The University of New Hampshire is committed to sustainability in many ways: New residence halls are the first in the nation to receive the EPA's Energy Star designation; our Wildcat Transit System runs on alternative fuels; biodiesel efforts fuel campus vehicles and explore new science; and, the new co-gen plant will save in excess of $30 million over the next 20 years, while helping to promote cleaner air in the region.

For more information, contact Paul Chamberlin, UNH assistant vice president for energy and campus development, at (603) 862-1903, or Dave Tooley, vice president-government & public affairs-eastern group for Waste Management, at (603) 929-3205.

http://www.unh.edu/ecd/design_lfg.html
http://www.wm.com

ECOLine™ Power Partnership

UNIVERSITY of NEW HAMPSHIRE

Last year,

the University of New Hampshire spent $12.9 million to supply heat and electricity to its buildings.

Each year,

the University consumes the equivalent of 1.2 billion cubic feet of natural gas.

With unpredictable gas and oil prices, these figures will only

grow.

The University of New Hampshire's "energy achievements are blazing a trail for higher education across the country. When EPA officials talk to energy managers at colleges and universities across New England, they point to UNH as an example of what can be done and how to do it."

—Robert W. Varney
Regional Administrator
EPA New England Office

UNH EcoLine™ under construction

A timely and responsible opportunity

The University of New Hampshire (UNH), in cooperation with Waste Management of New Hampshire, Inc., has launched the EcoLine landfill gas project that will pipe enriched and purified gas from Waste Management's landfill in Rochester to the Durham campus. UNH is the first university in the nation to undertake a project of this magnitude.


UNH Cogeneration Plant

The renewable, carbon-neutral landfill gas, from Waste Management's Turnkey Recycling and Environmental Enterprise (TREE) facility in Rochester, will replace commercial natural gas as the primary fuel in UNH's cogeneration (co-gen) plant, enabling UNH to provide its student residence halls and academic buildings with energy from a renewable source.

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

A 12.7 mile underground pipeline will transport the gas from a purification plant constructed by UNH at the TREE facility to the university's Durham campus. UNH is expected to fuel its cogeneration plant with landfill gas by late fall of 2008. Estimated cost of the project, including the construction of a second generator at UNH, is $45 million.

A strong and responsible tradition

A pioneer in landfill gas-to-energy projects, Waste Management designed and operated its first such facility in the U.S. more than 20 years ago. With 281 landfills in North America and more than 100 already having smaller landfill gas-to-energy projects underway, Waste Management is in a unique position to expand waste-based renewable power generation across the country. Waste Management currently has two landfill gas-to-electric plants at TREE producing green power for more than 9,000 local homes which will continue to operate, while excess gas will be sent to UNH's new and innovative renewable energy project.

Ranked by the U.S. Department of Energy in the top five percent for energy efficiency among similar colleges and universities, UNH is one of the nation's leading sustainable universities. UNH was the first university in the nation to earn the Environmental Protection Agency's Energy Star rating for seven residence halls and one administrative building. Plus, its Wildcat Transit is the state's largest public transit system and is fueled almost exclusively by alternative fuels such as B20 biodiesel or compressed natural gas.

Nationwide, Waste Management generates more than 700 megawatts of clean renewable energy—enough to power 700,000 homes or replace over eight million barrels of oil.

Education and purchasing campaigns have advanced energy efficiency among UNH students, faculty, and staff, reducing the equivalent of more than 200 tons of carbon dioxide emissions in the 2006–2007 school year. Guided by the University Office of Sustainability, UNH integrates sustainability across the university's curriculum, operations, research, and engagement, and focuses its efforts on biodiversity education, climate education, culture and sustainability, and food and society.


Waste Management's Turnkey Recycling and Environmental Enterprise Facility (also below) in Rochester, N.H.

An exciting and responsible future

Landfill gas is a naturally occurring by-product of landfill decomposition. Waste Management has a state-of-the-art gas collection system at TREE consisting of more than 300 extraction wells, miles of collection pipes, and compressors to capture the landfill gas.

Once construction on EcoLine is completed, the buried pipeline will not be visible, as it runs underground along roadways, the Spaulding Turnpike, and the Pan Am Railway's right-of-way onto UNH property. At UNH, landfill gas will replace commercial natural gas in UNH's co-gen plant, the primary source of heat and electricity for the five million square-foot Durham campus. The co-gen plant, which began operations in 2006, captures waste heat normally lost during the production of electricity and uses this energy to heat campus buildings, making more efficient use of energy resources.

More importantly, the landfill gas will stabilize the university's fluctuating energy costs, which have more than doubled in the last five years after growing at an annual rate of 18.9 percent.

EcoLine will also have a major impact on UNH's carbon dioxide emissions. It will reduce the university's greenhouse gas emissions an estimated 67 percent below 2005 levels and 57 percent below 1990 levels.