



## DOE Updates National Reference Standard for Commercial Buildings to 90.1-2010



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**ATLANTA** – Following preliminary analysis that ASHRAE/IES's 2010 energy efficiency standard contains significant energy savings over the 2007 standard – 18.2 percent source energy savings and 18.5 site energy savings – the U.S. Department of Energy (DOE) has issued a ruling that establishes the 2010 standard as the commercial building reference standard for state building energy codes.

In an announcement in the Oct. 19 edition of The Federal Register, DOE attributes the greater energy savings to improvements in ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, related to better lighting, daylighting, controls and building envelope and better mechanical systems and application to more systems.

With the Oct. 19 ruling, Standard 90.1-2010 serves as the commercial building reference standard for state building energy codes under the federal Energy Conservation and Production Act. As a result, states are required to certify by Oct. 18, 2013, that they have updated the provisions of their commercial building code regarding energy efficiency to meet or exceed 90.1-2010.

"The foundation of energy efficient buildings continues to grow stronger with the news that DOE is now referencing the 2010 standard," Ron Jarnagin, ASHRAE president, said. "ASHRAE hopes to make that foundation even stronger through our current work with IES developing the 2013 standard."

"IES is pleased with the results of the DOE analysis and the ruling on 90.1 2010 and will continue to pursue strategies for increasing lighting efficiency in buildings that will be impacted by the 2013 standard," Rita Harrold, IES director of technology, said. "The goal is always to improve not only energy savings but to recommend measures that improve the quality of the environment."

"The DOE has determined that the quantitative analysis of the energy consumption of buildings built to Standard 90.1-2010, as compared to buildings built to Standard 90.1-2007, indicates national source energy savings of approximately 18.2 percent of commercial building consumption," according to DOE. "Additionally, DOE has determined site energy savings are estimated to be approximately 18.5 percent."

The DOE noted that the newer version of the standard contains 19 positive impacts on energy efficiency. These impacts included changes made through the public review process in which users of the standard comment and offer guidance on proposed requirements. Specifically the positive impacts include:

Requirements for daylighting controls under skylights and commissioning of daylighting controls; increased use of heat recovery; cool roofs in hot climates; lower illuminance in certain exterior zones; skylights and daylighting in some building types; reduced ventilation energy; supply air temperature reset for non-peak conditions; efficiency requirements for data centers; lower lighting power densities; control of exterior lighting; occupancy sensor for many specific applications; daylighting control requirements for side-lighted spaces; and daylighting controls in more spaces.

Updated chiller efficiency requirements.

Extension of VAV fan control requirements.

Expansion of new lighting power densities to more retrofits and automatic damper requirements and use of economizers

Minimizes exceptions to switched receptacle requirement.

The ruling comes on the heels of a July announcement that established the 2007 standard as the as the commercial building reference standard for state building energy codes. The DOE noted that because the 2010 determination was published prior to the two-year deadline states have to demonstrate that their energy code meets or exceeds the stringency of the 2007 standard, states are allowed to file just one certification to address both determinations.

Since being developed in response to the energy crisis in the 1970s, Standard 90.1 now influences building designs worldwide. It has become the basis for building codes, and the standard for building design and construction throughout the United States. ASHRAE and IES publish a revised version of the standard every three years.

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