



Getting Started with ENERGY STAR Multifamily New Construction

Rebecca Hudson
EPA

Agenda

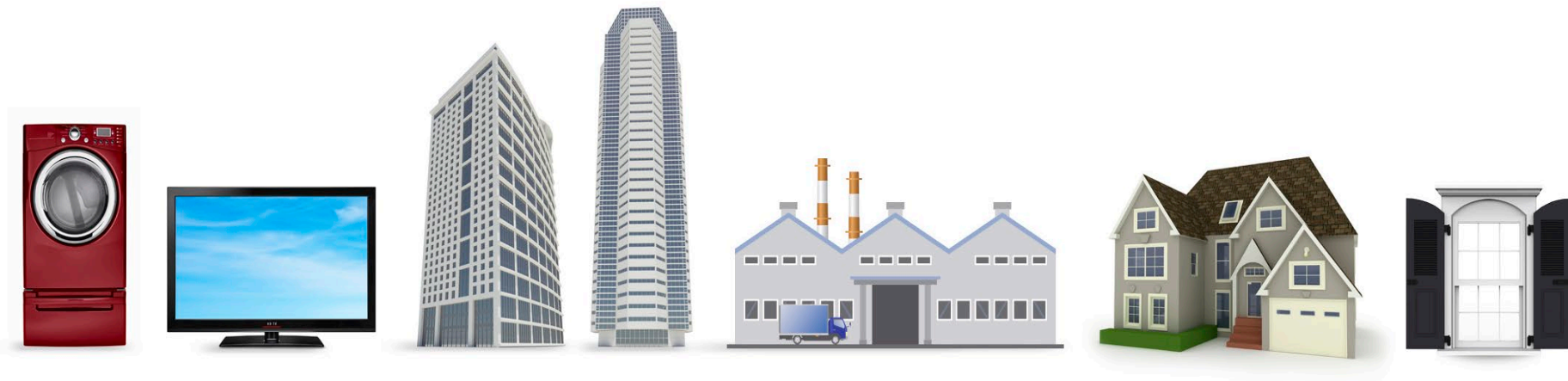
- Overview of ENERGY STAR
- Key Program Components
- Benefits of ENERGY STAR
- How to Get Started





Overview of ENERGY STAR Program

For more than 25 years, EPA's **ENERGY STAR** program has identified the most energy efficient **products**, **buildings**, **plants**, and **new homes** – all based on the latest government-backed standards and a rigorous third-party certification process.



ENERGY STAR. The simple choice for energy efficiency.



Today,
this little blue label
does all the hard work
of certifying outstanding
energy efficiency in:



ENERGY STAR. The simple choice for energy efficiency.



Today,
this little blue label
does all the hard work
of certifying outstanding
energy efficiency in:

70

**Product
Categories**



ENERGY STAR. The simple choice for energy efficiency.



Today,
this little blue label
does all the hard work
of certifying outstanding
energy efficiency in:

**Buildings
and Plants
Across**

24
Industries



ENERGY STAR. The simple choice for energy efficiency.



Today,
this little blue label
does all the hard work
of certifying outstanding
energy efficiency in:

**NEW
HOMES
Across the Nation**



More than **6,400,000**

website visitors each year



Awareness
now exceeds

85%

and preference
is growing



Every single day,
consumers choose
ENERGY STAR
products more than

800,000 times



16,000

businesses and public sector organizations partner with **ENERGY STAR**



More than **23,000** **buildings and plants**
have earned the label



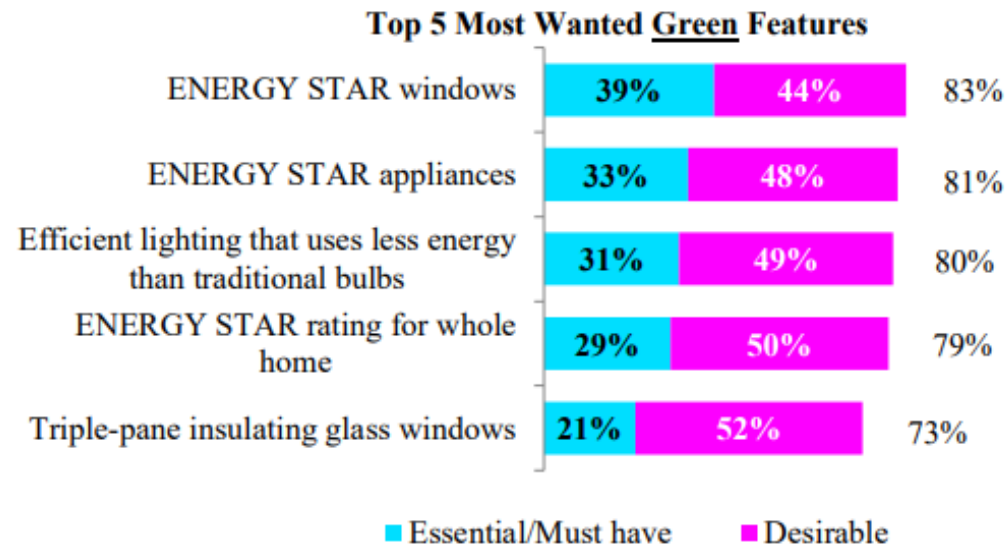
2 MILLION



Consumers are primed for ENERGY STAR

NAHB Survey of What Homebuyers Really Want (2021)

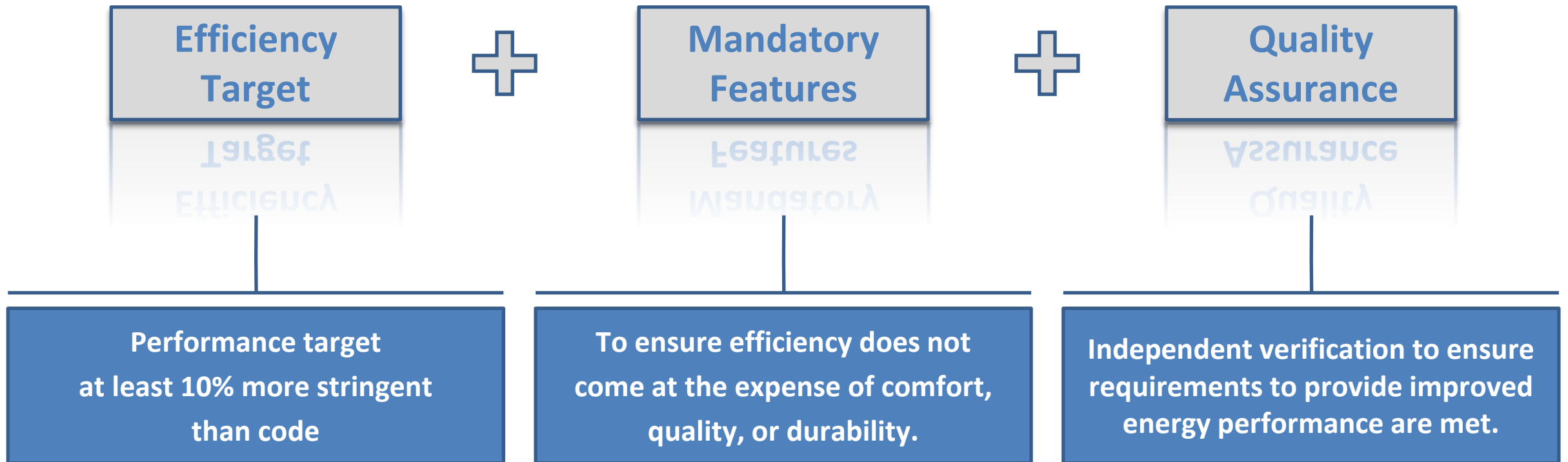
- ENERGY STAR is the only green home certification program known to a majority of buyers (73%), and fewer than 30% are aware of any of the other nine programs in the survey.
- Looking at just green features, the top 5 most wanted are ENERGY STAR windows, ENERGY STAR appliances, efficient lighting, ENERGY STAR rating for whole home/apartment, and triple pane insulating glass windows – all essential or desirable to over 70% of all buyers.





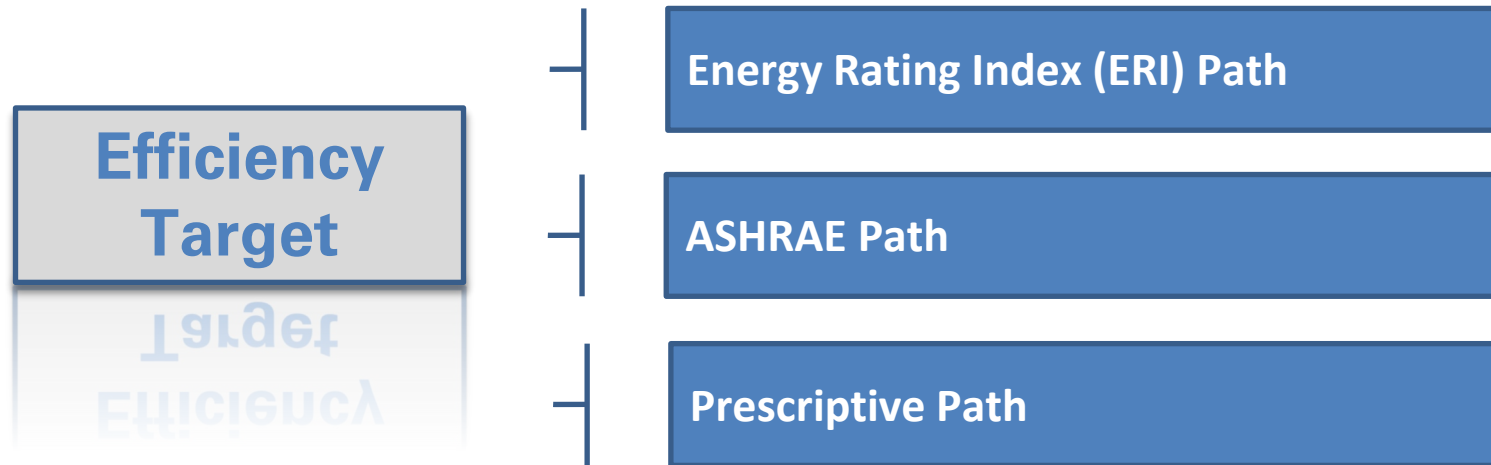
Key Components of ENERGY STAR Multifamily New Construction

Three Key Components to **ENERGY STAR Multifamily New Construction**

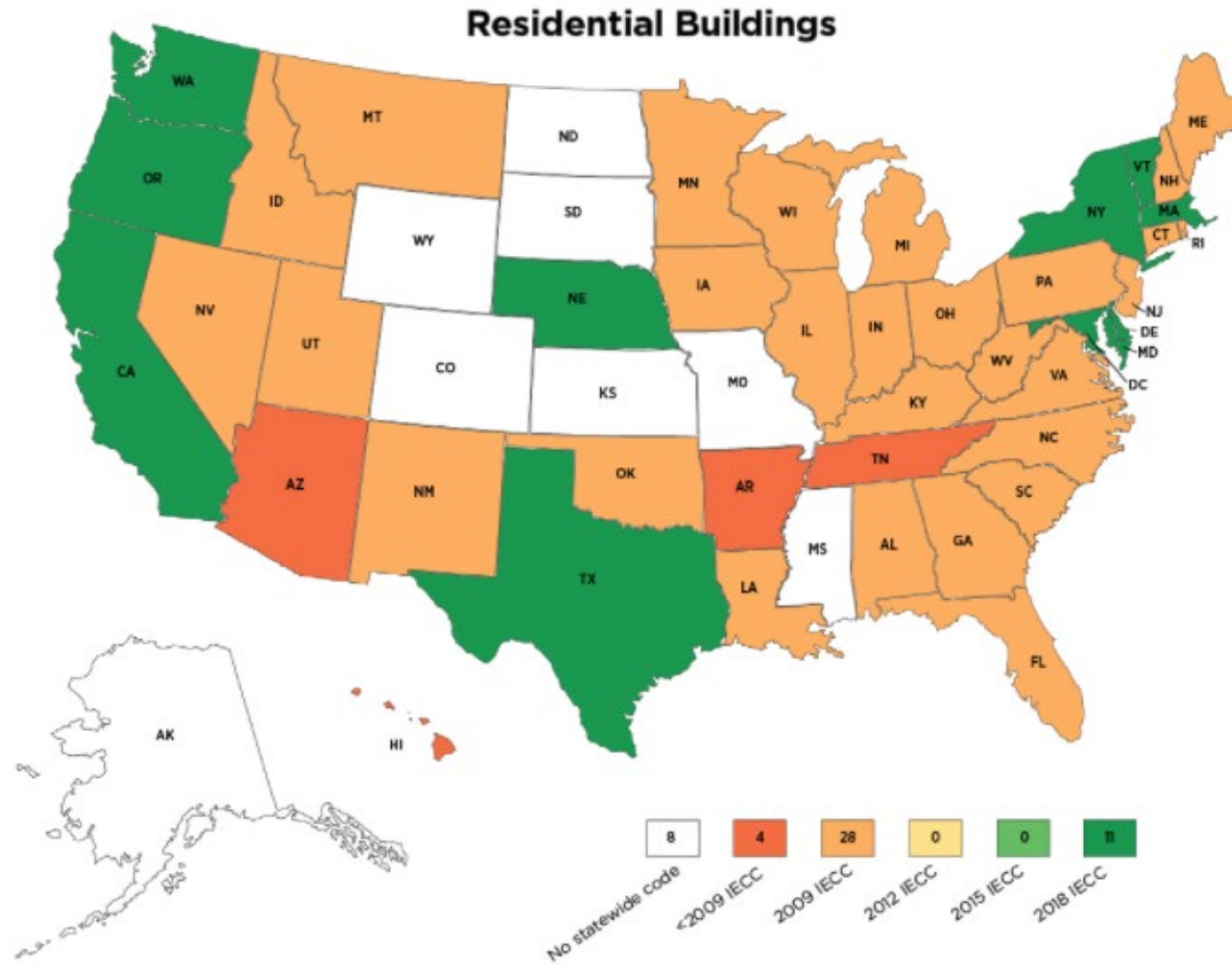


ENERGY STAR Multifamily New Construction

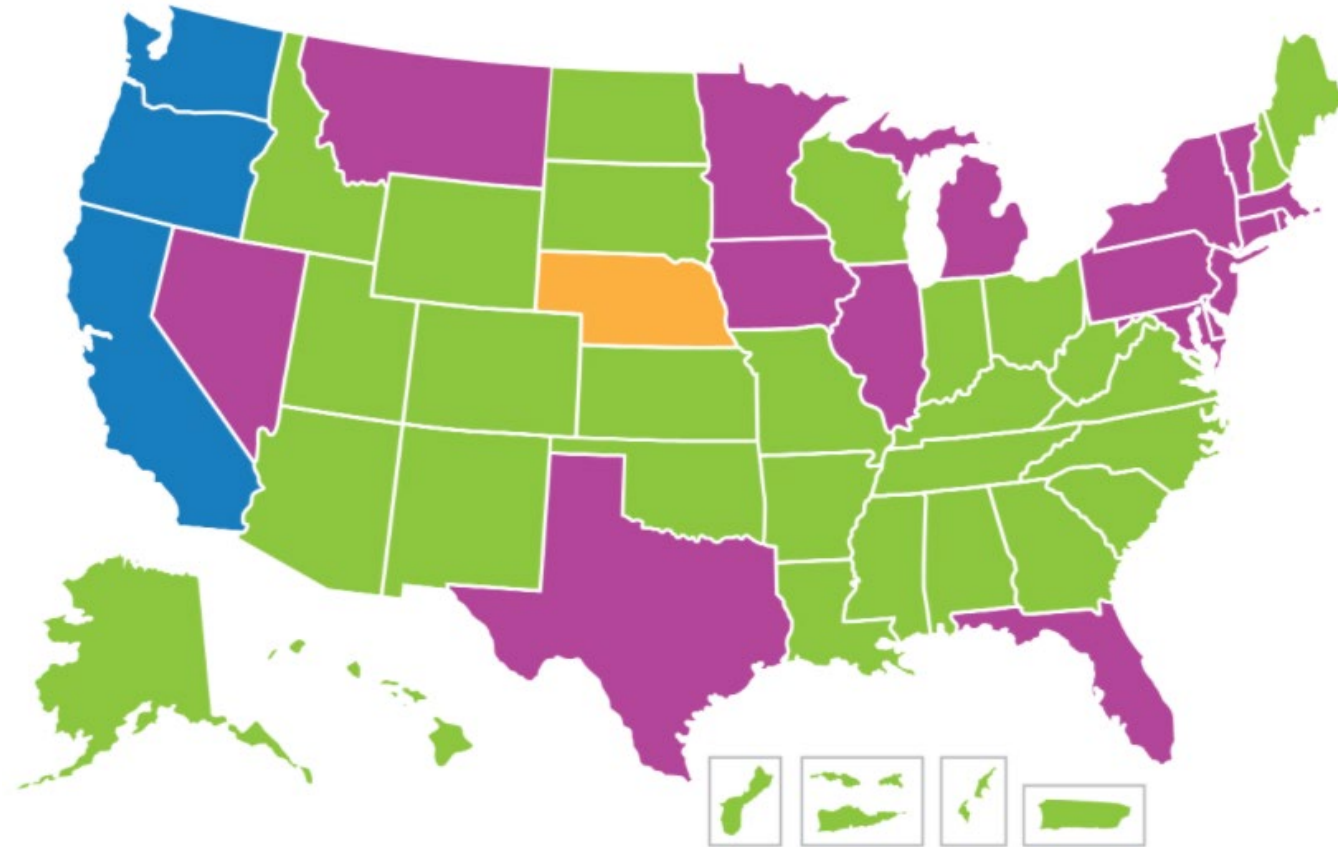
Efficiency Target



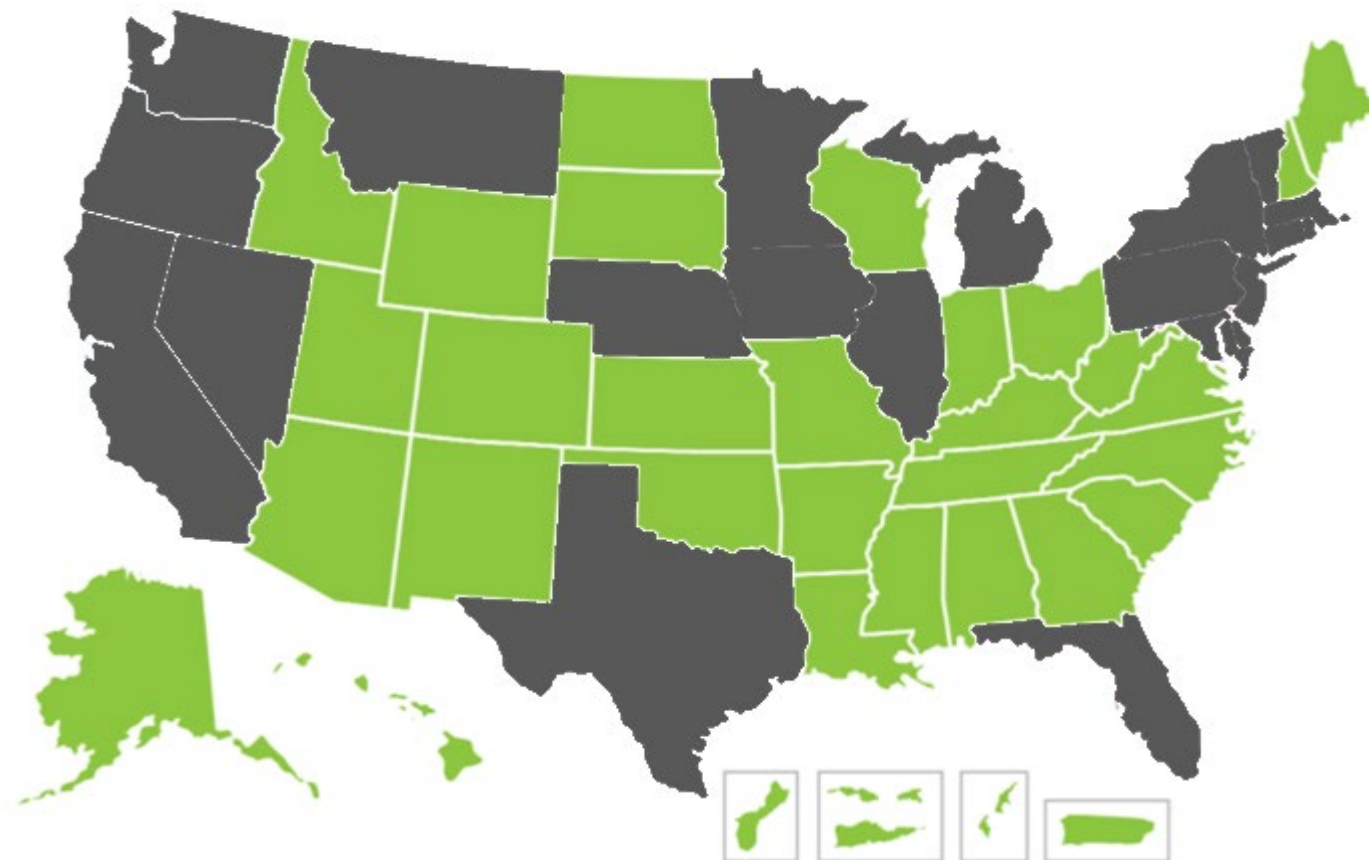
FAQ: How to get 10% savings above code for each State?



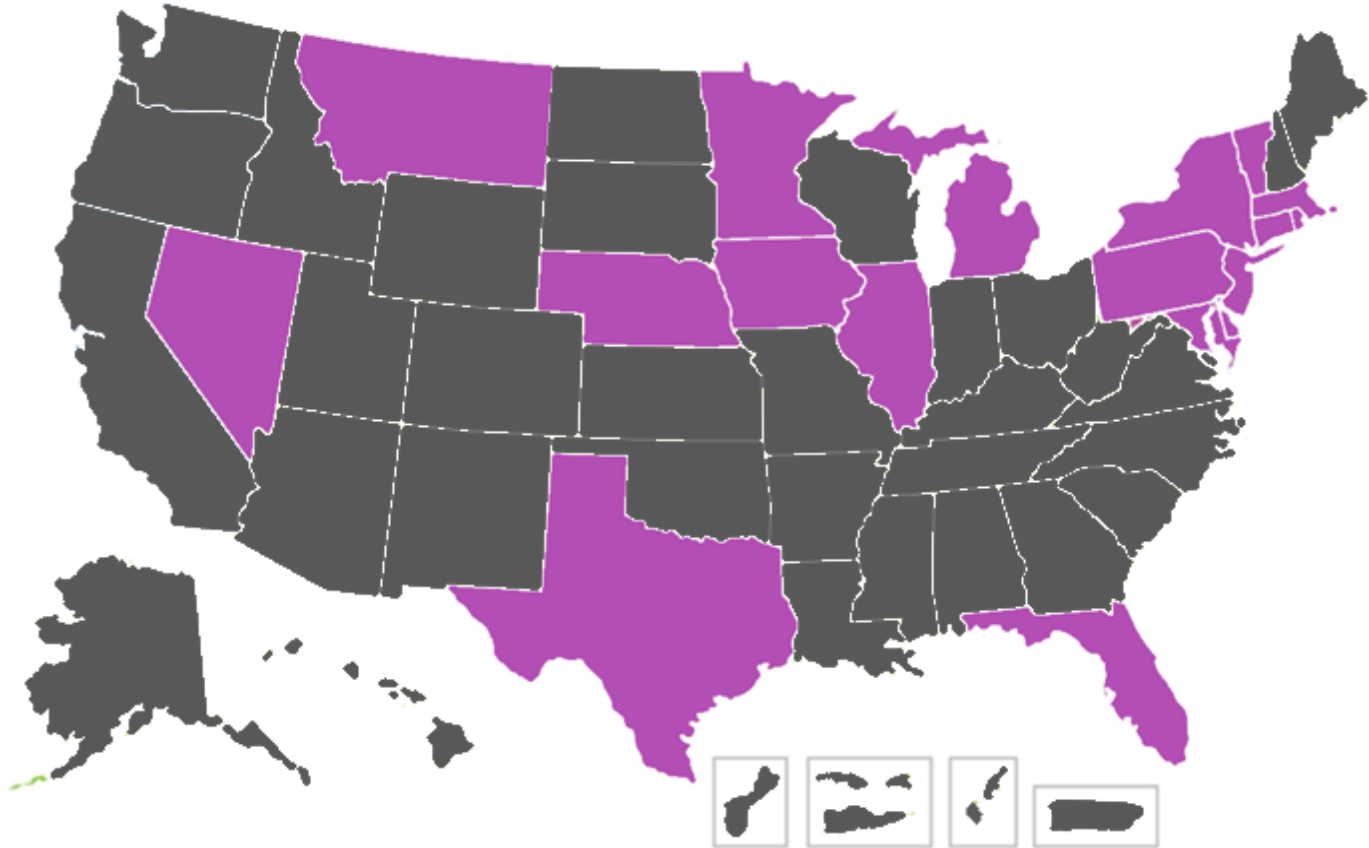
Answer: ENERGY STAR Efficiency Targets vary by State



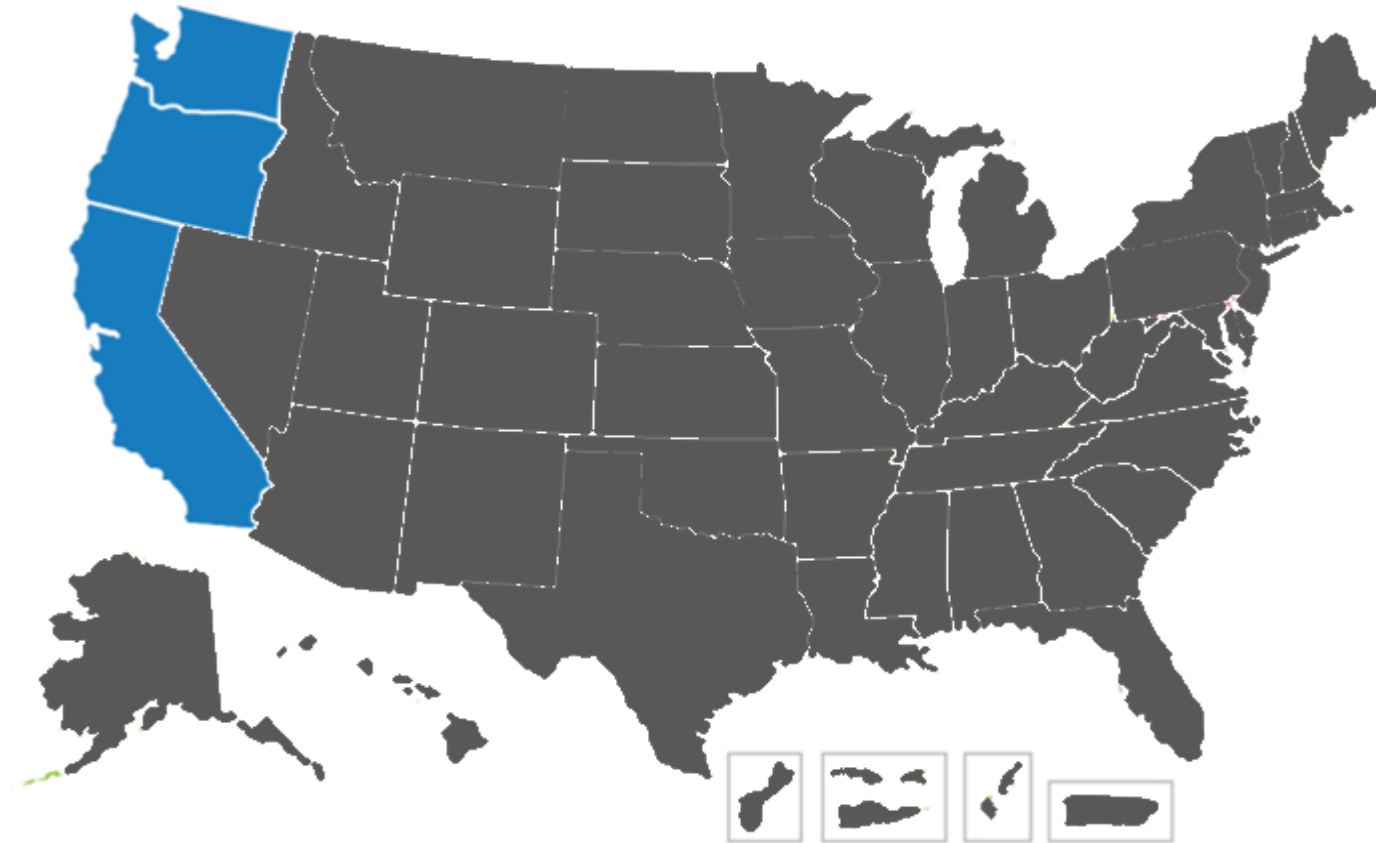
“Version 1”: Efficiency Target for ~2009 IECC States



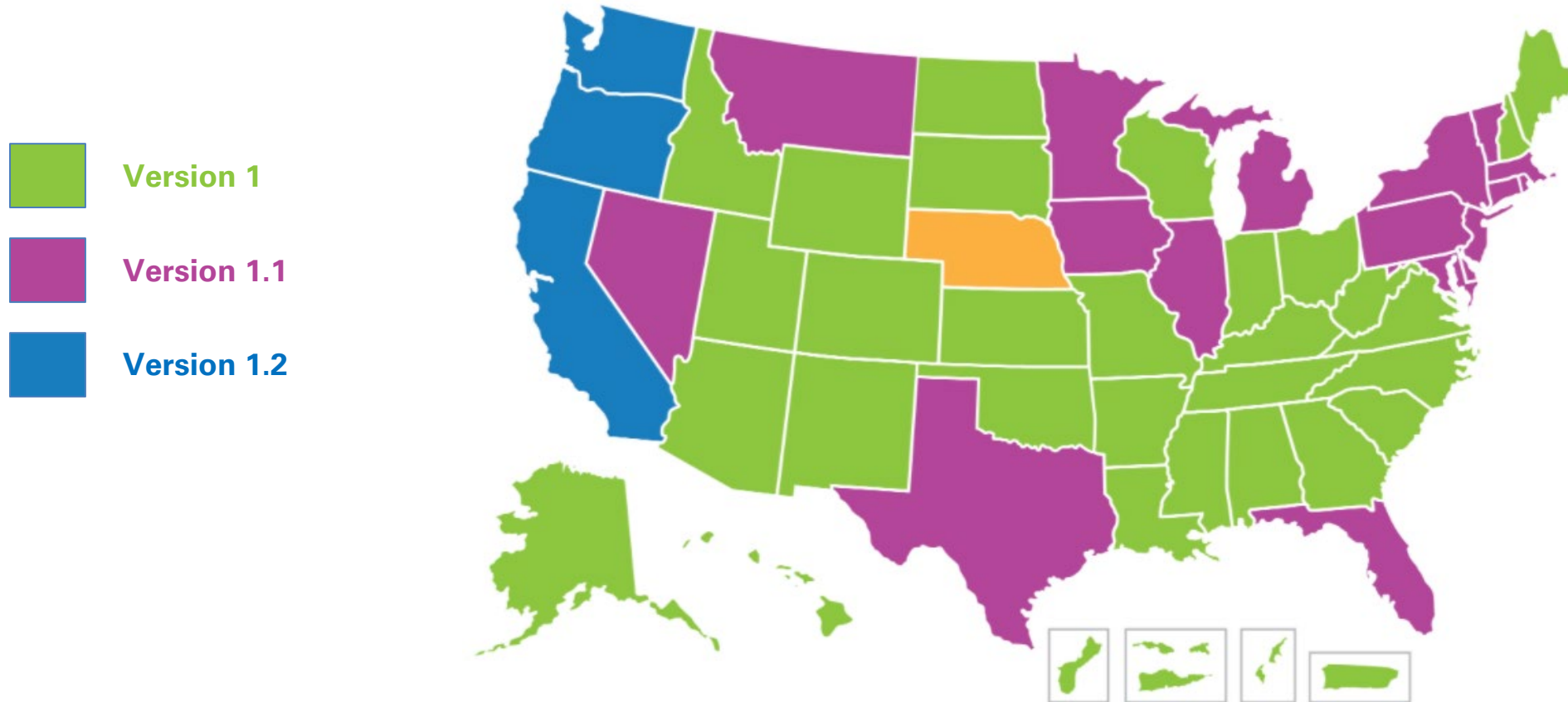
“Version 1.1”: Efficiency Target for ~2012-2018 IECC States



“Version 1.2”: Efficiency Target for > 2018 IECC States

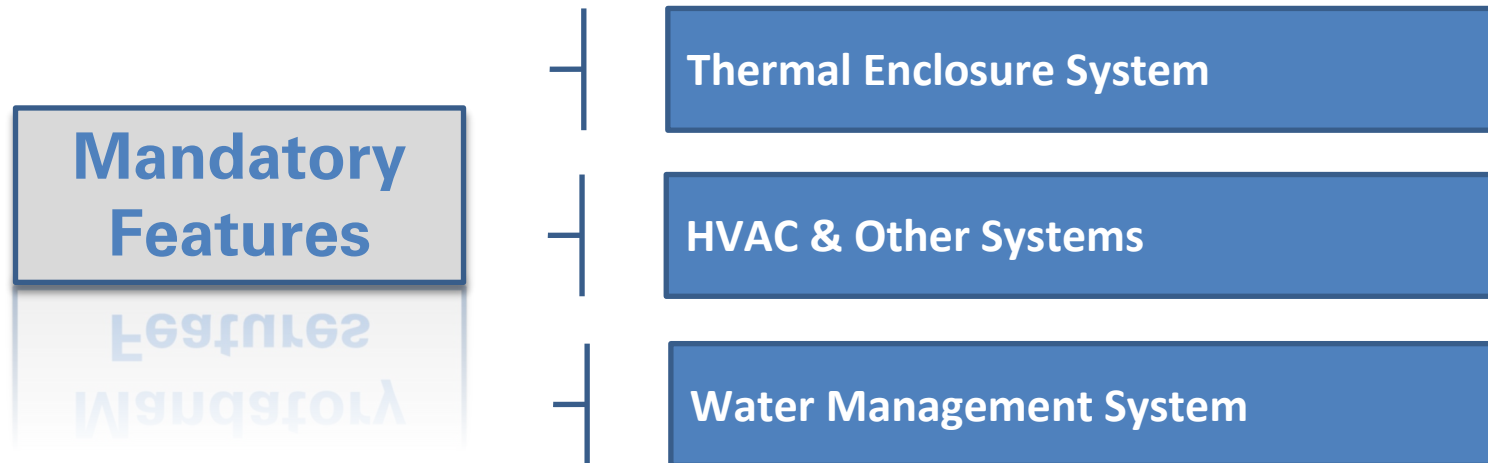


ENERGY STAR Efficiency Targets by State



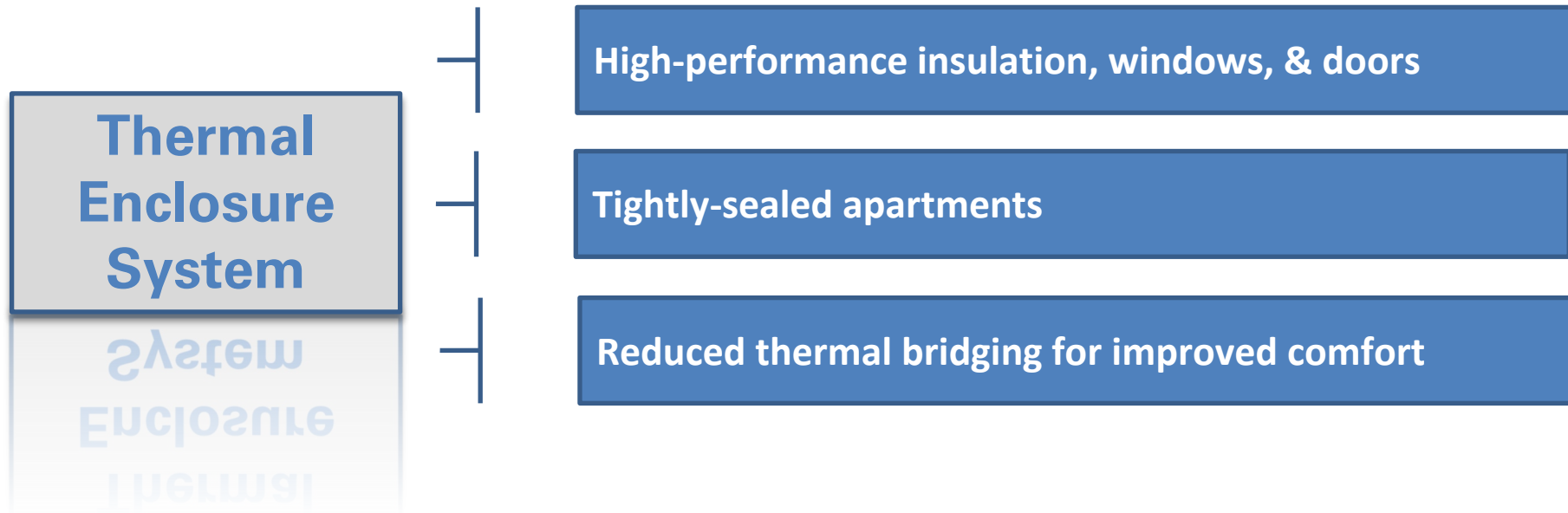
ENERGY STAR Multifamily New Construction

Mandatory Features



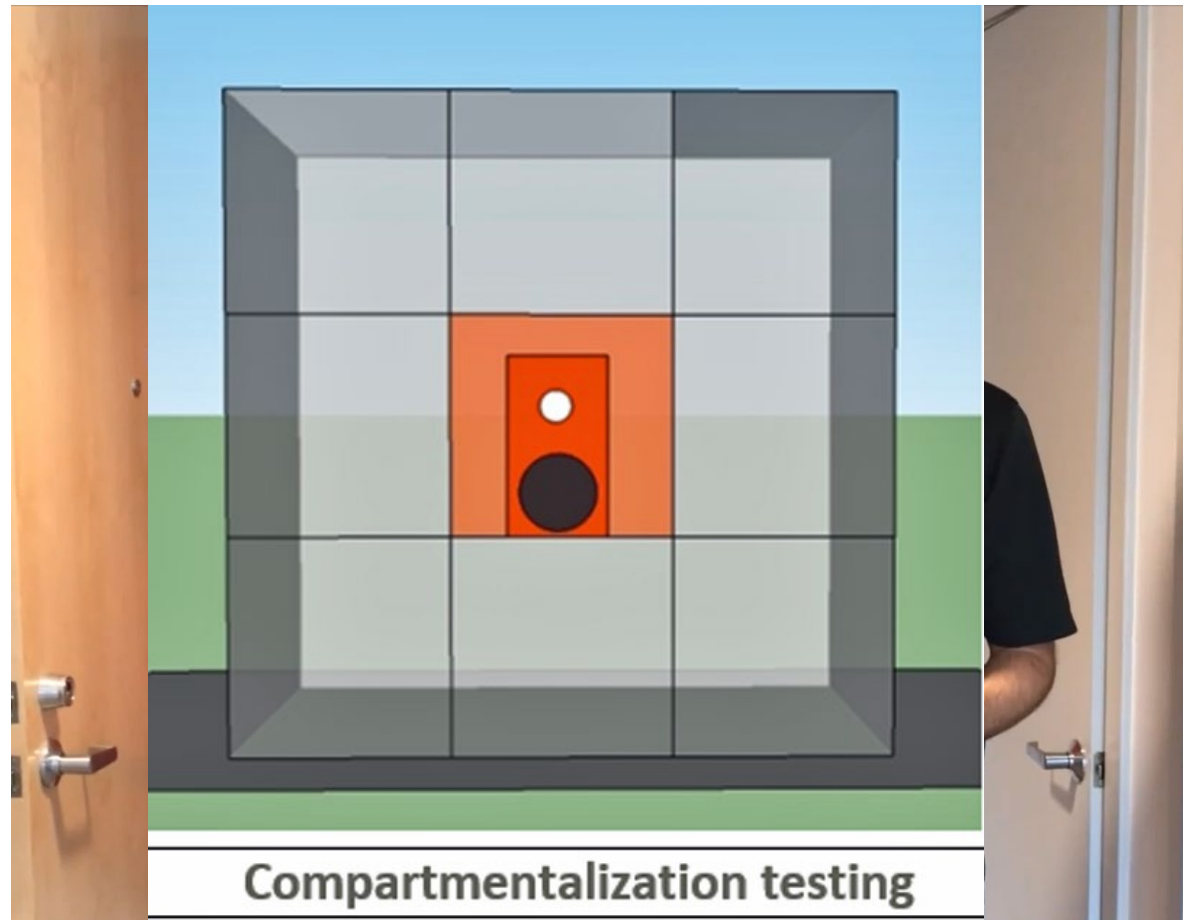
ENERGY STAR Multifamily New Construction

Mandatory Features



Tightly sealed apartments require compartmentalization tests

Blower door test



What we're avoiding...



What we're avoiding...

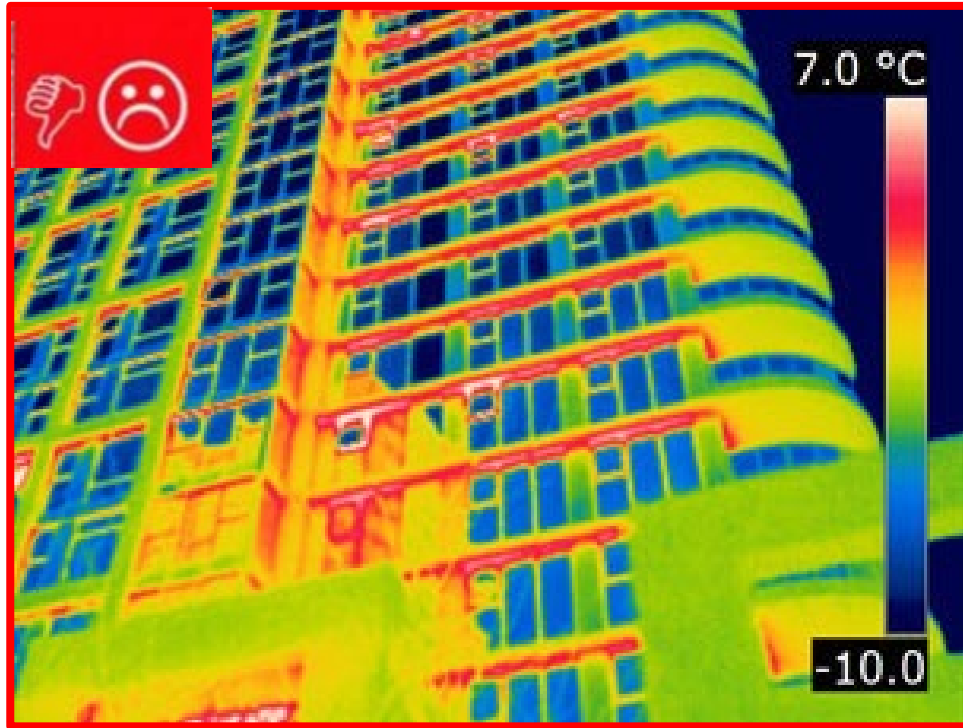
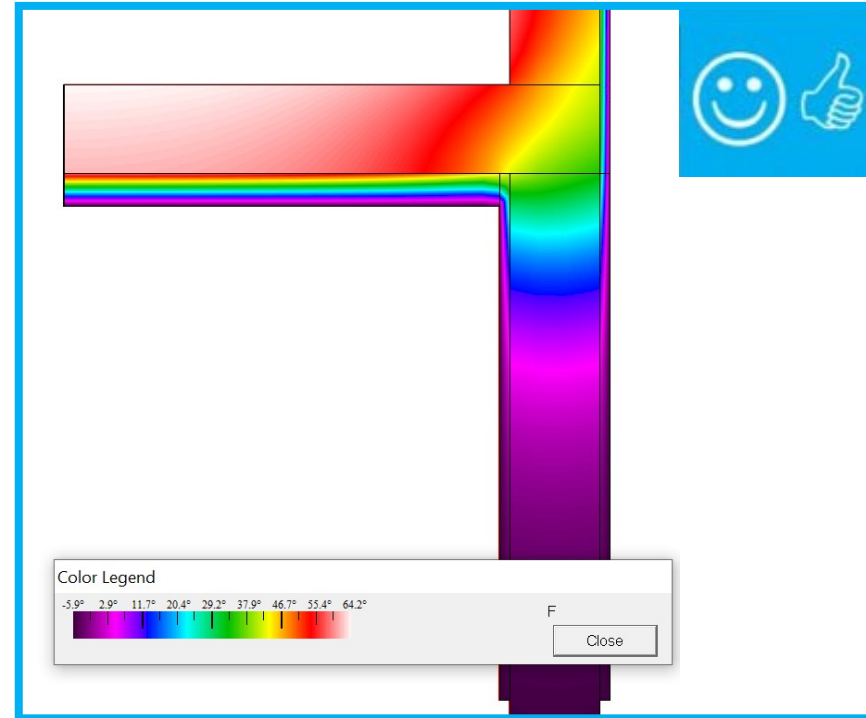


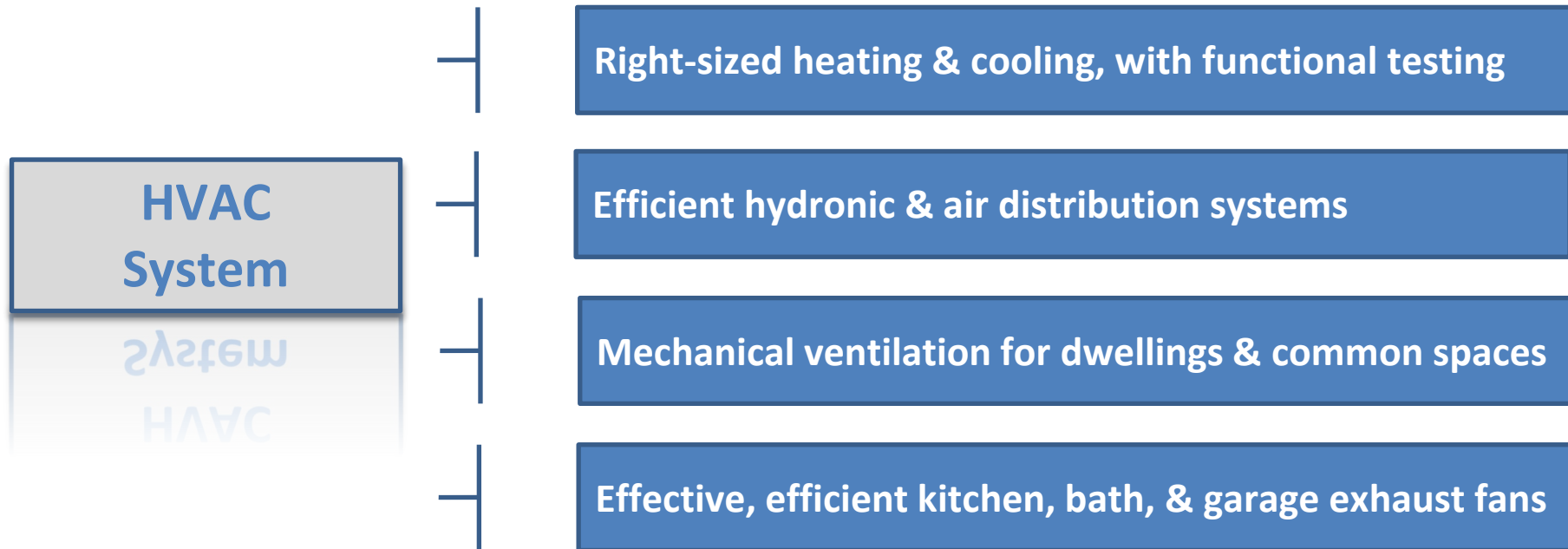
Image Credit: Building Science Corp.

What we're requiring...



ENERGY STAR Multifamily New Construction

Mandatory Features



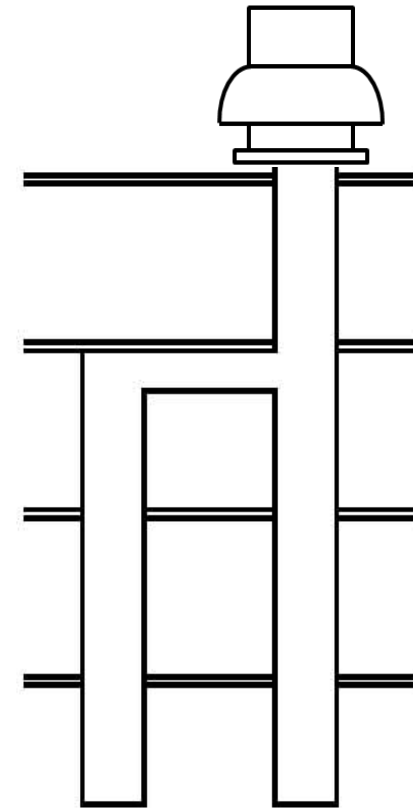
What we're avoiding...



What we're requiring...

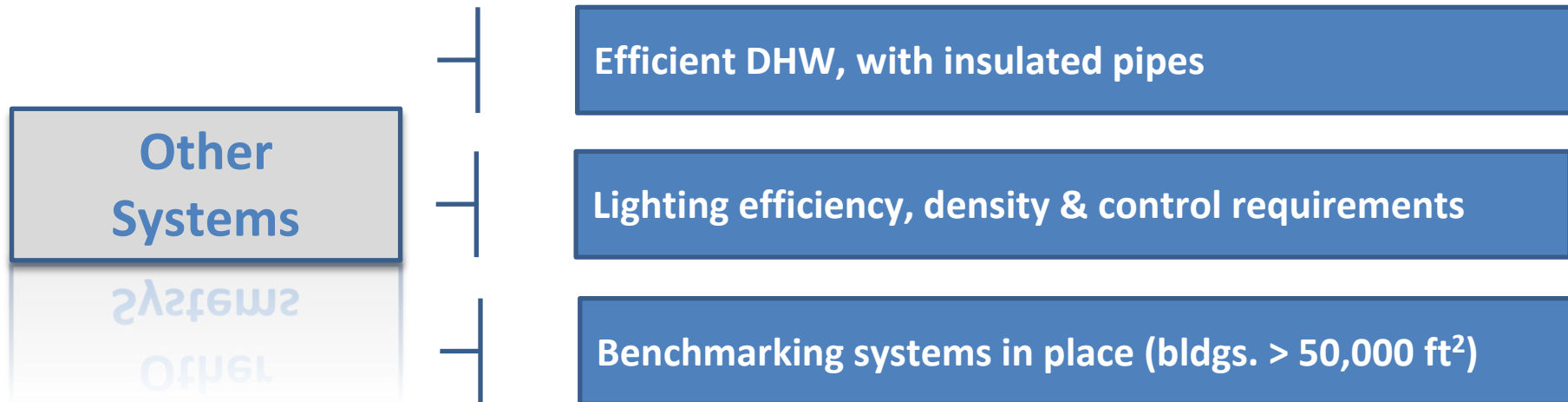


Central exhaust duct leakage test



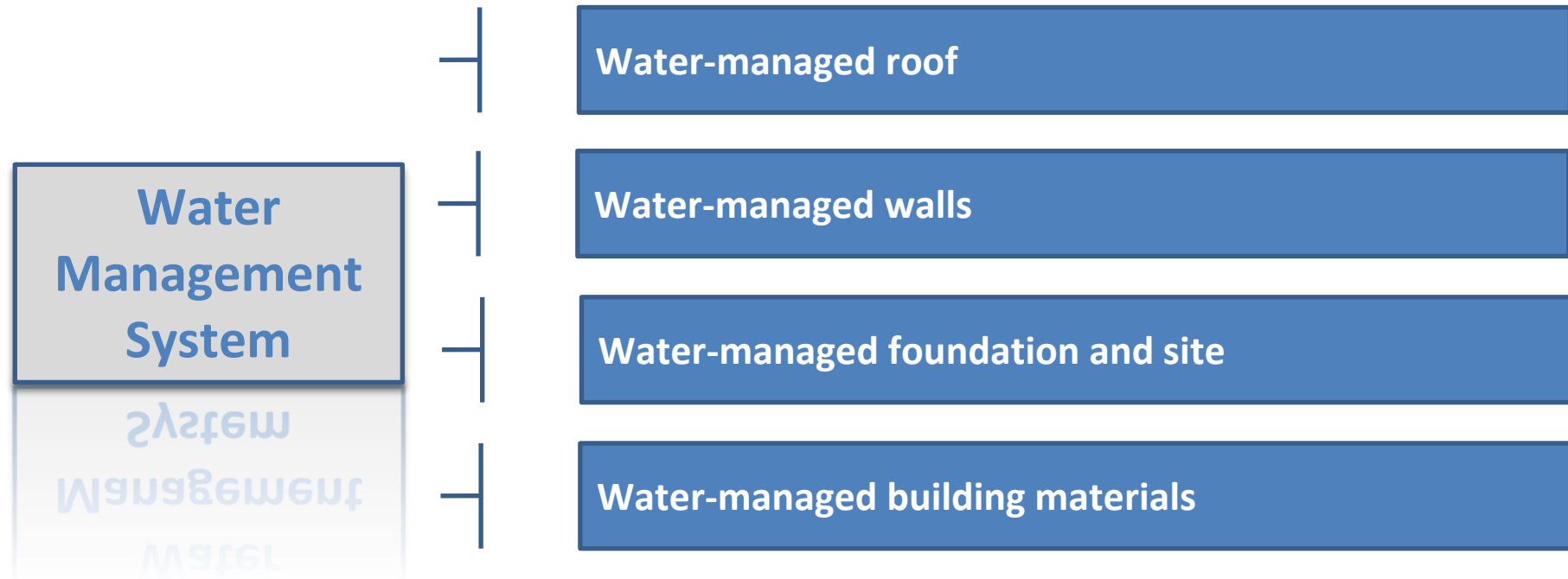
ENERGY STAR Multifamily New Construction

Mandatory Features

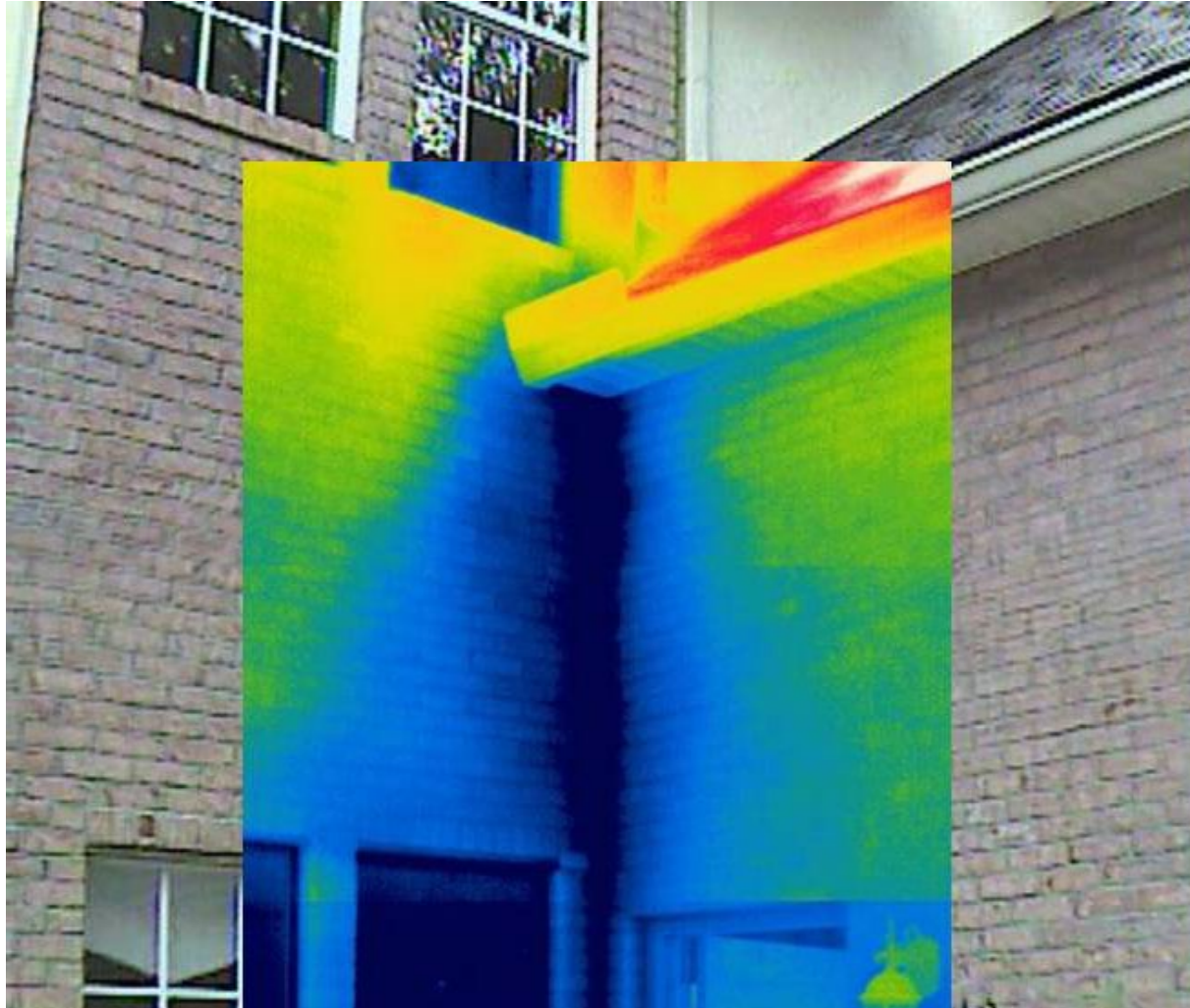


ENERGY STAR Multifamily New Construction

Mandatory Features

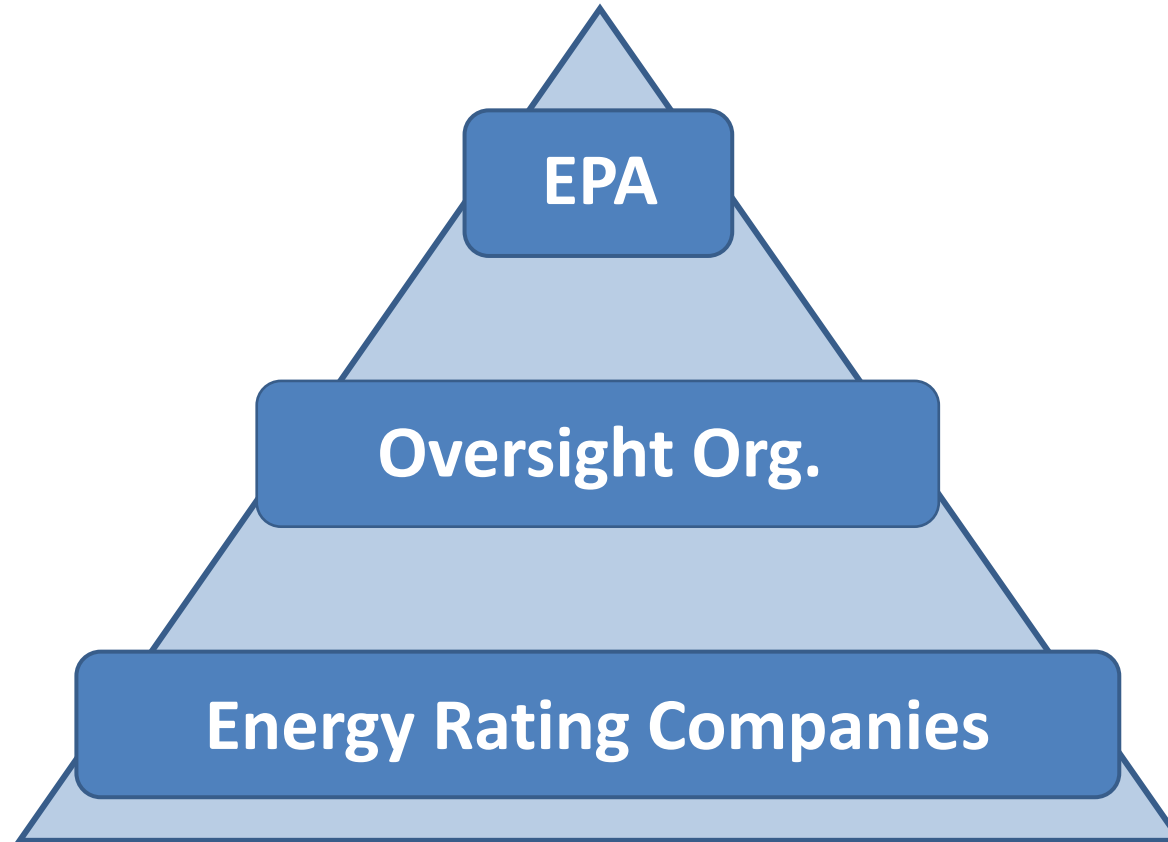


What we're avoiding..



ENERGY STAR Multifamily New Construction

Quality Assurance





Value of ENERGY STAR

Value for Builders and Developers

- Leverage government-backed building science research.
- Construct higher quality, more durable building.
- Greater quality and process control.
- Maximum value for money invested.
- Offset first costs by accessing available incentives.
- First step towards more advanced energy codes or getting to zero.

Value for Owners / Managers

- Lower utility bills and lower cost of operating.
- Reduced complaints for comfort issues.
- Set up for success to meet building performance standards.

Value for Residents

- Lower utility bills and lower cost of operating.
- Better comfort, durability, and quality.
- A more livable unit.

Value for Utilities, Housing Finance Agencies, Program Sponsors

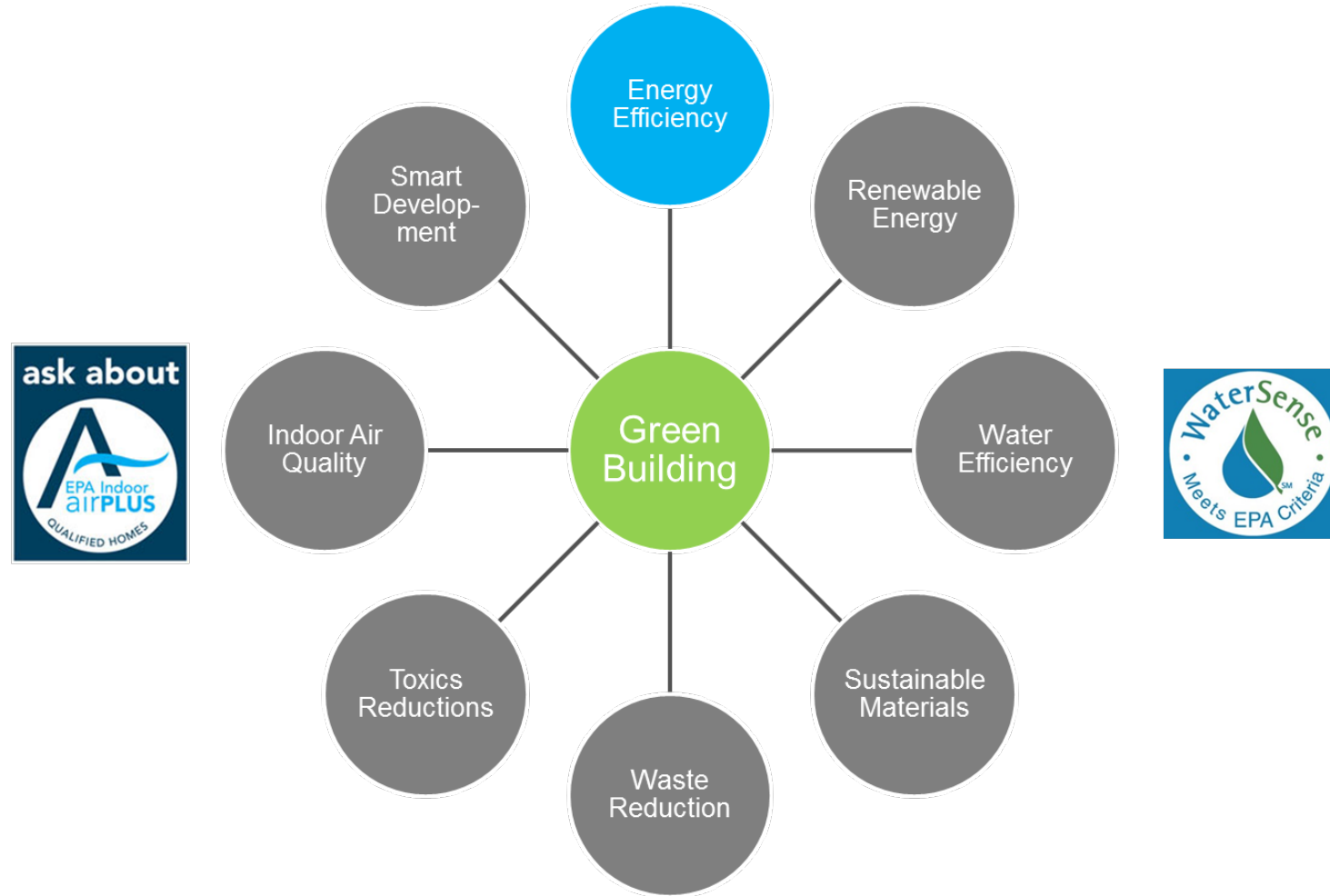
Fully supported national program for all multifamily:

- Leverages government-backed building science research.
- Meets strict cost-effectiveness requirements.
- Updates automatically based on code changes.
- Provides technical support.
- Includes verification, oversight, and recognition.
- Serves as the basis for other green building programs.

Starting point to increase energy efficiency....



Starting point to increase sustainability....



Starting point for other Green Building Programs...





Incentives For ENERGY STAR Homes and Apartments

Incentives for ENERGY STAR

- Financing
 - HUD Mortgage Insurance Premium (MIP)
 - Fannie Mae / Freddie Mac
 - Low-income housing tax credits (LIHTC) are often only accessible to high-performing buildings. Qualified Allocation Plans (QAP) often require/reference ENERGY STAR
- Utility
 - Offers \$/unit for ENERGY STAR certified multifamily buildings
 - For example, TECO in Tampa, FL, and NYSERDA in NY
 - [Nationwide Incentives](#) | [About ENERGY STAR](#) | [ENERGY STAR](#)

Incentives in Maryland

Sponsoring Organization	Incentive Program Name	Incentive Description
<p>Baltimore Gas and Electric Company (BG&E) 410-291-4511</p>	<p>BGE Smart Energy Savers Program</p>	<p>Program provides incentives for meeting ENERGY STAR Version 3.1 and 100% LED lighting. Builders receive for \$400 for multifamily, \$550 for Two over Two condos, \$750 for Townhomes, and \$1250 for Single Family homes. Additionally, builders receive \$75 for ENERGY STAR thermostats, \$200 for 16 SEER+ Air Conditioners, \$250 for 16 SEER+/10 HSPF+ Heat Pumps, and \$500 for 3.0 UEF Heat Pump Water Heaters.</p>
<p>Delmarva Power (MD) 410-860-6295</p>	<p>Delmarva Power's Energy Saving Programs</p>	<p>Program provides incentives for meeting ENERGY STAR Version 3.1 and 100% LED lighting. Builders receive for \$400 for multifamily, \$550 for Two over Two condos, \$750 for Townhomes, and \$1250 for Single Family homes. Additionally, builders receive \$75 for ENERGY STAR thermostats, \$200 for 16 SEER+ Air Conditioners, \$250 for 16 SEER+/10 HSPF+ Heat Pumps, and \$500 for 3.0 UEF Heat Pump Water Heaters.</p>
<p>PECO Energy Company 215-841-4950</p>	<p>PECO New Home Rebates</p>	<p>Builders who construct Code Plus homes (Energy Rating Index + 20% more efficient than code) are eligible for \$0.25 per kWh up to \$750, and ENERGY STAR certified homes are eligible for \$0.30 per kWh up to \$1750. The average incentive is \$600.</p>
<p>Potomac Edison (FirstEnergy) 724-830-5454</p>	<p>Potomac Edison's Energy Saving Programs</p>	<p>Program provides incentives for meeting ENERGY STAR Version 3.1 and 100% LED lighting. Builders receive for \$400 for multifamily, \$550 for Two over Two condos, \$750 for Townhomes, and \$1250 for Single Family homes. Additionally, builders receive \$75 for ENERGY STAR thermostats, \$200 for 16 SEER+ Air Conditioners, \$250 for 16 SEER+/10 HSPF+ Heat Pumps, and \$500 for 3.0 UEF Heat Pump Water Heaters.</p>

Programs Incentivizing ENERGY STAR



QAP References to ENERGY STAR

- North Carolina QAP:
 - *“New construction projects must achieve ENERGY STAR Multifamily New Construction Program certification as verified by an independent, third party expert who assists with project design, verifies construction quality, and tests completed units.”*
- Virginia QAP:
 - New Construction
 - *“Must become Energy Star Certified using appropriate program for development as defined annually by Energy Star”*
 - Green Certification options for extra points:
 - EarthCraft Gold, LEED, NGBS Silver or higher, Enterprise Green Communities
 - Zero Energy Ready Home, Passive House (future points)

Incremental cost from code to ENERGY STAR

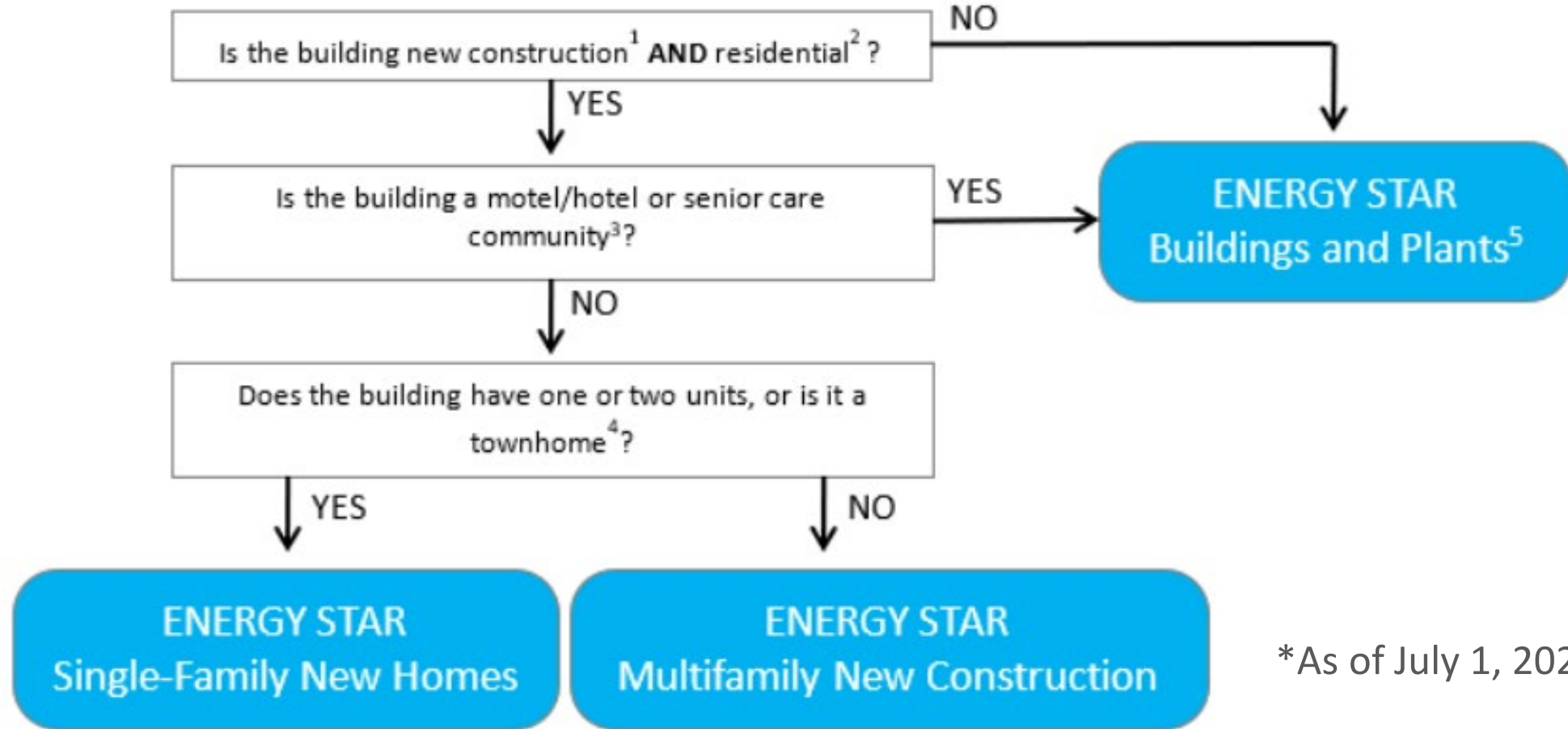
Exhibit 3: ENERGY STAR Multifamily New Construction v1.1 vs 2012 IECC, Illustrative Cost & Savings Summary

CZ	Location	HVAC Equipment Type	ENERGY STAR MFNC Version 1.1					
			Weighted Average Annual Purchased Energy Savings	Weighted Average Total Upgrade Cost	Monthly Purchased Energy Savings	Monthly Mortgage Upgrade Cost	Net Cash Flow	
1	Miami, FL	Elec. Air-Source HP	\$155	17%	\$1,687	\$13	\$9	\$4
1	Miami, FL	Gas Furnace / Elec. AC	\$172	19%	\$1,910	\$14	\$10	\$4
2	Tampa, FL	Elec. Air-Source HP	\$156	17%	\$1,371	\$13	\$7	\$6
2	Tampa, FL	Gas Furnace / Elec. AC	\$168	19%	\$1,594	\$14	\$9	\$5
3	Fort Worth, TX	Elec. Air-Source HP	\$162	16%	\$814	\$13	\$4	\$9
3	Fort Worth, TX	Gas Furnace / Elec. AC	\$162	17%	\$1,037	\$14	\$6	\$8
4	St. Louis, MO	Elec. Air-Source HP	\$182	16%	\$884	\$15	\$5	\$10
4	St. Louis, MO	Gas Furnace / Elec. AC	\$178	18%	\$1,065	\$15	\$6	\$9
5	Indianapolis, IN	Elec. Air-Source HP	\$202	17%	\$1,114	\$17	\$6	\$11
5	Indianapolis, IN	Gas Furnace / Elec. AC	\$186	19%	\$1,079	\$15	\$6	\$10
6	Burlington, VT	Elec. Air-Source HP	\$217	17%	\$1,159	\$18	\$6	\$12
6	Burlington, VT	Gas Furnace / Elec. AC	\$187	19%	\$1,047	\$16	\$6	\$10
7	Duluth, MN	Gas Furnace / Elec. AC	\$214	20%	\$1,047	\$18	\$6	\$12



ENERGY STAR Certification Process

ENERGY STAR Residential New Construction Eligibility*



*As of July 1, 2021

ENERGY STAR Residential New Construction Eligibility



} Single-Family
New
Homes

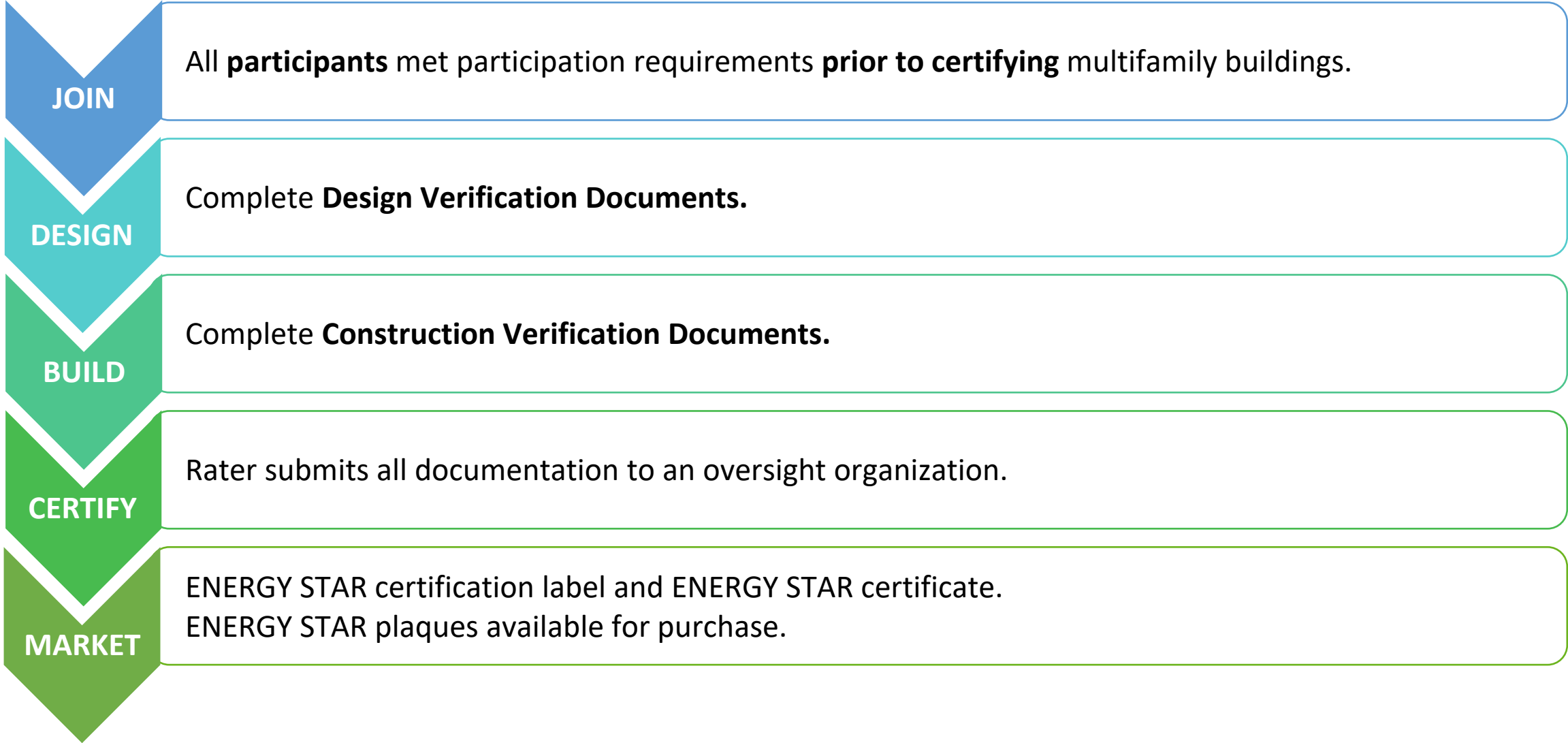
***As of July 1, 2021**



} MFNC



MFNC Certification Process





How to Get Started

How to Get Started

Find a rater at:

www.energystar.gov/partnerlocator



Technical Bulletin:
How to Get Your ENERGY STAR Multifamily New Construction Project Team Ready
August 12, 2020

The transition to EPA's ENERGY STAR Multifamily New Construction (MFNC) program is fast approaching. Is your project team ready?

Key participants for the Multifamily New Construction program include builders / developers, raters, functional testing agents, and ASHRAE path energy modelers. The ENERGY STAR Multifamily team created the guide below to highlight key steps to complete before starting an MFNC project.

- [Builders / Developers](#)
- [Raters](#)
- [Functional Testing Agents](#)
- [ASHRAE Path Energy Modelers](#)

Builders / Developers

Builders and developers work with [ENERGY STAR Rater partners](#) to construct ENERGY STAR certified multifamily buildings that meet EPA requirements for improved comfort, energy efficiency, and durability.



To identify an ENERGY STAR Rater near you who has trained in the specifics of MFNC, visit the [Energy Rating Companies](#) page to download a [list of MFNC trained raters](#).

While the Rater is responsible for verifying many [program requirements](#), it is the responsibility of the builder/developer to review the [National Water Management System Requirements](#) and ensure that each multifamily building is designed and constructed to meet those requirements.

Partnership: Multifamily builders and/or developers must sign an [ENERGY STAR Partnership Agreement](#) with EPA acknowledging their roles and responsibilities as a partner and documenting their commitment to meet the MFNC Program Requirements.

Credentials/Prerequisites: None.

Training: [Builder / Developer Orientation Video](#) is viewed as part of the Online Partnership Agreement above.

Directory: [ENERGY STAR Partner Locator](#)

Visit the [Builders & Developers](#) page and the [MFNC Certification Process](#) page to learn more.

Q	A	1% of units field-reviewed, including sample of common space in building]	field-reviewed; based on MRÖ's volume, not by Rater]	field-reviewed; based on MRÖ's volume, not by Rater]
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MFNC Certification Process

JOIN

All **participants** meet participation requirements **prior to certifying** multifamily buildings.

DESIGN

Rater or ASHRAE modeler completes **energy modeling** (if applicable)
HVAC system is designed to be **properly sized** and meet **ventilation requirements**
Rater reviews design to make sure mandatory measures and the performance target are met

BUILD

Rater and Functional Testing Agent complete their **testing and inspections**
Builder/Developer meets the **Water Management System** requirements

CERTIFY

When all **requirements are complete**, Rater submits documentation to an oversight org.

MARKET

ENERGY STAR certification label and ENERGY STAR certificate.
ENERGY STAR plaques available for purchase.

How to Get Started

1. Housing Agencies:
<https://www.energystar.gov/partner-resources/residential-new/related-programs/housing-agencies/>
2. Utilities & Other Program Sponsors:
<https://www.energystar.gov/partner-resources/residential-new/working/utilities-other>

Residential New Construction	
Program Requirements ▶	
About the ENERGY STAR Residential New Construction Program	
Working with ENERGY STAR	
Builders & Developers ▶	
Energy Rating Companies	
Utilities & Other Program Sponsors	
Becoming a Residential New Construction Sponsor Partner	
Best Practices for Program Design and Implementation	
Utility Support of Energy-Efficient Multifamily Construction	
Resources for Utility Sponsors	
Other Participants ▶	
Marketing Resources ▶	
Educational Resources ▶	
Single-Family New Homes Partner Locator	
Tools & Resources	
Related Programs ▶	
Home Buyer Information	
Complaints and Certification Review	

Utilities & Other Program Sponsors

Homes and apartments built to ENERGY STAR program requirements are designed to be at least 10% more energy efficient than those built to code and achieve a 20% improvement on average. Sponsoring an ENERGY STAR Residential New Construction program is an opportunity to promote energy efficiency in the residential market and to capture long-term peak and energy demand savings that can stand-alone or complement other residential energy efficiency initiatives.

View Program Requirements for Single-Family, Multifamily, and Manufactured homes.

By implementing an ENERGY STAR Residential New Construction program, utility sponsors can leverage a powerful brand advantage, along with fully-developed technical specifications and associated training and technical support available from EPA at no cost. Specific benefits to utilities of using this program platform include:

More detailed verification of efficiency measures: The inspection checklists allow for a high level of verification that provide sponsors with greater assurance that efficiency measures are being properly installed and that ENERGY STAR certified homes and apartments meet performance and quality expectations.

- The Thermal Enclosure checklist helps ensure that there are no thermal defects.
- The HVAC Quality installation checklists helps ensure that HVAC systems are installed using industry best practices and perform at rated efficiencies.
- The Water Management builder checklist helps ensure roofs, walls, and foundations are fully protected from water intrusion.

Greater savings per home: ENERGY STAR certified homes are approximately 20% more efficient than homes built to the 2009 International Energy Conservation Code (IECC). Further, the size adjustment factor ensures that larger homes include additional energy efficiency measures to account for their added size.

More definitive savings: Demand and peak savings will be much more reliable with every certified home due to greater rigor of the Reference Design and mandatory checklists. As a result, there will be less opportunity for builders to omit important energy efficiency improvements, and utilities can more confidently quantify the specific savings associated with ENERGY STAR certified homes and apartments.

Leverage nationally recognized ENERGY STAR name: ENERGY STAR makes it easy for homebuyers to select energy-efficient homes and apartments with its high consumer brand recognition. Efficiency programs based on ENERGY STAR benefit from this level of awareness and builder/developers partners also benefit from being able to leverage ENERGY STAR for effective differentiation from the resale market.

ENERGY STAR, a government-backed symbol for energy efficiency recognized by more than 90% of American households, provides a powerful platform for utilities implementing demand side management programs.

Residential buildings consume approximately 22% of the energy used in the United States each year. Working with the residential new construction market to ensure that homes and apartments are built to rigorous energy efficiency standards is an important opportunity to maximize end-use efficiency and avoid or postpone the construction of costly new power generation facilities.

Most residential construction types, including all sizes of multifamily buildings, can earn an ENERGY STAR label.

Utilities and Other Program Sponsors Benefits

ENERGY STAR provides utility partners with a variety of marketing, technical, and programmatic resources and support:

- Resources to distribute to potential program partners, including builders, developers, and verification professionals, to help educate them about the benefits of participation and increase awareness of energy efficient homes in the market.
- Technical one-on-one support as well as online trainings and webinars for utilities and partners.
- Best practices for program design and implementation.
- Networking opportunities, including an annual Stakeholder Meeting for top-performing ENERGY STAR utility, builder, and verifier partners.

ENERGY STAR Multifamily New Construction: Learn More

Website: www.energystar.gov/mfnc

- See program requirements for a selected certification pathway and region.
- View eligibility chart
- Other resources:
 - Webinars (live and recorded)
 - Technical Bulletins
 - Costs & Savings analysis
 - Comparisons with MFHR and ESCH

ENERGY STAR RESIDENTIAL NEW CONSTRUCTION PROGRAM REQUIREMENTS

SINGLE FAMILY | **MULTIFAMILY** | MANUFACTURED | UNDERGOING GUT REHAB

PROGRAM VERSIONS AT A GLANCE

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

STEP 2: Select State or Territory

Version 1 currently in effect | Version 1.1 currently in effect | Regional version currently in effect

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)

Regional Program Requirements
MFNC California Program Requirements Version 1.2 (PDF, 387 KB)

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)

IMPLEMENTATION TIMELINE

To determine the program version that a multifamily building is required to be certified under, identify



Q & A

ENERGY STAR Multifamily New Construction

Web & Email:

Main: energystar.gov/newhomespartners
Technical: www.energystar.gov/mfnc
Email: energystarhomes@energystar.gov

Social Media:



@energystarhomes



facebook.com/energystar

Contact:

Rebecca Hudson

EPA

Technical Manager

ENERGY STAR Multifamily New Construction

Hudson.Rebecca@epa.gov