temperature control is energy control

Simple Sustainable
Energy Management

PECO

11:00 AM 74°

7:00 PM 62°

PECO intelligent thermostat systems **automate** climate control, so that **unoccupied** facilities use less heating / cooling energy.

Great controls produce
big energy savings
with small investment

Heating and cooling public indoor environments require significant amounts of energy. In most cases, heating ventilation and air conditioning (HVAC) account for 50% of a building's total energy budget. Energy-use experts agree that reducing wasted resources is the greatest opportunity for conserving energy and reducing energy costs.

A low-cost and high-impact method of doing so is by reducing HVAC equipment runtime for unoccupied spaces by moving to demand-optimizing controlled HVAC systems. This involves upgrading existing controls with PECO intelligent digital, programmable thermostats and partner them with CO_2 and occupancy sensing capabilities. This ensures that climate is controlled only when the room is occupied. Studies show that such HVAC controllers can lower equipment maintenance and **reduce** energy consumption more than **25% annually**.

PECO's full line of intelligent thermostats and sensors provide facilities with complete solutions for converting most any HVAC system to a demand-controlled system.

These system controllers reduce energy consumption via advanced occupancy intelligence, occupancy detecting, CO_2 sensing, event programming, 365-day calendar and random start capabilities. Additional features include limiting user adjustability with range limits, keypad lock outs, PIN access and even locking covers.

Scheduling

With a built-in 365-day calendar, holidays and daylight-saving time shift, each day can have its own temperature set points scheduled. These can change throughout the day to optimally control temperature for occupancy comfort and efficient use of energy consumed by HVAC operations.

PECO Performance Pro thermostats have SD memory card interface so that temperature change scheduling can be performed at a computer, making even the most sophisticated schedule easily transferred to the thermostat. SD card programming and configuring saves considerable labor-time and allows facilities to adjust schedules on multiple thermostats quickly.

Occupancy Learning

Predicting the subtle differences in room occupancy can be daunting. PECO digital thermostats have taken intelligent programming to the next level by incorporating occupancy learning. This function improves energy use efficiency and occupant comfort by remembering occupancy patterns, and then automatically adjusts schedules to anticipate arrivals, as well as perform deep temperature setbacks by predicting departure, regardless of how schedules are set.

PECO T4900 Digital Intelligent Programmable Thermostat with SD Memory Card

Occupancy Verification

Studies show that up to 20% of indoor climate control energy use is wasted by heating or cooling unoccupied spaces. By eliminating this waste, facilities can reduce carbon footprints and lower energy consumption. Why pay to heat or cool when no one is there? These savings drop straight to the bottom line.

PECO intelligent thermostats are enabled with occupancy sensing inputs. When used with PECO occupancy sensors, the HVAC equipment will heat or cool to a less energy consuming temperature. Once sensors detect occupants, the system automatically sets temperatures to accommodate occupant comfort.

Demand Control Ventilation CO₂ Sensing

Maintaining a good indoor climate is the primary task of modern HVAC systems. Temperature and air quality, especially CO_2 concentration, must be kept within safe parameters. Today, regulatory agencies are driving changes to temperature and air quality requirements, which affects how ventilation is controlled.

Uncontrolled ventilation systems often run at the same level regardless of room occupancy or CO_2 concentration. PECO digital intelligent thermostats are CO_2 sensor input enabled. Addition of CO_2 sensing can save energy and maintenance by reducing fan run times by 50% or more.

Average Public Building Energy Use

- HVAC - 52%
- Water heating - 20%
- Lighting - 19%
- Other - 9%

Source: University of California, 2009
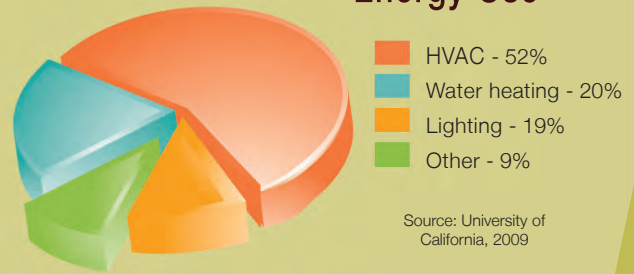
Access Control

Energy waste can often occur when occupants set thermostat temperatures to outside of typical ranges and leave them at that level. Controlling the amount of access to climate control can reduce energy consumption.

PECO programmable thermostats eloquently address this scenario by providing facilities with tremendous flexibility in how access is controlled, while enabling occupants to adjust climate temperature. Access control functions include preset range limits, PIN access keypad lock-out, isolated function control buttons and locking covers.

Memory Card Interface

Sustainable Energy Saving

PECO S200 CO_2 & Occupancy Sensors

PECO

PECO delivers smart technological solutions for temperature control.

For nearly 40 years, PECO temperature control devices have continued to meet high-standard system requirements in HVAC, commercial, public works, industrial, agricultural and chemical applications.

Products are commercial grade, thoroughly tested and built to surpass industry standard requirements. Manufacturing includes AS9100 and ISO 9001 quality programs, as well as UL/CSA/VDE/CE compliant products.

PECO is dedicated to delivering products that meet or exceed customer expectations.

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temperature control products