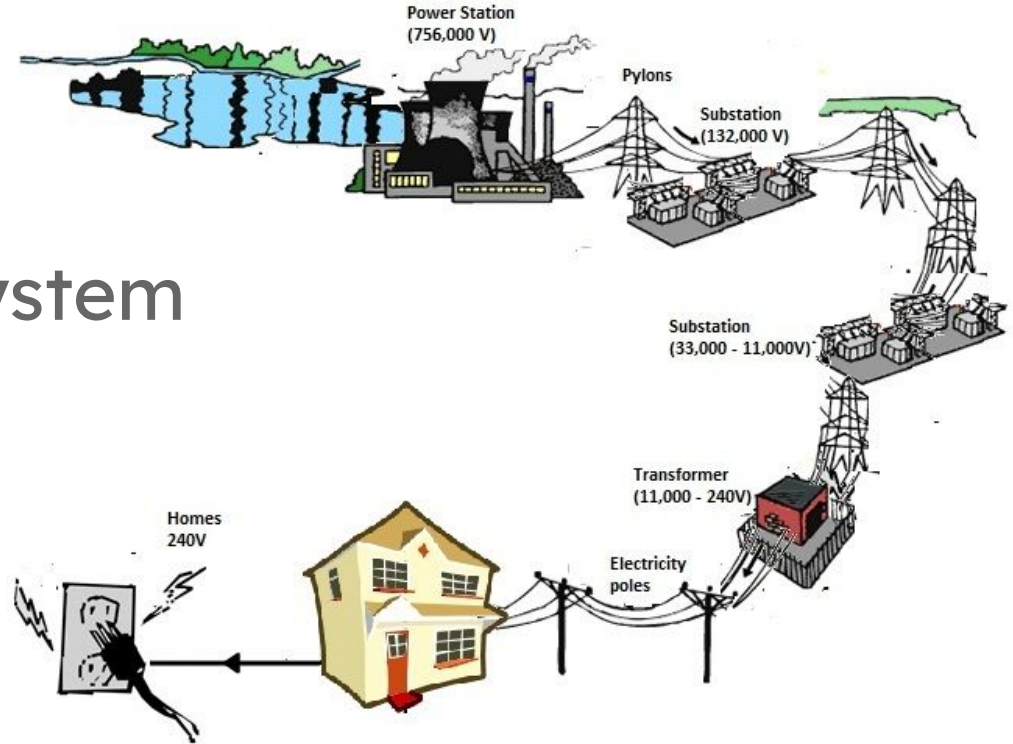


Energy Equity

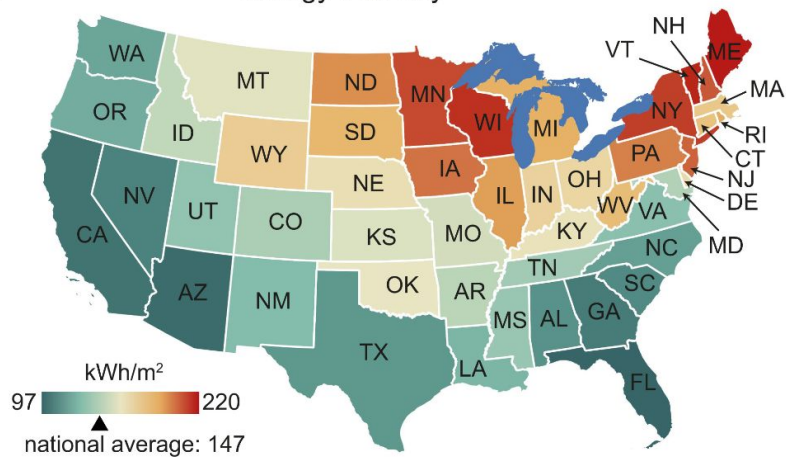
Harnessing Strategic
Investment for a
Sustainable and Just
Residential Energy System



Morgan Cleary

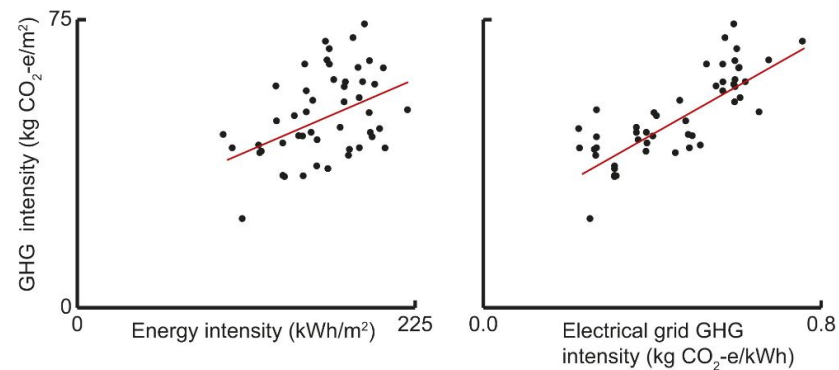
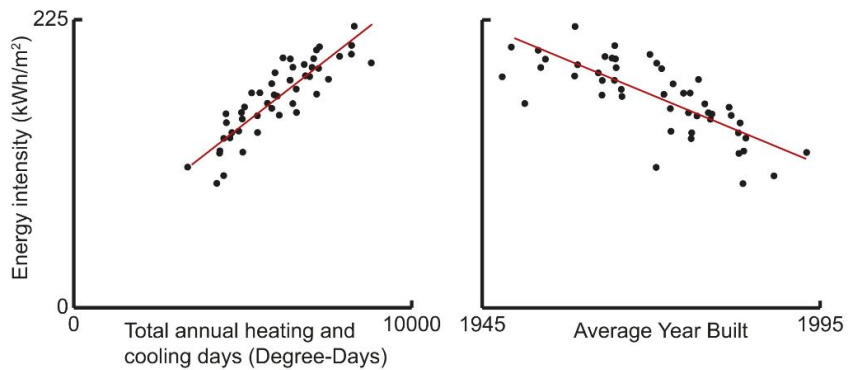
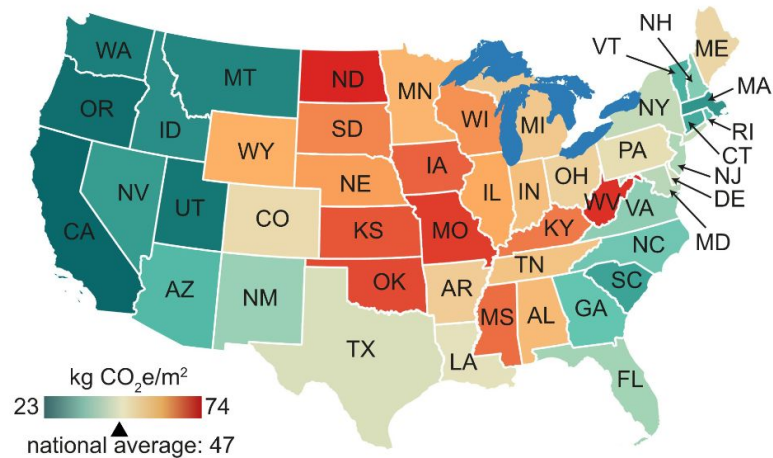
A

Energy Intensity



B

GHG Intensity



Massachusetts EEAC Model

The Massachusetts Energy Efficiency Advisory Council (EEAC) was created by the **Green Communities Act of 2008**, a comprehensive energy reform law. EEAC members guide the development of state- and nation-leading energy efficiency plans by the Commonwealth's investor-owned gas and electric utilities and energy providers. The Council's **priorities** are to develop, implement, evaluate, and monitor the implementation of these plans.

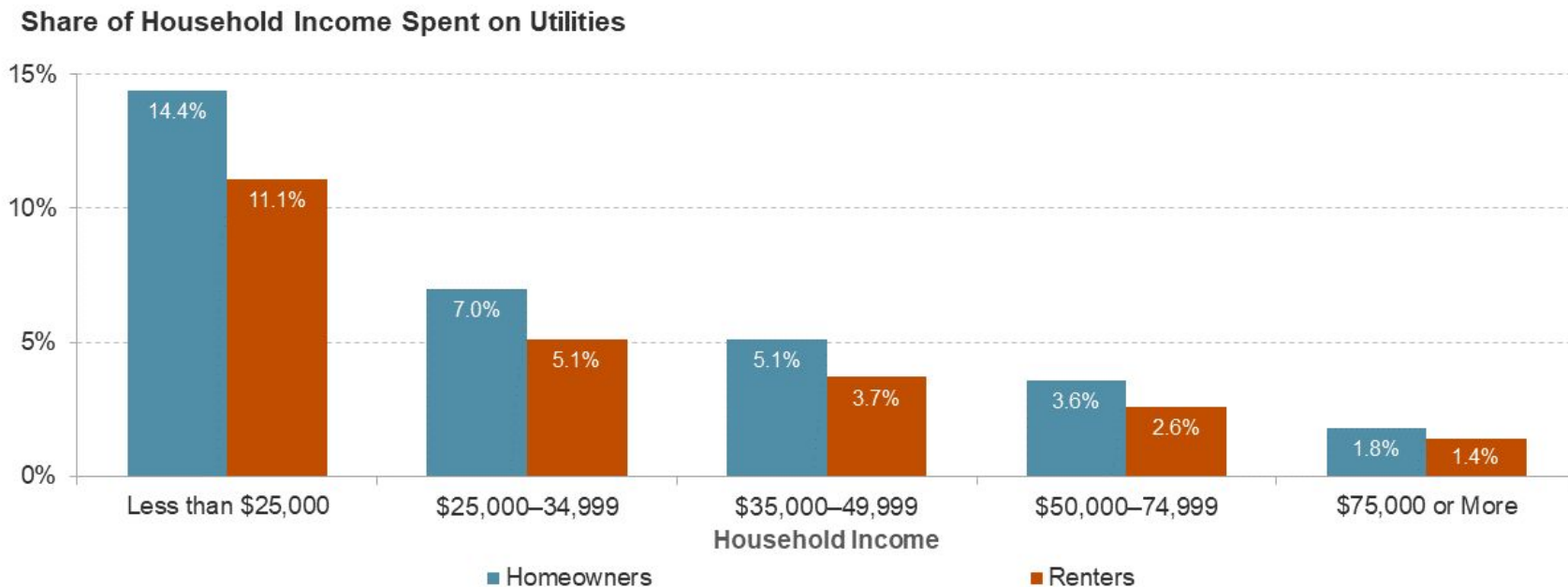
The Council is also charged with developing a long-term vision for the Commonwealth's energy future. In recommending and overseeing specific studies and research, the Council works to achieve energy efficiency savings and to maximize the economic and environmental benefits of energy efficiency.

The Massachusetts energy efficiency programs offered by Mass Save are funded by utility customers. All residents and businesses located in investor-owned utility territories in Massachusetts pay into a fund through their utility bill which supports the Mass Save programs. The Three-Year Plan directs how these funds will be spent on financial incentive programs for homes and businesses.



The residential and commercial buildings sector is already highly electrified, **but space heating, water heating, and cooking remain predominantly fossil-fueled services.** Under the electrification scenario, space- and water-heating demands are assumed to be met increasingly with electric, air, and ground-source heat pump technologies. Induction stovetops are assumed to replace traditional gas or electric stoves. **By 2050, the buildings sector is assumed to be 100% electrified.** ([link](#))

Figure 2. Energy Burdens Were Particularly High for Lower-Income Homeowners in 2021



Note: Utilities defined as electricity, natural gas, oil, or other fuels. Excludes renters who do not pay utilities separately from rent. In 2021, most renters paid for utilities separately: 90% of renter households paid for electricity separately, and 77% of renter households paid for their heat source separately, across all heat source types.

Source: JCHS tabulations of US Census Bureau, 2021 American Community Survey 1-Year Estimates.

Home *Energy Upgrades* For Single-Family Buildings *At No Cost!*

The LEAN Single-Family Program (1-4 unit residential) is tailored to deliver complete, cost-effective gas and electric energy efficiency measures for both renters and owners occupying 1-4 unit residential housing across Massachusetts.



See If You Qualify

Designed to leverage federal LIHEAP (Low-Income Home Energy Assistance Program) and WAP (Weatherization Assistance Program) funding and to blend that funding with the Mass Save program funds to maintain sector-level cost effectiveness. These federal programs are administered in Massachusetts by the EOHLC (Executive Office of Housing and Livable Communities), which works closely with the PAs and LEAN to maintain effective implementation offerings.

Allocation of Funds for Low-Income Sector Programs and Education

Commonwealth legislation mandates that energy efficiency funds shall be allocated to customer classes in proportion to their contributions to those funds, and “at least 10 percent of the amount expended for electric energy efficiency programs and at least 20 percent of the amount expended for natural gas energy efficiency programs shall be spent on comprehensive low-income residential demand side management and education programs.”¹¹⁰ The electric and natural gas PAs have allocated sufficient budgets to Low-Income sector programs to meet or exceed this mandate.

In the Low-Income sector,¹ these strategic decarbonization enhancements will include:

- Driving no-cost electrification for low-income customers, with a focus on those who heat with delivered fuels and electric resistance.
- Accelerating delivery of weatherization and electrification improvements to low-income customers by expanding the list of qualified vendors.
- Supporting deep energy retrofits and electrification via the Multifamily Deep Energy Retrofit pathway.

What We've Done

Since 2013, we have:



Weatherized approximately 350,000 homes, including 70,000 low-income households.



Supported the installation of heat pumps in over 75,000 homes and businesses (since 2019), including 3,600 low-income households.



Reduced greenhouse gas (GHG) emissions by 3.7 million metric tons of carbon dioxide equivalent (CO₂e), the same as of taking 800,000 cars off the road for a year.



Delivered over 153 million megawatt-hours (MWh) and 4.7 billion therms in energy savings, as well as \$31 billion in total benefits to customers.



Invested \$1.1 billion in improvements that lower energy bills and improve health, safety, and comfort for low-income households.



Provided \$6.7 billion in customer incentives.

What We're Going To Do

Under the 2025-2027 Plan, we aim to:

Weatherize 174,000 homes, including approximately 48,000 low- and moderate-income households.

Support the installation of heat pumps in over 115,000 households, including 16,000 low- and moderate-income households.

Reduce GHG emissions by 1.0 million metric tons of CO₂e.

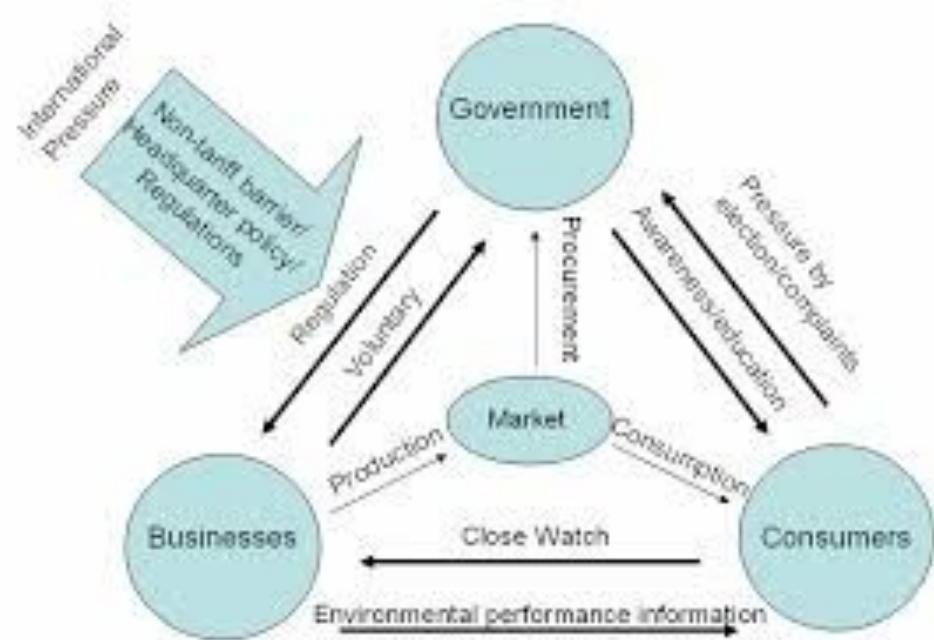
Deliver 9.8 million MWh and 1.1 billion therms in energy savings and \$13.8 billion in total benefits to customers.

Invest over \$1 billion in incentives paid for low- and moderate-income customers and renters.

Provide over \$3.5 billion in customer incentives.

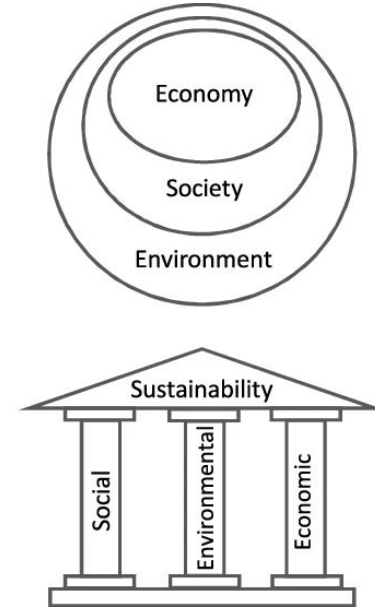
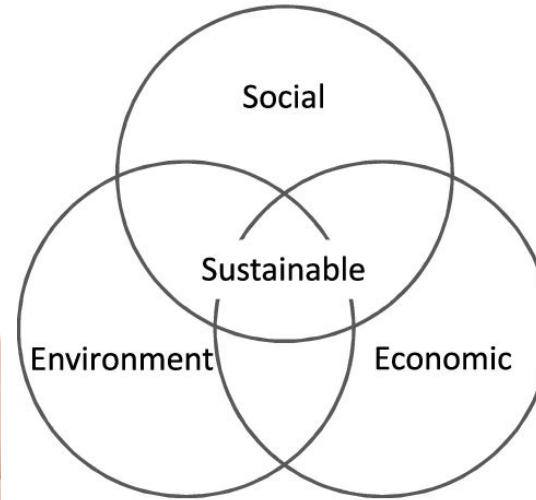
Benefits for Stakeholders

- **Consumers:**
 - Lower energy costs and improved comfort.
 - Access to affordable financing and incentives that make retrofitting financially viable.
 - Long-term savings through increased energy efficiency.
- **Contractors:**
 - Job creation in the energy efficiency sector.
 - Clear guidelines, incentives, and a growing market for energy-efficient retrofits.
 - Improved business opportunities as demand for energy-saving solutions rises.
- **Government and Public Good:**
 - Meeting sustainability goals and reducing overall energy demand.
 - Reducing greenhouse gas emissions and helping combat climate change.
 - Stimulating local economies through green jobs and energy savings.



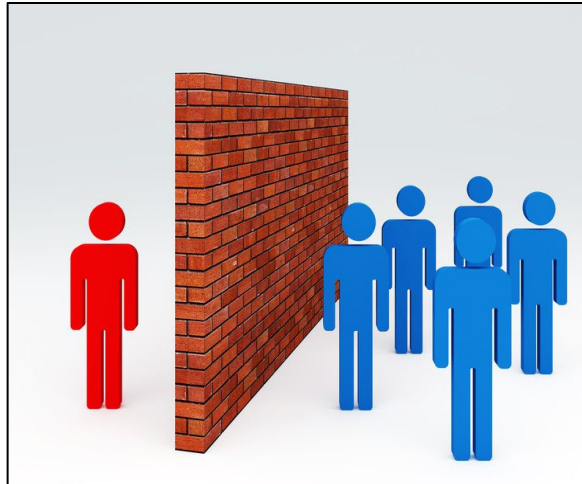
Alignment with Broader Sustainability and Policy Goals

- **Climate Action:** DERs address a crucial sector of GHGs in a multifaceted way
- **Equity and Accessibility:** Emphasizes equity in energy systems
- **A Possible Model for Other States and other Systems**



Challenges and Opportunities for Improvement

- **Barriers to Scaling Up:** Multifamily units, Variety of Stakeholders involved, nonprofits beholden to utilities, continued bureaucratic delay
- **Opportunities for Improvement:** Standardization, Expansion of HPC offerings, Incorporation of other states



Concluding Remarks

- Impacts from climate are imminent, and the Mass Saves program simultaneously addresses not only the imminent effects that humans will feel, but also seeks to cut down on the gravity of these effects.
- This program delivers widespread benefits, supporting both the job market and the broader community, ensuring value for all involved.
- The program continues to evolve and expand, creating more jobs, retrofitting more homes, reducing greater amounts of GHG emission, and efficiently leveraging investments toward a more productive program.
- I hope this presentation shares an applicable model for productive government investment, optimization mechanisms, and strategic investment to dynamically address many problems in the most efficient manner possible.