ENERGY STAR Residential New Construction Programs:

The Year in Review/The Year Ahead

Presented on November 28, 2023

The Big Theme:

A Whole New World

Support Section 45L Tax Credit

Make Core Program Improvements

ENERGY STAR NextGen™ CERTIFIED HOMES & APARTMENTS

BUILT FOR A CLEAN ENERGY FUTURE

Launch ENERGY STAR NextGen

§45L New Energy Efficient Home Tax Credit Update

Summary of Available Credits for ENERGY STAR Certification

- Single-Family Homes - $2,500 available for homes certified to eligible ENERGY STAR Single-Family New Home (SFNH) program requirements.

- Manufactured Homes - $2,500 available for homes certified to eligible ENERGY STAR Manufactured Home (MH) program requirements.

- Multifamily Homes - $500 available for homes certified to eligible ENERGY STAR Multifamily New Construction (MFNC) program requirements, with a larger tax credit ($2,500) available when prevailing wage requirements are met.

A larger tax credit (2x ENERGY STAR levels) is also available for homes that are certified to DOE's Zero Energy Ready Home (ZERH) Program, which requires ENERGY STAR certification as a prerequisite.

Key Things to Know about § 45L and IRS Notice 2023-65

- Eligibility for the § 45L tax credit requires ENERGY STAR (or ZERH) certification
- For the ENERGY STAR tax credit, minimum eligible program versions are based on acquisition date (not permit date)
- Minimum eligible versions are published in tables by year on EPA's tax credit website
- Builders should collect approved documentation of ENERGY STAR certification for their records
- The § 45L tax credit is optional
  - As the tax credit requirements increase, builders in many locations can continue to use a program version to earn ENERGY STAR certification that does not qualify for § 45L, and then ramp up to the tax credit levels if/when they are ready

Minimum ENERGY STAR Program Versions Eligible for the § 45L Credit

2024 Acquisition Dates

Minimum ENERGY STAR Program Versions Eligible for the § 45L Credit

State/Territory	Single-Family	Manufactured	Multifamily
AL, AK, AR, AZ, CO, CT, DC, DE, GA, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, VT, WI, WV, WY	SFNH National v3.1	MH v2	MFNC National v1.1
CA	SFNH California v3.3	MH v2	MFNC California v1.3
FL	SFNH Florida v.3.1; or SFNH National v3.1	MH v2	MFNC National v1.1
HI	SFNH Pacific v3	MH v2	MFNC National v1.1
OR, WA	SFNH Oregon and Washington v3.2; or SFNH National v3.2	MH v2	MFNC Oregon and Washington v1.2; or MFNC National v1.2

Minimum ENERGY STAR Program Versions Eligible for the § 45L Credit

2025 Acquisition Dates
Minimum ENERGY STAR Program Versions Eligible for the § 45L Credit

State/Territory	Single-Family	Manufactured	Multifamily
AL, AK, AR, AZ, CO, CT, DC, DE, FL, GA, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, VT, WI, WV, WY	SFNH National v3.2	MH v2	MFNC National v1.1
CA	SFNH California v3.3	MH v2	MFNC California v1.3
HI	SFNH Pacific v3	MH v2	MFNC National v1.1
OR, WA	SFNH National 3.2	MH v2	MFNC Oregon and Washington v1.2; or MFNC National v1.2

Minimum ENERGY STAR Program Versions Eligible for the § 45L Credit

2026 Acquisition Dates*
Minimum ENERGY STAR Program Versions Eligible for the § 45L Credit

State/Territory	Single-Family	Manufactured	Multifamily
AL, AK, AR, AZ, CO, CT, DC, DE, FL, GA, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, UT, VA, VT, WI, WV, WY	To be determined	To be determined	MFNC National v1.1
CA	To be determined	To be determined	MFNC California v1.3
HI	To be determined	To be determined	MFNC National v1.1
OR, WA	To be determined	To be determined	MFNC Oregon and Washington v1.2; or MFNC National v1.2

Visit the ENERGY STAR Tax Credits webpage for more information
(follow the link to 'Tax Credits for Home Builders')

www.energystar.gov/taxcredits

Dean Gamble

Single-Family

New Homes

Technical Manager

Rebecca Hudson

Multifamily

New Construction

Technical Manager

Updates on Core ENERGY STAR Program Requirements

ENERGY STAR
Single-Family New Homes (SFNH)

Status of National Program Requirements

- SFNH National Version 3.0
  - Has been sunset for homes permitted on or after 01/01/2023.
- SFNH National Version 3.1
  - Now required in most states.
  - ENERGY STAR ERI Target of ~55-65
  - Same mandatory requirements as SFNH National v3.0
- SFNH National Version 3.2
  - May be applicable sooner than you think:
    - Required for homes permitted on or after 1/1/25 in CT, NJ, OR, WA, VT.
      Recently announced that it will also be required starting on this date in FL & MD.
    - For ZERH v2 beginning in 2024
    - For 45L beginning with acquisitions in 2025

Status of National Program Requirements

- SFNH National Version 3.2 (continued)
  - ENERGY STAR ERI Target: ~45 - 55
    - Can be met using any mix of measures, but it will be hard to hit the target without these key features:
      - 2021 IECC insulation levels or equivalent
      - Ducts in conditioned space
      - Instant gas or heat pump water heater

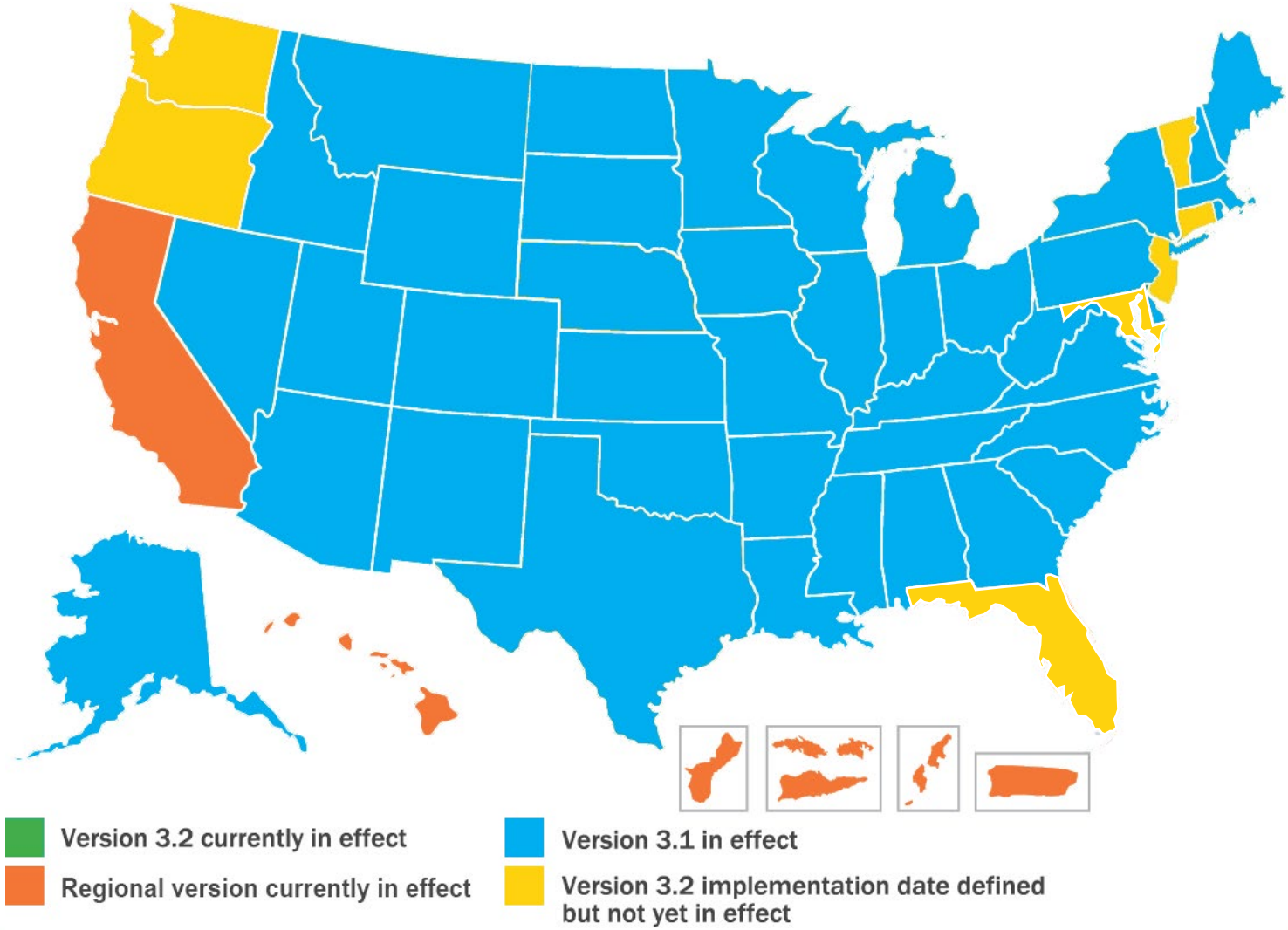
Status of National Program Requirements

- SFNH National Version 3.2 (continued)
  - Thermal Backstop:
    - Same mandatory requirements except that thermal backstop is more stringent and aligned with the 2021 IECC prescriptive path, or UA equivalent*.
      - *For homes permitted before 01/01/25, 105% x 2021 IECC UA is allowed.
    - Must be met regardless of the ERI, but a home can trade off between ceiling insulation, wall insulation, foundation insulation, windows, and doors.
    - Consider using low U-factor windows (~0.22-0.25) to help meet the backstop.

Status of Regional Program Requirements

- Oregon-Washington Version 3.2
  - Will not be applicable to homes permitted on or after 01/01/2025. After this date, homes will transition to National v3.2
- Florida Version 3.1
  - Will not be applicable to homes permitted on or after 01/01/2025. After this date, homes will transition to National v3.2
- California Version 3.2, 3.3, and 3.4
  - Applicable version dependent on plan approval date, permit date, and edition of state code being enforced for the home being certified.
- Pacific Version 3
  - Close to completing next version in response to new Hawaii code.
- Caribbean Version 3
  - Not anticipating any changes in the year ahead.

Status of SFNH Program Requirements



ENERGY STAR
Multifamily New Construction (MFNC)

Status of National Program Requirements

- MFNC National Version 1.0
  - Will be sunset for buildings permitted on or after 01/01/2024.
- MFNC National Version 1.1
  - Will be required in most states.
  - Increase in stringency of performance target (e.g., ERI 55-65)
  - Same mandatory requirements as MFNC National v1.0
- MFNC National Version 1.2
  - May be applicable sooner than you think:
    - Required for buildings permitted on or after 01/01/27 in CT, NJ, OR, WA, VT. Recently announced that it will also be required starting on this date in FL & MD.
    - For ZERH MF v2 beginning in 2025
    - For 45L, *anticipated*, beginning with acquisitions in 2027

Status of National Program Requirements

- MFNC National Version 1.2 (continued)
  - Performance Target based on Path:
    - ERI Path: ENERGY STAR ERI Target is ~45 – 55
    - Prescriptive Path: Based on the ENERGY STAR Reference Design
    - 15% improvement over ASHRAE 90.1-2019
  - Can be met using any mix of measures, but likely will need these key features:
    - 2021 IECC insulation levels or equivalent
    - Ducts in conditioned space
    - Instant gas or heat pump water heater

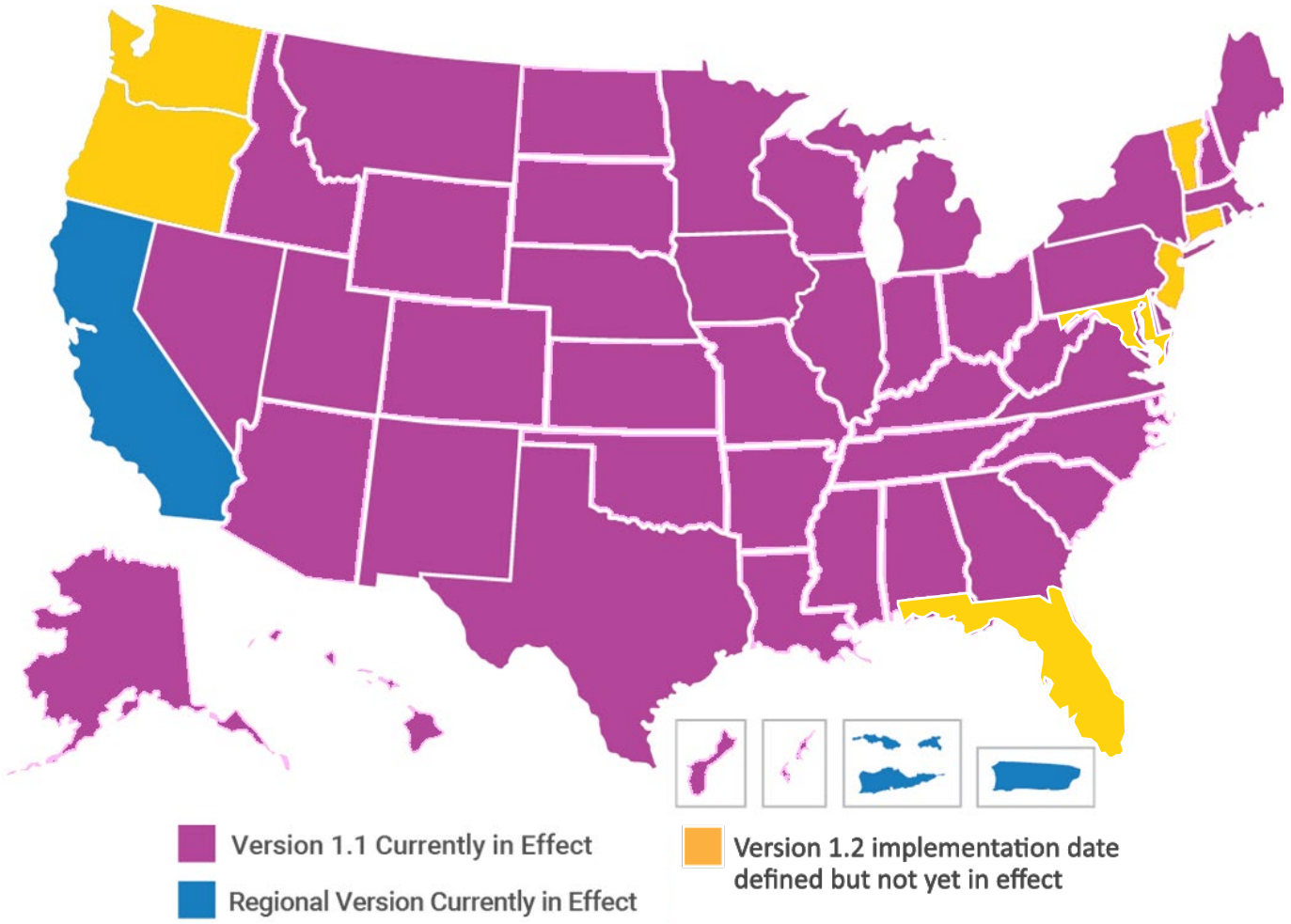
Status of National Program Requirements

- MFNC National Version 1.2 (continued)
  - Thermal Backstop:
    - Same mandatory requirements except that thermal backstop is more stringent and aligned with the 2021 IECC prescriptive path, or UA equivalent*.
      - *For buildings permitted before 01/01/25, 105% x 2021 IECC UA is allowed.
    - Can reference either the Residential or Commercial chapter
    - Must be met regardless of overall performance, but a building can trade off between ceiling insulation, wall insulation, foundation insulation, windows, and doors.
    - Consider using low U-factor windows (~0.22-0.25) to help meet the backstop.

Status of Regional Program Requirements

- Oregon-Washington Version 1.2
  - Will not be applicable to buildings permitted on or after 01/01/2027. After this date, buildings will transition to National v1.2
- California Version 1.2, 1.3, and 1.4
  - Applicable version dependent on plan approval date, permit date, and edition of state code being enforced for the home being certified.
- Caribbean Version 1
  - Not anticipating any changes in the year ahead.

Status of MFNC Program Requirements (In January)



Shared Updates for the SFNH & MFNC Programs

SFNH Revision 13 / MFNC Revision 04

- To be released next month, December 2023
- Enforced for permits on or after 1/1/2025
- Key change to note: **Sampling Sunset**
  - Removes the allowance to use sampling inspection protocols in the SFNH program for homes permitted on or after 01/01/2025.
  - Also, townhouses cannot use sampling inspection protocols, even when certified using the MFNC program, if permitted on or after 01/01/2025
- The next Revision also includes new alternatives, exemptions, and clarifications
  - More substantial updates in the MFNC program (e.g., thermal bridging, ventilation)

Key goals for the year ahead

1. Update the SFNH Pacific program requirements in response to new code in Hawaii.
2. Evaluate 2024 IECC, once published, and assess whether new national version is needed.
3. Streamline program requirements via development of next year's Revision.
4. Explore alternatives to removal of all drywall when pre-drywall inspection is missed.
5. Begin work on next edition of ANSI / RESNET / ACCA / ICC 310 – HVAC grading standard.

Upcoming ENERGY STAR Partner Meeting webinars

- A Beginner's Guide to the ENERGY STAR MFNC Program – November 30, 1-2 pm ET
- Overview of the Latest Revisions (Rev. 13 & 04) – December 7, 1-2 pm ET

Register at: www.energystar.gov/about/energy_star_trainings

Strengthening the ENERGY STAR Certification System's Quality Assurance / Quality Control Requirements

Context

- EPA's "ENERGY STAR Certification System" sets global requirements that all Home Certification Organizations (HCOs) must meet to earn EPA recognition and operate a certification program.
  - Includes, for example, Rater training and credentialing, approved rating software, data collection/database systems, and quality control protocols.
  - Each HCO decides how to implement the high-level requirements, subject to EPA approval.
- EPA is proposing a number of enhancements to improve effectiveness of current QAQC activities, give HCOs new tools to oversee participants, and ultimately create more confidence in the quality of ENERGY STAR certifications.

Major Themes for Enhancements

1. Taking better advantage of technology, particularly digital data:
   - Centralized collection of digitized ENERGY STAR Checklist data and Rater on-site photos (with minimum 3-year retention)
   - Formalizing software validations for all machine-verifiable items, such as minimum Version for dwelling's location and permit date.
   - Printing ENERGY STAR certificates and labels exclusively via approved rating software.

Major Themes for Enhancements

2. Improving effectiveness of existing File/Field review activities:
   - Using photos during all file reviews to assess a home's installed features (as opposed to being limited to paperwork items).
   - Adding "skills and knowledge check" as explicit purpose of field evaluations, and adjusting rates accordingly.

3. New oversight tools at the HCO level:
   - New quality control layer: 0.5% File review directly by HCO personnel.
   - Builder facilitation of HCO site visits, on as-needed basis.

Next Steps

- **Webinar:** December 11th at 1 PM ET (Strengthening the ENERGY STAR Certification System's Quality Assurance and Quality Control Requirements)
  - Register at energystar.gov/about/energy_star_trainings.
- **Stakeholder comment period** to be announced in December, running for 45 days. Look for email announcement.
- Once EPA policy finalized, HCOs will update their own policies and procedures and resubmit an application to EPA for approval.
- HCOs will inform their participants (Raters, QADs, etc.) of changes and implementation timelines through normal standards update channels. Implementations likely in 2024-2025 range.

Now Available!

ENERGY STAR NextGen New Homes and Apartments

Introduction

- Reducing emissions in residential construction requires us to expand beyond energy efficiency to also include:
  - Strategic electrification
  - Connected equipment to aid in demand response
  - Supporting EV-charging

- EPA's goal: to coalesce the industry around the primary features needed to reduce operational decarbonization

- ENERGY STAR NextGen is NOT intended to replace the core ENERGY STAR program, nor DOE's Zero Energy Ready homes

ENERGY STAR NextGen Certified Homes and Apartments

1. Highly energy-efficient construction
2. Multi-stage ENERGY STAR certified connected heat pump
3. ENERGY STAR certified connected heat pump water heater
4. Clean electric cooking
5. Electric vehicle charging capability

The right choice, for today and tomorrow.

The ENERGY STAR® NextGen program offers an additional level of recognition for homes and apartments that go above and beyond the core ENERGY STAR Residential New Construction program requirements and incorporate advanced electric technologies that will help to build our clean energy future.

Using less fossil fuel to operate helps ENERGY STAR NextGen homes and apartments make a big impact, reducing greenhouse gas emissions by up to 80 percent when compared to homes built to the latest code.

NextGen CERTIFIED HOMES & APARTMENTS

Built for a clean energy future.

Choosing an ENERGY STAR NextGen home helps to create a clean energy future for everyone and provides an important step toward reducing carbon pollution while providing energy savings, greater comfort, and advanced features.

Learn more at **energystar.gov/nextgenhomes**.

EPA United States Environmental Protection Agency

ESNextGen08/09/23

NextGen CERTIFIED HOMES & APARTMENTS
BUILT FOR A CLEAN ENERGY FUTURE

A home for tomorrow, built today.

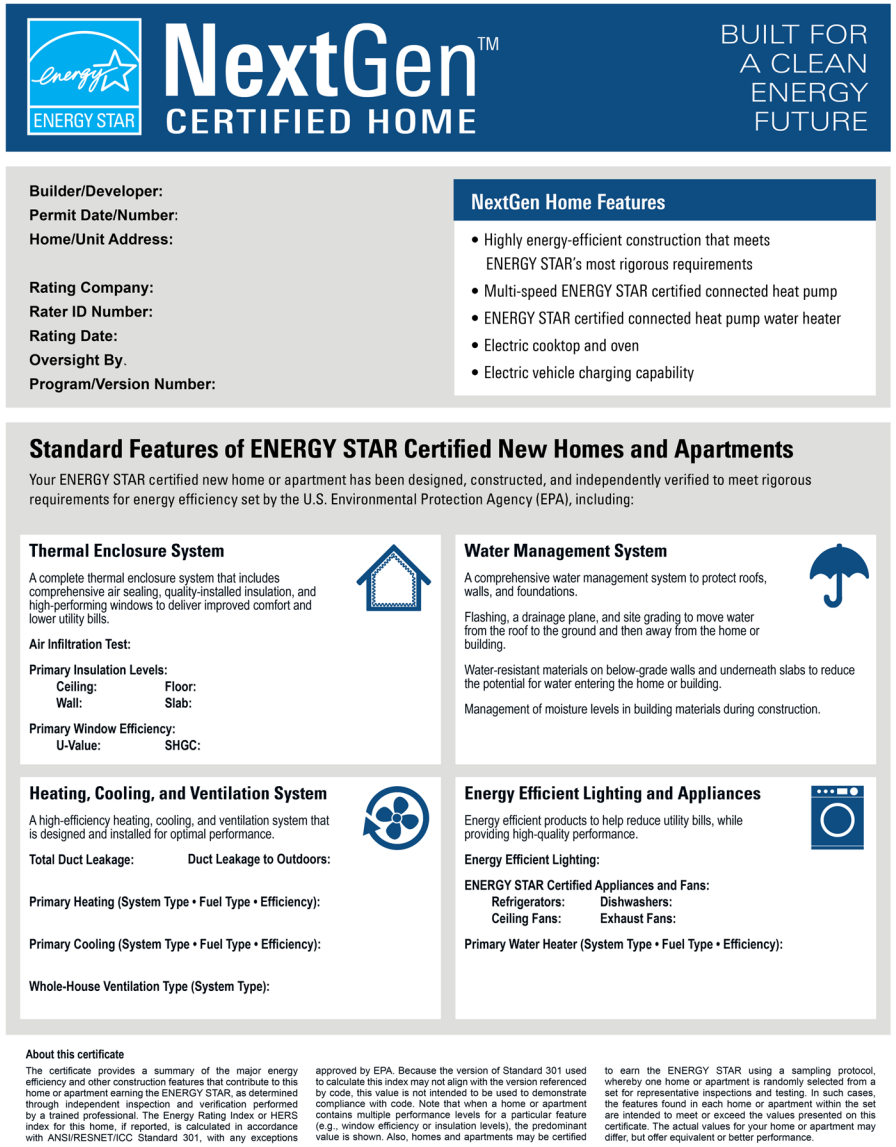
EPA United States Environmental Protection Agency

Learn more

Webinar on Tuesday, December 12th: 1pm EST

Just Launched: ENERGY STAR NextGen New Homes & Apartments Program

www.energystar.gov/NextGenHomes



ENERGY STAR NextGen™ CERTIFIED HOME

BUILT FOR A CLEAN ENERGY FUTURE

Builder/Developer:
Permit Date/Number:
Home/Unit Address:

Rating Company:
Rater ID Number:
Rating Date:
Oversight By.
Program/Version Number:

NextGen Home Features

- Highly energy-efficient construction that meets ENERGY STAR's most rigorous requirements
- Multi-speed ENERGY STAR certified connected heat pump
- ENERGY STAR certified connected heat pump water heater
- Electric cooktop and oven
- Electric vehicle charging capability

Standard Features of ENERGY STAR Certified New Homes and Apartments

Your ENERGY STAR certified new home or apartment has been designed, constructed, and independently verified to meet rigorous requirements for energy efficiency set by the U.S. Environmental Protection Agency (EPA), including:

Thermal Enclosure System

A complete thermal enclosure system that includes comprehensive air sealing, quality-installed insulation, and high-performing windows to deliver improved comfort and lower utility bills.

Air Infiltration Test:

Primary Insulation Levels:
Ceiling: **Floor:**
Wall: **Slab:**

Primary Window Efficiency:
U-Value: **SHGC:**

Water Management System

A comprehensive water management system to protect roofs, walls, and foundations.

Flashing, a drainage plane, and site grading to move water from the roof to the ground and then away from the home or building.

Water-resistant materials on below-grade walls and underneath slabs to reduce the potential for water entering the home or building.

Management of moisture levels in building materials during construction.

Heating, Cooling, and Ventilation System

A high-efficiency heating, cooling, and ventilation system that is designed and installed for optimal performance.

Total Duct Leakage: **Duct Leakage to Outdoors:**

Primary Heating (System Type • Fuel Type • Efficiency):

Primary Cooling (System Type • Fuel Type • Efficiency):

Whole-House Ventilation Type (System Type):

Energy Efficient Lighting and Appliances

Energy efficient products to help reduce utility bills, while providing high-quality performance.

Energy Efficient Lighting:

ENERGY STAR Certified Appliances and Fans:
Refrigerators: **Dishwashers:**
Ceiling Fans: **Exhaust Fans:**

Primary Water Heater (System Type • Fuel Type • Efficiency):

About this certificate

The certificate provides a summary of the major energy efficiency and other construction features that contribute to this home or apartment earning the ENERGY STAR, as determined through independent inspection and verification performed by a trained professional. The Energy Rating Index or HERS index for this home, if reported, is calculated in accordance with ANSI/RESNET/ICC Standard 301, with any exceptions approved by EPA. Because the version of Standard 301 used to calculate this index may not align with the version referenced by code, this value is not intended to be used to demonstrate compliance with code. Note that when a home or apartment contains multiple performance levels for a particular feature (e.g., window efficiency or insulation levels), the predominant value is shown. Also, homes and apartments may be certified to earn the ENERGY STAR using a sampling protocol, whereby one home or apartment is randomly selected from a set for representative inspections and testing. In such cases, the features found in each home or apartment within the set are intended to meet or exceed the values presented on this certificate. The actual values for your home or apartment may differ, but offer equivalent or better performance.

2023 ENERGY STAR Partner Meeting Webinar Series

2023 ENERGY STAR Partner Meeting Webinar Series

Now	ENERGY STAR: The Year in Review/The Year Ahead
Thursday, November 30th 1 PM Eastern	**A Beginners Guide to the ENERGY STAR Multifamily New Construction Program**
Tuesday, December 5th 1 PM Eastern	**45L Tax Credit Update**
Thursday, December 7th 1 PM Eastern	**Overview of the Latest Revisions (Rev.13 & 04) of the ENERGY STAR Single-Family and Multifamily Programs**
Monday, December 11th 1 PM Eastern	**Strengthening the ENERGY STAR Certification System's Quality Assurance and Quality Control Requirements**
Tuesday, December 12th 1 PM Eastern	**Just Launched: ENERGY STAR NextGen New Homes and Apartments Program**

Register at www.energystar.gov/partner_resources/residential_new/educational_resources/energy_star_webinars.

Each webinar will be recorded and available for playback afterward on our Recorded Webinars page:
www.energystar.gov/partner_resources/residential_new/educational_resources/energy_star_webinars/recorded_webinars