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ASHRAE Publishes First Zero Energy and Zero Carbon Building Evaluation Standard

ASHRAE has released a new standard to measure zero net carbon and energy goals in buildings.

ANSI/ASHRAE Standard 228-2023, Standard Method of Evaluating Zero Net Energy and Zero Net Carbon Building Performance, sets requirements for evaluating whether a building or group of buildings meets a definition of “zero net energy” or a definition of “zero net carbon” during building operation. The standard draws from ASHRAE Standard 105, among others, to address energy and carbon flows across a site boundary, their measurement, and their balance.

“Achieving a zero energy building has been viewed by many as a difficult goal to meet, with unforeseeable roadblocks and differing guidance,” said Keith Emerson, P.E., Life Member ASHRAE, chair of the Standards Project Committee 228. Standard 228 provides a consistent method for determining whether new and existing sites have reached zero energy. We hope this standard will become a helpful resource for building professionals in strategic decarbonization planning.”

Additional features of Standard 228 are as follows:

- Allowances for sites that lack the opportunity to produce adequate renewable energy, while placing additional requirements on the use of external carbon and renewable energy in the calculation.
- Defined calculation of energy in terms of

source—a multiplier on the energy crossing the site boundary to include energy used or lost in extraction, generation and transit to the site.

- The main energy calculation made in terms of annual average factors. Allowance is made for the calculation of individual hours where data is available.

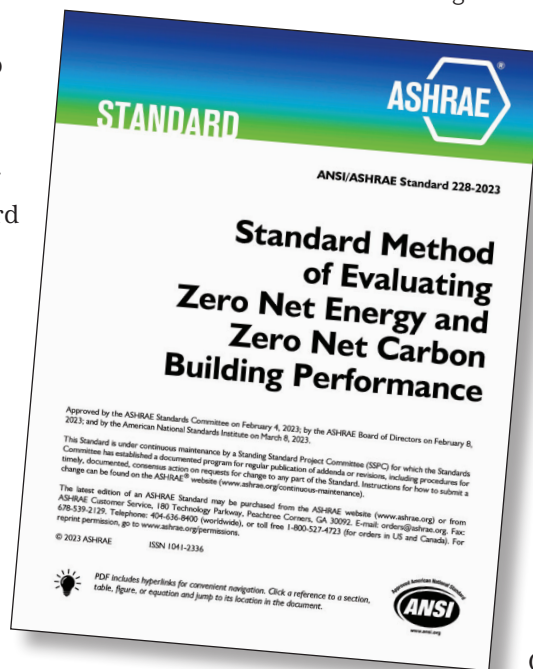
Standard 228 does not apply to the establishment of building energy performance goals or limits; design guidance or design requirements; embodied energy of building materials and systems; and transportation to and from a building. The standard is also not intended to circumvent any safety, health, or environmental requirements.

To purchase Standard 228-2023, visit ashrae.org/228 or contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada), 404-636-8400

(worldwide) or fax 678-539-2129.

Standard 228 has been published on continuous maintenance. A Standing Standard Project Committee (SSPC 228) has been formed to update the standard through the publication of addenda or revisions to any part of the standard. SSPC 228 is chaired by Dr. Paul Torcellini. Instructions for how to submit a change can be found on the ASHRAE website at ashrae.org/continuous-maintenance.

For more information on the standard, visit tinyurl.com/Standard-228.



Industry Roundup

Carrier Buys German Heat Pump Business in \$13.2B Acquisition

BERLIN—A German company, the Viessmann Group, is selling its heat pump business to Florida-based Carrier Global Corp. as part of a 12 billion-euro (\$13.2 billion) deal. The sale of Viessmann’s “climate solutions” business, announced by both companies in late April, comes as Germany is putting into place plans to phase out gas and oil heating systems in favor of climate-friendly alternatives. Heat pumps, which use electricity and ambient air or groundwater, are considered far more efficient than traditional combustion furnaces.

Source: Manufacturing Business Technology

Court Throws Out Berkeley, California’s Ban on Natural Gas

BERKELEY, CALIF.—On April 17 a federal appeals court overturned Berkeley, California’s first-in-the-nation ban on natural gas in new construction, agreeing with restaurant owners who argued the city bypassed federal energy regulations when it approved the ordinance. A lawsuit by the California Restaurant Association claimed the regulation violated federal law that gives the U.S. government authority to set energy-efficiency standards for appliances such as stoves, furnaces and water heaters. The Ninth U.S. Circuit Court of Appeals in San Francisco rejected a lower court judge’s decision two years ago that had upheld the Berkeley ordinance.

Source: AP News

New York State Bans Gas Stoves, Furnaces in New Building

NEW YORK—The New York Legislature passed a measure on May 2 that would ban natural gas appliances in new buildings. The law, negotiated by Gov. Kathy Hochul and Democratic legislators as part of the state’s budget process, begins phasing in next year. The measure prohibits the installation of fossil-fuel equipment in buildings of seven stories or less in 2026, with the ban for larger buildings starting in 2029. Exempt buildings include hospitals, restaurants and buildings not fully supported by the electrical grid. New York is the first to pass a state law banning gas appliances, though Washington state recently approved building codes requiring heat pumps, as opposed to furnaces, in most buildings.

Source: USA Today

DoE Announces New Investments to Accelerate Community Solar

WASHINGTON, D.C.—The U.S. Department of Energy (DOE) announced several new solar energy investments to cut home electricity bills and reduce local pollution. DOE’s National Community Solar Partnership (NCSP) selected 25 teams to participate in the \$10 million Community Power Accelerator Prize competition, which aims to establish a strong, nation-wide network of community solar project developers. Successful teams have the potential to deploy as much as 150 megawatts of community solar across the country—enough to power nearly 30 thousand American homes. Billions in private-sector financing commitments are expected to be leveraged to support the project developers.

Source: Department of Energy



Join Robert Bean, Fellow ASHRAE, and Peter Simmonds, Ph.D., Fellow Life Member of ASHRAE, as they discuss thermal comfort in buildings and the application of ASHRAE Standard 55 in real-world settings.



Scan the QR code or visit:
<https://tinyurl.com/thermal-comfort-AJP>