

FISCAL YEAR 2016: ANNUAL ENERGY REPORT

In FY2016, the Town's Energy Office conducted professional and technical tasks related to municipal and island-wide energy policies, practices, and projects that deliver significant taxpayer savings through reduced energy costs, while contributing to overall community sustainability and economic development. These efforts were led by the Town's Energy Coordinator, Lauren Sinatra.

In FY2016, Town facilities consumed 12,179,133 kWh of electricity (2% increase over FY2015), 137,692 gallons of heating oil (-22.5% less than FY2015), and 38,226 gallons of propane (-1.5% less than FY2015) at an overall cost of \$2,538,265 (-1.3% less than FY2015). There were above average temperatures in Nantucket during the months of December through March 2016.

Among the achievements of the Energy Office in FY2016 were the following:

- Oversaw the installation of wifi thermostats within the all-electric Planning and Land Use Services Building. By managing the thermostat set-points and calendar schedule, electricity usage decreased 37%, saving the Town over \$25,000 in electricity costs.
- Helped Our Island Home to contract for various mechanical upgrades such as new boilers, at a price far below budget and nearly \$300,000 less than the original estimate. Secured over \$30,000 in utility incentives towards the system upgrades which are mandated for residential health & safety.
- Helped the Natural Resources Dept. to secure \$4,630, or 55% of the equipment cost for new, high-efficiency LED algae grow lights at the new Shellfish Propagation Facility.
- Secured a \$35,000 from the MA Dept. of Energy Resources (DOER) grant to fund the Energy Office through FY2016.
- Worked with the Town IT Department to identify and implement energy saving power management settings on all municipal employee computer monitors, estimated to save up to \$100 per computer per year.
- Sold 179 Renewable Energy Certificates generated by the wind turbine at the high school at a cost of \$9,951 for the Town. By the end of FY2016, the 100kW wind turbine at Nantucket High School had generated 905 MWh, equating to approximately \$181,000 in avoided electricity costs and \$51,107 in Class 1 Renewable Energy Certificate (REC) sales.
- Rebid the Town's electric supply in November of 2015 to lock into historically low wholesale electricity prices. The new rate of \$.08292 KWh is nearly 2.5 cents lower than the previous contract price of \$0.10703, which has resulted in savings over National Grid's basic service rate.
- Won a \$5,000 grant award from the MassDEP to apply towards the Town's purchase of a Ford Fusion Plug-in Hybrid Vehicle (PHEV) through the MasseVIP program-- the first electric vehicle in Town's municipal fleet.
- Was awarded a \$5,000 grant to fully fund a solar hot water feasibility study at Our Island Home
- Successfully applied for and received solar analysis assistance by the National Renewable Energy Laboratory (NREL) to evaluate the technical and economic viability of solar photovoltaics (PV) and battery energy storage to cost-effectively reduce the Island's peak electrical demand.
- Surveyed opportunities for solar PV installations on Town buildings and land. Led efforts to create and launch a Nantucket Electric Aggregation Program to secure a less expensive and greener electric supply for Nantucket electric customers.
- Worked with National Grid to identify methods for reducing growth in electrical demand during peak periods in order to defer the need for a third underwater electric cable from the mainland.
- Organized and hosted various community outreach and education events and projects, including: AC Recycling events, "Energy Code" educational workshop series in collaboration with the Nantucket Builders Association, and a WPI research project "Analyzing Energy Awareness, Attitudes, and Alliances" to support the Town and National Grid's efforts to defer the need for a third undersea cable.

Goals for FY2017 include continuation and expansion of all of the programs listed above to further encourage efficient use of energy on Nantucket through new and innovative means. We are grateful to the Town officials, staff and volunteer supporters who have supported our efforts in past years and we look forward to further success in improving the efficiency of our energy use.

