



Grid-Interactive Homes and Buildings

With broad commitment to economy-wide decarbonization, the region will need to build a flexible, clean grid that optimizes energy usage and increases deployment of distributed energy resources to ensure that the transition is affordable, equitable, and cost-efficient. Grid-interactive buildings have the ability to shed, shift, or modulate energy use in response to grid conditions. If used as flexible sources of energy, homes and buildings will have reduced operating costs, improved comfort and resiliency, and provide increased grid reliability and security.

In order to achieve this, business models and policy and regulatory frameworks must be developed to support consumer uptake and provide pathways for grid modernization. This change will require states to modify the ways they regulate and oversee energy infrastructure. Policies, programs, and technology must be designed and implemented equitably so that the region's oldest homes and historically marginalized communities are at the forefront of the transition. Without this evolution, the electrification costs will be higher than necessary and will continue to burden those who have disproportionately shouldered it.

NEEP engages with diverse stakeholders, including state and local government, efficiency programs, industry, U.S. DOE, U.S. EPA, national labs, and advocates, to speed adoption of grid-interactive home and building technologies. In 2023, NEEP will work with these stakeholders to identify policy barriers to adoption of grid-interactive homes and buildings and then support development and uptake of innovative policies, regulatory action, and residential and commercial programs.

NEEP's 2023 Outcomes:

- Two state regulatory agencies (New Jersey, New York, Vermont) modify cost-benefit analysis for energy efficiency and/or grid planning to measure the value of real-time energy generation and use, such as adopting a Total Systems Benefit metric or similar measurement.
- Two utilities or program administrators (New Jersey, Vermont) design incentive programs for grid-interactive appliances and equipment with specific consideration for overcoming equity barriers.
- Two state regulatory agencies (Massachusetts, New Jersey) create statewide frameworks to accelerate adoption of GIHBs technologies.
- One state (Massachusetts, New York, Rhode Island) adopts a first-of-its-kind regulatory framework to prioritize energy efficiency and other demand side resources over the expansion of pipes and wires infrastructure.

NEEP's 2023 Activities:

NEEP works with partners to determine high priority work throughout the year. In 2023, this includes:

Stakeholder Engagement and Collaboration: *NEEP facilitates information sharing to advance long-term regional market transformation strategies and to develop a regulatory framework necessary to facilitate building decarbonization.*

- **Cross-Program Engagement:** NEEP provides support for topical partner working groups such as communities, heating electrification, and appliance standards to expand knowledge of GIHBs and identify implementation pathways.

- Collaboration: NEEP monitors, communicates, presents, and coordinates with national and regional organizations (e.g., U.S. DOE, U.S. EPA, Regional Energy Efficiency Organizations, NASEO, NECPUC, Building Performance Association, NBI, SEPA, ACEEE, CEE, E-Source, and advocacy organizations).

Tracking, Analysis, Tools, and Reports: *NEEP helps the region build market momentum by tracking, reporting, and analyzing relevant grid-interactive homes and buildings technology trends, policy and program activities, pilots and technology demonstrations, and the role of such to optimize energy performance.*

- Policy and Program Matrix: NEEP researches and maintains the [Grid-interactive Homes and Buildings Policy and Program Matrix](#).
- Resource Center: NEEP maintains the [Grid-interactive Homes and Buildings Resource Center](#).
- White Papers: NEEP researches and reports on three topics (TBD) related to policy innovation and regulatory policies to increase the adoption of GIHBs.
- Blog Series: NEEP produces a four-part series highlighting innovation in GIHBs policy and implementation.

Technical Assistance: *NEEP provides direct technical assistance to states, communities, consumers, and advocates to encourage the implementation of grid-interactive homes and buildings and grow access to these resources.*

- Technical Assistance: NEEP provides assistance on policy and program mechanisms to consider GIHBs as a tool for pursuing affordable and equitable building decarbonization.
- Public Comments: NEEP responds to requests for public comments that highlight the opportunities for GIHBs to contribute to energy efficiency and decarbonization goals.
- Collaboration: NEEP provides resources and best practices for advocates about grid-interactive homes and buildings and policy opportunities.
- Targeted Assistance: NEEP meets with state partners that support NEEP's Grid-Interactive Portfolio to provide guidance on best practices for program design and equitable implementation.

Thought Leadership: *NEEP influences the narrative around grid-interactive homes and buildings, strategic energy management, and smart energy technologies, by positioning NEEP and its partners as consistent, reliable expert sources of information and resources.*

- Webinar Series: NEEP hosts a webinar series that will feature GIHB policy content.
- Events: NEEP will identify opportunities to promote innovative GIHBs policies and champion solutions at events including NEEP-run and industry-hosted summits, workshops, and other convenings.