SAFFORD HALL

Hot Water Radiation

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 and storm 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.

Each room has a Temperature Sensor, TRY NOT to locate heat producing devices like a lamp near it. This can severely limit the heat to your space.

MHC

SAFFORD HALL

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

All other Hours
Call the Central Heating Plant
@ x2016

Mount Holyoke consumes in ½ hour more electricity than a typical 5 room house does in an entire month.

This is about 750 kilowatt-hours.

Mount Holyoke consumes more than 38,000 kilowatt-hours of electricity per day.

This is enough electricity to supply a 5 room house for 4.2 years, or maintain 50 of these houses for a month.

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.

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 bring 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 re-heated 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

Renovated areas throughout Safford Hall are heated with circulated hot water and Wall Panel 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 located in the basement. This information is transmitted to a web based server where it is available for review and modification. Automatic valves respond to this program to maintain each space at Setpoint (the equivalent of a Thermostat setting).

The Engineer operating the Heating Plant and Facilities staff can, when necessary, override this program, but you have the ability to add up to 1 hour of override by pressing the Override button on the thermostat. You also can raise or lower the temperature setting for your room 1-2 degrees.

Along the outside wall of each room is a section of wall panel radiation. The radiation has an opening at the top and at the bottom that allows air to flow over the hot pipes. This design depends upon a clear path for the air to naturally enter and exit the radiation area in order to heat the room. Cool air from the floor area enters the bottom of the heater where it is heated as it passes by the fin-tube piping. The warm air then rises out of the heater and into the room, displacing any cooler air so that the cycle can repeat itself. This type of heating is called *CONVECTION*. There is also a RADIANT component which emanates directly from the face of the heater.

Additionally, the main bathrooms in Safford are ventilated and heated by an Energy Recovery Ventilator located in the basement. 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.