

CGA Standards Philosophy

The Compressed Gas Association (CGA) and its members are dedicated to the development and promotion of safety standards and safe practices for our industry. Our mission is to promote ever-improving safe, secure, and environmentally responsible manufacture, transportation, storage, transfilling, and disposal of industrial, medical, and food gases and their containers. CGA members represent all facets of the industry: manufacturers, distributors, suppliers, and transporters of gases, cryogenic liquids, and related products. Our sphere of influence encompasses industrial, medical, food, and specialty gases in compressed or liquefied form, as well as a range of gas handling equipment.

CGA is widely recognized as a technical authority in the gases industry and has assumed an important leadership role in promoting safe practices to the global industry. Over more than 100 years of developing safety standards for the gases industry, the following have evolved as guiding principles for the CGA Standards Program:

[Standards will be safety-focused and effectively address the inherent risks of the topic at hand.](#) Standards will be based on risk-based evaluation underpinned by science and experience. Standards are not the basis of competition; they are the basis of best practices with regard to the continuous improvement of industry safety.

Standards should enhance industry safety and should not be barriers to trade. Requirements should generally be performance-based; requirements that limit innovation and restrict competition should be expressly avoided. Wherever possible, requirements should include a corresponding rationale to assist standards users in understanding the requirements. Standards should allow for advancements in technology and innovation.

Further, standards should be based on prevalent technologies and consensus; they should not generally lead the state of technology, although exceptions may be necessary (e.g., in cases where emerging markets or applications create the potential for increased safety risks that are best addressed through the development of consensus-based standards).

[Standards will be developed using a consensus-based approach.](#)

In order to serve the interests of the gases industry, industry standards need to be relevant and effectively respond to scientific and technological developments, as well as regulatory and market needs. They should not distort the market, have adverse effects on fair competition, or stifle innovation and technological development. In addition, they should not favor the interests of particular organizations, industry segments, or regions when different needs exist among these groups. Standards should only be developed where there is a clear need supported by a broad segment of the industry.

CGA membership shall be open to all members of the gases industry, and participation in the standards work process shall be open to all members of CGA. Any interested member of the Association with an interest in a specific standardization activity will be provided with meaningful opportunities to participate at all stages of standards development; non-members will be permitted to submit comments to CGA standards. Consensus procedures should seek to take into account the views of all parties concerned and to reconcile any conflicting arguments.

The standards development process will provide transparency to interested parties.

A clearly defined work process will guide all standards development activities and will be communicated to all participants in the work process. Essential information regarding current standards, proposals for standards, comments under consideration and final results should be made easily accessible to members and all interested parties in order to promote transparency in standards development. At a minimum, efforts to create transparency include:

- notice to all members of initiation of work;
- open solicitation of materially affected committees to participate in the work;
- the provision of updated standards drafts throughout the development process;
- the provision of an adequate period of time for interested parties to review the proposed standard and submit comments;
- the opportunity for commenters (including non-members) to participate in the discussion of their comment, and upon request receive prompt updates on the status of their comment;
- the prompt publication of a standard upon final approval; and
- the periodic publication of each committee's work program containing information on the standards currently being prepared.

CGA will promote standards as tools for supporting regulatory and code needs.

CGA will partner with regulatory agencies and code developers to identify proposed, coordinated solutions that could be addressed by voluntary consensus standards and work together for a common solution. We will enable reasonable access by affected parties to voluntary consensus standards that are incorporated by reference into regulations and codes while taking reasonable measures to protect our intellectual property. Where appropriate, we will provide regulatory and code officials with mechanisms for participating in relevant standards activities. CGA and its members will raise awareness of policy makers of the benefits of standards developed through open, transparent, consensus-based processes.

Further, CGA will work with regulatory agencies and code developers to promote incorporation of select CGA positions by reference. When regulatory authorities or code developers are unwilling to incorporate CGA positions, CGA will communicate with them about the unique characteristics of our industry and promote a risk based scientific approach to the development of regulations that affect our industry.

CGA will facilitate collaboration and inclusion in its standards development processes.

A key to the success of our standards program is the good faith collaboration of CGA members and invited stakeholders to develop positions which advance CGA's safety mission. CGA will encourage broad participation from all facets of its membership to support collaboration, innovation, and the development of standards that meet industry needs. Further, CGA will ensure that its standards development process facilitates an inclusive environment for all participants.

To avoid the development of conflicting industry standards, it is important that standards bodies avoid duplication of, or overlap with, the work of other standards bodies. In this respect, cooperation and coordination with other relevant standards bodies is essential. CGA will proactively create opportunities to collaborate and exchange information beyond our membership to identify areas of need, to make standardization processes more efficient and coherent, and formalize agreements as appropriate.

The standards program will be responsive to the interests of the industry and materially affected parties.

CGA will define mechanisms for its committees to identify and prioritize emerging issues that require the development or revision of standards. The method to initiate work will allow members to direct resources towards the areas of highest priority to the industry, while deprioritizing low value work. Organizations in developing markets should be encouraged to participate in the work process to share new perspectives as standards are developed.

Additionally, CGA will seek to continuously improve its work processes and related tools to facilitate effective participation and the efficient and timely development and distribution of voluntary consensus standards.

CGA will encourage the use of standards and adoption of best practices by the gases industry, its end users, and other external stakeholders.

CGA will strengthen outreach programs to promote understanding of how voluntary, consensus-based, market-driven standards can benefit its members, the broader industry, external stakeholders, and society as a whole. CGA will encourage its members to comply with or exceed CGA standards or their equivalents, and to promote these standards within their organizations and to their suppliers and customers.

Where appropriate, CGA will promote industry stewardship by preparing complimentary educational materials that promote a basic understanding of key safety principles contained in its standards. Additionally, as CGA seeks to promote its content to new users, we will consider developing general overarching safety documents to connect with these audiences and lead them to explore more CGA resources.

CGA will provide leadership in the development of globally harmonized industry standards.

Global harmonization of industry standards drives the consistent application of best practices worldwide. Harmonization efforts shall prioritize areas where there are gaps or conflicts in global industry standards. CGA's international standards efforts will include collaboration with other regional gas associations through the International Harmonization Council (IHC) and engagement in external standards bodies such as ISO, IEC, and the UN.

Any member of regional gas associations with an interest in a specific standardization activity will be provided with opportunities to participate in harmonized standards development.

CGA will employ diverse standards development approaches to meet the needs of the industry.

CGA participates in a broad spectrum of standards activities including industry, national, international and external standards development. The effort and resources required to support the work, acceptance of industry positions in the final standard, control over intellectual property, generation of publication sales revenues, and timeliness of standards development vary significantly for each approach.

CGA will use the following guiding principles to determine the approach used:

- **Industry Standards:** Industry standards, that is those developed by CGA with input from members or through the IHC, address topics that are primarily insular in nature to the gases industry and do not have significant applicability beyond the gases industry. Industry standards

development typically requires fewer resources and a shorter timeline with greater industry control over the final standard, however, these standards are not typically widely recognized outside of the industry. Historically this is the area in which CGA has been most active.

- **National Standards:** CGA will develop or promulgate existing standards as national standards in the U.S. and/or Canada when the topics addressed have broad applicability beyond the immediate gases industry or when there is an external driver (e.g., targeted regulatory adoption, emerging applications, need for broad review and acceptance, etc.) for seeking national adoption. These topics generally benefit from the inclusion of perspectives beyond the gases industry. National standards often require significant application of CGA staff and member resources and longer time to complete work, however, these standards are often more widely accepted outside of the industry and are more easily adopted in external codes and regulations.
- **International Standards:** CGA will develop or promulgate existing standards as international standards as needed to promote widespread awareness and adoption of best practices, avoid the duplication of work, and encourage the consideration of unique industry needs in external international standards bodies such as ISO and IEC. International standards require the highest application of resources and a significant amount of coordination among regional gas associations to achieve acceptance in the international community. However, these standards also benefit from having the broadest recognition outside of industry. There is a growing need to focus on international standards.

CGA and its members will also participate directly in standards development activities conducted by international organizations which directly affect the industry.

- **External Standards Participation:** In areas where external standards are adjacent to or overlapping with CGA standards, or have a direct impact on the gas industry, CGA will seek to participate and/or coordinate participation amongst its members in order to advocate for the adoption of industry positions and communicate factors related to the unique nature of the gases industry. In areas where there is overlap or close alignment in standards activity with external developers, CGA may consider developing agreements to formalize coordination, reciprocal memberships, and/or joint standards development.