

University of North Florida Energy Efficiency Measures

- During the installation of the central plant new heating plant six years ago, we installed a plate frame heat exchanger and control valves which allow the plant to supply variable temperature heating hot water to the campus and is reset based upon outside air temperature and required heating and dehumidification.
- All heating hot water boilers installed within the last six years are the most efficient available on the market for the size and type that we employ in the plant. They have a minimum of 4 to 1 turn down ratio for fuel and burner settings. The higher turn down ratio allow boilers to operate at the low fuel consumption and heat outputs when large amounts of heat are not required by the campus.
- All campus secondary pumping is variable volume which allows the pumps to be slowed down to follow the rise and fall of campus cooling and heating demands.
- All replacement motors purchased over the last ten years or specified for new equipment of 15HP are rated as high efficient or better.
- All five chiller units in the plant operate at .54 Kw/Ton or better. Four chillers are rated at .49 Kw/Ton. The industry standard is .55 Kw/Ton.
- All new buildings are equipped with energy savings T-8 and T-5 lamps. We have retrofitted Buildings 8, 9, 10, 12 and 15 with T-8 and T-5 lamps. Building 1, 29, 42, 43, 45, 46, 48, 50 and 51 were constructed with T-5 lamps. In the next round of the Green Lights Program, we will retrofit the Arena, Aquatics Center, Parking Garages, Fitness Center and Harmon Stadium.
- All capital building controls are monitored and controlled by state of the art Building Automation System (BAS) that controls building temperatures to plus or minus 1 degree of the set point. The set points are 70 degrees and 76 degrees.
- We have installed occupancy sensors or lighting control in Buildings 8, 9, 10, 50 and 51. Studies are being conducted to look at additional facilities.
- With the exception of Buildings 6 and 34 all building air handlers are equipped with variable frequency drives which enable the HVAC system to only supply the appropriate amount of air required to satisfy the building load at all temperature and occupancy levels. Building 6 is on the schedule for HVAC upgrades.
- The heat harvester installation is complete and we are now able to reclaim waste heat from the cooling tower water and supply it to the campus heating hot water supply loop. This results in a significant savings in natural gas usage for boiler operations.