PROSPECT HALL

*Heating System Description*
*and*
*How to make it work*

MOUNT
HOLYOKE
COLLEGE

**Tel. 2012**

or, after normal
business hours

**Tel. 2016**

# HEATING HELPERS

Be certain that windows are shut tightly.

If your windows won't shut properly call **Facilities Management at x2012** to report the problem. We will fix it.

Drawing the window blind will help to slow heat losses during the OFF cycles of the heating operation.

If your room has a temperature sensor in it TRY NOT to locate heat producing devices like a lamp near it. This can severely limit the heat to the building.

MHC

**PROSPECT HALL**

Monday – Friday
8:00 am – 4:30 pm
Call Facilities Management @ x2012

All other Hours
Call the Central Heating Plant
@ x2016

# WHERE'S THE HEAT COME FROM?

The entire campus is heated with steam that is produced in the Central Heating Plant and then distributed to every building via underground pipes.

At the peak of the season approximately 6,500 gallons of #6 Fuel Oil is burned every day to make the steam required to heat our buildings. This steam is maintained at very high pressures and is used first to generate electricity before being utilized by the campus for heating purposes. This generated electricity is applied against the consumption of Utility (purchased) power.

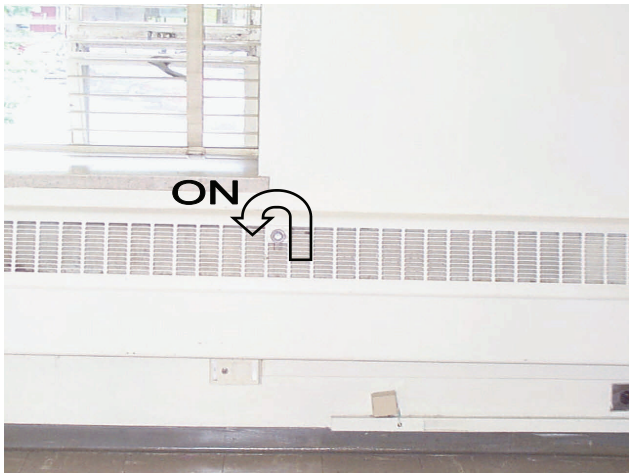
Underground distribution piping brings the steam to each building where it's pressure is reduced and made useable for the various heating systems.

Once the steam has released it's energy it returns to the CHP as condensate, to be reheated for another cycle. About 90% of the steam returns as water for re-use.

**The Energy Management Computer watches for heat and cold around the clock**

# IT'S A CIRCULATED HOT WATER HEATING SYSTEM

Prospect Hall is heated with circulated hot water and Fin Tube Radiation. Steam from the Central heating Plant is piped into the building where it is used to heat the circulated water. The water is then pumped around the building to heat the spaces.




Sensors located throughout the building monitor the room temperatures and report that information to an Energy Management Computer System also located in the basement. This information is transmitted to a Master Computer System in the Central Heating Plant where it is checked against a heating program dedicated to the Prospect environment. The automatic valves respond to this program to maintain the spaces at Setpoint ( the equivalent of a Thermostat setting).

The Engineer operating the Heating Plant when necessary can override this program.

Along the outside wall of each room is a section of Fin-Tube Radiation. The radiation is behind a grill, which is open at the bottom and has vents at the top. These openings provide for airflow over the heating pipes, and this design depends upon a clear path for air to naturally enter and exit the radiation area in order to heat the room. A covered or blocked radiator will not function efficiently.

A damper controls the air flow and is the only way to limit the heat output of this system. Each radiator has a damper control knob that controls the air flow over the radiator. This effects the rate of convection and thus the rate at which the room is heated. Turning the knob ***counter-clockwise*** opens the damper, and is the **ON** position. The radiator will HEAT the room best when the damper is open all the way. When the knob is turned ***clockwise*** all the way to it's stop, the damper is closed. This is the **OFF** position and NO HEAT will exit the radiation. If you leave your damper control closed , your room will not get the heat needed to maintain your room at a comfortable temperature. This damper control knob can be positioned anywhere between fully open and closed, which will control the rate at which the radiator produces heat.

There is no other individual control for a system like this. Any change to the flow of hot water through a single piece of radiation would have a significant effect on all the radiation on the same piping loop. This system is balanced when first installed and remains so unless changes are made to the piping system.

This system provides generally even space temperatures and automatically compensates for outside conditions.

Additionally, the main bathrooms in Prospect are ventilated and heated by an Energy Recovery Ventilator on the roof. This system captures the heat contained in the EXHAUST air stream and transfers it to the SUPPLY air for the corridors and bathrooms before it leaves the building. This pre-heats the supply air, thereby reducing the energy required to heat that portion of the building.

Mount Holyoke burned 940,000 thousand gallons of Oil last year, for heat and hot water.

This would heat more than 1500 homes for a year. Or, a single home for more than 1,500 years.

**PROSPECT HALL**