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Green Building and Energy Efficiency

Table of Contents

Green Building and Energy Efficiency	1
11 Green Building and Energy Efficiency	2
11.1 Introduction	2
11.2 Overview.....	2
11.3 New Construction, Reconstruction, and Substantial Rehabilitation	3
11.4 Rehabilitation of Non-Substantially Damaged Residential Buildings.....	4
11.5 Additional Requirements	5
11.6 Monitoring and Compliance	5

11 Green Building and Energy Efficiency

11.1 Introduction

Community Development Block Grant Disaster Recovery (CDBG-DR) subrecipients must incorporate green building and energy efficiency measures into their new construction, reconstruction, and rehabilitation projects. The U.S. Department of Housing and Urban Development (HUD) identifies different industry-recognized standards that may be selected and incorporated into each program's policy. These standards may differ from program to program.

The following requirements are not applicable to manufactured housing and/or housing that is not subject to site-specific adopted residential building codes such as the International Residential Code. For energy efficiency and performance, Manufactured Housing is required to adhere to either the NEEM or NEEM+ standards common to current production methods, and as approved by Oregon Housing and Community Services (OHCS) for implementation in the ReOregon program(s). Additional information can be found at neemhomes.com.

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 incorporate 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

Oregon Housing and Community Services requires that grantees incorporate measures that will result in a project that meets the HUD Green and Resilient Building Standard. A distinction is made between new construction, reconstruction, or substantial rehabilitation and rehabilitation, with different requirements necessary for both.

11.3 New Construction, Reconstruction, and Substantial Rehabilitation

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

- **Substantial damage** means damage of any origin sustained by a structure where the cost of restoring the structure to its original condition would equal or exceed 50% of the market value before it was damaged.
- **Substantial improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure where the cost 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. Program and compliance information can be found here:

- [Enterprise Green Communities](#)
- [Leadership in Energy and Environmental Design \(LEED\) \(New Construction, Homes, Midrise, Existing Buildings Operations and Maintenance, or Neighborhood Development\)](#)
- [ICC-700 National Green Building Standard Green+ Resilience](#)
 - Including the Certified Compliance Path found in Section 12
- [Living Building Challenge](#)
- 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. Program and compliance information can be found here:

- [ENERGY STAR® \(Certified Homes or Multifamily High-Rise\)](#)
- [U.S. Department of Energy \(DOE\) Zero Energy Ready Home](#)
- [EarthCraft House, EarthCraft Multifamily](#)
- [Passive House Institute Passive Building or EnerPHit certification from the Passive House Institute US, International Passive House Association](#)
- [GreenPoint Rated New Home, GreenPoint Rated Existing Home \(Whole House or Whole Building label\)](#)
- [Earth Advantage New Homes](#)
- 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, often overlapping in requirements, making it possible for one standard to encompass the requirements of the energy efficiency standards. The subrecipients should review the standards and select the option(s) they want to implement for their project. The subrecipient must identify, in each project file, which standards are used and include the appropriate scoring metrics. This demonstrates the extent to which the project is in compliance with the selected standards.

11.4 Rehabilitation of Non-Substantially Damaged Residential Buildings

For the rehabilitation of residential projects other than those described as “substantial,” OHCS requires that the subrecipient adhere to the HUD Office of Community Planning and Development (CPD) [Green Building Retrofit Checklist](#). Subrecipients must apply these guidelines to the extent applicable for the rehabilitation work undertaken, such as the following:

- 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.
- Use low/no Volatile Organic Compound adhesives and sealants

The HUD CPD Green Building Retrofit Checklist promotes energy efficiency and green building practices for residential retrofit projects. Subrecipients must follow the entire checklist and apply all measures 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 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](#). Effective until June 30, 2025.
- [2025 Oregon Energy Efficiency Specialty Code](#). Effective Jan. 1, 2025 with a *6-month phase-in period / Mandatory July 1, 2025
- [2023 Oregon Residential Specialty Code Adoption](#)
 - Chapter 1 ~ Effective and mandatory Oct. 1, 2023
 - Chapters 2 - 44 and appendices ~ Effective Oct. 1, 2023 and mandatory April 1, 2024
 - Based on 2021 International Residential Code (IRC)
 - [Issued Errata](#)
 - Interim amendments:
 - [Emergency Escape and Rescue Opening](#) - Effective Oct. 1, 2025
 - [Attached stacked two-family dwelling](#) - Effective Jan. 31, 2025

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 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 Closeout

At the completion of the project, as part of the required documentation for closeout 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 a project be at risk of violating 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 and 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 overlap between the two groups. They should not be viewed as one being “green” and the other being “resilient.”

