Energy Design Assistance

Presented By: Jessie Peterson, Xcel Energy
6-26-08

Agenda

- Demand-Side Management Programs
- Energy Design Assistance Program
  - Program Overview
  - Case Study
  - How to Participate
Demand-Side Management Programs

Why?
- Least Cost Plan
- Environmental Benefits
- Help customers manage their energy needs

Demand-Side Management Programs

Electric Conservation Goals

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<th>2009</th>
<th>2010</th>
<th>2020</th>
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<td>150 GWh</td>
<td>220 GWh</td>
<td>422 GWh</td>
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- Natural Gas Goals in development
- Biennial Filing August 2008
Goals

- Promote higher efficiency options
- Educate decision makers
- Educate sellers of equipment
- Rebate equipment to reduce first costs

Sustainable Design and Energy Efficiency work together!

DSM Programs

- Compressed Air
- Custom Efficiency
- Energy Analysis for Business
- Energy Design Assistance
- Energy Management Systems
- HVAC
- Lighting
- Motors/ VFD’s
- Recommissioning
- Saver’s Switch®
Energy Design Assistance Program
Overview

- Program offering began in 2006
- 14 completed projects
  - 8 GWh savings (enough energy to power ~900 homes a year)
  - ~$500,000 in incentives
- 78 projects in the pipeline to be completed between now and 2012
- 35% of current projects are LEED™ Registered.

Energy Design Assistance Program
Overview

- DSM – New construction incentives
- Whole building analysis
  - Utilizes energy modeling
  - Facilitated energy meetings
  - Incentives to lower the cost of high efficient opportunities
- FREE to Xcel Energy customers
Energy Design Assistance Program

Utility Perspective

What we do have...
- State approval to administer
- Funding
- Marketing Support
- Account manager/customer relationships

What we do not have...
- Practicing architects
- Practicing engineers
- Direct impact on customer choice
- Modeling expertise
- Design experience

Energy Design Assistance Program

Customer Perspective

- Provides performance comparisons for different energy/design solutions
- Promotes lowering operating costs
- Maximize your options on impacting the environment
- Provides LEED®-NC AEC 1 baseline analysis as applicable
Energy Design Assistance Program
Program Requirements
- New construction, major renovation, additions
- 50,000 square feet +
- 150,000 square feet + for entirely residential applications
- Must start prior to design development

Energy Design Assistance Program
Incentives
- Free Energy Analysis and model ~ $20,000+
- Design Team Reimbursement
  - Architect, engineer and cost estimator
  - Up to $12,000
  - Based on project size
- Construction Incentives
Energy Design Assistance Program

Incentives

- Increase with performance better than IECC 2003 energy code
- $170/kW to $275/kW

Energy Design Assistance Program

Collaborative Design

- The Design Team
  - Strategy definitions
  - Incremental costs
- The Owner
  - Agree to implement strategies
- Xcel Energy
  - Strategy definition and modeling
  - Consultant fees
  - Incentive payment
Energy Design Assistance Program

Process

Five Step Process
1. Introductory meeting
2. Preliminary analysis meeting
3. Bundle analysis
4. Final analysis and CD Review
5. Site Verification

Energy Design Assistance Program

Timing
Case Study

Signature Center at Denver West
Aardex Corporation
- Golden, CO
- New Construction
- 185,906 Square Feet
- $46 Million
- EDA design 2006
- Occupancy 2007/2008
Signature Center at Denver West
Energy Savings

Energy Design Assistance
- Phase 1: Verification
  - 260 kW savings
  - 598,034 kWh savings
  - $65,520 in incentives

LEED™ Certification
- LEED CS- Platinum
  - 37.3% energy reduction
  - 32.8% energy reduction
  - 7 out of 10 EA:1 points
Signature Center at Denver West
Energy Measures

- Under floor ventilation achieved by high-efficiency Roof Top Units equipped with an outside air economizer
- Building perimeter conditioned with chilled beams and radiant heaters
- Hot water supplied from high-efficiency boilers
- Chilled water supplied from evaporative cooled condensing chilled water units on roof with variable volume pumping distribution
- Lighting controlled by occupancy sensors, dimmable switches, and photo sensors

Energy Design Assistance Program
In Summary

- New Construction/Major Renovations
- 50,000 square feet
- Energy modeling: Lighting, Mechanical, Envelope Strategies
- Incentives based on energy savings
Energy Design Assistance Program
How to Apply

- www.xcelenergy.com/EDACO
- Application
- Contact
  - Account Manager
  - Business Solutions Center
  - Jessie Peterson, Xcel Energy
  - 612-330-6850