

## GREENENERGY



### SERVICES

## Energy Management Optimization System

Green Energy Services Energy Management Optimization System (*EMOS*) is helping commercial, educational, retail, office and multi-family customers implement cost-effective, high performance technology solutions for energy management. *EMOS* eliminates wasteful heating and cooling of unoccupied rooms without compromising comfort, by adjusting and maintaining a room's temperature using a combination of occupancy sensors, intelligent programmable thermostats and controllers.

### Unique Challenges

On average rooms at your facility are occupied only part of the time, and running air conditioning and heating in those rooms when they are unoccupied wastes energy. This can add up, especially if there are a large number of rooms with unpredictable times of use. Since HVAC costs typically account for more than 30% of a building's electricity costs, it's critical to control in-room energy consumption as it can significantly impact a property's bottom line. With our Energy Management Optimization System (*EMOS*), energy costs can be reduced by eliminating the unnecessary heating and cooling of unoccupied rooms.

With *EMOS* temperatures in each room are automatically maintained eliminating the need for manual temperature adjustment. Each room is evaluated independently in real-time to determine its energy efficient temperature, or setback, based on many environmental conditions, such as room location, window placement, dry vs. humid climate, varying weather conditions, the HVAC unit, and so on.

Because *EMOS* reduces the run-time for heating, ventilation and air conditioning equipment, it helps to decrease maintenance overhead and increase the equipment's working life, resulting in further maintenance savings.

*EMOS* is helping a wide variety of facilities reduce their energy consumption, by deploying a cost effective retrofit solution designed specifically for old and new facilities that is not disruptive.

### Energy Savings

Typically a 10-30% energy savings with paybacks less than 24 months can be realized using *EMOS* depending on utility rates, type of HVAC systems, and occupancy rates.

The *EMOS* monitoring and analytic features ensure optimum energy savings, giving facility managers the tools to identify and implement programs for additional energy savings and ROI reporting. *EMOS* provides total visibility and detailed data about the facilities HVAC systems and their energy consumption. *EMOS* also offers real-time, instant remote management, as well as master schedule integration capabilities.



### Solution Characteristics

- Uses wireless technology making it simple to install and operate.
- Occupancy-based solution with intelligent thermostats, occupancy sensors, and energy management controllers that automatically adjust HVAC.
- Low cost smart building technology with the ability to control the consumption of electricity real time.
- Provides room-by-room energy savings while ensuring occupant comfort, even when occupants are very still.
- Controls system recovery rates with the option for management to set the recovery time desired.
- Reduces operation expenses as well as wear and tear on HVAC units.
- Provides humidity protection and control with refresh cycle and direct relative humidity percentage targeting.
- Comes with self-healing network architecture.
- Offers dynamic system reconfiguration.
- Network polling from the Gateway server to the thermostat every 15 minutes.