank in connection with rapid foam development of the biomass in the tank.

Section 63. When using double sheets, the owner must ensure that no gas can escape in a concentration higher than five per cent of the lower explosion limit when measured continuously between the sheets.

(2) If concentrations higher than those listed in the first paragraph occur, this must lead to the closure of the gas installation.

(3) A procedure must be developed for the response of the operating staff at gas concentrations higher than five per cent of the lower explosion limit between the sheets in order to bring the entire installation from an unsafe to safe condition.

Section 64. The owner must ensure that no explosive mixture can arise in sulphur purification systems where atmospheric air or oxygen is added.

(2) The sulphur purification system must be secured by two independent safety devices that individually ensure the interruption of the gas supply to the sulphur purification system.

(3) The sulphur purification system must be equipped with an oxygen detector that can give a signal to the safety devices specified in the second paragraph for the interruption of the gas supply.

Section 65. If the gas from the upgrade facility is rejected and returned to the system, it must be ensured that connected gas systems or the gas installation are not adversely affected by the gas returned.

Specifically for gasification and pyrolysis installations

Section 66. Fuel entry into the reactor must be secured against flashback and oxygen penetration.

Section 67. Cooling of the fuel feed system must not cause a pressure rise in the unit exceeding the pressure for which the unit is dimensioned.

Section 68. The reactor must be designed to protect against explosive threats to the unit.

(2) The reactor must also be designed to withstand explosion.

Section 69. Gas may not be released during ash discharge or fuel input.

Section 70. Gas-fired starter and auxiliary burners for gasification and pyrolysis facilities must be designed and installed in accordance with the Order on the safety of gas installations and be included in the installation's operating and maintenance plan, cf. Section 101.

Specifically for gas installations in connection with infrastructure

Section 71. Gas installations in connection with infrastructure include compressor stations, metering and control stations, treatment plants, gas storage facilities, receiving and dispatching stations for cleaning and inspection tools, etc.

Section 72. There may be no space under the room or area where the gas pressure regulator and meter installations are located, where the floor surface along any wall is lower than the terrain outside.

(2) Building structures with cavities where gas can accumulate are not allowed.

Section 73. Permanent joints that are part of the gas installation and contribute to the pressure seal must be inspected by means of non-destructive testing.

(2) Non-destructive testing must be carried out by one or more methods, sufficient to show defects that may affect the integrity of the gas installation.

(3) Non-destructive tests must be carried out by personnel certified in accordance with DS/EN ISO 9712 for the test carried out, issued by a relevant accredited third-party organisation.

Section 74. The walls of a gas installation must be able to withstand an installation-specific internal overpressure in the event of an accident. The roof must be constructed as a light structure or with explosion lids, preferably made of non-flammable materials.

(2) Lightweight roof constructions or explosion hatches must be secured so that in the event of an accident, they do not pose a hazard to people, domestic animals or property.

(3) External walls of rooms with a risk of gas leakage may not have windows.

Section 75. Gas installations in connection with infrastructure must be fitted with, or connected to, the following:

1) Two separate safety devices that prevent higher pressures than those for which the pipelines are designed, both in use and at standstill; The safety devices must be adapted to local and operational conditions;

2) Shut-off and blow-off devices, so that the gas system can be quickly and safely taken out of use at any time; The number and type of shut-off and blow-off devices must be adapted to local, operational and material conditions;

3) Fittings or other equipment showing the operating conditions;

4) Necessary measures to prevent explosion and poisoning hazards at control wells and valve arrangements or similar where gas accumulation may occur.

(2) When installing shut-off valves from pipelines to gas installations, appropriate distance from the gas installation must be taken into account and operation must be possible in a safe manner.

Section 76. For the conversion of gas installations in connection with infrastructure, a complete and detailed design must be drawn up for the gas installation on the basis of the intended gas composition, cf. Section 11.

(2) The converted gas installation must comply with additional requirements for the new gas from the detailed design and applicable rules for gas installations, cf. Section 12.

(3) If there are conditions at the gas installation that cannot be maintained during conversion, an exemption from the requirements may be sought from the Danish Business Authority, provided that the installation maintains an adequate level of safety.

Chapter 10

Internal pipelines

Section 77. Internal pipelines covered by the rules for pressure equipment must be designed, constructed and operated in accordance with the requirements of the Order on the fitting, etc. of pressure equipment and the additional rules in this chapter.

(2) Other internal pipelines must be designed, established and operated in accordance with the rules laid down in the Order on the safety of gas pipelines, unless otherwise provided for in this chapter.

Section 78. Pipelines must be routed by the shortest possible route with vertical and horizontal piping, using as few joints as possible.

(2) For the piping of gases underground where the gas is heavier than atmospheric air, whole pipe lengths without joints must be used. If the conditions necessitate joints, solders or permanent joints must be used.

Section 79. Pipelines may not be routed in the building's cavity or protection space, lift shafts, chimneys, ventilation ducts, refuse chutes or similar spaces.

(2) By way of derogation from the first paragraph, pipelines may be routed in the external cavity wall of the building, provided that they are routed in casing with an outlet to the open air and gas tight towards the interior of the building.

Section 80. If casing or wall penetration is used when routing pipelines in buildings, etc., the casing or wall penetration must comply with the following:

- 1) Gas leaks must be directed away from the building or if this is not possible, gas leaks must be detected by olfaction or a gas detector;
- 2) Secured against water penetration;

3) Routed in one piece;

4) Secured against gas escaping to other locations and fire compartments, etc.;

5) Secured against harmful effects on the pipes and any corrosion protection on the pipes.

(2) Pipelines coated with plastic sheathing are not considered to be pipelines laid in casing.

Section 81. The entry of pipelines directly into the interior of the building and the exit of pipelines directly out of the building must be carried out using wall penetration, ensuring against the infiltration of gas and water into any cavity wall and interior locations.

Section 82. Pipelines inside the building that are routed in a direct line across walls, outer cavity walls and floor partitions in the building or are routed through walls or floors, must be routed in casings or with wall penetration in accordance with Section 81.

Section 83. When routing pipelines that are not immediately accessible for inspection, full pipe lengths without joints must be used.

(2) If circumstances necessitate concealed joints, fused joints must be used.

Section 84. Permanent joints on pipelines are preferable. Welded flanges, threads or compression joints can be used when joints need to be detachable.

(2) Compression joints suitable and intended for this purpose may be used where the use of permanent joints is not considered appropriate, provided that their use ensures the same level of safety as permanent joints.

(3) For compression joints, inspections must be carried out and documented to ensure that the joining methods have been performed correctly. The inspection must be carried out by a person other than the person who carried out the joining work.

(4) For flange joints, inspections must be carried out and documented to ensure that the joining methods have been performed correctly. The inspection must be carried out by a person with the appropriate expertise other than the person who carried out the joining work.

(5) The number of threaded joints must be kept to a minimum and may only be used with instrumentation. Suitable and calculated pack materials must be used.

Section 85. The joining of pipelines and steel components to a unit with a design pressure of less than 4.0 bar carried out on site by a user who is not the manufacturer, cf. the Order on the fitting out etc. of pressure equipment, must

be planned and carried out according to welding procedure and verified by a method that ensures a sufficient level of quality before, during and after welding.

(2) Standard welding procedure may be used for joining in steel with a design pressure of less than 4.0 bar.

(3) A visual inspection must be carried out on all joints made by personnel with the relevant expertise to perform the inspection.

(4) Non-destructive testing by a method other than visual inspection must be carried out on at least 10 per cent of a representative sample of the joints for each pipe dimension carried out on plants with a design pressure between 0.1 and 4.0 bar. The non-destructive tests must be carried out by a relevant accredited third-party company, where the test is carried out as accredited testing and demonstrates at least a quality level C according to DS/EN ISO 5817.

(5) Welding personnel must have a recognised welding or operator certificate issued by a relevant accredited third-party organisation, covering the relevant welding processes, filler material groups, dimensions, material thickness and welding types.

Section 86. Pipelines above ground at the gas installation site must be made of steel, without prejudice to the second and third paragraphs.

(2) Pipelines laid above ground for connecting sulphur purification systems and the sulphur purification system itself are exempt from the first paragraph if the pipeline is made of polyethylene that is specially protected against fire and UV exposure.

(3) For installation components that are not buildings, pipelines for shut-off valves may be constructed of polyethylene, provided that the part of the pipeline above ground is protected against fire and UV radiation.

Section 87. Before transporting gas, the owner must ensure that a gas filling procedure has been prepared and, in the case of gas production, a procedure for starting gas production, which ensures that the pipeline can be put into operation in a safe and fully responsible manner.

Section 88. When designing internal pipelines at gas installations for steel infrastructure, the design pressure must not result in an annular voltage greater than 50 per cent of SMYS.

Section 89. There must be no return flow of biomass in pipelines at biogas installations.

Section 90. Internal pipelines, valves and controls in connection with pipelines above ground must be secured against impact.

Section 91. Internal pipelines above ground must be identified with gas labels clearly indicating the type of gas.

(2) Markings must be large enough to be visible at all times at a distance to ensures adequate safety against error situations.

(3) Gas labels must be printed in the warning colour yellow with black, easily legible lettering, using both upper and lower case letters for readability. The warning colour yellow must have a luminescence factor of at least 0.45 and a maximum of 0.60 according to DS/ISO 20560.

(4) Marking with gas labels must be done using durable material and maintained throughout the entire service life of the pipeline.

Section 92. Internal pipelines that are dug down must be marked with marking points placed at the entrances and exits to the area of the gas installation, without prejudice to the second paragraph.

(2) If it is deemed necessary to have marking points elsewhere in the area of the gas installation, the marking points must be placed in accordance with the rules laid down in the Order on gas pipelines.

Section 93. If electrically conductive internal pipes are laid in the ground at the point of entry and exit from the building, the pipes must be electrically separated as close to the ground surface as possible.

Chapter 11

Requirements for independent verification of hydrogen gas installations

Section 94. Hydrogen gas installations are subject to verification by an independent third party as part of the installation or in case of significant changes, without prejudice to the third paragraph.

(2) The verification referred to in the first paragraph is deemed to meet the requirements when it has been carried out in accordance with the principles of risk-based verification in accordance with service specification DNV-SE-0474 and in accordance with service specifications DNV-SE-0479 and DNV-SE-0656, latest versions dated October 2021.

(3) Third-party verification of maintenance procedures may be exempted when third-party verification of the maintenance processes has been carried out.

Section 95. The owner of the gas installation is responsible for finding an independent third party who has the expertise to perform the task in accordance with Section 1.

(3) Independent verification of gas installations for hydrogen must be carried out by an organisation that meets the requirements listed in Annex 1.

Section 96. The degree of involvement of the independent third party in verification is determined by the owner of the gas installation to be low, medium or high based on the principles set out in section 2.5.3, Table 2-1 of service specification DNV-SE-0474.

(2) The chosen level of involvement must be justified and documented.

Section 97. The owner of the gas installation must prepare a written declaration to the selected independent third party that the same application for verification has not been submitted to other independent third parties.

Section 98. The owner of the gas installation must continuously evaluate the third party's level of involvement in verification throughout the project phase.

(2) The evaluation must take into account experience gained during the project and recommendations of the independent third party.

Section 99. The owner of the gas installation must take appropriate measures based on the results of the independent verification.

Section 100. The independent third party must prepare the documentation for the verification specified in Annex B, Section B.1.1.3 of service specification DNV-SE-0474.

(2) Any disagreement between the owner and the independent third party must be reflected in the final statement of verification.

(3) The results of the independent verification do not affect the owner's or user's responsibility for ensuring that the verified gas installation functions correctly and safely.

Chapter 12

Verification of gas installations

Section 101. When constructing, modifying and repairing gas installations, tests and inspections must be carried out to ensure that the installation is safe and functional.

Section 102. The owner of a gas installation must ensure that relevant procedures for carrying out verification are drawn up and applied.

Section 103. Gas installations must be checked and verified before they are put into service.

(2) The inspection must consist of the following at a minimum:

- 1) Non-destructive tests, cf. Section 106;
- 2) Inspection and testing of the gas installation;
- 3) Relevant strength and density tests;
- 4) Inspection to ensure that oxygen has been purged from the gas system;
- 5) Inspection of detection and ventilation conditions;
- 6) Adjustment and inspection of safety components and systems.

(3) Inspection must be documented and made available throughout the lifetime of the installation.

Section 104. The documentation for completed pressure testing must contain at least the following:

- 1) Nature and sample pressure of the test medium;
- 2) Duration, measurements and observations;
- 3) Any deviations or observed leaks;
- 4) Any other relevant information.

Section 105. Measuring equipment used in connection with verification must be calibrated regularly by a testing institute, without prejudice to the third paragraph.

(2) The timing of calibration must be in accordance with the manufacturer's instructions. Regardless of the manufacturer's instructions, calibration must be carried out at least once a year.

(3) If there is no requirement to calibrate the measuring equipment according to other legislation or according to the manufacturer's instructions, no calibration of the equipment must be carried out.

Section 106. Joints that are part of the gas installation and contribute to the pressure seal must be inspected by means of non-destructive testing when the joints are made on site by the owner or user who is not the manufacturer, cf. the Order on the design, etc. of pressure equipment.

(2) Non-destructive testing must be carried out by one or more methods, sufficient to show defects that may affect the integrity of the gas installation.

(3) Non-destructive testing must be carried out by certified personnel, by which the certificate has been issued by a relevant accredited third-party organisation for the test carried out.

Section 107. Before gas is conveyed, all parts contributing to the pressure containment of the gas system must be flushed of oxygen to a sufficient extent to reduce the risk of explosion.

Chapter 13

Cleaning and maintenance of gas installations

Section 108. Prior to the start-up of a gas installation and delivery of gas, the owner must ensure that a start-up procedure has been drawn up to ensure that the gas installation can be put into operation in a safe manner.

Section 109. The owner of a gas installation must ensure that an operation and maintenance plan is prepared, which must be used and maintained, be easily understandable, and available to the operating staff. The operation and maintenance plan must be made available to the Danish Business Authority.

(2) The operation and maintenance plan must contain written instructions for the operating staff about the operation and periodic inspection of the gas installation and the precautions to be taken in exceptional situations.

(3) The operation and maintenance plan must be prepared before the gas installation is put into operation.

Section 110. Owners of gas production facilities that produce for local gas networks or clusters that are not infrastructure networks for hydrogen or natural gas, must have a procedure for monitoring gas quality and notifying any end users in the event of fluctuations in the agreed gas quality.

(2) The procedure must include a description of how protection is ensured against the emission of gas that is not in accordance with what has been agreed. In addition, the procedure must include a description of risk-reducing actions for gas already dispatched that is not in accordance with what has been agreed.

Section 111. Chemicals and other substances used in gas installations and oil from installed pressure boosters and compressors may not be present in the gas at a concentration that entails a risk of blockage and malfunction or corrosion of installations and equipment.

Section 112. The owner must ensure that periodic inspections of the gas system are carried out at a frequency that ensures that any defects or irregularities are identified and rectified.

(2) The frequency and scope of periodic inspections must be adapted to the operating conditions and risk potential of the gas installation.

(3) For standard equipment, the manufacturer's instructions for periodic inspections must be followed at a minimum. If the manufacturer of standard equipment has not specified the frequency, the frequency must be based on an evaluation that takes into account the condition, application, location, material, operating conditions and other relevant factors.

(4) The results of the periodic inspections and information on all irregularities must be available at all times to the relevant operating staff and submitted to the Danish Business Authority on request.

Section 113. All intended outflows of gas must be transported to the flare and burned, without prejudice to the second and third paragraphs.

(2) If a risk assessment demonstrates that the gas can be burned off or handled in another manner than by flare without release into the atmosphere, these other solutions may be used.

(3) Compressors, measuring and control stations and similar equipment containing enclosed pressure in small volumes, where it is not proportionate to flare, may be discharged to the open air.

Section 114. Outflows that occur in the event of unintentional outflows from safety valves or similar, where it is not possible to burn the gas, must be carried out in accordance with Section 13.

Section 115. At hydrogen, pyrolysis and gasification gas production facilities, the facilities must be rinsed with nitrogen prior to start-up and at standstill in an amount that ensures compliance with Section 13.

(2) During standstill periods, hydrogen production facilities referred to in the first paragraph must be pressurised with inert gas.

Section 116. The owner of a gas installation must submit an annual progress report to the Danish Business Authority for the last calendar year before the end of the first quarter. The report must address compliance with the operation and maintenance plan, cf. Sections 109 and 112.

(2) The report must include descriptions of:

1) Maintenance carried out;

2) Deviations from the operation and maintenance plan;

- 3) Safety-critical incidents;
- 4) External damage;
- 5) Repairs and inspections, etc.

Chapter 14

Preparedness and obligation to provide information in the event of damage

Section 117. The owner of a gas installation must have a permanent emergency response team in place to ensure rapid intervention in the event of gas detection, gas odour, accidents or dangerous incidents in connection with the gas installation.

(2) The emergency response team must be able to handle the situations described in the first paragraph and ensure that the gas system is brought into a safe state.

Section 118. The owner must ensure the establishment and maintenance of an internal emergency plan to deal with the consequences of accidents and hazards at the gas installation.

(2) The contingency plan must, where necessary, be developed in cooperation with external preparedness systems.

Section 119. The owner or user of a gas installation must immediately notify the Danish Business Authority if, in connection with operations, including commissioning, or maintenance of the gas installation, damage is caused to the installation, persons, domestic animals or other property when the damage may have an impact on the gas-carrying parts.

(2) The notification referred to in the first paragraph must contain the following information at a minimum:

- 1) The sequence of events;
- 2) The extent of the damage;
- 3) The measures taken by the owner or user to limit or remedy the damage;
- 4) Any communications from the owner or user to other public authorities regarding the damage.

(3) Notification pursuant to the first paragraph must be given when the damage has been remedied or sufficient attempts have been made to remedy it.

Chapter 15

Expertise requirements and obligations in the event of a change of ownership

Section 120. The owner must ensure that anyone who designs, installs, starts up, operates or maintains a gas installation has the necessary expertise. The expertise must correspond to the complexity of the installation and the tasks to be handled by the person concerned, so that the person in question is able to identify and manage the risks that may arise and the dangers associated with them.

(2) The expertise must be documented individually for the relevant persons in the company's quality management system, if the company has one, or alternatively as part of the described company procedures.

Section 121. In the event of a change of ownership of a gas installation, the new owner must inform the Danish Business Authority.

(2) In the event of a change of ownership, the new owner must ensure that they are provided with all the documentation necessary to demonstrate that the gas installation complies with the requirements of the Gas Safety Act and this order.

Chapter 16

Administrative provisions

Section 122. The Danish Business Authority monitors compliance with the rules laid down in this order, in accordance with Section 12 of the act.

(2) In connection with the inspection pursuant to the first paragraph, the owner of the installation must, on request, be able to document compliance with the requirements of this order.

Section 123. Written communication to the Danish Safety Technology Authority must be in digital form.

(2) When applying for an exemption, the form on Virk (www.virk.dk) must be used.

(3) The Danish Business Authority may refrain from processing exceptions under the second paragraph if they are not submitted via Virk.

Section 124. Norms and standards referred to in this order are not published in the Danish Official Journal.

(2) The standards referred to in the first paragraph apply even if they are not available in Danish.

Section 125. The Danish Business Authority announces on its website if any standards or norms referred to in this announcement are withdrawn, become obsolete or are otherwise no longer applicable.

(2) The Danish Business Authority announces on its website if a newer version of a standard or norm than the one referred to in this order is considered applicable.

Chapter 17

Penal provisions

Section 126. Unless stricter penalties are stipulated under other legislation, fines will be imposed on anyone who:

- 1) fails to report a gas installation in accordance with Section 5(1) or fails to report in accordance with Section 6(1) or (2) or Section 7(1) or (2);
- 2) owns, designs or constructs a gas installation or has others do so in violation of Sections 11-14, Sections 16-23, Section 24(3), Sections 32, 33, 35-37, 41, 43-45, 47-51, 54, or 58-62, Section 63(1) or (2), Sections 64-70 or Sections 72-75;
- 3) fails to ensure that a comprehensive risk assessment has been prepared in accordance with Section 15(1) or fails to update it, cf. Section 15(3);
- 4) does not keep documentation in accordance with Section 15(2) or Section 46;
- 5) fails to ensure that procedures are established, maintained or developed in accordance with Section 38, Section 63(3) or Section 103, or fails to ensure that procedures are in place in accordance with Section 42;
- 6) as the owner, has not ensured that proper material documentation is available in accordance with Section 39;
- 7) does not carry out periodic inspections of tools or equipment in accordance with Section 40;
- 8) does not ensure the instruction of persons pursuant to Section 52 or unauthorised access pursuant to Section 53;
- 9) as the owner, uses or has others use, the gas flare in violation of the rules laid down in Chapter 8;
- 10) converts gas installations in connection with infrastructure in contravention of Section 76(1) or (2);

- 11) owns, designs or constructs internal pipelines in violation of Chapter 10;
- 12) as the owner, does not have the gas installation verified for hydrogen by an independent third party, cf. Section 94(1) or has this done in violation of the rules in Chapter 11;
- 13) as the owner, does not carry out or have carried out inspections of gas installations, cf. Section 101, or carries out or has carried out such inspections in violation of Sections 103-107;
- 14) as the owner, operates and maintains gas installations or has others do so in breach of Sections 108-115;
- 15) does not submit a status report in accordance with Section 116;
- 16) as the owner, does not have or maintain an emergency response in accordance with Sections 117 or 118;
- 17) as the owner or user, fails to notify the Danish Business Authority of damage in accordance with Section 119;
- 18) does not ensure the right expertise in accordance with Section 120(1) or document these competences in accordance with Section 120(2); or
- 19) does not notify the Danish Business Authority of a change of ownership, cf. Section 121(1).

Section 127. Companies, etc., (legal persons) may be held criminally liable in accordance with the regulations set out in Chapter 5 of the Penal Code.

Section 128. The limitation period for criminal liability is 10 years.

Chapter 17

Entry into force and transitional provisions

Section 129. The Order enters into force on 1 July 2026.

(2) Order No. 1702 of 17 December 2025 on the safety of gas installations is repealed.

Section 130. Gas installations established and operated in accordance with the rules in Order No. 1988 of 9 December 2020 on safety provisions for natural gas installations and bio-natural gas installations pursuant to the Working Environment Act, Order No. 253 of 4 April 2018 on safety for gas installations or Order No. 1702 of 17 December 2025 on safety for gas installations may continue to be operated in accordance with the rules in these

orders until significant changes are made to the gas installations in accordance with Section 24 of this order.

Section 131. Approvals and permits granted pursuant to Order No. 1988 of 9 December 2020 on safety regulations for natural gas installations and bio-natural gas installations under the Working Environment Act remain valid.

(2) Applications for approvals submitted to the Danish Safety Technology Authority before 1 January 2026 will be processed in accordance with the rules set out in Order No. 1988 of 9 December 2020 on safety provisions for natural gas installations and bio-natural gas installations under the Working Environment Act.

Section 132. Gas installations in connection with infrastructure for natural gas and biomethane may be carried out in accordance with the rules laid down in Order No 1988 of 9 December 2020 on safety rules for natural gas installations and bio-natural gas installations under the Working Environment Act up to and including 31 December 2026, without prejudice to the third paragraph.

(2) Gas installations related to infrastructure for natural gas and biomethane, which are completed or commenced before 31 December 2026 in accordance with the rules laid down in Order No. 1988 of 9 December 2020 on safety regulations for natural gas facilities and bio-natural gas facilities under the Working Environment Act, may be carried out or completed in accordance with these rules up to and including 31 December 2027, without prejudice to the third paragraph.

(3) If gas installations are constructed in connection with infrastructure pursuant to the first or second paragraphs, approval pursuant to Order No. 1988 of 9 December 2020 on safety provisions for natural gas installations and bio-natural gas installations pursuant to the Working Environment Act is not required, but the installations must be notified in accordance with Sections 5-10 of this order.

(4) In special cases, the Danish Business Authority may grant an exemption to complete work in accordance with Order No. 1988 of 9 December 2020 on safety provisions for natural gas installations and bio-natural gas installations under the Working Environment Act after 31 December 2027, cf. the second paragraph. Applications for exemptions must be received by the Danish Business Authority by this date.

Section 133. Gas installations may be carried out in accordance with the rules laid down in Order No. 253 of 4 April 2018 on the safety of gas installations up to and including 31 December 2026, without prejudice to the third paragraph.

(2) Gas installations where the project planning has been completed or commenced before 31 December 2026 pursuant to Order No. 253 of 4 April 2018 on the safety of gas installations, may be carried out or completed in accordance with these rules up to and including 31 December 2027, without prejudice to the third paragraph.

(3) The rules in the first and second paragraphs do not apply to gas installations for hydrogen.

(4) In exceptional cases, the Danish Business Authority may grant exemptions to complete work under Order No. 253 of 4 April 2018 on the safety of gas installations after 31 December 2027, cf. the second paragraph, and after 1 January 2026, cf. the third paragraph. Applications for exemptions must be received by the Danish Business Authority by the relevant date.

Annex 1

Requirements for independent third parties performing verification of hydrogen gas installations

1. The independent third party must be a legal person.
2. The independent third party must be a body independent of the organisation or hydrogen gas facility it verifies.
3. The inspection body, its senior management and staff responsible for carrying out the inspection tasks must not be the designer, manufacturer, supplier, installer, purchaser, owner, user or maintainer of installations that they assess or a representative of any of those parties.

A notified body, its senior management and staff responsible for carrying out the inspection tasks may not be directly involved in the design or manufacture, marketing, installation, use or maintenance of the gas facility, or represent parties involved in these activities. They must not participate in activities that may be contrary to their objectivity and integrity in relation to the conformity assessment activities for which they are authorised. This applies in particular to advisory services.

The independent third party must ensure that the activities of its subsidiaries or subcontractors do not compromise the confidentiality, objectivity or impartiality of their verification activities.

4. The independent third party and its staff must carry out the verification activities with the highest degree of professional integrity and the requisite technical competence in the specific field and must not be affected by any pressure and inducements, especially of a financial nature, which may influence their judgement or the results of their verification activities, in particular as regards persons or groups of persons with an interest in the results of those activities.
5. The verification organisation must be able to carry out all inspection tasks assigned that it carries out under this order, regardless of whether these tasks are carried out by the independent third party itself or on its behalf and under its responsibility.

At all times and for each inspection task it performs, the independent third party must have the following at its disposal:

1. The necessary staff with technical knowledge and sufficient and relevant) experience to carry out the inspection tasks.

This includes, among other things, a technical design department with the necessary technical knowledge and experience to perform the control calculations and assessments necessary to perform the inspection tasks.

2 Descriptions of the procedures under which verification is carried out in such) a way as to ensure transparency and the possibility to replicate those procedures. It must have in place appropriate policies and procedures that distinguish between the tasks it performs in its capacity as a verification organisation and any other activity.

3 Procedures to enable it to carry out its activities, taking into account the size) of the establishments concerned, the qualifications of suppliers and the degree of complexity of the technology concerned.

The independent third party must have the means necessary to perform the technical and administrative tasks associated with the verification activities in an appropriate manner and must have access to all necessary equipment or facilities.

6. The staff responsible for carrying out the inspection tasks must have:

1 Relevant technical and professional training covering all verification activities) carried out by the independent third party;

2 Adequate knowledge of the requirements regarding the assessments they) make and the necessary internal authority to perform such assessments;

3 Sufficient knowledge and understanding of the requirements of the Gas) Safety Act, this order and the relevant norms and standards according to which the gas installation is constructed;

4 The ability to draw up the documentation proving that the verifications have) been carried out.

7. It must be ensured that the independent third party, its senior management and the staff responsible for carrying out inspection tasks work impartially.

The remuneration of senior management and the staff responsible for carrying out the inspection tasks may not depend on the number of assessments made or on the outcome of those verifications.

8. The independent third party's staff has a duty to disclose all information that comes into their possession in the course of performing verification in accordance with this order to the Danish Business Authority on request.