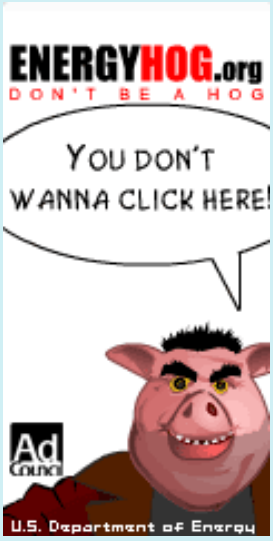




# HEI Hospitality

HEI is a national hotel company with 28 hotels location in 11 states. This award winning and rapidly growing hospitality group demonstrated industry leadership undertaking a national energy management program in 2004. The first step was a nationwide facilities and energy survey of its properties conducted by the hotel chief engineers, controllers, and general managers. The second step was (a) collecting the electricity, natural gas, and water/sewer bills and utility printouts from all of its properties and then (b) benchmarking them based on energy units per square foot, energy dollars per square foot and the same data based on 'per room' basis. HEI reviewed local utility tariffs, metering and energy-efficiency programs offered by the EDCs, LDCs, and state government energy offices. HEI first addressed low cost / no cost energy-efficiency improvements then undertook energy improvements requiring capital investments which yielded attractive payback periods, high ROI and positive NPV.

PHASE 1 of the energy management project involved lighting upgrades to of its hotels. This started with investment grade energy audits of all lighting systems in the hotel common areas, guest rooms, back of the house, and exterior lighting. Working with GE HQ, HEI implemented a retrofit to all of its lighting and exit signs to the state of the art in energy-efficient lighting. The goals were better lighting, lower life cycle costs and lower energy costs. All T12 fluorescent lighting was replaced with Super T8 and some office/conference room utilized the new RT5 fluorescent with duel level lighting. All of the incandescent lighting in the guest rooms, offices, hallways, pre-function, and ballroom areas were replaced with CFLs and in some cases with dimmable CFLs. All of the incandescent (and prior LED retrofit) exits signs were replaced in modern green LED exit signs. This major project will yielded a simple payback in 2.3 years and will continue to produce energy savings for the next 20 to 25 years. Project sales over $1 M / year and saves 115KBTU / Ft2. This lighting project will reduce the hotels' electrical demand loads plus save about 18,000,000 KWH /yr. and therefore reduce C02 pollution by over 12,870 tons /yr. HEI also created on on-line energy data base to HQ staff and hotel staff can track their energy use by utility meter and view PDFs of actual bills for the past 24 months.

PHASE 2 of the energy management project will be the installation of building automation system (BAS) controls for all of the hotel HVAC systems and new energy-efficient HVAC systems. A key target of the BAS improvement was the guest room HVAC units that usually run 24x7x365 under guest controlled thermostat settings alone. The BAS improvement protects guest comfort while monitoring occupancy by motion, body heat and a door switch. The BAS controls will reduce the average run time of the guest room HVAC units by 40% to 45%. This BAS project will yield a simple payback in 18 months and produce savings for the next 15 to 20 years. HEI also switched to digital thermostats for better guest satisfaction, comfort and management control over temperature set points saving an additional 1% to 3%. Existing BAS/EMS controlling the common area HVAC units are also being upgraded for additional savings. This project should reduce the hotels' electrical demand loads plus save about 15,000,000 KWH /year and therefore reduce CO2 pollution by over 10,725 tons per year.

PHASE 3 will consider alternative fuels, high efficiency HVAC equipment, high efficiency water

heating and occupancy based controls, improved maintenance procedures and some combined heat & power (CHP) projects in selected locations with high electricity costs. As motors are replaced, they will be replaced with premium efficiency motors and many will be considered for VFD applications. As new hotels are added to the portfolio in 2005 and 2006, HEI's new energy-efficiency and quality standards will be applied. The capital investments and energy savings of these additional improvements has not been determined yet. For new construction, HEI is considering 'commissioning' services to insure that all systems perform to the manufacturer's specifications, A&E design intent and the owners need for comfort, long life and energy efficiency.

The HEI energy management team was lead by its Facilities Vice President  Bob Holesko. Mr Holesko developed then 'sold' the energy-efficiency improvements to HEI's senior management team including its Asset Manager - Vice President Tom Brennen. HEI was guided through their energy management in regulated and deregulated markets by their consultant Think Energy Management LLC.

This can be a model for the hospitality industry will have great energy savings opportunities but less than 5% of the hotels have active energy management programs. HEI's energy-efficiency program can and should be replicated. A GE energy-efficiency success story has been written, professional photos taken and should be released soon.

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