

Working with Trusted Local Organizations to Address Impediments to Cost-Effective and Holistic Building Performance Improvements

Driving Equitable Access to Energy Efficient, Zero Energy/Zero Carbon Buildings in Underserved Communities

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BACKGROUND / INDUSTRY IMPACT

- **25% of all households are three times as likely** to state that energy is unaffordable and experience a higher energy burden than average households. For low-income households, **67% are 13 times** as likely to state this.¹
- Fundamental gap between cultivated building energy efficiency resources and adoption of benefits in underserved communities²
 - Systemic barriers impeding local adoption are not well understood
- This gap is being investigated to **advance equitable decarbonization** in underserved communities to:
 - Improve access
 - Increase implementation of holistic building performance
 - Cultivate tailored resources

PROJECT OVERVIEW / OBJECTIVES

Identify successes, barriers, and near-and-long-term needs of local organizations and non-profits serving underserved communities in adopting building energy efficiency technologies and solutions.

APPROACH

This new project aims to **empower equitable decarbonization** in commercial buildings by:

1. Inviting local non-profit organizations and community experts serving underserved communities to individual discussions
2. Conducting virtual roundtable discussions to start identifying tailored solutions for specific communities' needs.
 - We partnered and built trusted and intentional connections across **22** states, **15** local and **2** national wide organizations

FUTURE WORK

- Conduct additional roundtable discussions
- Finalize qualitative analysis

Research Outcomes

1. Identify barriers and drivers impeding local adoption of equitable building electrification in underserved communities
2. Cultivate tailored resources

¹ Dreibobl, Ariel, Lauren Ross, and Roxana Ayala. 2020. "How High Are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burden across the United States." American Council for an Energy-Efficient Economy (ACEEE). <https://www.aceee.org/sites/default/files/pdfs/u2006.pdf>

² U.S. DOE Energy Efficiency & Renewable Energy, PNNL, McGraw Hill Construction. 2011. "Business Case for Energy Efficient Building Retrofit and Renovation". <https://www.energy.gov/eere/buildings/articles/business-case-energy-efficient-building-retrofit-and-renovation>

³ U.S. DOE Office of Economic Impact and Diversity. 2022. "Justice40 Initiative." <https://www.energy.gov/diversity/justice40-initiative>

Impact

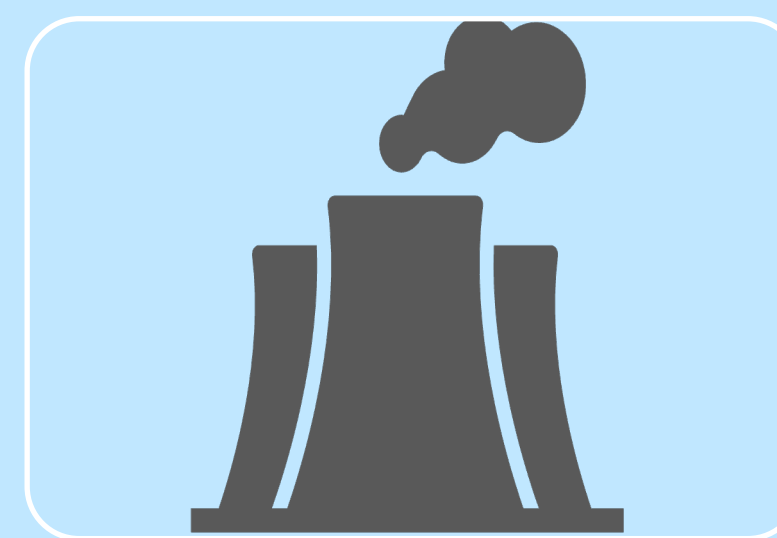
This new project focuses the expertise of local organizations and non-profits to identify and understand barriers and drivers that have enabled low market deployment and adoption rates of building improvements in underserved communities. Previous success stories from local expertise of successful adoption are also being leveraged.

Supports **equitable decarbonization** in underserved communities by:

- Addressing barriers and needs to adopt building energy efficiency (EE) technologies and solutions
- Developing and empowering **affordable**, cost-effective building performance improvements
- Understanding and identifying local community-centered strategic and equitable pathways to flow benefits directly to disadvantaged communities (i.e., **Justice40**³).

Examples of Barriers and Needs

Systemic/Resources



- **Barrier:** "I am not going to ask for things that I need because it might hurt me" (Anonymous Stakeholder)

Capacity and Workforce



- **Barrier:** "It's good to have a two-way engagement with the community. Partnering with a group like NREL is essential but we want to be more than just a partner, which can feel a little transactional. We want to have a *presence* in the community. Having NREL train someone in the community who then returns with new skills is also vital." (Anonymous Stakeholder)

Climate, Health, and Other



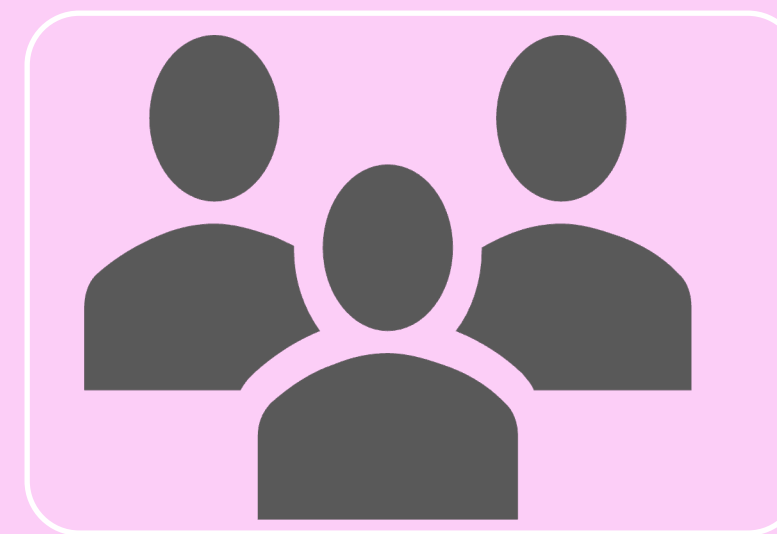
- **Barrier:** "How do we get the attention of the federal government without people dying after a post disaster scenario? We suffer from chronic flooding and property damage everyday." (Anonymous Stakeholder)
- **Barrier:** "Too many models focus on cost optimization and fail to factor in climate or assign a value to carbon mitigation." (Anonymous Stakeholder)

Financial



- **Need:** "In underserved communities, commercial buildings are mainly apartment complexes and small businesses... The tax-base are homeowners who have questions about how we are going to afford to adopt technology, what about broadband, etc." (Anonymous Stakeholder)

Capacity and Workforce



- **Need:** "We often spend a lot of time clearing the air around confusing or complicated terminology like RECs. We wish we didn't have to spend this time unpacking all of this information for our communities." (Anonymous Stakeholder)

Climate, Health, and Other



- **Need:** "Building on existing knowledge: A lot of people (Haiti, Cuba, Mexico) already know about climate catastrophe and disaster. There's a level of dialogue that does not include them. People are talking about climate and energy in a way that influences their lives right now." (Anonymous Stakeholder)