

NOTES FOR GREEN COMMITTEE ENERGY COMMITTEE

Phase I Projects:

Lighting in 20 buildings-
T-8 lamps w/ electronic ballasts
Reflectors
Compact Fluorescents
LED Exit lights

Water conservation in 20 buildings-
Low flow toilets
Low flow urinals
Low flow showerheads
Sink faucet aerators

Mechanical retrofits in 7 buildings-
Chiller/pump replacements
Air Handler repairs/replacements
Variable speed drives
Duct cleaning

Controls Updates
Computerized energy managements systems
Thermostats with scheduling

Phase I Savings:

\$3,651,177 energy dollars saved to date (12/31/2007)
24,726 tons of CO₂ reduced from atmosphere
Equivalent of removing 4,945 automobiles from Charleston

Phase II Projects:

Lighting in 41 buildings-
Low wattage T-8 lamps w/ electronic ballasts
Reflectors
Compact Fluorescents
LED Exit lights
LED Parking garage lights

Water conservation in 3 additional buildings-
Low flow toilets
Low flow urinals
Low flow showerheads
Sink faucet aerators
Waterless urinals @ Joe Riley stadium

Irrigation water conservation/rate savings at 46 sites-
Satellite controlled system
Meter installation to eliminate sewer charges

Mechanical retrofits in 9 buildings-
Package unit replacements
Air Handler repairs/replacements
Pump replacement

Controls Updates in 21 buildings-
Update computerized energy managements systems
Programmable Thermostats with scheduling

Solar Heating at 4 swimming pools-
Solar panels supplementing gas heaters
Solar panels to extend periods of use

Miscellaneous Projects-
Vending machine controls
Ice machine economizers

Phase II Savings:

\$834,000 energy dollars saved annually
Reduction of 5,328 tons of CO₂ annually
Equivalent of removing 1,066 automobiles annually

Additional Items that could Save Energy for the City:

Switch off lights whenever you leave your room or office.

Switch off someone else's lights if they are not in.

Unplug TV's when not in use.

Unplug VCR's, projectors, etc. when not in use.

Do not use unauthorized personal electric heaters.

Shut off copy machines at the end of the day.

Last one out of the restroom? Switch off the lights.

Take lamps and ballasts out of vending machines.

Close vestibule doors, saves heating and cooling.

Use inkjet rather than laser printers whenever possible.

Copy using two-sided feature of the copy machine.

Make sure the faucets are off and not dripping.

If a faucet is dripping, get it repaired.

Make sure the showers are off.

If the showers are leaking, get them repaired.

Don't open a window if the heating system is running.

Don't open a window if the air conditioning is running.

Avoid using elevators if you can.

Do not cover up heating/cooling registers or vents.

Use "task" lighting instead of overhead when possible.

City sponsored car pooling.

Plan travel ahead of time (UPS right-turn-only rule).

Defrost old refrigerators regularly.

Fill water bottles with tap water (a lot of money is spent to make it safe).

Install window blinds or window films.

Work earlier hours in warm months.

Keep extra weight out of vehicles (bowling balls, golf clubs, etc.).

Outlaw plastic bags.

Encourage using Public Library (don't buy books, movies, etc.).

Verbiage for Thermostat Set Point Policy

Policy

This provides the City of Charleston a standard for indoor temperature ranges to be used by City employees depending on the season of the year. It provides a basis for addressing environmental comfort issues with regard to thermostat settings. The temperatures listed in the policy are consistent with research performed by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE). Enforcement of this policy will reduce inefficient and wasteful operation of heating and cooling equipment within City facilities.

This policy supports the City of Charleston's commitment to climate protection, environmental stewardship and the Green Committee initiatives by reducing carbon emissions that contribute to global warming associated with the consumption of energy generated from electricity and the burning of fossil fuel. It will also reduce the costs of energy to the City.

Enforcement Responsibility

It is the responsibility of the facilities management team in the Parks Department to control facility indoor temperatures. The parameters of this policy should be known by all City employees and the community at large as a city initiative.

Heating and Cooling Space Temperature Guidelines

Cooling Season

In general the cooling season is considered to be April to October. Cooling is provided to maintain facilities at 76 deg F during normal occupied hours. During off-hours, temperatures may rise above this level. ASHRAE Standard 55 - Thermal Environmental Conditions for Human Occupancy states that temperatures in the 74-78 deg F range should be comfortable for most people (10% dissatisfaction rate) who are dressed appropriately for the season.

Heating Season

In general the heating season is considered to be November to March.

Heating is provided to maintain facilities at 68 deg F during normal occupied hours. During off-hours, temperatures may drop below this level. ASHRAE Standard 55 - Thermal Environmental Conditions for Human Occupancy states that temperatures in the 66- 72 deg F range should be comfortable for most people (10% dissatisfaction rate) who are dressed appropriately for the season.

Unoccupied Hours

Most buildings have designated occupied hours. To help save energy, the building temperatures will be changed allowed to rise during the cooling season and fall during the heating season from the normal operating set points during unoccupied hours.