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February 5, 2024

The Honorable Jennifer M. Granholm
Secretary
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20024

**Re: National Definition for a Zero Emissions Building: Part 1
Operating Emissions Version 1.00 Draft Criteria, published at
89 Fed. Reg. 1,086 (Jan. 9, 2024)**

Secretary Granholm,

The Building Owners and Managers Association (BOMA) International submits these comments in response to the Request for Information from the U.S. Department of Energy ("DOE"), regarding the draft criteria for a "National Definition of a Zero Emissions Building" ("ZEB"), Version 1.00 (the "Draft").

Founded in 1907, the Building Owners and Managers Association (BOMA) International is a federation of U.S. local associations and global affiliates. The leading trade association for commercial real estate professionals for more than 100 years, it represents the owners, managers, service providers and other property professionals of all commercial building types, including office, industrial, medical, corporate and mixed-use. BOMA International's mission is to advance a vibrant commercial real estate industry through advocacy, influence and knowledge.

BOMA International supports the DOE's effort in addressing the need to cut carbon emissions in the buildings sector and for providing a draft National Definition for a Zero Emissions Building. We agree that there is a need to create a standardized, consistent, and measurable basis for zero operating emissions buildings. As a 16-time awardee of the ENERGY STAR Partner of the Year, with a lengthy track record of leadership on sustainability of the built environment through market transformation, we applaud the goals of this effort.

However, we are concerned that the proposed definition, zero emissions, broadens the definition to include scopes of emissions that are beyond the control of the building owner, that the draft criteria is unnecessarily complex for the intended purpose, and that it focuses on specific technology over emission reduction.

Zero Emissions vs. Net Zero Emissions

BOMA International is concerned that the definition in the draft criteria does not reflect a true definition of “zero emissions building” since it is virtually impossible to construct and operate any “zero emissions” building without the use of some offsets. This is further complicated by the inclusion of the building’s life-cycle emissions.

Any definition of “Zero Emissions” must clearly state whether the definition includes or excludes life cycle emission from materials excavation, transportation, refinement, product shipping, construction and final deconstruction, operations and occupancy to final deconstruction and waste disposal emissions. While including life cycle emissions to achieve 'absolute zero' emissions during a building's life cycle is an aspirational objective, it is, in reality, virtually unattainable. It would take unlimited funds, technologies not yet available and the perfect geographic location to achieve actual “zero emissions.” This currently is not possible and calls into question the validity of defining any building as zero-emissions.

Excluding a building’s life cycle emissions, by default, transforms the definition from a “Zero Emissions” building to a “Net Zero Emissions Building” (NZEB). For this reason, we would urge the DOE to reconsider the idea of defining “Zero Emissions” but rather focus efforts on defining a “Net Zero Emissions” building or structure. While this may seem a minor point, it removes the potential that the definition will be mis-used as a government mandate or regulation and opens up a myriad of methods and pathways toward achieving significant emission reductions.

Complexity of the Definition

The DOE, EPA and other agencies have developed numerous metrics to determine resources used in buildings including ENERGY STAR Portfolio Manager. Other stakeholder driven organizations have developed such programs as LEED, Green Globes, WELL and BOMA BEST/BOMA 360. These programs measure resource utilization and outcomes in building operations and have been quite effective as tools to benchmark and then implement strategies to improve wellness, efficiency, water, and waste management. By necessity they are complex as they are examining multiple factors in the overall performance of the building envelope. However, here we are focused solely on defining “Zero Emissions Building” in terms of a building that produces no emission as a result of operations. From our perspective, this means that the building only uses renewable energy sources. Complicating the definition to include discussion of technology, energy choice, benchmark scores, and carbon/emission exchanges, to mention only a few, does not illustrate that a building emits zero emissions but rather creates a potential scheme to offset emissions, only giving the appearance of emission free operations.

We strongly encourage DOE to rethink the approach to defining zero-emissions buildings. For example, a numerical value could be assigned with higher values reflecting emission free operations. While we realize that this may be seen as avoiding labeling a building “100% emissions free” it is important to note that currently it is not possible to operate any building as a “zero emissions building.” Therefore, we believe that a simple definition that a zero emissions building operates using only verifiable renewable energy would provide a better representation of a building’s impact on the environment. This type of definition would be significantly more helpful in identifying high performing buildings, implementing and identifying technologies to move closer to zero emissions and guiding government assistance to those facilities that have the potential, in time, to reach zero-emission operations.

Other benchmarking and performance tools should continue to fulfill the role of determining wellness, efficiency, and waste management, while this definition should only measure emissions directly attributable to the source building's energy use.

Electrification

Electrification has become a key point in discussions on how to reach zero emissions buildings. We are concerned by this policy shift to all-electric operations, in that not all of the implications of this concept have been considered. Specifically, some existing buildings have physical limitations that make electrification impossible, and the electrical grid in some regions of the country is nowhere near capable of accommodating this shift or supplying clean energy. DOE's definition should acknowledge that for certain building sector applications electrification is not necessarily the most clean, efficient, resilient, or cost-effective solution.

We also urge DOE to provide equal treatment of all electricity emissions, regardless of whether they are generated on-site or off-site. Since the proposal allows grid electricity to be covered by RECs, we encourage the same treatment of on-site electricity generation by sources such as highly efficient combined heat and power (CHP).

Additionally, the use of renewable and decarbonized fuels and technologies—biomass, biogas, clean hydrogen, renewable natural gas, renewable propane, solar, and fossil fuels coupled with carbon capture and storage technologies (CCS)—as onsite generation should be included under any zero emissions building definition. These fuels and technologies deliver the same onsite zero emissions as electrification technologies powered by renewable energy and the definition should reflect this.

DOE should provide explicit and complete methodologies for building owners to demonstrate their onsite zero emission power and heat generation from all these renewable and decarbonized fuels and technologies. For example, EPA Greenpower Partnership guidelines referenced in the proposal are far too limiting—they do not allow for biogas, RNG, clean hydrogen, renewable propane, or CCS as eligible sources.

In summary, we support this effort underway to find a shared definition, but we believe the above concerns necessitate careful reconsideration of how this definition will be used and toward what end. It may be possible to find a simpler solution that, in conjunction with existing tools and added resources, will assist the built environment in moving closer toward our shared goals. BOMA International appreciates the great work being done by your staff to advance this conversation, and we stand ready to assist in any way possible.

Sincerely,

A handwritten signature in dark ink, appearing to read "Don Davis", is positioned above the printed name.

Don Davis
Vice President, Advocacy and Building Codes