



DRAFT Caribbean Program Requirements ENERGY STAR Multifamily New Construction, Version 1 (Rev. 02)

These Program Requirements shall only be used in Puerto Rico & the U.S Virgin Islands

Eligibility Requirements

The following multifamily building types are eligible to participate in the ENERGY STAR Multifamily New Construction program:

- Any multifamily building with dwelling or sleeping units that is NOT a two-family dwelling ¹; OR
- Mixed-use buildings, where dwelling units and common space exceed 50% of the building square footage. Parking garage square footage is excluded from this calculation ²; OR
- Townhouses, if following the requirements listed in Footnote 3. ³

Townhouses are also eligible to earn the ENERGY STAR through the ENERGY STAR Certified Homes program, which is a certification program for single family detached homes and two-family dwellings.¹ For more information, visit: www.energystar.gov/newhomesrequirements. In addition, multifamily buildings with permit dates prior to July 1, 2021, may be eligible to earn the ENERGY STAR through the Certified Homes or Multifamily High Rise programs. ⁴ For more information, visit: www.energystar.gov/mfhr/eligibility.

Also note that compliance with these requirements is not intended to imply compliance with all local code requirements that may be applicable to the building to be built. ⁵

Partnership and Training Requirements

The following requirements must be met prior to certifying multifamily buildings:

- The Builder or Developer for the project is required to sign an ENERGY STAR Partnership Agreement and complete the online "Builder / Developer Orientation", which can be found at www.energystar.gov/homesPA.
- Energy Rating Companies (e.g., rater companies and Providers ⁶) are required to sign an ENERGY STAR Partnership Agreement, which can be found at www.energystar.gov/homesPA, and Raters ⁷ are required to complete EPA-recognized training, which can be found at www.energystar.gov/mftraining.

ENERGY STAR Certification Process for the Caribbean

1. The certification process provides a single set of measures that must be used to construct an ENERGY STAR Certified Multifamily Building in the Caribbean, coupled with either an ERI rating or [Multifamily Review Organization](#) review for quality assurance purposes.
 - a. ERI Path: Use an EPA-recognized Verification Oversight Organization (VOO)'s Approved Software Rating Tool to configure efficiency measures that are equal to or better than the prescriptive measures listed in Exhibit 1, ENERGY STAR Multifamily Reference Design, for all the units to be certified. The resulting ERI is not required to meet a specific target value for the units to be certified. The ERI value shall be calculated using ANSI / RESNET / ICC Standard 301 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the Voluntary Compliance Date and Mandatory Compliance Date defined by RESNET. RESNET interpretations of Standard 301 shall also be followed. Any exceptions shall be approved by EPA and reported at www.energystar.gov/ERIEExceptions.
 - b. MRO Prescriptive Path: Meet or exceed the prescriptive requirements specified in Exhibit 1, ENERGY STAR Multifamily Reference Design and in the National Rater Design Review and Field Checklists. Upon completion of design, submit the Multifamily Workbook, with applicable portions completed; the Rater Design Review Checklist, the National MFNC HVAC Design Report and construction documents to the MRO. MROs may choose to implement alternative design review requirements. For the Excel-based Multifamily Workbook, while Partners are encouraged to always use the newest versions available online, unless otherwise specified, file updates between Program revisions will not be required. After a Program revision, project teams will be required to use the updated documents based on the enforcement timeline set for the revision.
2. Upon completion of design, multifamily buildings may be eligible for the Designed to Earn the ENERGY STAR designation. To earn this optional additional designation, follow the guidance available at www.energystar.gov/mfdees.
3. Construct the building using the measures selected in Step 1 and the Mandatory Requirements for All Certified Multifamily Projects, Exhibit 2.

Using a Rater, verify that all requirements have been met in accordance with the Mandatory Requirements for All Certified Multifamily Projects and with the on-site inspection procedures for minimum rated features of an EPA-recognized VOO. ^{8,9} For modular projects^x, a Rater must verify any requirement in the plant not able to be verified on-site because a feature will be concealed prior to shipment. The Rater is required to keep electronic or hard copies of the completed and signed Caribbean Rater checklists and the National MFNC HVAC Design Report. The Rater must review all items on the Caribbean checklists. Raters are expected to use their experience and discretion to verify that the overall intent of each inspection checklist item has been met (i.e., identifying major defects that undermine the intent of the checklist item versus identifying minor defects that the Rater may deem acceptable).

In the event that a Rater finds an item that is inconsistent with the intent of the checklists, the project cannot earn the ENERGY STAR until the item is corrected. If correction of the item is not possible, the project cannot earn the ENERGY STAR and individual units in the multifamily project also cannot be certified. In the event that an item on a Caribbean checklist cannot be inspected by the Rater, the project also cannot earn the ENERGY STAR. The only exception to this rule is in the on the Caribbean Rater Field Checklist where a Licensed Professional may assume responsibility for verifying the specified items. A Licensed Professional must be a Professional Engineer or Registered Architect in good standing and possess a current license. This option shall only be used at the discretion of the Rater. When exercised, the Licensed Professionals' responsibility will be formally acknowledged by signing the checklist for the item(s) that they verified.



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In the event that a Rater is not able to determine whether an item is consistent with the intent (e.g., an alternative method of meeting a checklist requirement has been proposed), then the Rater shall consult their Provider or MRO. If the Provider or MRO also cannot make this determination, then the Rater, Provider, or MRO shall report the issue to EPA prior to project completion at: energystarhomes@energystar.gov and will receive an initial response within 5 business days. If EPA believes the current program requirements are sufficiently clear to determine whether the intent has been met, then this guidance will be provided to the partner and enforced beginning with the house in question. In contrast, if EPA believes the program requirements require revisions to make the intent clear, then this guidance will be provided to the partner but only enforced for buildings permitted after a specified transition period after the release of the revised program requirements, typically 60 days in length.

This process will allow EPA to make formal policy decisions as partner questions arise and to disseminate these policy decisions through the [Policy Record](#) and the periodic release of revised program documents to ensure consistent application of the program requirements.

4. Finally, the following steps are required:
 - a. ERI Path: Register the rated units with the same EPA-recognized VOO.
 - b. MRO Prescriptive Path: The Multifamily Workbook; the Caribbean Rater Field Checklist, construction documents; and photo documentation must all be submitted to an MRO for their review and approval.



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Exhibit 1: ENERGY STAR Multifamily Reference Design

The ENERGY STAR Multifamily Reference Design is the set of efficiency features required to be used to construct an ENERGY STAR Certified Multifamily Building in the Caribbean. Note that Measure A: Solar Water Heater, Measure B: Dwelling Unit Heat Pump Water Heaters, or C: Bedroom Mini/Multi-Split HVAC must be selected and used in combination with all measures in the Envelope, Windows, & Doors section and Lighting & Appliances section. No tradeoffs are allowed. In addition, note that the Mandatory Requirements for All Certified Multifamily Projects, Exhibit 2, contain additional requirements such as prescriptive air sealing requirements and mini/multi-split wiring requirements.

Cooling Equipment & Water Heating Equipment

- At least one of the following three measures shall be selected and met:
 - **Measure A: Solar Water Heater** - DHW equipment shall include a solar water heater system with a Solar Fraction $\geq 87\%$.¹⁰ No space cooling is required if Measure A is selected, but **if** any space cooling is provided for dwelling units or common spaces, it must be provided using mini- or multi-split AC's or HP's ≥ 15 SEER. A single mini-split head is permitted to serve one or more bedrooms using up to 10 ft. of ductwork per head.
 - **Measure B: Dwelling Unit Heat Pump Water Heater** –DHW equipment serving dwelling units shall be an integrated heat pump water heater (HPWH) installed within the dwelling unit in a space with a volume of at least 1,000 ft³. The decibel rating on the HPWH must be less than or equal to 48 dba. No space cooling is required if Measure B is selected, but **if** any space cooling is provided for dwelling units or common spaces, it must be provided using mini/multi-split AC's or HP's ≥ 15 SEER. A single mini-split head is permitted to serve one or more bedrooms using up to 10 ft. of ductwork per head.
 - **Measure C: Bedroom Mini/Multi-Split HVAC** – Mini/multi-split AC's or HP's ≥ 15 SEER, each with ≤ 10 ft. of ductwork, shall serve all bedrooms. No space cooling is required outside of bedrooms, but **if** any space cooling is provided outside bedrooms, it must be provided using mini/multi-split AC's or HP's ≥ 15 SEER. A single mini-split head is permitted to serve one or more bedrooms using up to 10 ft. of ductwork per head.

Envelope, Windows, & Doors

- Dwelling unit and common space wall insulation shall be $\geq R-5$.
- Windows in all bedrooms and conditioned spaces shall meet the following specifications:

Window U-Value:	≤ 1.2
Window SHGC:	≤ 0.35

Lighting, Appliances, and Plumbing Fixtures

- Ceiling fans shall be installed in all primary living areas and designated common spaces greater than 75 ft² and be ENERGY STAR certified^{11, 12}.
- ENERGY STAR LED light bulbs shall be installed in 100% of ANSI / RESNET / ICC Standard 301-defined Qualifying Light Fixture Locations and LEDs installed in 90% of all common space and exterior¹³ fixtures.
- Where specified, refrigerators, dishwashers, clothes washers and dryers are ENERGY STAR certified.¹⁴
- Showerheads and dwelling-unit lavatory faucets are WaterSense certified.



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Exhibit 2: Mandatory Requirements for All Certified Multifamily Projects

Party Responsible	Mandatory Requirements
Rater	<ul style="list-style-type: none"> • Completion of Caribbean MFNC Rater Design Review Checklist, Version 1 • Completion of Caribbean MFNC Rater Field Checklist, Version 1
HVAC System Designer	<ul style="list-style-type: none"> • Completion of National MFNC HVAC Design Report, Version 1 / 1.1 with the following exemptions: Section 3, Section 4, Section 5 and Section 6
Builder or Developer	<ul style="list-style-type: none"> • Completion of National MFNC Water Management System Requirements, Version 1 / 1.1

Effective Date

To determine the program Version and Revision that a multifamily building is required to be certified under, look up the location and permit date of the home in Exhibit 3. Program requirements for other locations can be found at www.energystar.gov/mfncrequirements.

Multifamily buildings permitted prior to July 1, 2021 are permitted to participate in any of the following programs, as long as the project meets the Eligibility Requirements defined within that program: the ENERGY STAR Certified Homes program, the ENERGY STAR Multifamily High Rise program, or this ENERGY STAR Multifamily New Construction Program. To participate in the MFHR program, projects must submit their Project Application to an MRO prior to January 1, 2021.

Exhibit 3: ENERGY STAR Multifamily New Construction Implementation Timeline for the Caribbean

State / Territory	Buildings Permitted ⁴ On or After This Date Must Meet the Adjacent Version & Revision	Version	Revision ¹⁵
PR, USVI	07-01-2010	National, V1	Rev. 01
	07-01-2021	Caribbean v1	Rev. 02



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Footnotes:

1. The term 'building' refers to a structure utilized or intended for supporting or sheltering any occupancy for a residential purpose; a structure with no dwelling or sleeping units connected to a structure with dwelling or sleeping units by less than 10% of its exterior wall area is not to be included in the 'building'. A dwelling unit, as defined by the 2012 IECC, is a single unit that provides complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation. The term 'sleeping unit' refers to a room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities but not both. The term 'two-family' dwelling refers to a detached building with 2 dwelling units.
2. The term 'common space' refers to any spaces in the building being certified that serve a function in support of the residential part of the building that is not part of a dwelling or sleeping unit. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, residential recreation rooms, and dining halls, as well as offices and other spaces used by building management, administration or maintenance in support of the residents.
3. The term 'townhouse' refers to a single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides. Townhouses earning the ENERGY STAR through the Multifamily New Construction program must use the program documents described in Exhibit 2. They also must use the ERI Path of the Multifamily New Construction program as they are not eligible to use the MRO Prescriptive Path.
4. The Rater may define the 'permit date' as either the date that the permit was issued or the application date of the permit. In cases where permit or application dates are not available, Providers or Multifamily Oversight Organizations have discretion to estimate permit dates based on other construction schedule factors. These assumptions should be both defensible and documented.
5. While certification will result in compliance with many code requirements, a Rater is not responsible for ensuring that all code requirements have been met prior to certification. For more information about how these program requirements help satisfy code requirements, visit: www.energystar.gov/newhomesguidance. In the event that a code requirement, a manufacturer's installation instructions, or an engineering document conflicts with a requirement of the ENERGY STAR program (e.g., slab insulation is prohibited to allow visual access for termite inspections), then the conflicting requirement within these program requirements shall not be met. Certification shall only be allowed if the Rater has determined that no equivalent option is available that could meet the intent of the conflicting requirement (e.g., switching from exterior to interior slab edge insulation). Note that all units under the ERI Path must still meet the ERI value that results from configuring efficiency measures that are equal to the prescriptive measures listed in Exhibit 1, ENERGY STAR Reference Design, for the building to be certified. Therefore, other efficiency measures may be needed to compensate for the omission of the conflicting requirement.
6. The term 'Provider' refers to an Approved Rating Provider that is a designee of a VOO such as RESNET.
7. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. The person(s) shall: a) be a Certified Rater, Approved Inspector, or an equivalent designation as determined by a Verification Oversight Organization or Multifamily Review Organization; and, b) have attended and successfully completed an EPA-recognized training class. See www.energystar.gov/mfraining.
8. Raters who operate under an MRO or a Sampling Provider are permitted to verify the Minimum Rated Features of the building and to verify any Checklist Item designated "Rater Verified" using a VOO-approved sampling protocol. Where a sampling protocol does not sufficiently describe methodology for multifamily projects, use the *RESNET Guidelines for Multifamily Energy Ratings*, available at www.resnet.us/blog/resnet-adopts-guidelines-for-multifamily-energy-ratings/. No parties other than Raters are permitted to use sampling. All other items shall be verified for each certified building. For example, no items on the National HVAC Design Report are permitted to be verified using a sampling protocol.
9. A modular home is a prefabricated home that is made of multiple modules or sections that are manufactured and substantially assembled in a manufacturing plant. These pre-built sections are transported to the building site and constructed by a builder to meet all applicable building codes for site-built homes.
10. Solar fraction is defined by the ICC-SRCC OG-300 Solar Water Heating System Certification Program's solar fraction rating, using the Puerto Rico or U.S. Virgin Islands location. For the OG-300 directory, visit www.solar-rating.org/programs/og-300-program/.
11. Primary living areas within dwelling units include dining rooms, living rooms, family rooms, dens, offices, and bedrooms. Primary living areas do not include other spaces within dwelling units, such as kitchens, bathrooms, hallways, stairways, entrances, and utility rooms.
12. Designated common spaces include exercise rooms, residential recreation rooms, dining halls, and offices.
13. This requirement applies to exterior lighting fixtures that are attached to the building, but does not apply to landscape or parking lot lighting fixtures.
14. Where an appliance type is not eligible for ENERGY STAR certification, (e.g., commercial dryers) the appliance is exempt from this requirement.
15. Buildings certified under Rev. 02 of the program requirements are permitted to use any version of the MFNC National HVAC Design Report.