

THE CITY OF PAWTUCKET
Rhode Island

**ENERGY
MANAGEMENT
PLAN**

*December
2016*

I. INTRODUCTION

The City of Pawtucket believes that monitoring and managing the energy performance of its facilities is critical for creating and maintaining a Sustainable energy system, mitigating against high and volatile energy prices, lowering operating costs, and reducing greenhouse gas emissions. This Energy Management Plan serves as a roadmap to guide decision-making and action toward a more sustainable future. Specifically, it sets a quantitative energy reduction goal and specific strategies for achieving that goal.

ENERGY POLICY STATEMENT

The City of Pawtucket encourages and supports an energy conservation and management program for its facilities in order to lower energy consumption and costs and to reduce the environmental impact of its operations. In this regard, it is the responsibility of each official and employee to participate actively in conservation and management efforts. In implementing this program, every effort will be made to maintain business operations and comfort levels throughout its facilities. It is the responsibility of Pawtucket to implement, direct, monitor, evaluate and report on energy conservation efforts. Therefore, Pawtucket hereby commits to implementing immediate and long-term plans to conserve energy resources, specifically, the strategies outlined in this Plan. These efforts will guide and support best management practices for sustainable energy management.

BASELINE ENERGY USAGE

According to data through December 2015, the City Hall, Police, and Fire Station; Deborah Sayles Library; Public Works Center; and Senior Center consistently consume the most energy relative to all facilities in the city's portfolio.

The City Hall, Police, and Fire Station facility used an average of 81 kBtu/ft² each year from 2010 to 2015. Over the previous five years, energy use intensity (use per square foot) has increased by roughly five percent. This facility has the highest square footage among all facilities in the City's portfolio. It also employs the largest number of workers with the most weekly operating hours. These factors likely



contribute to the facility's high-energy use.

Pawtucket City Hall, Police, and Fire Station

The Deborah Sayles Library has used an average of 122 kBtu/ft² annually from 2010-2015. The library has 125 computers, which may contribute to the facility's energy consumption. Energy use has remained relatively stable over the previous five years, ranging from 115 kBtu/ft² to 131 kBtu/ft².

Pawtucket Public Library (Deborah Sayles Library)



The Pawtucket Public Works Center used approximately 90 kBtu/ft² per year. The building has the second largest square footage and number of workers compared to other buildings in the profile.

Pawtucket Public Works Center



The Pawtucket Senior Center used 53 kBtu/ft² on average each year since 2010. The building's characteristics associated with its age (121 years) may contribute to its high-energy use intensity. The City of Pawtucket is taking advantage of state programs that will significantly decrease its energy use and improve facility conditions.

Pawtucket Senior Center



II. ENERGY REDUCTION GOAL

A clear and measurable energy reduction goal is critical for understanding intended results, developing effective strategies and realizing significant energy savings. Therefore, the City of Pawtucket commits to achieving a 15% reduction in energy consumption by (YEAR 2018) below 2014 levels across all of its facilities.

The City of Pawtucket is already on track to meet this goal through recent and current clean energy projects. In 2017, the City will implement energy efficiency improvements citywide and in seven facilities specifically. Projects include upgrades to lighting, control systems, window replacement, and installation of a new energy efficient boiler in Pawtucket Public Works, among others. Upgrades to streetlights alone are projected to reduce energy consumption of streetlights by 66%. These projects are expected to reduce overall energy consumption by 38% in these facilities and save over \$326,000 annually.

Furthermore, the City of Pawtucket commits to a 10% reduction below current levels in fleet vehicle fuel use by 2021.

The following action plan outlines concrete strategies that the City will undertake to continue this important work and meet its aggressive reduction goals.

III. ACTION PLAN

This action plan outlines steps that Pawtucket will take in the coming years to more thoroughly assess opportunities, implement clean energy initiatives and achieve its energy reduction goals.

STRATEGY 1: Reduce energy usage and increase energy efficiency in City-owned facilities.

Identify and implement energy efficiency opportunities

The City of Pawtucket will continue to identify opportunities for energy efficiency improvements throughout municipal facilities. Over time, we will find energy efficient retrofits for our aging infrastructure and equipment. We will continue to identify improvements that are cost-effective, and prioritize implementation for the most cost-effective projects.

Identify and implement renewable energy opportunities (solar)

The City of Pawtucket will identify opportunities to install renewable energy systems. Of all renewable energy sources, solar photovoltaic systems that convert the sun's energy into electricity may be the most appropriate for Pawtucket given typical weather conditions. Further research into siting and system size needs to be done in order to identify optimal locations and distribution of solar energy systems.

Reduce fuel use through implementing new policies and standards

The City of Pawtucket will reduce fuel use through implementing policies and standards. We have identified idling as a significant driver of fuel use in fleet vehicles. We will first target idling in order to reduce fuel consumption through two avenues. First, we will proposed policies to limit the amount of time spent idling. Second, we will engage in a campaign to raise awareness of the costs of idling and encourage drivers to turn off vehicles when appropriate. We will then identify additional ways to further reduce fuel consumption.

Establish guidelines for continuous improvement of energy performance The City of Pawtucket will establish guidelines for continuous improvement of energy performance. We will track energy use for all municipal facilities and fuel consumption for all fleet vehicles. This information will be used to identify facilities that consume relatively high amounts of energy, leading to possible identification of energy efficiency improvements. Tracking energy use also allows us to evaluate the effectiveness of projects and policies.

STRATEGY 2: Manage energy costs through effective energy procurement, energy use monitoring and building operator training.

Energy Management Team

The City of Pawtucket will assemble an energy management team led by the Recycling and Sustainability Administrator. This team will include interested and engaged members of the public who wish to volunteer their time to help promote energy efficiency and renewable energy. The team will also continue an ongoing working relationship with National Grid to get advice on energy efficiency measures and promotions. This team will further connect Pawtucket stakeholders who are driven to reduce energy consumption in municipal facilities.

Educate building occupants about conservation

The City of Pawtucket will initiate an ongoing educational campaign for municipal employees regarding energy use and efficiency measures. This campaign will capitalize on the momentum and excitement of current efficiency projects. Through such a campaign, our hope is that employees take ownership over

energy consumption and practice energy conservation. One way that employees can help is by communicating potential energy issues to the energy management team (e.g. offices that are too hot or too cold). We will work to establish an open dialogue with all municipal employees.

Establish system for ongoing monitoring for energy use

The City of Pawtucket will generate energy consumption reports each quarter. These reports serve several purposes. First, the reports will be an important platform for communication and transparency of energy use and expenditure within the City. Second, the reports will provide critical information in the evaluation of energy efficiency projects and identification of energy efficiency opportunities. Over time, reporting will ensure the City of Pawtucket stays on track to meet its energy reduction goal

Purchase ENERGY STAR equipment and appliances

The City of Pawtucket will commit to purchasing Energy Star equipment and appliances. Products that carry the Energy Star label consume less energy relative to alternatives. This energy savings will be a critical piece of achieving our energy goal.

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