

Xcel Business Customers: Program and Rebate Summary

Rebates for New Energy-Efficient Equipment

Xcel offers prescriptive rebates to its business customers. What's a prescriptive rebate? It simply means that Xcel has a preset rebate amount for certain pieces of high efficiency energy-using equipment. They have calculated lifetime energy and monetary savings, and have set the rebate amount to help offset the incremental cost of purchasing the higher efficiency version of the equipment. While the upfront cost may still be a little higher than the low efficiency option, the payback from savings should only take a year or two; then it's savings for the remainder of the life of the equipment.

The following categories of electricity-using products have programs and rebates available. Equipment that uses natural gas is not currently available for rebates, but that may change in the future. Please look to the links to be taken straight to Xcel's Colorado website for that particular energy efficiency program.

Lighting Efficiency for Existing Buildings

Xcel provides rebates for the vast majority of common lighting products, including lamps, ballasts, sensors and even exit signs. The exact level of rebate depends on the particular equipment type and size, and what type of equipment is being replaced.

Equipment Type	Rebate levels ¹
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

Link to Website and Applications: http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25072-22793-2_171_256-0,00.html

¹ Xcel Business Programs Summary, 11/2005. Rebates are subject to change.

Lighting Efficiency for New Construction

Xcel also offers some rebates for higher efficiency lighting equipment going into a newly constructed building or addition. The rebates are different for new buildings than for existing structures. This is primarily due to the fact that the incremental installation cost will be very low, plus building and equipment codes are getting stricter, so there may not be as big a difference between energy use of the standard equipment and the high efficiency products. Nonetheless, you should find that the high efficiency products have a very short payback period and provide great savings over their lifetime.

Equipment Type	Rebate levels ²
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

Link to Website and Applications: http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25072-22793-2_171_256-0,00.html

Cooling Efficiency

The rebates for electric cooling equipment will reduce the upfront cost of purchasing higher efficiency products that will save energy and money over the lifetime. The higher the efficiency, the greater the rebate. There are many conditions to optimize your system rebate, so please look at Xcel's website for details on eligibility and combining system elements.

Equipment Type	Rebate levels ³
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

² Xcel Business Programs Website, 1/2006. Rebates are subject to change.

³ Xcel Business Programs Website 1/2006. Rebates are subject to change. Note that additional rebates continue to rise for as the EER rating gets higher.

Link to Website and Applications: http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25163-22778-2_171_256-0,00.html

Motor Efficiency

Rebates are available for both high efficiency motors and for variable speed drives (VFDs). Any motor application can benefit from these rebates, including return/supply fans, blowers, condensate or chilled-water pumps, or process fans and pumps. More efficient motors may also reduce downtime and gain extended motor lifetimes. Many businesses now replace motors before they actually fail, and find that the economics are favorable. Logically, motors that are older, that operate longer hours, or have been rewound would be the place to start a replacement program.

VFDs can reduce costs by running the motors only as hard as necessary for a given application. The greatest potential for using VFD technology to improve your operation exists for larger HP motors that run a high number of hours per year, and when there is a high degree of throttling from valves, dampers, or other system control devices.

Rebates are available for purchasing and installing NEMA (National Electrical Manufacturers Association) 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

Rebates range from \$10 to \$600 per motor, depending on HP, motor RPM, and nominal efficiency rating. In addition, rebates of \$30 per HP are available for VFDs, ranging in application from 1-200 HP.⁴

Link to Website and Applications: http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25164-22794-2_171_256-0,00.html

Recommissioning: Improving the Energy Operation of your Buildings

Recommissioning can be considered a tune-up for your building. Inevitably, a building's energy efficiency is compromised over time by equipment malfunctions, problems with controllers, wear and tear on valves, dampers, and motors, and a wide variety of other problems. The recommissioning process focuses on getting all systems working as well as possible, eliminating energy waste as well as potentially reducing maintenance

⁴ <http://www.xcelenergy.com/docs/retail/busmrkts/MotorASDPremiumEfficiencyChart.pdf> as of January 9, 2006

problems. Xcel states on their web site that recommissioning can lower energy use by an average of 10%.

Xcel offers support during a two-step process.⁵

Step 1 – Diagnosis

- Xcel funds up to 50 percent of cost of the recommissioning study not to exceed \$15,000 in rebates. Your 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

Link to Website and Applications: http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25116-22799-2_171_256-0,00.html

Energy Design Assistance

Xcel is offering help for customers who are planning new construction or major renovations to ensure that smart energy decisions are built into the development plans. Free consulting is available customized to your particular project. The consulting is enhanced with computer modeling of energy use patterns. The consulting can be used for assistance in meeting LEED criteria, as well.

To be eligible, projects must meet the following criteria:

- 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.

⁵ http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25116-22799-2_68_133-0,00.html
as of January 9, 2006

Cash incentives to install energy-saving equipment and measures are offered as well, customized to the particular project. The incentive level is determined through the studies conducted based upon savings level.

The first step in participating in the Energy Design Assistance Program is to have an introduction meeting with the owner, the design team, Xcel's Energy Design consultant, and an Xcel representative. The meeting gets the whole group up to speed on the design and options for energy savings are presented. At this point, the energy model is created and run. The next step is to hold a "bundle meeting", where the energy strategies which emerged from the modeling are presented and it is shown how they work together to reduce energy needs. Then a final meeting is held to finalize the strategies, plans, and rebates. At the construction plan stage, Xcel will review documents to ensure that the energy saving strategies are included. And finally, once the construction is completed, Xcel will conduct an inspection of the building.

Link to Website and Applications: http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_25171-22840-2_171_256-0,00.html

Custom Efficiency

Xcel's most recent addition (Feb. 2006) to their portfolio of energy efficiency rebate options is their Custom Efficiency Program. This program covers equipment that is not covered under the other prescriptive rebates. The incentive is up to \$200 per kW saved, and calculations are done on a project-by-project basis. All Custom Efficiency rebates are required to be pre-approved, which takes no more than 10 days (according to Xcel) once the application is received. Below are examples of options under Custom Efficiency.

Building envelope

- Additional wall/roof insulation
- Energy-efficient windows
- ENERGY STAR® roofing
- Window glazing/film

Compressed air

- Air storage with controls
- Controls
- More efficient air dryers
- New efficient compressors
- Piping reconfiguration and storage
- Reduce oversized hp of compressors
- Sequencer
- Variable frequency drive (VFD) compressors

Controls - applications

- CO2 based ventilation
- Compressed air systems
- Daylighting
- Energy management systems (EMS)
- Energy recovery
- HVAC control (PTAC controls)
- Morning preheat/cool down
- Night setback, day setup
- Start/stop
- Temperature resets

Controls - concepts

- Match system operation to occupancy or line speed
- Reduce equipment operational hours

Cooling and heating - concepts

- Eliminate simultaneous heating and cooling
- Improve chilled water flow
- Match operation and equipment with current occupancy
- Minimize equipment cycling (boilers, cooling fans, etc.)
- Minimize supply and return fan amps
- Optimize enthalpy control of economizer function
- Optimize mixed air control based on occupancy
- Optimize operation during periods of low occupancy
- Optimize supply air temperature and relative humidity
- Reduce CFM during periods of low occupancy
- Restore or improve economizer function

Cooling and heating - equipment

- Air conditioning economizers
- Boilers, heaters and makeup air units
- Chillers
- Economizers
- Free cooling
- Furnaces
- HVAC heating and cooling control schemes (weekday, weekend, evening settings)
- Insulation (ceiling, wall, water heaters, hot-water distribution pipes)
- New energy-efficient HVAC equipment
- PTAC units
- Rooftop and condenser units
- Window films, blinds, awnings and solar screen shades

Lighting

- Efficient use of lighting (mapping and resource needs assessment, lighting level reduction)
- Situation where new fixtures save energy but are not a one-to-one exchange. Efficient lighting fixtures include electronic ballasts, compact fluorescent lamps, LED signage, pulse start metal halide, high-bay fluorescents, T8s and super T8.

Motors

- Adjustable/variable speed drives > 200 hp
- Efficient motors > 200 hp
- System motor hp reduction

Office equipment

- Energy Star office equipment options (monitors, copiers, inkjet printers, etc.)
- Lighting controls

Process equipment installations (examples)

- Install sensors to reduce product drying time. Install sensors to reduce product drying time.
- New process (layout, piping modifications).
- New system produces more output than the old system while using the same amount of energy as the old system.
- New system produces the same output as old system using less energy.
- Reconfigure conveyor system.
- Remove/reduce horsepower, motors (oversized, staging).
- Turn off unused and backup equipment during low production periods.

Refrigeration

- Ammonia compressors
- Anti-condensate heater control
- Compressor sequencing
- Floating head pressure control
- Insulated freezer doors
- Suction level separation
- Thermo-siphon oil cooling
- VFD for compressor

Website for more information and for application forms:

http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-3_4530_8437_27266-24570-2_68_133-0,00.html