DR12.40: Field Testing of Occupancy-Based Guest Room Controls

OPPORTUNITY

What have previous studies demonstrated about the potential for occupancy-based guestroom Energy Management Systems?

Reduce Energy Consumption While Maintaining Guest Comfort

The largest electricity end uses in hotels and motels are:

- Space cooling & heating
- Lighting

- Office computers & equipment
- Refrigeration systems
- Kitchens & Food preparation Water heating

TECHNOLOGY

How does an EMS web based system work for guest room controls? Access And Control Of Property Management System Through A Web Based Management Tool



M&V

Where did Measurement and Verification occur?

Emerging Products conducted a study at two hotels in the Southern California service area utilizing two brands of occupancy controlled guest room thermostat products.

One hotel had packaged terminal air conditioning units and the other with fan coil units, with roughly equal numbers of rooms with conventional thermostat control and advanced controls. Savings were observed in heating, cooling and fan energy use.

RESULTS

How did the use of PMS/ EMCS systems for guestroom control perform in M&V?

Guest room controls integrated with the PMS/EMCS offers energy efficiency potential

However energy savings were not as significant as expected unless rooms go unsold longer than 72 hours

The temperature range parameters set by hotel management drives the energy efficiency potential of the PMS/EMCS

DEPLOYMENT

Where does M&V recommend deploying occupancy-based guestroom Energy Management Systems?

Future Studies

It is recommended to continue to study methods to improve equipment capabilities on network reliability and security to enhance acceptance of hotel owners to employ technology. Improvements should focus on making devices and technology more user friendly.