2025 ANNUAL ACTIVITY REPORT

NSAI TC 001

GAS TECHNICAL STANDARDS COMMITTEE



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1 Chair's Statement



Liam Nolan

Chair of NSAI/ TC 001

As Chair of the NSAI/TC 001 Gas Technical Standards Committee (GTSC), I am pleased to present our Annual Activity Report for 2025, a year marked by significant progress in the development of standards supporting Ireland's evolving gas sector and energy transition.

The continued success of the standards committees and working groups relies on the dedication and expertise of the many industry, regulatory and academic experts who contribute their time and knowledge to support standards development.

We have been greatly supported by our Technical Secretary Anne Coulson over the course of the year and I would like to thank Anne on behalf of the GTSC.

Against a backdrop of increasing interest in renewable gases as a means of decarbonisation, the GTSC continued to play a central role in supporting the safe, reliable and sustainable development of Ireland's gas sector throughout 2025. The Committee provided national leadership in gas standardisation while ensuring Ireland's active participation in European and international standards development across natural gas, LPG, LNG, biomethane and hydrogen technologies. During the year, 93 experts contributed to the work of the GTSC and its associated sub-committees and working groups, reflecting strong industry, regulatory and academic engagement.

A key achievement in 2025 was the publication of three significant Irish standards: I.S. 813:2025 Domestic Gas Installations, I.S. 3216:2025 Code of Practice for the Bulk Storage of LPG, and I.S. 329:2024+A1:2025 Gas Distribution Mains. The amendment to I.S. 329 represents a significant milestone by enabling the design, construction, operation and maintenance of gas distribution networks for the future transport of 100% hydrogen.

Hydrogen standardisation remained a strategic priority throughout the year. Through the continued secondment of a Hydrogen Standardisation Expert from Gas Networks Ireland, the Committee enhanced its capacity to assess the implications of hydrogen across the gas value chain. A dedicated hydrogen working group helped to coordinate hydrogen-related activities across the committees. Irish experts also played a prominent role at European level, including representation within the CEN/CENELEC Hydrogen Coordination Group.

Internationally, GTSC members actively monitored and contributed to the work of over 30 CEN and ISO technical committees, helping to shape standards covering gas infrastructure, gas quality, hydrogen technologies, biomethane, transportation fuels, appliances, pipelines, storage systems and safety. Particular focus was placed on the revision of existing standards to facilitate hydrogen and renewable gas integration while maintaining high levels of safety and system reliability.

Looking ahead to 2026, the GTSC will continue expanding its focus on renewable gases and hydrogen, support the revision of key Irish standards, and strengthen Ireland's influence in European and international standardisation activities. Through this work, the GTSC will continue to support the decarbonisation of Ireland's energy system while ensuring that safety, technical excellence and stakeholder collaboration remain at the forefront of standards development.

On behalf of the Committee, I would like to thank all members, observers, working group participants and NSAI staff for their continued support throughout 2025. I look forward to working with you all as we continue to develop the standards that will underpin a safe, sustainable and resilient gas sector for Ireland.

2 Introduction

In 2025, NSAI/TC 001 welcomed 11 new members to the various committees and regretfully saw the departure of 14 members. This year, a total of 93 experts participated in the work of NSAI/ TC 001.

NSAI/ TC 001 monitors and participates in the work of approximately 24 CEN[1] Technical Bodies, 3 CEN CENELEC Joint Technical Committees and 7 ISO[2] Technical Bodies.

In December 2025, NSAI/TC 001 published 3 indigenous standards:

I.S. 813:2025, *Domestic gas installations* which was drafted by NSAI/TC 001/SC 3 *Installation and appliances*,

I.S. 3216:2025, *Code of practice - Bulk storage of liquefied petroleum gas (LPG)* which was drafted by NSAI/TC 001/SC 7 *LPG and LNG installations, equipment and storage*, and

I.S. 329:2024 + A1:2025, *Gas Distribution Mains,* an amendment which was made to allow for the design, construction, commissioning, operation, maintenance, alteration and decommissioning of new mains for the distribution of 100% hydrogen.

3 Scope of the Gas Technical Standards Committee

The NSAI/TC 001 *Gas Technical Standards Committee* advises the NSAI with regard to national and international standards in the areas of the supply and usage of natural gas, LPG, liquefied natural gas (LNG), renewable gas (biomethane, BioLPG, and hydrogen). The membership of the committee is composed of key stakeholders/collective bodies that provide an authoritative and representative voice or policy role in the gas sector. Members of the committee contribute their knowledge and expertise on a voluntary basis and advise the NSAI on what Irish standards and Codes of Practice are necessary for products and processes used in the gas industry, with particular regard to safety. NSAI/TC 001 also supports the development of European (CEN) and International (ISO) gas related standards. The role of the associated sub-committees is defined in NSAI P-ST-01 and can be summarised as follows:

- To advise the NSAI regarding Irish Standards and Codes of Practice necessary for the transmission, distribution and utilisation of natural gas, LPG, LNG and renewable gases (biomethane, BioLPG and hydrogen) with particular regard to safety and to make recommendations as required;
- To draft appropriate documentation including Standards, Codes of Practice, Amendments and Safety Recommendations as necessary;
- To ensure that interested parties are consulted in the drafting of these Standards and Codes of Practice;
- To liaise with similar bodies in other EU countries and in particular CEN (European Committee for Standardisation) and ISO (International Organisation for Standardisation); and
- To advise NSAI on how to vote on draft European and International Standards.

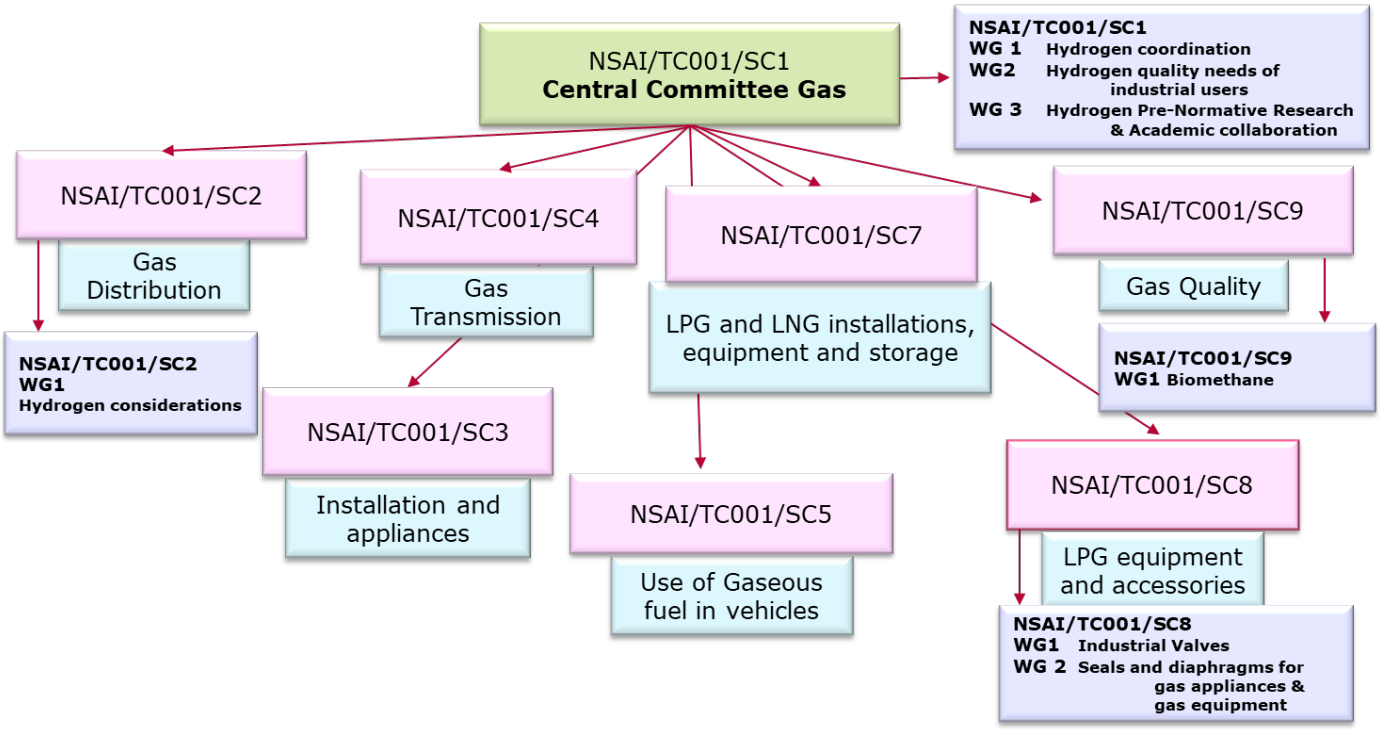
[1] The European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC) are two officially recognized European Standardization Organizations.

[2] The International Organization for Standardization (ISO) is an independent, non-governmental International Standardization Organization.

4 Structure and Membership

4.1 Structure

The Gas Technical Standards Committee, NSAI/ TC 001 is made up of a Central Committee governing 7 Sub-committees and 7 Working Groups as illustrated in the Figure below:



4.2 Members

The list below are the members for the year:

NSAI/TC 001/SC 1 CENTRAL COMMITTEE The Central Committee oversees the activities of each sub-committee. **Number of committee members:** 11 **Number of Plenary meetings in 2025: 4**	
Chairperson:	Liam Nolan, Gas Networks Ireland
Technical Secretary	Anne Coulson, NSAI
Hydrogen Standardisation Expert	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Represented by:	➢ All Chairs of each of the NSAI/TC 001 sub-committees ➢ Department of Climate, Energy and the Environment (DCEE) ➢ National Directorate for Fire and Emergency Management ➢ Department of Transport (DoT) ➢ Commission for Regulation of Utilities

NSAI/TC 001/SC 1 WG1 Hydrogen Coordination WG 1 supports the coordination of Hydrogen standardisation related information to be raised at the relevant NSAI/TC 001 sub-committees and manages the resolution of resulting actions and gaps in standardisation. Number of committee members: 10 Number of committee meetings in 2025: 0	
Chairperson:	Liam Nolan, Gas Networks Ireland
Technical Secretary	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Supporting Secretary	Anne Coulson, NSAI
Represented by:	➢ All Chairs of each of the GTSC sub-committees ➢ Liaison representative of NSAI/ETC/TC 006/SC 1 Potentially explosive atmospheres – Non electrical ➢ ESB

NSAI/TC 001/SC 1 WG 2– Hydrogen quality needs of industrial users WG 2 facilitates information sharing with a focus on industrial gas quality needs (including power generation) connected to gas infrastructure i.e. Transmission System Operator (TSO), Distribution System Operator (DSO) and the impact on their processes if hydrogen is used for combustion in the future, as well as other technical information deemed useful for this group of experts. WG 2 reports into the Central Committee and may join the subcommittees in the future where relevant. The WG is not mapped to any CEN or ISO Technical Committee. **Number of committee members:** 3	
Technical Secretary	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Supporting Secretary	Anne Coulson, NSAI
Represented by:	➢ SSE Thermal ➢ Bord Gáis Energy ➢ EIH2 ➢ ESB

NSAI/TC 001/SC 1/WG 3– Hydrogen Pre-Normative Research and Academic collaboration WG 3 facilitates the collaboration among academic experts and allows experts to keep abreast of Hydrogen Pre-Normative Research and general standardisation updates relevant to academics involved in hydrogen research. It is envisaged that as the industry develops, there will be further webinars communicating pre-normative research required and, as a result, membership for this e-committee may grow. WG 3 reports into the Central Committee and may join the subcommittees in the future where relevant. The WG is not mapped to any CEN or ISO Technical Committee. Number of committee members: 10	
Technical Secretary	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Supporting Secretary	Anne Coulson, NSAI
Represented by:	➢ Dublin City University (DCU) ➢ University College Dublin (UCD) ➢ Gas Networks Ireland (GNI) ➢ Ulster University ➢ ESB ➢ University of Limerick

NSAI/TC 001/SC 2 – Distribution NSAI/TC 001/SC 2 supports the development of national and international standards in the areas of the distribution of natural gas, LPG and renewables (biomethane, BioLPG and hydrogen) up to 16 bar. This includes services, distribution, PE pipe and fittings, and regulators. **Number of committee members:** 17 **Number of committee meetings:** 2	
Chairperson:	James Burchill, Gas Networks Ireland
Technical Secretary	Anne Coulson, NSAI
Hydrogen Standardisation Expert	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Represented by:	➢ Gas Networks Ireland (GNI) ➢ Liquid Gas Ireland (LGI) ➢ Commission for Regulation of Utilities (CRU) ➢ Jacobs Engineering ➢ Active Energy Control (AEC) ➢ Fingleton White ➢ Pipelife ➢ Ambient Energy
NSAI/TC 001/SC 2 WG 1 –Hydrogen Considerations A new Working Group was formed under NSAI/TC 001/SC 2. The Working Group comprises members of NSAI/TC 001/SC 2 and NSAI/TC 001/SC 4. **Scope:** Review of the implications of hydrogen on the design, construction, commissioning, operation, maintenance and alteration of polyethylene (PE) or metallic mains, for distribution at pressures up to and including 16 bar, i.e. I.S. 329. **Number of working group members:** 9 **Number of working group meetings:** 0	
Chairperson:	James Burchill, Gas Networks Ireland
Technical Secretary	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Represented by:	➢ Gas Networks Ireland (GNI) ➢ Fingleton White ➢ Commission for Regulation of Utilities (CRU) ➢ Pipeline Integrity Engineers (PIE)

NSAI/TC 001/SC 3 – Gas installation and appliances
NSAI/TC 001/SC 3 supports the development of national and international standards in the areas of installation and appliances for natural gas, LPG and renewables (biomethane, BioLPG and hydrogen) in domestic and non-domestic premises.

Number of committee members: 12

Number of observers: 4

Number of committee meetings in 2025: 6

Chairperson:	Liam Doyle, LGI
Technical Secretary	Anne Coulson, NSAI
Represented by:	➢ Gas Networks Ireland (GNI) ➢ Liquid Gas Ireland (LGI) ➢ Commission for Regulation of Utilities (CRU) ➢ Calor Gas ➢ Bord Gáis Energy ➢ SGS Ireland Limited ➢ Installer Review Panel (IRP) ➢ MecTec Gas Ltd. ➢ Solas ➢ Independents ➢ Safe Electric ➢ Heat Services Ltd ➢ NSAI/ETC/TC 002 (Liaison representative)

NSAI/TC 001/SC 4 - Transmission **NSAI/TC 001/SC 4** supports the development of national and international standards in the areas of the transmission of natural gas, LPG and renewables (biomethane, BioLPG and hydrogen) through pipelines and pipeline installations from 16 bar upwards. This includes compressor stations. **Number of committee members:** 15 **Number of observers: 4** **Number of committee meetings in 2025: 1**	
Chairperson:	Fergal O'Mahony, Fingleton White (outgoing) Johnny Fingleton, Fingleton White (incoming)
Technical Secretary	Anne Coulson, NSAI
Represented by:	➢ Gas Networks Ireland (GNI) ➢ Neodyne ➢ Commission for Regulation of Utilities (CRU) ➢ Electricity Supply Board (ESB) ➢ FIngleton White ➢ Independent (Pipeline Integrity Engineers (PIE)) ➢ Murphy Group

NSAI/TC 001/SC 5 - Use of gaseous fuel in vehicles NSAI/TC 001/SC 5 supports the development of national and international standards in the areas of the use of CNG, LNG and hydrogen in vehicles and associated refuelling stations. This excludes CNG, LNG and Hydrogen propulsion systems in vehicles. **Number of committee members:** 11 **Number of observers: 2** **Number of committee meetings in 2025: 2**	
Chairperson:	Emmet Cregan, Gas Networks Ireland
Technical Secretary	Anne Coulson, NSAI
Represented by:	➢ Air Products ➢ Bord na Mona ➢ Commission for Regulation of Utilities (CRU) ➢ Energia ➢ ESB ➢ Gas Networks Ireland (GNI) ➢ Independent ➢ Meath County Council,

NSAI/TC 001/SC 7– LPG & LNG installations, equipment and storage
NSAI/TC 001/SC 7 supports the development of national and international standards in the areas of LPG and LNG storage, LPG cylinder filling, LPG refuelling facilities and LNG onshore installations and equipment.

This excludes LNG and LPG propulsion systems in vehicles.

Number of committee members: 11

Number of committee meetings in 2025: 1

Chairperson:	Tim Richardson, Calor Gas
Technical Secretary	Anne Coulson, NSAI
Represented by:	➢ Calor Gas ➢ Cork County Council ➢ Gas Networks Ireland (GNI) ➢ Health and Safety Agency (HSA) ➢ Heat Services Ltd ➢ Liquid Gas Ireland (LGI) ➢ Molgas Energy Ireland ➢ Murphy Group

NSAI/TC 001/SC 8 - LPG equipment and accessories
NSAI/TC 001/SC 8 monitors Irish participation in the pressure vessel and the Transport of Dangerous Goods area at CEN (particularly CEN /TC 286) and ISO meetings.

Number of committee members: 7

Number of committee meetings in 2025: 1

Chairperson:	Paul O'Connell, Flogas Ireland Ltd
Technical Secretary	Anne Coulson, NSAI
Represented by:	➢ Flogas Ireland Ltd. ➢ Calor Gas ➢ Health and Safety Agency (HSA) ➢ BSB ➢ Heat Services Ltd ➢ Henkel Ireland

NSAI/TC 001/SC 8/WG 1– Industrial Valves

This Working Group supports the International standardisation of valves for all industrial applications and for all types of fluids, including : - steam traps; - valve actuator interface; - safety devices against excessive pressure (safety valves and bursting disks); - control valves (excluding the actuator element and their interface); but excluding: - sanitary valves (as defined by CEN/TC 164/WG 8).

Number of working group members: 1

NSAI/TC 001/SC 8/WG 2 – Seals and diaphragms for gas appliances and gas equipment

This Working Group supports the International standardisation of material requirements and test methods for seals and diaphragms for gas appliances and gas equipment.

Number of working group members: 1

NSAI/TC 001/SC 9– Gas Quality
NSAI/TC 001/SC 9 supports the development of national and international standards in the areas of gas quality including the specification and analysis of natural gas, LPG, renewables (biomethane, BioLPG) and hydrogen.

Number of committee members: 12

Number of observers: 4

Number of committee meetings in 2025: 0

Chairperson:	Michael Crowley, Gas Networks Ireland
Technical Secretary	Anne Coulson, NSAI
Represented by:	➢ Active Energy Control Ltd (AEC) ➢ Commission for Regulation of Utilities (CRU) ➢ Gas Networks Ireland (GNI) ➢ ESB ➢ Independent ➢ Flogas ➢ Renewable Gas Forum ➢ SGS (Gas Analysis Services) ➢ Vermillion Energy

- **NSAI/TC 001/SC 9 WG 1 Biomethane for injection in the natural gas network**
- NSAI/TC 001/SC 9 WG 1 has been established to support the development of national and international standards in the area of biomethane.

5 Summary of 2025 Activities

5.1 National Work

5.1.1 National Standards

The national work activities carried out by each of the NSAI/TC 001 sub-committees in 2025 included the publication of the following 3 standards :

Committee	Work item
NSAI/TC 001/SC 2 Gas distribution	• **I.S. 329:2024 + A1:2025,** *Gas distribution mains* – Published Q4 2025 to include hydrogen considerations.
NSAI/TC 001/SC 3 Gas installation and appliances	• **I.S. 813**, *Domestic gas installations* – – Published Q4 2025 after the review of 268 comments submitted during Public enquiry.
NSAI/TC 001/SC 7 LPG & LNG installations, equipment and storage	• **I.S. 3216**, *Code of practice for the Bulk Storage of Liquefied Petroleum Gas (LPG)* – Published Q4 2025

5.1.2 Hydrogen Standardisation Activities

Gas Networks Ireland continued their secondment of a Hydrogen Standardisation Expert to work on national and international standardisation activities relating to hydrogen.

In continuation with the secondment objectives, to enhance the capacity and hydrogen knowledge within the NSAI/TC 001 committee, the focus was on facilitating informed decision-making regarding hydrogen standardisation both nationally and internationally.

This capacity building primarily targets standardisation activities in CEN and ISO, related to hydrogen and hydrogen-natural gas blends (H2NG), in areas such as the safe operation of H2NG pipelines, gas quality and odorization, network equipment and materials, energy measurements, hydrogen injection into the gas network, hydrogen in transport, end-use equipment, and hydrogen production and storage.

As all gas standards will have to be revised to be adaptable for 100% hydrogen use or hydrogen blends with other types of gas, the Hydrogen Working Group was established under the supervision of NSAI/TC 001/ SC1 Central Committee Gas, to co-ordinate this work. The Technical Committees and Working Groups that were coordinated in 2025 are as follows:

- NSAI/TC 001/SC1 WG 1 – Hydrogen coordination
- NSAI/TC 001/SC 1 WG 2– Hydrogen quality needs of industrial users
- NSAI/TC 001/ SC1 WG3 – Hydrogen Pre-Normative Research and Academic collaboration
- CEN/CLC Hydrogen Coordination Group
- NSAI/TC 74 – Hydrogen Production & Storage Technologies
- NSAI/TC 001/ SC2 WG1 – Hydrogen considerations
- NSAI/TC 001/SC 5 – Use of gaseous fuel in vehicles

This focused effort from national Technical Committees and Working Groups, has enabled NSAI to actively monitor and participate in European and International hydrogen-related Technical Committees, Working

Groups and Coordination Groups. Figure 3 highlights the areas of the hydrogen value chain currently being overseen by both existing and newly formed national Technical Committees.

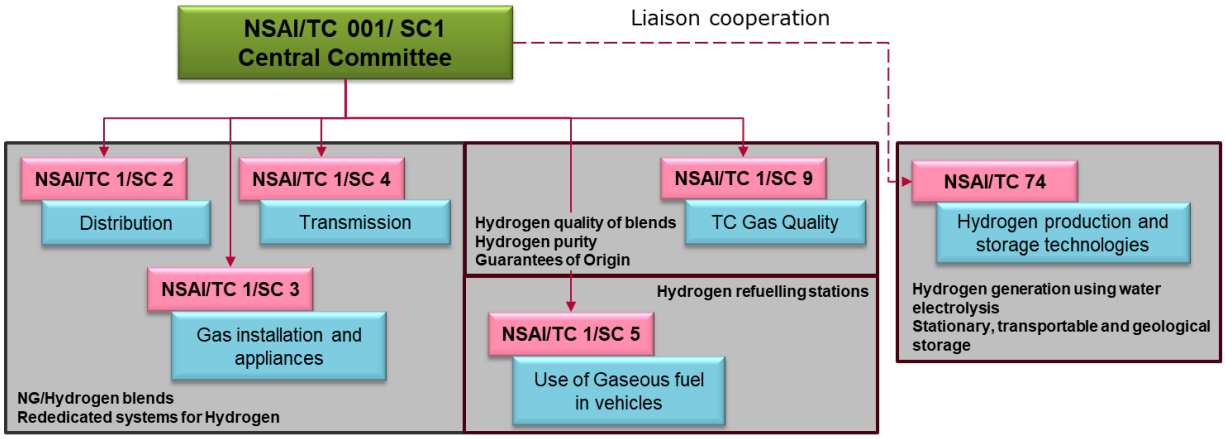


Figure 3. Hydrogen topics covered under scope of NSAI Technical Committees

An example of the extensive work currently being carried out at European level, and closely reviewed by the NSAI/TC 001, is the revision and development of standards on gas quality in existing gas systems to incorporate hydrogen and hydrogen quality in repurposed gas systems. This work responds to the EU hydrogen and decarbonised gas package and demonstrates the increased cooperation between the European Commission and the European Standardisation Organisations, CEN and CENELEC, to ensure an aligned and balanced approach in delivering the European Green Deal. Ali Ekhtiari, the secondee from Gas Networks Ireland (GNI), represented NSAI as the spokesperson for industrial applications in the CEN Hydrogen Coordination Group. His role focused on coordinating and linking Technical Committees (TCs) working on amending and revising standards to be adaptable with hydrogen. This coordination is crucial for ensuring that the standards developed are comprehensive and aligned with the evolving hydrogen landscape.

The equivalent level of cooperation is being reached at national level between NSAI standards and national policy makers. NSAI also participated on the DCEE Interdepartmental Hydrogen Task force.

Key milestones for Hydrogen Standardisation and policies 2025	
1. ***CEN Hydrogen Coordination Group***	

Coordinate and accelerate the implementation of the European Clean Hydrogen Alliance (ECH2A) Roadmap on Hydrogen Standardisation together with the responsible CEN and CENELEC TCs, by supporting the integration of roadmap topics in a work program of existing and new CEN and CENELEC TCs according to their scopes and by preparing a list of priority standards to be developed, revised and/or adopted.

The CEN/CLC Hydrogen Coordination Group is Divided into 6 Clusters:

1. Hydrogen production: Different technologies, pathways and input resources that establish hydrogen and its derivatives. The production stage includes the purification and compression and possibly storage at the production site. (Spokesperson: Nick Hart - BSI).

2. Hydrogen network: The network for hydrogen (≥98%) from the injection facility up to the inlet connection of gas appliances. This includes injection, transmission and distribution

systems (incl. liquid hydrogen importation terminals, pipelines), storage, compression, pressure regulation and measuring, installation and the related equipment, as well as related requirements on safety, gas quality, environment, emissions and management systems. (Spokesperson: André Pester - CEN/TC 234 Chair).

3. Industrial applications: Applications using hydrogen as a feedstock and/or energy for industrial processes. (Spokesperson: Ali Ekhtiari -NSAI).

4. Energy sector integration: Batch transport of Liquid hydrogen, compressed hydrogen, methanol, ammonia transported by ship, on rail or truck. Bunkering. Fuelling and usage of hydrogen in road vehicles, heavy-duty on and off-road vehicles, railways, maritime vessels and inland waterways, aviation. (Spokesperson: Jörg Seiffert - COG SG Chair).

5. Transport and Mobility: Activities to facilitate the integration of H2 in power and combined heat and power generation and flexibility of the grids (e.g., heat, electricity, gas) and storage of hydrogen. (Spokesperson: Laurent Schmitt - SF Rail Chair).

6. Building – Residential applications: Gas appliances using hydrogen and as covered by Gas Appliances Regulation EU 2016/426 and local power generation (e.g., fuel cells). (Spokesperson: Patrick Milin - COG G_U Chair).

5.1.3 International work and national areas of interest related to hydrogen standardisation activities

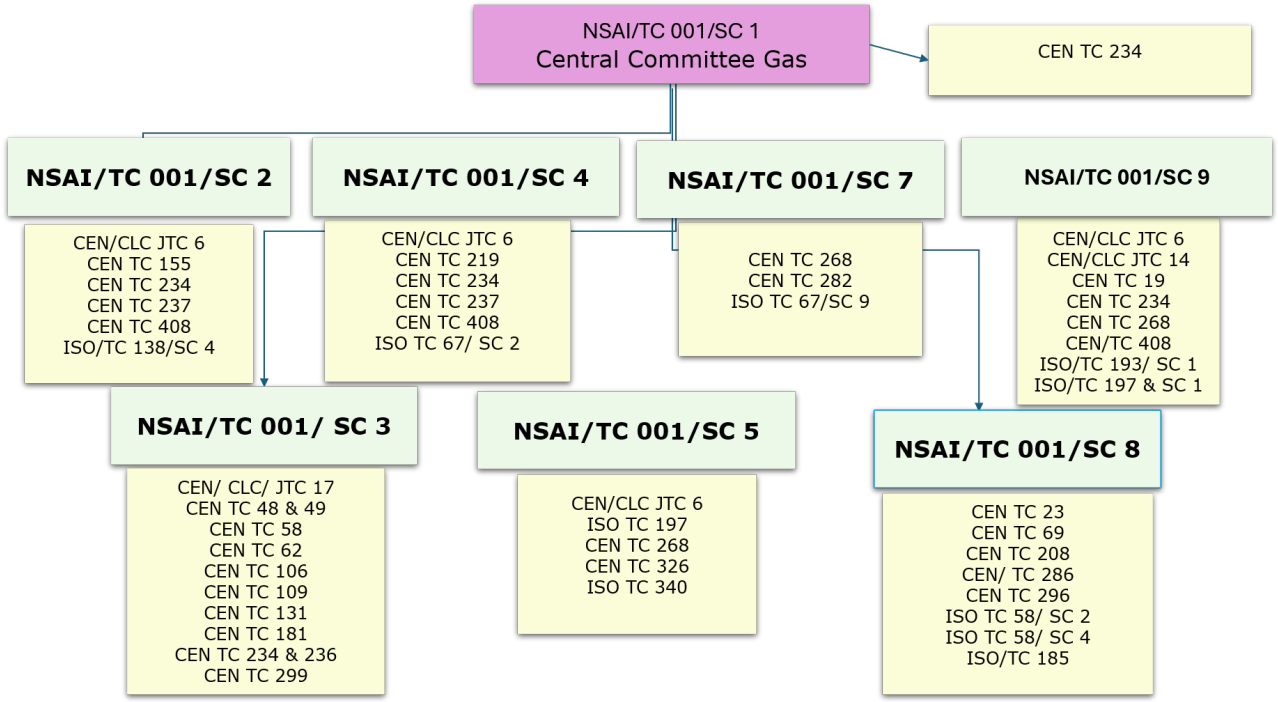
The relevant NSAI/TC 001 sub-committees continued to monitor and participate on the following European and international committees related to hydrogen standardisation activities:

Committee Reference	Committee title
ISO/TC 197	Hydrogen technologies
ISO/TC 197/SC 01	Hydrogen at scale and horizontal energy systems
CEN/TC 234	Gas infrastructure (and all Working Groups)
CEN/TC 268	Cryogenic Vessels (in particular, WG 5 on "Specific hydrogen technologies applications")
CEN/CLC/JTC 6	Hydrogen in energy systems
CEN-H2 COG	Hydrogen Coordination Group

In addition, hydrogen standardisation requests issued by the European Commission are being closely monitored by the NSAI/TC 001 committees.

5.2 International Work

NSAI TC 001 participates in and monitors, at various levels of engagement, the following CEN and ISO committees:



Committee Reference	Committee title
CEN/CLC/JTC 6	Hydrogen in energy systems
CEN/CLC/JTC 14	Energy management and energy efficiency in the framework of energy transition
CEN/CLC/JTC 17	Gas Appliances with Combined Heat and Power
CEN/TC 23	Transportable gas cylinders
CEN/TC 48	Domestic gas-fired water heaters
CEN/TC 49	Gas cooking appliances
CEN/TC 58	Safety and control devices for burners and appliances burning gaseous or liquid fuels
CEN/TC 62	Independent gas-fired space heaters
CEN/TC 69	Industrial Valves
CEN/TC 106	Large kitchen appliances using gaseous fuels
CEN/TC 109	Central heating boilers using gaseous fuels
CEN/TC 131	Gas burners using fans

Committee Reference	Committee title
CEN/TC 155 WG 12	Pressure systems of polyolefin material for gas supply, water supply and drainage and sewerage
CEN/TC 181	Appliances and leisure vehicle installations using liquefied petroleum gas and appliances using natural gas for outdoor use
CEN/TC 208	Elastomeric seals for joints in pipework and pipelines
CEN/TC 219	Cathodic protection
CEN/TC 234	Gas infrastructure
CEN/TC 236	Non industrial manually operated shut-off valves for gas and particular combinations valves-other products
CEN/TC 237	Gas meters
CEN/TC 268	Cryogenic vessels
CEN/TC 268/WG 5	Cryogenic vessels - Specific hydrogen technologies applications
CEN/TC 282	Refrigerated Liquefied Gases (RLG) SEVESO infrastructure design and operation
CEN/TC 286	LPG equipment and accessories
CEN/TC 296	Tanks for the transport of dangerous goods
CEN/TC 299	Gas-fired sorption appliances, indirect fired sorption appliances, gas-fired endothermic engine heat pumps and domestic gas-fired washing and drying appliances.
CEN/TC 326	Natural Gas Vehicles - Fuelling and Operation
CEN/TC 408	Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid
ISO/TC 58/SC 2	Gas cylinders - Cylinder fittings
ISO/TC 58/SC 4	Gas cylinders - Operational requirements for gas cylinders
ISO/TC 67/SC 2	Pipeline transportation systems
ISO/TC 67/SC 9	Production, transport and storage facilities for cryogenic liquefied gases
ISO/TC 138/SC 4	Plastics pipes and fittings for the supply of gaseous fuels
ISO/TC 185	Safety devices for protection against excessive pressure
ISO/TC 193/SC 1	Analysis of natural gas
ISO/TC 197	Hydrogen technologies
ISO/TC 197/SC 1	Hydrogen at scale and horizontal energy systems
ISO/TC 340	Natural gas fuelling stations

As part of the GTSC's ongoing review, each sub-committee reviewed its participation on international committees, where individual committee members were nominated to participate and represent NSAI.

5.2.1.1 CEN Technical Committees

CEN/CLC/JTC 006 - Hydrogen in energy systems

Irish representatives: 4

This Joint Technical Committee is responsible for standardization in the field of systems, devices and connections for the production, storage, transport and distribution, measurement and use of hydrogen from renewable energy sources and other sources, in the context of the European strategy for the development and acceptance of the hydrogen market.

The JTC has 3 Working Groups:

CEN/CLC/JTC 006/ WG 1 – Terms and Definitions

CEN/CLC/JTC 006/ WG 2 – Guarantees of Origin

CEN/CLC/JTC 006/ WG 3 – Hydrogen safety

CEN/CLC/JTC 006 published the following standards in 2025:

Standard Reference	Standard Title
EN ISO 22734-1:2025	Hydrogen generators using water electrolysis - Part 1: Safety (ISO 22734-1:2025)
EN ISO 24078:2025	Hydrogen in energy systems - Vocabulary (ISO 24078:2025)

The work programme for CEN/CLC/JTC 006 in 2025 was as follows:

Standard Reference	Standard Title
CEN/ISO/TS 15916	Hydrogen technologies - Basic considerations for the safety of hydrogen systems (ISO/TS 15916)
FprEN ISO 19870-1	Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 1: Emissions associated with the production of hydrogen up to the production gate
prEN ISO 19870-2	Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 2: Emissions associated with the conditioning and transport of gaseous and liquid hydrogen up to consumption gate
prEN ISO 19870-3	Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 3: Emissions associated with the production, storage and transport of ammonia up to delivery gate and the conversion of ammonia into hydrogen
T.B.C	Safe use of hydrogen in built constructions
prCEN/TS	Hydrogen Gas Safety in Enclosed Spaces

CEN/CLC/JTC 014 WG 5 Guarantees of Origin related to energy

Irish representative(s): 1

This Joint Technical Committee, CEN/CLC/JTC 14 is responsible for standardization in the field of energy management within the energy transition framework in close coordination with CEN/CENELEC sectorial strategy.

NSAI TC 001 is particularly monitoring the work related to Energy measurement and monitoring, CEN/CLC/JTC 14 WG 5 *Guarantees of origin related to energy*.

CEN/CLC/JTC 14 WG 5 published EN 16325:2025, Guarantees of Origin related to energy to reflect hydrogen and biomethane. This committee is working closely with CEN/CLC/JTC 6 Hydrogen in energy systems.

CEN/TC 49 – Gas cooking appliances

Dates: Plenary meeting held in Milan on 18th December 2025.

Irish representatives on committee: 1

The scope of CEN/TC 49 is standardisation in the area of gas cooking appliances: terminology, classification, constructional and performance characteristics, test methods and marking.

The Work programme of CEN TC 49 in 2025 was as follows::

CEN/TC 49 Work programme 2025	
Standard Reference	**Standard Title**
EN 30-1-1:2021+A1:2023/prA2	Domestic cooking appliances burning gas - Part 1-1: Safety - General
EN 30-2-2:2024/prA1	Domestic cooking appliances burning gas - Part 22: Rational use of energy Appliances having forced-convection ovens and/or grills
FprEN 15181	Measuring method of the energy consumption of gas fired ovens

CEN/TC 69 Industrial Valves

Dates: Plenary meeting held in Courbevoie on 25th and 26th June 2025.

Irish representatives on committee: 3

The scope of CEN/TC 69 is the standardization of valves for all industrial applications and for all types of fluids, including: - steam traps; - valve actuator interface; - safety devices against excessive pressure (safety valves and bursting disks); - control valves (excluding the actuator element and their interface); but excluding: - sanitary valves (as defined by CEN/TC 164/WG 8).

CEN TC 69 published the following standards in 2025:

Standard Reference	Standard Title
EN 15714-4:2025	Industrial valves - Actuators - Part 4: Hydraulic part-turn actuators for industrial valves - Basic requirements
EN 16668:2025	Industrial valves - Requirements and testing for metallic valves as pressure accessories

The Work programme of CEN TC 69 in 2025 was as follows:

CEN/TC 69 Work programme 2025	
Standard Reference	**Standard Title**
EN 19:2023/prA1	Industrial valves - Marking of metallic valves
FprEN 593	Industrial valves - Metallic butterfly valves
prEN ISO 6704 rev	Automatic steam traps — Classification
prEN 12266-1	Industrial valves - Testing of metallic valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements
prEN 12516-1 rev	Industrial valves - Shell design strength - Part 1: Tabulation method for steel valve shells
prEN 12516-3	Industrial valves - Shell design strength - Part 3: Experimental method
prEN 13397 rev	Industrial valves - Metallic diaphragm valves
EN ISO 15848-1:2015/prA2	Industrial valves — Measurement, test and qualification procedures for fugitive emissions — Part 1: Classification system and qualification procedures for type testing of valves — Amendment 2
prEN ISO 15848-2 rev	Industrial valves — Measurement, test and qualification procedures for fugitive emissions — Part 2: Production acceptance test of valves
FprEN 18191	Industrial valves - Additional requirements for metallic valves for hydrogen application
prEN 18376	Industrial valves - Metallic ball valves
prEN 18377	Industrial valves - Metallic globe valves
prEN 18378	Industrial valves - Metallic gate valves
prEN ISO 23632 rev	Industrial valves — Design validation-testing of valves
prEN ISO 28921-2 rev	Industrial valves — Isolating valves for low-temperature applications — Part 2: Type testing

CEN/TC 109 - Central heating boilers using gaseous fuels

Date: Plenary meeting held in Delft on 15th October 2025.

Irish representatives on committee: 1

The scope of CEN/TC 109 is all gas-fired central heating boilers, including the boilers of the condensing type, with or without integrated domestic hot water production, of all types and all nominal inputs, but only for the specific characteristics suited to the utilisation of gaseous fuels.

TC 109 published the following standard in 2025:

Standard Reference	Standard Title
EN 13203-1:2025	Gas fired domestic appliances producing hot water - Part 1: Assessment of performance of hot water deliveries

The Work programme of CEN TC 109 in 2025 was as follows:

CEN/TC 109 Work programme 2025	
Standard Reference	**Standard Title**
prEN 15502-2-7	Heating boilers - Part 2-7: Specific standard for gas-fired central heating units
CEN/TS 15502-3-3	Gas-fired central heating boilers - Part 3-3: 100 % Hydrogen - Expansion of EN 15502-2-1:2022
CEN/TS 15503-3-2	Gas-fired central heating boilers – Part 3-2: Expansion of EN 15502-2-2 to include H2NG-Y20 appliances using a pneumatic gas supply (PGS) control
prEN 15502-2-3 rev	Gas-fired central heating boilers - Part 2-3: Specific standard for hybrid units combining a gas-fired boiler and an electrical heat pump in a product

CEN/TC 155 Plastics piping and ducting systems

Date: Plenary meeting held in Lisbon 20th and 21st May 2025.

Irish representatives on CEN/TC 155 WG 12: 1

NSAI TC 001 is particularly monitoring the work of CEN/TC 155 WG 12 *Pressure systems of polyolefin material for gas supply, water supply and drainage and sewerage,* the scope of which is standardization of polyethylene piping systems for gas supply, water supply and drainage and sewerage and associated test methods.

TC 155 published the following standards in 2025 related to gaseous fuels:

Standard Reference	Standard Title
EN 1555-1:2025	Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 1: General
EN 1555-2:2025	Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 2: Pipes
EN 1555-3:2025	Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 3: Fittings
EN 1555-4:2025	Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 4: Valves
EN ISO 16486-2:2024/A11:2025	Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 2: Pipes
EN ISO 16486-3:2025	Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 3: Fittings (ISO 16486-3:2025)
EN ISO 16486-4:2025	Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 4: Valves (ISO 16486-4:2025)

The Work programme of CEN TC 155 in 2025 relevant to gas was as follows:

CEN/TC 155 Work programme 2025	
Standard Reference	**Standard Title**
FprEN ISO 11301-1	Piping systems for rehabilitation of underground gas supply networks - Part 1: Polyethylene (PE) material (ISO/FDIS 11301-1)
prEN ISO 11301-5	Piping systems for rehabilitation of underground gas supply networks -- Part 5: Unplasticized Polyamide (PA-U) material
FprCEN/TS 1555-7	Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 7: Assessment of conformity

CEN/TC 208 – Elastomeric seals for joints in pipework and pipelines

Date: Virtual Plenary meeting 15th of September 2025

Irish representatives on CEN/TC 208/ WG 4: 1

The scope of CEN/TC 208 is the standardization of material requirements and test methods for elastomeric seals for joints and diaphragms used in systems for the conveyance of fluids, for example, cold and hot water, waste water, gas, hydrocarbons and other fluids. NSAI TC 001 is particularly monitoring the work of CEN/TC 208/ WG 4 *Seals and diaphragms for gas appliances and gas equipment.*

The Work programme of CEN TC 208 in 2025 was as follows:

CEN/TC 208 Work programme 2025	
Standard Reference	**Standard Title**
prEN 377 rev	Lubricants for applications in appliances and associated controls using combustible gases except those designed for use in industrial processes
EN 549:2019+A2:2024/prA3	Rubber materials for seals and diaphragms for gas appliances and gas equipment

CEN/TC 234 – Gas infrastructure

Date: Hybrid Plenary meeting 26th and 27th March in Cyprus

Irish representatives: on committee: 15

The 15 national experts have been nominated to participate or monitor the work of the following CEN/TC 234 Working Groups:

WG 1 Gas installations WG 2 Gas supply systems up to and including 16 bar and pressure testing
WG 3 – Gas Transportation
WG 4 – Storage
WG 5 – Gas measuring
WG 6 – Gas pressure regulation
WG 7 – Gas compression
WG 10 – Service Lines – NSAI secretariat
WG 11 – Gas Quality
WG 12 – Safety and Integrity management
WG 13 – H2NG PNR Supervisory Group
WG 14 – Methane Emissions
WG 15 – Convenor's Advisory Group

The scope of TC 234 was extended in 2025 due to the disbandment of the CEN Sector Forum Gas infrastructure to include the coordination of gas infrastructure standardisation. The amended scope is Standardisation in the field of gas pipeline infrastructure for gaseous energy carriers and blends thereof from the input into the on-shore transmission network up to the inlet connection of gas appliances, which includes related functional requirements for injection, transmission, compression, pressure control, storage, blending, gas treatment, odorisation, distribution, measuring, and associated installation pipework, as well as related requirements such as safety, gas quality, sustainability, environment and emissions. Within the scope of CEN/TC 234, gaseous energy carriers and blends describe gases which are in the gaseous state when conveyed in the gas pipeline infrastructure such as hydrogen, hydrogen rich, and methane rich gases, dimethyl ether (DME) and propane and butanes used for combustion and/or as feedstock, excluding steam and compressed air. The scope also includes the coordination of questions concerning gas infrastructure in liaison with the Technical Committees in CEN and ISO, dealing with issues related to gas infrastructure stated above.

CEN/TC 234 is continuing to focus on the review of its existing standards with a view to address the introduction of Hydrogen in the gas infrastructure, as blended H2NG or as 100% hydrogen.

CEN/TC 234 published the following standards in 2025:

Standard Reference	Standard Title
EN 1776:2025	Gas infrastructure – Gas measuring systems – Functional Requirements
EN 16726:2025	Gas infrastructure - Quality of gas – Group H
EN 12186:2025	Gas infrastructure - Gas pressure control stations for transmission and distribution - Functional requirements

The national representatives provided input into their associated Working Groups and voted in the national SCs on the standards in the following work programme of CEN/TC 234.

CEN/TC 234 Work programme 2025	
Standard Reference	**Standard Title**
EN 15001-1:2023/prA1	Gas Infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 1: Detailed functional requirements for design, materials, construction, inspection and testing
prEN 1918-1 rev	Gas infrastructure - Underground gas storage - Part 5: Functional recommendations for surface facilities

CEN/TC 234 Work programme 2025	
Standard Reference	**Standard Title**
prEN 1918-2 rev	Gas infrastructure - Underground gas storage - Part 2: Functional recommendations for storage in oil and gas fields
prEN 1918-3 rev	Gas infrastructure - Underground gas storage - Part 3: Functional recommendations for storage in solution-mined salt caverns
prEN 1918-4 rev	Gas infrastructure - Underground gas storage - Part 4: Functional recommendations for storage in rock caverns
prEN 1918-5 rev	Gas infrastructure - Underground gas storage - Part 5: Functional recommendations for surface facilities
EN 17649:2022/prA1	Gas infrastructure - Safety Management System (SMS) and Pipeline Integrity Management System (PIMS) - Functional requirements
EN 1594:2024/prA1	Gas infrastructure - Pipelines for maximum operating pressure over 16 bar - Functional requirements
prEN 12327 rev	Gas infrastructure - Pressure testing, commissioning and decommissioning procedures - Functional requirements
prCEN/TS 12007-6 rev	Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 6: Specific functional recommendations for unplasticized polyamide (PA-U)
T.B.C	Gas infrastructure - Methane leak detection and repair programmes for gas transmission, distribution and storage systems and LNG terminals - Functional requirements
T.B.C	Gas infrastructure - Quality of gas - Aspects of rate of change of gas quality parameter on gas infrastructure and end-use
T.B.C	Gas infrastructure — Equipment to be installed and procedures to be used to prevent or minimise venting and flaring with limitations and feasibility criteria
T.B.C	Gas infrastructure — Methodology for methane emissions quantification for gas transmission, and distribution systems, underground gas storage and LNG terminals
T.B.C	Gas infrastructure - Quality of gas - Aspects of oxygen in the gas infrastructure and end-use
T.B.C	Gas infrastructure - Quality of gas - Hydrogen

CEN/TC 237 – Gas meters

Date: Plenary meeting held in Delft on 15th October 2025.

Irish representative: 1

The scope of CEN/TC 237 is the standardisation of the requirements for the construction, performance and safety of gas meters, including diaphragm, rotary displacement and turbine and electronic gas meters, and all associated conversion devices

TC 237 published the following standards in 2025

Standard Reference	Standard Title
EN 12480:2025	Gas meters - Rotary displacement gas meters
EN 17526:2021+A1:2025	Gas meter - Thermal-mass flow-meter based gas meter

The Work programme of CEN TC 237 in 2025 was as follows:

CEN/TC 237 Work programme 2025	
Standard Reference	**Standard Title**
prEN 1359 rev	Gas meters - Diaphragm gas meters
prEN 12405-2	Gas meters - Conversion devices - Part 2: Energy conversion
prEN 14236	Ultrasonic domestic gas meters
prEN 17526	Gas meter - Thermal-mass flow-meter based gas meter

CEN/TC 282

Date: Plenary meeting held in Pullach im Isartal on 22nd October 2025.

Irish representative: 1

The scope of CEN/ TC 282 is the development and maintenance of standardisation deliverables on safety risk assessment, design, operation and maintenance for those large scale and medium scale onshore and offshore infrastructures under the SEVESO III Directive and dealing with:

- Integration of storage for infrastructure for Refrigerated Liquefied Gases (RLG) as LNG, LH2, NH3, and Liquid CO2.
- Vaporisation of Refrigerated Liquefied Gases (RLG) as LNG, LH2, NH3, and Liquid CO2.
- Liquefaction of CO2.
- Loading/unloading installations for ships (LNG, LH2, NH3, CH3OH, and Liquid CO2), trains (LNG, LH2, NH3) and trucks (LNG, LH2, NH3, Liquid CO2) energy carriers.

Activities excluded are the design and operation of transport fuelling infrastructure, and unloading fuelling stations as these are managed by CEN/TC 326.

The TC mirrors ISO/TC 67/SC 9 for the above-mentioned field of activities.

TC 282 published the following standard in 2025

Standard Reference	Standard Title
CEN ISO/TS 16901:2025	Guidance on performing risk assessment in the design of onshore LNG installations including the ship/shore interface (ISO/TS 16901:2022)

The Work programme of CEN TC 282 in 2025 was as follows:

CEN/TC 282 Work programme 2025	
Standard Reference	**Standard Title**
prEN ISO 6338	Method to calculate GHG emissions at LNG plant (ISO 6338:2023)
prEN ISO 6338-1	Calculations of greenhouse gas (GHG) emissions throughout the liquefied natural gas (LNG) chain - Part 1: General (ISO 6338-1:2024)
prEN ISO 6338-2	Calculations of greenhouse gas (GHG) emissions throughout the liquefied natural gas (LNG) chain - Part 2: Natural gas production and transport to LNG plant (ISO 6338-2:2024)
prEN ISO 6338-4	Calculations of greenhouse gas (GHG) emissions throughout the liquefied natural gas (LNG) chain - Part 4: Shipping (ISO/DIS 6338-4:2026)
prEN ISO 6338-5	Calculations of greenhouse gas (GHG) emissions throughout the liquefied natural gas (LNG) chain - Part 5: Regasification (ISO/DIS 6338-5:2026)

CEN/TC 286 – Liquid gas equipment and accessories

The scope of CEN/TC 286 is standardization of all static and transportable pressure equipment for liquid gas (such as LPG, DME, and their blends, including from renewable sources) and their associated accessories. Scope to include design, manufacture, inspection and testing, and operational requirements, but excluding pipelines, and cartridges of 1 litre and below. The Secretariat of CEN/TC 286 is held by NSAI, with Mrs Anne Coulson as the Secretary and Mairead Duffy as Secretariat support.

CEN/TC 286 held its 41st Plenary Meeting on the 25th and 26th June 2025 as a hybrid meeting and hosted in Oslo. 34 committee members were in attendance, 14 in person and 16 online.

There were 11 WG meetings held throughout the year as follows:

WG 1 – LPG pressure vessels
0 meetings in 2025

WG 2 – Valves
3 meetings in 2025

WG 5 – Road Tankers
0 meetings in 2025

WG 6 – Automotive Systems
2 meetings in 2025

WG 7 – Operation of cylinders and tanks
5 meetings in 2025

WG 8 – LPG pipework
1 meeting in 2025

WG 9 – LPG propulsion systems for recreational craft
0 meetings in 2025

WG 10 – Environment
0 meetings in 2025

WG 11 – Terminology
0 meetings in 2025

CEN/TC 286 published the following standards in 2025:

Standard Reference	Standard Title
EN 16631:2025	LPG equipment and accessories - Pressure relief valves for LPG pressure vessels - Reconditioning requirements
CEN/TS 16765:2025	LPG equipment and accessories - Environmental and climate change considerations for CEN/TC 286 standards
CEN/TS 18209:2025	LPG equipment and accessories - Cylinders transportation racks controls
EN ISO 14245:2021/A1:2025	Gas cylinders - Specifications and testing of LPG cylinder valves - Self-closing - Amendment 1 (ISO 14245:2021/Amd 1:2025)
EN 12252:2022+A1:2025	LPG equipment and accessories - Equipping of LPG road tankers

The Work programme of CEN TC 286 in 2025 was as follows

Standard Reference	Standard Title
prEN 12805	LPG equipment and accessories - Automotive LPG components - Containers
prEN 13856	LPG equipment and accessories - Minimum requirements for the content of the user manual for automotive LPG systems
prEN 14570	LPG equipment and accessories - Equipping of overground and underground LPG vessels
prEN 14893 rev	LPG equipment and accessories - Transportable Liquefied Petroleum Gas (LPG) welded steel pressure drums with a capacity between 150 litres and 1 000 litres
prEN 14678-1 rev	LPG equipment and accessories - Construction and performance of LPG equipment for automotive filling stations - Part 1: Dispensers
prEN 13175 rev	LPG Equipment and accessories - Specification and testing for Liquefied Petroleum Gas (LPG) pressure vessel valves and fittings
prEN 13799 rev	LPG equipment and accessories - Contents gauges for Liquefied Petroleum Gas (LPG) pressure vessels
prEN 13953 rev	LPG equipment and accessories - Pressure relief valves for transportable refillable cylinders for Liquefied Petroleum Gas (LPG)

CEN/TC 326 – Liquid and compressed gases vehicles - Fuelling and Operation

Irish representative: 1

The scope of CEN/TC 326 is standardisation in fuelling infrastructure, operations & maintenance for fuelling infrastructure, certification of people working in the operation & maintenance of the fuelling infrastructure for CNG & LNG (fossil or biomethane and other renewable and low-carbon methane rich gases) for trucks, cars, maritime & inland navigation vessels (shore-to-ship bunkering), and trains,
Specifications and procedures for (Un)loading trucks transporting (bio)CNG, (bio)LNG, H2 and LH2.
Standardisation in fuel storage of (bio)CNG and (bio)LNG and equipment of storage of (bio)CNG and (bio)LNG
Activities excluded: Design, operation and maintenance of fuelling infrastructure for H2 (hydrogen) and LH2 (liquid hydrogen) for maritime & inland navigation vessels (shore to ship bunkering), road vehicles, trains, and aircrafts.

The Work programme of CEN TC 326 in 2025 was as follows:.

Standard Reference	Standard Title
prEN ISO 16923	Natural gas fuelling stations - CNG stations for fuelling vehicles (ISO/DIS 16923:2024)
prEN ISO 16924	Natural gas fuelling stations - LNG stations for fuelling vehicles (ISO/DIS 16924:2024)

A review of these documents was a major focus for NSAI TC 001/ SC 5 throughout 2025.

CEN/TC 408 – Biomethane and other renewable and low-carbon methane rich gases

Irish representative: 1

The scope of CEN/TC 408 is standardization in the following areas:

- specification for renewable and low-carbon methane rich gases for injection in the gas network,
- specification for natural gas, renewable and low-carbon methane rich gases and mixtures thereof as fuel for engines.
- necessary related methods for sampling, analysis, and testing.
- production of renewable and low-carbon methane rich gases (e.g. anaerobic digestion, pyrolysis, gasification, methanation, power-to-gas).
- Compressed and liquefied forms of these gases are also covered in the scope.

CEN/TC 408 is a mirror committee of ISO/TC 255 'Biogas, ISO/TC 193/SC 1/WG25, Biomethane, ISO/TC 193/WG8, Knock resistance, and ISO/TC 28/SC 4/WG17 Specifications of liquefied natural gas for marine applications.

CEN/TC 408 published the following standards in 2025:

Standard Reference	Standard Title
EN ISO 17507-1:2025	Natural gas - Calculation of methane number of gaseous fuels for reciprocating internal combustion engines - Part 1: MNc method (ISO 17507-1:2025)

Standard Reference	Standard Title
EN ISO 17507-2:2025	Natural gas - Calculation of methane number of gaseous fuels for reciprocating internal combustion engines - Part 2: PKI method (ISO 17507-2:2025)

5.2.1.2 ISO Technical Committees

ISO TC 58 SC 2 Cylinder fittings

ISO TC 58 SC 2 is a sub-committee of TC 58 - Gas cylinders, and is responsible for standardization in the areas of:

• The design and testing of valves, fittings and accessories (including flexible hoses), valve protection guards and caps, connection threads for gas cylinders and other transportable pressure receptacles, (e.g. bundles of cylinders).

•Test and calculation methods to determine the fire potential (including oxidizing ability), toxicity and tissue corrosiveness of gases and gas mixtures.

ISO TC 197 Hydrogen technologies

ISO TC 197 is responsible for standardisation in the field of systems and devices for the production, storage, transport, measurement and use of hydrogen.

This Technical Committee is responsible for producing the following standards:

Standard Reference	Standard Title
ISO/DIS 13985	Liquid hydrogen — Land vehicle fuel storage system
ISO/AWI 16110-2	Hydrogen generators using fuel processing technologies
ISO/DIS 17268-2	Gaseous hydrogen land vehicle refuelling connection devices — Part 2: Flow capacities greater than 120 g/s
ISO/DIS 19870-2	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain — Part 2: Emissions associated with the conditioning and transport of gaseous and liquid hydrogen up to consumption gate
ISO/DIS 19870-3	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain — Part 3: Emissions associated with the production, storage and transport of ammonia up to delivery gate and the conversion of ammonia into hydrogen
ISO/DIS 19870-4	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain — Part 4: Emissions associated with the storage and transport of hydrogen via LOHC
ISO/AWI 19880-1	Gaseous hydrogen — Fuelling stations — Part 1: General requirements
ISO/CD/TS 19880-10	Gaseous hydrogen — Fuelling stations — Part 10: Mobile fueling stations

Standard Reference	Standard Title
ISO/AWI 19880-11	Gaseous hydrogen — Fuelling stations — Part 11: Part 11: High pressure Liquid Hydrogen Pumps
ISO/DIS 19884-1	Gaseous hydrogen — Pressure vessels for stationary storage — Part 1: General requirements
ISO/DTR 19884-2	Gaseous hydrogen — Pressure vessels for stationary storage — Part 2: Material test data of class A materials (steels and aluminum alloys) compatible to hydrogen service
ISO/DTR 19884-3	Gaseous hydrogen — Pressure vessels for stationary storage — Part 3: Pressure cycle test data to demonstrate shallow pressure cycle estimation methods
ISO/CD 19885-2	Gaseous hydrogen — Fuelling protocols for hydrogen-fuelled vehicles — Part 2: Definition of communications between the vehicle and dispenser control systems
ISO/CD 19885-3	Gaseous hydrogen – Fuelling protocols for hydrogen fuelled vehicles — Part 3: Hydrogen fuelling protocols for road vehicles
ISO/AWI 19885-4	Gaseous hydrogen — Fuelling protocols for hydrogen fuelled vehicles — Part 4: Part 4: Validation of Hydrogen Fuelling Protocols Applied in a Dispenser
ISO/AWI 19886	Hydrogen technologies — General hydrogen station requirements
ISO/CD 19887-2	Gaseous Hydrogen — Fuel system components for hydrogen-fuelled vehicles — Part 2: Rail vehicles
ISO/AWI 19888-1	Hydrogen technologies – Aerial vehicles – Part 1 : Liquid Hydrogen Fuel Storage System
ISO/CD TS 19889-1	Hydrogen technologies — Interoperability — Part 1: Interface between gaseous hydrogen trailer and hydrogen fuelling station
ISO/WD TS 22734-2	Hydrogen generators using water electrolysis — Part 2: Testing guidance for performing electricity grid service
ISO/WD 24925	Cryo-compressed hydrogen refuelling protocol
ISO/WD 25578	Liquid hydrogen — Land vehicle refuelling connection devices
ISO/WD 26018	Liquid hydrogen — Fuel system components for hydrogen fuelled vehicles

A sub-committee, ISO/TC 197/SC 1, has been created. SC1 anticipates collaboration with CEN/TC 234 on addressing energy systems integrated with blended fuels (H2NG) gas networks. ISO/TC 197/SC 1 is developing the ISO standards on the methodology of determining the greenhouse gas emissions associated with hydrogen that are being adopted by CEN/CLC/JTC 6.

5.2.2 International standards

The main International work activities carried out by NSAI/ TC 001 in 2025 included the following:

Committee	Work item
CEN/CLC/JTC 6	NSAI TC 001 approved the new work item of CEN/CLC/JTC 6 in collaboration with ISO/ TC 197 to develop ISO/TS 15916 *Hydrogen technology – basic considerations for safety of hydrogen systems into a more comprehensive document including content on material compatibility and safety of liquid hydrogen systems*. NSAI TC 001 also approved new work items to adopt ISO 19870 parts 1 – 3 as CEN standards: EN ISO 19870-1 *Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 1: Emissions associated with the production of hydrogen to production gate* EN ISO 19870-2 *Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 2: Emissions associated with the conditioning and transport of gaseous and liquid hydrogen up to Consumption Gate* EN ISO 19870-3 *Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 3: Emissions associated with the production, storage and transport of ammonia up to delivery gate and the conversion of ammonia into hydrogen.* NSAI TC 001 approved the publication of EN ISO 24078 *Hydrogen in energy systems - Vocabulary*
CEN/TC 19	NSAI TC 001 approved the revision of EN 16709 *Automotive fuels - High FAME diesel fuel (B20 and B30) - Requirements and test methods*
CEN/TC 49	NSAI TC 001 approved the following CEN/TC 49 documents: EN 30-1-1:2021+A1:2023/prA2 – *Domestic cooking appliances burning gas - Part 1-1: Safety - General* (Enquiry draft) EN 15181 *Measuring method of the energy consumption of gas fired ovens* EN 613:2021/prA1 *Independent closed-fronted gas-fired type B11, type C11, type C31 and type C91 heaters*
CEN/TC 62	NSAI TC 001 approved the following CEN/TC 62 amendments: EN 509 *Decorative fuel-effect gas appliances* EN 613 *Independent closed-fronted gas-fired type B11, type C11, type C31 and type C91 heaters*
CEN/TC 155	NSAI TC 001 approved the following CEN/TC 155 standards: EN 12106 *Plastics piping systems - Polyethylene (PE), crosslinked polyethylene (PE-X) and unplasticized polyamide (PA-U) pipes - Test method for the resistance to internal pressure after application of squeeze-off* EN 1705 *Plastics piping systems - Thermoplastics valves - Test method for the integrity of a valve after an external blow.* EN ISO 11295 *Plastics piping systems used for the rehabilitation of pipelines - Classification and overview of strategic, tactical and operational activities (ISO/DIS 11295:2025)*

Committee	Work item
	EN 1555-4 *Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 4: Valves* EN ISO 15494 - *Plastics piping systems for industrial applications - Polybutene (PB), polyethylene (PE), polyethylene of raised temperature resistance (PE-RT), crosslinked polyethylene (PE-X), polypropylene (PP) - Metric series for specifications for components and the system (ISO/DIS 15494:2025)*
CEN/ TC 234	NSAI TC 001 approved the decision of CEN/TC 234 to revise a number of documents to include hydrogen: EN 12007-1-2012 *Gas infrastructure Pipelines for maximum operating pressure up to and including 16 bar Part 1: General functional requirements* EN 12007-2-2012 *Gas infrastructure Pipelines for maximum operating pressure up to and including 16 bar Part 2: Specific functional requirements for polyethylene* EN 12007-3-2015 *Gas infrastructure Pipelines for maximum operating pressure up to and including 16 bar Part 3: Specific functional requirements for steel* EN 12007-4-2015 *Gas infrastructure Pipelines for maximum operating pressure up to and including 16 bar Part 4: Specific functional requirements for renovation* EN 12186 *Gas infrastructure - Gas pressure control stations for transmission and distribution - Functional requirements* NSAI TC 001 voted to approve the A-Deviation for Ireland in the TC 234 standard EN 16726 *Gas infrastructure - Quality of gas - Group H*, the scope of which specifies gas quality characteristics, parameters and their limits, for gases classified as group H that are to be transmitted, injected into and withdrawn from storages, distributed and utilized. The A deviation related specifically to the concentration of oxygen and hydrogen in the gas infrastructure. NSAI TC 001 went on to approve the formal vote draft of EN 16726. NSAI TC 001 also approved new work items on technical reports, related to EN 16726, on oxygen in gas infrastructure and on the rate of change of the WOBBE index. NSAI TC 001 approved the adjustment of the scope of TC 234 following the disbandment of the CEN Sector forum gas to include coordination of the standardisation needed for gas infrastructure.
CEN TC 237	NSAI TC 001 approved the preliminary work item for the revision of EN 17526 *Gas meter – Thermal-mass flow-meter based gas meter*, the scope of which includes up to 20% hydrogen/gas blends, and 100% hydrogen. . The document is to serve as a template for other standards under the remit of CEN/T 237 covering non-conventional gases, including up to 20% hydrogen/gas blends, and 100% hydrogen. NSAI TC 001 also approved the publication of EN 12480 *Gas meters - Rotary displacement gas meters.*
CEN/TC 268	NSAI TC 001 approved the following CEN/TC 268 documents: NWI Adoption of ISO 25578 *Liquid hydrogen — Land vehicle refuelling connection devices*

Committee	Work item
	prEN 17124 *Hydrogen fuel - Product specification and quality assurance for hydrogen refuelling points dispensing liquid or gaseous hydrogen - Proton exchange membrane (PEM) fuel cell applications for vehicles* NSAI TC 001 also approved the decision by CEN/TC 268 to amend the scope of the work item on Outdoor refuelling points: dispensing liquid hydrogen and incorporating filling protocols to identify a focus on heavy-duty vehicles.
CEN/TC 286	NSAI/TC 001 voted to approve a change in title and scope of TC 286 to allow for DME to be blended with LPG. NSAI/TC 001 also voted to approve the following new technical specification: FprCEN/TS 18209 *LPG equipment and accessories - Cylinders transportation racks controls*
CEN/TC 326	NSAI/TC 001 approve the following CEN adoption of ISO standards: EN ISO 16923 Natural gas fuelling stations - CNG stations for fuelling vehicles EN ISO 16923 Natural gas fuelling stations - LNG stations for fuelling vehicles NSAI TC 001 also approved the proposed new scope for CEN/TC 326 - standardisation in fuelling infrastructure, operations & maintenance for fuelling infrastructure, certification of people working in the operation & maintenance of the fuelling infrastructure for CNG & LNG (fossil or biomethane and other renewable and low-carbon methane rich gases) for trucks, cars, maritime & inland navigation vessels (shore-to-ship bunkering), and trains, Specifications and procedures for (Un)loading trucks transporting (bio)CNG, (bio)LNG, H2 and LH2. Standardisation in fuel storage of (bio)CNG and (bio)LNG and equipment of storage of (bio)CNG and (bio)LNG.
ISO TC 67/SC 2	NSAI/TC 001/SC 4 voted to approve the following document: ISO/FDIS 14313 (Ed 3) *Oil and gas industries including lower carbon energy — Pipeline transportation systems — Pipeline valves*
ISO TC 138 SC 4	NSAI TC 001 approved the following draft international standards of ISO TC 138 SC 4 ISO/DIS 4437-1 (Ed 3) *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 1: General* ISO/DIS 4437-2 (Ed 3) *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 2: Pipes* ISO/DIS 4437-3 (Ed 3) *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 3: Fittings*
ISO/TC 197	NSAI TC 001 approved the following ISO/TC 197 documents: ISO/NP 19885-4: *Gaseous hydrogen — Fuelling protocols for hydrogen fuelled vehicles — Part 4:Validation of Hydrogen Fuelling Protocols Applied in a Dispenser* ISO/FDIS 13984: *Liquid hydrogen — Land vehicle fuelling protocol*

6 Work programme for 2026

- **The NSAI/TC 001 will undertake the following work in 2026:**

- **NSAI/TC 001** will continue to focus on the extension of its scope to include renewable gases and Hydrogen. Experts from within these areas will be invited to join the relevant sub-committees.

- **NSAI/TC 001/SC 2** will continue to monitor and review the development of European and International Standards in CEN/CLC JTC 6, CEN/TC 155, CEN/TC 234, CEN/TC 237, CEN/TC 408 and ISO/TC 138/SC 4.

- **NSAI/TC 001/SC 3** will continue to monitor standardisation activities under CEN/CLC JTC 17, CEN/TC 048, CEN/TC 049, CEN/TC 058, CEN/TC 62, CEN/TC 106, CEN/TC 109, CEN/TC 131, CEN/TC 181, CEN/TC 234, CEN/TC 236 and CEN/TC 299.

- **NSAI/TC 001/SC 3** will also begin the revision of I.S. 820:2019

- **NSAI/TC 001/SC4** will continue to monitor and review the development of European and International Standards in CEN/CLC/JTC 6, CEN/TC 219, CEN/TC 234, CEN/TC 237, CEN/TC 408 and ISO/TC 67/SC 2.

- **NSAI/TC 001/SC5** will continue to monitor and review the activities and work of CEN/CLC/JTC 6, CEN/TC 197, CEN/TC 268, CEN/TC 326, CEN/TC 408, ISO/TC 197, ISO/TC 340.

- **NSAI/TC 001/SC7** will continue to monitor and review the development of European and International Standards in CEN/TC 268, CEN/TC 282 and ISO TC 67/SC 9.

- **NSAI/TC 001/SC8** will continue to participate in the development of European Standards developed by CEN/TC 23, CEN/TC 69, CEN/TC 208, CEN/TC 286, CEN/TC 296, ISO TC58 SC2 & SC4 and ISO/TC 185.

- **NSAI/TC 001/SC9** will continue to monitor and review the development of European and International Standards in CEN/CLC/JTC 006, CEN/CLC/JTC 014, CEN/TC 19, CEN/TC 234, CEN/TC 268, CEN/TC 408, , ISO TC 193 SC1 and ISO TC 197 SC 1.

7 Active indigenous Irish standards within the scope of the GTSC

- **S.R. 12007-5:2016**
  Installation of Gas Service Pipes. Parts 1 and 2 (Fourth Edition)

- **SWiFT 8:2011**
  Specific requirements for electrical apparatus for the detection of Carbon Monoxide (CO) in domestic premises

- **I.S. 328:2021**
  Gas Transmission Pipelines and Pipeline Installations

- **I.S. 329:2024+ A1:2025**
  Gas distribution mains

- **I.S. 370:2016**
  Colour code for buried plastics piping

- **I.S. 813:2025**
  Domestic gas installations

- **I.S. 820:2019**
  Non-Domestic gas installations Edition 3

- **I.S. 822:2007**
  Gas pressure regulating installations on service pipelines

- **I.S. 3213:2020**
  Code of Practice for the Storage of LPG Cylinders and Cartridges

- **I.S. 3216:2025**
  Code of practice – Bulk storage of Liquefied Petroleum Gas (LPG)