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## ASHRAE Standards Continue to Set Efficiency Baselines

*Organization Promotes Adoption, Integrity of Standard 90.1*

By, Kimberly Schwartz

ASHRAE is committed to improving the efficiency of the built environment. That commitment is best exhibited through ASHRAE's standards, which, through constant improvement, continue to raise the bar for building efficiency.

Currently, ASHRAE is developing the 2016 version of Standard 90.1, the "Energy Standard for Buildings Except Low-Rise Residential Buildings." Yet, the organization continues to push for the adoption of earlier versions of this standard at the state level. ASHRAE is also committed to maintaining the integrity of 90.1 as a baseline standard for high-performance buildings across the country.

### **Committed Volunteers**

Drake Erbe, vice president, market development, **Airxchange Inc.**, is the chair of the ASHRAE 90.1 - 2016 committee, and he is overflowing with positive comments about the volunteers who devote their time to the development of 90.1.

"ASHRAE 90.1 is a very, very big deal in terms of the effort, commitment, and level of dedication involved," Erbe said, noting there are around 100 volunteers currently involved in the development of the 2016 version.

Erbe previously served as the mechanical subcommittee chair for both the 2007 and 2010 versions of 90.1 and as the co-vice chair of the 2013 version. He's been involved in the 90.1 development process for a long time and is very proud of the success ASHRAE has had with its consensus approach to standard making.

“We created a standard process that says we’re not doing industry fights,” he said. “We want consensus with the advocates, the industry, and all stakeholders. ... This process has worked extremely well.”

As examples, Erbe pointed to gains in chiller, furnace, and boiler efficiencies that have been incorporated into recent versions of 90.1, all of which were amicably achieved, he said.

Erbe noted ASHRAE follows the ANSI standard process, which includes engaging all stakeholders and holding public reviews.

“It’s a complex process — one that many people think might be slow — but, it’s methodical and careful because it is the intent of all of the volunteers and ASHRAE that what we do actually gets realized in the marketplace,” he said.

### **Standard Adoption**

According to Erbe, ASHRAE is careful when developing 90.1, since the standard is designed to function as a baseline requirement for all commercial and high-rise residential buildings.

“We strive to push the boundaries somewhat,” he said. “But, we also have to be reasonable because this sets minimum requirements, and everyone has to comply.”

Last fall, the increased efficiencies required by 90.1-2013 were recognized by the U.S. Department of Energy (DOE) when the department issued an announcement adopting the 2013 version of 90.1 as the commercial building reference standard for state building energy codes. In the Sept. 26, 2014, issue of the Federal Register, DOE stated, “buildings built to Standard 90.1-2013, as compared with buildings built to Standard 90.1-2010, would result in national source energy savings of approximately 8.5 percent and site energy savings of approximately 7.6 percent of commercial building energy consumption.”

According to a press release sent out at the same time, ASHRAE president Tom Phoenix said: “ASHRAE is pleased with this ruling from the DOE, recognizing the energy savings measures in the standard.”

Yet, while the DOE’s endorsement of the 90.1-2013 is intended to trigger state adoption of the standard, there is no uniform path to nationwide acceptance.

Erbe explained that after the DOE issues its ruling, states have “two years to confirm their building code is equal to or better than ASHRAE 90.1-2013.” He continued, “Unfortunately, one of the problems is, of course, that state adoption is varied.”

The map below shows the current status of adoption across the country. As of today, 15 states have adopted the 2010 version of 90.1, but some states have no statewide code while others are

still using the 2001, 2004, and 2007 versions of 90.1. The DOE tracks the adoption status at [www.energycodes.gov/adoption/states](http://www.energycodes.gov/adoption/states).

“We want to see universal adoption of the 2010 standard, and then we can start pushing the envelope [to 2013],” Erbe said. “It’s great that 2013 [has been accepted by DOE], but, in reality, various levels of 90.1 are being used at the state level, and, therefore, various efficiencies are being realized.”

### **Realized in the Market**

While ASHRAE continues to push for increased adoption of more recent versions of 90.1 across all states, the organization is also striving to uphold the integrity of its standard. According to Erbe, the organization is concerned that recent actions by the DOE are undermining the consensus process that has resulted in the development of 90.1.

When DOE issues new rules that go beyond the minimums established in 90.1, Erbe said it lessens the likelihood that the standard will be followed in the market.

“That’s why the volunteers do their work — they’re interested in making sure this stuff gets to the ground,” Erbe said. “There’s a lot of hard work that’s being done by the volunteers of 90.1, and they’re all working for the purpose of getting the standards down to the ground. Otherwise, you’re just publishing a book.

“Above all, ASHRAE is striving for Standard 90.1 to be technologically feasible and economically justified, so it gets into the marketplace,” concluded Erbe.