

Project Details

Contract Type:

Energy Savings Performance Contract; Power Purchase Agreement

Facility Size:

21 Buildings (ESPC)
868,252 square feet (ESPC)

Annual Energy Savings:

43,508 therms natural gas
822,683 kwh (ESPC)
339,607 kwh (Solar)

Project Summary

The Metropolitan Area Planning Council (MAPC) issued a Request for Qualifications (RFQ) to energy service companies (ESCOs) to provide for comprehensive energy management services for 14 of its member communities. Ameresco submitted a proposal and was subsequently awarded the contract.

In collaboration with and by direction of the City of Melrose, Ameresco will implement comprehensive energy infrastructure improvements and cost savings opportunities.



Ameresco will replace old inefficient lighting, which not only increase energy savings but also improve aesthetics.



The City of Melrose entered into a 20-year PPA with Ameresco.

Customer Benefits

As part of the City's Green Community designation, Melrose pledged to reduce its energy use by 20% in five years. To assist in meeting the City's commitment, Melrose chose to implement an energy savings performance contract (ESPC) and a power purchase agreement (PPA) with Ameresco.

With an ESPC the City of Melrose will be able to reduce utility costs by more than \$175,000 annually, through the acquisition of less than \$2.5 million dollars in capital improvements. This investment, however, will be budget-neutral to the City. The City will achieve these improvements via a performance contract designed to extract energy inefficiencies in the current utility operating budgets to self-fund the project from future energy savings. Payment will be made over time utilizing Ameresco's annual energy savings for security.

Through the ESPC Ameresco will install energy conservation measures (ECMs) throughout the city buildings and schools. In general the ECMs are designed to deliver many technical, financial, and environmental benefits to the City of Melrose. Benefits include, better learning and working environment for students and staff, improved energy efficiency and operation of existing systems and new energy efficient equipment and systems.

Through the PPA the City will purchase electricity at a rate lower than the rate currently paid to its electric utility. Rooftop-mounted solar panels were installed at Melrose High School and Melrose Veterans Memorial Middle School with a total capacity of 301 kW-DC. The 20-year PPA offers a fixed price per kWh for the City and provides energy cost savings and a hedge against fluctuating utility prices.

Environmental Benefits

Through its partnership with Ameresco, the City is expected to save the equivalent of 1,785,659 pounds of CO₂ per year. The green benefit from this carbon reduction is roughly equal to:

- ~ 148 cars taken off the road for one year
- ~ 112 households powered for one year
- ~ 184 acres of pine forest absorbing carbon

The project helps reduce the need for energy from traditional power plants fueled by fossil fuels.

About The City of Melrose, MA

Melrose is a small city located approximately seven miles north of Boston with a geographic area of 4.76 square miles and a population of 28,150 people. Since its settlement in the middle of the 18th century, Melrose has offered its residents a desirable compromise between the crowded metropolis of Boston and the frontier of rural exurbia. Melrose is predominantly residential with exquisite Victorian homes dating from the late 1800s, but beyond being a city of homes, Melrose has a long-standing tradition of being self-sufficient, to support residents' housing, education, employment, health, shopping, entertainment, recreation and leisure needs.

Learn more at
www.cityofmelrose.org

About Ameresco

Ameresco, Inc. (NYSE:AMRC) is one of the leading energy efficiency and renewable energy services providers. Our energy experts deliver long-term customer value, environmental stewardship, and sustainability through energy efficiency services, alternative energy, supply management, and innovative facility renewal, all with practical financial solutions. Ameresco and its predecessors have constructed billions in projects throughout North America.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please visit www.ameresco.com.



Windows at the Franklin Early Childhood Center will receive weatherization.

Accolades

"This is the future, right here on the roof of Melrose High School," said Mayor Robert J. Dolan. "These solar panels are providing electricity to run the school. I anticipate that over time, solar energy will become a more and more important part of the energy picture for cities and towns throughout the Commonwealth. With this installation, we are preparing for our future."

- Robert J. Dolan, Mayor
City of Melrose, MA

ESPC Services Provided

Ameresco identified energy saving opportunities throughout the City. Some of the opportunities are described in further detail below.

Ameresco will install a state-of-the-art lighting system to benefit the building occupants. This project replaces or upgrades approximately 4,000 existing fixtures and will enhance the quality, consistency, and color rendering of the lighting system, while meeting all applicable codes and standards. Ameresco will install new lighting controls, as well, to reduce energy use from unnecessary lighting operations .

Ameresco will install demand controlled ventilation to save Melrose energy by reducing the amount of

outdoor air that is conditioned during low occupancy periods.

Weatherization techniques will reduce the infiltration of outside air and the leaking of conditioned air. The reduction of outdoor air infiltrating occupied conditioned space will improve occupant comfort and will reduce heating and cooling costs.

The existing boiler at City Hall will be replaced with a new, more efficient, near-condensing, gas-fired hot water boiler. The existing boiler is near the end of its useful life and would require expensive repairs in the near future. Also at the City Hall, a new chiller will help improve chilled water reliability and alleviate expensive repairs as well as significantly improve efficiency.

A new integrated energy management system (EMS) will be installed in several city and school buildings. The EMS will be accessible from any Internet-enabled personal computer with web browsing software and will reduce energy consumption, increase system reliability and improve occupant comfort for the City. The EMS will also provide dynamic systems control and utility consumption reporting capabilities for the entire City.

Solar PPA Services Provided

With no capital cost to the City, Ameresco designed, built, operates and maintains more than 1,000 solar panels at the middle and high school. As an education benefit for the schools, Ameresco will provide materials for teachers to utilize in the classroom. A fully-customizable LCD television will visually display the real-time performance and environmental benefits of the PV system at each of the schools. Furthermore, Ameresco will establish a web page to display real time data from the PV electricity output. Teachers and students will be able to access this web page and the reports generated by the system may be linked to the classroom.