Planning ahead

Development of the 2021 I-Codes is underway

by Mark S. Graham

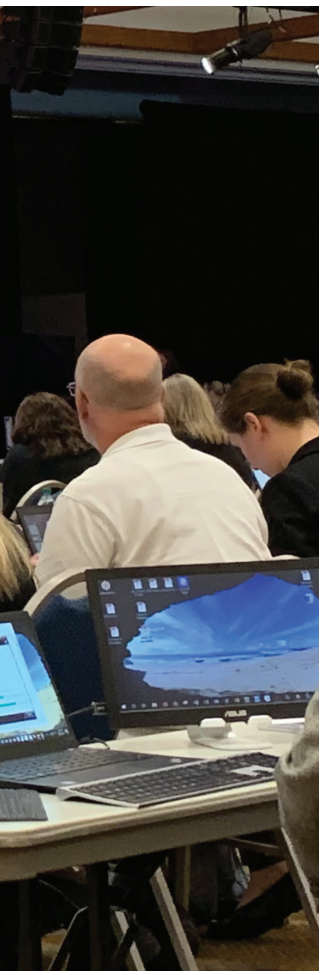
Between April 28 and May 8, NRCA participated in the International Code Council®'s 2019 Group B Committee Action Hearings in Albuquerque, N.M., for development of the 2021 I-Codes. Following is a brief summary of ICC's code development process and some roofing-related code change proposals being considered.

ICC process

ICC develops and publishes its 15 model codes on a three-year cycle; a list of the individual I-Codes is provided on the next page. The current 2018 editions of the I-Codes were published in 2017.

The next editions of the I-Codes will be published as 2021 editions, likely available in late 2020.

ICC's model codes are updated and revised by ICC's code development process. Interested parties are encouraged to submit code change proposals to ICC periodically. An ICC code development committee evaluates each of the code change proposals submitted and makes recommendations to ICC's governmental voting members. Individual ICC code development committees consider the code change proposals for a specific code or, in some instances, specific chapters or portions of chapters of a code.



The code development committees meet in two groups, referred to as Group A and Group B. For the current code development cycle, Group A committees met in 2018 and addressed code change proposals to portions of the International Building Code® and International Residential Code,® and the International Fire Code,® International Fuel Gas Code,® International Mechanical Code,® International Plumbing Code,® International Private Sewage Disposal Code,® ICC Performance Code,® International Property Maintenance Code,® International Swimming Pool and Spa Code,® International Wildland Urban Interface Code® and International Zoning Code.® This year, Group B committees met addressing code change proposals to the remaining portions of the IBC and IRC, and International Existing Building Code,® International Energy Conservation Code® and International Green Construction Code.®

IBC's Chapter 15-Roofing is unique in that several code development committees are responsible for considering its code change proposals. IBC's Structural Code Development Committee, which meets in Group B, is primarily responsible for Chapter 15's content. However, ICC's fire safety, general and plumbing committees are responsible for specific portions of Chapter 15 in Group A. As a result, proposed code changes to Chapter 15 are heard over a two-year period in each cycle.

THE I-CODES

ICC Performance Code®
International Building Code®
International Energy Conservation Code®
International Existing Building Code®
International Fire Code®
International Fuel Gas Code®
International Green Construction Code®
International Mechanical Code®
International Plumbing Code®
International Private Sewage Disposal Code®
International Property Maintenance Code®
International Residential Code for One- and Two-family Dwellings®
International Swimming Pool and Spa Code®
International Wildland Urban Interface Code®
International Zoning Code®

Additional information about the I-Codes is accessible at www.iccsafe.org.

Group A concluded in October 2018 with ICC's public comment hearing at ICC's Annual Conference in Richmond, Va., followed by ICC's online governmental consensus vote.

Group B changes

Code change proposals for ICC's Group B were due Jan. 7. NRCA submitted 17 code change proposals for consideration. NRCA's code change proposals are intended to clarify the codes' intent and streamline compliance.

One of the code changes NRCA submitted was accepted administratively before the Group B committee hearings as an errata to the 2018 I-Codes. This particular code change correlates the requirements for reroofing in IEBC 2018 to those in IBC 2018.

Of NRCA's 16 remaining code change proposals, 11 were recommended for approval by ICC's code development committees.

Some of NRCA's more noteworthy changes follow:

- Code Change S31-19 reformats IBC 2018's requirements for single-ply membrane roof systems into a single section with a new consolidated single-ply membrane material standards table.
- Code Change S35-19 provides a new section addressing roof coatings consolidating IBC 2018's requirements, which were incomplete and spread throughout Chapter 15.
- Code Change S39-19 clarifies dimensions for ASCE 7-16's wind uplift zones (field, perimeter and corner) are required to be provided in construction documents.
- Code Change CE71-19 provides roof assembly-specific provisions to the energy code's U-factor method and allows the minimum-required R-value for above-deck tapered insulation to be determined by the average R-value method.
- Code Change CE102-19 adds single-ply membrane roof systems to the energy code's air barrier requirement deemed-to-comply option.

In addition to the code changes NRCA submitted, NRCA also provided testimony opposing a number of roofing-related code changes NRCA's Technical Operations Committee deemed as either unnecessary, not technically justified or contrary to the roofing industry's best interests. For example, NRCA successfully opposed a code change proposal that attempts to mandate in reroofing projects roof drainage (roof drains, scuppers and gutters) be upgraded to the current plumbing code's requirements.

What's next

ICC will accept public comments on the code development committees' actions on all Group B code change proposals until July 24.

ICC's final action on Group B code change proposals will take place at ICC's public comment hearing held at its 2019 Annual Conference, Oct. 23-30, in Clark County, Nev., and ICC's online governmental consensus vote, which will be held in November and December.

Code change proposals approved at the public comment hearing and online

governmental consensus vote—along with those approved during the Group A process—will be published in the 2021 I-Codes.

After the Group B online governmental consensus vote, I will provide an update on code changes that will be incorporated into the 2021 I-Codes.

MARK S. GRAHAM is NRCA's vice president of technical services.
@MarkGrahamNRCA

Roofing Technology Think Tank seeks award submissions

Roofing Technology Think Tank, a group of roofing professionals focused on technology solutions for the roofing industry, is seeking submissions for its first award program to recognize an Innovator of the Year.

The Innovator of the Year award was created to nationally recognize an individual who has contributed to the advancement of the roofing industry through technical innovation and/or product development in one of the following areas: production/technology efficiency; safety innovation; client service/quality of delivery; employee recruitment/training/retention; or environmental impact.

To be eligible, a nominee must be licensed and bonded for a minimum of five years and have a minimum of 10 employees and $5 million in annual revenue. The nominee also must be a member of one or more professional industry associations and be able to cite community enrichment ties through support of nonprofits or company culture programs.

Award judging criteria will be based on innovation, results, design and strategy. The recipient will be announced in September at the Best of Success conference in Miami.

The deadline for submissions is July 30. Additional information and award applications are available at www.rt3thinktank.com/innovator-award. There is a $50 nomination fee to cover processing and award costs.

U.S. surpasses 2 million PV installations

On May 9, the Solar Energy Industries Association and Wood Mackenzie Power & Renewables reported there now are more than 2 million photovoltaic installations in the U.S., according to www.cnbc.com. PV installations reached the 2 million mark three years after hitting the 1 million mark; it took the industry 40 years to reach the 1 million mark.

Fifty-one percent of the first million PV installations and 43% of the second million occurred in California. The Solar Energy Industries Association explained the reduction largely resulted from a residential sector that was growing and "rapidly diversifying across state markets." PV installations in Florida, Maryland, Rhode Island, Texas and Utah also helped drive growth.

Abigail Ross-Hopper, CEO of the Solar Energy Industries Association, says the organization believes "the 2020s will be the decade solar becomes the dominant new form of energy generation."

Wood Mackenzie Power & Renewables predicts PV installations will reach 3 million in 2021 and 4 million in 2023.

"According to our latest forecasts, by 2024 there will be, on average, one solar installation per minute," said Michelle Davis, senior solar analyst at Wood Mackenzie Power & Renewables, in a May 9 statement. "That's up from one installation every 10 minutes in 2010."

China announces subsidy-free clean energy projects

China has approved its first group of renewable energy projects to be built without financial support from the government, according to Bloomberg Law.

The subsidy-free list encompasses 56 onshore wind farms and 168 photovoltaic solar arrays across 16 provinces totaling 20.8 gigawatts. Solar outweighs wind in the approved projects, with 14.8 gigawatts of capacity compared with 4.5 gigawatts of turbines. The renewable projects only can profit from selling electricity into grids at prices equal to or less than coal power.

New solar projects in China are expected to accelerate during the second half of 2019 because the list of subsidy-free plants now will allow provinces to organize the bidding process required for projects that need government support.

China's focus on renewable energy stems from its desire to reduce coal reliance and help fight pollution. Although the country has subsidized clean power plants for years, it is moving toward a market-driven approach to help control large subsidy bills. China also announced policies such as setting mandatory consumption targets and giving priority grid access to subsidy-free plants to further encourage clean energy use.

To learn more about China's renewable energy efforts, go to www.professionalroofing.net.

Analysts estimate China will add 37 gigawatts of capacity in 2019.

DOE offers millions for energy-efficient construction technology

The Department of Energy is offering $33.5 million of grant money in new construction technology and advanced building techniques with an aim to reduce energy usage in commercial and residential buildings, according to www.constructiondive.com.

The agency is seeking solutions that will allow energy efficiencies after building retrofits, with goals that include a 75% reduction in major loads from HVAC systems. DOE also wants construction technologies to help new buildings achieve a 50% increase in energy efficiency through techniques such as off-site manufacturing, robotics, digitization, automation and improved building modeling.

Commercial buildings have long been a focus for DOE, which is tasked with addressing energy challenges in the U.S. through science and technology. According to the agency, commercial buildings use 20% of the U.S.' power.

To maximize energy efficiencies, DOE supports whole building design—an integrated approach to design and construction that leads to various elements of a building working together to save energy. Some construction considerations of whole building design include creating high-performance building envelopes, using landscaping for shading, and using a passive solar approach such as placing certain sizes and types of windows in specific locations.

Features of buildings using passive house design concepts include solar gain optimization; an airtight building envelope; moisture and thermal control via insulation to eliminate thermal bridging; triple-glazed, high-performance windows; and heat-recovery ventilation.

> "DOE wants construction technology to help new buildings achieve a 50% increase in energy efficiency"

To learn more about whole building design, go to www.professionalroofing.net.