

Better Buildings Residential Network
Peer Exchange Call Series

The Future of Investments in Residential Energy Efficiency and What it Means Now

October 14, 2021



#### **Agenda and Ground Rules**

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers
  - Lowell Ungar, ACEEE
  - Kara Saul Rinaldi, Building Performance Association (BPA/ AnnDyl)
  - Ben Evans, U.S. Green Building Council
- Open Discussion
- Closing Poll and Announcements

#### **Ground Rules:**

- 1. Sales of services and commercial messages are not appropriate during Peer Exchange Calls.
- 2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.





#### Better Buildings Residential Network

#### Join the Network

#### **Member Benefits:**

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

#### **Commitment:**

 Members only need to provide one number: their organization's number of residential energy upgrades per year, or equivalent.

#### **Upcoming Calls (2<sup>nd</sup> & 4<sup>th</sup> Thursdays):**

- 10/28: It's Not About Energy, It's About Comfort Addressing the Reality?
- 11/18: Remodeling The Biggest Untapped Efficiency Opportunity?

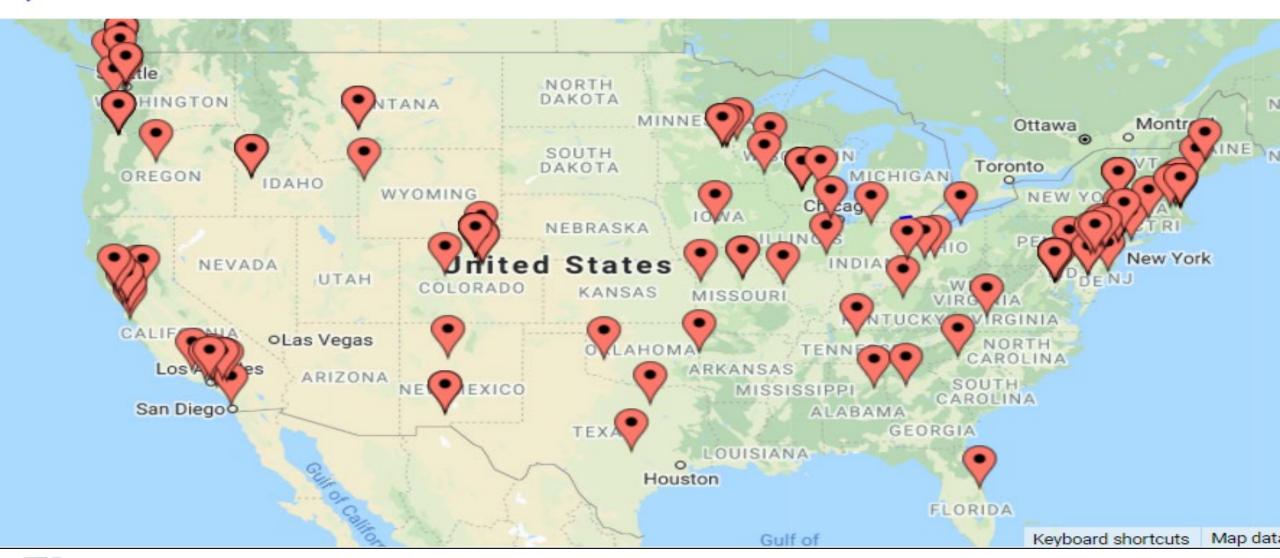
Peer Exchange Call summaries are posted on the Better Buildings website a few weeks after the call

For more information or to join, for no cost, email <u>bbresidentialnetwork@ee.doe.gov</u>, or go to <u>energy.gov/eere/bbrn & click Join</u>





#### **Call Attendee Locations**





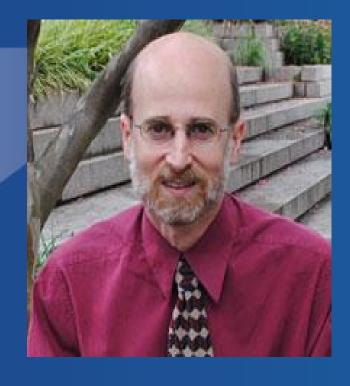


### **Opening Poll**

- What is your organization's experience or familiarity with the current budget and infrastructure legislation?
  - Very experienced/familiar
  - Some experience/familiarity
  - Limited experience/familiarity
  - No experience/familiarity
  - Not applicable







Lowell Ungar ACEEE



#### F.

# Proposed Federal Investment in Home Efficiency

\$50+ Billion in 15 Minutes or Less

Better Buildings Residential Network October 14, 2021

Lowell Ungar Director of Federal Policy





#### **American Council for an Energy-Efficient Economy**

- Nonprofit 501(c)(3)
- Research: buildings, industry, transportation, health & behavior
- Policy: US federal, state, utilities & local
- Outreach: conferences and publications
- Funding from foundations, contracts, government grants & conferences

aceee.org @ACEEEdc



#### The Bills

#### **Appropriations Bill**

Passed House; waiting

#### **Bipartisan Infrastructure Deal (BID)**

Passed Senate; waiting

#### **Reconciliation Bill**

Passed House; under negotiation





## **Funding Areas**

- Home energy efficiency
  - Home energy retrofits
  - Heat pumps + electrification
  - New homes
- Broader programs that could include home EE
  - Affordable housing
  - Flexible programs
  - Utility programs



## Home Energy Retrofits

- Low-income weatherization (WAP)
  - \$3.5 billion in BID and \$3.5 in reconciliation
  - Also \$0.5 for lead, health, and safety work in WAP homes
- Subsidized multifamily (GREAHT)
  - \$6 billion in reconciliation for HUD
- Rebates and training (HOPE for HOMES)
  - \$9 billion in reconciliation





## Heat pumps + Electrification

- Zero Emission Homes
  - \$9 billion in reconciliation
- Expand 25C tax credit
  - In reconciliation







#### **New Homes**

- Expand 45L tax credit
  - In reconciliation: \$2,500 for Energy Star
  - Adds \$5,000 for Zero Energy Ready homes
- Building energy codes funding
  - \$0.225 billion in BID for implementation
  - \$0.3 billion in reconciliation for adoption





## Affordable Housing (HUD)

#### **EE** eligible but no requirements

- Public housing
  - \$80 billion in reconciliation
- Housing Investment Fund (CDFIs)
  - \$9.6 billion in reconciliation
- Indian Housing
  - \$0.9 billion in reconciliation
- Unlocking Possibilities
  - \$4.5 billion in reconciliation
- Low Income Housing Tax Credit expansion







## Flexible Programs (include homes)

- State Energy Program
  - \$0.5 billion in reconciliation
- Energy Efficiency Conservation Block Grants
  - \$0.55 billion in BID and \$5 in reconciliation
- Community Development Block Grants (HUD)
  - \$8.5 billion in reconciliation + \$1 B for CDBG-Disaster Recovery
- Greenhouse Gas Reduction Fund (climate banks)
  - \$27.5 billion in reconciliation
- Environmental and Climate Justice Block Grants
  - \$5 billion in reconciliation
- Energy Communities
  - \$2 billion in reconciliation





## **Utility Programs**

- Clean Electricity Performance Program
  - Efficiency eligible use of funds, but does not get payment
- Clean Energy Repowering (rural utilities)
  - Efficiency improvements eligible (\$9.7 billion in reconciliation)
  - Also \$0.2 billion for Rural Energy Savings Program





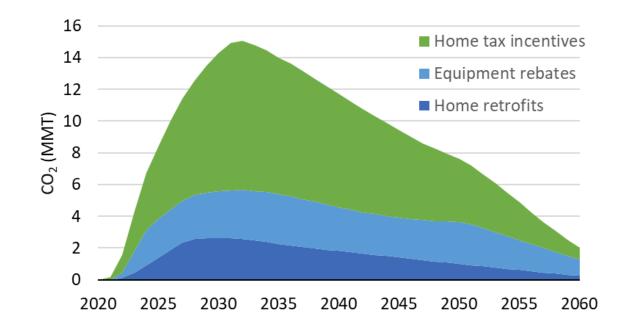
## Implementation

- DOE (and HUD, EPA, IRS, ...) scramble: rulemaking, guidance, grant management, ...
  - Still lacking confirmed leaders, short staffed, and behind
- State and local governments scramble: implement programs
- Industry scrambles: scale up



## **Impacts**

- 360 MMT CO<sub>2</sub> emissions
- 440,000 added jobs
- \$5 billion net savings (PV of energy bills investments)







## Thank you!

#### **Upcoming ACEEE Conferences**

Energy Efficiency as a Resource	October 19-21 & 26-27, 2021	Virtual
Behavior, Energy, and Climate Change	November 8-10, 2021	Virtual
Hot Water Forum	March 21-23, 2022	Atlanta, GA
Energy Efficiency Finance Forum	May 23-25, 2022	White Plains, NY
Summer Study on Energy Efficiency in Buildings	August 20-26, 2022	Pacific Grove, CA

aceee.org/events







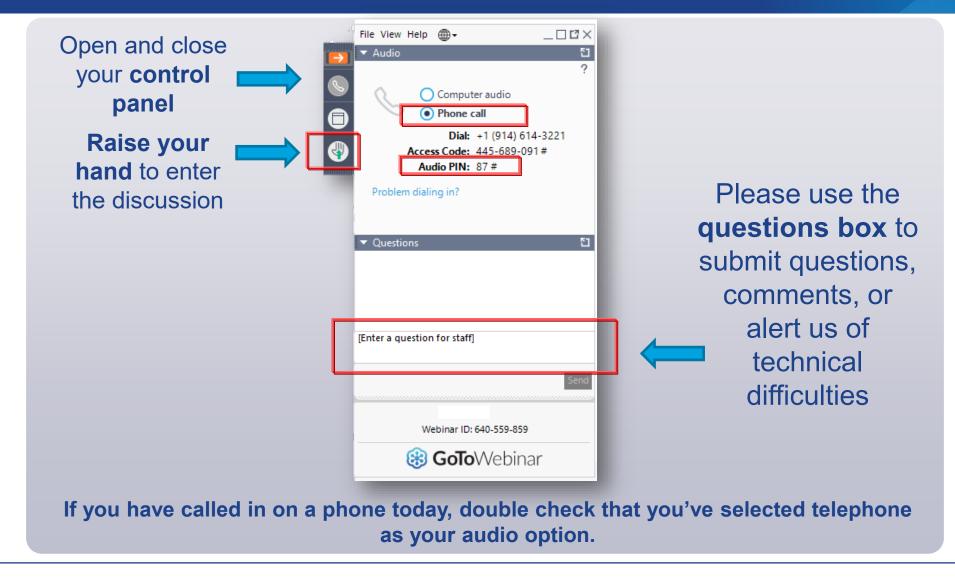








#### **Discussion: Share Your Questions**









Kara Saul Rinaldi
Building Performance Association (BPA/AnnDyl Policy Group)





## The Future of Investments in Residential Energy Efficiency and What it Means Now. Better Buildings Residential Network Presentation

Kara Saul Rinaldi

BPA Vice President of Government Affairs, Policy, and Programs

October 14, 2021







The Building Performance Association is a membership-driven 501(c)6 industry association dedicated to advancing the home and building performance industry. Built upon three decades of experience, the Association is well-positioned to provide industry support through key areas including advocacy, education, programs, networking, publications, and community.

We represent almost 10,000 members who work to deliver improved energy efficiency, health, safety, and environmental performance to people in their homes across the United States and Canada. For more information, please visit <a href="https://www.Building-Performance.org">www.Building-Performance.org</a>.





#### Residential Retrofit Policies

- ▶ Bipartisan Infrastructure Package WAP, SEP
- ▶ Budget Reconciliation HOPE for HOMES, 25C, 45L, other residential EE
- ► FY22 Appropriations BTO, RBI, WAP, SEP







## Bipartisan Infrastructure Package

	Appropriations	
Program	Bipartisan Infrastructure Package	Timeline
Weatherization Assistance Program (WAP)	\$3.5B	FY22 until expended
State Energy Program (SEP)	\$500M	FY22-26
EE Revolving Loan Fund (RLF) Capitalization Grants	\$250M	FY22 until expended
Energy Efficiency and Conservation Block Grant Program (EECBG)	\$550M	FY22 until expended
Low-Income Housing Energy Assistance Program (LIHEAP)	\$500M	FY22-26
Workforce, Education & Training programs	\$60M	FY22-26/until expended







## Budget Reconciliation - HOPE for HOMES

- House reconciliation package: HOPE for HOMES is included in House Energy & Commerce Budget Reconciliation package at a funding level of \$9 billion through 2031
  - ▶ \$8.5 billion in Home Owner Managing Energy Savings (HOMES) Rebates
  - \$500 million in Home On-line Performance-Based Energy Efficiency (HOPE) Contractor Training Grants
  - Reconciliation version: full legislative text of the standalone HOPE for HOMES bill cannot be included in the reconciliation package – much will be left to DOE in terms of implementation
  - Partial performance/prescriptive approach from standalone version is NOT included in reconciliation version
  - ▶ Instead, H4H is paired with a \$9 billion High-Efficiency Electric Home Rebate Program to provide homeowners rebates for electric systems/appliances. Part of the "Zero Emissions Homes Act" inclusion.
- ▶ The Senate has yet to release bill text, but HOPE for HOMES is expected to be included.





## Budget Reconciliation – Additional Residential EE Provisions

- Weatherization Assistance Program Funding
  - > \$3.5 billion to remain available until 2031.
  - > \$850 million must go to make dwelling units that are occupied by low-income persons weatherization-ready.

#### Codes

- > \$100 million for grants to assist state and local governments to adopt residential building codes that meet or exceed the 2021 International Energy Conservation Code.
- > \$200 million for grants to assist state and local governments to adopt: building energy codes for residential and commercial buildings that meet or exceed the zero energy provisions in the 2021 IECC, or an equivalent stretch code.

#### ► EECBG

\$5 billion, available until 2031, for the Energy Efficiency and Conservation Block Grant (EECBG) Program, which provides grants to State and local governments and Indian Tribes to implement energy audits and retrofits to reduce greenhouse gas emissions and improve energy efficiency in the building, transportation, and other sectors.







## Budget Reconciliation - 25C Tax Credit

- ► The House Ways & Means Committee has proposed to extend the 25C credit for ten years, through 2031
  - > Lifetime cap eliminated and replaced with an annual cap
  - Credit percentage increased from 10% to 30%, with a maximum value up to \$1,200
  - A 30% credit is available for home energy audits up to \$150
  - Qualified Energy Property includes:
    - Electric Heat Pumps and Electric Heat Pump Water Heaters
    - Central Air Conditioners
    - \* Natural Gas, Propane, or Oil Water Heaters, Furnaces, or Hot Water Boilers







## Budget Reconciliation – 45L Tax Credit

- The House Ways & Means Committee has proposed to extend and expand the 45L tax credit
  - > Extended through 2031 for units acquired after 2021
  - > \$2,500 for Energy Star Program Requirements
  - > \$5,000 for Zero Ready Home Certification
  - \$500 or \$1,000 available for Energy Star Multifamily New Construction National Program Requirements—increasing to \$2,500 or \$5,000 when construction meets prevailing wage requirements







## FY22 Appropriations

- DOE Residential Buildings Integration (RBI)
  - Funding proposed at \$60M (House) and \$72M (Senate)
  - President Biden requested \$72M in his FY22 Budget
- State Energy Program (SEP)
  - Funding proposed at \$70M (House) and \$70M (Senate)
  - > President Biden requested \$62.5M in his FY22 Budget
- Weatherization Assistance Program (WAP)
  - Funding proposed at \$375M (House) and \$375M (Senate)
  - President Biden requested \$390M in his FY22 Budget
- These figures are all in addition to funding that passed the Senate in the Bipartisan Infrastructure Package and awaits a vote in the House





## Thank you! Questions?

#### Kara Saul Rinaldi

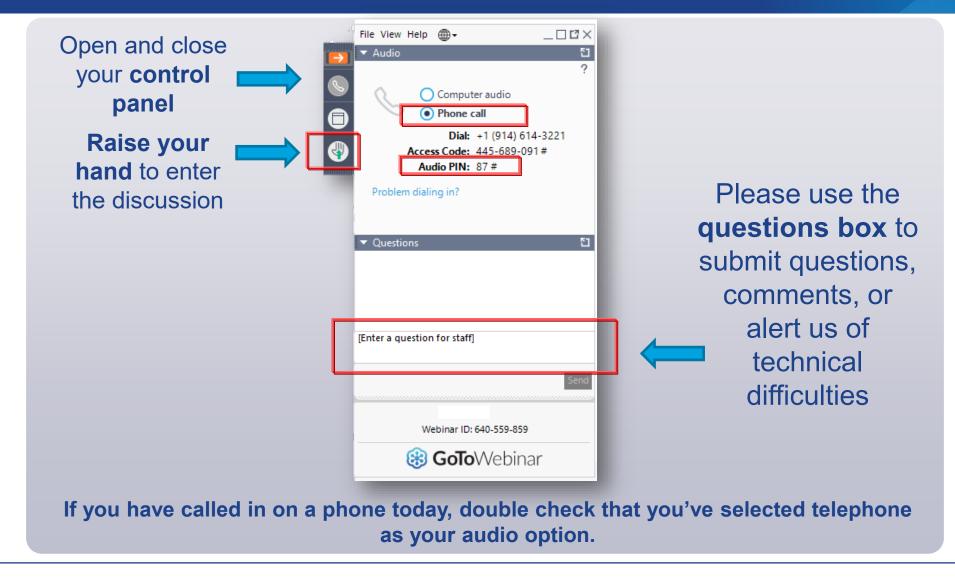
VP of Government Affairs, Policy, and Programs Building Performance Association

Kara.saul-rinaldi@building-performance.org





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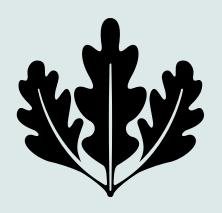






Ben Evans
U.S. Green Building Council





## **Ben Evans**

Federal Legislative Director U.S. Green Building Council

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#### **Federal Energy Efficiency Tax Incentives**

- Sec. 45L Credit New Home Construction
- Sec. 25C Credit Homeowner Efficiency Improvements
- Sec. 179D Deduction Commercial Building Improvements



- ➤ Long-overdue updates in both the Senate Finance Committee's Clean Energy for America Act and House Ways & Means Committee's GREEN Act included in House \$3.5T reconciliation package.
- > Goal is to overhaul existing incentives with long-term, multi-year extensions providing certainty for the market, modernized performance requirements and strengthened incentive levels.

Sec. 45L New Home Construction	Current Incentive	New Incentive (as proposed)
Credit Value	\$1,000-\$2,000 per unit	\$2,500 base tier, with higher tier of \$5,000. Adjusted annually for inflation.
Performance Requirement	50% improvement over 2006 IECC	Meet ENERGY STAR for base tier and DOE Zero Energy Ready for higher tier
Duration	Slated to expire 12/31/2021	10-year extension through 12/31/2031
Scope & Conditions	<ul> <li>Available only to multifamily projects of three stories are less under IECC.</li> <li>No wage requirements.</li> </ul>	<ul> <li>- Accessible for larger multifamily projects with change from IECC to ENERGY STAR/Net Zero Ready.</li> <li>- For new construction only, retrofits not allowed to take credit.</li> <li>- Senate bill requires prevailing wages for multi-family projects; House bill sharply reduces incentive for multifamily projects not meeting prevailing wage.</li> </ul>



Sec. 25C – Homeowner Improvements	Current Incentive	New Incentive (as proposed)
Credit Value	10% of eligible purchases up to \$500 lifetime limit, with lower caps on some products (e.g., max \$300 for central AC)	House bill - 30% of eligible purchases up to \$1,200 annually, with full amount available annually for most product categories (except windows and doors)  Senate bill - 30% up to \$1,500 annually with \$600 caps on most product categories except full \$1,500 allowed for envelope and \$800 for air source heat pumps.  Window capped at \$200 (ENERGY STAR)/\$600 (ENERGY STAR Most Efficient).  Both include adjustments for inflation.
Performance Requirement	Must meet 2009 IECC for envelope. For equipment, varies by product category, with static performance specs that don't evolve over time	For envelope, latest IECC. For equipment, highest CEE Tier (not Advanced) for most product categories, allowing performance requirement to automatically evolve. ENERGY STAR for windows/doors.



Sec. 25C – Homeowner Improvements (cont.)	Current Incentive	New Incentive (as proposed)
Duration	Slated to expire 12/31/2021	10-year extension through 12/31/2031
Qualifying Products	Envelope improvements, water heaters, heat pump water heaters, central AC, air source heat pumps, boilers, furnaces, windows, doors and skylights, roofing.	Minor changes. Roofing removed as qualifying category, and air barriers/duct sealing clarified as qualifying. House version adds home energy audits as qualifying. Senate adds AERC-certified window treatments, and moves ground source heat pumps under 25C (\$10,000 credit)



Sec. 179D Commercial Buildings	Current Incentive	New Incentive (as proposed)
Credit Value	\$1.80 per square foot	Sliding scale \$2.50 to \$5.00, adjusted annually for inflation.
Performance Requirement	50% improvement over latest DOE- determined ASHRAE standard. (This was updated in December 2020 legislation from 50% improvement over ASHRAE 90.1-2007)	Must exceed latest DOE-determined ASHRAE 90.1 by minimum of 25% to receive \$2.50, rising in 10-cent increments up to \$5.00 for each percentage point improvement over 90.1 up to 50%. OR existing buildings can get same deduction range by demonstrating 25%-50% energy use intensity reduction.



Sec. 179D Commercial Buildings (cont.)	Current Incentive	New Incentive (as proposed)
Duration	Made permanent in December 2020 legislation.	10-year modification through 12/31/2031, meaning these updates would expire 1/1/2032 without an extension.
Other		<ul> <li>Drops partial deductions &amp; interim lighting rule.</li> <li>Allows nonprofits and Indian tribes to use the deduction via allocation to project designer.</li> <li>Allows 90.1 "reference standard" to automatically evolve over time.</li> <li>Requires prevailing wages and apprenticeship program.</li> <li>Changes timing from commence construction to placed in service</li> </ul>

#### **Open Questions**

- How much time is needed between when new versions of ASHRAE
   90.1/ENERGY STAR/IECC/ZER are finalized and when they apply to projects for tax incentives? Particularly with "placed in service" vs. "start construction."
- Will projects be allowed to use 45L and other credits such as LIHTC without losing basis?
- Can we make 25C a refundable credit to spur more uptake from low-income households?
- What impact will prevailing wage/apprenticeship requirements have on uptake?
- How do we balance states with advanced code requirements (Calif., Mass., etc.)
   with lagging states?



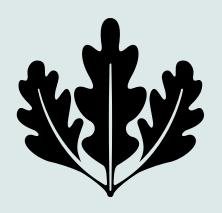
## **Energy Efficiency Tax Incentives – Estimated 10-Year Cost**

Incentive	JCT Score (House version) 10-Year Extension
45L	\$2.7B
25C	\$14.9B
179D	\$626M
Total	\$18.3B

Note: \$18.3B score for energy efficiency incentives is less than 8% of \$235B score for all clean energy tax provisions in the House package. As context, ITC/PTC expansions for renewable power are scored at \$106.8B and green fleets/vehicles incentives are scored at \$42.4B.

### **Low-Income Housing Tax Credit Expansion**

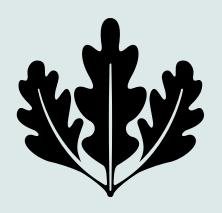
- Expansion in House package estimated to cost \$31B, with focus on extremely low-income and difficult-to-reach areas.
- No sustainability or climate provisions for new construction and major renovation.
- Additional proposals for code requirement and to offer a 30% basis adjustment for "deep retrofit" projects achieving 50% energy savings.



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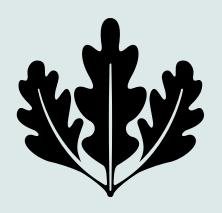
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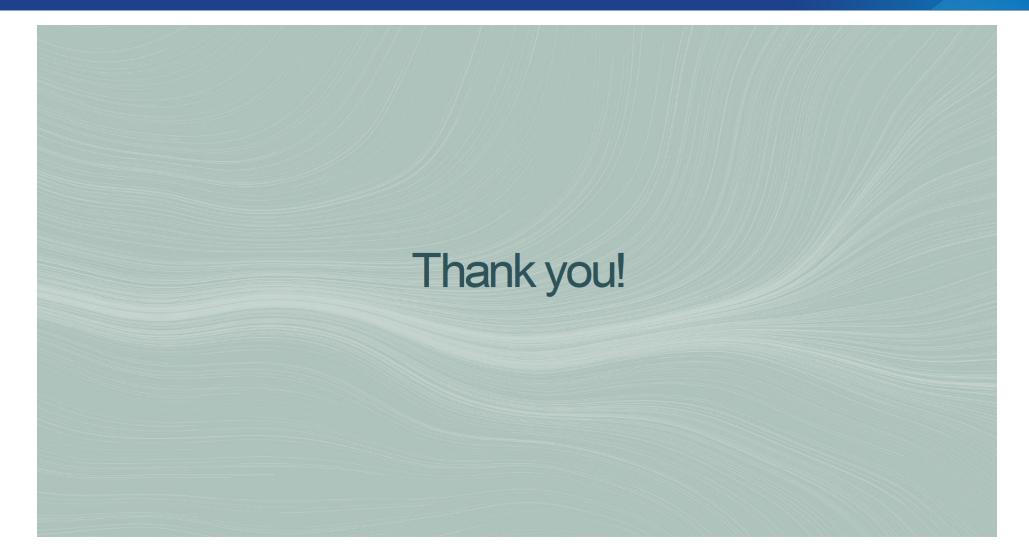
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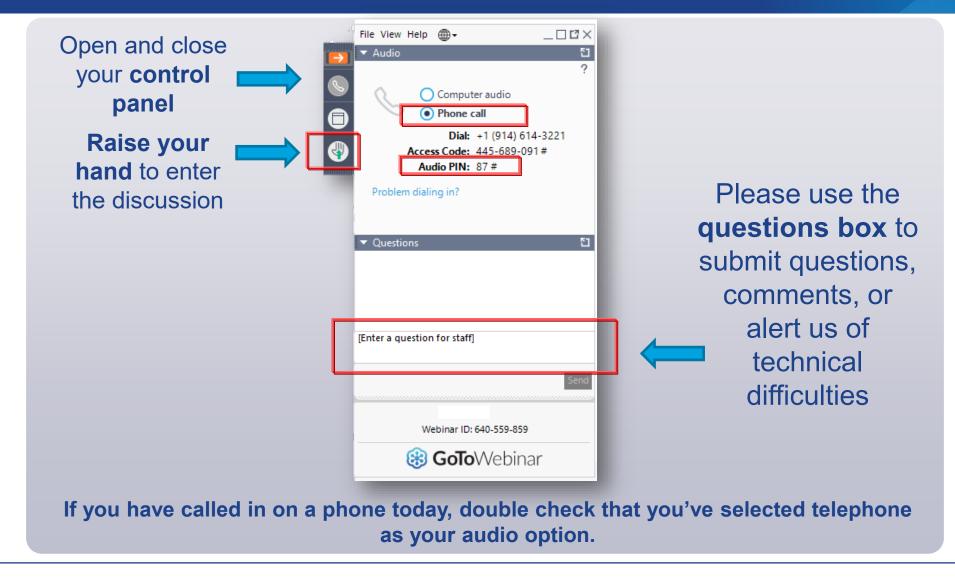








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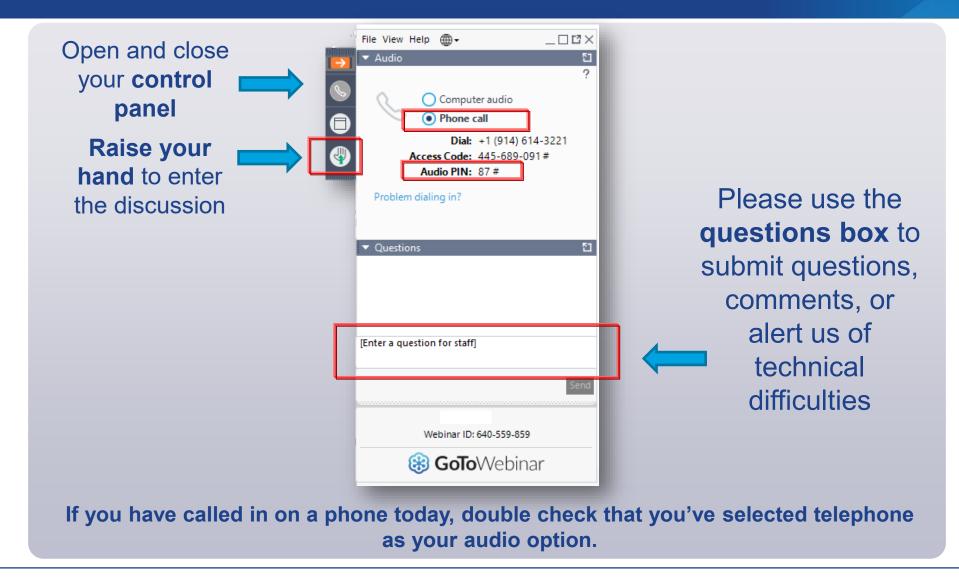








### **Open Discussion**







# **Closing Poll**

## • After today's call, what will you do?

- Consider implementing one or more of the ideas discussed
- Seek out additional information on one or more of the ideas
- Make no changes to your current approach
- Other (please explain)







## Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- Handbooks explain why and how to implement specific stages of a program.
- Quick Answers provide answers and resources for common questions.
- Proven Practices posts include lessons learned, examples, and helpful tips from successful programs.
- Technology Solutions NEW! present resources on advanced technologies,
   HVAC & Heat Pump Water Heaters, including installation guidance, marketing strategies, & potential savings.



https://rpsc.energy.gov





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Please send any follow-up questions or future call topic ideas to:

bbresidentialnetwork@ee.doe.gov



