



Images Copyright © City of Beverly 2024

• DURATION

Ongoing since 2014

• POPULATION 2024

Beverly: 42,526 (Growth rate -0.16%)

• URA SCOPE

STRATEGY. Shared Vision
SOCIETY. Staying Human

• TOPICS

RENEWABLE ENERGY
DECARBONIZATION
ENERGY RESILIENCE
PUBLIC TRANSIT
CLIMATE ACTION
SUSTAINABLE INFRASTRUCTURE

• MAIN ACTORS

City of Beverly
Green Beverly, LLC
Change is Simple



Driving the Clean Energy Transition in Beverly, MA, USA Through a Greener Power Grid

Nestled along the rugged coastline of Massachusetts, Beverly is a city shaped by its industrial past and forward-thinking ambitions. With a population of over 42,000, it boasts a unique blend of urban life and open spaces, connected by four train stations and a regional airport. Its diverse neighbourhoods reflect a mix of history and modernity, while its economy thrives in sectors ranging from manufacturing to biotechnology, healthcare, and education.

But Beverly's story is not just one of economic strength—it's a city determined to meet the climate crisis head-on. With a clear vision for the future, Beverly is rapidly cutting emissions by electrifying buildings and transportation. Renewable energy projects expanded access to public transit, and energy efficiency programs are transforming the way residents power their homes and move through the city.

Sustainable Development Goal calls for access to clean, reliable energy, and Beverly is meeting this challenge with urgency. The city's commitment to electrification goes hand in hand with building enough clean energy infrastructure to ensure a genuine reduction in carbon emissions. Every initiative is a step toward a smaller carbon footprint and a healthier future.

Since Mayor Mike Cahill took office in 2014, solar energy has become a defining feature of Beverly's landscape. Over the past decade, the city has installed 12.5 megawatts of solar power, with more on the horizon. Solar panels now cover eight sites, including a former landfill and four parking lots repurposed with solar canopies.

These installations generate enough electricity to power all municipal buildings and streetlights—equivalent to supplying 1,000 homes each year. Overcoming challenges in local energy distribution, Beverly has helped modernize the grid while making clean energy a local reality.

None of this has been achieved in isolation. Partnerships with state agencies, utility providers, solar and EV developers, nonprofits, and local businesses have been essential. Mayor Cahill's leadership has also extended beyond city borders, influencing national and international climate policy through his work with the United States Climate Mayors Steering Committee.

Beverly's journey is one of determination and action—where innovation meets responsibility, and a small coastal city proves that real change begins at home.



Impact

Beverly's commitment to sustainability continues to yield measurable progress, demonstrating how proactive policies and strategic investments can drive meaningful environmental change. The integration of new solar photovoltaic (PV) systems into the existing grid has required extensive research, negotiation, and advocacy at regional, state, and national levels, positioning the city as a leader in grid modernization.

In 2024, Beverly's eight solar sites are projected to generate 10,280,884 kWh of clean electricity—enough to offset all municipal electricity consumption. This achievement underscores the potential of renewable energy to replace fossil fuel dependency. Over the past five years, these efforts have led to a 14.5 percent reduction in the city's greenhouse gas emissions, setting a precedent for other municipalities aiming to transition toward a cleaner future.

Electrification of the municipal vehicle fleet is also accelerating, with a clear objective to transition all school buses to electric by 2030. By securing innovative financing, grant funding, and forming public-private partnerships, the city has deployed five electric school buses equipped with vehicle-to-grid technology, with eight more set to be operational within two years. Additionally, the installation of 23 public EV charging ports is making electric transportation more accessible for residents, visitors, and businesses, further reducing reliance on fossil fuels.

Community participation remains at the heart of Beverly's strategy. The city's community energy coaching program has already helped nearly 3,000 households—representing 20% of the housing stock—take advantage of energy efficiency programs. This has resulted in nearly 1,000 homes receiving insulation upgrades and over 400 installing modern electric heating and cooling systems, directly improving home efficiency and reducing energy costs.

A significant milestone was reached with the launch of the municipal electricity buying program, which leverages community purchasing power to secure affordable electric rates while increasing the share of renewable energy beyond state-mandated levels. With more than 13,000 homes and small businesses enrolled, this initiative provides a scalable model for communities seeking to transition to clean energy affordably and efficiently.

Challenge

The challenge facing Beverly—and society as a whole—is the urgent need to transition away from carbon-based energy sources to mitigate climate change. Fossil fuel dependence continues to drive greenhouse gas emissions, worsening extreme weather events, sea level rise, and environmental degradation. Without decisive action, communities risk increasing energy instability, economic strain, and long-term harm to public health.

Beverly recognizes that reducing emissions requires not only commitment but also strategic implementation of clean energy solutions. Electrifying buildings and transportation is essential, but its success depends on access to renewable energy. A modernized grid, powered by solar, wind, and battery storage, is necessary to ensure electrification leads to true decarbonization. By investing in renewable infrastructure and innovative technologies like vehicle-to-grid systems, Beverly is actively reducing grid strain while enhancing energy reliability.

However, individual efforts are not enough. Addressing the climate crisis demands collaboration among municipalities, businesses, and residents. Expanding public transit, walkable urban design, and energy efficiency programs empowers communities to reduce their carbon footprint. Through collective action and a commitment to sustainable innovation, Beverly is working to create a future where clean energy is not just an option, but the foundation of daily life.

Solution Proposed

Beverly's climate action strategy aims to build a low-carbon, resilient community by making forward-thinking investments in public infrastructure and community support programs.

The transition to electrified buildings and transportation is essential in reducing dependence on fossil fuels. However, achieving this requires a modernized, renewable electric grid. Beverly's initiatives focus on alleviating strain on the region's aging infrastructure while enhancing power reliability. The city became the first in the U.S. to integrate vehicle-to-grid technology into its all-electric school bus fleet, allowing stored energy to be fed back into the grid during peak demand. Additionally, battery storage systems complement newly developed solar arrays, further strengthening local energy resilience.

To ensure equitable participation in the clean energy transition, Beverly collaborates with neighbouring cities to fund community-wide energy programs. A dedicated coaching team provides guidance on financial and technical aspects of energy-efficient upgrades for residents and small businesses.

Urban design improvements in Beverly enhance walkability, cycling infrastructure, and public transit access, reducing reliance on personal vehicles. Awarded the U.S. Mayors Climate Protection Award, Beverly serves as a model city, sharing its strategies for collective climate action.

<https://thebayawards.com/>