STRATEGIC BUSINESS PLAN (SBP)

Clause 2.1.2 of the ISO/IEC Directives, Part 1

ISO/TC 67

Oil and gas industries including lower carbon energy

Secretariat:

Vision: International standards used locally worldwide

Mission: to create value-added standards for the oil and natural gas and lower carbon industries

What is the main market trend?

The market is moving toward cleaner energy, driven by innovation, and the need for efficient, standardized operations.

Why are standards important?

They provide a reliable foundation for safe, efficient, and sustainable operations in a complex global industry.

Who participates in standards development in this topic?

Energy companies, drilling contractors, service suppliers and manufacturers, governments, public interest groups, investment and lending institutions, academia, consumers, local communities.

What are the committee's strategic priorities?

To enhance safety, health and environmental protection, support technoglocial innovation and adaptation.

How can you get involved?

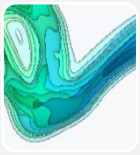
Speak with your national standards body or one of the extensive range of international-level liaisons to TC 67.

Message from the Chair, Mr Philip Smedley

Welcome to the 2025 version of our ISO TC 67 strategic business plan. In this you will read a little of our history and the many interfaces and stakeholders that we engage with.

Importantly, we will deliver publications in a well-planned and timely manner, with higher quality standards emphasising the requirements our customers will need to achieve.

We will strive to better communicate the value of our standards and publication milestones to industry bodies and experts beyond our TC 67 SMEs.



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ISO's role in supporting the SDGs

ISO/TC 67 standards support the following SDGs

Introduction

The evolution of formal strategic planning in ISO Technical Committees is a key measure in supporting the ISO 2030 Strategy vision of making lives easier, safer and better. This document is designed to aid committees and their stakeholders in:

- Identifying benefits and vision of standardization within the committee's field of activity
- Linking benefits to higher strategic imperatives (ISO 2030 Strategy, SDGs , London Declaration Action Plan)
- Prioritizing among projects and allocating resources
- Providing transparency and communicating through a format adapted to three key audiences (general public, TMB and other TCs, and internal TC stakeholders
- Supporting data-driven continuous improvement, including user perspectives where available
- Maintaining strategic flexibility for different market cadences

International standards embody the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in ISO Technical committees, representative of all interested parties, supported by a WTO TBT-compliant public enquiry phase.

International standards are developed through a member-driven market-centric process, where any P- member may submit a proposal for new work.

This document represents an important filter through which new work items should be considered by P-members of a committee and shall be referenced in new work item proposals submitted to the committee per clause 2.3.4 of the ISO/IEC Directives, Part 1.

Beginning in 2026, deviations from this strategy shall be rationalized in new work item proposals.

Meeting global needs

To realize our vision, we must develop consensus-based standards that are relevant and respond to current and future challenges. We must focus on getting the right standards to market at the right time, and with the right content and in the right format.

Business environment and future trends

Vision: international standards used locally worldwide.

Mission: to create value-added standards for the oil and natural gas and lower carbon industries.

Many stakeholders work in or influence the oil and gas, petrochemical and low carbon energy industries. It is a very visible industry in the international marketplace and is essential for the continuation of economic growth and to help move developing countries and their populations out of poverty. Furthermore, it is a closely watched industry by the financial community and the general public in terms of harm to its workers and the general public, pollution events, and cost of its products to business and the general public.

Stakeholders in the industry include energy companies (referred to as operators who are licensed by governments to lease territory) and their shareholders, governments, public interest groups, investment and lending institutions, research institutions and academia, employees, suppliers and contractors, consumers and local communities. Each stakeholder group expects a readily available product or process, delivered efficiently and safely, with minimal associated costs and no accidents or injuries. These groups place economic, social and technical constraints on the development and use of resources. Generally, the "industry" includes operators, manufacturers, regulatory organizations, trade associations and academia. The personnel pool is diverse in knowledge and experience, but all seek a usable end product.

The equipment and materials must all be specified to provide assurance that the design and manufacture has been completed with supply reliability factors in mind. If any individual stakeholder interprets an action as not addressing a concern, the activity can be adversely affected or stopped. The operator is seen as the user of these materials and equipment and is therefore closely scrutinized for conformance and intent.

Defining the basic requirements through standardization benefits the operator, manufacturer and/or service provider and the regulators. Interchangeability of equipment parts is a prerequisite for equipment that is frequently moved in and out of areas. This equipment must be fit for purpose and easily available. Operators see international standards as a way of gaining the ability to purchase and use equivalent parts worldwide. Standards reduce the number of internal company specifications that need to be written and maintained to ensure that equipment and materials meet company requirements. Manufacturers and service-supply providers find that standards clearly define product specifications and allow them to economically produce equipment for the entire industry, thereby reducing their manufacturing costs and subsequent inventory costs.

The technologies used to discover, extract, transport and refine hydrocarbons are constantly evolving, and technology is a major driving force in the industry. Cheap and easily accessible sources of oil and natural gas have been found and produced, and these are now being supported and replaced by lower carbon and renewable options such as carbon capture, hydrogen and wind. Hydrocarbon exploration and production is becoming more difficult and is being forced into more inhospitable areas, remote locations and smaller, lower quality reservoirs. The performance of materials and equipment must meet these challenges.

Technological developments by service/supplier and operator companies have allowed the extension of operating areas into deeper water, cold climate areas and very remote locations with no road access or local infrastructure. Operators and service companies must protect workers, well products, indigenous people and wildlife, and maintain a pristine environment. These remote, challenging areas mean that the costs of equipment, materials, transportation and personnel escalate.

Non-traditional sources of oil and gas, such as shale oil, oil sands, coal gas, and natural gas hydrates, are actively being explored and developed. At the same time, standards developed by the committee support the transition to sustainable, low-carbon energy systems. This includes the growing regulatory support for renewable energy sources, such as wind, solar, hydro, geothermal, and bioenergy, all of which produce less greenhouse gas emissions over their lifecycle compared to fossil fuels. In conventional oil and gas operations, technologies to reduce flaring and emissions, as well as electrification technologies, help mitigate greenhouse gas emissions. Hydrogen and ammonia, as energy carriers and storage media, are also critical in the shift toward low-carbon energy. Each of these energy carriers requires the development of effective and safe regulations for their transportation and use.

Advances are also being made in the handling of existing products. Techniques such as extended-reach drilling and liquefied natural gas (LNG) shipping are becoming more common. However, these methods require continuous technological enhancement to meet the evolving needs of the industry.

The industry is witnessing a shift towards diverse energy sources, each requiring new approaches to extraction, refining and utilization. This evolution requires continuous improvement and innovation in equipment and technology to meet the challenges and opportunities presented by these developments.

Standards must address health, safety and environmental (HSE) considerations that satisfy the companies that use them, regulators, communities in which they operate, public interest groups and the public at large. The inclusion of HSE in standards protects workers, the general public and the environment in which operations take place. Alongside quality management systems, Regulators see international standards as a way to ensure the sustainable development of their countries' natural resources while protecting the health and safety of workers and the environment. Historically, national or industry standards have been widely used, but not always applied internationally. Most market participants agree that a single set of international standards is the only way to achieve effective standardization.

Stakeholder expectations for standards are evolving, demanding clearer and more usable standards with a focus on digital applications.

Benefits of standards and vision for standardization in the field of activity

ISO/TC 67 is a market-driven technical committee addressing needs of the manufacturers and purchasers of hydrocarbon and renewable energy fields, transfer pipelines and refining equipment. Operators have demonstrated that participation in the writing and use of ISO standards has reduced the need for national, regional, and internal company specifications; facilitated the transfer and application of equipment worldwide; reduced barriers to trade across country boundaries and allow the purchase of compatible equipment from multiple suppliers.

Manufacturers use standards to outline basic requirements, and then allow for innovation and expansion of basic concepts. This innovation is a major driver for the manufacturer of more complex, technologically advanced products and allows the manufacturer to differentiate his products and company. The differentiation is a marketing advantage to manufacturers and suppliers, and encourages their participation in standardization.

The regulatory community is charged by their country legislators and authorities to provide a market which leads to the development of natural resources, employment of the population, and provides a safe, environmentally protected workplace. A regulator finds that participation in the standard writing process covers the requirements of their mandate and incorporates their national ideas and needs. All parties find it beneficial to work within a common system of standards preparation. The goal of ISO/TC 67 is the coordination of technical input from all interested parties, with no bias of national or regional origin, or employer to develop international standards used locally worldwide. Regional standards and industry and institution guidance documents can form the basis of the work.

The major benefit is a reduction in costs to all parties involved as reported by the World Economic Forum. Operators, drilling contractors, engineering services and manufacturers find that a common set of engineering practices reduces the number and volume of individual specifications needed. Manufacturing (materials, retooling and setup) costs are reduced, which benefits both the end users and manufacturers. Inventory costs for all concerned is significantly reduced.

Regulatory agencies find that the incorporation of standards reduces their work involved in creating and maintaining their own rules and specifications. New regulatory frameworks might need modified or new standards.

Reflections on current publications and their market impacts

The primary advantages across the full range of stakeholders are:

a) an increase in the level of personal health and safety and a reduction in the risk of environmental harm, and
b) a reduction in costs for all parties by increased conformance, competence, competition, efficiency, reliability and availability.

Operators, drilling contractors, service suppliers and manufacturers have found that a common set of engineering practices reduces the number and volume of individual company specifications required. In 2017, the World Economic Forum (WEF) considered that industry standards could save 1% of CAPEX by reducing individual company specification in the energy industry sector. This led ISO/TC 67's key stakeholder, IOGP, to initiate JIPs (joint industry funded projects) to build common commercial operator overlays with agreed preferred practice and options. The IOGP JIP 33, 35, and 36 initiatives demonstrate the potential market impact of improved standards that are universally applied in the industry. ISO/TC 67 will leverage this work to sharpen and harmonize standards.

The use of international standards allows free trade in countries that are in, or wish to enter, the industry. If clearly stated and carefully followed, a small manufacturer anywhere can enter the international market by demonstrating conformance to a published ISO Standard. A country can build up its domestic industry and still meet the needs of the market, while maintaining health, safety and environmental agreements.

 **Sustainability and climate change**	The oil and gas industry is clearly a carbon-intensive sector. Evidently, the hydrocarbon production industry and thus the scope of TC 67 has a negative impact on climate change and therefore on the London Declaration Action Plan. However, the TC 67 is also making efforts to incorporate standards and opportunities for green and lower carbon energy. As each standard is updated, provisions for lower carbon emissions throughout the full life cycle can be promoted. These include the development of standards covering offshore wind, transportation of (liquified and natural gas blended) hydrogen, carbon capture and storage in redundant wells, and the transportation of non-hydrocarbon products where no standards exist, or existing standards are not adequate. TC 67 has two new working groups which focus on the green lower carbon activities through life and on fuel ammonia, both WGs are planning to publish their first standards in 2025. TC 67 is moving in alignment with the energy transition goals. Standards will include lower carbon energy activities, requirements and guidance on measuring emissions, carbon reduction and sustainability through life cycle. TC 67 standards also include designing for extreme metrological and oceanographic events (e.g. wind, waves, temperature, sea ice and currents), including local and global changes in the frequence and/or intensity of such events. Furthermore, as long as there is a need for oil and gas in the world, it will be important to match supply and demand in the most efficient and environmentally friendly way; this is also the challenge facing TC 67.

All voices heard

We need to ensure that we attract and retain the best experts and enable everyone to participate. We must listen to all voices, both in the development of standards and when making decisions as an organization.

 **Stakeholder mixture and engagement**	TC 67 and its SCs and WGs comprise a wide range of stakeholders: owners/operators, manufacturers, suppliers, ship yards, technical consultants, academics, regulatory bodies, independent verification bodies, trade associations and other standards and guidance organizations. Most of our more active P-members have national mirror committees that are also tasked with ensuring a wide range of national stakeholders can participate or oversee the scope and text of TC 67's work and publications.
 **Developing country perspectives**	TC 67 comprises members from both developed and developing countries. The wealth generated by oil and gas production has meant that countries that historically have been classified as less developed are now developing countries, often with high GDPs relative to their population size. For these fast-developing countries in particular, the education skills and national infrastructure are growing rapidly, but often from a relatively low base. For these countries, in particular, which do not have decades of experience in regulation, competence assessment and quality systems, standards can be an important facilitator for governments and their agencies to set safety levels and assurance validation requirements within a proven economic framework. They can also enable the local workforce to be trained to understand and appreciate the key considerations and associated risks throughout the life cycle of a component or system. Participation of key national stakeholders in WGs and standards development would also allow a better understanding of the underlying rationale behind these key considerations and what might be occurring in technology development that could influence the future direction and changes in specifications. However, at present, with the notable exception of China, TC 67 struggles to get active participation from most TC 67 P-member developing countries at the WG level. Previously, in TC 67/SC 2, we had a twinning arrangement with the Secretariat/ Committee Management between Italy and China. Following the ending of that arrangement, China is now the sole Chair and Secretariat for TC 67/SC 10 and TC 67/WG 15.

ISO Standards used everywhere

To encourage the widespread use of ISO standards and attract experts to the development process, we must clearly demonstrate the benefits of using ISO standards.

Coordination and cohesion

The ISO/TC 67 Management Committee (MC) meets every 2 months to discuss the status and update of existing and new projects. It also monitors project management, text quality and prioritization of the existing ISO/TC 67 portfolio.

There are two joint working groups under the responsibility of another committee:

- ISO/TC 35/JWG 6 Joint ISO/TC 35 - ISO/TC 67 WG: Competency requirements for coating inspectors and applicators
- ISO/TC 192/WG 4 Gas turbines

For a full list of liaisons see: ISO/TC 67 - Oil and gas industries including lower carbon energy.

Other category A liaison members are:

- IOGP: International Oil and Gas Producers Association
- IADC: International Association of Drilling Contractors
- WMO: World Meteorological Organisation
- NGV Global: Natural Gas Vehicle Knowledge Base (formerly The International Association for Natural Gas Vehicles - IANGV)
- Association for Natural Gas Vehicles - IANGV)
- UNECE: United Nations Economic Commission for Europe

And Category B Liaison Members

- WCO: World Customs Organisation

National adoption perspectives

The committee's vision is to develop international standards used locally worldwide. We are actively collaboration with regional and national standards organizations to foster the creation of one single global industry standard.

Conformity assessment

Conformity assessment and TC 67's interface with ISO CASCO team has been primarily involving TC 67/WG 2 Operating Integrity Management Standards. The five published standards under the TC 67/WG 2 scope are:

1. ISO/TR 13881:2000 Petroleum and natural gas industries — Classification and conformity assessment of products, processes and services
2. ISO/TS 17969:2017 Petroleum, petrochemical and natural gas industries — Guidelines on competency management for well operations personnel
3. ISO 29001:2020/Amd 1:2024 Petroleum, petrochemical and natural gas industries — Sector-specific quality management systems — Requirements for product and service supply organizations — Amendment 1: Climate action changes
4. ISO 13880:1999 Petroleum and natural gas industries — Content and drafting of a technical specification
5. ISO 13879:1999 Petroleum and natural gas industries — Content and drafting of a functional specification

In addition, from a current portfolio of around 240 Standards, we have the following test-specific standards:

1. ISO/TC 67/WG 7, ISO 3845:2024 Oil and gas industries including lower carbon energy

— Full ring ovalization test method for the evaluation of the cracking resistance of steel line pipe in sour service

2. ISO/TC 67/WG 8, ISO 17781:2017 Petroleum, petrochemical and natural gas industries — Test methods for quality control of microstructure of ferritic/austenitic (duplex) stainless steels

3. ISO/TC 67/SC 2/WG 15, ISO 21329:2004 Petroleum and natural gas industries — Pipeline transportation systems — Test procedures for mechanical connectors

4. ISO/TC 67/SC 3/WG 2, ISO/PWI TR 10426-7 Oil and gas industries including lower carbon energy — Cements and materials for well cementing — Part 7: Laboratory test method for materials for well abandonment

5. ISO/TC 67/SC 5/WG 2, ISO 13679:2019 Petroleum and natural gas industries — Procedures for testing casing and tubing connections

ISO TC 67 Strategic Objectives

Objectives	Responsible SC or WG (if applicable)	Proposed actions	Priority (HIGH, MEDIUM, LOW)
TC-level			
Move to lower carbon	AHG3 Hydrogen & Ammonia WG14 Fuel Ammonia WG 15 Green manufacturing SC2 Pipeline transportation (of non- hydrocarbon products) SC 7 Offshore structures (including offshore wind) SC 8 Arctic operations (ice management aspects — offshore wind specificity) SC 9 Production, transport and storage facilities for cryogenic liquefied gases SC 10 Enhanced oil recovery	To develop new standards and update existing standards to embrace some non-hydrocarbon energy products (within TC 67's now wider scope)	HIGH
Quality of text	All standards but with selection of higher priority standards on case-by- case basis	To communicate to Project Leaders the ISO Directives and recommendations for plain English, and the IOGP Report 604 for Good Requirements writing.	HIGH
Coordination with API	SC 2, SC3, SC4, SC5, SC6 & SC 7	To request the ISO/TMB that the ANSI proposal to allow TC 67 to publish full text versions of some API standards without possible trade sanction violation. To ensure that ISO and API do not compete in updating existing formally co- branded standards, given the limited expert resources available and copyright constraints.	MEDIUM
Performance management	TC 67 MC	To inform the TC 67 members and Project Leaders of statistics representing Project Delivery by using the tools provided in ISO Project Portal	MEDIUM

		To maintain an overview of all Project progress so awareness and intervention of issues can be initiated sooner. Assess where TC 67 and its SCs are stronger or weaker at delivering to schedule and feedback best practice to Project Leaders at Project Initiation.	
Communication	TC 67 MC Communication	To develop a Communication Strategy to support the implementation of the ISO/TC67 Strategic Business Plan, specifically in relation to: • Increased deployment and industry use of ISO/TC 67 standards • Increased expert participation in ISO/TC 67 standards development and implementation ISO/TC 67 MC members to lead and monitor the implementation of the communication strategy established during the communication session held in conjunction with the 2025 March MC	MEDIUM
Liaison with IOGP	TC 67 MC	To assess the current level of engagement between ISO/TC67 SC&WGs with their equivalent IOGP Committee/Sub- Committee to identify opportunities for increased collaboration in standards development and adoption. To identify opportunities for transitioning IOGP reports as ISO/TC67 International standards. To identify industry uptake and priority standards also feeding into the IOGP Operator Key Standards initiative.	HIGH/MEDIUM
SC-Level			
Methane emissions	SC 9 Production, transport and storage facilities for cryogenic liquefied gases	To publish three new ISO standards to meet regulator need for upstream energy sector. Reduction of methane emissions is one of the most effective and cost-efficient ways to reduce greenhouse gasses. Having agreed common standards for measuring methane emissions from a wide range of possible industrial sources is now a very high priority for national & regional governments and their agencies.	HIGH
Participation	Retain and extend participation	For some members/experts of SC or WG have been absent	HIGH

		from activities for long periods due to retirement or other reasons. Retaining and increasing broad participation to standards work is an high priority to the committee.	