

6. HOTEL ENERGY MANAGEMENT SYSTEM AS INNOVATIVE WAY TO REDUCE EXPENDITURES

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Introduction. In today's world, technology has grown to be a part of our everyday lives. In this day and age, there is a technologic device or a software used by a device for every operation in the hospitality world, such as reservation systems, security cameras, point of sale systems, property management systems, mobile communication, meeting matrix, energy management systems, key card encoder, etc. By incorporating the use of such devices into the workplace, it has changed the way we conduct business while saving time and money as it dismisses many time consuming tasks. Although technology can be very costly, it pays off in the long run by simplifying and condensing everyday tasks at work resulting in valuable time being spent more efficiently. Computerized technology has impacted both front-of-house and back-of-house staff in a positive way.

Hotel Energy Management is the practice of controlling procedures, operations and equipment that contribute to the energy use in a hotel operation. This can include electricity, gas, water or other natural resources. Because hotels can have complicated operations and extensive facilities they utilize many different types of energy resources. It can improve hotel energy management, security and housekeeping efficiency without sacrificing guest comfort. Such systems have now come to be recognized as one of the most cost effective energy conservation way in the world, with proven energy savings of 15-40% making it a smart investment for any hotel owner.

Heating and cooling is one of the largest operating costs of total energy consumption in nearly all buildings. This is no exception in hotels where waste is considerably more prevalent. Guests are away from their rooms more than 50% of the time, frequently leaving utilities running in their absence. Hotel energy management system incorporates an economical solution which automatically places the HVAC (Heating, Ventilation and Air Conditioning) system at a more energy efficient level when guest rooms are empty. It is simple to install. By interfacing directly with already existing HVAC system, there's no need to build a new network. In fact, installation can take as little as 20 minutes per room.

Energex develops occupancy based HVAC and lighting energy management systems. Using passive infrared (PIR) sensing with logic-control software, the system switches to "economy" mode after a space has become vacant for a pre-determined length of time. When occupancy is returned, the initial HVAC and lighting conditions are restored within five to eight minutes. This results in reduced HVAC and lighting costs of up to 45%, while contributing to enhanced equipment life and noise reduction. Advanced PIR and Ultrasonic occupancy sensors seamlessly expand from a stand-alone, low-cost energy management system to include unlimited control possibilities. The system quickly scales up to include lighting controls, remote management, load shedding and wireless applications.

Using a combination of infrared occupancy sensors and a switching control microprocessor, the energy management control system knows when a room in your building is empty for more than 30 minutes. Once triggered, the energy saving controls switch into 'Conservation' mode in the empty room until an individual returns – reducing energy waste and utility costs. When occupants return to the room, the energy management control system returns room temperature to the occupant's preferred settings.

Conclusions. Hotel business as a part of hospitality industry can be characterized like fast growing and perspective for investments. But there are some issues that influence on each hospitality enterprise. Season factor, unstable tourist flows and high level of competition may cause downtime of hotel rooms and as a result – growing of expenditures. Due to the economic crisis, hoteliers are nowadays more conscious than ever. Hotels use huge amounts of energy, therefore, investments in more efficient energy use can lead to significant reductions in energy consumption, operating costs and energy bills. Some innovative energy management systems could cut energy costs for hotel up to 65%. Moreover, they can be customized to meet individual needs and manage energy consumption effectively in one product.

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