

**Public Meeting and Hearing on the
U.S. Department of Energy (DOE)
Draft Environmental Impact Statement (DEIS)
for Proposed Energy Conservation Standards
for Manufactured Housing**

U.S. DEPARTMENT OF
ENERGY

Office of
ENERGY EFFICIENCY &
RENEWABLE ENERGY

*Public webinar
January 26, 2022
5 pm Eastern Standard Time (EST)*



Agenda for the public meeting and hearing on the draft EIS

Time	Topic
5:00-5:30 pm EST	Welcome and presentation about the draft EIS
	<ol style="list-style-type: none">1. Meeting overview2. Comments on the draft EIS and timeline3. Purpose and need for the proposed action4. Proposed action and alternatives5. Environmental resource areas evaluated and potential consequences6. Measures to mitigate potential adverse impacts7. Questions and answers about the draft EIS
5:30 pm EST	Public hearing to receive formal comments on the draft EIS
	<i>We will start with pre-registered speakers then move to those who ask during this meeting to comment.</i>
After the hearing	Additional opportunity for questions and answers about the draft EIS
	<i>The meeting will conclude when formal comments have been received and questions addressed. This meeting is being recorded. The draft EIS comment period continues to Feb. 28, 2022 – please provide your comments by this date.</i>

Overview of this public meeting on the draft EIS



- DOE has prepared a draft environmental impact statement to assess **potential impacts to the human environment** of proposed energy conservation standards for manufactured housing
- We are in the **public comment** phase for the draft EIS, in accordance with the National Environmental Policy Act (NEPA) process
- The purpose of this public meeting is to:
 - Share information about the draft EIS
 - Welcome questions about the draft EIS and provide answers (Q&A)
 - Hold a public hearing to provide tribal governments, regulatory agencies, and the public an opportunity to **comment on the draft EIS**

Comments on the draft EIS

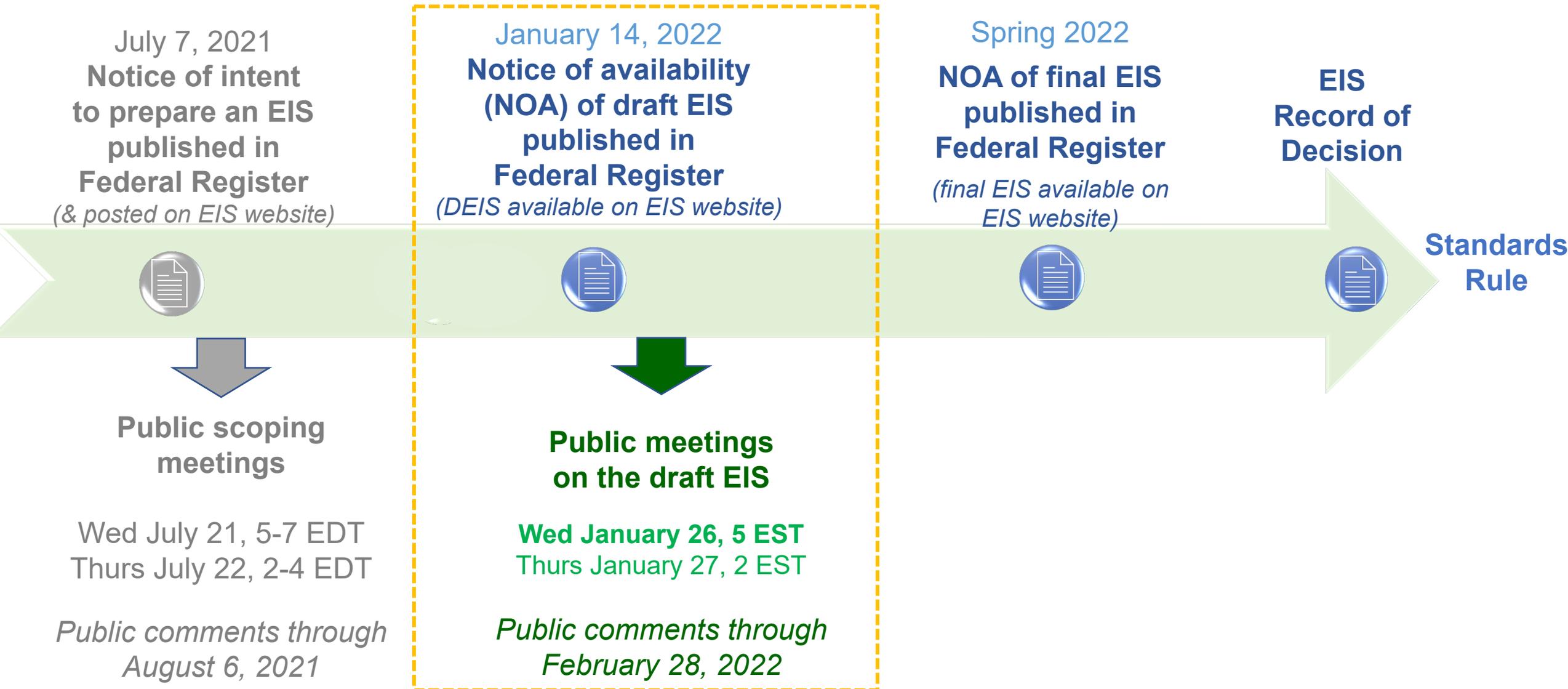


- Comments on the draft EIS will be considered in preparing the final EIS and the Record of Decision under NEPA – and they will inform the rulemaking process
- DOE welcomes comments on all aspects of the draft EIS, including but not limited to:
 - Purpose and need
 - Proposed action and alternatives
 - Analysis of potential impacts
 - Proposed mitigation
- DOE will hear formal comments today and invites written comments through Feb. 28

Please note: We are *not* taking comments on the proposed rule for energy conservation standards during this meeting or otherwise as part of commenting on the DEIS. The NEPA process is separate from (and informs) the rulemaking process. Any comments on the proposed rule (specifically on how the analyses and results presented in the draft EIS should inform DOE's final rule) can be provided through the rulemaking docket website:

<https://www.regulations.gov/document/EERE-2009-BT-BC-0021-1642>.

EIS timeline and opportunities for public comment



EIS website: <https://ecs-mh.evs.anl.gov>

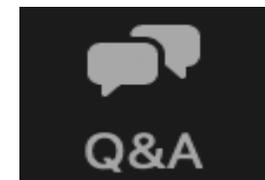


Inviting your questions and comments today

- Questions about the draft EIS

We will answer as many questions as we can until the hearing, and we will address the remainder after the hearing

- to ask a question about the draft EIS, please use the “Q&A” icon and type your question at any time (*during the presentation, hearing, or Q&A session*)



- Comments on the draft EIS

The public **hearing** on the draft EIS will begin at 5:30 pm Eastern time (ET)

- if you wish to enter a comment to be read aloud on your behalf, please use the “Q&A” icon and type “**Formal comment:**” then your name (and organization, if any) and your comment

Purpose and need for the proposed action



- DOE's **purpose and need** for the proposed action is to establish energy conservation standards for manufactured housing (MH), as **required** by the Energy Independence and Security Act of 2007 (EISA)
 - Congress directed DOE to establish these standards based on the latest version of the International Energy Conservation Code (IECC), subject to cost-effectiveness considerations
- In addition to fulfilling this **statutory mandate**, the proposed standards would:
 - ✓ Reduce national **energy consumption**: residential sector uses ~20 quadrillion Btus (*quads*)
 - ✓ Reduce **energy costs** for owners of manufactured homes: more \$/ft² than other homes, higher E burden
 - ✓ Reduce **emissions of greenhouse gases** & other pollutants (electricity production): climate & air quality
 - ✓ Protect **public health and safety**: energy insecurity is higher in manufactured home households

DOE's proposed action and alternatives

General Alternative	Detailed Alternative	Tier and Basis		Level of Energy Efficiency
A: Tiered standards based on price	A1	1	Price \$63,000 or less	Corresponding to ~\$750 price increase
		2	More than \$63,000	Based on 2021 IECC, R-20+5 insulation
	A2	1	Price \$63,000 or less	Corresponding to ~\$750 price increase
		2	More than \$63,000	Based on 2021 IECC except R-21 insulation
B: Tiered standards based on size	B1	1	Single-section home	Corresponding to ~\$750 price increase
		2	Multi-section home	Based on 2021 IECC, R-20+5 insulation
	B2	1	Single-section home	Corresponding to ~\$750 price increase
		2	Multi-section home	Based on 2021 IECC except R-21 insulation
C: Untiered standards	C1	None		Based on 2021 IECC, R-20+5 insulation
	C2	None		Based on 2021 IECC except R-21 insulation
D: No action	D	None		No change from existing HUD Code

Resource areas evaluated in the draft EIS



Energy resources

Air resources

Health and safety

Socioeconomic resources

Environmental justice

Emissions of greenhouse gases, other air pollutants

Climate change

Indoor air quality

The draft EIS highlights many analyses developed to support the rulemaking process, as presented in DOE's August 2021 supplemental notice of proposed rulemaking and its technical support document, and DOE's October 2021 notice of data availability of updated inputs and corresponding analyses.

Estimated impacts, 30-year home lifetime



Energy resources

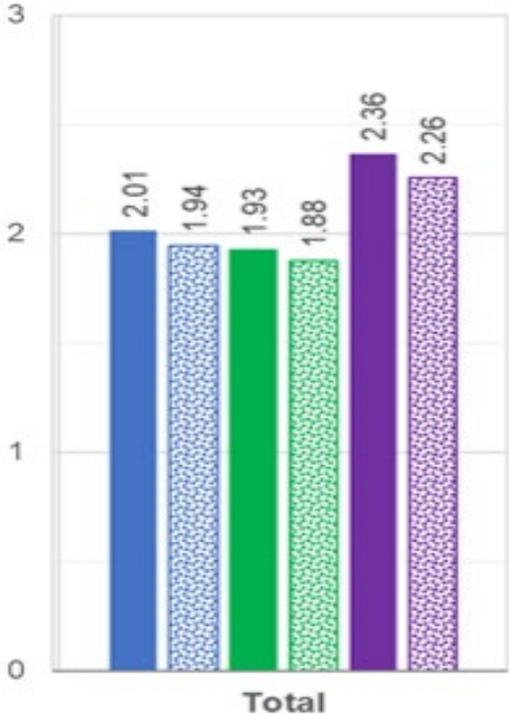
Conserve ~2 quadrillion Btus (quads) *(alternatives are within 0.5 quads of each other)*
Full IECC standards (no tier, C) **save more energy** than those tiered by price or size (A-B)

Air resources: emissions

Avoid ~100 million metric tons GHG *also other emissions, reducing climate & air quality impacts*
Full IECC standards (no tiers, C) **reduce emissions more** than those tiered by price or size (A-B)

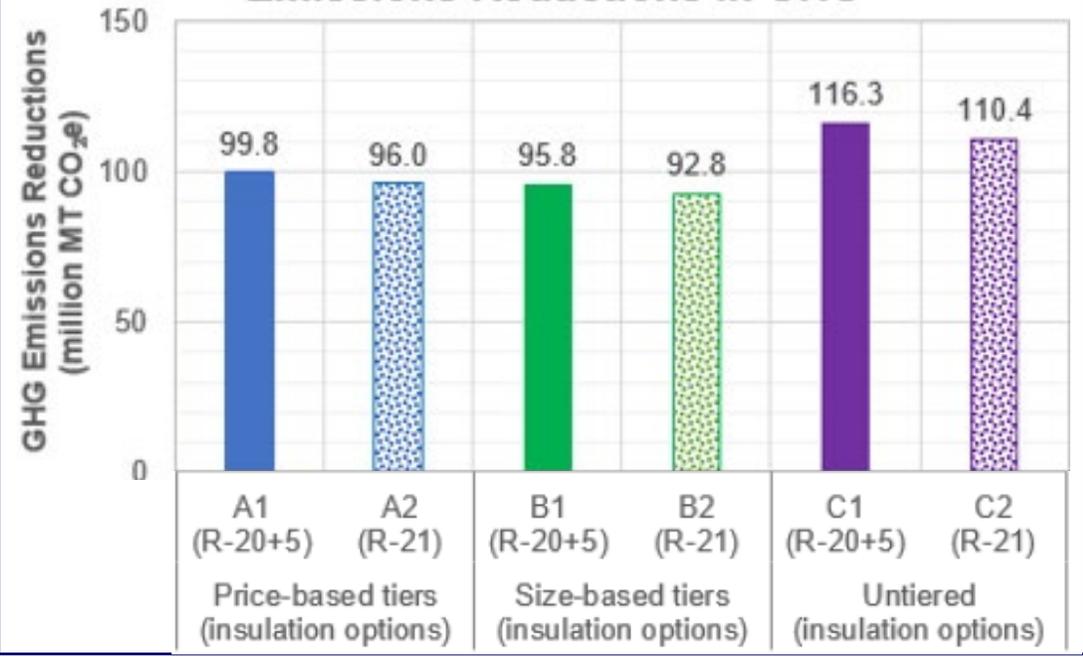
Energy Savings

30-year energy savings (quads)



- A1 (price-based tiers, R-20+5 insulation)
- A2 (price-based tiers, R-21 insulation)
- B1 (size-based tiers, R-20+5 insulation)
- B2 (size-based tiers, R-21 insulation)
- C1 (untiered, R-20+5 insulation)
- C2 (untiered, R-21 insulation)

Reduced GHG Emissions (CO₂ equivalents)



Estimated impacts, 30-year home lifetime

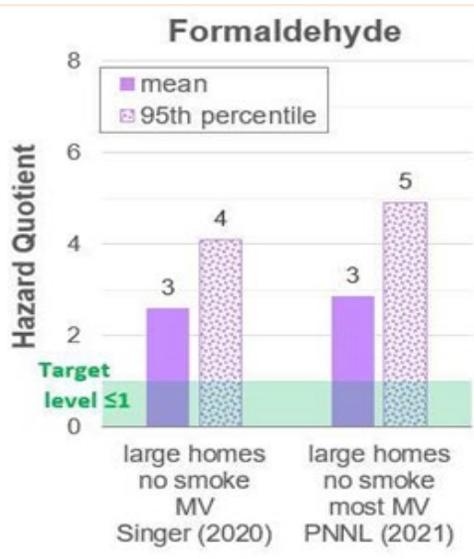


Indoor air quality

Health and safety

- Better indoor protection from outdoor air pollutants, including wildfire smoke (*30% more protection than current standards*)
- More airtight homes would have **higher indoor air concentrations of pollutants emitted indoors**, increasing the existing potential for health effects, particularly when ventilation is not routinely used

(changes in indoor air quality & associated potential for health effects: similar across action alternatives)



Data for air pollutants in homes indicate a **potential exists for noncancer effects under current conditions**

A hazard quotient of 1 or less indicates the exposure is unlikely to cause an adverse effect

(“MV” means mechanically ventilated home)

Estimated impacts, 30-year home lifetime (2020\$)



Socioeconomic resources

Consumers: National savings reach several billion dollars *(net present value)*

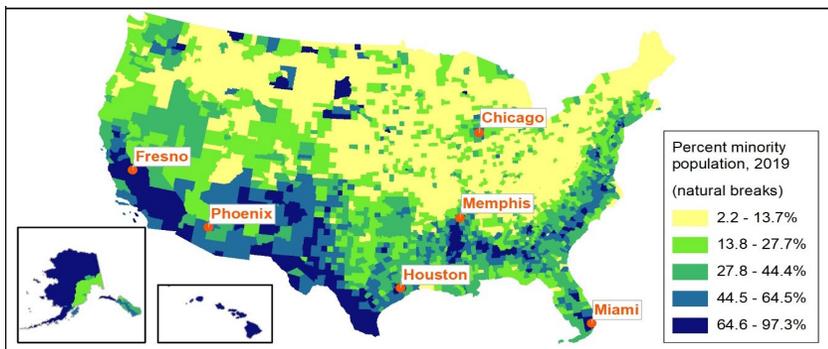
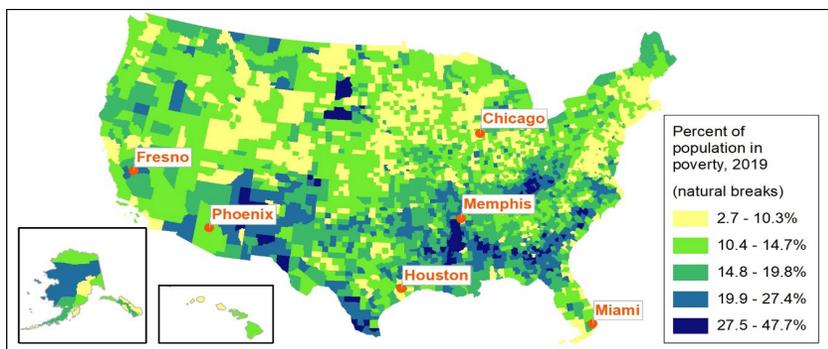
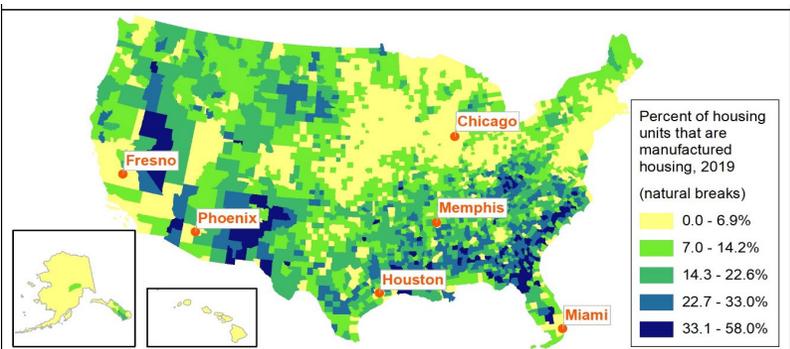
- Lifecycle savings for home: >\$1,600-\$3,700; higher savings are w/relaxed insulation
- Purchase price increase: ~\$750 for single-section or \$63,000 and less
- Payback period: <4 yrs for single-section or \$63,000 and less *(8.5-11 yrs for others)*

Manufacturers: Industry net present value depends on scenario

- Grows ~2-3% with gross margin %, drops nearly 2-3% with preserve operating profit markup

Environmental justice

- Lower upfront cost (~1%) for single-section or \$63,000 & less but fewer E conservation benefits
- Higher upfront cost (>5-7%) for full IECC, no tiers – but all have full E conservation benefits



Measures to mitigate potential adverse impacts



Mitigation Measures	Resource Areas Addressed
<p>Promote installation of energy-efficient fans for ventilation</p> <p>Advance research and stakeholder engagement to increase implementation of energy-efficient ventilation</p> <p>Provide training and technical assistance to manufacturers</p>	<p>Indoor air quality and health, socioeconomics, and environmental justice</p>
<p>Promote improved indoor air quality and environmental justice through efficiency labeling and informational resources about healthy homes and financing options</p> <p>Promote Healthy Homes Principles</p> <p>Promote efficiency labeling</p>	<p>Indoor air quality and health, socioeconomics, and environmental justice</p>
<p>Promote financial mechanisms to offset first costs through incentives, assistance, and informational resources</p> <p>Promote financial incentives</p> <p>Promote financial assistance</p> <p>Increase awareness of financing options</p>	<p>Socioeconomics and environmental justice</p>
<p>Promote awareness of DOE's energy justice initiative</p>	<p>Environmental justice</p>

Questions and answers about the draft EIS



To ask about the draft EIS, please click on the Q&A icon and type your question.

The Public Hearing will begin at 5:30 pm Eastern time

We now invite your comments on the draft EIS

Providing oral comments

- Each person will have 5 minutes to present their comment(s) during the public hearing
- We will begin with pre-registered speakers
- If you have not pre-registered and would like to provide an oral comment, the two options are:



Raise Hand

To speak, click "raise your hand" and when we call your name, please click "unmute" to state your comment



Q&A

To have your comment read aloud on your behalf, please click "Q&A" and type "Formal comment:" then your name (and organization if any) and your comment – and indicate you would us to read it aloud for you

Providing written comments

- Instructions for submitting written comments are provided on the EIS website:

<https://ecs-mh.evs.anl.gov>



There are many opportunities to improve the energy efficiency of manufactured homes. | Photo courtesy of @iStockphoto.com/Marje

Submit Comments

Please use the [Comment Form](#) to submit comments on the draft EIS

Energy Conservation Manufactured Housing

The U.S. Department of Energy (DOE) Renewable Energy (EERE) has prepared a statement (EIS) for proposed energy conservation measures for manufactured housing.

Background

The link to the comment form is at the top left and also in the button here:

Submitting Written Comments

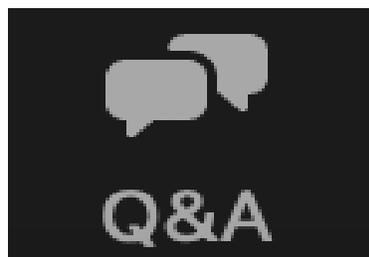
The preferred method for submission of written comments is through this website's comment form. To submit an online comment on the draft EIS, please use the button below.

[Comment Form](#)

Thank you for your inputs, they are very important to the EIS process! The comment period continues through **Feb 28**.

To ask a question about the draft EIS for the Q&A after the hearing, please use the Q&A icon to enter your question. 15

Questions and answers about the draft EIS



Please use the Q&A icon to enter your question about the draft EIS

Close of this public meeting on the draft EIS for proposed energy conservation standards



- **Thank you!** for participating today, and for providing your comments on the draft EIS
- We will hold a second public meeting and hearing tomorrow, 2-4 pm EST
(see the EIS website)
- In preparing the final EIS, we will equally consider **oral comments** relevant to the EIS that are presented in the public hearings today and tomorrow and **written comments** relevant to the EIS that are submitted during the comment period
- Reminder: Written comments are to be submitted by **February 28, 2022**
- Instructions for providing written comments are available on the EIS website:
<https://ecs-mh.evs.anl.gov>