Now Available: The ENERGY STAR Multifamily New Construction (MFNC) Program!

Rebecca Hudson, EPA
Gayathri Vijayakumar, Steven Winter Associates
February 26, 2019
Today’s Agenda

Overview of the MFNC program
• Building Eligibility
• Implementation Timeline
• ES Partners & Other Participants
• 3 Certification Paths
• Mandatory Requirements

Alignment with other Programs
MFNC website

Q&A: energystarhomes@energystar.gov
Q&A Session Tomorrow

ENERGY STAR Multifamily New Construction Program: Q&A

Wednesday, February 27, 2019 - 8:30 AM-10:00 AM, Bayside A
Presenters: Gayathri Vijayakumar and Rebecca Hudson
MFNC Building Eligibility
ES MF New Construction Programs: pre-2019

- Single Family Homes
- Factory Built Homes
- Low Rise Multifamily Buildings

- Mid and High Rise Multifamily Buildings
- Launched in 2011 to cover buildings previously ineligible for Certified Homes (ESCH)
As of January 2017

ENERGY STAR. The simple choice for energy efficiency.

Is the building new construction\(^1\) AND residential\(^2\)?

**NO**

Is the building a motel/hotel, nursing home, dormitory* or assisted living facility?

**YES**

Does the building have four (4) or less units?

**NO**

Does the building have three (3) or less stories?\(^3\)

**NO**

Does the building have six (6) or more stories?\(^3\)

**NO**

Does each unit have its own heating, cooling and DHW\(^4\)?

**YES**

Do the dwelling units occupy 80% or more of the occupiable\(^5\) square footage of the building?\(^5\)

**NO**

Existing multifamily properties may be eligible to earn the ENERGY STAR through the ENERGY STAR Commercial program. For more information visit www.energystar.gov/buildings.

To learn more about how commercial buildings, including motels/hotels, skilled nursing, nursing homes, supportive care, and dementia facilities can earn the ENERGY STAR, visit www.energystar.gov/buildings.

*As of January 1, 2014, EPA is no longer offering ENERGY STAR certification for medical office buildings or residence halls/dormitories/barracks.

NOTES:

1. New construction can include significant gut rehabilitations when defined as a change of use, reconstruction of a vacant structure, or when construction work requires that the building be out of service for at least 30 consecutive days.

2. The primary use of the building must be for residential purpose, i.e. the residential and residential associated common area must occupy more than 50% of the building’s occupiable\(^6\) square footage. A garage is not considered ‘occupiable’. Common area includes any spaces within the building that serves a function in support of the residential part of the building that is not part of a dwelling unit. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, and residential recreation rooms. This also includes offices used by building management, administration or maintenance and all special use areas located in the building to serve and support the residents such as day-care facilities, gyms, dining halls, etc.

3. Any above-grade story with 20% or more occupiable\(^6\) space, including commercial space, shall be counted towards the total number of stories for the purpose of determining eligibility. An above-grade story is one for which more than half of the gross surface area of the exterior walls is above-grade.

4. Four (4) and five (5) story buildings with in-unit heating and cooling and a central domestic hot water system where solar energy provides at least 50% of the domestic hot water needs for the residential units, will qualify through the ENERGY STAR Certified Homes program as long as all other eligibility requirements of that program are met.

5. Per ASHRAE 62.2-2010, occupiable space is any enclosed space inside the pressure boundary and intended for human activities or continual human occupancy, including, but not limited to, areas used for living, sleeping, dining, and cooking, toilets, closets, halls, storage and utility areas, and laundry areas.

6. For mixed-use buildings, exclude the retail/commercial area when determining the square footage of the “building”.

- **ENERGY STAR Certified Homes**
- **ENERGY STAR Multifamily High Rise**

EPA
Goal of ENERGY STAR MFNC Program

Delineation between SF and MF

One MF program for all building heights with common space requirements

What is Single-Family?
- Detached homes
- Two-family dwellings
- Townhomes (IRC definition)
What is Multifamily?

Townhomes too, with some revised/added requirements & ESCH Reference Design

Most attached housing

Mixed use, if residential is more than 50% by OSF

Not hotels, dorms, skilled nursing, or assisted living
ENERGY STAR Program Decision Tree

- **Is the building new construction?**
  - **NO**
  - **YES**
    - **Is the building a motel/hotel, dormitory, skilled nursing facilities, or assisted living facility?**
      - **NO**
      - **YES**
        - **ENERGY STAR Buildings and Plants**
    - **NO**
      - **Does the building have one or two units, or is it a townhome?**
        - **YES**
          - **ENERGY STAR Certified Homes**
        - **NO**
          - **ENERGY STAR Multifamily New Construction**
Program Decision Tree: Footnote Summary

1. Gut rehabilitations are allowed if the building is able to meet all the program requirements
2. Residential and common space definitions
3. Townhome definition and rules
4. Occupiable space definition
Program Decision Tree: Footnote 3

3. Townhomes may use the MFNC Checklists, but they must use the ERI Path and Certified Homes Reference Design.

A townhome is defined as 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.
ENERGY STAR MFNC Building Types
MFNC Implementation Timeline
Specification Development Timeline

- Stakeholder Feedback 2017-2018
  - Nov/Dec 2017: Webinar and Comment Period
  - Feb/Mar 2018: RESNET, Webinar & Comment Period
  - June 2018: Final Comment Period

  Presentations, comment responses and highlights documents available at [www.energystar.gov/mfspec](http://www.energystar.gov/mfspec)

- Nov 2018: Requirements Documents posted
Concurrent ANSI Standard Development

- ANSI/RESNET/ICC 301-2014 governs how energy ratings are performed
- Currently allows energy ratings on units in multifamily buildings UP to 3 stories
- No specific accommodations for multifamily units/systems
Standards Development Timeline

• **2013**: EPA chairs MFWG to create MF Guidelines; published in 2014
• **2016-7**: RESNET MF Committee turns those into a Standard
• **2018**: ANSI 301-2019 has 3 rounds of public comment
• Will allow energy ratings on units in any height building

Standard Implementation Timeline

• **January 2019**: Published
• **July 2019**: Anticipated ‘adoption’ by RESNET
• **January 2020**: May be required for energy ratings (based on bldg. permit)
ES MFNC Implementation Timeline

✓ Jan 2019: MFNC webpages and program launch
✓ Feb 2019: Stakeholder webinar & RESNET sessions

• Jan 2019 – Dec 2020: Choose ESCH, MFHR, or MFNC
  – A building that complies with all MFNC requirements, regardless of building permit date, can be certified (ie. reported); can even switch from MFHR or ESCH

• Jan 2019 – July 2019 (?): ERI Path limited
  – Not yet available in all energy rating software
  – Need RESNET to approve ERI above 5 stories
ES MFNC Implementation Timeline (cont’d)

• Jan 2021: MFNC **required** for multifamily buildings with permit dates **January 1, 2021** and later
• Cannot do ESCH / MFHR if permitted after
• No current sunset date established
  ‒ If permitted before January 1, 2021, no time limit to complete under ESCH or MFHR
MFNC Partners & Participants
ES MFNC Partners & Participants

Builder/Developer

Rater

Functional Testing Agent

HVAC Designer

ASHRAE Modeler (ASHRAE Path)

Multifamily Oversight Orgs
Verification Oversight Org (ERI Path)
Multifamily Review Org (ASHRAE / Prescriptive Paths)
Audience Poll

Who do we have in the room?
Builder or Developer?
Utility?
Training Provider?
Software Developer?
ES MFNC Partners & Participants

Builder/Developer
Rater
Functional Testing Agent
HVAC Designer
ASHRAE Modeler (ASHRAE Path)
Multifamily Oversight Orgs
Verification Oversight Org (ERI Path)
Multifamily Review Org (ASHRAE / Prescriptive Paths)

*Red indicates different from Certified Homes
ES MFNC Partners & Participants

Builder/Developer
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Multifamily Oversight Orgs
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Multifamily Review Org (ASHRAE / Prescriptive Paths)

*Purple indicates modified from Certified Homes
ENERGY STAR MFNC Partners

Builders & Developers

Role & Expectations

– Responsible for Water Management System Requirements
– Either the Builder OR Developer must be a partner

Requirements

– Complete online Partnership Agreement
– View online orientation video
Modifications to Online Partnership Agreement – Coming Soon

Single Family Builders
Modified orientation video

Multifamily Builders and Developers
Select VOO/MRO in OPA
Watch Builder/Developer orientation
ENERGY STAR MFNC Partners

Raters
Roles & Expectations

• Verify that all requirements have been met
  – Rater Design and Field Checklists
• Collect Documentation
  – HVAC Design Report
  – HVAC Functional Testing Checklist*
  – ASHRAE Path – Performance Path Calculator
  – ASHRAE/Prescriptive Paths – MF Workbook**

*Not required if completed by a credentialed contractor
**Or alternative accepted by MRO
ENERGY STAR MFNC Partners

Raters

Requirements

a) Be a Certified Rater, Approved Inspector, or an equivalent designation as determined by a Verification Oversight Organization (VOO) or Multifamily Review Organization (MRO)

b) Have attended and successfully completed an EPA-recognized training class

c) Complete online Partnership Agreement
ENERGY STAR MFNC Partners

Raters

Training

• Current ENERGY STAR Rater Partner:
  – MFNC Rater Training (similar format as current ESCH Rater training)

• Not yet a Partner:
  – ESCH & MFNC Rater Training
ENERGY STAR MFNC Partners

Raters
Training (continued)

• Approved Courses (18 RESNET PDHs): [https://archive.resnet.us/pd/courses.aspx](https://archive.resnet.us/pd/courses.aspx)

• **Jan-Dec 2019**: MFNC Rater Training is *optional* for current ENERGY STAR Rater Partners

• **Jan 2020**: To certify to MFNC in 2020, MFNC Rater Training certificate uploaded in MESA (My ENERGY STAR Account) or during Online Partnership Agreement
Energy Star Mfnc participants

Functional Testing Agents

Roles & Expectations

• Complete section(s) of the MFNC HVAC Functional Testing Checklists

Requirements

• Verify and maintain the required credentials
  – H-QUITO credentialed contractor, commissioning credentials, or OEM representative
• Watch online orientation & be listed in the directory (unless a credentialed contractor)
ENERGY STAR MFNC Participants

HVAC Designer

Roles & Expectations
• Complete the MFNC HVAC Design Report and provide to the Rater

Requirements
• None
ENERGY STAR MFNC Participants

ASHRAE modelers

Role & Expectations

• Create ASHRAE 90.1 whole building energy models
  – Use Appendix G & the Simulation Guidelines
• Complete the Performance Path Calculator (Excel), at Design stage and As-Built

Requirements

• Watch online orientation & be listed in the directory
ENERGY STAR MFNC Participants

ASHRAE modelers

ASHRAE Modeler Directory

ENERGY STAR Multifamily New Construction

<table>
<thead>
<tr>
<th>Individual Name</th>
<th>Organization</th>
<th>Email</th>
<th>Phone Number</th>
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<tr>
<td>Robert Salcido</td>
<td>Salcido Solutions</td>
<td><a href="mailto:rob@salcidosolutions.com">rob@salcidosolutions.com</a></td>
<td>303-641-7396</td>
<td>Louisville</td>
<td>CO</td>
</tr>
<tr>
<td>Mollie Olson</td>
<td>Capital Consultants, Inc.</td>
<td><a href="mailto:molson@capital-consultantsinc.com">molson@capital-consultantsinc.com</a></td>
<td>314-436-2315</td>
<td>Charlotte</td>
<td>NC</td>
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</table>
ENERGY STAR MFNC Participants

Multifamily Oversight Organizations

Verification Oversight Organization (VOO)
- ERI Path
- Provide Oversight similar to Certified Homes

Multifamily Review Organization (MRO)
- ASHRAE and Prescriptive Paths
- Provide Oversight similar to MFHR
MFNC Certification Paths
Multifamily New Construction (MFNC) Requirements Overview

Performance Target

- ASHRAE
- ERI
- Prescriptive

- Mandatory Features
- Verification & Oversight
- ENERGY STAR
Multifamily New Construction (MFNC) Requirements Overview

Performance Target

ASHRAE  ERI  Prescriptive

Mandatory Features

Verification & Oversight

ENERGY STAR
ASHRAE Path

Whole-Building Modeled Energy Savings
- 15% above ASHRAE 90.1 (the year is based on the state commercial code)
- 10% above Title 24-2016/9 in California

What’s Different from MFHR?
- Low-rise projects follow same modeling rules except have wood-framed baseline
- Removed Plenum/Garage Heating penalty
Energy Rating Index (ERI) Path

ENERGY STAR **MF** Reference Design

- MFNC Version “1” and “1.1” aligns w/ ESCH Version “3” and “3.1”
- Regional “1.2” for OR & WA
- Modeling 1-2 points less than ESCH
- **MF** Reference Design is not used for Townhomes; use Certified Homes

ERI Path for units in any height bldg, but < 6 until RESNET adopts ANSI 301-2019

Prescriptive common area measures
Prescriptive Path

- No energy modeling
- Available for all projects (except CA), even states that adopt 2018 IECC
- ENERGY STAR Multifamily Reference Design specifications is required in-unit and common areas
- Additional req’ts beyond ENERGY STAR Multifamily Reference Design (e.g. in-unit lighting power density, building level window-to-wall ratio)
ENERGY STAR MFNC Certification Paths

Program Documents related to Certification Paths

• National Program Requirements
• ERI Target Procedure (ERI Path)
• Simulation Guidelines (ASHRAE Path)
• Performance Path Calculator (ASHRAE Path)

www.energystar.gov/mfnc
Multifamily New Construction (MFNC) Requirements Overview

- **Performance Target**
- **ASHRAE**
- **ERI**
- **Prescriptive**

- **Mandatory Features**

- **Verification & Oversight**

- **ENERGY STAR**
ENERGY STAR MFNC Mandatory Features

Program Documents (PDF) with Mandatory Features
- Rater Design Review Checklist*
- Rater Field Checklist*
- HVAC Design Report
- HVAC Functional Testing Checklist
- Water Management System Requirements

*Multifamily Workbook (Excel)
Multifamily Workbook

Multifamily Workbook (Excel-based) offers:
• Spreadsheet versions of the two Rater Checklists
• Dwelling unit testing results spreadsheet
• Common area testing results spreadsheet
• Spreadsheets to help demonstrate compliance with envelope, DHW, lighting, and HVAC requirements
• BETA version online shows example

Used by MRO’s in ASHRAE & Prescriptive Paths (replaces T&V Worksheets); Optional for ERI Path
## Rater Design Review Checklist

<table>
<thead>
<tr>
<th><strong>1. Partnership Status</strong></th>
<th><strong>Must Correct</strong></th>
<th><strong>Rater Verified</strong></th>
</tr>
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<tr>
<td>1.1 Rater has verified that builder or developer is an ENERGY STAR partner using <a href="http://energystar.gov/partnerlocator">energystar.gov/partnerlocator</a></td>
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<td>Builder Name:</td>
<td></td>
<td></td>
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<tr>
<td>Developer Name:</td>
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# Multifamily Workbook

## Rater Design Review Checklist

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<th>Must Correct</th>
<th>Rater Verified</th>
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</table>

Footnote 1. This Checklist applies to all dwelling units, sleeping units, most common spaces 2 on the property, and parking lots. This Checklist does not apply to commercial or retail spaces. This Checklist does not apply to common spaces that are located in buildings on the property without any dwelling or sleeping units. 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. Where the term ‘dwelling unit’ is used in this Checklist, the requirement is also required of ‘sleeping’ units. The term ‘building’ refers to a structure utilized or intended for supporting or sheltering 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’.

Footnote 3. The term ‘Rater’ refers to the person completing the third-party inspections required for certification. This person shall: a) be a Certified Rater, Approved Inspector, or an equivalent designation as determined by a “Multifamily Oversight Organization” and, b) have attended and successfully completed an EPA-recognized training class. See energystar.gov/mftraining.

1.1 Rater has verified that builder or developer is an ENERGY STAR partner using energystar.gov/partnerlocator
# Multifamily Workbook

## Unit Types

<table>
<thead>
<tr>
<th>UNIT TYPE</th>
<th>BEDROOMS</th>
<th>BATHROOMS</th>
<th>AREA</th>
<th>ENCLOSURE AREA</th>
<th># RETURNS</th>
<th>VENTILATION (CFM)</th>
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###(Unit Details)

**TOTAL DUCT LEAKAGE (6.4.1/6.4.2)**

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<td>22 VOLUME INTO UP</td>
<td>20</td>
<td>60</td>
<td>50</td>
<td>200</td>
<td>1</td>
<td>29</td>
<td>PASS</td>
<td>Rough-In</td>
</tr>
<tr>
<td>201</td>
<td>2BR1stInt</td>
<td>1500</td>
<td>3000</td>
<td>120</td>
<td>60</td>
<td>900</td>
<td>37.5 UNIT INTEGRITY</td>
<td>30</td>
<td>60</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>PASS</td>
<td>Final</td>
</tr>
</tbody>
</table>

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*Note: The image contains additional data not shown here.*
MFNC Mandatory Requirements
MFNC Rater Design Review Checklist

What’s different from Certified Homes or MFHR?
• Two separate PDF checklists, also available in Excel

Partnership Status (Section 1)

High-Performance Fenestration & Insulation (Sect 2, 3)
• Fenestration & Insulation for dwelling units & common spaces (based on commercial code)

Review of HVAC Design Report (Section 4)
• Collect and review 10 items

Additional Construction Document Review (Section 5)
• Optional, covers air-sealing, and other new items
MFNC Rater Field Checklist

What’s different from Certified Homes or MFHR?
• Two separate PDF checklists, also available in Excel
• Rater verifies; Builder & LP can verify some items

Thermal Enclosure (Sections 1-4)
• Minimum insulation req’ts for projected balconies, elevated podiums, heated plenums, heated garages
• Fully-aligned Air Barriers & Reduced Thermal Bridging
• Compartmentalization test requirement: 0.30 cfm50/ft² of enclosure area (~6 ACH50 per unit)
MFNC Rater Field Checklist

What’s different from Certified Homes or MFHR?

HVAC System & Duct Quality Installation (Section 5-10)

• Bedrooms ≥ 150 cfm, pressure balanced (-5 to 5 Pa)
• Added Central Exhaust Duct Leakage test and HVAC Equipment Control & Hydronic Distribution req’ts (similar to code/MFHR requirements)
• DLTO still required for Townhomes; Total DL for others (exempt if in conditioned space with less than 10ft supply)
• Lower leakage allowance if returns are NOT ducted
MFNC Rater Field Checklists (continued)

What’s different from Certified Homes or MFHR?

*NEW* Sections 11-14

- Domestic Hot Water req’ts: heat traps on in-unit storage, inspect R-3 insulation on piping, Rater-measured HW temperature at faucets/showerheads
- Common Area Lighting Power Density Maximums (W/ft²), efficient fixtures/bulbs (Tier II), automatic lighting controls, but no minimum footcandle req’t
- Whole Building Energy Data Acquisition Strategy (buildings > 50,000 ft²): Lease agreements, utility aggregated data, energy monitors
MFNC HVAC Design Report

What’s different from Certified Homes or MFHR?

• HVAC design report per building, not per system
• Design common areas to ASHRAE 62.1 & report common area heating & cooling loads and equipment selection
• Room-by-room load calcs required for Townhomes, but unit-level for other MF
• Verify inputs/ranges on dwelling unit load calcs (ie. internal gains, infiltration)
• HVAC items verified by Rater are on Design Report
MFNC HVAC “Functional Testing” Checklist

What’s different from Certified Homes or MFHR?

• Not ‘Commissioning’….it’s ‘Functional Testing’
• FT Agent can be a H-QUITO Credentialed Contractor, OEM representative, or have a commissioning credential (ie. ASHRAE BCxP, AEE CBCP, NEBB BSC or CxPP)
• **New** Section 5 covers ALL dwelling unit AND common systems, but Rater can verify these items
• **New** Sections 6-9 for central VRF heat pumps, boilers, chillers, pumps (Installing Contractor cannot verify these)
MFNC Water Management System Req’ts

What’s different from Certified Homes or MFHR?

• Kept the Water Management System Builder Requirements from Certified Homes program
  – Responsibility of the Builder/Developer, not Rater
  – Applies to the building/project
  – Exemption for capillary break under open or ventilated garage slabs
  – New for MFHR projects
Multifamily New Construction (MFNC) Requirements Overview

- Performance Target
- ASHRAE
- ERI
- Prescriptive

Mandatory Features
- Verification & Oversight
- ENERGY STAR
Multifamily Oversight Organizations

Different Oversight Organizations for different Paths

Verification Oversight Organization (VOO)
- RESNET
- ERI Path
- Submittal at Final

Similar to Certified Homes

Multifamily Review Organization (MRO)
- HIRL, Karpman Consulting, TRC
- ASHRAE and Prescriptive Paths
- Proposed Design & As-Built Submittals

Similar to MFHR
Multifamily New Construction (MFNC) Requirements Overview

Performance Target

ASHRAE

ERI

Prescriptive

Mandatory Features

Verification & Oversight

ENERGY STAR
Labeling (required)  

Labeling (optional)
Putting it all together....
MFNC ERI Path Overview

Enter
Builder/Developer and Rater become ES Partners
FT Agent takes online orientation (if needed)

Design
Include Mandatory Features in design
Complete HVAC Design Report & Rater Design Checklist
Conduct energy modeling to beat the ERI Target

Build
Build to design
Raters inspect & test
Complete Rater Field Checklist, HVAC Functional Testing Checklist & update energy ratings
Submit to Provider

Earn
MFNC ASHRAE Path Overview

Enter

Builder/Developer and Rater become ES Partners
FT Agent & modeler take online orientation (if needed)

Design

Include Mandatory Features in design
Complete HVAC Design Report & Rater Design Checklist
90.1 energy model achieves 15%
Proposed Design Submittal (to MRO)

Build

Build to design
Raters inspect & test
Complete Rater Field Checklist, HVAC Functional Testing Checklist & update energy model
As-Built Submittal (to MRO)

Earn

ENERGY STAR
MFNC Prescriptive Path Overview

Enter

Builder/Developer and Rater become ES Partners
FT Agent & modeler take online orientation (if needed)

Design

Include Mandatory Features & prescriptive req’s in design
Complete HVAC Design Report & Rater Design Checklist
Proposed Design Submittal (to MRO)

Build

Build to design
Raters inspect & test
Complete Rater Field Checklist, HVAC Functional Testing Checklist
As-Built Submittal (to MRO)

Earn
## Submittals to MRO (ASHRAE & Prescriptive)

### Design
- Prescriptive & ASHRAE
  - Rater Design Checklist
  - HVAC Design Report
  - MF Workbook
  - Construction documents
- ASHRAE only
  - Performance Path Calculator
  - Modeling files

### As-Built
- Prescriptive & ASHRAE
  - Rater Field Checklist
  - HVAC Functional Testing Checklist
  - MF Workbook
  - Construction documents
  - Photo documentation
- ASHRAE only
  - Performance Path Calculator
  - Modeling files
ENERGY STAR MFNC and other Programs

Enterprise Green Communities, 2015 NGBS, LEED v4 Homes, and LEED v4 Multifamily Mid-Rise
- Will allow MFNC in lieu of Certified Homes or MFHR

PHIUS 2018
- Will likely permit MFNC in lieu of Certified Homes

DOE Zero Energy Ready Homes & EPA Indoor airPLUS
- Still evaluating if/when they can expand their building eligibility to match MFNC
ENERGY STAR RESIDENTIAL NEW CONSTRUCTION PROGRAM REQUIREMENTS

PROGRAM VERSIONS AT A GLANCE

STEP 1: SELECT A PATH

- ERI and Prescriptive
- ASHRAE / Title 24

STEP 2: Select State or Territory

ELIGIBILITY

These requirements apply to most multifamily buildings. See flow chart (PDF, 85 KB) for the specific multifamily projects that are eligible. Multifamily projects permitted prior to January 1, 2021, may continue to certify through the MFHR or Certified Homes program, based on the eligibility requirements of those programs.

PROGRAM REQUIREMENTS

National Program Requirements
MFNC National Program Requirements Version 1/1.1/OR-WA 1.2 (PDF, 490 KB)
ENERGY STAR MFNC web pages

IMPLEMENTATION TIMELINE

To determine the program Version that a multifamily building is required to be certified under, identify the location and permit date of the building below. Note that the National Version 1.1 program requirements are being implemented in states that have adopted the residential 2012, 2015, or 2018 IECC, or an equivalent code. Note, as well, that regional program requirements, and associated implementation timelines, have been developed for buildings in CA, OR, and WA.

<table>
<thead>
<tr>
<th>State / Territory</th>
<th>Buildings Permitted On or After This Date Must Meet the Adjacent Version</th>
<th>Multifamily New Construction Program Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL, AK, AZ, AR, CO, GA, GU, HI, IN, ID, KS, KY, LA, ME, MS, MO, NE, NH, NM, NMI, NC, ND, OH, OK, PA, PR, SC, SD, TN, USVI, UT, VA, WV, WI, WY</td>
<td>01-01-2021</td>
<td>National Version 1</td>
</tr>
<tr>
<td>CA</td>
<td>01-01-2021</td>
<td>California Version 1.2</td>
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</table>

Mandatory Measures
- MFNC Rater Design Review Checklist (PDF, 523 KB)
- MFNC Rater Field Checklist (PDF, 736 KB)
- MFNC HVAC Design Report (PDF, 415 KB)
- MFNC HVAC Functional Testing Checklist (PDF, 407 KB)
- MFNC Water Management System Requirements (PDF, 143 KB)

SUPPORTING DOCUMENTS

Coming Soon!
- Testing & Verification
- Multifamily Workbook
- Photo Documentation
- Photo Documentation Guidance
- Photo Documentation Template
ENERGY STAR MFNC web pages

PROGRAM VERSIONS AT A GLANCE

STEP 1: SELECT A PATH
- ERI and Prescriptive
- ASHRAE / Title 24

STEP 2: To see county design temperatures, select your state or territory.

Select State or Territory

ELIGIBILITY

These requirements apply to most multifamily buildings. See flow chart (PDF, 85 KB) for the specific multifamily projects that are eligible. Multifamily projects permitted prior to January 1, 2021, may continue to certify through the MFHR or Certified Homes program, based on the eligibility requirements of those programs.

PERFORMANCE TARGETS

For the ASHRAE Path, determine the commercial code in effect in your state and then choose from the Performance Target options in the table below. Projects in states that have adopted the commercial code the 2012 IECC, 2015 IECC, 2018 IECC, ASHRAE 90.1-2010, ASHRAE 90.1-2013, ASHRAE 90.1-2016, or equivalent, will be required to meet a Performance Target of 15% better than the energy code under which the building is permitted, unless choosing one of the equivalent options in the table below. All other projects must meet the national requirement of 15% over ASHRAE 90.1-2007.

PROGRAM REQUIREMENTS

National Program Requirements
MFNC National Program Requirements Version 1/1.1/OR-WA 1.2 (PDF, 490 KB)

Regional Program Requirements
MFNC California Program Requirements Version 1.2 (PDF, 387 KB)
ENERGY STAR MFNC web pages

<table>
<thead>
<tr>
<th>Performance Target Options: Savings (%) above varying ASHRAE 90.1 Baselines</th>
</tr>
</thead>
<tbody>
<tr>
<td>------------</td>
</tr>
<tr>
<td>2009 IECC</td>
</tr>
<tr>
<td>2012 IECC</td>
</tr>
<tr>
<td>2015 IECC</td>
</tr>
<tr>
<td>2018 IECC</td>
</tr>
</tbody>
</table>

1. Appendix G from the referenced ASHRAE Standard or from ASHRAE 90.1-2016 may be used.
2. These Performance Target options may not be used for projects using Appendix G from ASHRAE 90.1-2016.
3. Appendix G from ASHRAE 90.1-2016 must be used.

Notes and Exceptions:

Local Code Exception: While local city or town codes may differ from the state code, the determination for the ENERGY STAR program is based on the commercial code adopted by the state, not the local jurisdiction. In an instance where the building is permitted under a local code that is not the same as the state code, the Performance Target is based on the state code in place. The permit application or issue date will be used to determine what state code was in place in the state. To determine the code adopted by the state and its effective date, please visit Status of State Energy Code Adoption Web page.

Modeling options: To reduce the burden of applying two different codes to a given project, projects are allowed to use alternate targets of 20% savings over ASHRAE 90.1-2007 as equivalent to 15% over ASHRAE 90.1-2010; and 25% savings over ASHRAE 90.1-2007 and 20%...
ENERGY STAR Residential NC website
Q&A Session Tomorrow

ENERGY STAR Multifamily New Construction Program: Q&A

Wednesday, February 27, 2019 - 8:30 AM-10:00 AM, Bayside A
Presenters: Gayathri Vijayakumar and Rebecca Hudson
Wrap-up and Questions

MFNC requirements: [www.energystar.gov/mfnc](http://www.energystar.gov/mfnc)

MFNC program available now! ERI limited to 5 stories and less until RESNET confirms

MFNC **required** if permitted on or after 1/1/2021

MFNC Rater Training available in 2019 but not required until January 2020

Contact [energystarhomes@energystar.gov](mailto:energystarhomes@energystar.gov) with any questions, for webinar recordings, or to be added to the stakeholder list for MF updates