

We often hear of “net-zero” buildings, but what does that actually mean? Does this account merely for direct emissions, or also indirect emissions across the entire life cycle of a building? There has not been industry consensus on what constitutes a ‘zero-emissions’ building, but the White House Climate Policy Office is looking to change that.

Through the Department of Energy (DOE), the White House is working to develop a National Definition of a Zero Emissions Building. The DOE aims to coalesce the industry around a uniform and consistent framework for defining a zero emissions building as well as establish a pathway for verification. This framework can influence the design and operations of buildings and expedite significant emissions reductions.

Last month, the DOE published [Part 1 of this national definition](#), which applies to existing buildings and new construction (excluding federally-owned buildings). Part 1 targets whole building operational emissions, defining a zero operating emissions building as one that:

- Is very energy efficient
- Has zero on-site emissions from energy use, and
- Is fully powered by clean energy

The definition draft identifies the methodology for verifying these definition components. Existing buildings must meet an ENERGY STAR score of 75 or higher or an energy use intensity (EUI) of 35% or better than median EUI. New construction must meet an ENERGY STAR score of 90 or higher with energy use projected to be 10% lower or more than energy use based on the latest IECC or ASHRAE 90.1 model code. The building’s on-site (Scope 1) emissions must measurably equal zero. Finally, the building can utilize both on-site and off-site clean energy to be solely powered by zero emissions energy. Buildings can use the Environmental Protection Agency’s (EPA) ENERGY STAR Portfolio Manager to create documentation for verification, but they may also base verification off 12 months of whole-building energy use (or document the building has met each of the three criteria independently).

While Part 1 of the definition focuses on operational emissions, the DOE may address emissions across the full building life cycle, such as embodied carbon and refrigerants, in subsequent parts of the definition.



The DOE's Building Technologies Office has released a [request for information](#) (RFI) to receive feedback from the industry and other building stakeholders on the draft definition. Comments can be accepted through **February 5, 2024 at 5pm ET**. Additionally, DOE is hosting a virtual listening session on the draft definition on [January 30, 2024 at 10am ET](#).

Industry signaling has culminated in the creation of a National Definition of a Zero Emissions Building, and developing this definition demonstrates a great step forward in the transition to a low-carbon built environment.

*Written by Hailey Moll, Senior Associate, Educational Resources*