



ENERGY STAR® NextGen™ Certification

Eligibility Criteria for Existing Commercial and Multifamily Buildings

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ENERGY STAR for Commercial Buildings

This 7-page document outlines the eligibility criteria for ENERGY STAR® NextGen™ certification for existing U.S. commercial and multifamily buildings, available starting in fall 2024.

Overview

The U.S. government has established a goal of net-zero emissions, economy-wide, by 2050. Reaching this goal will require increases in efficiency, vastly increased renewable energy capacity, and a transition from fossil fuels to clean energy. Buildings have a critical role to play in achieving each of these objectives. Toward that end, in January 2023, the EPA proposed a new recognition, called ENERGY STAR NextGen™ certification, designed to encourage top energy performance, use of renewable energy, and reduced onsite emissions in existing U.S. commercial and multifamily buildings.

The EPA requested comment on the proposal, asking a series of questions about the overall certification and each of the proposed criteria. The EPA received over forty sets of comments on the proposal, representing hundreds of individual comments. Based on a careful review of the comments and further consideration, the EPA is pleased to present below the final criteria for ENERGY STAR NextGen certification for U.S. commercial and multifamily buildings (hereafter referred to as simply NextGen certification).

- Read more: [Public Comment Summary and the EPA's Responses](#).

Background

The following set of principles guided the EPA's development of this proposed new certification:

Ensure energy efficiency. There is widespread agreement that achieving cost-effective energy efficiency is an essential step to reducing carbon emissions from buildings. Studies have consistently shown that inefficiencies in building systems waste energy, leading to greater emissions, higher costs to building owners and occupants, and additional energy system infrastructure needs. Recent studies also show that substantially greater efficiency is necessary to meeting the goal of net-zero emissions, economy wide. Therefore, NextGen certification must ensure efficiency.

Encourage development and use of cost-effective renewable energy. Buildings can spur renewable energy development in several ways. Crediting onsite generation and/or procurement from offsite sources allows the market to determine the best, most cost-effective approach for each building – helping to ensure the greatest action. The option that is best for a particular building depends on its size, location, and other factors. For example, tall, narrow buildings and others that have limited roof space or shading may not have feasible options for onsite renewable energy but can procure renewable energy from nearby installations, from other renewable energy projects, or via renewable energy certificates. On the other hand, buildings with more roof space (such as warehouses) or with significant open area around them (such as buildings in more rural areas) will have a greater ability to deploy onsite renewable energy.

Incentivize reduction in onsite emissions. A key objective of ENERGY STAR recognition is to motivate building owners to improve the performance of their buildings. Recognizing only those that have zero onsite emissions would miss the opportunity to help buildings to move meaningfully along the path of reducing and ultimately eliminating onsite fossil fuel use. Therefore, NextGen certification should encourage buildings to transition to efficient zero emissions heating, water heating, and cooking, as well as recognize those that already have zero onsite emissions and are efficient.

Establish one set of national criteria. The EPA will implement the NextGen certification at a national level. Therefore, it needs to include one set of criteria that works nationally and can be applied to all buildings regardless of their location.

Recognize top performance. By design, the certification should only recognize top performers, even if that is a relatively small number of buildings.

In addition, it is important that the certification be easily understood, with clear metrics, so that buildings know how to achieve it, what improvements are needed, and how they are progressing toward meeting the requirements.

The final NextGen certification criteria were developed with these principles in mind.

Final ENERGY STAR NextGen Certification Criteria

Below are the final ENERGY STAR NextGen certification criteria for existing commercial and multifamily buildings. These criteria will be used when the program launches in fall 2024. The EPA intends to periodically reevaluate each criterion and potentially revise them (e.g., increase their stringency) based on the market’s response and the advancement of demonstrated efficiency, renewable energy, and low carbon activity in buildings. Such reevaluations will likely occur every 5–7 years to limit disruption and confusion, while ensuring that the certification keeps pace with changes in the market.

1. Demonstrate Superior Energy Performance

- **Requirement:** The building achieves an ENERGY STAR score of 75 or higher and meets all criteria associated with ENERGY STAR certification.
- **Implementation:** No changes are required since the EPA already administers ENERGY STAR certification for buildings through Portfolio Manager.
- **Rationale:**
Requiring buildings to achieve ENERGY STAR certification to qualify for NextGen certification ensures that they are top energy performers without sacrificing comfort.

ENERGY STAR certification recognizes buildings that achieve an ENERGY STAR score of 75 or greater and whose data and acceptable indoor air and lighting levels are verified by a Professional Engineer or Registered Architect. The ENERGY STAR score measures the energy performance of buildings relative to the market, accounting for differences in key operating characteristics.

Requiring this certification restricts NextGen certification to only those [building types eligible for ENERGY STAR certification](#). As the EPA develops ENERGY STAR scores and certification for additional building types, they will become eligible for NextGen certification.

2. Use Renewable Energy

- **Requirement:** The building obtains at least 30% of the total energy it consumes (on a site basis) from eligible renewable sources; however, if electricity represents less than 30% of the total site energy consumed, the building must instead obtain 100% of its electricity from eligible renewable sources. Total energy includes all energy sources used by the building, encompassing fuels consumed on site, electricity (purchased as well as generated and used onsite), and district energy). Eligible renewable sources can include onsite renewable electricity and/or offsite green power procurement, subject to the requirements outlined below. Renewable energy components of *standard* grid-supplied electricity are not eligible renewable sources and do not count toward the requirement. In general, these requirements are consistent with those for [the EPA's Green Power Partnership](#).

For **onsite** renewable energy generation to be eligible, the building owner must retain and retire the renewable energy credits (RECs) associated with the onsite generation consumed by the building. If no RECs were generated or sold for the onsite renewable energy generation, the building owner must attest to that fact.

For **offsite** renewable energy procurement to be eligible, it must meet the following requirements:

- **Unbundled RECs, Power Purchase Agreements (PPAs), and any other renewable electricity procurements not conveyed through the utility electric bill:**
 - RECs are Green-e certified.
 - OR-
 - Owner can document that RECs have been retired (by or on behalf of the owner) and were generated by facilities put into service within the prior 15 years.
- **Green power products (e.g., community choice aggregation, utility products, green tariffs, community solar):**
 - Product must be Green-e certified.

You can find out whether a particular green power product is Green-e certified by searching on [the Green-e website](#).

- **Implementation:** The EPA will enhance the renewable energy tracking features in Portfolio Manager to support this criterion, including adding the ability to track RECs and green power products as well as adding a new metric to inform users if they meet the NextGen requirement.

As part of the application process, a licensed professional (Professional Engineer or Registered Architect) must verify that green power included in an application for NextGen certification satisfies these requirements. The EPA will provide guidance and examples of the documentation demonstrating an applicant has met the requirements.

- **Rationale:**

Buildings have an important role to play in increasing the supply and use of renewable energy. Since ENERGY STAR is a national program and the mix of energy resources on the local or regional electricity grid changes over time, the EPA is proposing a single percentage requirement for NextGen certification, regardless of building location.

A primary goal of NextGen certification is to encourage building owners to take action to procure green power, thereby contributing to development of new renewable energy sources. Therefore, renewable energy that contributes to the generation of standard electricity supplied by the regional or local grid does not count toward the NextGen

requirement (unless the building owner can claim ownership of the RECs, or the RECs have been retired on the building owner's behalf).

As most buildings do not currently use renewable energy, the EPA is proposing a relatively modest initial requirement of 30% of total energy or 100% of electricity consumption, whichever is lower, to incentivize more buildings to procure renewable energy. The EPA may adjust the percentage over time.

The 30% requirement is expressed as a percentage of total site energy use rather than as a percentage of electricity because if the requirement was instead for 30% of electricity use, buildings with a higher proportion of electricity would need to demonstrate a greater overall use of renewable energy. This would mean all-electric buildings would have a more stringent renewable energy requirement than buildings using fossil fuels directly, which is counter to one of the key goals of the NextGen certification.

On the other hand, some buildings may have total energy use that is comprised of less than 30% electricity. These buildings would not be able to meet the 30% requirement with green power (as green power cannot be used to "offset" direct fuel use). These buildings can meet the NextGen renewable electricity criterion by obtaining 100% of their electricity use from green power.

3. Meet a Direct Emissions Target

- **Requirement:** The building's direct (i.e., onsite) greenhouse gas emissions intensity (GHGi) is at or below a specified level. Each building will have a unique direct GHGi target—called the "NextGen Direct GHGi Target" in Portfolio Manager—which is normalized for both the type of building and climate/weather. Because direct GHG emissions in buildings are related to heating needs, every building's NextGen Direct GHGi Target will be normalized based on the number of Heating Degree Days (HDD) experienced by the building. The normalization process also accounts for the fact that buildings using fuels for hot water and cooking have a baseload level of fuel consumption, regardless of HDD.
- **Implementation:** The EPA will add metrics to Portfolio Manager for the NextGen Direct GHGi Target.

To develop the NextGen Direct GHGi Targets for each property type, the EPA analyzed data from ENERGY STAR certified buildings (excluding buildings with no direct emissions) and determined the relationship between direct GHGi and HDD for each property type. Using statistical analysis, the EPA established a "baseload" GHGi value and a GHGi/HDD factor for each property type. An individual property's target is calculated by adding the

property type-specific baseload value to the product of the GHGi/HDD factors and the property's actual HDD value. The target represents the average direct GHGi emissions for ENERGY STAR certified buildings, accounting for heating needs.

The EPA found that for each property type, the resulting NextGen Direct GHGi Targets are relatively consistent across climate zones. Therefore, the EPA is confident that this approach will result in equitable targets for buildings across the country.

- See GHGi targets and details of the EPA's analysis: [Technical Reference: ENERGY STAR NextGen Direct GHGi Targets](#).

Buildings with no on-site fossil fuel use automatically meet this criterion as they have zero direct GHG emissions. De minimus use of fossil fuels on-site for testing of back-up generators is allowed and will not count in determining if a building meets this criterion.

- **Rationale:**

Direct emissions from energy use at buildings results from combustion of fossil fuels, such as natural gas, for space heating, water heating, cooking, and miscellaneous uses. The primary options for reducing these emissions include improving energy efficiency, which generally leads to incremental reductions, and electrifying end uses. A direct GHGi level, if set properly, will encourage reductions in use of fossil fuels at the building. The EPA considered requiring buildings to be 100% electric to qualify for NextGen certification; however, that would not help motivate buildings to transition to zero onsite emissions but rather would only recognize those that are already there.

The EPA also considered establishing emissions targets for total GHG emissions instead of direct GHG emissions. Total GHG emissions include both direct emissions from onsite fuel use as well as indirect emissions that occur at the power plant generating electricity (or district energy) used in the building. Indirect emissions intensity varies significantly based largely on the fuels used at the power plant, which is outside the control of the building owner. To establish a total GHG emissions criterion, the EPA would not be able to rely on a single, national emissions factor and would have to propose multiple thresholds, which would vary not just geographically but also over time. This would be very complex and, depending on the regional grid, might discourage action toward zero onsite emissions in some regions. It would also penalize building owners in regions where the mix of fuels used to generate electricity results in greater emissions.

Direct emissions vary significantly among building types, and even more so among regions since a major factor in the level of direct GHG emissions is weather. As a result, since a predominant use of onsite fuels is space heating, even energy efficient buildings

in colder climates will tend to have higher direct GHG emissions than most buildings in warmer climates. The number of Heating Degree Days in a particular area reflects the climate and weather in that area and is a standard measure of heating needs. The higher the HDD, the more energy needed for heating and consequently the higher the emissions. To account for variations in heating needs, the EPA is normalizing the NextGen Direct GHGi Targets by building type and the annual number of HDD, as described above.

The EPA based its development of the proposed GHGi Factors on data from ENERGY STAR certified buildings. One reason for focusing the analysis on certified buildings is that their energy data has undergone a verification process as part of the application for ENERGY STAR certification. In addition, their emissions reflect the fact that they are highly efficient. By establishing the NextGen Direct GHGi Targets as described above, the EPA is targeting NextGen certification to those buildings with direct emissions lower than 50% of ENERGY STAR certified buildings that use onsite fuels.

Eligibility

NextGen certification requires that a building be eligible to earn the existing U.S. ENERGY STAR certification. (Read more: [Which property types are eligible for an ENERGY STAR score/certification?](#))

With the introduction of NextGen certification, the EPA will offer two forms of ENERGY STAR certification at the individual building level:

- ENERGY STAR certification (for existing energy efficient buildings, offered by the EPA since 1999)
- ENERGY STAR NextGen certification (for existing energy efficient low-carbon buildings, available fall 2024)

As a general rule, a building can apply for only one of these certifications in any given year. To limit disruption for building owners as they learn about and become more experienced with the new recognition, however, the EPA will allow an exemption to this rule for a limited time. In 2024 and 2025, the EPA will allow buildings to upgrade to NextGen certification regardless of when they received ENERGY STAR certification, even if it is within the same year. Starting in 2026, a building that receives ENERGY STAR certification will have to wait 11 months before applying for its next certification (of either type). Put another way, if a building earns ENERGY STAR certification any time in 2024 or 2025, it can upgrade to NextGen certification in the same year, regardless of how much time has elapsed; but if that building earns ENERGY STAR certification in 2026 and beyond, it will have to wait 11 months before becoming eligible for NextGen certification.