

PANEL 12: Smart and Grid-Interactive Buildings

New technologies and strategies enable energy-efficient, grid-interactive buildings at scale to support decarbonization of the buildings sector. This panel focuses on the effective integration of energy efficiency, demand flexibility, energy storage, distributed energy resources, and electric vehicle charging in commercial and residential buildings. Panel 12 includes novel visions as well as physical deployments, especially those that drive market transformation. A key cross-cutting theme this year is equity—the accessibility, viability, and effectiveness of these smart building, smart grid solutions for historically underserved communities and market sectors. We invite abstracts of individual presentations, panels, debates, podcasts, or posters on the following, especially including partnerships across industry, academia, research institutions, and others:

- Pilot deployments or case studies of smart building or smart grid components preferably at scale;
- Advancements in hardware, software, communications and interoperability for grid-interactive energy efficient buildings that demonstrate load flexibility;
- Business models and deployment strategies that increase adoption of these smart building/grid strategies;
- Opportunities to identify and address barriers to introducing smart building/smart grid approaches in underserved communities;
- Technologies and strategies that support behavior change and inform decision-making throughout the smart building or smart grid lifecycle;
- New tools or strategies for control or management, machine and reinforcement learning, AI, and optimization; or
- Novel applications of data science, modeling, visualization, security, and network communication.