

# IX. ENERGY

## INTRODUCTION

Energy impacts nearly all aspects of our daily lives. We depend on energy to travel; to heat and cool our buildings; and to power everything from streetlights, to smartphones, and medical equipment. Energy planning is relevant to the City's operations but also to residents and businesses living and working within Woonsocket. This Element will consider strategies to reduce energy consumption as well as the sources of energy, generation, and distribution within the City, security and reliability, efficiency, and the impact on the local and regional economy.

## Vision for Energy

*Over the next 20 years, Woonsocket will continue to invest in energy infrastructure that is durable, dependable, and clean, and helps support our business and the quality of life of our residents.*

For greater detail on data and statistics related to energy, see the Energy chapter of the Baseline Report of the Comprehensive Plan.

## WHAT WE HEARD

Based on community surveys and other methods of public engagement, residents want the City to focus on:

- The addition of solar panels in Woonsocket, including for residential, municipal, commercial, and industrial buildings.
- Cost concerns related to the transition to renewable energy in Woonsocket.
- Installing more LEDs for streetlights, in addition to transitioning streetlights to solar power where possible.

In the community survey, over 70% of respondents said “Investing in more energy efficient municipal facilities and vehicles and connecting the public with energy efficiency resources” was Important or Very Important.

Additionally, about 64% of respondents said “Investing in more renewable energy for municipal facilities and vehicles and connecting the public with renewable energy resources” was Important or Very Important.

There seems to be strong public support for both energy efficiency and renewable energy efforts.

## CITY BUILDINGS, FACILITIES, & FLEET

Energy efficient City facilities, buildings, and operations not only save money, but reduce pollution and greenhouse gas emissions. Upgrading insulation and improving HVAC systems in municipal buildings, acquiring more efficient fleet vehicles, installing more efficient indoor lighting, and upgrading streetlights are examples of how Woonsocket can reduce energy costs.

### Energy Use

To begin reducing energy consumption it is essential that we understand how much energy we use currently. The RI Office of Energy Resources encourages municipalities to collect energy usage data for all publicly owned buildings to establish baseline energy consumption information. This data can be logged into a free online database developed by ENERGY STAR called Portfolio Manager. The City can use Portfolio Manager to develop baseline energy data and an energy profile for each municipal building in Woonsocket, addressing both electricity use and heating fuel costs. The City simply needs to enter data from past energy bills, as well as information on particular municipal facilities such as square footage, number of employees, hours of use, etc., and Portfolio Manager does the rest, calculating energy use per square foot so that facilities can be more accurately compared with one another. The City can use this baseline energy data along with data for ongoing energy expenses to track Woonsocket’s energy consumption rates over time. By identifying the structures with the highest energy consumption rates, the City can prioritize future conservation investments where they will have the greatest impact.

### Energy Efficiency

By simply reducing the amount of energy it takes to power our systems, we can ensure that the energy we produce goes further. Woonsocket can explore energy efficiency improvements to City facilities and encourage private property owners to pursue efficiency improvements of their own. Many steps can be taken to improve energy efficiency in City buildings, such as replacing older windows with newer energy efficient models that can reduce heating costs in the winter and cooling costs in the summer. Even efforts as simple as replacing conventional light bulbs with LED models and turning off lights when leaving a room significantly reduce energy consumption. Energy efficiency improvements come at a wide variety of costs, ranging from no- and low-cost solutions to more extensive upgrades. This means that many energy efficiency improvements are within the reach of all property owners and residents of Woonsocket.

ADI Energy prepared an Energy Efficiency Plan for the City in 2015. This plan focused on energy efficiency upgrades at City Hall, Harris Library, and the decorative street lighting throughout the City. ADI Energy identified five key Energy Conservation Measures, which the City has been working to implement.

The City purchased its streetlights in spring 2021 and is investing in converting them to LED. Energy usage is expected to be reduced by about 50%.



*Example of an LED streetlight (City of Woonsocket)*



*New LED lighting Veterans Memorial Park (City of Woonsocket)*

## RESIDENCES & BUSINESSES

The City promotes programs available to Woonsocket residents and businesses to help them be more energy efficient and reduce their energy costs. Currently, residents can receive an energy assessment of their homes from Rhode Island Energy/PPL and become eligible for rebates for insulation and energy-efficient appliances. Rebates are also available for small businesses for costs associated with energy efficiency electrical upgrades. Weatherization programs are available through Rhode Island’s Weatherization Assistance Program for low-income residents, including rental units with landlord approval. The Weatherization Assistance Program is managed by local community action agencies, including the Community Care Alliance and the Blackstone Valley Community Action Program, and will cover 100% of the cost of improving heating, air conditioning, and appliances of income-eligible homes.

## RENEWABLE ENERGY

### Solar

In Woonsocket, small scale solar is allowed in all zoning districts except for Public Recreation, as a way to encourage more people to add solar panels to their homes or businesses. Larger scale residential solar is allowed, but with a special use permit in residential zoning districts. Commercial/industrial solar is only allowed in the City’s

Industrial or Mixed-Use Commercial/Industrial zoning districts. There has been increased interest from developers in ground mounted solar in Woonsocket. While the City has a Zoning Ordinance regulating solar already, it needs to be amended based on the experience gained in the approval process for recent solar projects.

## Wind

Woonsocket allows wind energy facilities by special-use permit in its industrial, mixed-use industrial/commercial, and major commercial zoning districts. However, wind power generation in inland locations, such as Woonsocket, has less potential than in coastal parts of the state, and will likely not be a significant source of energy in Woonsocket (at least not with existing technologies).



*Example of residential rooftop solar – Logee Street, Woonsocket (Compass Real Estate)*



*Solar array at former Alice Mill site, Fairmount Street, Woonsocket (The Call)*



*Examples of 3-family homes in Worcester, MA renovated for energy efficiency (WBUR)*

### **Thundermist Hydroelectric Plant**

Woonsocket is home to the Thundermist Hydroelectric Plant, located along the Blackstone River at 118 S Main Street. This facility, first opened in 1983, was not originally very profitable, and was closed by RI DEM in 2003 because of perceived harmful fluctuations in the river's water level. However, after being repaired, the City-owned facility (now leased to a private operator) was reopened and now generates 1.2 megawatts of power, or enough for about 600 homes. This plant represents the only major energy production facility within the City.



*Thundermist Hydroelectric Plant (US Army Corps of Engineers)*

## **BROADBAND**

The term broadband refers to high-speed internet access. The City is well-served by commercial broadband (e.g., Verizon and Cox), but is also served in some locations by OSHEAN, a non-profit provider. There is an upfront cost to build out the OSHEAN network, but this is often heavily subsidized with public funding. A few years ago, the City's public schools and library were wired with OSHEAN fiber. This left the City with a robust network in place that can be further built on efficiently and affordably.

Expanding access to broadband services is important for business expansion and retention, improved opportunities for home-based businesses and entrepreneurship, and access to educational and health resources. Anything the City can do to expand broadband access to as many people and businesses as possible will be a boon to economic development and community well-being.

## GETTING IT DONE

GOAL IX-1: Realize more cost-efficient, clean, and reliable energy through energy efficiency measures and use of renewable energy by the City, residents, and businesses.

POLICY IX-1.1: Build municipal capacity to improve energy efficiency and reduce energy consumption of City buildings, facilities, and operations.

ACTION IX-1.1.a: Establish a new energy use baseline for assessment of the amount of energy currently being used by municipal buildings, vehicles, and equipment, and establish a protocol for tracking this data over time.

ACTION IX-1.1.b: Based on the energy usage assessment, update the City's 2015 Energy Efficiency Plan to refine and outline energy reduction goals, strategies to reduce energy consumption and improve energy efficiency, and how progress towards goals will be tracked.

ACTION IX-1.1.c: The City will give preference to energy efficient fleet vehicles and equipment when replacement is required, such as high fuel efficiency and/or electric vehicles, as viable.

ACTION IX-1.1.d: Establish an energy committee within city government, or a collaborative city/resident/business energy commission to be responsible for implementing the Energy Efficiency Plan and act in an advisory role for local decision makers.

POLICY IX-1.2: Coordinate with the Rhode Island Office of Energy Resources to explore alternative energy solutions, including solar, wind, and hydropower, and energy efficiency techniques for all municipal operations.

POLICY IX-1.3: Support residents and businesses to be more energy efficient and use more renewable energy.

ACTION IX-1.3.a: Support solar and other alternative energy opportunities for interested residents and businesses through the RI Office of Energy Resources and other sources.

ACTION IX-1.3.b: City staff will remain aware of and participate in local, statewide, and national educational initiatives to promote energy efficiency and the increased use of renewable energy.

ACTION IX-1.3.c: Continually update a clearinghouse of resources for residents to use more renewable energy and improve and maintain the energy efficiency of their homes and rental properties.

GOAL IX-2: Continue to assess the City’s Zoning Ordinance to allow the establishment of various renewable energy production facilities (wind, solar, hydropower) in appropriate areas.

POLICY IX-2.1: Explore ways to encourage more local renewable energy production facilities in harmony with new and existing uses.

ACTION IX-2.1.a: Identify municipally-owned lands and buildings that might be suitable for locating renewable energy production facilities.

ACTION IX-2.1.b: Encourage the installation of on-site renewable energy production facilities for new developments.

POLICY IX-2.2: Continue to support local energy production through hydroelectric power.

POLICY IX-2.3: Promote development of solar energy that minimizes impacts to land uses, properties, and the environment.

ACTION IX-2.3.a: Assess the City’s solar energy standards to reduce barriers to and incentivize small-scale solar energy systems such as roof-top solar.

ACTION IX-2.3.b: Assess the City’s solar energy standards to ensure that larger scale solar energy systems have minimal impacts on the environment and neighboring uses.

GOAL IX-3: Continue to expand broadband opportunities for residents and businesses.

POLICY IX-3.1: Ensure that broadband fiber is laid throughout the City in an effort to ensure that key areas are “broadband-ready” for interested residents and businesses.

ACTION IX-3.1.a: Facilitate OSHEAN expansion to institutions near the existing network where connection costs would be limited. Potential sites include schools, medical facilities, and public housing.

ACTION IX-3.1.b: Explore building wi-fi hotspots off the OSHEAN network to offer free wi-fi within Downtown and low-income neighborhoods.