

Performance Contracting

Mount Wachusett Community College

Gardner, MA

Project Cost: \$4.3 million

Annual Cost Savings: \$272,826

Facility Description: Public college campus comprised of more than 400,000 square feet

Contract Term: 10-year Energy Savings Performance Contract (ESPC)



“This is a guaranteed energy savings project that is both economically sound and environmentally responsible...a fuel source that is renewable, locally available, cost effective, non polluting and publicly acceptable.”

Edward R. Teceiro, Jr.
Executive Vice President
Mount Wachusett Community
College

Source: Metro West News

To meet its goal of replacing its costly electric heating system with a renewable energy source while also enhancing its forest products technology curriculum, Mount Wachusett Community College selected NORESKO to implement a cutting edge, low emission advanced biomass boiler plant and other conservation measures.


The centerpiece of a \$4.3 million energy and water conservation effort, the new biomass plant will utilize wood chips, a byproduct of the more than 80 sawmills across Massachusetts, to provide heat to the college's 400,000 square feet of space as well

as for a 12,000 square foot planned addition. This new heating system will also feature a state-of-the-art core separator that will clean 95% of the particulate matter from the exhaust to ensure that the plant meets all State and federal clean air requirements.

In addition to providing energy analysis, engineering, and construction management services, NORESKO has also worked with the college to secure a \$1 million Department of Energy grant, \$750,000 from the Commonwealth of Massachusetts Renewable Energy Trust Fund, and \$200,000 in rebates from the local utility to partially offset a considerable portion of the project cost. NORESKO also provided support in the arrangement of tax-exempt lease financing for the remainder of the project cost.

Following is a summary of the complete package of energy and water conservation projects developed and installed by NORESKO:

- Replacement of more than 4,400 lighting fixtures in various buildings including the gymnasium, theater, pool, lecture halls, classrooms and offices. This included retrofit of all T-12 fixtures with energy efficient T-8 fixtures and mercury vapor and incandescent lighting with metal halide and compact fluorescent units.
- Retrofit of urinals and sinks with low-flow flushometers and aerators. Replacement of toilets with 1.6 gallon per flush units.
- Installation of variable frequency drives (VFDs) on air handling unit supply and return fans to vary electric consumption in accordance with heating and cooling demand.
- Construction of a 320 bhp low emission advanced biomass boiler plant with 300 bhp oil backup to replace the college's inefficient electric resistance heating system. Connection of new hot water distribution piping to existing chilled water mains and retrofit of unit ventilators and heating and ventilation units with hydronic coils.



NORESCO is the nation's most experienced energy service company providing comprehensive and proven energy-efficiency solutions and infrastructure development and operations strategies to a wide range of customers. A recognized industry leader installing and operating over \$1.4 billion of proven energy solutions in diverse markets across the nation, NORESKO has built on-site energy infrastructure generating more than 300 megawatts of power, and has helped customers improve energy efficiency saving over 31 billion-kilowatt hours of electricity and 71 trillion Btus of fuel. NORESKO is a wholly owned subsidiary of Pittsburgh-based Equitable Resources and is accredited by the National Association of Energy Service Companies.



NORESCO Corporate Headquarters • One Research Drive, Suite 400C
Westborough, MA 01581 • 1.888.NORESCO [1.888.667.3726] • www.noresco.com