

A photograph of the Rochester skyline across a body of water. A prominent white arch bridge spans the water in the foreground. The skyline includes several tall buildings, including a distinctive cylindrical tower. The sky is clear and blue.

Dedicating day-to-day energy management to implement Climate Action Plan

Case Study

Company Name:
City of Rochester

Industry:
Municipal Government

Location:
Rochester, New York

Annual Electric Savings:
977,203 kWh

Overview

Located on the southern shore of Lake Ontario, the City of Rochester is the fourth largest city in the State and the regional economic hub for Monroe County. It is home to the region's largest employers, including the University of Rochester, Strong Memorial Hospital, and a host of other manufacturing, health, and research facilities that provide the foundation for growth and economic activity. Rochester's environmental mission, presented in the City's Municipal Operations Climate Action Plan, expresses a commitment to outstanding environmental stewardship through practice and policy, guided by the values of sustainability, conservation, restoration, compliance, leadership, and continuous improvement. Rochester will continue to lead the community in energy planning as it implements the City of Rochester Climate Action Plan, engaging community stakeholders to reduce energy consumption and greenhouse gas emissions citywide.

Through the New York State Energy Research and Development Authority's (NYSERDA) On-site Energy Manager (OsEM) program, the City of Rochester engaged a contract OsEM on a part-time basis for a two-year period. Projects facilitated by the OsEM included multiple LED lighting upgrades, an engineering study involving converting a large water production facility to geothermal HVAC, studies of numerous energy conservation measures in multiple city buildings, Covid related indoor air quality improvement studies, improvements to the city's energy use database in Energy Star Portfolio Manager, goal attainment as part of the Department of Energy Better Buildings Challenge, tools and training for tracking savings from city agreements for solar generated purchased power, securing rebates on qualified equipment, and day-to-day support for city engineering, architectural services, and operations, as well as maintenance on energy related matters.

“The On-site Energy Manager Program provided the city with the ability to assess the value of having a dedicated resource focused exclusively on the city’s energy consuming equipment and energy related processes and data. The results achieved in the program demonstrated the clear benefits realized by the city through energy savings to having a resource dedicated to day-to-day energy management activity.”

— *City of Rochester Representative*

Goals

- City point of contact on projects generating in excess of 977,000 kWh of electricity savings.
- Technical interface for the Rochester on multiple NYSERDA Flex Tech studies involving various energy saving measures, geothermal HVAC, and indoor air quality as it related to Covid and energy use.
- Complete Portfolio Manager database improvements resulting in the Rochester exceeding its Better Buildings Challenge goal ahead of schedule.
- Develop tools and trained city personnel for tracking production and reporting on savings on a Rochester purchased power agreement for a 2 MW solar facility.

Results

Energy Efficiency: The OsEM worked with outside consultants and engineers as well as Rochester architects, building services, and other city staff to facilitate implementation of several energy efficiency measures resulting in 977,000 kWh of electricity savings. Utility rebates in excess of \$125,000 were secured for energy efficiency measures implemented.

Cost-Shared Technical Assistance: Applied for and received technical assistance through NYSERDA’s Flex Tech Program for studies associated with numerous potential energy efficiency measures in several Rochester-owned buildings.

NYSERDA Sponsored Studies: Rochester interface with NYSERDA Flex Tech consultants on examining indoor air quality improvements and energy use for Covid 19 mitigation strategies involving HVAC equipment operations and maintenance on large public facilities (libraries and arenas).

Department of Energy Better Buildings Challenge: Improved data integrity and expanded the number of Rochester buildings and systems contributing to the Challenge. Challenge goals were exceeded ahead of schedule.

New York Power Authority Geothermal Energy Challenge: City point of contact for multi-phase study involving assessment of utilizing geothermal heat pumps versus conventional high-efficiency HVAC equipment for heating and cooling the Rochester’s drinking water production facility. The study produced a highly detailed report including schematic design, energy modeling data, costs, savings, and payback period for both options. The report will help inform future capital planning for upgrades at the facility.

The NYSERDA On-site Energy Manager Program

Through the On-site Energy Manager (OsEM) Pilot Program, NYSERDA cost-shares up to 75% of the cost to hire an OsEM. OsEMs work with companies to develop and implement successful energy and productivity projects. Projects may include operation and maintenance improvements, behavioral changes, energy efficiency upgrades, process improvements, throughput and scrap reduction improvements, and cost management.

Discover how to bring energy costs under control and maximize profitability with NYSERDA.

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