

Success Story: University of New Hampshire



"By reducing the university's dependence on fossil fuels and reducing our greenhouse gas emissions, EcoLine is an environmentally and fiscally responsible initiative."

Mark Huddleston
President
University of New Hampshire

Landfill Gas Powers Higher Education at University of New Hampshire

With the costs of higher education continuing to soar, many colleges and universities are looking for innovative ways to lower expenses, while simultaneously pursuing their long-term sustainability goals. The University of New Hampshire (UNH) is proving that both objectives are, indeed, achievable.

UNH is the largest university in that state. Its Durham campus, home to approximately 15,000 students, covers 1,100 acres, with 300 acres devoted to its campus "core." Although by all appearances a "traditional New England campus," UNH takes great pride in being among the first higher education institutions in America to pursue an environmental sustainability program.

One of the most notable of these programs is EcoLine, a project designed to provide the campus with renewable energy via carbon-neutral landfill gas from Waste Management's Turnkey Recycling and Environmental Enterprise (TREE) facility in Rochester,

N.H., approximately 12.7 miles away. Developed in partnership with Waste Management, the \$45 million program currently provides the campus with 80 to 85 percent of all its energy needs.

**Universities
can earn their
advanced degrees
in sustainability
with the help of
Waste Management.**

EcoLine works by capturing naturally produced landfill gas at TREE via a system of 300 extraction wells, miles of collection pipes, and compressors. The gas, mostly carbon dioxide and methane, is "scrubbed" and then sent via an underground pipeline to the UNH campus where it's used to power an on-site cogenerator, which produces both heat and electricity. The cogenerator is a particularly efficient piece of technology because it captures heat produced during the

production of electricity, heat that can then be used to warm campus buildings and other facilities.

Specific benefits of the EcoLine project include:

- Payback of its \$45 million cost within 10 years (conservatively), with considerable cost savings thereafter.
- Improved budget control, as UNH can now avoid the wild price fluctuations associated with oil and natural gas.
- Decreased greenhouse gas emissions, which thanks to EcoLine, are now 57 percent below 1990 levels.

So successful is EcoLine that it was named the "2009 Project of the Year" by the U.S. Environmental Protection Agency's (EPA) Landfill Methane Outreach Program.