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U.S. DEPARTMENT OF  
**ENERGY**

Office of  
ENERGY EFFICIENCY &  
RENEWABLE ENERGY

# Technical Assistance & Equity Considerations in Building Performance Standards (BPS)

**National Renewable Energy Laboratory**

Presented by Isabel Langlois-Romero

**July 31, 2024**



# Technical Assistance and Applied Research for BPS

**National Labs provide technical assistance, replicable methodologies, and analysis for equitable BPS strategies.**

- Equity-centered stock analysis
  - What are local concerns or built environment?
  - How to prioritize buildings for equity programming and connection to financing?
- Stakeholder Engagement Methodologies
  - How to engage with directly and indirectly affected communities
  - Tailor outreach strategies to local communities
  - Guides with consolidates lessons from other jurisdiction
- Applied community based participatory research with communities\*
  - Pilot and demonstration projects to create scalable solutions to share
    - Shareable outputs: Replicable equity stock analysis, engagement methodologies, budgets/process for BPS engagement, research instruments and surveys for engagement in multilingual resources (7-8 languages).

# Participatory research in building science research

## Community-based participatory research (CBPR) in building sciences – contextualizing data analysis with community voices and experiences.

- Bringing communities into the research process
  - Builds public discourse surrounding climate and building science.
  - Educates the public on new research, local programs, and more.
- Building trust in communities
  - Building relationships with historically marginalized groups
  - Co-creation of solutions
- Grounding research in community perspectives
  - Increases applicability and interest in research

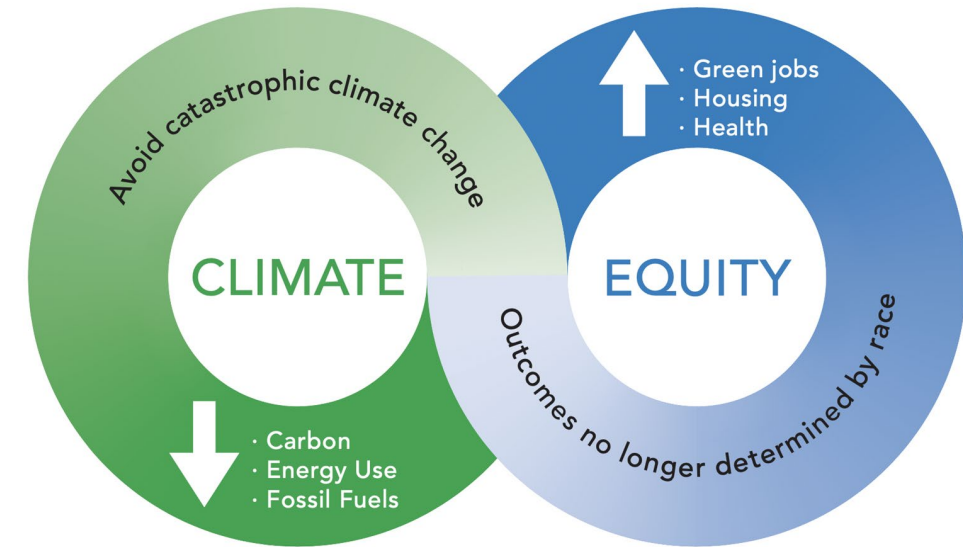


Image: Prepared for: American Cities Challenge. "Building Performance Standards: A Framework for Equitable Policies to Address Existing Buildings. 2021.

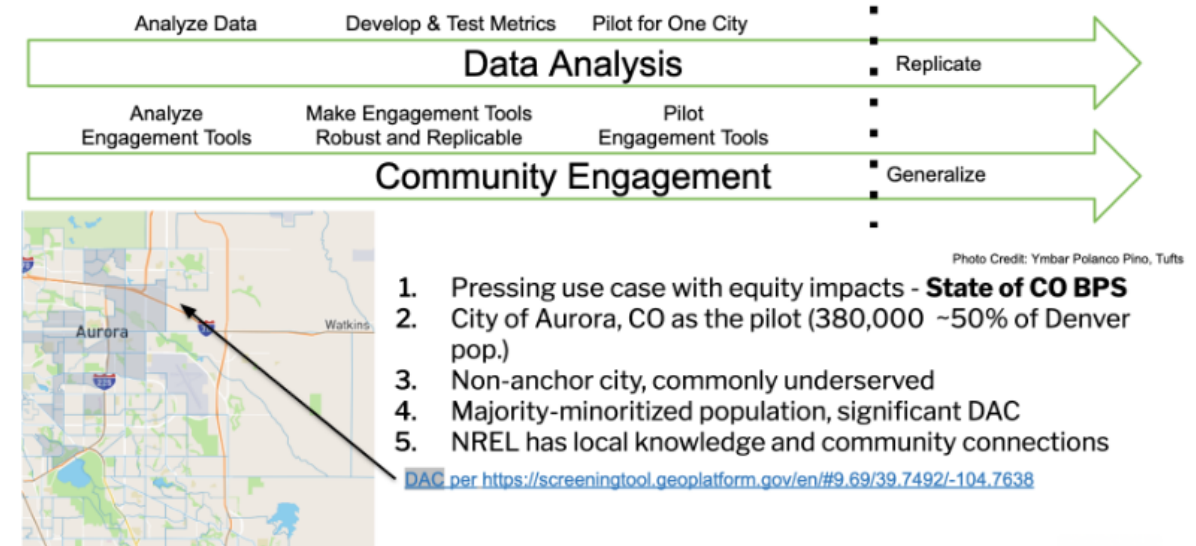


# Enabling Equity Considerations in Commercial Buildings

## Research Inquiries.

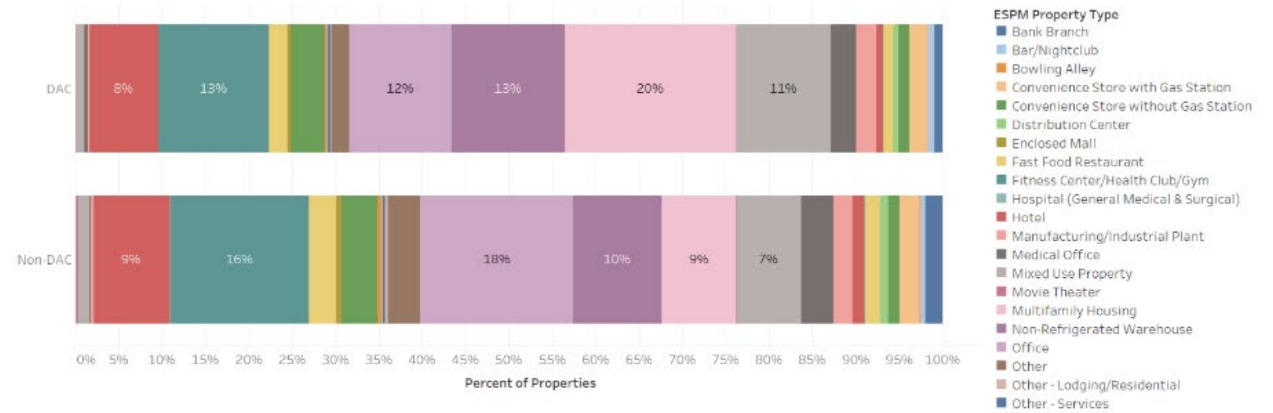
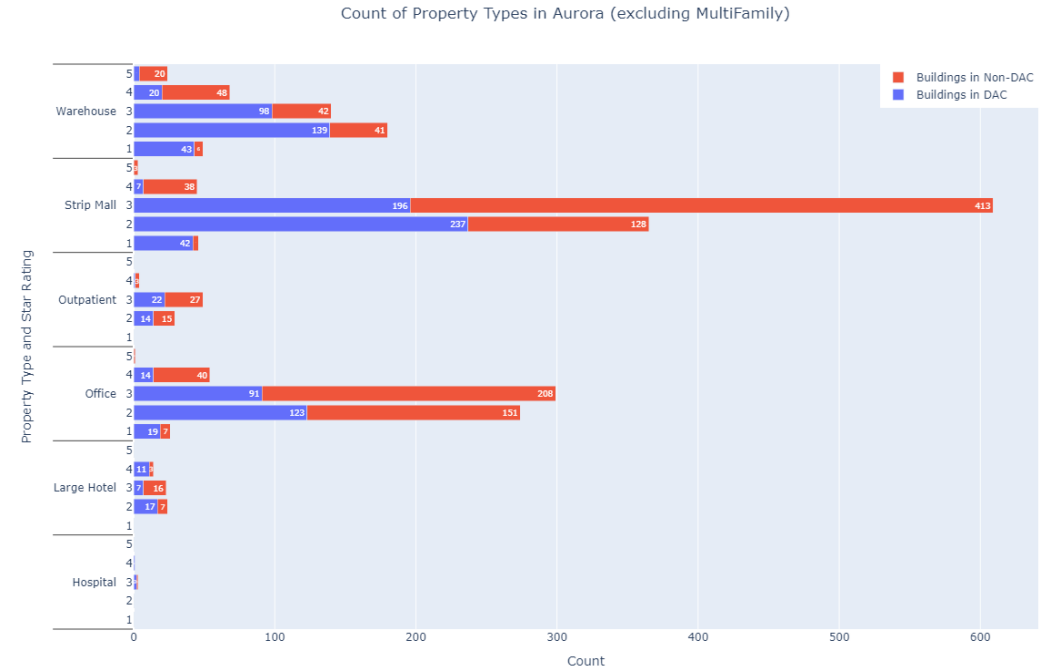
- Scalable engagement methodologies and research instruments to share nationally (budgets, processes, surveys, and more).
- Methodology for identifying and prioritizing commercial buildings for equity-focused BPS programming
  - What commercial buildings support community and why?

## 2023 Commercial Equity Pilot in Aurora, Colorado



# Aurora Spotlight: Equity Stock Analysis

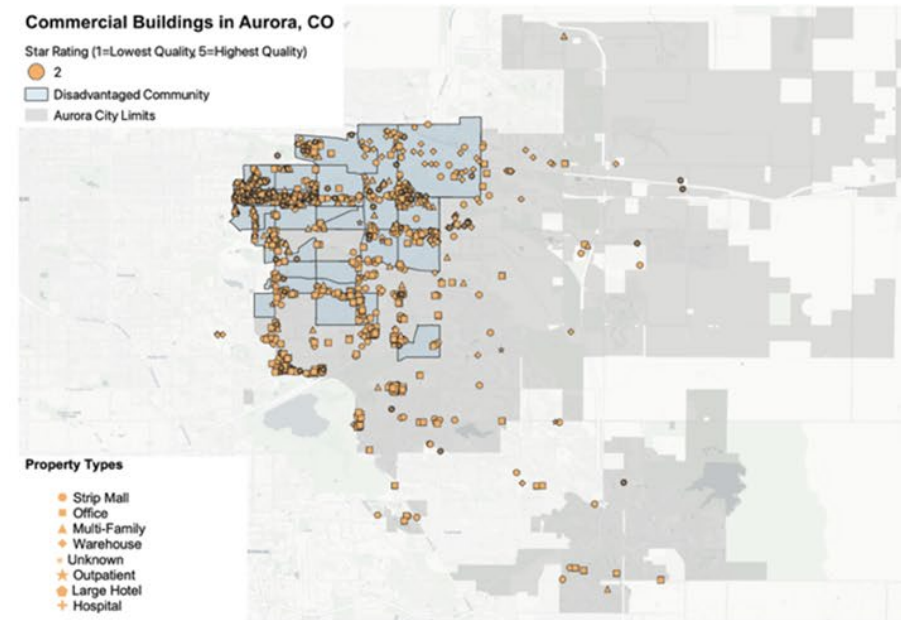
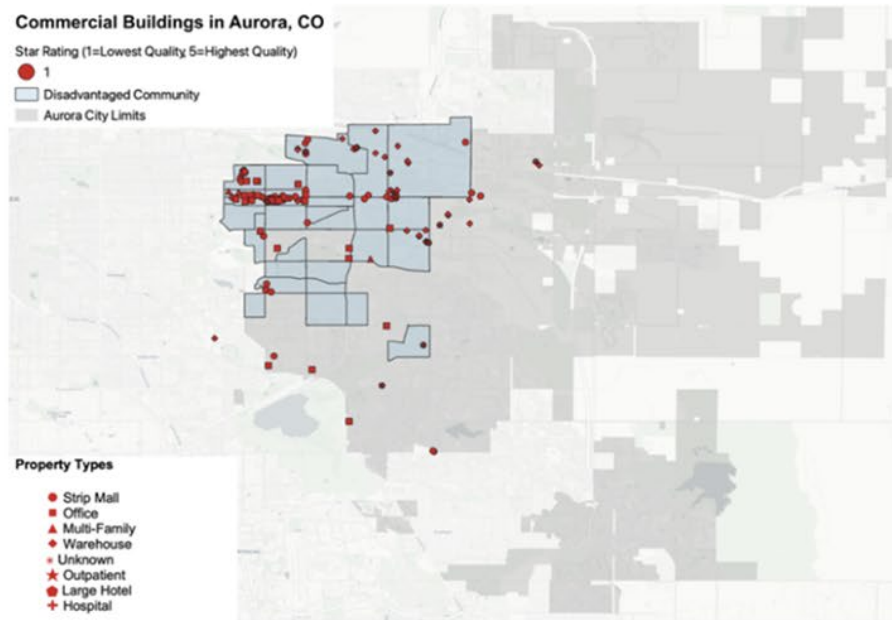
- Aurora pilot project characterized commercial buildings, identified future research, and informed replication of pilot project in different geographical location.
  - Segmented commercial buildings into groups: 1) All buildings, 2) CEJST DAC/non-DAC, 3) Star rating distribution, and 4) BPS properties.
  - In each segment looking at: Property type, tenant industry type, lease type/duration, CEJST DAC status, star rating, heating type,



# Spotlights: Geospatial analysis of CoStar star rating

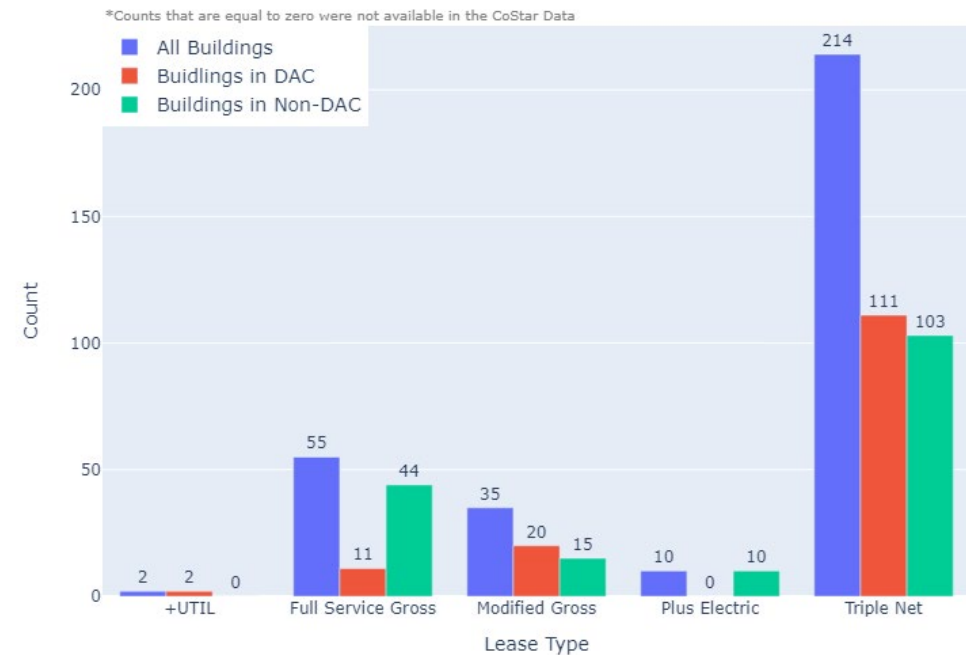
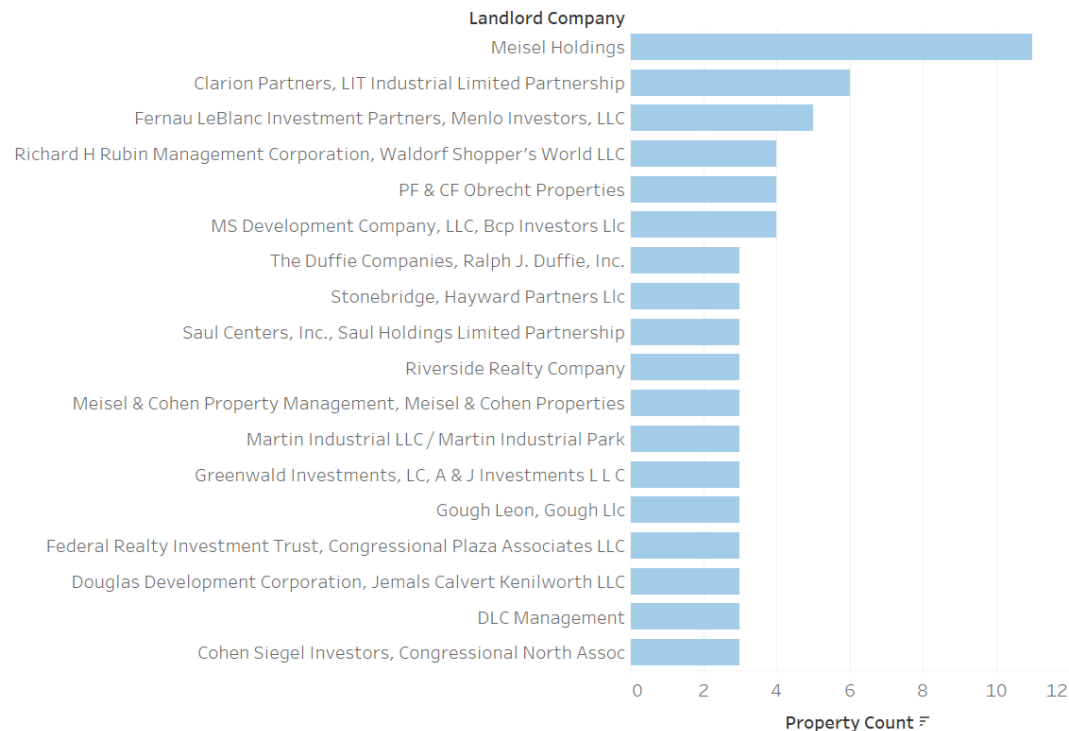
- Geospatial Stock Analysis: Commercial NOAH Analysis:
  - Most 1 and 2 star CoStar commercial buildings were in CEJST DAC;
  - 30% of 1 & 2 star buildings were not in CEJST DAC.
  - Informed locations for targeted outreach

Using CoStar real estate data, geospatially analyzed density of 1-5 star rated buildings and White Houses disadvantaged community census tracts



# Lessons Learned: Stock Analysis

- Aurora pilot project informed methodology for stock analysis in Atlanta, GA demonstration project and TA network offerings.
  - New TA capability: Refined equity stock analysis
  - Future research identified: 1) Investigate lease type/terms, 2) Ownership matrix analysis





# Community Outreach: Aurora, Colorado

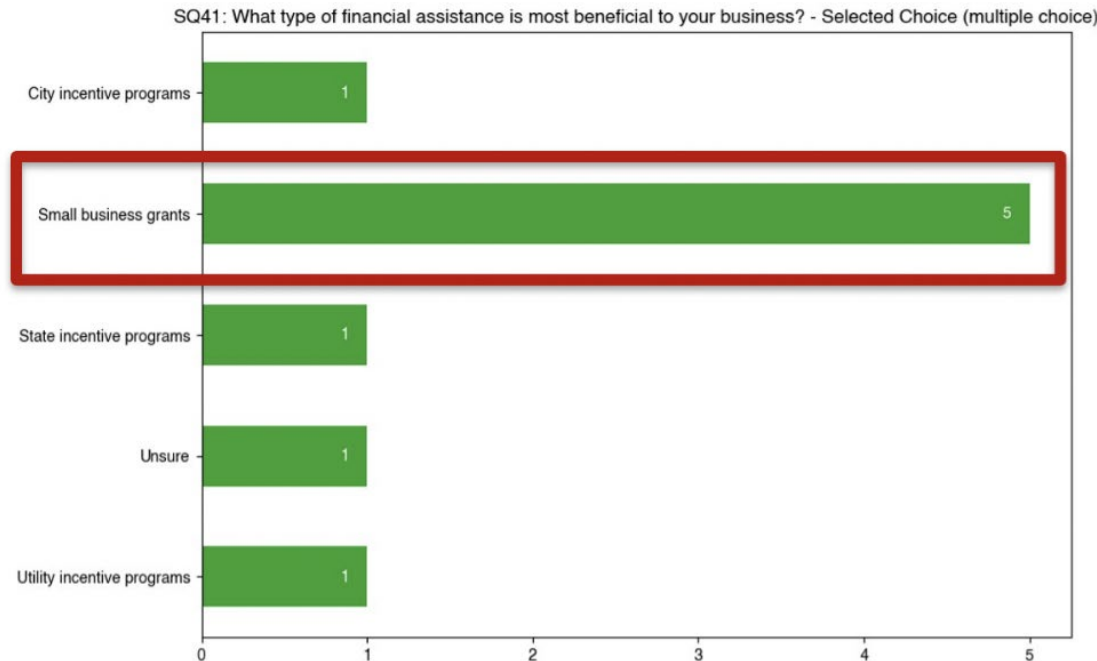
## Engagement Overview

- Community outreach: Community Events, Surveys and Interviews:
  - Engaged over 1,000 individual through community meetings, surveys, interviews, volunteers, community events and organization partners
    - Other forms of engagement: Focus groups for survey development, trained volunteers on research outcomes, canvassed businesses in targeted areas.
  - Attended 10-15 events in Aurora, CO
  - Over 10 one-on-one interviews
  - Surveyed commercial building users (7 languages, each participant and volunteer paid):
    - Community member: 95; Business Owner: 64; Property Owner: 21

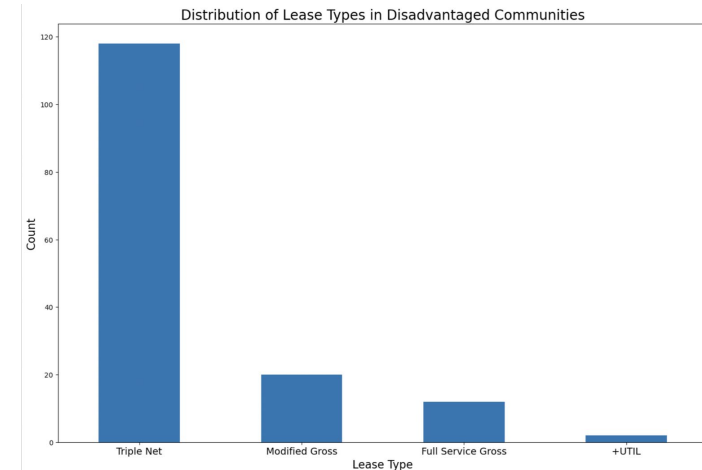


# Spotlights: Aurora Engagement Findings

- Identify community-prioritized commercial buildings
  - 69 properties in Aurora identified as community-prioritized commercial buildings
- General questions about policy development
  - Prioritized outreach and communication by building user
  - Best forms of financial assistance for building upgrades
  - Preferred equipment and building upgrades for building user type

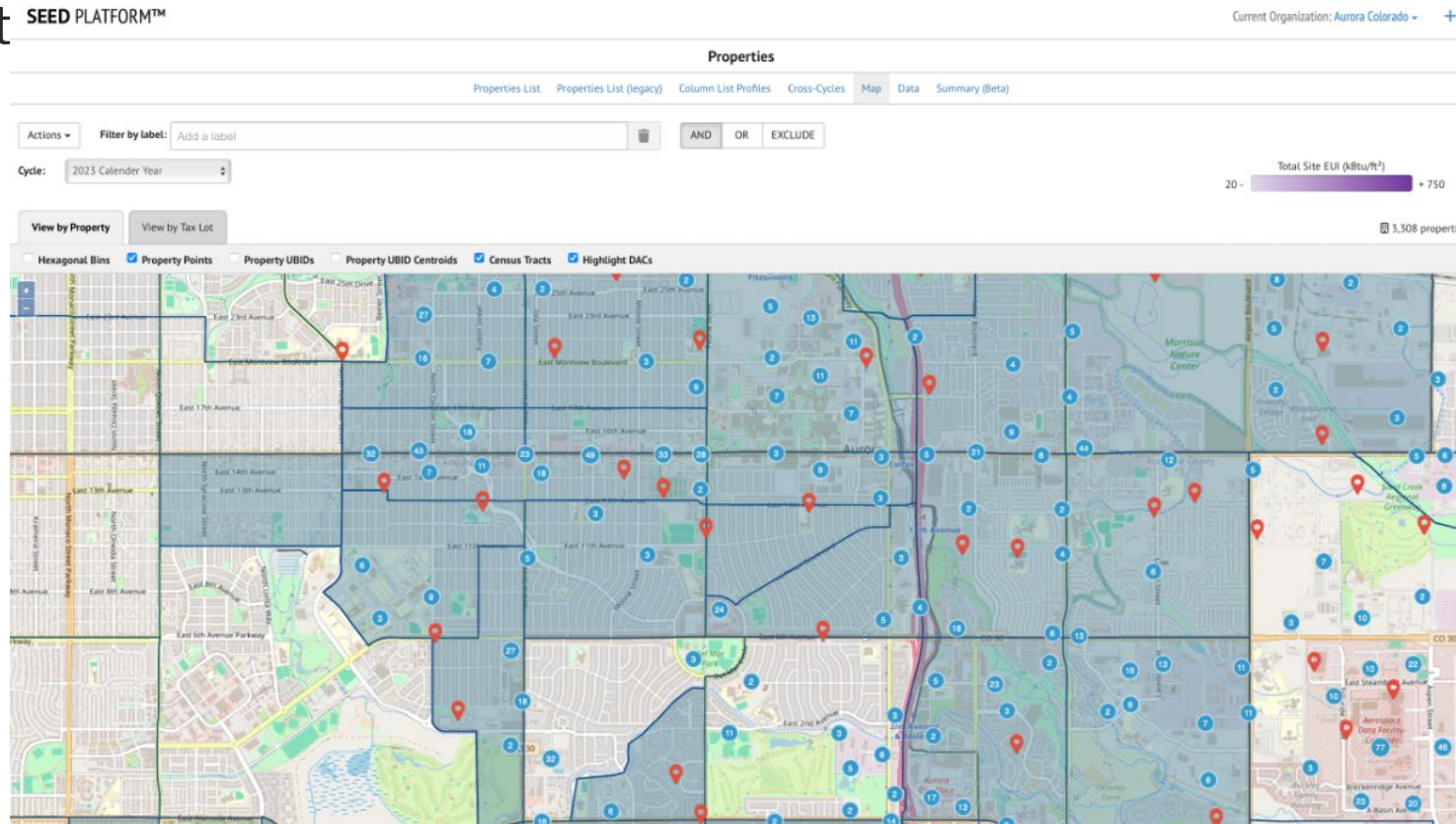


***“Business owners said that social media, trusted community leaders, and people who physically visit their business are the most valuable ways to get information about incentives, services, and energy assistance programs”***



# Spotlights: Outreach and engagement

- Prioritizing specific buildings for BPS programming
  - 69 properties in Aurora identified through surveys and engagement as buildings which serve and support community
  - These can supplement DAC status properties or local “under-resourced definitions” and engage community in process of building upgrade and efficiency education



*“61% of community said that energy investments in these building would directly benefit them”*

*“62% of community member survey respondents said they have to leave their house to cool off, and that they would cool off in libraries, local business, and malls”*



# Lessons Learned: Commercial Building Community Services

- Based on outreach determined other ways to characterize equity in commercial buildings

## Community Events Space:

- Offer meeting rooms or event spaces for community gatherings, workshops, or local events.
- Provide a venue for cultural or educational programs that benefit the community.



## Co-Working Spaces for Startups:

- Set up co-working spaces to support local entrepreneurs and startups.
- Offer discounted or subsidized office space for small businesses.



## Educational Programs:

- Host workshops, seminars, or training sessions on topics relevant to the community.
- Collaborate with local schools or organizations to provide educational resources.



## Health and Wellness Initiatives:

- Organize health and wellness programs such as fitness classes or health screenings.
- Partner with healthcare professionals to provide informational sessions.



## Community Gardens or Green Spaces:

- Develop green spaces or community gardens around the building.
- Encourage local residents to participate in gardening activities.



## Job Fairs and Career Development:

- Host job fairs to connect local residents with job opportunities.
- Provide career development workshops and resume-building sessions.



## Art and Culture Exhibitions:

- Showcase local artists' work through galleries or exhibitions.
- Sponsor cultural events to promote diversity and community engagement.



## Public Amenities:

- Offer public amenities such as rest areas, water fountains, or public restrooms.
- Create spaces that enhance the overall community experience.



Community Building

## Community Outreach and Support:

- Establish a community outreach team to address local concerns and gather feedback.
- Provide support for vulnerable populations through partnerships with local charities.



## Environmental Initiatives:

- Implement eco-friendly practices within the building to contribute to sustainability.
- Host events or initiatives focused on environmental awareness and conservation.



## Tech and Innovation Hubs:

- Foster innovation by creating spaces for tech startups and innovation labs.
- Provide mentorship programs for aspiring entrepreneurs.
- Free access to Wifi.



## Emergency Response and Safety Programs:

- Collaborate with local emergency services to conduct safety drills.
- Provide emergency response information and resources to the community.



## Community Partnerships:

- Collaborate with local businesses, schools, and nonprofits for joint initiatives.
- Build strong partnerships to address shared community goals.



## Childcare Facilities:

- Offer childcare facilities or partner with local providers to support working parents.
- Provide family-friendly amenities to create a more inclusive environment.



## Digital Inclusion Programs:

- Provide access to technology and digital literacy programs for the community.
- Host workshops on digital skills and internet safety.





# Conclusions

**Many opportunities to integrate equity into BPS processes. National Labs provide technical assistance, replicable methodologies, and analysis for equitable BPS strategies to support jurisdictions.**

- BPS Technical Assistance Network:
  - Scalable, multilingual resources and outreach instruments for jurisdictions around the US to use for energy policy stakeholder engagement and engagement
  - Scalable equity stock analysis methodologies
  - Equity-Centered TAG for BPS
    - Subcontracting minority-owned CBOs and other stakeholders to review stakeholder engagement strategies for BPS Cross-Lab TA members



# Thank you!

## Contacts

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New Story <https://www.nrel.gov/news/program/2023/cultural-festival-brings-nrel-to-community-of-aurora.html>