



# Caribbean Program Requirements

## ENERGY STAR Multifamily New Construction, Version 1 (Rev. 032)

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 (MFNC) program:

- Any multifamily building with dwelling or sleeping units that is NOT a ~~two-family~~ dwelling (e.g., ~~not a single-family home or a duplex~~); OR
- ~~Any Mixed-use~~ buildings with dwelling or sleeping units, where the dwelling units and common space exceed 50% of the building square footage. Parking garage square footage is excluded from this calculation<sup>2</sup>; OR
- Townhouses, if following the requirements listed in Footnote 3.<sup>3</sup>

Townhouses are also eligible to ~~earn the ENERGY STAR through~~ participate in the ENERGY STAR Single-Family New Homes program, which is a certification program for dwelling (e.g., single-family homes, duplexes) and townhouses ~~single-family detached homes and two-family dwellings~~.<sup>1</sup> Multifamily buildings 5 stories or less may be eligible ~~for to participate in~~ the ENERGY STAR Single-Family New Homes program. For more information, visit: [www.energystar.gov/newhomesrequirements](http://www.energystar.gov/newhomesrequirements). In addition, multifamily buildings with a MFHR Project Application submitted prior to January 1, 2021 and a permit date prior to July 1, 2021, may be eligible to ~~earn~~ participate in the ENERGY STAR ~~through the~~ Multifamily High Rise program.<sup>4</sup> For more information, visit: [www.energystar.gov/mfhr/eligibility](http://www.energystar.gov/mfhr/eligibility).

While primarily intended for new construction, existing buildings (e.g., undergoing a gut rehabilitation) are also eligible to participate in the ENERGY STAR Multifamily New Construction program, with guidance available at: [www.energystar.gov/GutRehabGuidance](http://www.energystar.gov/GutRehabGuidance).

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.<sup>5</sup>

### Partnership and Training Requirements

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

- The Builder or Developer for the project building 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](http://www.energystar.gov/homesPA).
- Energy Rating Companies (e.g., rater companies and Providers<sup>6</sup>) are required to sign an ENERGY STAR Partnership Agreement, which can be found at [www.energystar.gov/homesPA](http://www.energystar.gov/homesPA), and operate under either a Home Certification Organization (HCO) or a Multifamily Review Organization (MRO). Learn more and find a current list of HCOs at [www.energystar.gov/hco](http://www.energystar.gov/hco) and MROs at [www.energystar.gov/mro](http://www.energystar.gov/mro).
- ~~and~~ Raters<sup>7</sup> are required to complete EPA-recognized training, which can be found at [www.energystar.gov/mftraining](http://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 Home Certification Organization (HCO)'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.<sup>8</sup> 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 HCO that the building is being certified under, with approved exceptions listed at [www.energystar.gov/ERIEExceptions](http://www.energystar.gov/ERIEExceptions). Buildings following 1a must be certified through an HCO.
  - b. MRO Prescriptive Path: Meet or exceed the prescriptive requirements specified in Exhibit 1, ENERGY STAR Multifamily Reference Design and in the Caribbean 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. EPA strongly recommends submitting documentation before construction; however, Raters may choose to submit the design documentation with the As-Built Submittal. 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~~ Raters will be required to use the updated documents based on the enforcement timeline set for the revision. Buildings following 1b must be certified through an MRO. EPA recommends that Raters identify their MRO during the design state, but at the latest, the building must be under MRO oversight prior to the first inspection. MROs have limited discretion to grant an exemption to this policy (e.g., when a buildings switches Paths).
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](http://www.energystar.gov/mfdees).
3. Construct the building using the measures selected in Step 1 and the Mandatory Requirements for All Certified Multifamily ~~Projects~~ Buildings, 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 inspection procedures for minimum rated features in ANSI / RESNET / ICC ~~Standard~~ 301, Appendix B.<sup>7,9</sup> For modular ~~multifamily projects~~ buildings<sup>10</sup>, 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 for the whole building. Raters are expected to use their experience and discretion to verify that the overall intent of each inspection checklist



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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.

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](mailto: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 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. Once verification on all units and common spaces is complete, submit the whole building for final certification (see alternative below). Finally, the following steps are required:

a. ERI Path: ~~S~~submit the building to the HCO for final certification and follow the HCO's certification and oversight procedures (e.g. quality assurance, recordkeeping, and reporting).

Generally, buildings must be submitted for certification after verification on all units and common spaces is complete. Alternatively, at the discretion of the Provider, individual dwelling units may be conditionally certified prior to the building completion if the following process is observed:

i. The Provider must generate a Conditional ENERGY STAR Certification Disclosure letter to be included with the label and certificate for the homebuyer of each conditionally certified unit.

ii. Once verification on all dwelling units and common spaces is complete, and the whole building is certified, the Provider must generate an ENERGY STAR Certification Confirmation letter for the builder to deliver to the applicable homebuyers.

In the event that any dwelling unit or common space in the building is ultimately unable to be verified, the building will not be able to earn certification; the Provider must decertify any conditionally certified units; and the builder must notify the applicable homebuyers.

a-b. MRO Prescriptive Path: ~~submit the building to the MRO for final certification with the 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 Measure C: Bedroom Mini/Multi-Split HVAC~~, or Measure D: Envelope Improvements 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~~four measures shall be selected and met:

- **Measure A: Solar Water Heater** - DHW equipment shall include a solar water heater system with a Solar Fraction  $\geq 87\%$ .<sup>11</sup> 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  $\geq 15$  SEER OR PTACs with  $\geq 11.6$  EER. 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 ft<sup>3</sup>. 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  $\geq 15$  SEER OR PTACs with  $\geq 11.6$  EER. 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  $\geq 15$  SEER, each with  $\leq 10$  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  $\geq 15$  SEER. A single mini-split head is permitted to serve one or more bedrooms using up to 10 ft. of ductwork per head.
- **Measure D: Envelope Improvements –**
  - Dwelling unit and common space wall insulation shall be  $\geq R-7.5$  ci.
  - Attic or roof deck insulation shall be  $\geq R-38$  ci.
  - Windows in all dwelling units and common spaces shall meet the following specifications:

Window U-Value:	$\leq 0.85$
Window SHGC:	$\leq 0.25$
  - Mini/multi-split AC's or HP's  $\geq 15$  SEER, each with  $\leq 10$  ft. of ductwork, OR PTACs with  $\geq 11.6$  EER 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  $\geq 15$  SEER OR PTACs with  $\geq 11.6$  EER. 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 (For Measures A, B, and C)

- 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:	$\leq 1.2$
Window SHGC:	$\leq 0.35$

#### Lighting, Appliances, and Plumbing Fixtures (For all Measures)

- Ceiling fans shall be installed in all primary living areas and designated common spaces greater than 75 ft<sup>2</sup> and be ENERGY STAR certified.<sup>12, 13</sup>
- 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 exterior<sup>14</sup> fixtures.
- Where specified, refrigerators, dishwashers, clothes washers and dryers are ENERGY STAR certified.<sup>15</sup>
- 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
<b>Rater</b>	<ul style="list-style-type: none"> <li>Completion of <del>Caribbean</del>-MFNC <u>Caribbean</u> Rater Design Review Checklist, Version 1</li> <li>Completion of <del>Caribbean</del>-MFNC <u>Caribbean</u> Rater Field Checklist, Version 1</li> </ul>
<b>HVAC System Designer</b>	<ul style="list-style-type: none"> <li>Completion of <del>National</del>-MFNC <u>National</u> HVAC Design Report, Version 1 / 1.1 with the following exemptions: Section 3, Section 4, Section 5 and Section 6 <u>OR</u></li> <li>Completion of HVAC design report(s) compliant with ANSI / ACCA / RESNET 310, plus the SFNH / MFNC National HVAC Design Supplement for Dwellings &amp; Units and, if applicable, Supplement for Common Spaces &amp; Central Systems</li> </ul>
<b>Builder or Developer</b>	<ul style="list-style-type: none"> <li>Completion of <del>National</del>-MFNC <u>National</u> Water Management System Requirements, Version 1 / 1.1</li> </ul>

### Mandatory Compliance 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/mfcnrequirements](http://www.energystar.gov/mfcnrequirements).

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 Single-Family New 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 <sup>4</sup> On or After This Date Must Meet the Adjacent Version & Revision	Version	Revision <sup>16</sup>
PR, USVI	07-01-2020	National, V1	Rev. 01
	07-01-2021	Caribbean v1	Rev. 02
	<u>01-01-2024</u>	<u>Caribbean v1</u>	<u>Rev. 03</u>



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### Footnotes:

- ~~Buildings that do not contain dwelling or sleeping units are not eligible for certification under MFNC.~~ 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 that encompasses dwelling/sleeping units and (if present) common spaces, sharing one or more of the following attributes: a common street address, a common entrance or exit, central/shared mechanical systems, or structurally interdependent wall or roof systems.~~ Attached structures such as townhouses and 4-story two-unit structures (commonly referred to as "2-over-2s") may be considered separate buildings if they are divided by a vertical fire separation wall from the foundation to the roof sheathing and share none of the other attributes listed above. A skyway or a breezeway that connects two structures is not considered a common entrance or exit. A dwelling unit, as defined by ANSI / RESNET / ICC 301~~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~~ A 'sleeping unit', as defined by ANSI / RESNET / ICC 301, 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. A 'dwelling', as defined by ANSI / RESNET / ICC 301, is any building that contains one or two dwelling units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupied, or that are occupied for living purposes. ~~The term 'two-family' dwelling refers to a detached building with 2 dwelling units.~~ For the purposes of eligibility, hotels, motels, and senior care facilities are not considered multifamily buildings. Visit: [https://www.energystar.gov/partner\\_resources/residential\\_new/program\\_reqs/mfnc\\_building\\_eligibility\\_for\\_more\\_information](https://www.energystar.gov/partner_resources/residential_new/program_reqs/mfnc_building_eligibility_for_more_information).
- 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.
- ~~The term~~ A 'townhouse', as defined by ANSI / RESNET / ICC 301, ~~refers is 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.
- 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.
- 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](http://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 Multifamily Reference Design, for the building to be certified. Therefore, other efficiency measures may be needed to compensate for the omission of the conflicting requirement.
- The term 'Provider' refers to an Approved Rating Provider, as defined by ANSI / RESNET / IECC ~~Standard~~ 301, that is a designee of a HCO.
- 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, as defined by ANSI / RESNET / IECC ~~Standard~~ 301, or an equivalent designation as determined by an HCO or MRO; and, b) have attended and successfully completed an EPA-recognized training class. See [www.energystar.gov/mftraining](http://www.energystar.gov/mftraining).
- Home Certification Organizations (HCOs) are independent organizations recognized by EPA to implement an ENERGY STAR certification program for single-family and multifamily homes and apartments using an Energy Rating Index (ERI) compliance path. Learn more and find a current list of HCOs at [www.energystar.gov/partner\\_resources/residential\\_new/working/other\\_participants/hco](http://www.energystar.gov/partner_resources/residential_new/working/other_participants/hco).
- Raters who operate under an HCO or MRO with a Sampling Protocol are permitted to verify the minimum rated features of the building and to verify any Checklist Item designated "Rater Verified" using an HCO-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.
- A modular ~~home-building~~ is a prefabricated ~~home-building~~ 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 ~~buildings~~homes.



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11. Solar fraction shall be determined using the [ICC-SRCC OG-300 Solar Water Heating System Certification Program's](#) annual solar fraction rating (SFA) for the rating location closest to the building and for the SRCC OG-300 Draw Pattern. For the OG-300 directory, visit <https://solar-rating.org/directories/certified-companies/>.
12. 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.
13. Designated common spaces include exercise rooms, residential recreation rooms, dining halls, and offices.
14. This requirement applies to exterior lighting fixtures that are attached to the building but does not apply to landscape or parking lot lighting fixtures.
15. Where an appliance type is not eligible for ENERGY STAR certification, (e.g., commercial dryers) the appliance is exempt from this requirement.
16. Buildings certified under Rev. ~~02~~ and Rev. 03 of the program requirements are permitted to use any version of the National MFNC HVAC Design Report.