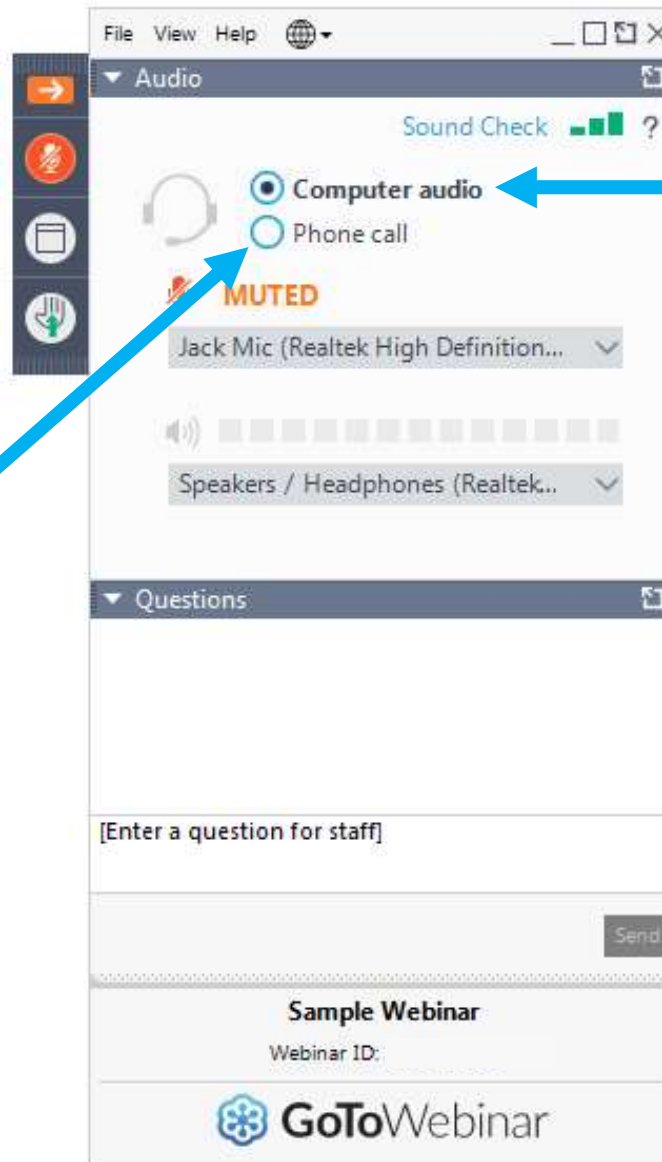


Use this button to expand or minimize your toolbar at any time.

Use this button to indicate your response to Agree/Disagree and Y/N questions.

If you are using your telephone:

- Select “use telephone” button
- Dial in and enter your access code
- Enter your audio pin and press #



If you will listen in using the speakers on your computer:

- Select the “Computer Audio” button
- Unmute your desktop
- Click on [Audio Setup](#) if you’re having any difficulty.

Everyone will be muted, but you can type in questions at any time and we’ll answer them at the end of the presentation.



**ENERGY STAR Residential New Construction:
Proposed California Program Requirements
(SFNH v3.4 & MFNC v1.4)
And Revised Implementation Policy**

Presented on March 22, 2023



Dean Gamble
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ENERGY STAR
Single-Family New Homes



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ENERGY STAR
Multifamily New Construction

Agenda

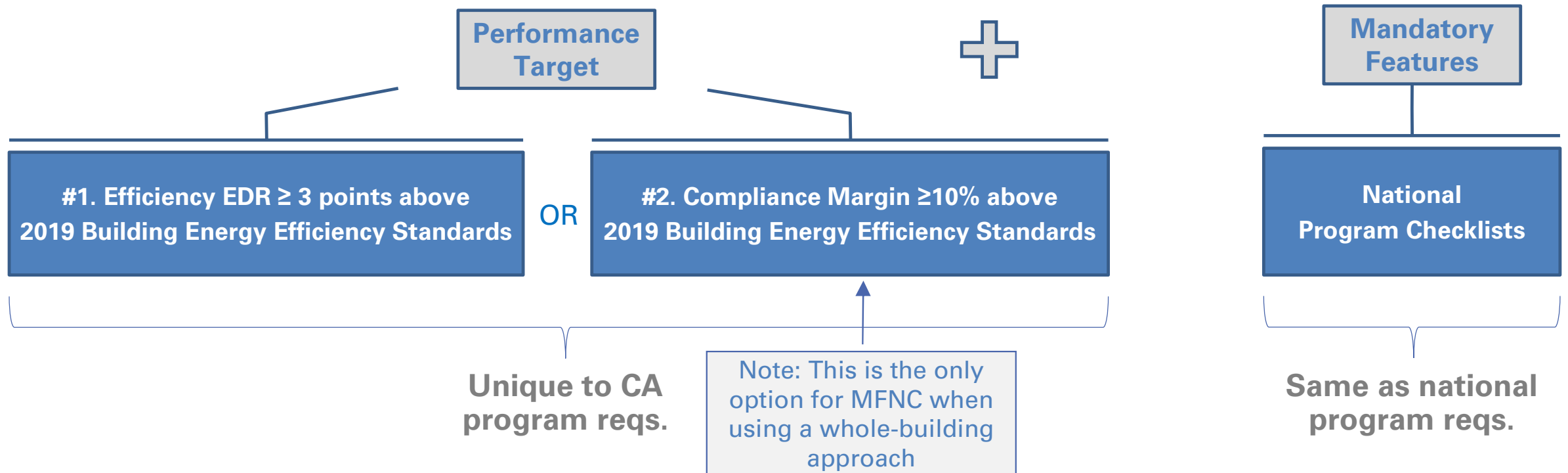
- Current ENERGY STAR program requirements in California
- Single-Family New Homes:
 - California code updates
 - ENERGY STAR response to California code updates
 - Proposed next version of ENERGY STAR program requirements in California
- Multifamily New Construction:
 - California code updates
 - Proposed next version of ENERGY STAR program requirements in California
 - Other key updates
- Revised implementation policy
- Stakeholder Feedback Period
- Q&A

A photograph of a house under construction, showing the wooden frame and roof structure. The house is surrounded by trees and a clear blue sky with some clouds. A green semi-transparent overlay covers the middle of the image, containing white text. In the foreground, there is a blue tarp and some construction materials.

Current ENERGY STAR Program Requirements in CA

Current California Program Requirements

Single-Family New Homes, California Version 3.3 Multifamily New Construction, California Version 1.3





Single-Family New Homes

A photograph of a house under construction, showing the wooden frame and roof structure. The image is overlaid with a semi-transparent green banner. The text "CA Code Updates" is centered on the banner in white, bold font. The background shows a clear blue sky with scattered white clouds. In the foreground, there is a dirt area with construction materials, including a blue tarp and a red tractor.

CA Code Updates

California Code Updates

- CA began implementing its latest code, the 2022 Building Energy Efficiency Standards on January 1st, 2023, based on permit application date.
- No changes to core efficiency requirements:

2019 Building Energy Efficiency Standards												2022 Building Energy Efficiency Standards											
Page 292												Page 341											
TABLE 150.1-A COMPONENT PACKAGE – Single Family Standard Building Design (continued)												TABLE 150.1-A COMPONENT PACKAGE – Single-Family Standard Building Design (continued)											
Climate Zone												Climate Zone											
1 2 3 4 5 6 7 8 9 10 11												12 13 14 15 16											
Building Envelope	Floors	Slab Perimeter	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		
		Raised	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19		
		Concrete Raised	U 0.092 R 8.0	U 0.092 R 8.0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	
	Quality Insulation Installation (QII)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
	Roofing Products	Low-Sloped	Aged Solar Reflectance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
			Thermal Emittance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
		Steep-Sloped	Aged Solar Reflectance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.20	0.20	0.20
			Thermal Emittance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.75	0.75	0.75
	Fenestration	Maximum U-factor	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	
		Maximum SHGC	NR	0.23	NR	0.23	NR	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	
		Maximum Total Area	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
		Maximum West Facing Area	NR	5%	NR	5%	NR	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	NR	
	Door	Maximum U-factor	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	



California Code Updates

- However, elements of electrification have been added:
 - In prescriptive path:
 - Space-heating heat pump must be used in CA CZ 3, 4, 13, and 14.
 - Heat pump water heater must be used in all CA CZ's except 3, 4, 13, and 14.
 - In performance path:
 - Generally modeled against space-heating heat pump in CA CZ 3, 4, 13, and 14.
 - Generally modeled against heat pump water heater except in CA CZ 3, 4, 13, and 14.
 - Mandatory requirements include rigorous electric-ready provisions if gas is used:
 - Water heating: 2.5'x2.5'x7' space, 240V-ready electrical service, condensate drain
 - Space heating: 240V-ready electrical service
 - Cooking: 240V-ready electrical service
 - Clothes dryer: 240V-ready electrical service
- Homes must be Energy Storage System (ESS)-ready

California Code Updates

- Performance path metrics have been revised:
 - The energy budget is expressed in terms of the Energy Design Ratings:
 - The Energy Design Rating 1 (EDR1) is based on source energy.
 - The Energy Design Rating 2 (EDR2) is based on TDV energy and has two components:
 - The Energy Efficiency Design Rating, and,
 - The Solar Electric Generation and Demand Flexibility Design Rating.
 - The Total Energy Design Rating accounts for both.
 - Homes must separately comply with the Source Energy Design Rating, Energy Efficiency Design Rating, and the Total Energy Design Rating.

A photograph of a house under construction, showing the wooden frame and roof structure. The house is surrounded by trees and a clear blue sky with some clouds. A green semi-transparent overlay covers the middle of the image, containing the text. In the foreground, there is a blue tarp and some construction materials.

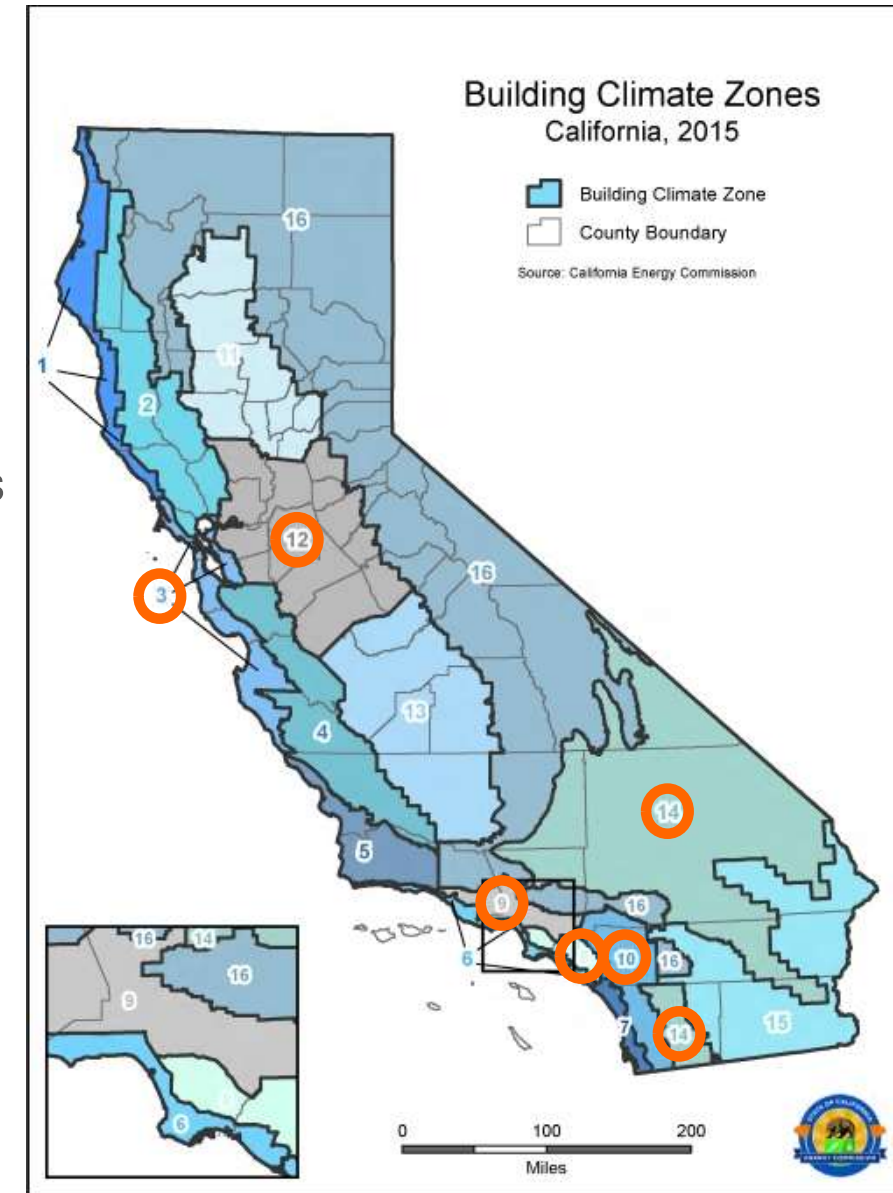
ENERGY STAR Response to CA Code Updates

ENERGY STAR Response to CA Code Activity

- EPA needs to define and implement new ENERGY STAR Versions for California in response to the 2022 Standards.
- Goal was to maintain savings target of at least 10% for consistency with:
 - Prior versions
 - National brand promise
- Key questions:
 - Unclear how electrification elements would impact ability to meet 10% target.
 - Unclear whether 3 Efficiency EDR points would still correspond with 10% savings.

ENERGY STAR Response to CA: Efficiency Target

- To assess the feasibility of maintaining a 10% savings target, EPA modeled six commonly built plans from several participating builders in various California CZ's.
 - >85% of ES certifications in CA used the SFNH program
 - ~75% of ES SFNH certifications in CA were by these builders
- 22 permutations of plans and CZ's were modeled.
- From this analysis, we found that 10% savings were achievable using off-the-shelf technologies.



ENERGY STAR Response to CA: Efficiency Target

Representative Package for CA CZ 10

Developed for CA Version 3.3

Package Name	Standard Design	Upgrade Package
Enclosure		
Radiant Barrier	Not Included	Not Included
Attic Insulation at Ceiling + Below Roof Deck	R-38 + R-19	R-49 + R-21
Predominant Wall Type, Cavity Ins + Ext Ins	2x6, R-21+R-5	2x4, R-15+R-4
Slab Insulation	Not Included	Not Included
Window U-factor / SHGC	0.30 / 0.23	0.29 / 0.22
Blower Door (ACH50)	5	4
Roofing Products		
Aged Solar Reflectance	0.20	0.17
Aged Solar Emittance	0.85	0.93
HVAC		
HSPF (Heat Pump) or AFUE (Furnace)	8.2 / 80	9.2
SEER	14	16
EER	11.7	13
Low Leakage Air Handler	Not Included	Included
Verified Refrigerant Charge	Yes	Yes
Duct Insulation	R-8	R-6
Ducts in Conditioned Space	Not Included	Not Included
Whole House Cooling Fan	Included	Not Included
Mechanical Ventilation: Type	Same as Proposed	Balanced
Mechanical Ventilation: Fan Eff (W/CFM)	Balanced: 0.70	0.51
Mechanical Ventilation: Recovery Eff (SRE / ASRE)	Not Included	63 / 66
DHW		
Water Heater Energy Factor (UEF)	Gas: 0.81 UEF	Gas: 0.93 UEF
Distribution	Gas: Standard	Gas: Standard

Downgrade from Standard Design
 Upgrade from Standard Design

- Many of these measures were already being used. Key upgrades from current practice included:
 - Higher-efficiency heat pump, and,
 - HRV that met CEC's fault indicator display and accessibility criteria
- Representative packages for other climate zones varied a bit but the two features above were constants.

ENERGY STAR Response to CA: Efficiency Target

- For new analysis, modeled the same representative packages developed for CA v3.3, but in EnergyPro compliance software for 2022 code, with key features adjusted:

Packages	Compliance Margin				Delta Efficiency EDR		
	Min	Avg	Max	% of Homes Over 10% Target	Min	Avg	Max
CA v3.3 Pkgs, but with NEEA Tier 3 HPWH	10%	16%	32%	100%	4.6	7.7	18.4
CA v3.3 Pkgs, but with 0.95 EF instant gas DHW	-9%	6%	19%	27%	-4.0	3.0	9.7
CA v3.3 Pkgs, but with 95% AFUE gas furnace	8%	13%	19%	82%	3.5	6.4	11.2
CA v3.3 Pkgs, plus battery	21%	29%	43%	100%	9.7	13.6	24.8

Ratio of Compliance Margin to EDR is ~2:1

ENERGY STAR Response to CA: Efficiency Target

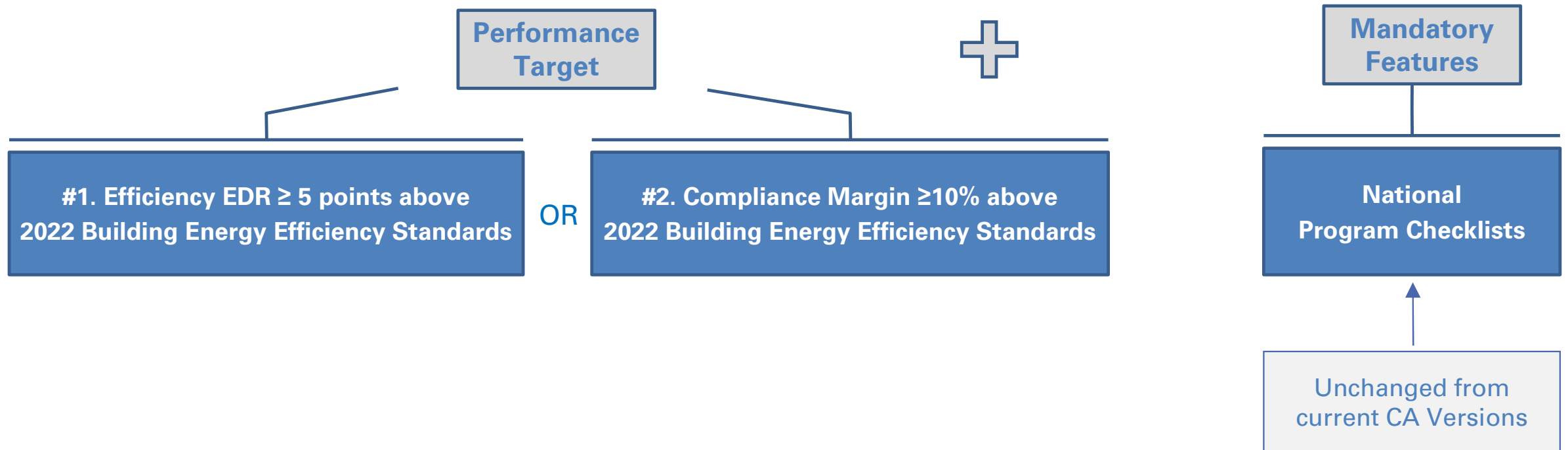
- Key takeaways from modeling:
 - Achieving 10% compliance margin (or delta 5 Efficiency EDR points) is feasible using traditional efficiency measures
 - Targets are generally not feasible with traditional efficiency measures if gas water heating is used; but can sometimes be reached using a gas furnace
 - Targets can be achieved using a battery



Proposed Next Version of ENERGY STAR Program Requirements in CA

Proposed next version of ENERGY STAR program requirements in CA

Single-Family New Homes California Program Requirements, Version 3.4



Demonstrating compliance with performance metrics

- Can be demonstrated using standard CA code compliance reports:

Compliance Margin Metric

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft ² -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft ² -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	7.05	30.75	4.11	17.97	2.94	12.78
Space Cooling	0	0	0.01	0.07	-0.01	-0.07
IAQ Ventilation	0.71	7.61	0.52	5.63	0.19	1.98
Water Heating	1.81	20.66	1.55	18.82	0.26	1.84
Self Utilization/Flexibility Credit				0		0
North Facing Efficiency Compliance Total	9.57	59.02	6.19	42.49	3.38	16.53

$$16.53 / 59.02 = 28.0\%$$

Demonstrating compliance with performance metrics

- Can be demonstrated using standard CA code compliance reports:

Delta Efficiency EDR Metric

ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)
Standard Design	45.9	57.9	41.2			
Proposed Design						
North Facing	36.4	41.7	33.9	9.5	16.2	7.3
East Facing	38.7	45	35.6	7.2	12.9	5.6
South Facing	39.9	46.7	36.4	6	11.2	4.8
West Facing	38	44.1	35.1	7.9	13.8	6.1

A photograph showing the interior wooden framing of a building under construction. The image features a grid of vertical studs and horizontal joists, with some areas showing insulation. A yellow banner is overlaid across the center of the image, containing the text "Multifamily New Construction".

Multifamily New Construction

California Code Updates

- New Multifamily Subchapters

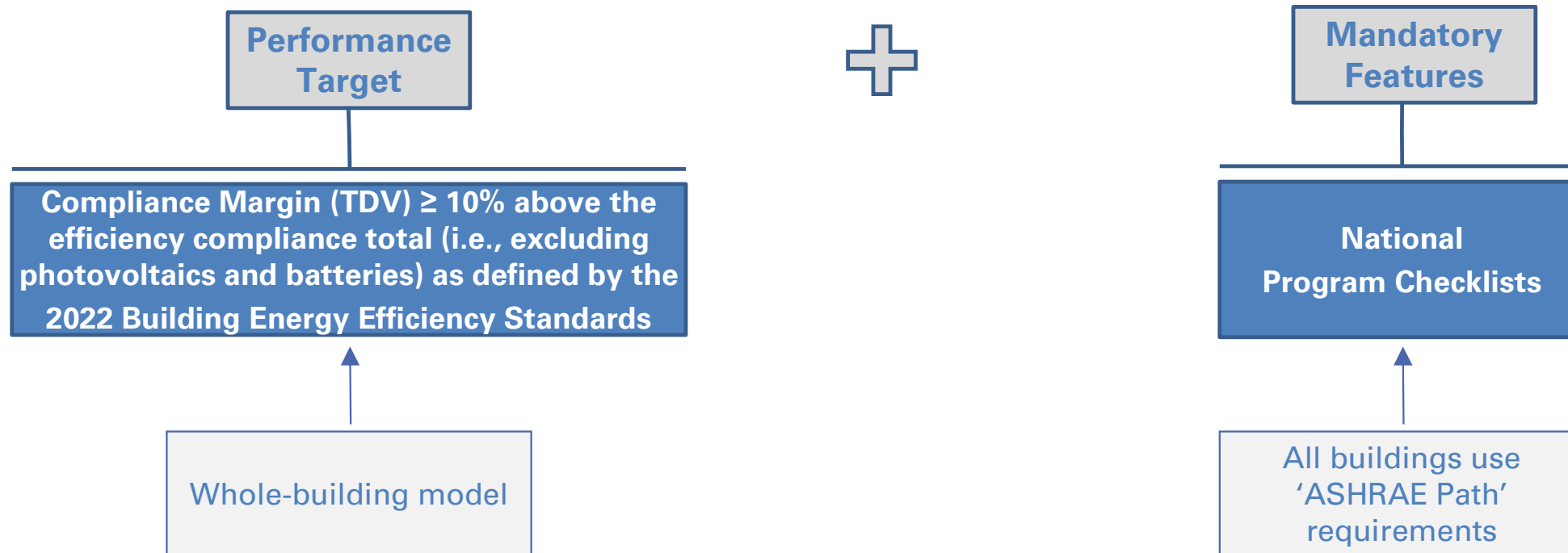
SUBCHAPTER 10 MULTIFAMILY BUILDINGS—MANDATORY REQUIREMENTS	360
SECTION 160.0 – GENERAL	360
SECTION 160.1 – MANDATORY REQUIREMENTS FOR BUILDING ENVELOPES	361
SECTION 160.2 – MANDATORY REQUIREMENTS FOR VENTILATION AND INDOOR AIR QUALITY	364
SECTION 160.3 – MANDATORY REQUIREMENTS FOR SPACE CONDITIONING SYSTEMS IN MULTIFAMILY BUILDINGS	381
SECTION 160.4 – MANDATORY REQUIREMENTS FOR WATER HEATING SYSTEMS	397
SECTION 160.5 – MANDATORY LIGHTING REQUIREMENTS FOR INDOOR AND OUTDOOR SPACES	399
SECTION 160.6 – MANDATORY REQUIREMENTS FOR ELECTRIC POWER DISTRIBUTION SYSTEMS	413
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SECTION 170.0 – GENERAL	420
SECTION 170.1 – PERFORMANCE APPROACH	421
SECTION 170.2 – PRESCRIPTIVE APPROACH.....	423

California Code Updates

- All Multifamily buildings use non-residential building software
- Performance path metrics include:
 - Source energy budget
 - Time-dependent valuation (TDV) energy budget
- Buildings must separately comply with the source energy budget and the TDV energy budget.

Proposed next version of ENERGY STAR program requirements in CA

California Multifamily New Construction, Version 1.4



Demonstrating compliance with performance metrics

- Can be demonstrated using standard CA code compliance reports:

TDV Compliance Margin Metric

C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ² - yr)			
COMPLIES ²			
Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Space Heating	4.06	4.05	0.01
Space Cooling	32.27	25.27	7
Indoor Fans	21.25	21.26	-0.01
Heat Rejection	0	0	0
Pumps & Misc.	2.09	2.09	0
Domestic Hot Water	28.77	24.39	4.38
Indoor Lighting	15.68	15.68	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	104.12	92.74	11.38 (10.9%)
Photovoltaics	-66.98	-67.02	0.04
Batteries	---	---	---
TOTAL COMPLIANCE	37.14	25.72	11.42 (30.7%)

¹ Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

Other Key Updates

Eligibility

- Townhouses are not eligible for Multifamily New Construction in California, Version 1.4
 - For Title 24-2022, townhouses must use the Single-Family code chapter and requirements with different modeling and metrics
 - Townhouses are eligible for ENERGY STAR SFNH in California

Oversight Organizations

- Low-rise multifamily buildings use an Home Certification Organization (HCO)
- High-rise multifamily buildings use a Multifamily Review Organization (MRO)

A photograph of a building under construction, showing the wooden frame and roof structure. The building is surrounded by a dirt area with construction materials and a red tractor. The sky is blue with white clouds. A green semi-transparent banner is overlaid across the middle of the image, containing the text "Revised Implementation Policy" in white.

Revised Implementation Policy

Revised Implementation Policy

- Current implementation policy in CA is based on Plan Approval Date and Permit Date.
- Because Plan Approval Date comes first, this effectively dictates which ENERGY STAR Version must be used.

Current Single-Family New Homes Policy

State / Territory	Homes With Plan Approval Date and Permit Date On or After This Date Must Meet the Adjacent Version & Revision (See Footnote 11 for Definition & Exception ¹¹)	Version	Revision ¹²
CA	10-01-2020	California v3.2	Rev. 10
	01-01-2022	California v3.2	Rev. 11
	01-01-2023	California v3.3	Rev. 11
	01-01-2024	California v3.3	Rev. 12

- Some communities are built over years, spanning more than one edition of code, yet their initial Plan Approval Date locks them into using a single ENERGY STAR Version.
- This has the potential to result in certifications that are not responsive to advancing code.

Revised Implementation Policy

- EPA is proposing to address this by revising its implementation policy for all California ENERGY STAR Versions, effective for permits beginning January 1, 2024.

Proposed Single-Family New Homes Policy

State / Territory	Use the Plan Approval Date, Permit Date, and Edition of the Building Energy Efficiency Standards (BEES) Required by the AHJ to Determine the Applicable Version & Revision (See Footnote 11 for Definition & Exception ¹¹)			Version	Revision ¹²
	Permit Date	Plan Approval Date	Edition of the BEES Required by AHJ		
CA	Before 01-01-2024	Before 01-01-2023	Any Edition	California v3.2	Rev. 11
		01-01-2023 to 12-31-2023	Any Edition	California v3.3	Rev. 11
	On or After 01-01-2024	Any	2019 or earlier	California v3.3	Rev. 12
			2022	California v3.4	Rev. 12

Existing Policy

Proposed New Policy beginning 1/1/24

Proposed Multifamily New Construction Policy

State / Territory	Use the Plan Approval Date, Permit Date, and Edition of the Building Energy Efficiency Standards (BEES) Required by the AHJ to Determine the Applicable Version & Revision (See Footnote 11 for Definition & Exception ¹¹)			Version	Revision ¹²
	Permit Date	Plan Approval Date	Edition of the BEES Required by AHJ		
CA	Before 01-01-2024	Before 01-01-2023	Any Edition	California v1.2	Rev. 02
		01-01-2023 to 12-31-2023	Any Edition	California v1.3	Rev. 02
	On or After 01-01-2024	Any	2019 or earlier	California v1.3	Rev. 03
			2022	California v1.4	Rev. 03

Existing Policy

Proposed New Policy beginning 1/1/24

Revised Implementation Policy

- Just to emphasize, this will impact the implementation of not just the new California Versions, but also the prior Versions.



ENERGY STAR Single-Family New Homes California Program Requirements, Version 3.3 (Rev. 12)

Exhibit 2: ENERGY STAR Single-Family New Homes Implementation Timeline for California

State / Territory	Homes With Plan Approval Date and Permit Date On or After This Date Must Meet the Adjacent Version & Revision (See Footnote 11 for Definition & Exception ¹¹)	Version	Revision ¹²
CA	10-01-2020-	California v3.2	Rev. 10-
	01-01-2022	California v3.2	Rev. 11-
	01-01-2023	California v3.3	Rev. 11
	01-01-2024	California v3.3	Rev. 12

State / Territory	Use the Plan Approval Date, Permit Date, and Edition of the Building Energy Efficiency Standards (BEES) Required by the AHJ to Determine the Applicable Version & Revision (See Footnote 11 for Definition & Exception ¹¹)			Version	Revision ¹²
	Permit Date	Plan Approval Date	Edition of the BEES Required by AHJ		
CA	Before 01-01-2024	Before 01-01-2023	Any Edition	California v3.2	Rev. 11
		01-01-2023 to 12-31-2023	Any Edition	California v3.3	Rev. 11
	On or After 01-01-2024	Any	2019 or earlier	California v3.3	Rev. 12
			2022	California v3.4	Rev. 12



Revised Implementation Policy Summary


- For all ENERGY STAR Versions in California, the implementation policy will transition from one based primarily on Plan Approval Date to one based on permit date and the edition of the code being enforced.
- This new policy will be effective for permits after January 1, 2024. Homes and apartments for which the:
 - 2022 edition of code is enforced will be certified using the new proposed Versions.
 - 2019 or earlier edition of code is enforced will be certified to SFNH v3.3 or MFNC v1.3.

A photograph of a building under construction, showing the wooden frame and roof structure. The building is surrounded by construction materials and a blue tarp. A green semi-transparent overlay covers the middle of the image, containing the text "Stakeholder Feedback Period" in white. The background shows a blue sky with white clouds and a green landscape.

Stakeholder Feedback Period


Stakeholder Feedback Period

- Four-week period: **Wed. March 15th – Wed. April 12th**
- Visit www.energystar.gov/partner_resources/residential_new_stakeholder_feedback to view the draft program requirements, the stakeholder feedback form, and this webinar.
- Submit written comments using the **Stakeholder Feedback Form** to energystarhomes@energystar.gov.
- Soliciting feedback on: new program requirements, revised implementation policy, removal of eligibility for townhouses to use MFNC.
- Barring substantial partner feedback, the final program requirements should be released in May.



DRAFT ENERGY STAR Single-Family New Homes
California Program Requirements, Version 3.4 (Rev. 12)

Eligibility Requirements
Site-built or modular ¹ Dwellings ² (e.g., single-family homes, duplexes) and Townhouses ³ are eligible to participate in the ENERGY STAR



DRAFT ENERGY STAR Multifamily New Construction,
California Program Requirements, Version 1.4 (Rev. 03)

Eligibility Requirements
The following multifamily building types are eligible to participate in the ENERGY STAR Multifamily New Construction (MFNC) program:

- Any multifamily building with dwelling or sleeping units that is NOT a detached dwelling (e.g., not a single-family home or a duplex) ¹; OR
- Any mixed-use buildings with dwelling or sleeping units, where the dwelling units and common space exceed 50% of the building square footage. Parking garage square footage is excluded from this calculation ²

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

Note that compliance with these requirements is not intended to imply compliance with all local code requirements that may be applicable to the building to be built. ³

Partnership, Training, and Credentialing Requirements
The following requirements must be met prior to certifying multifamily buildings:

- The Builder or Developer for the building is required to sign an ENERGY STAR Partnership Agreement and complete the online "Builder / Developer Orientation", which can be found at www.energystar.gov/homesPA.
- FT Agents must meet one of the following:
 - The HVAC installing contractor AND credentialed by an EPA-recognized HVAC Quality Installation Training and Oversight Organization (H-QUITO). An explanation of this process can be found at www.energystar.gov/eshvac; OR
 - Not the HVAC installing contractor, AND
 - Signed up online in EPA's online database as an FT Agent and watched the online FT Agent orientation, which can be found at www.energystar.gov/mftraining; AND
 - Holds one of the credentials listed online here: www.energystar.gov/ftas or is a representative of the Original Equipment Manufacturer (OEM).
- Energy Rating Companies (e.g., rater companies and Providers ⁴) are required to sign an ENERGY STAR Partnership Agreement, which can be found at www.energystar.gov/homesPA, and operate under either a Home Certification Organization (HCO) or a Multifamily Review Organization (MRO). Learn more and find a current list of HCOs at www.energystar.gov/hco and MROs at www.energystar.gov/mro.
- Raters ⁵ are required to complete EPA-recognized training, which can be found at www.energystar.gov/mftraining.

ENERGY STAR Certification Process ⁶


1. Determine through which type of oversight organization (HCO or MRO) the project must be certified:
 - All low-rise multifamily buildings, as defined by the 2022 Building Energy Efficiency Standards, must be certified through an HCO.
 - All high-rise multifamily buildings, as defined by the 2022 Building Energy Efficiency Standards, must be certified through an MRO. EPA recommends that Raters identify their MRO during the design stage, but at the latest, the building must be under MRO oversight prior to the first inspection. MROs have limited discretion to grant an exemption to this policy.
2. Configure the preferred set of efficiency measures in a whole-building model and verify that the resulting performance meets or exceeds the performance target, defined as a Compliance Margin (TDV) ≥ 10% compared to the Efficiency Compliance Total of the Standard Design (TDV) corresponding to the building, as defined by the 2022 Building Energy Efficiency Standards and determined by a CEC-approved software program. ⁷


Note that, regardless of the measures selected, the Mandatory Requirements for All Certified Multifamily Buildings in Exhibit 1 are also required and impose certain constraints on the efficiency measures selected (e.g., insulation levels, insulation installation quality, window performance, duct leakage). Where the Checklists list different requirements for "ERI", "ASHRAE", or "Prescriptive", select the requirements associated with "ASHRAE".

3. Upon completion of design, for high-rise multifamily buildings, specific documentation is submitted to the MRO for their review and approval as described in Exhibit 3. EPA strongly recommends submitting documentation before construction; however, Raters may choose to submit the design documentation at final certification. MROs may choose to implement alternative design review requirements.
4. Upon completion of design, multifamily buildings may be eligible for the Designed to Earn the ENERGY STAR designation. To earn this optional additional designation, follow the guidance available at www.energystar.gov/mfdees.
5. Construct the building using the measures selected in Step 2 and the Mandatory Requirements for All Certified Multifamily Buildings, Exhibit 1.
6. Using a Rater, verify that all requirements have been met in accordance with the Mandatory Requirements for All Certified Multifamily Buildings and with Data Input requirements and with On-Site Inspection Procedures for California HERS Ratings. ⁸ For modular multifamily buildings, a Rater must verify any requirement in the plant not able to be verified on-site because a feature will be concealed prior to shipment. ⁴

The Rater must review all items on the National Rater checklists for the whole building. Raters are expected to use their experience and discretion to verify that the overall intent of each inspection checklist item has been met (i.e., identifying major defects that undermine the intent of the checklist item versus identifying minor defects that the Rater may deem acceptable).

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Q&A

ENERGY STAR Residential New Construction

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