



# **Zero-Emission Space and Water Heater Standards**

**Update to the AB 32 Environmental Justice Advisory Committee  
April 17, 2025**

# Presentation Overview

## Topics

1. Guiding Values and Regulation Purpose
2. Process to Date
3. Public Engagement Themes
4. Next Steps
5. Discussion

## Goals

- Recap public engagement activities, key learnings to date, and highlight staff work underway and planned.
- Hear EJAC's perspectives and learn how EJAC would like to be involved moving forward.

# Guiding Values for the Development of the Regulation

- Support climate change mitigation and resilience and public health.
- Evaluate economic and other impacts as they relate to historic and ongoing disparities in clean air, affordable healthy homes and workplaces, and load implications.
- Encourage manufacturers and the broader workforce to create affordable, reliable, and convenient solutions that support widespread zero-emission space and water heater adoption.
- Coordinate with public agency partners to ensure clarity, alignment, and long-term feasibility for any proposed standards.
- Create an accessible, transparent, and inclusive process.

# Why space and water heater standards?

By growing the market for healthy heating equipment, we can lower building emissions and improve the lives of Californians.

- **Reduce climate pollutants.**

- Space and water heaters account for ~8% of statewide greenhouse gas (GHG) emissions.
- 2022 Scoping Plan set a goal for 3 million climate-ready homes by 2030 and 7 million by 2035.

- **Improve air quality and public health.**

- Smog-forming nitrogen oxides (NOx) increase the risk of asthma, heart disease, and other illnesses.
- 2022 State SIP Strategy included building emission standards.



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## **Process to Date**

# Zero-Emission Space and Water Heater Standards Regulatory Development Process





# Public Engagement Process to Date



- **2023 Summer:** Kickoff Workshop, Assessment Interviews
- **2023 Winter:** [Assessment Report](#), [Outreach and Engagement Strategy and Plan](#), [Public Solicitation](#)

# Current Public Experts

- Association for Energy Affordability
- Allensworth Progressive Association
- Building Decarbonization Coalition
- Climate Action Campaign
- Climate Resilient Communities
- CalMTA
- Ceres
- Channing Street Copper Company
- Construction Trades Workforce Initiative
- Climate Resilient Communities
- Consultancy to National Propane Gas Association
- Earthjustice
- Energy Solutions
- Emerald Cities Collaborative
- HPBA - Hearth, Patio, and Barbecue Association
- GRID Alternatives
- Individuals (3)
- Lawrence Berkeley National Laboratory
- Lennox
- Natural Resources Defense Council
- Peninsula Clean Energy
- Pacific Gas & Electric
- Rinnai America
- Redwood Energy
- RMI
- Sierra Energy Reimagined
- Silicon Valley Clean Energy
- Southern California Edison
- SPUR
- Strategic Actions for a Just Economy
- TRC
- Tre' Laine Associates
- Western Propane Association



# Public Engagement Process to Date (2)



- **2023 Summer:** Kickoff Workshop, Assessment Interviews
- **2023 Winter:** Assessment Report, Outreach and Engagement Strategy and Plan, Public Expert Solicitation
- **2024**
  - Technical Feedback Meetings
  - Public Expert Briefings
  - Public Workshops
  - Listening Sessions

# 2024 Workshops, Briefings, and Feedback Meetings

## Technical Feedback Meetings

- Emissions Modeling
- Building Retrofits
- Market and Technology
- Cost Analysis
- Equity Analysis
- Pool and Spa Heaters

## Public Workshops

- Staff Analysis Overview
- Regulatory Proposal Update and Request for Alternatives

## Public Expert Briefings

- “Affordable Housing Decarbonization: Utility Allowances” by Climate Action Campaign
- “Tenant Protections for Equitable Building Decarbonization” by Strategic Actions for a Just Economy
- “Single-Family Building Readiness” by Energy Solutions
- “Affordable Housing Retrofit Needs” by Association for Energy Affordability

# 2024 Listening Sessions

## August - October

- ◆ 7 in person, co-hosted
- 4 virtual: 3 CARB-hosted and 1 co-hosted

**SPUR and  
Tenderloin  
Neighborhood  
Development  
Corporation**



**Construction  
Trades Workforce  
Initiative and  
UA342**



Northern  
California  
Virtual

**Climate  
Resilient  
Communities,  
Menlo Spark,  
350 Silicon  
Valley**



Southern  
California  
Virtual

**Sierra Energy  
Reimagined**



Central  
California  
Virtual

**Allensworth  
Progressive  
Association**



**Climate Action  
Campaign**



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## **Public Engagement Themes**



# 1. A manufacturer-oriented regulation may still face household- and business-level challenges.

**We aim to meaningfully address them in a statewide policy design.**

## Key Concerns Raised

- Equipment costs and incentives.
- Energy costs and rate designs.
- Retrofit needs and low-cost solutions.
- Energy system needs, especially in cold climates and rural areas.
- Manufactured home and multifamily housing needs.
- Renter impacts and protective policies.
- Workforce needs and training resources.

## Current Work

- Explore additional regulatory concepts.
- Solicit feedback on technology cost, retrofit, and emission analysis methods.
- Research contracts to inform approach: Anti-displacement policy, propane and wood use, non-residential retrofits, and equitable decarbonization.

## 2. Interagency alignment remains critical to successful regulation design and implementation.

### Broader Policy

- Protective housing policies
- Workforce readiness

### Affordability

- Incentive programs
- Energy rates

### Implementation

- Energy system planning
- Building permit streamlining

### Existing Coordination Venues

- California Heat Pump Partnership
- Joint Agencies Steering Committee
- CEC Integrated Energy Policy Report and Energy Action Plan
- Bimonthly CARB-CEC-CPUC-HCD staff calls
- Air District meetings
- Scoping Plan Updates
- Local Climate Action Plans



### 3. Effective collaboration with on-the-ground practitioners is fundamental to successful implementation.

#### Reflections on process:

- Co-host support with venue, logistics, and outreach was critical to the success of in-person events.
- CARB staff benefit from working with practitioners to check assumptions and identify potential implementation strategies.
- CARB staff are hearing a need for accurate and accessible information about zero-emission heating solutions.
- Considering how to appropriately integrate additional outreach into our regulatory research, proposal development, and potential implementation.

#### Listening session responses: Who should CARB reach and include?



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## **Next Steps**

# Public Engagement Process Next Steps



- **2025 Winter:**

- Public Expert Evaluations
- Public Expert Report-Back Meeting

- **2025 Spring/Summer:**

- Update to EJAC
- Publish Listening Session Summary Report and updated Outreach and Engagement Strategy and Plan.
- Additional public expert briefings and discussions.

- **2025 Fall - 2026 and beyond:**

- Host a public workshop to share the revised regulatory concept.
- Once regulation concept is closer to final, begin implementation planning.
- Consider additional outreach modes, including tours/site visits, and another round of co-hosted community meetings.

# Discussion

**What questions do you have for our team?**

**What recommendations do you have for CARB staff as we continue our regulation development work?**

**Ideas for EJAC involvement moving forward:**

- Participating as public experts (reviewing staff methods, sharing briefings, co-hosting outreach/engagement events, and/or planning for implementation).
- Receiving a staff update like this after our next workshop.
- Other ideas?

**Thank you!**