

# It's A Process

## How stakeholders can effectively participate in the development of codes and standards

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The only way to take ownership of your industry is to engage. As many have stated before, "If we do not have a seat at the table, then we will be left behind." With time and money shortages, many industry leaders may think they cannot take the time to help promote requirements necessary in the industry. If they do not take part in the revision of codes and standards, then how will they protect the work environment?

Proponents of new and existing technology must take the initiative to take part in updating existing requirements and developing new requirements. Each Standards Development Organization (SDO) has staff assigned to help participants, but the final decision on content and processes rests with those participating stakeholders and interested parties.

Let's take a look at how stakeholders can most effectively participate in the development of codes and standards:

### **Determine which model codes or standards need revision**

Know which codes and standards impact your industry, customers, etc., and in what manner. Determine what changes are required to foster acceptance of safe and effective system installations, and what research and analysis may be needed. Then, conduct the research, analyze, and prepare the documentation needed to support the changes and counter any likely arguments against the acceptance of the changes.

After you determine which model codes or standards need revision, become familiar with the processes used by the SDOs. Follow the SDO process and engage in supporting the proposed changes, counter any arguments against the changes, and conduct additional research and analysis deemed necessary to ensure success. Get engaged with those committees responsible for considering proposed revisions to model codes early in the process and submit any proposed changes and supporting documentation to the SDO before any deadlines.

### **Learn from others**

Engage contractors, code officials, inspectors, and others who have had some interaction with these activities. Having their input early is important and will further ensure that these key players are proponents of your revisions.

### **Collaborate**

Engage all stakeholders in the development of requirements for new or existing model codes or standards. Advising all stakeholders of the planned activities and inviting them to participate is critical to a successful outcome. Collaboration in the development of proposals should include collaboration in the development of supporting documentation, analysis, and rationale. These efforts can be significant in terms of time and resources, are much easier to accomplish, and are more efficient and robust when developed collectively by proponents. Get individuals involved with the industry in early consideration of the proposed changes, including entities who will be adopting the updated model code or standard who may take ownership of the proposed changes and could provide valuable insight into enhancing what is proposed. Communicate throughout the process so that they are aware of the effort, can provide input, and can become advocates.

The industry should show a united front in these processes. Where different segments of the industry or competitors use model codes and standards to gain an advantage at the expense of others, it is more likely that decision makers will not progress and instead postpone action until there is a more obvious consensus from those advocating change.

### **Educate others**

Engage in activities that can further educate decision-makers associated with the development process of what is proposed. When they have questions or need additional information, the responses should be based on input from all those involved in developing the initial proposal.

## **Remain engaged**

For long-term updating and enhancement, remain engaged. Being connected to the appropriate organizations and their processes, ongoing educational support, and communication will ensure that as their processes evolve and documents are available for updating, those efforts remain synchronized with advances in industry technology.

## **The IAPMO Process**

The International Association of Plumbing and Mechanical Officials (IAPMO) utilizes an open-consensus process in the development of its *Uniform Plumbing Code (UPC®)* and *Uniform Mechanical Code (UMC®)*. These codes are established through scientific research, debate, and analysis. IAPMO itself does not develop the model code but establishes and oversees a process whereby all interested parties, stakeholders, or any interested entity can participate. This process is part of the American National Standards Institute's (ANSI) essential requirements intended to ensure fair and due process to all interested and affected parties. The main points in the process include openness, lack of dominance, balance, coordination and harmonization, notice of development, consideration of views and objections, consensus vote on the requirements, the ability to file appeals and have them considered, and availability of the written procedures. Essential requirements are general rather than specific, and the development organization can write specific development procedures that are unique to them and responsive to their needs. The procedures are developed and controlled by stakeholders and interested parties.

It is important to gain an understanding of the overall process used by SDOs to develop their codes and standards. Industry cannot be reactive and expect to stay in step with the times. Let's take a look at IAPMO's development process to gain an insight into procedures used by SDOs.

### **Step 1: Public and Committee Proposal Stage**

The code revision cycle begins with a call for proposals, asking for interested parties to submit public proposals. After the proposal closing date, the Technical Committee holds its first technical meeting. The Technical Committee uses the proposals to develop the first revisions to the standard, which results in an integrated draft known as the Report on Proposals. The Report on Proposals has an initial agreement by the committee based on a simple majority vote at the meeting to establish a consensus. The committee's final position is established by letter ballot.

The committee-approved revisions are based on a two-thirds vote. Any proposal that failed to achieve the necessary two-thirds vote is noted in the Report on Proposals and reconsidered by the technical committee as an automatic public comment. The Report on Proposals consists of input from the public, committee, correlating committee, comments on committee actions, voting results from ballots, task group reports, and a preprint of the revised standard.

### **Step 2: Comment Stage**

The public comment period begins after the Report on Proposals is published. This period is a call for any interested party to submit comments on the Report on Proposals. After the call for public comments, and during the same year as publishing the Report on Proposals, IAPMO membership holds its first meeting. Anyone in the association who objects to an action of the Technical Committee, as published in the Report on Proposals, may make a motion at the Association Consideration Session, where they will have the opportunity to propose amendments to the text. A successful main motion is made by a majority of all members present and eligible to vote at the meeting. Only IAPMO members are entitled to vote and may be physically present or send a designated representative. Any successful action is included in the Monograph of Comments.

After the public comment closing date, the Technical Committee holds a second technical meeting, where members consider and act on all comments directly related to the Report on Proposals. The committee then provides action and response to each public comment and uses such comments to develop the Report on Comments. The Report on Comments has the initial agreement by the committee based on simple majority vote during the meeting to establish consensus. The final position of the committee is established by letter ballot.

### **Step 3: Association Technical Meeting**

After distributing the Report on Comments, the Association Technical Meeting is held. The motions allowed at this meeting provide the opportunity to propose amendments to the text based on the published Report on Proposal, Report on Comments, and Technical Committee Proposals and Comments.

IAPMO membership is not required to make or speak to a motion, but voting is limited to IAPMO members who have joined at least 180 days before the session and have registered for the Technical Meeting. Motions to accept a proposal, accept an identifiable part, or accept an identifiable part and accept a comment, are limited to the original submitter of the proposal or comment, or his or her authorized representative. In all other cases, anyone can make an allowable motion.

At the close of debate on each motion, voting takes place. The motion requires a majority vote to carry. All successful motions are confirmed by a written letter ballot following the meeting and before the standard is forwarded to the Standards Council for issuance.

### **Step 4: Standards Council Appeal Hearings and Issuance of the Standard**

Some standards receive no controversial proposed changes or comments and therefore are sent directly to the Standards Council for issuance. The Standards Council considers appeals both in writing and at hearings, where all interested parties can participate.

Appeals are based on the entire record of the process, as well as all submissions on the appeal. After deciding all appeals related to a standard, the council, if appropriate, issues the standard as an official IAPMO standard. The Standards Council's decision is final, and the code becomes effective 20 days after issuance.

## **Tips for revisions to model codes or standards**

The first — and perhaps most important — tip for proposing revisions to model codes or standards is to review the timeline associated with the model code or standard. A missed deadline will delay consideration of your revision until the next cycle. Thorough preparation is critical.

Next, make sure the proposal or comment is filled out correctly with all of the requested information. Having an incomplete proposal increases the likelihood the proposal or comment will not be accepted. If there is any doubt about filling out information, contact the staff liaison for support.

When proposing changes to current codes, justify the changes by stating why the proposal is superior to the current requirements of the code based on technical information. Proposals that add or delete requirements must be supported by a logical explanation that clearly shows why the current code requirements are inadequate or too restrictive, why the proposal is superior to the current requirements of the code, specify the flaws of the current code requirements, and explain how such proposals will improve the code. Without research, analysis, and documentation to support the desired revision, it is less likely to be approved for public review or complete the code development process without some adverse comment. An industry team approach is preferable to different entities associated with the industry working individually and for possible cross purposes.

Lastly, it is important to understand that the language of model codes and standards must be presented as mandatory and enforceable. As such, commentary, background, informative language, and examples typically found in educational materials, training programs, and other supporting products are not appropriate for inclusion in the model code or standard.

### **Guidelines for Writing Code Change Proposals**

- Except where time is actually meant, “where” is to be used instead of “when.” “Where” is conditional/situational and “when” is time-related.
- Express maximums as “shall not exceed” and minimums as “not less than.” Avoid “at least” (e.g., the length shall not be less than ...).
- Do not use the word “no” (e.g., instead of “No nails shall be used,” state, “Nails shall not be used”).
- Definition of terms should never contain requirements.
- Avoid text such as “Where approved by the Authority Having Jurisdiction” and “As required by the Authority Having Jurisdiction.” Instead, propose text that provides criteria upon which the Authority Having Jurisdiction

can base approval. In other words, code text should minimize the required amount of judgment on behalf of the code user.

- “That” versus “which” phrases beginning with “that” suggest the phrase establishes a necessity in the context of the code provision (e.g., “The free area of a louver that covers a combustion air opening is determined as follows ...” In this case, it is essential to know that only louvers covering combustion air openings are being addressed).
- Avoid creating exceptions to code sections where the main section text can state the intent (e.g., “Except where a locking-type circuit breaker is provided, a disconnect shall be located within sight of the unit.” This is preferable to, “A disconnect shall be located within sight of the unit.” Exception: Where a locking-type circuit breaker is provided.
- Exceptions must be used only to state an allowance, option or alternative to the general rule of the code section. An exception should always be viewed as a relaxation of or alternative to the main requirement. Exceptions are not to state a new requirement that is distinct from the main rule (e.g., “High-pressure piping shall be tested at not less than 50 psi. Exception: Low-pressure piping shall be tested at not less than 10 psi.” The exception in this example should be the second sentence of the main section.
- In almost all cases, it is unnecessary to start a sentence with “all” or use it as an adjective. (e.g., “All exits shall be provided with emergency lighting.” The word “all” should be omitted.
- Do not use the terms “and/or, assure, ensure, or insure,” as they are ambiguous as to how can one enforces those terms.
- Avoid run-on sentences. Break up separate criteria and requirements into separate smaller sentences where possible.
- Watch out for misplaced phrases in sentence structure. (e.g., “Sprinkler piping that supplies a sprinkler head installed in a plenum shall be not less than 1 inch.” The words “installed in a plenum” appears to modify a sprinkler head. The intent could have been that it is the piping that is installed in the plenum, not the sprinkler head).

## Final Thoughts

Industry cannot be reactive and expect to stay in step with the times. Working closely with code consultants and collaborating with other industry representatives is a good way to stay in tune with what's happening — it's a good policy to have consistent representation of technical experts from industry and government. Decide on a strategy and action plan collaboratively to address critical gaps and deficiencies. Identify specific opportunities for you and other organizations to work together in developing codes and standards, identify critical gaps and deficiencies, and develop recommendations for addressing them. Everyone involved in code development must be educated on the direct effect that the process has on public health and safety, and costs. It's important to focus on improving existing code requirements while opposing any unnecessary escalation of construction costs. Remember, the best route is on the local level, where industry leaders can make the greatest difference by immersing themselves in the codes, building relationships with community leaders, and making sure their communities are aware of how codes or standards affect public safety.

For information on the detailed procedures, please visit The Codes and Standards Development Process Web page at <http://codes.iapmo.org>.