Xcel Energy’s
Energy Efficiency Programs

Derek Shockley
Trade Relations Manager
Commercial and Industrial
Driver: Colorado’s Energy Needs

In the last decade:

- Number of Customers: Up 15%
- Electric Use per Customer: Up 19%
- Peak Demand: Up 39%

Xcel Energy must meet customers’ needs

- Manage supply by obtaining more power
- Manage demand by reducing customers’ usage
Xcel Energy’s Environmental Leadership

- No. 1 wind power provider
- Windsource®
  - Largest green-pricing program in USA
- Industry-leading energy efficiency programs
- One of largest photovoltaic systems 8.2 megawatts
- Solar*Rewards - 2,100 customers, 12 megawatts
- Voluntary emissions reductions
Reduce Demand

Efficiency programs
- Estimated Capacity to 886-994 MW
- Annual energy use reductions to 3,699 GWh (2009-2020)

Past legislation (2006-2013)
- 320MW demand reduction
- 800GWh use reduction

530 MW is approximately the size of Xcel Energy’s largest coal-fired power plant in Colorado
How Xcel Energy Helps

- Provides incentives to adopt energy-efficient technologies
- Rebates provide trade partners a tool to influence a customer’s purchase decision
- Xcel Energy brand name and neutral 3rd party endorsement

Results: energy savings and quicker paybacks for customers
Xcel Energy’s Efficiency Programs

- Cash rebates, as opposed to bill credits
- Existing facilities or new construction
- For Xcel Energy electricity business customers in Colorado
  - Added natural gas programs in 2009 (for customers who buy their natural gas directly from us)
2002 XCEL ENERGY ELECTRIC SERVICE AREAS

“AREAS SHOWN ARE APPROXIMATE”
Xcel Energy Efficiency 2008
Program Descriptions
Xcel Energy Offers Three Types of Programs

- Prescriptive programs
- Non-prescriptive programs
- Studies/Audits
Xcel Energy
Prescriptive Programs

Prescriptive programs

Predetermined rebate amounts and related savings for various energy-saving technologies

- **No preapproval required**

- Qualifying technologies are listed on the rebate applications

**Included programs:**

- Lighting
- Cooling
- Motors and variable frequency drives
Xcel Energy
Non-prescriptive Programs

Non-prescriptive rebates

For equipment and conservation efforts not covered with the prescriptive programs

» Preapproval required

» Rebate amounts and energy savings may vary greatly by project

Included programs:

» Custom Efficiency
» Energy Management Systems
» Energy Design Assistance
Xcel Energy Studies/Audits

Xcel Energy funds a portion of a study, which may lead to identifying energy-saving opportunities.

- **Preapproval required**
- Additional rebate opportunities can be realized by submitting a prescriptive or custom rebate application

**Included programs:**
- Compressed Air
- Recommissioning
- Refrigeration Recommissioning
- Energy Analysis
- Lighting Redesign
Xcel Energy
2008
Program Results
Xcel Energy Program Results in Colorado

Small Business, Commercial and Industrial

- 2007 (Year-End)
  - 32.9 MW demand reduction
  - 94.9 GWh annual energy use reduction

- 2008 (Year-End)
  - 35 MW demand reduction
  - 118 GWh annual energy use reduction
Xcel Energy Biennial Filing

Submitted August, 2008
Approved December, 2008
Proposed & Approved Programs

- 35 enhanced or new electric and natural gas efficiency and conservation programs
  - Businesses – new rebates, enhanced program customization and natural gas equipment rebates
  - Residential – incentives for saving natural gas and electricity
  - Low-income customers – special programs to provide rebates and help with in-home weatherization
Proposed & Approved Business Programs

- New programs
  - Boilers
  - Behavioral change
  - Data centers
  - Furnaces
  - New construction
  - Process efficiency
  - Small business lighting
  - Self-directed
  - Segment-based
  - Standard Offer

- Enhanced existing programs
  - Compressed air
  - Cooling
  - Custom
  - Energy Analysis
  - Energy management systems
  - Lighting
  - Motors and drives
  - Recommissioning
Enhancements to Existing Programs
Compressed Air

OLD  50-99 hp: 100% study funding, up to $2,500
     99+ hp: 75% study funding, up to $15,000

NEW  Prescriptive rebate of $4,000 - $4,500 on compressor systems under 50 hp and $200/airless drain.
     Study rebates remain the same.

Cooling

OLD  $10-$50/ton, plus $4/ton above standard
     $200/box VAV

NEW  Rebate levels designed to average 33% of incremental cost
     Detailed rebate matrix is being developed
### Custom Efficiency

| OLD | $200/kW standard ($400/kW temporary promotion) |
| NEW | $400/kW and/or $7/Dth (MCF) |

### Energy Management Systems

| OLD | On-peak up to $400/kW (summer months 8 a.m. – 6 p.m.) Off-peak up to $0.0525/kWh |
| NEW | On-peak up to $400/kW (summer months 8 a.m. – 6 p.m.) Off-peak up to $0.08/kWh (6 p.m. – 8 a.m.) $7/Dth (MCF) |
Lighting

OLD $1.75 - $125/fixture

Energy efficient lighting including T8, T5, highbays, photocells, sensors and LED exit signs

NEW $1.50 - $210/fixture

T8 rebates (retrofit only) require high efficiency ballast with low ballast factor: $13 - $22 (higher rebates, slightly different than original filing)

Ceramic metal halide rebates – new construction and retrofit: $12 - $75
## Motors and Drives

**OLD**  
$10-$600/motor on NEMA Premium® Efficiency motors 1-200 hp  
VFD motors $30/hp 1-200 hp

**NEW**  
Most substantial change, rebates now available for retrofitting existing (in-service) motors, and the rebates are significant  
Drive rebates have increased (VFD, ASD)  
Rebate applications available online
Recommissioning

OLD  Up to 50% of study cost, max $15,000
      Up to $200/kW or $0.0525/kWh for implementation

NEW  Up to 75% of study cost, max $25,000
      Up to $400/kW summer peak, or $0.08/kWh and $7/Dth

Energy Analysis

OLD  Online study is free; on-site study $200-$300
     Engineering assistance study up to 50%, max $15,000
     Implementation rebates via applicable program

NEW  Engineering assistance study up to 75%, max $25,000
New Programs Summary
## New Programs Summary

<table>
<thead>
<tr>
<th>Program</th>
<th>Rebates</th>
<th>Comments</th>
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| **Boilers** | ▶ $600/MMBTUH for 85% Non-Condensing Boilers  
▶ $2500/MMBTUH for 92% Condensing Boilers | ▶ Prescriptive rebates for boiler tune ups and controls  
▶ Effective Jan. 21, 2009  
▶ Applications available on line |
| **Furnaces** | ▶ $80 for 92% AFUE  
▶ $120 for 94% AFUE | ▶ A prescriptive rebate program  
▶ Installed equipment must match GAMA specification  
▶ Applications available on line |
# New Programs Summary

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<tr>
<td>Data Centers</td>
<td>- Studies up to 75%, max. $25,000&lt;br&gt;- New data centers go through an EDA type New Construction program&lt;br&gt;- All implementation rebates at $400/kW</td>
<td>- RFI process underway to select qualified contractors for studies&lt;br&gt;- Two separate paths: one for existing data centers and one for new construction&lt;br&gt;- Preapproval required</td>
</tr>
<tr>
<td>New Construction</td>
<td>- Program covers cost of energy modeling: $8,000-$12,000 to owner’s design team&lt;br&gt;- All implementation rebates at $300/kW and $7/Dth</td>
<td>- Over 50,000 sq.ft. EDA&lt;br&gt;  - Basic energy savings&lt;br&gt;  - Enhanced, seeking LEED&lt;br&gt;- Under 50,000 sq.ft.&lt;br&gt;  - List of energy-efficient measures to incorporate</td>
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<tr>
<td>Process Efficiency</td>
<td>Study funding with customer contribution capped at 25% or $7,500</td>
<td>Qualifier: must have saving potential of 2 GWhs or 8,000 Dth</td>
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<td></td>
<td>Rebates per applicable program</td>
<td>Designed for multi-phase, multi-year plan</td>
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<td></td>
<td></td>
<td>Bonus incentives may be given for milestones</td>
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<tr>
<td>Self-Directed Custom Efficiency</td>
<td>$525/kW saved, or $0.10/kWh vs. smaller rebates in most other programs</td>
<td>Qualifier: must have over 2 MW and 10 GWhs combined energy use</td>
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<td></td>
<td>Customer required to do M&amp;V</td>
<td>Larger rebates, customer is doing most of the “work”</td>
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<td>Rebates can cover up to 75% of incremental cost vs. 50%</td>
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<td>Small Business Lighting</td>
<td>‣ Same as new lighting prescriptive rebates (implementation phase)</td>
<td>‣ Third-party contractor will administer the program</td>
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<td></td>
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<td>‣ RFP is currently underway</td>
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<td>‣ Turnkey process for small businesses under 400kW</td>
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<tr>
<td></td>
<td></td>
<td>‣ No cost for audit and support</td>
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<td></td>
<td></td>
<td>‣ Launch: 1st quarter 2009</td>
</tr>
<tr>
<td>Standard Offer</td>
<td>‣ Study rebates at 50% up to $0.10 per sq. ft.</td>
<td>‣ Designed for bundled projects</td>
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<td></td>
<td>‣ $250/KW saved</td>
<td>‣ Contains a technical audit phase and an implementation phase</td>
</tr>
<tr>
<td></td>
<td>‣ $0.05 per kWh saved</td>
<td>‣ ESCO participation, GEO involvement</td>
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<td>‣ $7/Dth saved</td>
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| **Commercial Real Estate**  | ‣ Preliminary report cost is $8,000; with a 50% rebate  
|                             | ‣ Investigative studies reimbursed at 75%, up to $25,000              | ‣ Marketing program targeted at owner-occupied and leased buildings of at least 50,000 sq.ft.  
|                             |                                                                         | ‣ Implementation rebates per applicable program plus a 30% bonus          |
| **Behavioral Change**       | ‣ Indirect marketing program targeted at small and medium-sized businesses | ‣ Energy Efficiency Workshops  
|                             |                                                                         | ‣ Free of charge  
|                             |                                                                         | ‣ Conducted by energy consultant  
|                             |                                                                         | ‣ Employee Education Campaign  
|                             |                                                                         | ‣ On-site education, posters, collateral |
Biennial Goals

- Designed to save more than 425 million kWh of electricity and 721,000 dekatherms of natural gas in 2009 and 2010

- 2009/2010 biennium total of $137 million proposed for overall portfolio of programs
Contact Information

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