

2024 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 Gas Technical Standards Committee (NSAI/TC 001) I am delighted to present our Annual Activity Report for 2024.

I would like to thank the many experts participating on our various committees and working groups and also to thank their companies for supporting the essential work of standards development. We have been greatly assisted by the NSAI team including Alice Hanly, Anne Coulson and our secondment from Gas Networks Ireland, Ali Ekhtiari.

Our Chair of TC 001/SC 9, *Gas Quality*, Michael Crowley was recognised in 2024 for his significant contribution to national and international standardisation over many years, being awarded the prestigious NSAI 1997 Award.

In the first quarter of 2024 we published the latest edition of I.S. 329 *Gas Distribution Mains*. We also established a new working group under NSAI/TC 001/SC 2 *Gas Distribution* to commence work on amending I.S. 329 *Gas Distribution Mains*, for the inclusion of hydrogen.

There was continued engagement with the academic and research community via the working group on Hydrogen Pre-Normative Research and Academic Collaboration.

Two new working groups were established under NSAI/TC 001/SC 8 *LPG Equipment and Accessories* to address international standardisation of 'Industrial Valves' and of 'Seals and diaphragms for gas appliances and gas equipment'.

A successful public enquiry for I.S. 813 *Domestic Gas Installations* saw a significant level of feedback from the industry. This best-selling standard plays a key role in the gas industry, underpinning the Registered Gas Installer scheme.

Committee members also maintained their active participation and engagement with technical committees at both a European and International level, influencing and contributing to the development of European standards and informing our approach to Irish technical standards.

In 2024 Gas Networks Ireland published an ambitious transformation Pathway to a Net Zero Carbon Network, highlighting how the national gas network will support Ireland's transition to a carbon-neutral economy by 2050. We also saw increased interest in BioLPG, a certified renewable gas from sustainably sourced waste materials.

With the support of NSAI, the members of the NSAI/TC 001 committees and working groups are playing a critical role in our transition to the energy system of the future and we look forward to continued progress in the years ahead.

2 Introduction

In 2024, NSAI/TC 001 welcomed 14 new members to the various committees and regretfully saw the departure of 2 members. This year, a total of 103 experts participated in the work of NSAI/ TC 001.

NSAI/ TC 001 monitors and participates in the work of approximately 24 CEN¹ and CENELEC Technical Bodies, 2 CEN CENELEC Joint Technical Committees and 7 ISO² Technical Bodies.

A draft of I.S. 813, *Domestic gas installations* was launched for public enquiry in 2023, during which 268 comments were received. NSAI/TC 001/SC 3 *Installation and appliances* is working through each comment received and agreeing on resolutions.

Work continued on the revision of I.S. 3216, *Code of practice - Bulk storage of liquefied petroleum gas (LPG)* with a draft agreed for public enquiry due to be launched in Q1 2025.

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, liquefied petroleum 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 are 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.

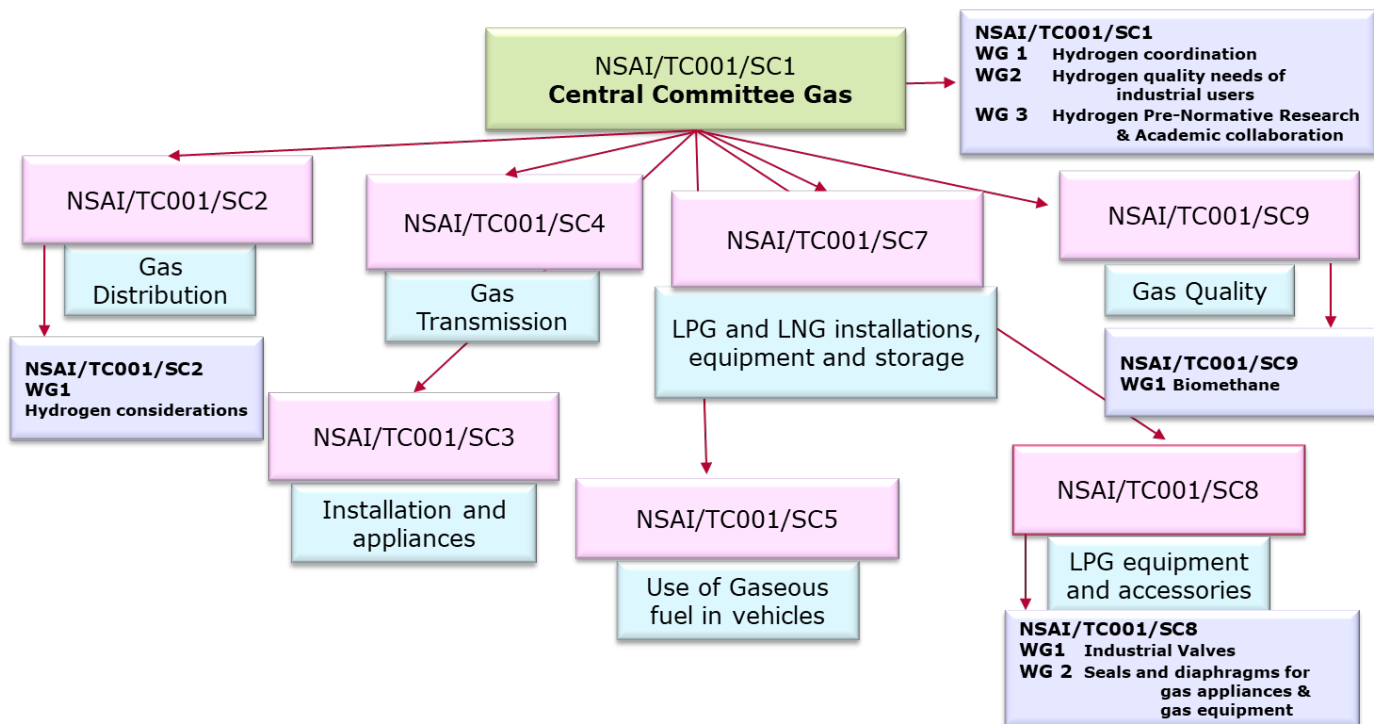
¹ The European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC) are two officially recognized European Standardization Organizations.

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 2024: 1	
Chairperson:	Liam Nolan, Gas Networks Ireland
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Hydrogen Standardisation Expert	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Represented by:	<ul style="list-style-type: none"> ➤ All Chairs of each of the NSAI/TC 001 sub-committees ➤ Department of, Environment, Climate and Communications (DCEE) ➤ Department of Housing, Local Government and Heritage (DHLGH) ➤ Department of Transport (DoT)

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: 9 Number of committee meetings in 2024: 0	
Chairperson:	Liam Nolan, Gas Networks Ireland
Technical Secretary	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Supporting Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ All Chairs of each of the GTSC sub-committees ➤ Liaison representative of NSAI/ETC/TC 006/SC 1 Potentially explosive atmospheres – Non electrical

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	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ SSE Thermal ➤ Bord Gáis Energy ➤ EIH2

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: 9

An Introductory/Training meeting was held on 30th July 2024 for new members.

Research discussions have been held with academics.

Technical Secretary	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Supporting Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ Dublin City University (DCU) ➤ University College Dublin (UCD) ➤ Gas Networks Ireland (GNI) ➤ Ulster University ➤ ESB ➤ Irish Research Centre

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: 15

Number of committee meetings: 4

Chairperson:	James Burchill, Gas Networks Ireland
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Hydrogen Standardisation Expert	Ali Ekhtiari, NSAI (Seconded from Gas Networks Ireland)
Represented by:	<ul style="list-style-type: none"> ➤ Gas Networks Ireland (GNI) ➤ Liquid Gas Ireland (LGI) ➤ Commission for Regulation of Utilities (CRU) ➤ Jacobs Engineering ➤ Calor Gas ➤ Active Energy Control (AEC) ➤ Fingleton White ➤ Pipelife

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:	<ul style="list-style-type: none"> ➤ 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: 22

Number of observers: 3

Number of committee meetings in 2024: 12

Chairperson:	Liam Doyle, LGI
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ Gas Networks Ireland (GNI) ➤ Liquid Gas Ireland (LGI) ➤ Commission for Regulation of Utilities (CRU) ➤ Calor Gas ➤ Bord Gáis Energy ➤ Flogas Ireland Ltd ➤ SGS Ireland Limited ➤ Installer Review Panel (IRP) ➤ MecTec Gas Ltd. ➤ Solas ➤ Glen Dimplex ➤ Independents ➤ Safe Electric ➤ 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: 18

Number of observers: 1

Number of committee meetings in 2024: 2

Chairperson:	Fergal O'Mahony, Fingleton White
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ 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: 19

Number of committee meetings in 2024: 4

Chairperson:	Emmet Cregan, Gas Networks Ireland
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ Air Products ➤ Bord na Mona ➤ Bus Eireann ➤ Commission for Regulation of Utilities (CRU) ➤ Energia ➤ ESB ➤ Gas Networks Ireland (GNI) ➤ Health and Safety Agency (HSA) ➤ Hydrogen Ireland ➤ Independent ➤ Meath County Council, Fire Service

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: 12

Number of committee meetings in 2024: 1

Chairperson:	Tim Richardson, Calor Gas
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ Calor Gas ➤ Chief Fire Officers Association ➤ Cork County Council ➤ Flogas Ireland Ltd. ➤ Gas Networks Ireland (GNI) ➤ Health and Safety Agency (HSA) ➤ 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: 10

Number of committee meetings in 2024: 4

Chairperson:	Paul O'Connell, Flogas Ireland Ltd
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ Flogas Ireland Ltd. ➤ Calor Gas ➤ Health and Safety Agency (HSA) ➤ BSB ➤ 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: 17

Number of observers: 4

Number of committee meetings in 2024: 4

Chairperson:	Michael Crowley, Gas Networks Ireland
Technical Secretary	Alice Hanly, NSAI (outgoing) Anne Coulson, NSAI (incoming)
Represented by:	<ul style="list-style-type: none"> ➤ Active Energy Control Ltd (AEC) ➤ Commission for Regulation of Utilities (CRU) ➤ Gas Networks Ireland (GNI) ➤ ESB ➤ Electricity Association of Ireland (EAI) ➤ Independents ➤ Flogas ➤ Renewable Gas Forum ➤ SGS (Gas Analysis Services) ➤ Vermillion Energy
<ul style="list-style-type: none"> ➤ 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. 	

6 Summary of 2024 Activities

6.1 NSAI 1997 Award awarded to Michael Crowley, Chair of NSAI/TC 001/SC 9



Michael Crowley

Chair of TC 001/SC 9

The NSAI 1997 Award was awarded to Michael Crowley at the NSAI Standards forum and awards ceremony in October 2024.

The 1997 Award is given to members of NSAI Committees in recognition of their significant contribution to national and international standardisation over many years. The 1997 Award was introduced following the establishment of NSAI by the National Standards Authority of Ireland Act, 1996.

Micheal has been involved in standardisation work for over 10 years. As well as being Chair of NSAI/TC 001/SC 9, Gas Quality, he represents NSAI on a number of international committees. Michael volunteered to participate on various hydrogen related committees and groups to keep the NSAI/TC 001 subcommittees up to speed on the developments in this new area for the GTSC.

Michael was also one of the speakers in a webinar that was provided by NSAI to the Institute of Engineering and Technology and Engineers Ireland members in 2022, where he outlined the workings of NSAI/TC 001/SC 9, and the technical challenges discussed in the committee with regards to hydrogen on the gas network. This webinar has resulted in further applications of interest from experts seeking to participate in hydrogen related standardisation activities.

6.2 National Work

6.2.1 National Standards

The national work activities carried out by each of the NSAI/TC 001 sub-committees in 2024 included the following:

Committee	Work item
NSAI/TC 001/SC 2 Gas distribution	<ul style="list-style-type: none"> I.S. 329, Gas distribution mains – Published Q1 2024 Working Group 1 is working on an amendment to I.S. 329 to include hydrogen considerations.
NSAI/TC 001/SC 3 Gas installation and appliances	<ul style="list-style-type: none"> I.S. 813, Domestic gas installations – NSAI/TC 001/SC 3 is progressing through the 268 comments submitted during Public enquiry.
NSAI/TC 001/SC 7 LPG & LNG installations, equipment and storage	<ul style="list-style-type: none"> I.S. 3216, Code of practice for the Bulk Storage of Liquefied Petroleum Gas – Work continued on the revision of I.S. 3216. The Public enquiry draft of I.S. 3216 was agreed by the members of NSAI/TC 001/SC 7 and Public enquiry, will be launched in Q1 2025.

6.2.2 Hydrogen Standardisation Activities

In June 2021, NSAI and Gas Networks Ireland started a two-year secondment to work on standardisation activities relating to hydrogen. Ali Ekhtiari was appointed as a Hydrogen Standardisation Expert from May 2024, taking over the role from Niamh Conroy.

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 2024 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
- NSAI/TC 75 – Carbon Capture, Transportation and Storage
- NSAI/TC 76 – Biogas (secretary support)

Building on the foundational work carried out by the Hydrogen Standardisation Expert, NSAI successfully recruited approximately 31 committee members with a keen interest or expertise in hydrogen. This focused effort, combined with the growing expertise within the relevant national Technical Committees, has enabled NSAI to actively monitor and participate in European and International hydrogen-related committees and working groups. Figure 3 highlights the areas of the hydrogen value chain currently being overseen by both existing and newly formed national technical committees.

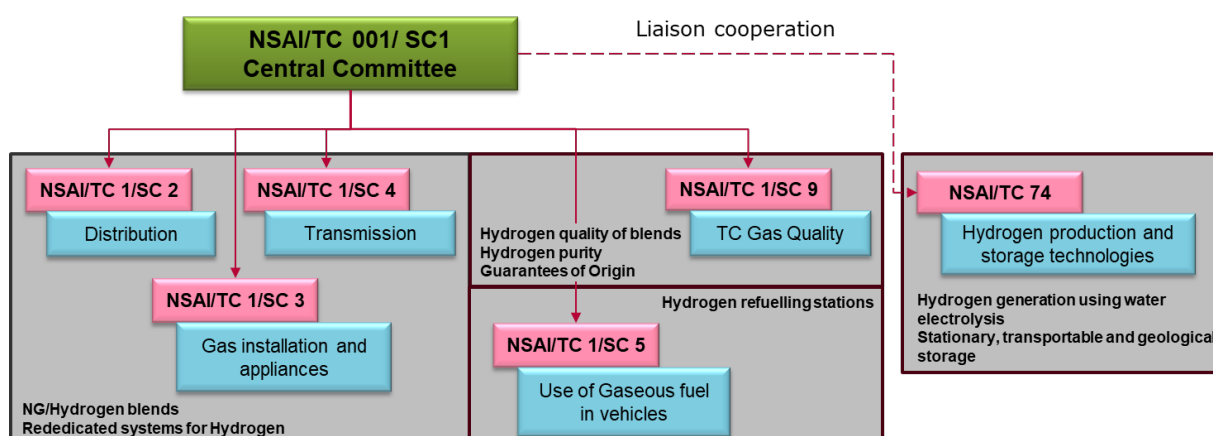


Figure 3. Hydrogen topics covered under scope of NSAI Technical Committees

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), represents NSAI as the spokesperson for industrial applications in the CEN Hydrogen Coordination Group. His role focuses 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. Ali Ekhtiari also represents NSAI at the DCEE Interdepartmental Hydrogen Working Group. According to the hydrogen program planned by DCEE, NSAI will participate in WG 3, Safety and Standards, of the program.

Key milestones for Hydrogen Standardisation and policies 2024

1. Establishing Hydrogen Coordination Group by CEN

September 2024

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 ($\geq 98\%$) 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).



Attendees of “Hydrogen Coordination Group” in Berlin, October 2024

2. Publication of Climate Action Plan 2024

December 2024

The Climate Action Plan 2024 emphasises the critical role of hydrogen in Ireland's transition to a low-carbon economy. It outlines strategies for integrating hydrogen into various sectors, including transport, industry, and energy. The plan highlights the development of hydrogen infrastructure, support for research and innovation, and the establishment of regulatory frameworks to ensure safe and efficient hydrogen use. Additionally, it focuses on fostering public-private partnerships and aligning national efforts with European initiatives to accelerate the adoption of hydrogen technologies and contribute to achieving Ireland's climate goals. The plan aims to increase hydrogen production capacity to 2 GW by 2030 and reduce greenhouse gas emissions by 51% by 2030, in line with the EU's Fit for 55 package.

NSAI is represented on the Interdepartmental Hydrogen Working Group steered by the Department of Environment, Climate and Communication (DECC). NSAI had the opportunity to inform on NSAI's role and hydrogen related standardisation activities. As a result, Ireland's first Hydrogen Strategy includes emphasis on the relationship between a robust regulatory framework and standards.

1. 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 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")

Committee Reference	Committee title
CEN/CLC/JTC 6	Hydrogen in energy systems
CEN-H2 CG	Hydrogen Coordination Group

The current EN gas standards are being reviewed for the implication for hydrogen blending by the following CEN TC 234 working groups. These are listed in the table below and the list is not exhaustive.

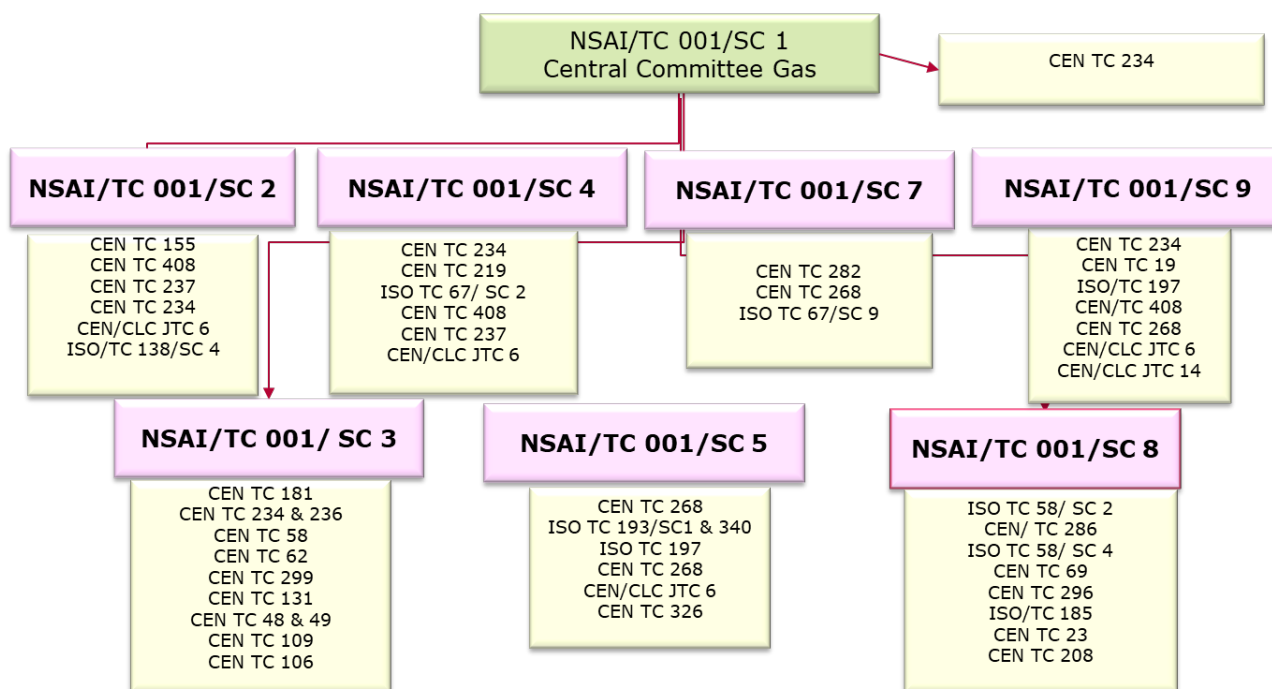
CEN TC234 Gas Working Group	Gas Standards requiring revision for the inclusion of hydrogen	Update 2024
WG1 (Gas Installation in buildings)	EN 1775:2007	
WG2 (Pipelines with MOP ≤16 bar)	EN 12007 (Parts 1 to 4) EN 12327:2012	Hydrogen amendments in all EN 12007 series have been started in January 2025
WG3 (pipelines with MOP >16 bar)	EN 1594:2023 EN 12732:2021 prEN 17674	Published 2023, now includes hydrogen considerations The standard number for the conversion of pipelines with a maximum operating pressure over 16 bar for the use of hydrogen is prEN 17674. This standard is currently under development and focuses on ensuring the safe and efficient adaptation of existing pipelines for hydrogen transport
WG 4 (Underground storage)	EN 1918 (Part 1 to 5)	Under revision, to include hydrogen considerations
WG5 (Gas Measuring)	EN 1776:2015	Under revision
WG6 (Gas Pressure Regulation)	EN 12186:2014 EN 12279:2000+A1:2005 prEN 17928-1, prEN 17928-2, prEN 17928-3	Under review New standards under development for injection plants for natural gas, hydrogen and biomethane
WG 7 (Gas Compressor)	EN 12583:2022	Under amendment
WG 8 (Industrial Piping)	EN 15001-1:2023 EN 15001-2:2023	Published in 2023
WG 10 (Service Lines)	EN 12007-5:2014	Under revision, to include hydrogen considerations

CEN TC234 Gas Working Group	Gas Standards requiring revision for the inclusion of hydrogen	Update 2024
WG 11 (Gas Quality)	EN 16726:2015+A1:2018 CEN/TS 17977:2023	Under revision New Technical Specification on Quality of gas - Hydrogen used in rededicated gas systems
WG 12 (SMS and PIMS)	EN 17649:2022	Published in 2022, now includes hydrogen considerations

In addition, hydrogen standardisation requests issued by the European Commission are being closely monitored by the NSAI/TC 001 committees. Most recently, a Technical specification, TS 19875-1 *Gas Transmission Pipelines* was issued addressing 10% hydrogen blend with natural gas in existing transmission pipelines. The technical details are published in CEN TC 234 WG3. Methodology for repurposing natural gas pipelines for transportation of hydrogen-blended natural gas up to 10% of hydrogen by volume.

6.3 International Work

The GTSC participate and monitor, at various levels of engagement, the following CEN and ISO committees:



Committee Reference	Committee title
CEN/TC 23/SC 1	Cylinder design
CEN/TC 23/SC 3	Operational requirements
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
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

Committee Reference	Committee title
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	Installation and equipment for LNG
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
CEN/CLC/JTC 006	Hydrogen in energy systems
ISO/TC 058/SC 02	Gas cylinders - Cylinder fittings
ISO/TC 058/SC 04	Gas cylinders - Operational requirements for gas cylinders
ISO/TC 067/SC 02	Pipeline transportation systems
ISO/TC 067/SC 09	Liquefied natural gas installations and equipment
ISO/TC 138/SC 04	Plastics pipes and fittings for the supply of gaseous fuels
ISO/TC 185	Safety devices for protection against excessive pressure
ISO/TC 193/SC 01	Analysis of natural gas
ISO/TC 197	Hydrogen technologies
ISO/TC 197/SC 01	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.

6.3.1.1 CEN Technical Committees

CEN/TC 234 – Gas infrastructure

Date: Hybrid Plenary meeting 17th and 18th April in Leipzig

Irish representatives: 5, including secretary support for WG 10

The scope of TC 234 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. It includes related functional requirements for injection, transmission, compression, pressure control, storage, blending, gas treatment, odourisation, 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 TC is continuing to focus on the review of its existing standards with a view to address the introduction of Hydrogen, as blended H2NG or as 100% hydrogen.

8 national experts have been nominated to participate or monitor the work of the following CEN/TC 234 working groups:

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

The national representatives provided input into their associated working group on the standards drafting of the following work programme of CEN/TC 234. The GTSC sub-committees have been paying particular attention to CEN/TC 234 related standardisation, the documents are revised to reflect blending of hydrogen in the existing gas infrastructure.

CEN/TC 234 published the following standards in 2024:

Standard Reference	Standard Title
EN 17928-1:2024	Gas infrastructure – Part 1: General requirements
EN 17928-2:2024	Gas infrastructure - Injection stations - Part 2: Specific requirements regarding the injection of biomethane
EN 17928-3:2024	Gas infrastructure - Injection stations - Part 3: Specific requirements regarding the injection of hydrogen
EN 12007-5:2024	Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 5: Service lines - Specific functional requirements

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Standard Reference	Standard Title
FpCEN/TS 17874	Methodology for methane emissions quantification for gas transmission, distribution and storage systems and LNG terminals
prEN 1776	Gas infrastructure - Gas measuring systems - Functional requirements
prEN 16726	Gas infrastructure - Quality of gas - Group H
prEN 1918-1 rev	Gas infrastructure - Underground gas storage - Part 5: Functional recommendations for surface facilities
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
prEN 12186	Gas infrastructure - Gas pressure control stations for transmission and distribution - Functional requirements
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 — Methodology for methane emissions quantification for gas transmission, and distribution systems, underground gas storage and LNG terminals
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

CEN/TC 49 – Gas cooking appliances

Dates: Plenary meeting held in Milan on 7th November 2024.

Irish representatives: 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. CEN TC 49 published the following standards in 2024:

Standard Reference	Standard Title
EN 30-2-2:2024	Domestic cooking appliances burning gas - Part 2-2: Rational use of energy - Appliances having forced-convection ovens and/or grills
EN 30-2-1:2024	Domestic cooking appliances burning gas - Part 2-1: Rational use of energy - General
EN 30-1-2:2023+A1:2024	Domestic cooking appliances burning gas - Part 1-2: Safety - Appliances having forced-convection ovens

CEN/TC 69 Industrial Valves

Dates: Plenary meeting held in Paris on 25th June 2024.

Irish representatives: 1

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 49 published the following standards in 2024:

Standard Reference	Standard Title
EN ISO 4126-10:2024	Safety devices for protection against excessive pressure - Part 10: Sizing of safety valves and bursting discs for gas/liquid two-phase flow (ISO 4126-10:2024)
EN 17955:2024	Industrial valves - Functional safety of safety-related automated valves
EN ISO 8233:2024	Thermoplastics valves - Torque - Test method (ISO 8233:2024)
EN ISO 5640:2024	Industrial valves - Mounting kits for part-turn valve actuator attachment (ISO 5640:2024)

CEN/TC 109 - Central heating boilers using gaseous fuels

Date: 17th October 2024

Irish representatives: 2

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 standards in 2024:

Standard Reference	Standard Title
EN 15502-2-2:2024	Gas-fired central heating boilers - Part 2-2: Specific standard for type B1 appliances
CEN/TS 15502-3-1:2024	Gas-fired central heating boilers - Part 3-1: H2NG and ACCF - Expansion of EN 15502-2-1:2022
EN 15502-2-1:2022+A1:2023/AC:2024	Gas-fired central heating boilers - Part 2-1: Specific standard for type C appliances and type B2, B3 and B5 appliances of a nominal heat input not exceeding 1 000 kW

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

Date: Virtual Plenary meeting 12th of September 2024

Collaboration of CEN/TC 208 with CEN/TC 286 was discussed at the plenary meeting with regard to the addition of DME to CEN standards. The TC 286 liaison confirmed that the definition of 'LPG' is being changed from 'Liquefied Petroleum Gas' so 'LPG' can cover new materials such as DME.

This 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.

The committee is currently working on the revision of EN 549:2019+A2:2024 *Rubber materials for seals and diaphragms for gas appliances and gas equipment*. GTSC TC 9 voted to revise EN 549:2019+A2:2024 in the CEN systematic review and submitted comments on the document.

CEN/TC 237 – Gas meters

Date: 29th October 2024 in Delft (Netherlands)

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. CEN/TC 237 published EN 12261:2024 Gas meters - Turbine gas meters.

CEN/TC 326 – Natural Gas Vehicles - Fuelling and Operation

Date: Virtual Plenary meeting 12th September 2024

Irish representative: 1

The scope of CEN/TC 326 is standardisation in the design, construction, operation, inspection, safety and maintenance of fuelling stations and facilities for natural gas vehicles (NGV's). It includes natural gas and biomethane in compressed (CNG) or liquefied (LNG) form and covers the operational aspects of NGV's during their life cycle.

CEN/TC 326 published the following standards in 2024.

Standard Reference	Standard Title
EN 17921:2024	Natural gas fuelling stations - LNG unloading connector
EN 17922:2024	Natural gas fuelling stations - LNG unloading stop system
EN 17932:2024	Natural gas vehicles - Requirements for liquefied natural gas vehicle (LNGV) workshops and the management of liquefied natural gas (LNG) vehicles
EN 17963:2024	Natural gas vehicles - LNG vehicle fuelling procedures

CEN/TC 326 is currently working on the following standards.

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 will be a major focus for GTSC TC 6.

CEN/TC 408 – Natural Gas and biomethane for use in transport and biomethane for injection in the natural gas grid

Date: Virtual Plenary 29th May 2024

Irish representative: 1

The scope of CEN/TC 408 s 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 engine. 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 2024:

Standard Reference	Standard Title
EN ISO 2611-1:2024	Analysis of natural gas - Halogen content of biomethane - Part 1: HCl and HF content by ion chromatography (ISO 2611-1:2024)
EN ISO 2615:2024	Analysis of natural gas - Biomethane - Determination of the content of compressor oil (ISO 2615:2024)
EN ISO 2620:2024	Analysis of natural gas - Biomethane - Determination of VOCs by thermal desorption gas chromatography with flame ionization and/or mass spectrometry detectors (ISO 2620:2024)

CEN/TC 286 – LPG equipment and accessories

The scope of CEN/TC 286 is Standardisation of all pressure equipment and transport pressure equipment for liquefied petroleum gas, including associated accessories and including the 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 40th Plenary Meeting on the 5th and 6th June 2024 as a hybrid meeting and hosted in Madrid. 34 committee members were in attendance, 15 in person and 19 online.

There were 9 WG meetings held throughout the year as follows:

WG 1 – LPG pressure vessels

0 meetings in 2024

WG 2 – Valves

1 meeting in 2024

WG 5 – Road Tankers

0 meetings in 2024

WG 6 – Automotive Systems

2 meetings in 2024

WG 7 – Operation of cylinders and tanks

4 meetings in 2024

WG 8 – LPG pipework

0 meetings in 2024

WG 9 – LPG propulsion systems for recreational craft

0 meetings in 2024

WG 10 – Environment

1 meeting in 2024

WG 11 – Terminology

1 meeting in 2024

CEN/TC 286 progressed 12 work items in 2024, including the completion and publication of 4 standards.

The following standards were published in 2024:

Standard Reference	Standard Title
EN 14071:2024	LPG equipment and accessories - Pressure relief valves for LPG pressure vessels - Ancillary equipment
EN 14129:2024	LPG Equipment and accessories - Pressure relief valves for LPG pressure vessels
EN ISO 15995:2021/A1:2024	Gas cylinders - Specifications and testing of LPG cylinder valves - Manually operated - Amendment 1 (ISO 15995:2021/Amd 1:2024)
EN16728:2016+A2:2020/AC:2024	LPG equipment and accessories - Transportable refillable LPG cylinders other than traditional welded and brazed steel cylinders - Periodic inspection

EN 14071, and EN 14129 are due to be referenced in the Official Journal of the European Union (OJEU) in support of Directive 2014/68/EU on Pressure Equipment. prEN 14570 will also be referenced in the (OJEU) and is due to be published in 2025.

TC 286 will be working on the following standards in 2025:

Standard Reference	Standard Title
CEN/TS 16765	LPG equipment and accessories - Environmental and climate change considerations for CEN/TC 286 standards
EN 16631	LPG equipment and accessories - Pressure relief valves for LPG pressure vessels - Reconditioning requirements
prEN 14570	LPG equipment and accessories - Equipping of overground and underground LPG vessels
EN ISO 14245:2021/FprA1	Gas cylinders - Specifications and testing of LPG cylinder valves - Self-closing - Amendment 1 (ISO 14245:2021/FDAM 1:2024)
FprCEN/TS XXX	LPG equipment and accessories - Cylinders transportation racks controls
EN 12252:2022/prA1	LPG equipment and accessories - Equipping of LPG road tankers
prEN 12805 rev	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 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 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/CLC/JTC 006 - Hydrogen in energy systems

Irish representatives: 4, including Hydrogen Standardisation Expert

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 scope includes cross cutting items such as: terminology, Guarantee of Origin, interfaces, operational management, relevant hydrogen safety issues, training and education.

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.

The GTSC 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 are currently revising EN 16325, *Guarantees of Origin for electricity, gaseous hydrocarbons, and hydrogen, and heating & cooling*, which is being updated to reflect hydrogen and biomethane. This committee is working closely with CNE/CLC/JTC 6 Hydrogen in energy systems.

The last update on CEN/CLC JTC 6: NWIP Vienna agreement on ISO 19870-1 Methodology for Determining the Greenhouse Gas Emissions Associated with the Production of Hydrogen up to Production Gate

6.3.1.2 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.

The plenary meeting is represented by Irish delegate, Paul O'Connell, Convenor of ISO/TC 58/SC 2/WG 12 *Cylinder fittings*.

ISO TC 58 SC 2 WG 12 Cylinder fittings

Paul O'Connell, Convenor

Anne Coulson, Supporting Secretary

ISO TC 197 Hydrogen technologies

Irish representatives: Hydrogen Standardisation Expert

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 WG is responsible for producing the following standards:

- ISO 14687: 2019 -Hydrogen fuel quality —Product specification -this includes hydrogen quality for both fuel cell applications and combustion applications.

- ISO/TR 15916: 2015 -Basic considerations for the safety of hydrogen systems
- ISO 26142: 2010 -Hydrogen detection apparatus —Stationary applications

A sub-committee, ISO/TC 197/SC 1, has been created. SC1 anticipates collaboration with CEN/TC234 on addressing energy systems integrated with blended fuels (H₂NG) gas networks.

ISO/TC/197 is working with CEN/TC 234 to most effectively progress the development of standards in the following areas

- Hydrogen quality requirements for combustion appliances;
- Hydrogen quality requirements for industrial power generation;
- Requirements for hydrogen combustion applications;
- Requirements for electrolyzers when used for injection into the natural gas grid / a repurposed gas grid if different;
- Requirements for electrolyzers when used for electrical grid balancing;
- Input into CEN TC 234 WG6 work on injection of renewable gases
- Requirements for vehicles operating on mixtures of compressed hydrogen and natural gas above 2% (the current limit in EN 16723-2), including interoperability requirements for the interface with fuelling stations.

6.3.2 International standards

The main International work activities carried out by NSAI/ TC 001 in 2024 included the following:

Committee	Work item
NSAI/TC 001/SC 4 Transmission	<p>NSAI/TC 001/SC 4 voted to approve the following documents:</p> <ul style="list-style-type: none"> • ISO/NP 24947, <i>Petroleum and natural gas industry — Pipeline transportation systems-- Pipeline Inspection Data Alignment Specification</i> • ISO/NP 24947, <i>Petroleum and natural gas industries — Pipeline transportation systems — On-land pipeline repair</i> • Draft CEN-TC 234 DEC 01-2024 - Revision EN 12186-2014+A1 <i>Gas pressure control</i> • EN 12583:2022/prA1, <i>Gas Infrastructure - Compressor stations - Functional requirements</i> • ISO/NP 24947 <i>Petroleum and natural gas industry — Pipeline transportation systems-- Pipeline Inspection Data Alignment Specification</i> • ISO/NP 24948 <i>Petroleum and natural gas industries — Pipeline transportation systems — On-land pipeline repair</i> • <u>EN 12583:2022/prA1</u> <i>Gas Infrastructure - Compressor stations - Functional requirements</i> <p>NSAI/TC 001/SC 4 approved the following new Work Items:</p> <ul style="list-style-type: none"> • Revision EN 12186-2000+A1 <i>Gas pressure control stations</i> • TS <i>Hydrogen Safety in Enclosed Spaces</i> • Revision of EN 1918-1. <i>Gas infrastructure - Underground gas storage – Part 1: Functional recommendations for storage in aquifers</i>
NSAI/TC 001/SC 5 Use of gaseous fuel in vehicles	<p>NSAI/TC 001/SC 5 voted to approve the following documents:</p> <ul style="list-style-type: none"> • FprEN 17932 <i>Vehicle fuelling procedures</i> • prEN ISO 24490 <i>Cryogenic vessels - Centrifugal pumps for cryogenic service (ISO/DIS 24490:2024)</i> • FprEN ISO 21009-2 <i>Cryogenic vessels - Static vacuum insulated vessels - Part 2: Operational requirements (ISO/FDIS 21009-2:2024)</i> <p>NSAI/TC 001/SC 5 approved the following new Work Item:</p> <ul style="list-style-type: none"> • CEN_TC_268_N971_NWIP H2 maritime and inland waterways
NSAI/TC 001/SC 8 LPG equipment and accessories	<p>NSAI/TC 001/SC 8 voted to approve the following documents:</p> <ul style="list-style-type: none"> • FprEN ISO 22435 <i>Gas cylinders - Cylinder valves with integrated pressure regulators - Specification and type testing (ISO/FDIS 22435:2023)</i> • FprEN ISO 10297 <i>Gas cylinders - Cylinder valves - Specification and type testing (ISO/FDIS 10297:2023)</i> • ISO 17871:2020/FD Amd 1 (Ed 2) - <i>Gas cylinders — Quick-release cylinder valves — Specification and type testing — Amendment 1</i> • ISO/FDIS 14456 (Ed 2) - <i>Gas cylinders — Gas properties and associated classification (FTSC) codes</i>

Committee	Work item
	<ul style="list-style-type: none"> • FprEN 16631 - <i>LPG equipment and accessories - Pressure relief valves for LPG pressure vessels - Reconditioning requirements</i> • FprEN 17955 Industrial valves - <i>Functional safety of safety-related automated valves</i> • FprEN 14071- <i>LPG equipment and accessories - Pressure relief valves for LPG pressure vessels - Ancillary equipment</i> • prEN ISO 10286 - <i>Gas cylinders - Vocabulary (ISO/DIS 10286:2024)</i> • FprEN 14129 - <i>LPG Equipment and accessories - Pressure relief valves for LPG pressure vessels</i> • FprCEN/TS 16765 - <i>LPG equipment and accessories - Environmental and climate change considerations for CEN/TC 286 standards</i> • FprEN ISO 11118 Gas cylinders - <i>Non-refillable metallic gas cylinders - Specification and test methods (ISO/FDIS 11118:2024)</i> <p>NSAI/TC 001/SC 8 also approved the following revisions/ amendments:</p> <ul style="list-style-type: none"> • Revision of EN 13799:2022* - <i>LPG equipment and accessories - Contents gauges for Liquefied Petroleum Gas (LPG) pressure vessels</i> • Revision of EN 13175:2019+A1:2020* - <i>LPG Equipment and accessories - Specification and testing for Liquefied Petroleum Gas (LPG) pressure vessel valves and fittings</i> • Revision of EN 13953:2020* - <i>LPG equipment and accessories - Pressure relief valves for transportable refillable cylinders for Liquefied Petroleum Gas (LPG)</i> • Revision of EN 14893:2014 - <i>LPG equipment and accessories - Transportable LPG welded steel pressure drums with a capacity between 150 litres and 1 000 litres</i> • Revision of EN 16728:2016+A1:2020 - <i>LPG equipment and accessories – Transportable refillable LPG cylinders other than traditional welded and brazed steel cylinders - Periodic inspection</i> • Second amendment to ISO 17871:2020 - <i>Gas cylinders — Quick-release cylinder valves — Specification and type testing</i> • Revision of ISO 17879 - <i>Gas cylinders — Self-closing cylinder valves — Specification and type testing</i> • Amendment to EN 12245:2022 - <i>Transportable gas cylinders — Fully wrapped composite cylinders</i>
<p>*The Chair of SC 8 is also the Convenor of TC 286 WG2 which has responsibility for the revision of EN 13799, EN 13175 and EN 13953.</p>	

7 Work programme for 2025

- **The NSAI/TC 001 will undertake the following work in 2025:** NSAI/TC 001 will continue to focus on the extension of its scope to include renewable gas, Hydrogen and LNG. Experts from within these areas will be invited to join the relevant sub-committees. Focus will be continued on the recruitment of experts from the area of hydrogen.
- **NSAI/TC 001/SC 2** will continue to monitor and review the development of European and International Standards in CEN/TC 155, CEN/TC 408, CEN/TC 234, CEN/TC 237 and ISO/TC 138/SC 4, CEN/CLC JTC 6.
- **NSAI/TC 001/SC 2** will support NSAI/TC 001/ SC 2 WG 1 to continue working on the amendment of I.S. 329:2024, *Gas distribution mains* with a view to address Hydrogen considerations.
- **NSAI/TC 001/SC 3** will continue to monitor standardisation activities under CEN/TC 048, CEN/TC 058, CEN/TC 62, CEN/TC 106, CEN/TC 131, CEN/TC 234, CEN/TC 236 and CEN/TC 299. Focus will be given to the review of CEN/TC 048 and CEN/TC 049 standardisation activities.
- **NSAI/TC 001/SC 3** will continue to review comments received from prI.S. 813:2022 public enquiry with a view to publishing this standard in 2025
- **NSAI/TC 1/SC4** will continue to monitor and review the development of European and International Standards in CEN/TC 219, CEN/TC 234, CEN/TC 237, CEN/TC 408, ISO/TC 67/SC 2 and CEN/CLC/JTC 6.
- **NSAI/TC 1/SC5** will continue to monitor and review the activities and work of CEN TC 326, CEN/TC 268, CEN/TC 197, ISO TC 193/SC 1 and CEN/CLC/JTC 6 and especially the revision of ISO 16923 and ISO 16924 by ISO/TC 340.
- **NSAI/TC 1/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 1/SC7** will review any comments received during public enquiry of the Irish Standard I.S. 3216 - *Code of practice – Bulk storage of Liquefied Petroleum Gas (LPG)* with a view to publishing this standard in 2025.
- **NSAI/TC 1/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 and ISO/TC 185.
- **NSAI/TC 1/SC9** will continue to monitor and review the development of European and International Standards in CEN/TC 19, CEN/TC 234, CEN/TC 268, CEN/TC 408, CEN/CLC/JTC 006, CEN/CLC/JTC 014, ISO TC 197.

8 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**
Gas distribution mains
- **I.S. 370:2016**
Colour code for buried plastics piping
- **I.S. 813:2014+A1:2017**
Domestic gas installations Edition 3 (Including AC1:2014 and AC2:2014)
- **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. 3216:2010+A1:2014**
Code of practice – Bulk storage of Liquefied Petroleum Gas (LPG)