# ENERGY STAR Residential New Construction Programs:
# The Year in Review/Year Ahead

Presented on October 4, 2022

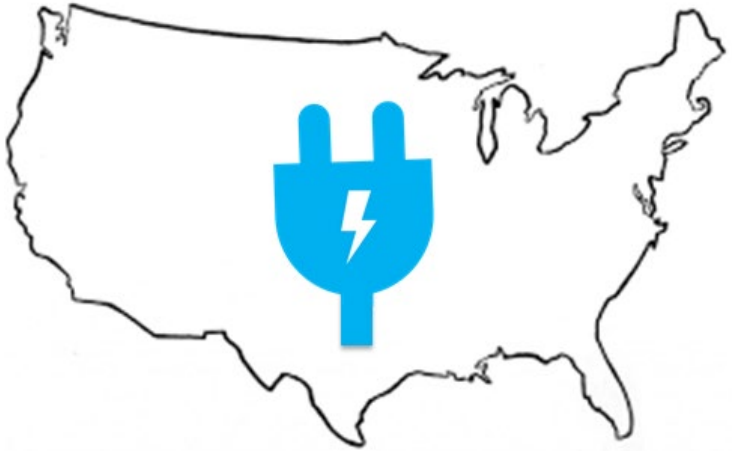

EPA United States Environmental Protection Agency

# Jon Passe

Chief, ENERGY STAR
Residential Branch

# Big Themes for 2023

**Advance Core Programs**



**Address Decarbonization**

**Support 45L Tax Credit**

## Rebecca Hudson

**Multifamily**

**New Construction**

Technical Manager

## Dean Gamble

**Single-Family**

**New Homes**

Technical Manager

## Elliot Seibert

**Residential Programs**

Implementation Manager

# Updates on Core ENERGY STAR Program Requirements

# Program Revisions
# (SFNH Rev. 12, MFNC Rev. 03)

## Just released revisions to SFNH and MFNC programs

### A Revision…

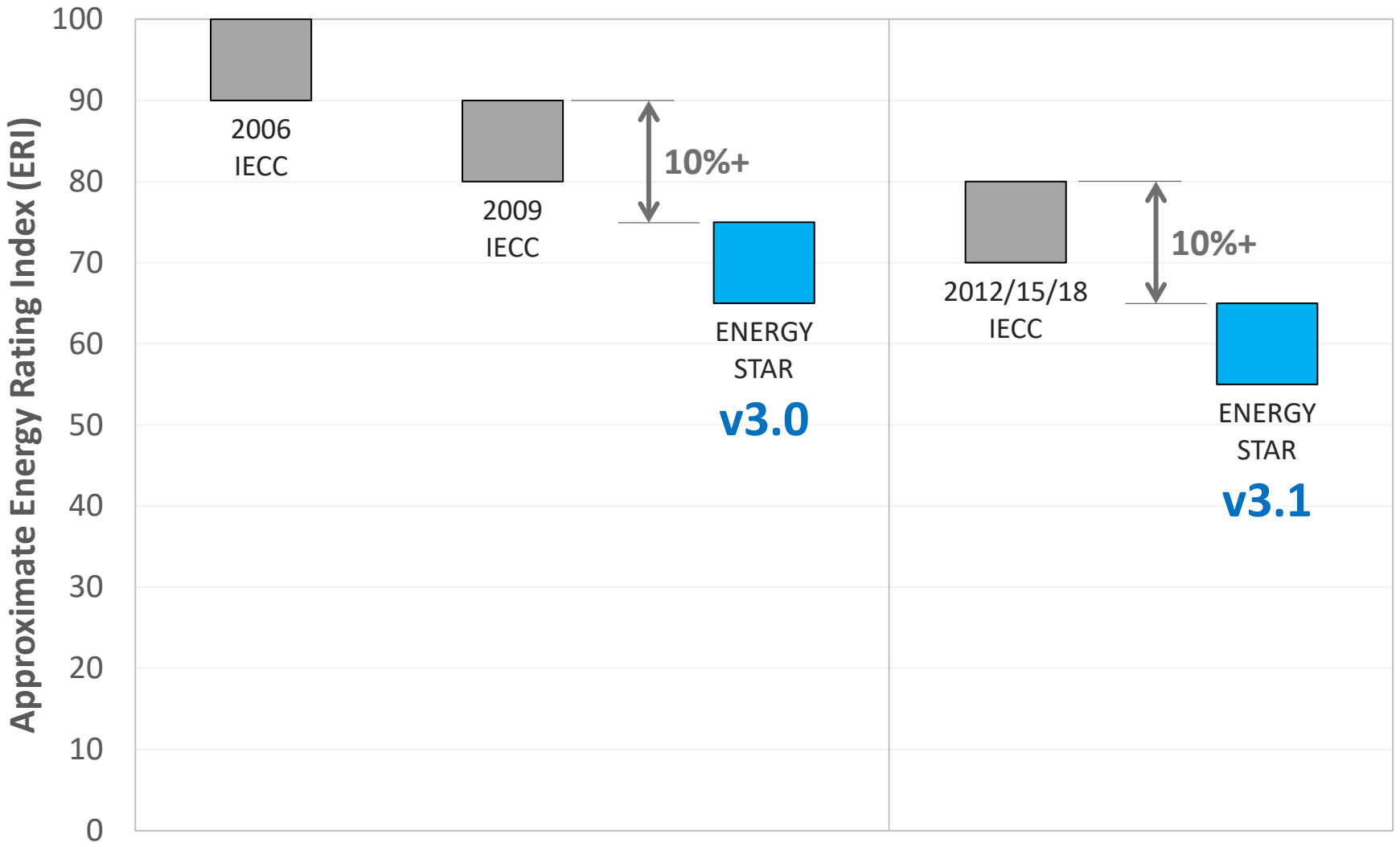
1. Clarifies
2. Simplifies
3. Improves

- SFNH Rev. 12 and MFNC Rev. 03 now posted
- Review SFNH and MFNC Highlights and Mark-up documents
  www.energystar.gov/newhomespolicyrecord

**JOIN US:** Overview of the Latest Revisions (Rev.12 & 03) of the ENERGY STAR Single-Family and Multifamily Programs
Tue, Oct 11, 2022 (1:00 PM - 2:30 PM EDT)

# National Transition to SFNH v3.1 & MFNC v1.1

# Modern code evolution



# Key components of ENERGY STAR versions

**Performance Target**

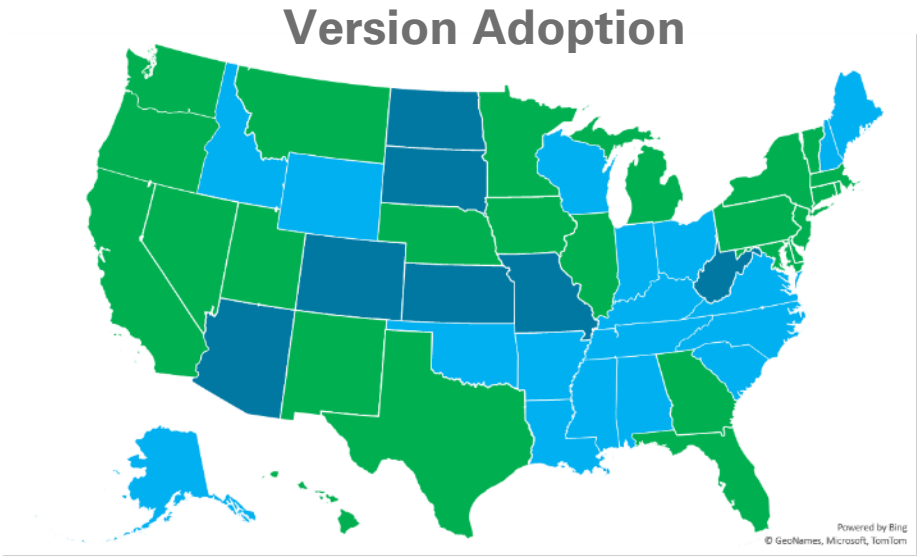
- V3.0: ~65-75 ERI target
- V3.1: ~55-65 ERI target

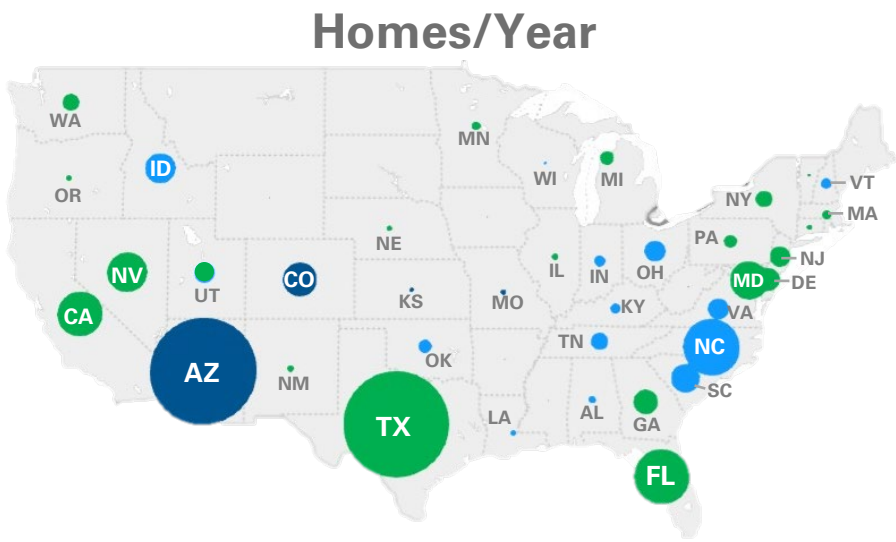
+

**Mandatory Features**

Ensure that efficiency is not delivered by sacrificing indoor air quality, comfort, & durability

# Implementation of ENERGY STAR versions as of July 2022




**25** **Version 3.1+** (national or regional)

**7** **Version 3.0** due to home rule, meaning no statewide code to trigger version change

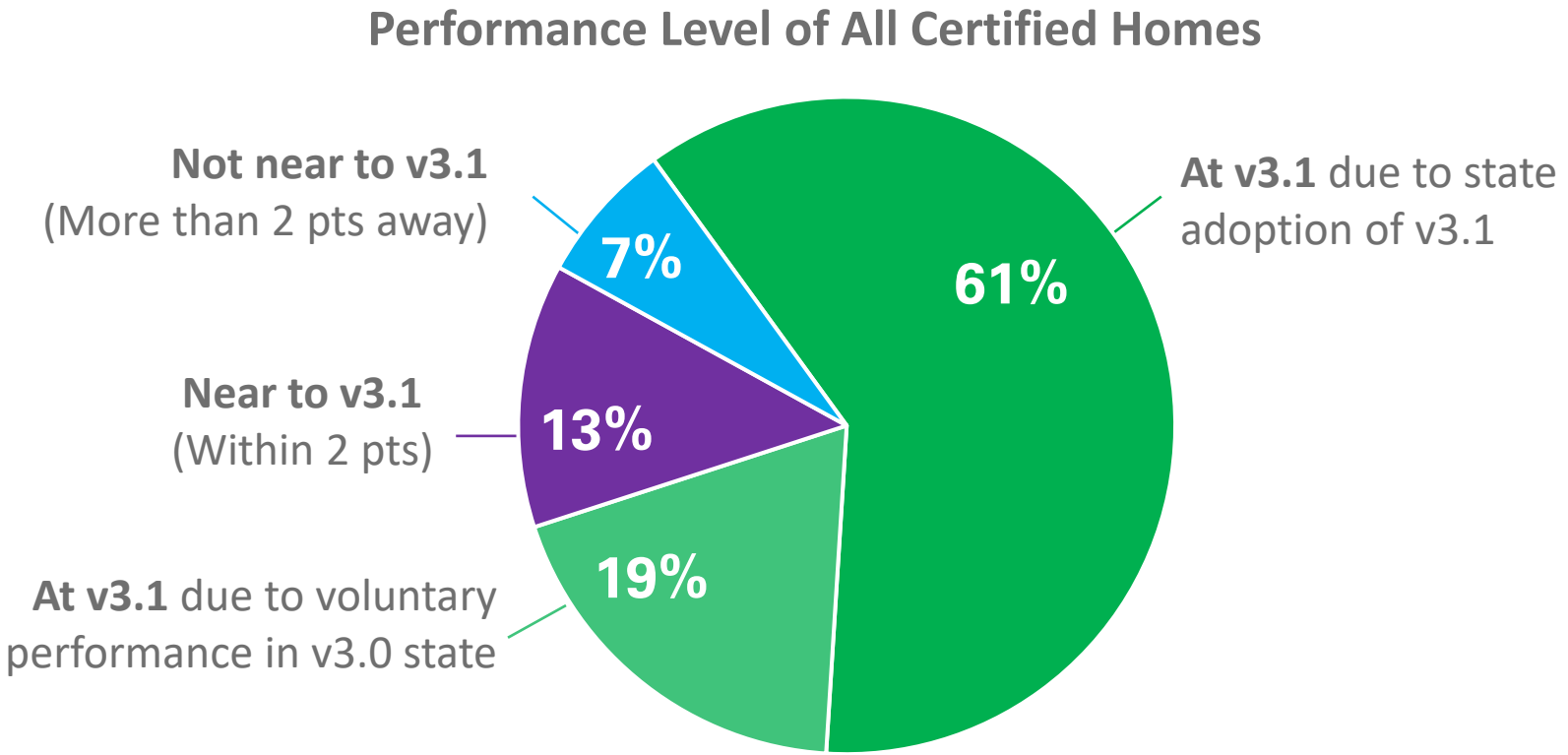
**18** **Version 3.0** due to code ≤ 2009 IECC

# National transition to SFNH v3.1 and MFNC v1.1

- Transitioning all states still using Version 3.0 to **Version 3.1**.
  - For Version 3.1, transition date of **January 1, 2023** (based on permit date).
- For MFNC, similar transition of states using Version 1.0 to **Version 1.1**.
  - For Version 1.1, transition date of **January 1, 2024** (based on permit date).
- This means that the SFNH National v3.0 and MFNC National v1.0 program requirements will be sunset.

# Partners are well-positioned for the transition to Version 3.1

- **93%** of single-family homes certified as ENERGY STAR between 08/2019 and 08/2020 were already **at or near the v3.1**:

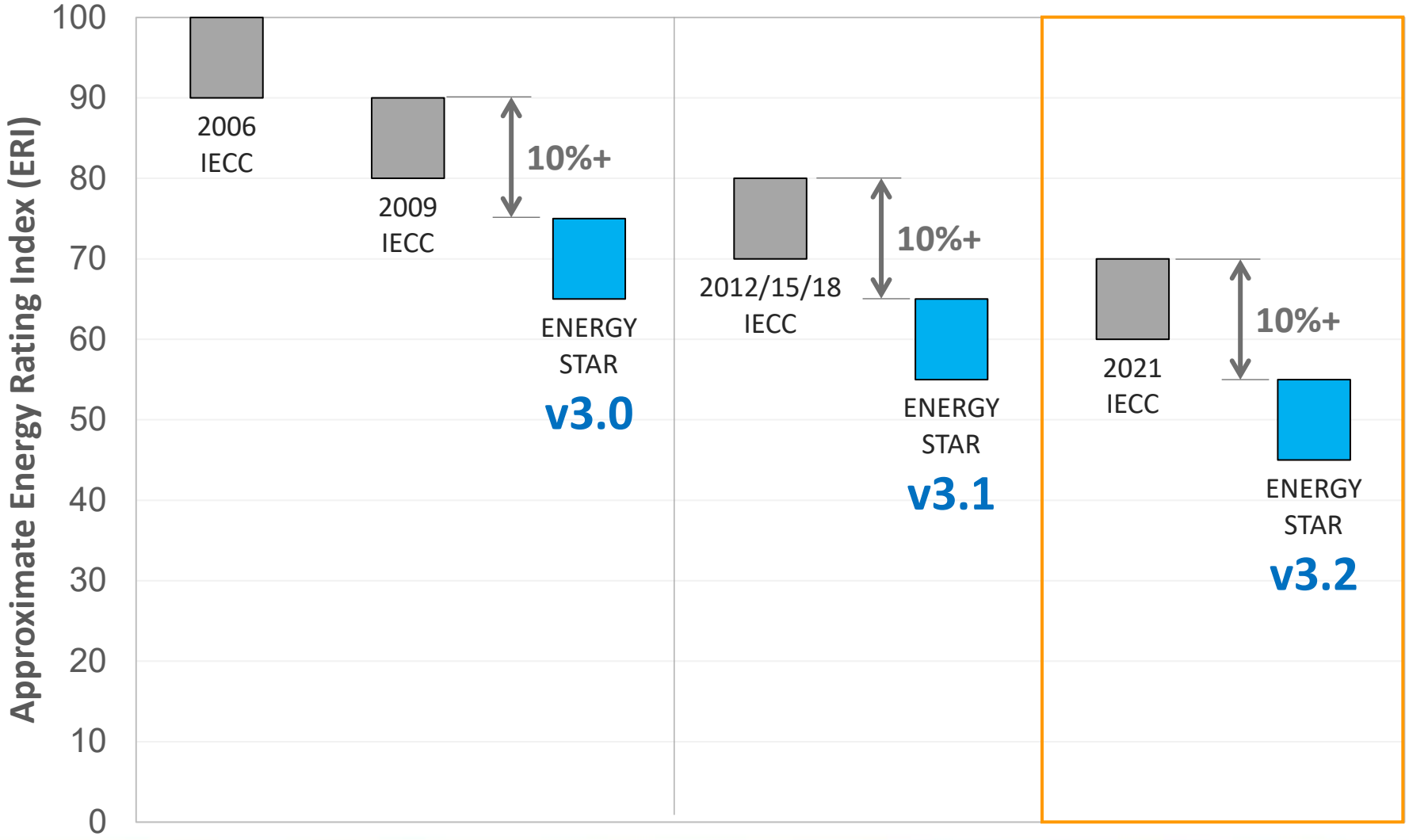


# Want more details?

- **Preparing for the National Transition to Single-Family Version 3.1 and Multifamily Version 1.1**
  - ✓ Thu, Oct 20, 2022 (1:00 PM - 2:00 PM EDT)

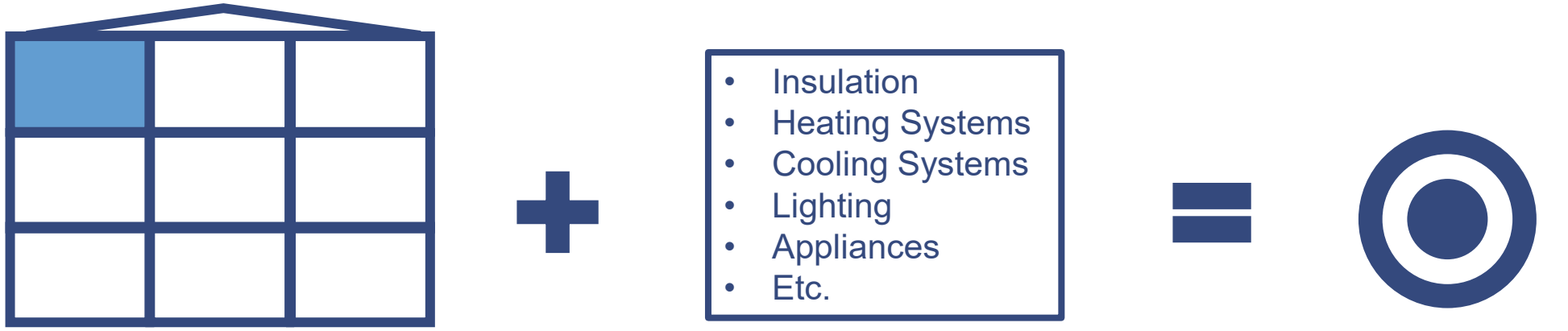
# Definition of SFNH v3.2 & MFNC v1.2

# Modern code evolution



# Process for developing new Versions

- Development of a new SFNH and MFNC ‘Reference Design.’




**Home / Apartment To Be Built** | **Reference Design Measures** | **Performance Target**

- Iterative energy modeling used to identify a package of measures that:
  - Generate at least 10% savings
  - Are practical for a builder / developer to incorporate

# Key takeaways about the new performance targets

- For SFNH v3.2, the typical ENERGY STAR ERI target is ~50-55
- For MFNC v1.2, there are three paths, each with its own performance target:
  1. **ERI Path**: ERI target is in same ballpark or a bit lower than SFNH v3.2
  2. **Prescriptive Path**: Based on the new ENERGY STAR Reference Design
  3. **ASHRAE Path**: 15% improvement over ASHRAE 90.1-2019

# More stringent thermal backstop in Version 3.2 / 1.2

- Under prior versions, the thermal backstop is primarily tied to the 2009 IECC prescriptive path, or UA equivalent.
- For homes certified using Version 3.2 / 1.2, the 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.
- Regardless of the overall performance of the home or apartment, it cannot have an enclosure worse than these limits.
- But trade-offs are allowed between: ceiling insulation, wall insulation, foundation insulation, windows, and doors.

# Improved window and insulation levels in the 2021 IECC

- The 2021 IECC has higher insulation levels than the 2009 IECC in most CZ's:

| CZ | Code | Windows | Ceiling | Wall: Cavity + Cont | Frame Floor | Basement Wall | Crawlspace Wall | Slab |
|---|---|---|---|---|---|---|---|---|
| 1 | 2009 IECC | 1.2 | 30 | 13 | 13 | 0 | 0 | 0 |
| | 2021 IECC | 0.50 | 30 | 13 | 13 | 0 | 0 | 0 |
| 2 | 2009 IECC | 0.65 | 30 | 13 | 13 | 0 | 0 | 0 |
| | 2021 IECC | 0.40 | 49 | 13 | 13 | 0 | 0 | 0 |
| 3 | 2009 IECC | 0.50 | 30 | 13 | 19 | 13 | 13 | 0 |
| | 2021 IECC | 0.30 | 49 | 20 | 19 | 13 | 13 | 10, 2ft |
| 4 | 2009 IECC | 0.35 | 38 | 13 | 19 | 13 | 13 | 10, 2ft |
| | 2021 IECC | 0.30 | 60 | 20 + 5 | 19 | 13 | 13 | 10, 4ft |
| 4C & 5 | 2009 IECC | 0.35 | 38 | 20 | 30 | 13 | 13 | 10, 2ft |
| | 2021 IECC | 0.30 | 60 | 20 + 5 | 30 | 19 | 19 | 10, 4ft |
| 6 | 2009 IECC | 0.35 | 49 | 20 | 30 | 19 | 13 | 10, 4ft |
| | 2021 IECC | 0.30 | 60 | 20 + 5 | 30 | 19 | 19 | 10, 4ft |
| 7 & 8 | 2009 IECC | 0.35 | 49 | 21 | 38 | 19 | 13 | 10, 4ft |
| | 2021 IECC | 0.30 | 60 | 20 + 5 | 38 | 19 | 19 | 10, 4ft |

# Examples: How to meet thermal backstop in Version 3.2

- Calculated UA trade-offs for a typical home:
  - 2,400 sq. ft.
  - Two-stories
  - 15% WFA
  - Various foundation types

| Windows | | | |
|---|---|---|---|
| U-value | Area | UA | Change in UA |
| 0.35 | 360 | **126** | **-** |
| 0.30 | 360 | **108** | **-18** |
| 0.25 | 360 | **90** | **-18** |

| Walls | | | | |
|---|---|---|---|---|
| R-value | U-Value | Area | UA | Change in UA |
| 13 | 0.077 | 1978 | **152** | **-** |
| 15 | 0.067 | 1978 | **132** | **-20** |
| 19 | 0.053 | 1978 | **104** | **-28** |
| 21 | 0.048 | 1978 | **94** | **-10** |

| Ceilings | | | | |
|---|---|---|---|---|
| R-value | U-Value | Area | UA | Change in UA |
| 38 | 0.026 | 1200 | **32** | **-** |
| 49 | 0.020 | 1200 | **24** | **-7** |
| 60 | 0.017 | 1200 | **20** | **-4** |

# Examples: How to meet thermal backstop in Version 3.2

- In Climate Zone 3, for a slab-on-grade home:

| Climate Zone | 3 | |
|---|---|---|
| **IECC Version** | **2009** | **2021** |
| Ceiling Insulation | 30 | 49 |
| Wall Insulation: Cavity + Cont | 13 | 20 |
| Windows & Doors | 0.50 | 0.30 |
| Frame Floor Insulation | 19 | 19 |
| Basement Wall Insulation | 13 | 13 |
| Crawlspace Wall Insulation | 13 | 13 |
| Slab Insulation | 0 | 10, 2ft |

| Scenario Name | 2021 IECC | Alt. 1 | Alt. 2 | Alt. 3 | Alt. 4 |
|---|---|---|---|---|---|
| Ceiling Insulation | 49 | 49 | 49 | 49 | 49 |
| Wall Insulation: Cavity | 20 | 15 | 15 | 21 | 15 |
| Wall Insulation: Continuous | None | 3 | 3 | None | 3 |
| Window U-factor | 0.30 | 0.30 | 0.28 | 0.29 | 0.25 |
| Door U-factor | 0.30 | 0.17 | 0.17 | 0.17 | 0.17 |
| Frame Floor Insulation | n/a | n/a | n/a | n/a | n/a |
| Basement Wall Insulation | n/a | n/a | n/a | n/a | n/a |
| Crawlspace Wall Insulation | n/a | n/a | n/a | n/a | n/a |
| Slab Insulation & Depth | 10, 2ft | None | R5, 2ft | None | None |
| **Total UA for Home** | **343.3** | **360.5** | **337.6** | **342.6** | **342.5** |
| % better than 2021 IECC | | -5.0% | 1.7% | 0.2% | 0.2% |



EPA | ENERGY STAR. The simple choice for energy efficiency.

# Examples: How to meet thermal backstop in Version 3.2

- In Climate Zone 4, for a home with a conditioned basement:

| **Climate Zone** | **4** | |
|---|---|---|
| **IECC Version** | **2009** | **2021** |
| Ceiling Insulation | 38 | 60 |
| Wall Insulation: Cavity + Cont | 13 | 20 + 5 |
| Windows & Doors | 0.35 | 0.30 |
| Frame Floor Insulation | 19 | 19 |
| Basement Wall Insulation | 13 | 13 |
| Crawlspace Wall Insulation | 13 | 13 |
| Slab Insulation | 10, 2ft | 10, 4ft |

| Foundation | Conditioned Basement | | | | |
|---|---|---|---|---|---|
| **Scenario Name** | **2021 IECC** | **Alt. 1** | **Alt. 2** | **Alt. 3** | **Alt. 4** |
| Ceiling Insulation | 60 | 49 | 49 | 49 | 38 |
| Wall Insulation: Cavity | 20 | 21 | 21 | 23 | 21 |
| Wall Insulation: Continuous | 5 | None | None | None | None |
| Window U-factor | 0.30 | 0.30 | 0.27 | 0.27 | 0.25 |
| Door U-factor | 0.30 | 0.17 | 0.17 | 0.17 | 0.17 |
| Frame Floor Insulation | n/a | n/a | n/a | n/a | n/a |
| Basement Wall Insulation | 13 | 13 | 21 | 13 | 13 |
| Crawlspace Wall Insulation | n/a | n/a | n/a | n/a | n/a |
| Slab Insulation & Depth | None | None | None | None | None |
| **Total UA for Home** | **381.2** | **406.2** | **383.1** | **384.7** | **386.3** |
| % better than 2021 IECC | | -4.1% | 1.8% | 1.4% | 1.0% |

# Examples: How to meet thermal backstop in Version 3.2

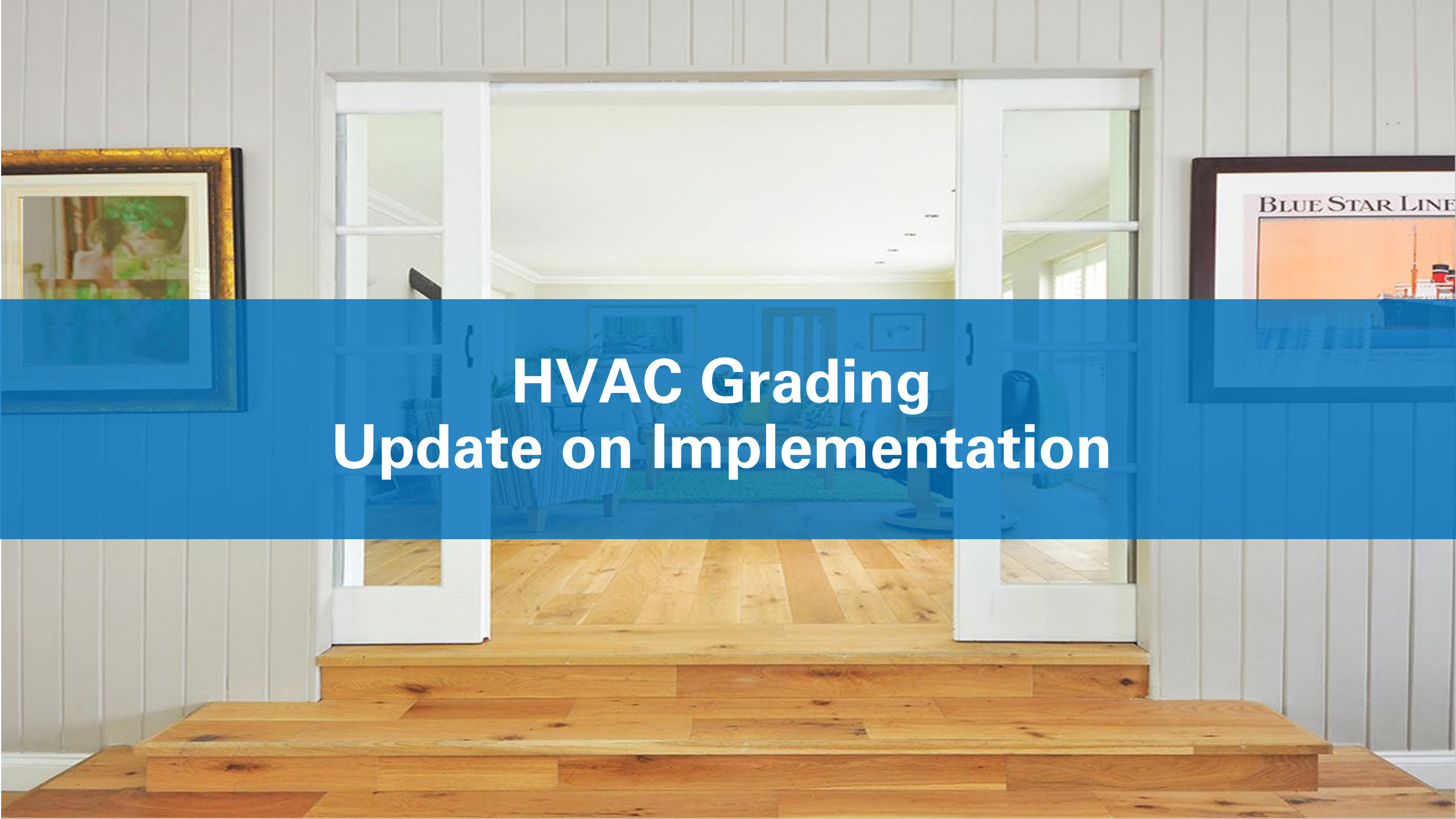
- In Climate Zone 4, for a home with a slab:

| **Climate Zone** | **4** | |
|---|---|---|
| **IECC Version** | **2009** | **2021** |
| Ceiling Insulation | 38 | 60 |
| Wall Insulation: Cavity + Cont | 13 | 20 + 5 |
| Windows & Doors | 0.35 | 0.30 |
| Frame Floor Insulation | 19 | 19 |
| Basement Wall Insulation | 13 | 13 |
| Crawlspace Wall Insulation | 13 | 13 |
| Slab Insulation | 10, 2ft | 10, 4ft |

| Foundation | Slab | | | |
|---|---|---|---|---|
| **Scenario Name** | **2021 IECC** | **Alt. 1** | **Alt. 2** | **Alt. 3** |
| Ceiling Insulation | 60 | 49 | 60 | 49 |
| Wall Insulation: Cavity | 20 | 21 | 23 | 21 |
| Wall Insulation: Continuous | 5 | None | None | None |
| Window U-factor | 0.30 | 0.29 | 0.27 | 0.24 |
| Door U-factor | 0.30 | 0.17 | 0.17 | 0.17 |
| Frame Floor Insulation | n/a | n/a | n/a | n/a |
| Basement Wall Insulation | n/a | n/a | n/a | n/a |
| Crawlspace Wall Insulation | n/a | n/a | n/a | n/a |
| Slab Insulation & Depth | 10, 4ft | 10, 4ft | 10, 4ft | 10, 4ft |
| **Total UA for Home** | **300.5** | **317.9** | **300.3** | **299.9** |
| % better than 2021 IECC | | -4.8% | 1.0% | 1.1% |

# Development of SFNH National v3.2 & MFNC National v1.2

- A new version of the ENERGY STAR Single-Family New Homes program requirements: **National Version 3.2** and ENERGY STAR Multifamily New Construction program requirements: **National Version 1.2**.
- The only differences between National v3.2 and National v1.2 compared to previous versions are:
  - More stringent performance targets (e.g., lower ERI target)
  - A new thermal backstop
- Only to be implemented in states that adopt the 2021 IECC or equivalent; implementation date one year after enforcement of new state code.




# HVAC Grading
# Update on Implementation

# HVAC grading update

## The Five Key Sequential Tasks in Standard 310

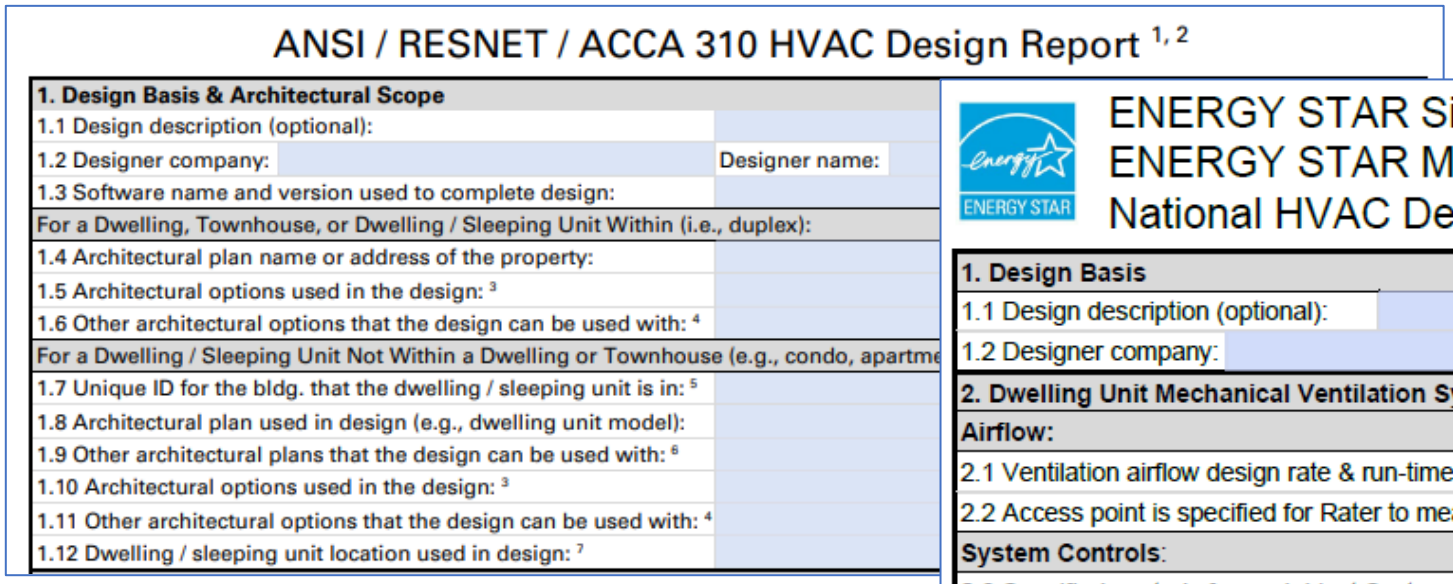
| Task 1 | Task 2 | Task 3 | Task 4 | Task 5 |
|---|---|---|---|---|
| Design Review | Total Duct Leakage | Blower Fan Airflow | Blower Fan Watt Draw | Refrigerant Charge |

**HVAC grading makes it easier to certify ENERGY STAR homes and apartments:**

- Integrates most ENERGY STAR HVAC requirements into an ERI rating
- For eligible systems, does not require a credentialed HVAC contractor / FT agent
- For eligible systems, eliminates / streamlines the HVAC Commissioning Checklist
- Rewards proper installation with ERI points and helps meet the 45L tax credit

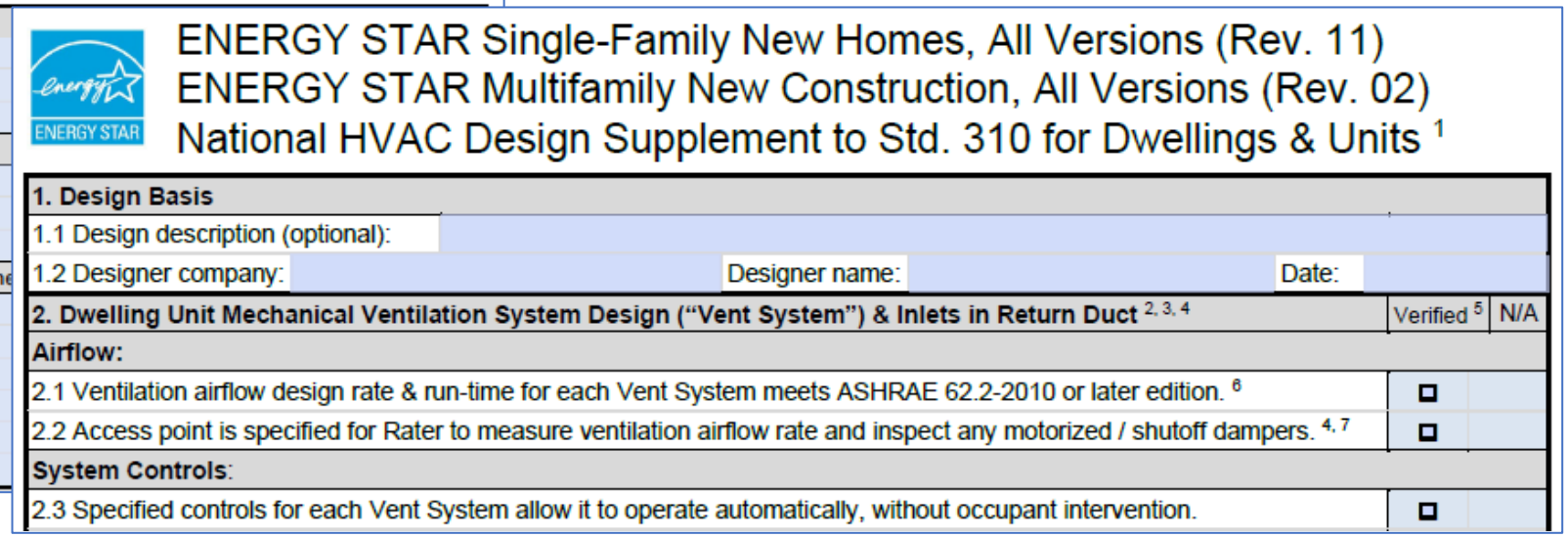
## HVAC grading update

1. ERI points can now be earned for HVAC grading in all rating software programs.
2. Std. 310 HVAC Design Report and ENERGY STAR Supplement to Std. 310 have been added to Wrightsoft and EnergyGauge; Elite RHVAC will add them.



ANSI / RESNET / ACCA 310 HVAC Design Report [1, 2]

| 1. Design Basis & Architectural Scope | |
|---|---|
| 1.1 Design description (optional): | |
| 1.2 Designer company: | Designer name: |
| 1.3 Software name and version used to complete design: | |
| For a Dwelling, Townhouse, or Dwelling / Sleeping Unit Within (i.e., duplex): | |
| 1.4 Architectural plan name or address of the property: | |
| 1.5 Architectural options used in the design: [3] | |
| 1.6 Other architectural options that the design can be used with: [4] | |
| For a Dwelling / Sleeping Unit Not Within a Dwelling or Townhouse (e.g., condo, apartme | |
| 1.7 Unique ID for the bldg. that the dwelling / sleeping unit is in: [5] | |
| 1.8 Architectural plan used in design (e.g., dwelling unit model): | |
| 1.9 Other architectural plans that the design can be used with: [6] | |
| 1.10 Architectural options used in the design: [3] | |
| 1.11 Other architectural options that the design can be used with: [4] | |
| 1.12 Dwelling / sleeping unit location used in design: [7] | |

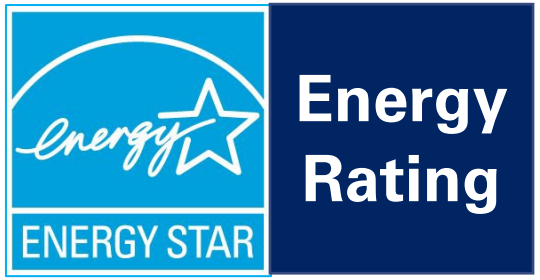


ENERGY STAR Single-Family New Homes, All Versions (Rev. 11)
ENERGY STAR Multifamily New Construction, All Versions (Rev. 02)
National HVAC Design Supplement to Std. 310 for Dwellings & Units [1]

| 1. Design Basis | | | |
|---|---|---|---|
| 1.1 Design description (optional): | | | |
| 1.2 Designer company: | Designer name: | Date: | |
| **2. Dwelling Unit Mechanical Ventilation System Design ("Vent System") & Inlets in Return Duct** [2, 3, 4] | | Verified [5] | N/A |
| **Airflow:** | | | |
| 2.1 Ventilation airflow design rate & run-time for each Vent System meets ASHRAE 62.2-2010 or later edition. [6] | | ☐ | |
| 2.2 Access point is specified for Rater to measure ventilation airflow rate and inspect any motorized / shutoff dampers. [4, 7] | | ☐ | |
| **System Controls**: | | | |
| 2.3 Specified controls for each Vent System allow it to operate automatically, without occupant intervention. | | ☐ | |

- All the pieces are in place to get the benefits of HVAC grading. Ask your Rater to complete their training, model potential ERI impact, and try it out on a home.

# Key Components of an ENERGY STAR Certified Home or Apartment




| | |
|---|---|
| **Efficiency** | • Good energy rating with features locked in |
| **Comfort** | • Complete thermal enclosure system<br>• Bedroom comfort vents |
| **Air Quality** | • Whole-house fresh air system<br>• Kitchen and bath fans that work well<br>• MERV 6+ filter, properly installed<br>• Combustion safety |
| **Durability** | • Complete water management system |

# Development of ENERGY STAR Manufactured Homes, Version 2.1

# ENERGY STAR Manufactured Housing - Version 2.1

- In response to the finalization of more stringent Energy Conservation Standards for manufactured housing, EPA proposed a new version of the ENERGY STAR Manufactured Homes program requirements (Version 2.1).
  - Stakeholder feedback period held in August
- The cornerstone of the proposed Version 2.1 is a consistent, well-insulated envelope that outperforms the most stringent code insulation and window requirements by at least 25% for single-sections and 5% for multi-sections.
- In addition, multi-section homes must choose one equipment upgrade package:
  1. Electric Heat Pump Package
  2. High-Efficiency Gas Equipment Package (now with tankless gas water heater)
  3. Heat Pump Water Heater Package (only available in CZs 1 & 2)
- EPA is currently reviewing stakeholder feedback and hopes to finalize the new Program Requirements before the end of the year.

# Home Certification Organization (HCO) Updates

# Home Certification Organizations (HCOs)

- Home Certification Organizations (HCOs) are independent organizations recognized by EPA to implement an ENERGY STAR certification program based on the ENERGY STAR Single-Family New Homes or Multifamily New Construction program requirements.
- This is the latest incarnation of a process originally formalized in 2007 (then called Verification Oversight Organizations).
- EPA accepts applications on an ongoing basis and will recognize a new HCO if/when an applicant has demonstrated that it meets all of the requirements of the application.

**National Update** (All states and territories except California)

- As a reminder, RESNET submitted a full application and was formally recognized as an HCO last year.
- EPA recognized Building Science Institute (BSI) as an HCO earlier this year after an extensive application review process.

# Home Certification Organizations (HCOs)

## California Update

Homes and apartments certified using ENERGY STAR SFNH California Version 3.3 and MFNC California Version 1.3 (those with permits on or after 1/1/2023) must be under the auspices of an HCO approved with California scope. This includes:

- RESNET, in partnership with CalCerts
- CHEERS, in partnership with National Energy Registry

## Frequently Asked Questions

- What are the differences between the EPA-recognized HCOs?
- What does the recognition of an additional HCO mean to an Energy Rating Company that is currently working with another EPA-recognized HCO?
- Can Energy Rating Companies do ENERGY STAR certifications through multiple HCOs?
- Is EPA planning to recognize additional HCOs in the future?

Learn more and find full listing at: www.energystar.gov/hco

# Asa oss

Pro ra e elo ent e inar

# ENERGY STAR NextGen Certified Homes and Apartments

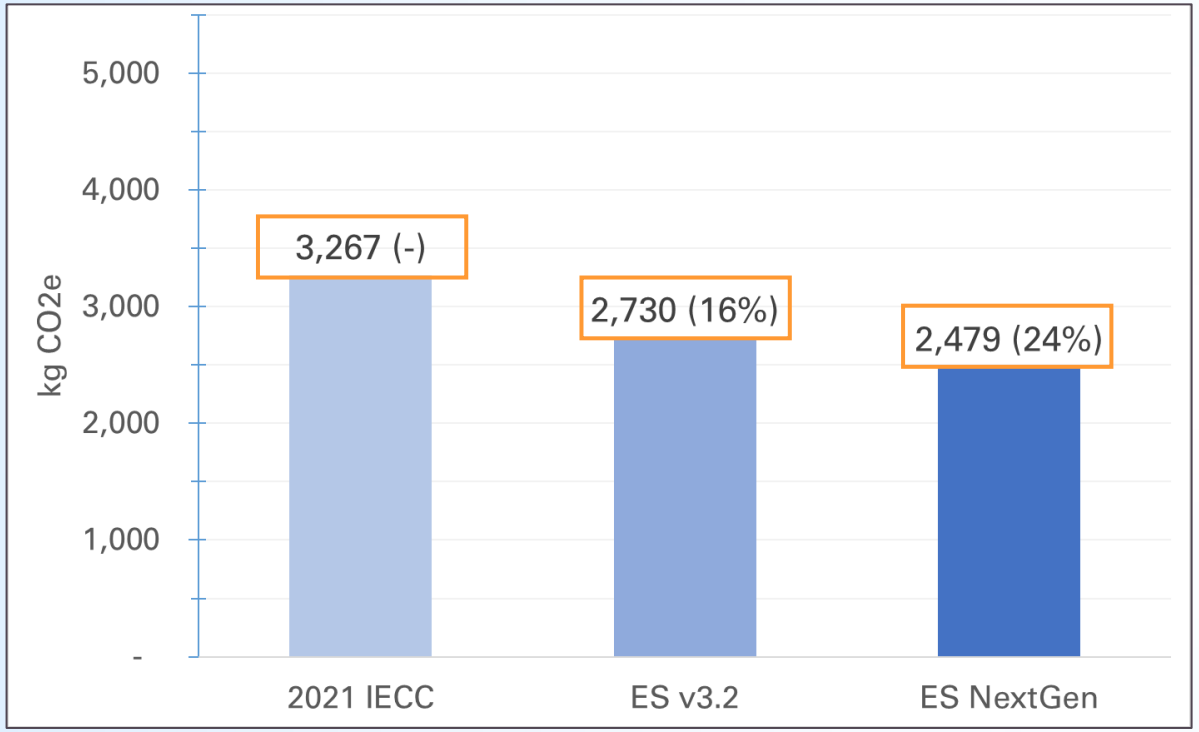
# ENERGY STAR NextGen Homes and Apartments Program

An additional, optional 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

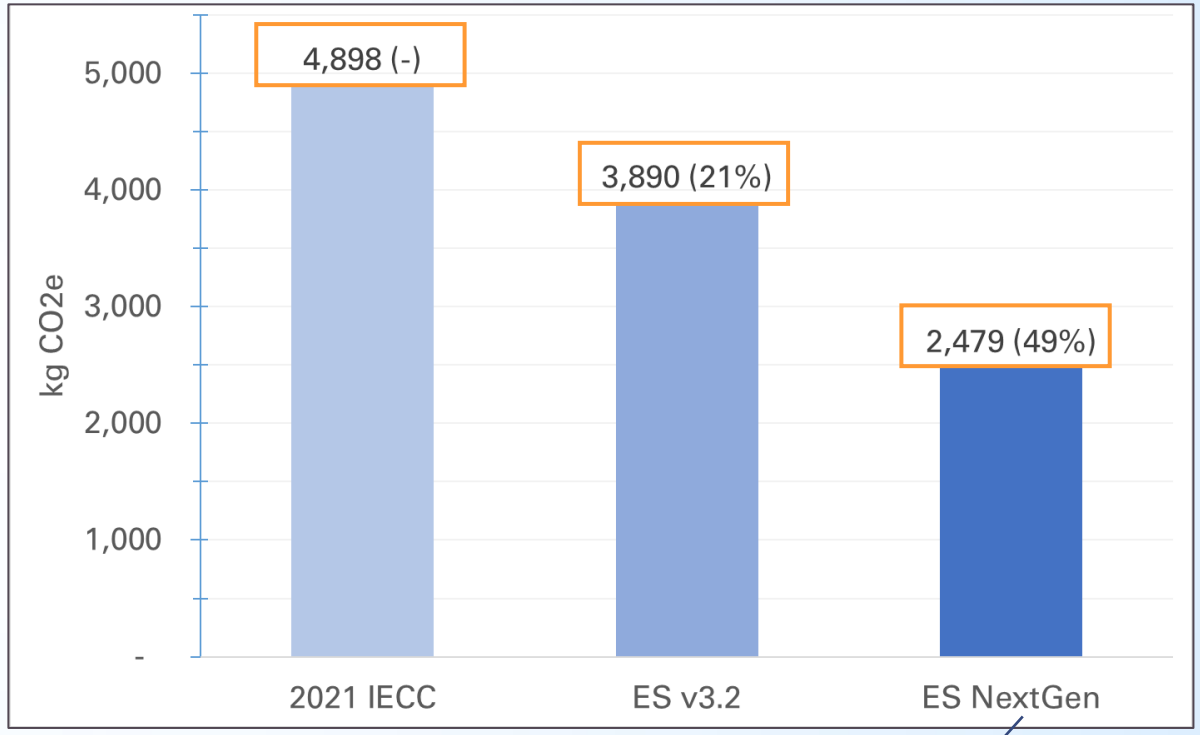

1. Highly energy-efficient construction (ES National v3.2/v1.2 or CA v3.3/v1.3)
2. Multi-stage ENERGY STAR certified connected heat pump (ES Cold Climate certified in Climate Zones 5-8)
3. ENERGY STAR certified connected heat pump water heater
4. Induction cooktop* and electric oven
5. Electric vehicle charging capability

# National Emissions Impact for ENERGY STAR NextGen Homes

## National Average Emissions Per Home For Electric Baseline New Homes




## National Average Emissions Per Home For Gas Baseline New Homes




Note that major end-uses are electrified with NextGen


Learn more at:
www.energystar.gov/NextGenHomes

Or contact me at: foss.asa@epa.gov

## Marta Montoro

Communications

# Communications and Marketing


# The future starts here.

We are proud to offer new homes that have earned the ENERGY STAR® label. ENERGY STAR certified new homes are designed and built to provide superior comfort and savings compared to most new homes currently on the market. Offering more than just efficient appliances, certified homes integrate energy efficiency from the ground up.

## Get comfortable in an ENERGY STAR certified new home.

**The right choice, for today and tomorrow.**

ENERGY STAR certified new homes are energy efficient by design, with savings that start now and continue into the future. Better systems and construction features make all the difference throughout your home.

- Advanced air sealing, high-quality insulation, and high-performance windows for reduced leaks and drafts provide more consistent temperatures and minimize dust, pollen, and other allergens.
- High-efficiency heating and cooling system for improved comfort.
- Comprehensive water management techniques protect against moisture damage.

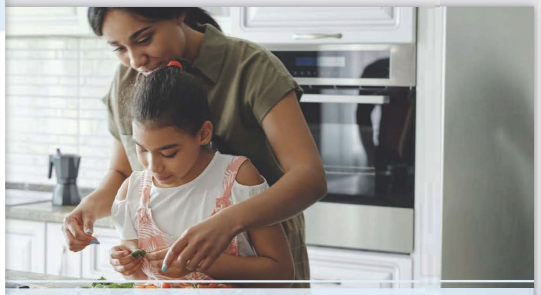
**Built on a foundation of trust.**

For more than 25 years, ENERGY STAR certified new homes have set the standard for quality, efficiency, and lasting value.

- Meet strict requirements set by the U.S. Environmental Protection Agency.
- Tried-and-true best building practices.
- Third-party tested, inspected, and certified.

**Join the 2+ MILLION families who have made their home a star.**

EPA United States Environmental Protection Agency



ERGY STAR certified new homes at energystar.gov/newhomes.

**amily can be proud of.**

an ENERGY STAR certified new home
ing it's built to a high standard of
bility—and a lifetime of memories.
rgy efficient than standard new homes
e compared to existing homes.
the ground up.
ersvalue now and into the future.

**tarts inside the house.**

h a high-performance filter improves

- Designed for optimal comfort.
- Contributes to a cleaner, healthier environment—inside and out.

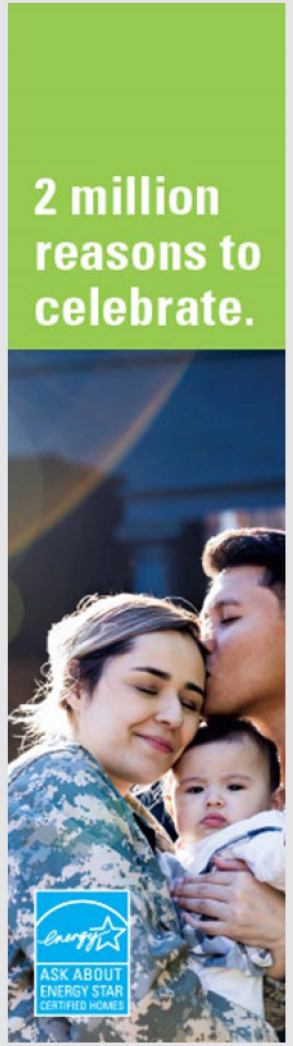

**A better home for a better tomorrow.**

ENERGY STAR certified new homes are just built better. More comfort. Increased savings. A better, healthier world. That's what you can expect from your ENERGY STAR certified new home.

Learn more about ENERGY STAR certified new homes at **energystar.gov/newhomes**

EPA United States Environmental Protection Agency



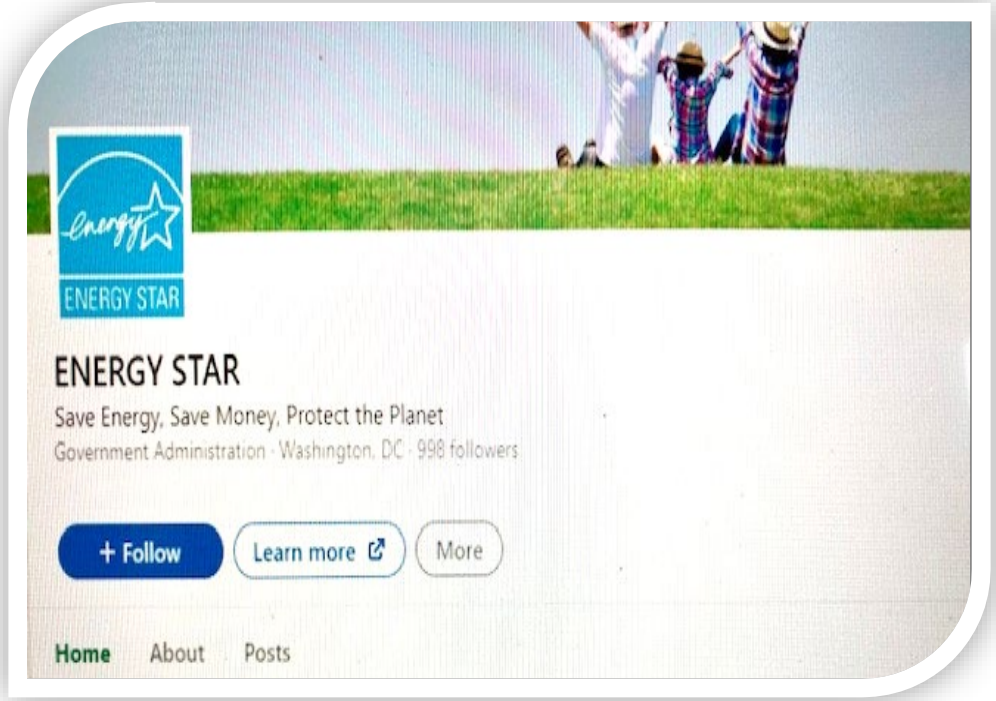


# Two Million Homes. Two Million Reasons to Celebrate!

- 2M homes video released last fall
- Two shorter versions (15 sec/30 sec) are available on the ES YouTube channel
  - These are great for social media use!

# New this year!

- ENERGY STAR is now on LinkedIn!
  - Program-wide news and updates available
  - Connect with the broader ES community
- You can also follow us on Facebook and Twitter @ENERGYSTARHomes



NextGen CERTIFIED HOMES & APARTMENTS
BUILT FOR A CLEAN ENERGY FUTURE

# A home for tomorrow, built today.

ENERGY STAR® NextGen certification 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.

### Advanced technologies, with high performance and premium features.

ENERGY STAR NextGen homes and apartments deliver all the comfort, quality, and durability that homeowners and residents have come to expect from the ENERGY STAR label—and so much more. These homes come with leading-edge equipment, such as:

- Multi-speed ENERGY STAR certified heat pumps: More efficient than furnaces or boilers, heat pumps serve double duty with heating and cooling, making them usable year-round.
- ENERGY STAR certified heat pump water heaters: Heat pump water heaters that earn the ENERGY STAR label are up to four times more efficient and use 70 percent less energy than standard models.
- Induction cooktops* and electric ovens: Up to 10 percent more efficient than conventional electric resistance units, and about three times more efficient than gas ranges.
- Electric vehicle (EV) charging capability: In homes with private parking, a heavy-duty power outlet is wired in and ready to charge an electric vehicle or have a Level 2 EV charger installed. And in apartment complexes with shared parking, up to five ENERGY STAR certified EV chargers are provided with additional capacity to add more.

*Some homes that receive government subsidies may provide conventional electric stoves instead of induction cooktops.

### Creating a clean energy future for everyone.

EPA United States Environmental Protection Agency

Learn more about ENERGY STAR NextGen homes and apartments at **energystar.gov/nextgenhomes**.

ENERGY STAR NextGen homes and apartments are up to 20 percent more energy efficient than homes built to typical code levels and feature advanced efficient electric and hybrid technologies that provide premium performance and experiences, along with improved indoor air quality.

### Built with energy-efficient construction.

ENERGY STAR NextGen homes and apartments meet the U.S. EPA's most advanced ENERGY STAR requirements for energy efficiency and performance, delivering comfort and savings you can count on.

### Creating a healthier, safer indoor living environment.

The advanced electric and hybrid equipment found in ENERGY STAR NextGen homes and apartments can reduce or eliminate emissions associated with natural gas combustion and contribute to reduced indoor air pollutants.

### Built on the trusted foundation of EPA's ENERGY STAR program.

ENERGY STAR NextGen homes and apartments are built on EPA's 25+ year history of delivering energy savings and environmental benefits through the ENERGY STAR program.

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

ESNextGen 09/13/22

# Zak Shadid

Partner Services Manager

ENERGY STAR Residential Branch

# What We Know About the 45L Tax Credit

# 45L Tax Credits: What We Know

- Qualifying for the base level 45L tax credit will be specifically tied to ENERGY STAR certification for three sectors beginning in 2023:
  - Single-Family New Homes
  - Multifamily New Construction
  - Manufactured New Homes
- Higher credit available for homes certified to DOE ZERH program.
- Extended through 2032.
- Requirements are tied to the date when the home or dwelling unit is 'acquired', rather than permitted.
- IRS will be issuing additional formal guidance on implementation.

# 45L Tax Credits: What We Know

- ENERGY STAR Single-Family New Homes certification - $2,500 per single-family home
  - Jan. 1, 2023 – Dec. 31, 2024: National Version 3.1 *
  - Jan. 1, 2025 – Dec. 31, 2032: National Version 3.2 *
  - *Or the regional program requirements applicable to the home
- ENERGY STAR Multifamily New Construction certification - $2,500 per dwelling unit
  - Reduced to $500 for multifamily projects that do not meet prevailing wage requirements.
  - Most recent Version of National Program Requirements **
  - ** Or the regional program requirements applicable to the dwelling unit.
- ENERGY STAR Manufactured New Homes certification - $2,500 per manufactured home
  - Most recent Version of the program requirements
  - Currently Version 2, with Version 2.1 recently proposed.

# 45L Tax Credits:  What We Know

- Requirements for earning ENERGY STAR certification may differ from the requirements to earn the tax credit.
- Two hypothetical examples:
  - In 2026, a home is built in a state that has adopted the 2021 IECC, so National v3.2 is required for the home to be certified.
    - National v3.2 is also required for the home to earn the tax credit, because it is acquired after 2025.
  - In 2026, a home is built in a state has no statewide code, so National v3.1 is required for the home to be certified.
    - However, National v3.2 is still required for the home to earn the tax credit, because it is acquired after 2025.
    - Therefore, the builder could build to National v3.1 and earn the label -- or step up to National v3.2 and earn the tax credit.

# Partner Meeting Webinar Series

- **Introducing the ENERGY STAR NextGen Homes Program**
  - ✓ Thu, Oct 6, 2022 (1:00 PM - 2:00 PM EDT)

- **Overview of the Latest Revisions (Rev.12 & 03) of the ENERGY STAR Single-Family and Multifamily Programs**
  - ✓ Tue, Oct 11, 2022 (1:00 PM - 2:30 PM EDT)

- **Preparing for the National Transition to Single-Family Version 3.1 and Multifamily Version 1.1**
  - ✓ Thu, Oct 20, 2022 (1:00 PM - 2:00 PM EDT)

Register at: www.energystar.gov/homes (under Technical Guidance & Webinars)

# Q & A

# ENERGY STAR Residential New Construction

**Program website & email:**

Single Family: www.energystar.gov/newhomesrequirements
Multifamily: www.energystar.gov/mfnc
Email: energystarhomes@energystar.gov