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Marketing the Non-Energy Benefits of Enhanced Automation

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What is Enhanced Automation?

- Enhanced automation (EA) increases capabilities of existing energy management or energy billing systems to better manage energy use in buildings and building occupants comfort.
- Involves installing control or monitoring EA technologies, reprogramming and/or fine tuning existing equipment control systems.
- EA systems can manage a variety of building systems, including heating, ventilation and air conditioning (HVAC), lighting, and other systems such as security and building access.

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Background

- In 2001, California offered a number of programs to encourage investment in demand-responsive systems.
- Primary motivation – for customers and program designers – was 2001 energy crisis.
- As emergency waned, new marketing messages were needed.
- Non-energy benefits became key to future program success.

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Benefits of EA

- Provides important information on energy demand, equipment usage, and costs.
- Provides additional flexibility in maintaining the optimal building climate and pinpointing problem areas.
- Allows more efficient control of building operations from central or remote locations.

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Case Study: Retail Chain

- Project Summary
  - Pager-based signals to 119 stores to curtail lighting and HVAC loads
  - Centralized control via Internet
  - Ability to view interval utility data via Internet
- Primary Benefits
  - Saved $140,000 in energy costs
  - Ability to reduce demand by 2.8 MW
  - Near real-time access to usage data
  - Low transaction costs

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Benefits of EA (cont)

- Provides long-term benefits including the ability to identify new opportunities for energy saving projects and to better forecast and manage energy costs.
- Provides improved response capabilities to occupants' and management's needs, reducing occupant complaints resulting in lost productivity, cancelled leases, sales losses, etc.

Case Study: Office Complex

- Project Summary
  - Connected lighting and HVAC to EMS via LAN
  - New EIS collects 15-min interval data
  - Installed CO2 sensors
- Primary Benefits
  - Cut peak load by 12%
  - Automated load shedding
  - Targeted HVAC control
  - Increased occupant comfort

Benefits of EA (cont)

- Enables receipt and response to energy price signals, helping manage energy costs and participation in demand-responsive and peak-load reduction programs.
- Reduces energy demand in supply-constrained markets and helps society as a whole through improved reliability and lower, more stable energy prices.

Case Study: College Campus

- Project Summary
  - Established Web interface to HVAC controls and utility meters
  - Ability to raise set-point or shut down HVAC systems
- Primary Benefits
  - Reduced peak demand from 4.4 MW to 1.7 MW
  - Ability to respond to dynamic energy prices
  - Real-time access to usage data

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Overview of Marketing Program

- Link messages, information to stages of investment decision-making
  - Awareness
  - Interest
  - Intent
  - Implementation

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Marketing Materials

- Awareness Brochure
- Case Studies
  - Alameda County – Public Institution
  - Hewlett-Packard Company – Office Campus
  - Comerica – Office Building
  - Foothill-De Anza Community Colleges –Educational
  - Staples, Inc. – Retail Chain
  - Hilton/Doubletree Hotel – Hotel
- Business Case Guidebook & Template
- Technical Options Guidebook

Other Resources

- Facility assessments
- Website
- Vendor lists
- Technical assistance hotline, email
- Links to more information and funding sources