



# An Energy Efficiency Case Study: *Wellfleet Police Department*

## New Wellfleet Police Station Features Energy Efficient Measures

The new 10,680-square-foot police station at 36 Gross Hill Road was built with an eye on energy and cost savings. The new facility was outfitted with a number of features that will save the department, and ultimately taxpayers, money.

The funding for these energy efficient upgrades were 100% covered through a combination of Green Communities grant funds and Cape Light Compact incentives. As of 2018, Wellfleet is one of four Cape Cod towns with the Green Community designation which allows towns to be eligible for annual grant funding towards energy efficiency projects.

Most of the energy savings are a result of the dedicated outside air system (DOAS), variable refrigerant flow (VRF) system and energy recovery ventilators (ERV). VRF systems efficiently deliver refrigerant at variable rates and exact amounts to spaces that require it. VRF heat recovery units allow multiple indoor units to operate in simultaneous heating or cooling modes while connected to a single outdoor unit. Consequently, VRF systems offer energy savings from operating at increased efficiencies at part-load conditions.

Additionally, the system in the current design includes ERV heat recovery, which allows for increased energy savings during periods of simultaneous heating and cooling. Ventilation for the building will be provided by two energy recovery ventilators. ERVs reduce heating and cooling demands by pre-heating entering outside air with heat captured from the exhaust air during the heating season, and pre-cooling the outside air during the cooling season to offset part of the ventilation heating and cooling loads.

The second major area of energy savings comes from the high-performance lighting that was installed. These lights partnered with lighting controls and energy efficient exterior lighting make up about one fourth of the overall cost and energy savings.

Additional areas of energy savings are a result of the high-performance split system heat pumps and additional wall and roof insulation that exceeds standard code specifications.

### Lighting Savings

Energy: 32,641 kWh

Annual Cost Savings: \$5,875.38

### HVAC Savings

Energy: 70,457 kWh

Annual Cost Savings: \$12,682.26

### Total Savings

Energy: 107,024 kWh

Annual Cost Savings: 19,264.32

### Funding

Green Communities Grant:

\$120,422.91

Cape Light Compact:

\$24,195.76



*Cape Light Compact IPE, is an award-winning energy services organization operated by the 21 towns on Cape Cod and Martha's Vineyard and Dukes County. The Compact's mission is to serve its 205,000 customers through the delivery of proven energy efficiency programs, effective consumer advocacy and renewable competitive electricity supply. For more information, visit [www.capelightcompact.org](http://www.capelightcompact.org).*