

# **Xcel Energy Conservation Rebate and Incentive Programs**

ESC Meeting

March 14, 2006



## Overall History of Xcel Programs for 2006

- Settlement agreement hammered out between group of (mostly environmental) parties and Xcel
- Xcel can build Comanche 3 coal plant without opposition from the parties
- Xcel is obligated to implement DSM programs, using TRC as primary test
- Approved by PUC

# Program Portfolio Development

- Xcel Minnesota has had a very robust set of DSM programs for years
- Xcel Colorado is adopting many of the same programs
- Staff is shared between the two main offices for Xcel
- Various roundtable discussions and DSM meetings over the past year

# The Offerings: Rebates for Energy Efficiency and Conservation Measures

- Prescriptive rebates
- Custom Efficiency
- Design Assistance

# Lighting Rebates: Existing Buildings

Equipment Type	Rebate levels <sup>[1]</sup>
Fluorescent T8 lamps with electronic ballasts	\$5-\$10
Fluorescent Super T8 lamps with electronic ballasts	\$10-\$18
Fluorescent T5 lamps with electronic ballasts	\$5-\$16
High-bay fluorescent T8 lamps with electronic ballasts	\$75
High-bay fluorescent T5 HO lamps with electronic ballasts	\$75
Hardwired compact fluorescent fixtures (CFLs)	\$8-\$24
Industrial multi-CFL fixtures	\$25
Metal halide & high pressure sodium fixtures	\$17-\$45
Pulse start metal halide fixtures	\$25-\$65
Reflectors	\$0.50/sq.ft.
Occupancy sensors and photocells	\$12-\$36
LED exits signs	\$6

# Lighting Rebates: New Buildings

Equipment Type	Rebate levels
Fluorescent Super T8 lamps with electronic ballasts	\$1.75-\$2.25
Fluorescent T5 lamps with electronic ballasts	\$2-\$2.50
High-bay fluorescent T8 lamps with electronic ballasts	\$12
High-bay fluorescent T5 HO lamps with electronic ballasts	\$12
Hardwired compact fluorescent fixtures (CFLs)	\$3-\$8
Metal halide & high pressure sodium fixtures $\geq$ \$150 kW	\$6
Pulse start metal halide fixtures	\$6-\$18

# Cooling Efficiency Rebates

Equipment Type	Rebate levels
Packaged terminal air conditioners (PTAC)	\$50/ton plus \$4/ton for higher efficiency
Water source heat pumps	\$50/ton plus \$4/ton for higher efficiency
Rooftop AC units	\$50/ton plus \$4/ton for higher efficiency
Condensing units	\$25/ton plus \$4/ton for higher efficiency
Split systems	\$25/ton plus \$3/ton for higher efficiency
Variable air volume (VAV) boxes	\$200 per box
Cooling towers	\$3 per ton
Chillers – scroll or rotary screw	\$10/ton plus \$3/ton for higher efficiency
Chillers - centrifugal	\$12/ton plus \$3/ton for higher efficiency

# Motor Efficiency Rebates

- Rebates are available for NEMA Premium™ efficiency motors in new and existing facilities. Motors must be sized from 1-200 HP and meet the following features:
  - AC Polyphase induction motors
  - Squirrel cage rotor design
  - NEMA design B torque characteristic
  - Synchronous speed of 3600, 1800, or 1200 RPM
- \$10 to \$600 per motor, \$30/HP for VFD

# Recommissioning

## Step 1 – Diagnosis

- Xcel funds up to 50 percent of cost of the recommissioning study not to exceed \$15,000 in rebates. Building must be at least 50,000 square feet to qualify.
- Select your own contractor or choose from Xcel's provider list
- The study includes:
  - An assessment of operating mechanical systems
  - A written report that includes energy-saving recommendations

## Step 2 – Implementation

- Your Recommissioning study report becomes the Recommissioning plan
- Electric rebates can cover up to half the cost of implementation
- If you did a Recommissioning study without Xcel's involvement, you still can qualify for implementation rebates using the Xcel Fast Track Recommissioning Form

# Energy Design Assistance

- New construction, additions or major renovations
- Projects 50,000 sq. ft. or more in early design stages
- Housing & condominium projects qualify at 150,000 sq. ft. not including garage space.

# Energy Design Assistance

- Energy design team meets
- Energy model is created
- Energy savings strategies are created

# Custom Efficiency

- Covers equipment and measures not found under prescriptive rebates
- Rebates of up to \$200/kW energy savings
- Calculations are done for each application, and rebate levels are determined
- Xcel says they will turn around application approval in 10 days.

## **Custom Efficiency: Examples of Areas of Rebates**

- High-efficiency compressors, motors and other equipment
- Controls for ventilation, energy recovery, lighting, refrigeration
- Energy-efficient windows, humidification, elevator modernization (DC to AC)
- Process equipment

## Federal Tax Credits: Commercial Buildings (2006-7)

- Tax **deduction** (if public building, can go to the “designer”) of up to \$1.80/ft<sup>2</sup> (whole building) for buildings that use 50% less energy than ASHRAE 90.1-2001
- Partial deductions of up to \$.60/ft<sup>2</sup> from any one of three building systems—the building envelope, lighting, or heating and cooling system—that meets 50% target
- Partial lighting deduction of \$.30-.60/ft<sup>2</sup> **may** be available for savings between 25-50%

# Federal Tax Credits: Solar and Alternative Generation

- Incentive Type: Corporate Tax Credit (in service 2006&7 only)
- Eligible Renewable/Other Technologies:
  - Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Geothermal Electric, Fuel Cells, Solar Hybrid Lighting, Direct Use Geothermal, Microturbines
- Amount:
  - Credit is 30% for solar, solar hybrid lighting, and fuel cells, and 10% for microturbines. The geothermal credit remains at 10%.
  - Maximum Incentive:\$500 per 0.5 kW for fuel cells; \$200 per kW for microturbines; no maximum specified for other technologies
  - Eligible System Size: Microturbines less than 2 MW; fuel cells at least 0.5 kW
- Source: <http://www.dsireusa.org/index.cfm?EE=0&RE=1>

# Xcel Rebates for PV Installations

- Only small system rebates have been approved so far (up to 10KW)
- Small system rebates = \$2/Watt of capacity plus \$2.50/Watt Renewable Energy Credit which could be adjusted based on performance

# Additional Information Sources

- American Council for an Energy-Efficient Economy (ACEEE)  
• <http://www.aceee.org/energy/legsttus.htm>
- Alliance to Save Energy  
• <http://www.ase.org/content/article/detail/2683>
- Tax Incentives Assistance Project  
• <http://www.energytaxincentives.org/tiap-businesses.html>
- Commercial Building Tax Deduction Coalition  
• <http://www.efficientbuildings.org/>
- National Electrical Manufacturers Association  
• <http://www.nema.org>
- Environmental Protection Agency (EPA)  
• <http://www.epa.gov/fedrgstr/EPA-IMPACT/2005/October/Day-18/i20701.htm>
- Lighting Controls Association  
• <http://www.aboutlightingcontrols.org>
- Washington State University  
• <http://www.energy.wsu.edu/ftp-ep/pubs/library/EnergyPolicyAnalysis.pdf>