



11 Green Building & Energy Efficiency

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11 Green Building & Energy Efficiency

11.1 Introduction

CDBG-DR subrecipients are required to incorporate green building and energy efficiency measures into their new construction, reconstruction, and rehabilitation projects. HUD identifies a number of different industry-recognized standards that may be selected from and incorporated into each program's policy. These standards may differ from program to program.

11.2 Overview

The HUD Green and Resilient Building Standard is a set of guidelines for the design, construction, and operation of housing that is both energy efficient and resilient to natural disasters. The standard is based on the principles of green building, which incorporates a range of practices that reduce the environmental impact of buildings. These practices can include the use of energy-efficient appliances, water-saving fixtures, and recycled building materials. The standard also includes requirements for resilience to natural disasters, such as earthquakes, floods, and wildfires. These requirements can include the use of reinforced concrete foundations, impact-resistant windows, and noncombustible building materials.

The benefits of the HUD Green and Resilient Building Standard include:

- Lower energy bills for homeowners and renters
- Reduced environmental impact
- Improved indoor air quality
- Increased resilience to natural disasters
- Greater comfort and livability
- Higher property values

OHCS requires that grantees incorporate measures that will result in a project that meets green and resilient building standards. A distinction is made between rehabilitation and new construction, reconstruction, or substantial rehabilitation, with different requirements necessary for both.

11.3 New Construction, Reconstruction, and Substantial Rehabilitation

The subrecipient is required to select and adhere to the Green and Resilient Building Standard for new construction and reconstruction of housing as required by HUD. The subrecipient must meet this standard for all residential new construction, reconstruction, and rehabilitation of substantially damaged buildings. HUD defines substantial damage and substantial improvement, with limited exceptions, in 44 CFR 59.1 as:

- **Substantial damage** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.
- **Substantial improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred “substantial damage,” regardless of the actual repair work performed.

11.3.1 Selection Options

Each project must meet an industry-recognized standard that has achieved certification under one of the following:

- **Enterprise Green Communities.** Program and compliance information can be found here: <https://www.greencommunitiesonline.org/checklist>
- **Leadership in Energy and Environmental Design (LEED) (New Construction, Homes, Midrise, Existing Buildings Operations and Maintenance, or Neighborhood Development).** Program and compliance information can be found here: <https://www.usgbc.org/guide-LEED-certification>
- **ICC-700 National Green Building Standard Green+ Resilience.** Program and compliance information can be found here: <https://www.iccsafe.org/building-safety-journal/bsj-hits/2020-national-green-building-standard-now-available-for-free-download/>
- **Living Building Challenge.** Program and compliance information can be found here: <https://living-future.org/lbc/resources/>
- *Or any other equivalent comprehensive green building program. The subrecipient will need to specify the standard and present it for approval.*

In addition to the selection options above, the project must also meet one of the following minimum energy efficiency standards such as:

- **ENERGY STAR® (Certified Homes or Multifamily High-Rise).** Program and compliance information can be found here: https://www.energystar.gov/sites/default/files/asset/document/ES%20Certified%20Homes%20QA%20Checklist_Rev%2012.pdf
- **DOE Zero Energy Ready Home.** Program and compliance information can be found here: <https://www.energy.gov/eere/buildings/doe-zero-energy-ready-home-zerh-program-requirements>
- **EarthCraft House, EarthCraft Multifamily.** Program and compliance information can be found here: <https://earthcraft.org/resources/>
- **Passive House Institute Passive Building or EnerPHit certification from the Passive House Institute US, International Passive House Association.** Program and compliance information can be found here: <https://www.phius.org/resources/tools-and-support/certification-support>
- **Greenpoint Rated New Home, Greenpoint Rated Existing Home (Whole House or Whole Building label).** Program and compliance information can be found here: <https://www.greenpointrated.com/greenpoint-rated/rating-process-and-fees>
- **Earth Advantage New Homes.** <https://www.earthadvantage.org/initiatives/home-standards.html>
- *Or any other equivalent energy efficiency standard acceptable to HUD. The subrecipient will need to specify the standard and present it for approval.*

Many of the green building standards incorporate energy efficiency standards. The subrecipients should review the standards and select the option(s) they would like to implement for their project. The subrecipient must identify within each project file which of these standards will be used and must also include the appropriate scoring metrics that demonstrates the extent to which the project is in compliance with the selected standards.

11.4 Rehabilitation of Non-substantially Damaged Residential Buildings

For rehabilitation of residential projects other than those described as “substantial,” OHCS requires that the subrecipient adhere to the HUD CPD Green Building Retrofit Checklist, found here: <https://www.hud.gov/sites/dfiles/CPD/documents/CPD-Green-Building-Retrofit-Checklist.pdf>. Subrecipients must apply these guidelines to the extent applicable for the rehabilitation work undertaken, for example:

- When replacing or repairing bathrooms, kitchens, and laundry rooms, use materials that have durable, cleanable surfaces.
- Products and appliances replaced as part of the rehabilitation work must be ENERGY STAR-labeled, WaterSense-labeled, or Federal Energy Management Program labeled.
- When replacing windows, install geographically appropriate ENERGY STAR rated windows.
- Utilizing low/no VOC adhesives and sealants.

The HUD Office of Community Planning and Development Green Building Retrofit Checklist promotes energy efficiency and green building practices for residential retrofit projects. Subrecipients must follow the checklist in its entirety and apply all measures within the checklist to the extent applicable to the particular building type being retrofitted. The phrase “when replacing” in the checklist refers to the mandatory replacement with specified green improvements, products, and fixtures only when replacing those systems during the normal course of the retrofit.

Note: OHCS does not expect the subrecipient to attempt to bring into compliance items that are outside of the rehabilitation scope.

11.5 Additional Requirements

Subrecipients should also be aware of, and incorporate into their projects as applicable, other state energy efficiency requirements. These requirements may be found in the following documents:

- 2021 Oregon Energy Efficiency Specialty Code
<https://www.oregon.gov/bcd/codes-stand/Documents/2021oeesc.pdf>
- 2023 Oregon Residential Specialty Code Adoption notes that the 2023 edition Chapter 1 is effective as of October 1, 2023, while the remainder is effective as of April 1, 2024.
<https://www.oregon.gov/bcd/codes-stand/pages/orsc-adoption.aspx>

Subrecipients should be aware that this is not an exhaustive list.

11.6 Monitoring and Compliance

11.6.1 Award

The Green Building and Energy Efficiency requirements are acknowledged by submitting selection certification with their evidentiary material. The subrecipient should be prepared to provide these documents to OHCS upon request. The subrecipient is encouraged to contact the OHCS representative if assistance in understanding the requirements and additional documentation is needed.

11.6.2 Housing Policy

As discussed in this chapter, depending on the housing program, different requirements will be met in terms of green and resilient building requirements. Interim monitoring and compliance requirements will be detailed in program design and policy or procedural documents.

11.6.3 Project Close-out

At the completion of the project, as part of the required documentation for close-out and/or final verification that green building requirements have been achieved per the program policy, the subrecipient should include the completed checklist(s) and/or inspection document(s) for the selected standard within the project file.

Should an instance arise in which the project may be at risk of running afoul of the requirements, the subrecipient should contact the OHCS representative for further guidance.

Below is a flowchart that identifies the different allowable options within the Industry Recognized Standards, as well as the Energy Efficiency Standards.

It should be noted that while HUD identifies the combination of these two different standards as the Green and Resilient Building Standard, there is a fair amount of overlap between the two groups and they should not be viewed as one being “green” and the other being “resilient.”

