



# ENERGY STAR Certified Homes

## Revision 09 for Partners

September 19, 2018



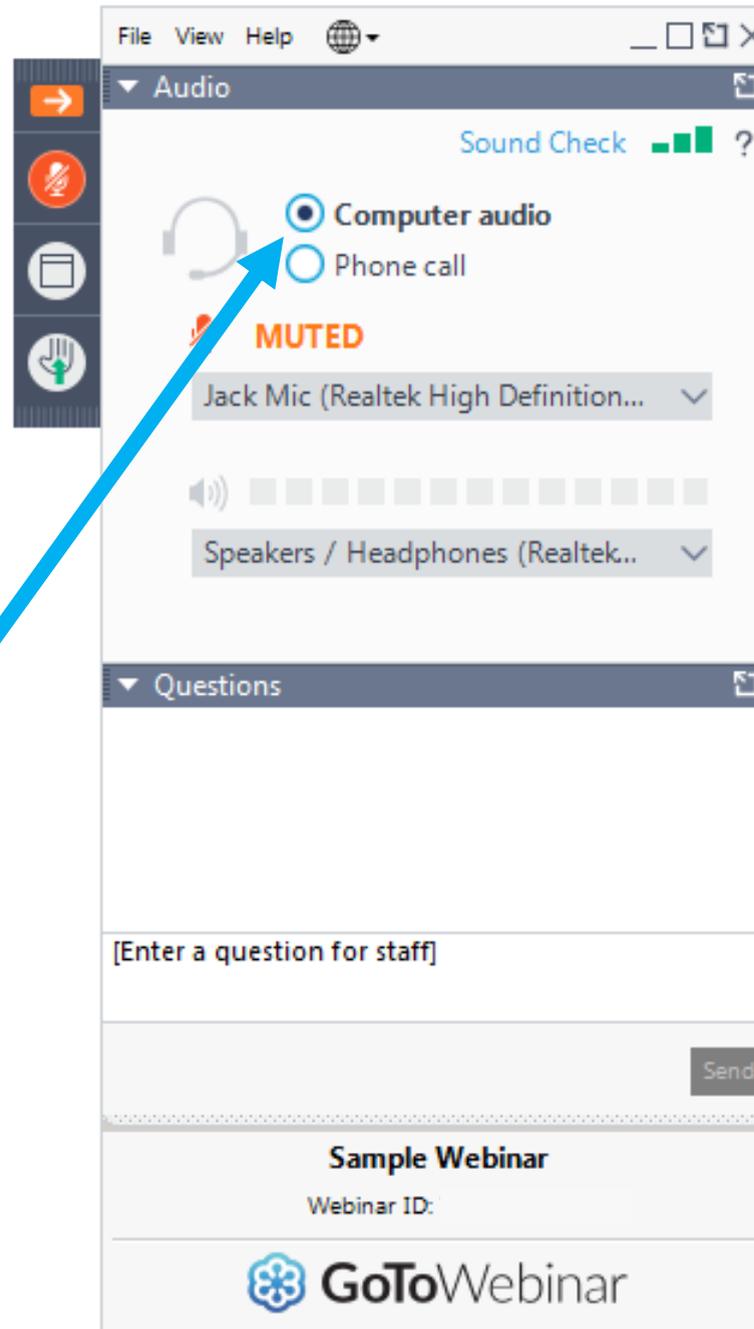
# Tips for Participating in today's Webinar

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

Use the "Raise Your Hand" button to indicate your response to Agree/Disagree and Y/N questions.

If you are using your telephone:

- Select "Phone Call" 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. We'll answer them at the end of the presentation.



## Learning Objectives

- Understand the latest changes to the ENERGY STAR Certified Homes Program.
- Understand when to apply Revision 09 to ENERGY STAR homes.
- Get your questions answered!



## Agenda

- 12:00**     **Welcome**
- 12:05**     **ENERGY STAR Revision 09 Overview**  
Dean Gamble, EPA
- 12:30**     **Q&A**
- 12:45**     **Adjourn**

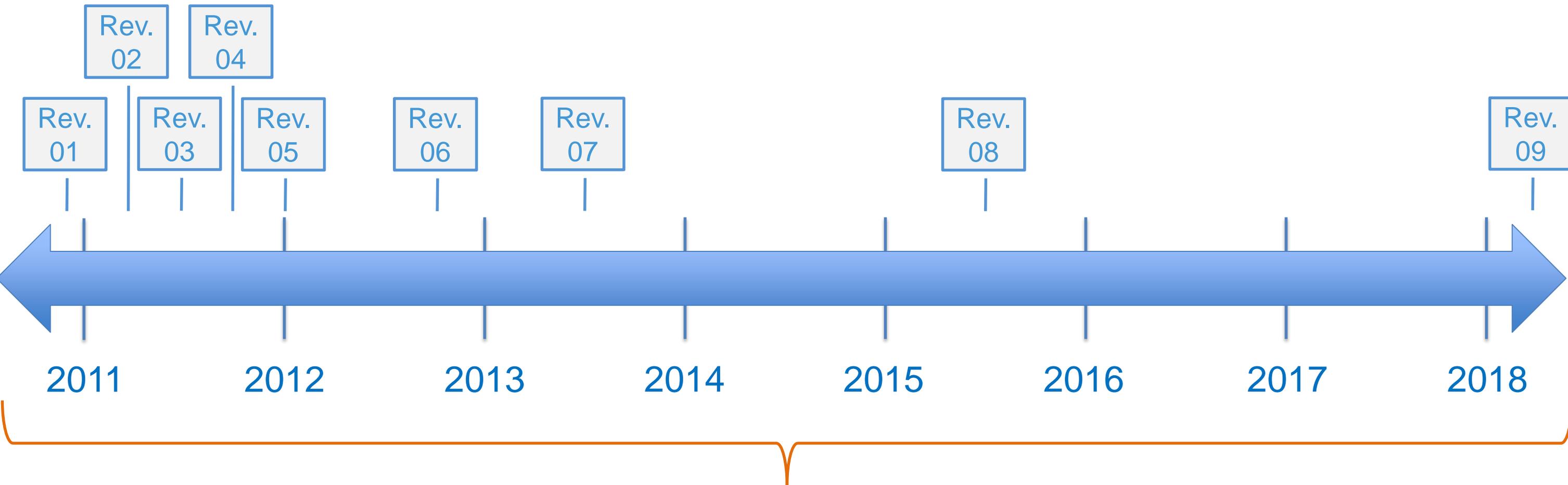


## What is a Revision?

- 1 It clarifies
- 2 It simplifies
- 3 It improves



## What is a Revision?





## Rev. 09 It's Fine.

- No new checklists.
- No new checklist items.
- No fewer checklist items.
- No fewer checklists.
- Just modifications to a handful of existing checklist items.
- Backwards compatible  
(i.e., Rev. 08 HVAC Design Report can be used for homes certified under Rev. 09)



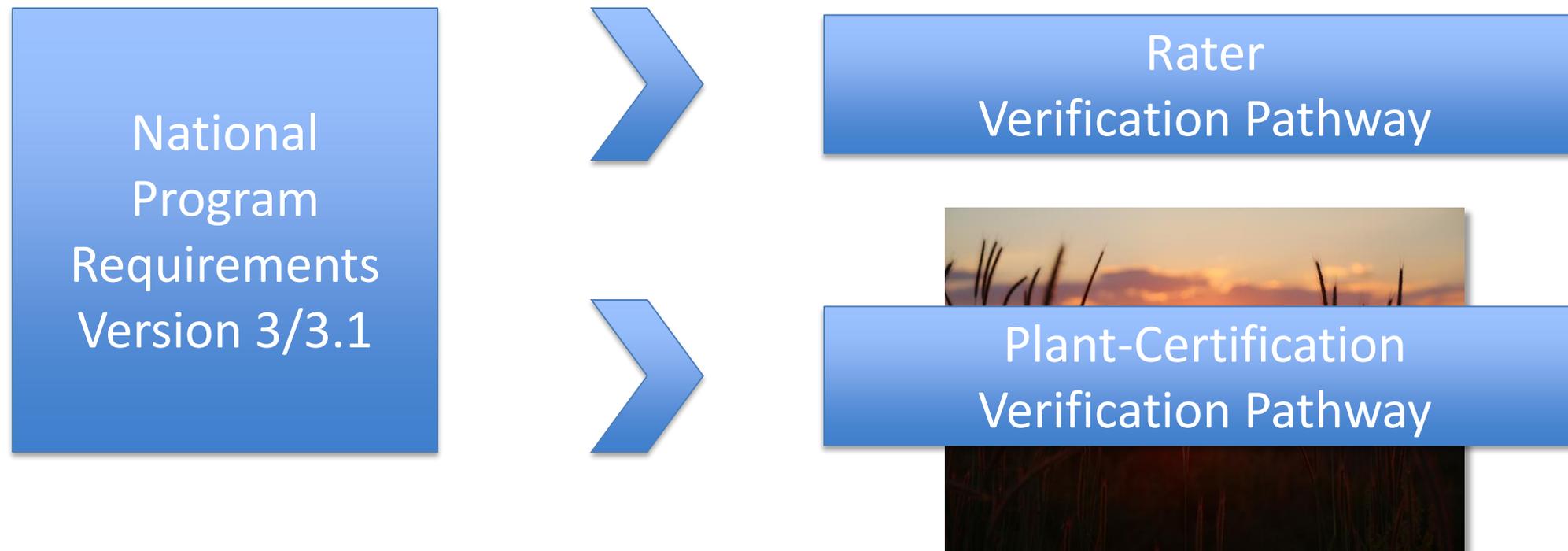
## #1. 4- and 5-story building eligibility requirements

- Criteria related to heating, cooling, and hot water systems have been removed from the prerequisite eligibility requirements for four and five story buildings.
- Footnote 5 of the Version 3 / 3.1 National Program Requirements has been revised to recommend that centralized heating, cooling, and hot water systems be modeled using the RESNET Guidelines for Multifamily Ratings.



## #2. Sun-setting of plant-certification path for modular homes

- Only the Rater-verification pathway has been retained.
- Program requirements has been updated to reflect this and include a footnote defining a modular home.





### #3. Required rating and registration with Verification Oversight Org. (VOO)

- While previously implied, we now explicitly require homes to receive a rating and be registered with an EPA-approved VOO.



## #4. Revised Effective Date section of National Program Requirements

- The Implementation Timeline tables have been revised for clarity.
- Includes information about both the applicable Version and Revision.

State	Applicable to Homes with the Following Permit Date
MA	On or after 01/01/2015
DC, IL, MD, RI	On or after 04/01/2015 (except for Calvert County and St. Mary's County in MD, for which the applicable permit date is on or after 07/01/2015)
IA	On or after 06/01/2015
DE	On or after 12/01/2015
MT,OR, WA	On or after 01/01/2016
MN, VT	On or after 04/01/2016
NV	On or after 07/01/2016
NJ	On or after 04/01/2017
TX	On or after 10/01/2017

State / Territory	Homes Permitted <sup>14</sup> On or After This Date Must Meet the Adjacent Version & Revision	Version	Revision <sup>15</sup>
AL, AK, AZ, AR, CO, GA, IN, ID, KS, KY, LA, ME, MS, MO, NE, NH, NM, NC, ND, OH, OK, PA, SC, SD, TN, UT, VA, WV, WI, WY	07-01-2016	National v3	Rev. 08
	01-01-2019	National v3	Rev. 09
DC, DE, IA, IL, MA, MD, MN, MT, RI, VT	07-01-2016	National v3.1	Rev. 08
	01-01-2019	National v3.1	Rev. 09
NV	07-01-2016	National v3	Rev. 08
	10-01-2016	National v3.1	Rev. 08
	01-01-2019	National v3.1	Rev. 09
MI, NJ	07-01-2016	National v3	Rev. 08
	04-01-2017	National v3.1	Rev. 08
	01-01-2019	National v3.1	Rev. 09



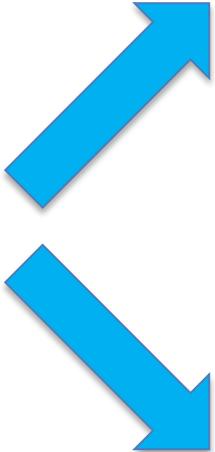
## #5. Rater Design Review Checklist and Rater Field Checklist separated

- The National Rater Design Review and Field Checklists have been separated into their own individual documents:

**Rater Design Review Checklist**  
ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 08)

**Rater Field Checklist**  
ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 08)

Home Address: _____	City: _____	State: _____	Permit Date: _____
<b>Thermal Enclosure System</b>	<b>Must Correct</b>	<b>Builder Verified<sup>1</sup></b>	<b>Rater Verified<sup>2</sup></b> <b>N/A<sup>3</sup></b>
<b>1. High-Performance Fenestration &amp; Insulation</b>			
1.1 Fenestration meets or exceeds levels specified in Item 2.1 of the Rater Design Review Checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -



**National Rater Design Review Checklist**  
ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 09)

Home Address: _____	City: _____	State: _____	Permit Date: _____
<b>1. Partnership Status</b>	<b>Must Correct</b>	<b>Rater<sup>1</sup> Verified</b>	
1.1 Rater has verified that builder is an ENERGY STAR partner using <a href="http://energystar.gov/partnerlocator">energystar.gov/partnerlocator</a>	<input type="checkbox"/>	<input type="checkbox"/>	

**National Rater Field Checklist**  
ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 09)

Home Address: _____	City: _____	State: _____	Permit Date: _____
<b>Thermal Enclosure System</b>	<b>Must Correct</b>	<b>Builder Verified<sup>1</sup></b>	<b>Rater Verified<sup>2</sup></b> <b>N/A<sup>3</sup></b>
<b>1. High-Performance Fenestration &amp; Insulation</b>			
1.1 Fenestration meets or exceeds specification in Item 2.1 of the National Rater Design Review Checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -



## #6. Low-end bedroom pressure-balancing limit specified

- A low-end bedroom pressure-balancing limit has been specified; this was ambiguous before Rev. 09.
- Low-end limit is -3 Pa, or -5 Pa for bedrooms with a design airflow  $\geq 150$  CFM.

### Old Policy

< 150 CFM: ? to +3 Pa

$\geq 150$  CFM: ? to +5 Pa

### New Policy

< 150 CFM: -3 to +3 Pa

$\geq 150$  CFM: -5 to +5 Pa

- Footnote has clarified door configurations during testing:
  - Doors separating bedrooms from the main body of the house shall be closed (e.g., a door between a bedroom and a hallway)
  - Doors to rooms that can only be entered from the bedroom shall be open (e.g., a closet, a bathroom)

## #7. Alternative compliance option added for filter access in attics

### Old Policy

HVAC filters located in the attic are considered accessible if drop-down stairs provide access to attic and a permanently installed walkway has been provided between the attic access location and the filter...

### New Policy

...or the filter location:

- Enables arm-length access from a portable ladder without the need to step into the attic, AND,
- The ceiling height where access is provided  $\leq 12$  ft.





## #8. Document retention period of three years specified in HVAC-C

- While previously ambiguous, a document retention period of **3 years** has been specified for the HVAC contractor to retain their completed HVAC Commissioning Checklists.
- This ensures that completed checklists are available for quality assurance activities.



# #9. Increased tolerance for conditioned floor area on HVAC Design Report

## Old Policy

0 ft<sup>2</sup> smaller - 300 ft<sup>2</sup> larger than the rated home

## New Policy

100 ft<sup>2</sup> smaller - 300 ft<sup>2</sup> larger than the rated home



Rated Home



HVAC Design Home



## #10. Increased tolerance for window area on HVAC Design Report

- The low-end limit of window area used in the loads, relative to the rated home, was lowered from 0 to 15 sq. ft.
- In addition, a secondary metric was added for homes with a large amount of window area.

### Old Policy

Difference in window area: 0  
ft<sup>2</sup> smaller to 60 ft<sup>2</sup> larger

### New Policy

Difference in window area:  
15 ft<sup>2</sup> smaller to 60 ft<sup>2</sup> larger

Or, for homes with

> 500 ft<sup>2</sup> of window area:

Difference in window area:  
3% smaller to 12% larger



## #11. Increased tolerance for furnace sizing on HVAC Design Report

- The heating sizing limit for furnaces paired with cooling increased.
- No changes to the cooling sizing limits.

### Old Policy

Recommended: 100 - 140%

Allowed: 100 - 200%

### New Policy

Recommended: 100 - 140%

Allowed: 100 - 400%



## #12. Clarification on definition of mini-split / multi-split system

- The definition of a mini-split / multi-split system has been revised to state that the length of the duct system is not a determinant for meeting this definition.
- The implication is that even a mini-split with a longer duct run would be exempted from most of the HVAC Design Report and from the HVAC Commissioning Checklist.



## #13. ENERGY STAR Reference Design updates

### Adjustments to ENERGY STAR Reference Design

Applies To	Measure	Old Value	New Value	Approx. ERI Impact
National v3.1: CZ 3 Only	Furnace Efficiency	90 AFUE	80 AFUE	~2-3



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Applies To	Measure	Old Value	New Value	Approx. ERI Impact
National v3.1: CZ 3 Only	Furnace Efficiency	90 AFUE	80 AFUE	~2-3
National v3.1: All CZ's FL v3.1: All CZ's	Size Adjustment Factor	0.083	0	~0-2



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Applies To		Measure	Old Value	New Value	Approx. ERI Impact
National v3.1:	CZ 3 Only	Furnace Efficiency	90 AFUE	80 AFUE	~2-3
National v3.1: FL v3.1:	All CZ's All CZ's	Size Adjustment Factor	0.083	0	~0-2
National v3: National v3.1: FL v3.1:	All CZ's All CZ's All CZ's	Water Heater Efficiency, when Rated Home has instant gas water heater	40 gal, 0.61 EF	50 gal, 0.59 EF	~1



**Rev. 09**

**It's Fine.**



## When to apply Revision 09

- You're free to apply Revision 09 to any home being certified.
- However, homes permitted on or after 1/1/2019 must be certified using Revision 09.
- Homes certified under Rev. 09 are allowed to use either Rev. 08 or Rev. 09 of the National HVAC Design Report.



# Access the Revision 09 Documents

Visit the [Program Requirements page](#) to download Checklists for the jurisdictions that you are working in.

Visit the [Policy Changes and Clarifications page](#) to view Revision 09 highlights, and detailed summaries of edits made to each program document.



## Q&A

Please type your questions into the Questions box to be read aloud and addressed.



The screenshot shows a GoToWebinar interface with two main sections: 'Audio' and 'Questions'. The 'Audio' section includes a 'Sound Check' indicator, radio buttons for 'Computer audio' (selected) and 'Phone call', a 'MUTED' status with a microphone icon, a dropdown menu for 'Jack Mic (Realtek High Definition...)', a volume slider, and a dropdown menu for 'Speakers / Headphones (Realtek...)'. The 'Questions' section features a large text input area with the placeholder text '[Enter a question for staff]' and a 'Send' button. At the bottom, the interface displays 'Sample Webinar' with 'Webinar ID: 796-134-563' and the 'GoToWebinar' logo.



# ENERGY STAR Certified Homes

## Web:

Main: [www.energystar.gov/newhomespartners](http://www.energystar.gov/newhomespartners)  
Technical: [www.energystar.gov/newhomesrequirements](http://www.energystar.gov/newhomesrequirements)  
Training: [www.energystar.gov/newhomestraining](http://www.energystar.gov/newhomestraining)  
Products: [www.energystar.gov/products](http://www.energystar.gov/products)

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