

ADVANCED BUILDINGS AND COMMUNITIES

Program 204 Newsletter

DEAR P204 MEMBER ADVISORS

What an eventful spring 2024! We launched our Building Performance Standards Regional Assessment supplemental project in April and are scoping out a new supplemental on Building Decarbonization Value Framework to launch in October 2024.

Meanwhile, our team has been actively bidding on various proposals (DOE, DOD, NYSERDA, CEC) — continuing the strong leveraging of the membership funding with government grants. Please reach out if you would like to collaborate with us on any grants, especially with host sites.

Stay tuned for our upcoming "Save the Date" messages for the key topical webinars on centralized heat pump water heaters in multifamily applications; commercial buildings insights; and nature-based solutions for building, communities, and ecosystems.

We look forward to meeting you in person at our twoand half-day Fall Advisory Meeting in Los Angeles, which will include a Tuesday afternoon local tour with EPRI's Grid-Edge Customer Technologies (P170) and Customer Insights (P182) Programs.

With kind regards,

Sara Beaini, PhD

Program Manager, Advanced Buildings and Communities

UPCOMING EVENTS

EPRI MEETINGS

2024 Fall Advisory – Los Angeles, CA | September 16–18, 2024 Contact <u>ED&CSAdvisory@epri.com</u> if you did not receive an invitation or click here for more information.

WEBCASTS

Centralized Heat Pump Water Heaters in Multifamily Communities
Webinar – Webex | August 21, 2024, 12:30–1:45 PM EST
Click here to add the webcast to your calendar.

Commercial Buildings Research Topics Webinar – Webex
October 22, 2024 | More information and invitations coming soon.

Nature-Based Solutions for Buildings, Communities, and Ecosystems Year-1 Project Wrap-Up Webcast – Webex | November 12, 2024, 1:00–2:00 PM EST | Click here to add the webcast to your calendar.

P204 End of Year Webcast – Webex | December 11, 2024, 2:00–3:00 PM EST | More information and invitation coming soon.

INDUSTRY EVENTS

ACEEE Summer Study on Energy Efficiency in Buildings—Pacific Grove, CA | August 4–9, 2024 | Click here for more information.

Association of Energy Engineers World Energy Conference & Expo – Nashville, TN | September 25–27, 2024 | Click here for more information.

ET (Energy Transition) Summit- Sacramento, CA | October 8–9, 2024 | Click here for more information



Quarterly Recap

WEBCASTS RECAP

P204 Midyear Webcast (June 18th): Provided an update and overview of our base, TI (Technology Innovation), government, and supplemental projects. In case you missed it, the recording can be accessed here.

Building Performance Standards Case Study Webcast

(July 8th): Shared findings of a case study P204 conducted in collaboration with Seattle City Light as well as a study by Exelon about stock-based modeling approach to analyze Maryland's proposed statewide building performance standard. In case you missed it, login to your EPRI account and access the meeting materials here.

Electrification & Customer Solutions 2025 ARP Rollout (July 24th): The webcast included an overview of the 2025 ARP for programs: Power Quality (P1), Grid-Edge Customer Technologies (P170), Customer Insights (P182), Electrification (P199), and Advanced Buildings and Communities (P204). In case you missed it, the recording can be accessed here.

IN THE NEWS

DOE Launches National Definition of a Zero Emissions **Building**

New Public-Private Partnership Forms to Accelerate Heat Pump Adoption in California

New Bi-Directional EV Charger Debuts

What's Happening to the Olympic Village After the Paris 2024 Games are Over?

Cities Across Canada Consider Maximum Temperature Policy for Rental Units... When will The U.S. Follow?

Al-Backed Robots are Helping to Construct a New Residential Building, Speeding Build Process, and Improving Safety

Passive Design Airports

INDUSTRY OUTREACH

Madeline Kostic with Seattle City Light (SCL) presented at the European Council for an Energy Efficient Economy (ECEEE) Summer Study: Sustainable, Safe, and Secure Through Demand Reduction in Paris, France on June 10–15. The presentation highlighted research conducted with P204 and SCL titled, The "Where and When" Grid Impacts of Seattle's Building Emissions Performance Standards. The presentation highlighted the modeling-based building electrification roadmaps that were created by EPRI for common building types in Seattle and used the models to showcase a methodology for applying results from building energy modeling to broader benchmarking data, to predict building stock level increases in peak load and draw conclusions regarding the volume of customer and grid-side service upgrades required between now and 2050. Thank you, Madeline, for sharing the work we did together to a larger and more diverse audience! Contact Mazen Daher, mdaher@epri.com, for more information on BPS.





Program Project Spotlights



BUILDING PERFORMANCE STANDARDS SUPPLEMENTAL **PROJECT**

Who Should Join?

Utilities looking to understand the impacts of emerging Building Performance Standards (BPSs) on their operations and develop programs to support their customers.

Project Highlights

- Identify the most cost-effective pathways for commercial and multifamily customers to comply with BPSs in a service territory.
- Learn how peers and other stakeholders are responding to BPSs.
- Understand how large-scale adoption of compliance measures will affect utility operations.

Project Tiers (3002029533):

Tier 1: Develop optimal regional compliance pathways that can be used by utilities to prioritize the development of customer programs.

Tier 2: Analyze utility-specific impacts of large-scale customer BPS compliance on utility operations.

For more information, click here, or contact Mazen Daher, mdaher@epri.com. To watch the webcast launch from May 9th, click here and login to your EPRI account.

COST-EFFECTIVE ADVANCED WINDOW RETROFITS FOR SCHOOLS

Project Description

EPRI was awarded by the California Energy Commission to demonstrate the cost-effectiveness and quantify the benefits of an interior mounted window retrofit technology for a school district located in California Central Valley (IECC Climate Zone 3B).

Project Value

Window upgrades are typically passed over by school buildings due to the high costs and asbestos and lead removal concerns. This project aims to provide valuable feedback on the practical aspects of the retrofit technology's adoption – such as convenience of installation, cost-effectiveness, and day-to-day issues, and will conduct a quantitative field study to evaluate the technology's realworld performance (gas and electric savings) and market adoption plan.

Project Timeline

3-year long project (began in 2023, technology install in Summer 2025, and will end in 2026). Contact: Agatha Kazdan, akazdan@epri.com

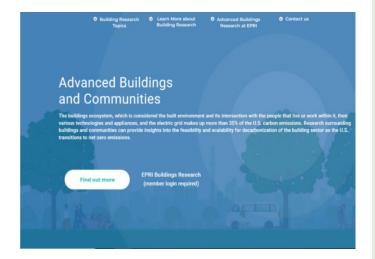




Program Updates

NEW P204 PUBLIC WEBSITE

The P204 Website is now public! The public facing website features fun facts about buildings research. To access the public website, click here. To access the original members facing website, follow the links the on the public facing website or click here.



P204 TEAM MEMBER SPOTLIGHT

Kayla Bortolon (Nettesheim) joined EPRI's Advanced Buildings and Communities Program (P204) in May 2023 as an Engineer/Scientist I after graduating from the University of Tennessee with a Bachelor's Degree in Biosystems Engineering and minors in **Environmental Engineering and** Watersheds. She is based out of the



Knoxville, TN office. Prior to joining P204, Kayla was a student intern for two years with EPRI's Grid-Edge Customer Technologies Program (P170). This fall, Kayla will begin her MBA in Energy and Sustainability. In her free time, Kayla enjoys spending time with her two rescue dogs, hiking, and paddleboarding.

P204 NFWS

Recently Published California Energy Commission (CEC) Papers from P204:

Enabling a Customer-Centric Approach to Scaling Integrated Demand Side Management Retrofits, Achieving Zero-Carbon Retrofits in Existing Low-Income Multifamily Housing (CEC-500-2024-045)

This project evaluated two multifamily affordable housing demonstration sites in Fresno and Ontario, California (IECC Climate Zone 3B) to understand how to implement deep energy efficiency in existing affordable housing while overcoming barriers such as space, comfort, inconvenience, and asbestos mitigation.







Customer-Centric Demand Management Using Load Aggregation and Data Analytics (CEC-500-2024-079)

This project developed and demonstrated the Open Demand Side Resources Integration Platform (OpenDSRIP) to allow the integration and coordination of distributed energy resources to maximize load flexibility using smart thermostats.







P204 Accepted into Phase 3 of the Defense **Innovation Unit Proposal**

P204 and project team proposed an innovative design and construction technique to renovate an existing Army barracks building in Fort Campbell, Kentucky, into a Net-Zero Emissions and highly efficient LEED Gold building. EPRI is currently working to finalize the proposal and begin the 2-3-year long project.

About EPRI

Founded in 1972, EPRI is the world's preeminent independent, nonprofit energy research and development organization, with offices around the world. EPRI's trusted experts collaborate with more than 450 companies in 45 countries, driving innovation to ensure the public has clean, safe, reliable, affordable, and equitable access to electricity across the globe. Together, we are shaping the future of energy.

For more information, contact:

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