## **BUSINESS ENERGY SOLUTIONS**

**ENERGY EFFICIENCY CASE STUDY:** 

**United States Coast Guard** Academy

New London, CT



The U.S. Coast Guard Academy is a top military college with a mission to educate future leaders of America's maritime military force. Each year, approximately 200 graduates are commissioned as Coast Guard officers to help ensure the safety, security and stewardship of our nation's waters.

## **Results Summary**

- 39 million in capital improvements
- More than \$2 million in annual energy savings
- 48% reduction in energy consumption
- 15% reduction in water consumption
- 7,800 metric tons of avoided CO2 per year - equivalent to taking more than 1,600 cars off the road

"Anytime we can invest in the infrastructure onboard the service's only accession point for officers we are making an investment in the long-term strength of the service."

- Rear Admiral Bill Kelly, Academy Superintendent
- "This project is a shining example of what is possible when you have a forwardthinking institution with an active energy management team, combined with expert resources providing guidance and recommendations, all working together to optimize energy use and create a more sustainable future. As the academy continues to develop our country's future leaders, they will do so in a modern, highperformance environment while also saving significant amounts of energy and reducing costs and carbon emissions."
- Penni Conner, Eversource Senior Vice President and Chief Customer Officer

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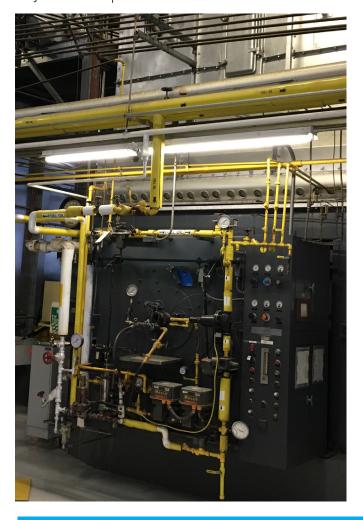




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## The Challenge

In 1932 the Coast Guard Academy relocated to a sprawling 103-acre campus on the west bank of the Thames River. Over time it has become the third largest consumer of energy in the U.S. Coast Guard. The energy management team made it their mission to address the sustainability, resiliency and energy efficiency of the 87-year-old campus.



## The Eversource Solution:

In partnership with Eversource, the Coast Guard Academy secured a \$72.6 million Utility Energy Service Contract (UESC), the largest UESC ever awarded by the Department of Homeland Security. Over two years, the team completed a holistic energy management project that modernized infrastructure and equipment in 30 campus buildings, from student barracks to the academic laboratories, helping the Academy use energy more efficiently and cost-effectively. Eversource and Ameresco led the implementation of several energy efficiency, renewable energy and water conservation measures, including:

- Replacing the academy's fuel oil-fired boiler plant with a high-efficiency natural gas plant supplemented with a combined heat and power plant with a 1 MW microturbine generator
- Boiler system improvements
- Chiller plant expansion and optimization
- Steam and hot water system improvements
- Laboratory hood replacement and exhaust modifications
- Heating system conversions and HVAC improvements
- Campus-wide Direct Digital Controls (DDC) system improvements
- Kitchen ventilation controls
- Plug load controls
- Retro-Commissioning
- Water conservation measures including new fixtures
- Lighting improvements including new fixtures and LEDs

With the help of Eversource and Ameresco, the Academy has dramatically cut its carbon emissions and ushered in a new era of sustainability and resiliency for the campus.

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