

THE SKINNY

Amendment 37 for Solar Electricity



COLORADO AMENDMENT 37: WHAT DOES IT MEAN TO YOU?

In November 2004, Colorado became the first state ever to adopt a renewable energy standard by popular vote. Amendment 37 requires that qualifying Colorado utilities generate 10% of their electric supply from renewable energy sources by 2015. It also presents an excellent opportunity for residents interested in installing solar photovoltaic systems.

Amendment 37 stipulates that four percent of the renewable energy requirement come from solar electric systems or photovoltaics (PV). Half of this requirement must come from individual residential and business customer solar systems. This provision applies specifically to Xcel Energy and Aquila, which must offer rebates to stimulate the market for PV.

THE SOLAR SET ASIDE:

- ☀ The solar requirement for customer systems amounts to about 40 Megawatts (MW) of PV being installed by 2015. This will result in about 2,000 solar powered Colorado homes and businesses.
- ☀ Xcel Energy and Aquila established rebate programs for its residential and business customers installing PV, beginning in 2006. Xcel's program, Solar Rewards, offers a rebate of \$4.50/watt for systems under 10 kW. This is a combination of a \$2.00/watt rebate and a \$2.50 payment for the Renewable Energy Credit (REC). These rebates significantly improve the economics of installing home PV systems (see box at right).
- ☀ In addition, solar systems installed in 2006 & 2007 are eligible for a Federal tax credit of 30% (applied to after-rebate cost). Residential tax credits are capped at \$2,000. (See page 2 for details). Commercial applications are not subject to the cap.
- ☀ Rebates are retroactive to December 1, 2004, and all PV systems installed after this date are eligible for rebates.
- ☀ Amendment 37 also requires that qualifying utilities offer net metering for PV installations. (See page 2).

Thinking of installing a PV system? Here's what you need to know.

Before you install a PV system on your home, it is a good idea to maximize your home's energy efficiency to make your PV system as cost-effective as possible.

A 2,000 watt (2 kW) PV system could reasonably provide about half of the electricity needs of an energy efficient 2,000 square foot home.

Here's the cost breakdown:

2,000 watt PV system installed	\$18,000
\$4.50/watt rebate:	(\$9,000)
30% (up to \$2,000) tax credit	(\$2,000)
Customer cost	\$7,000

- ☀ With net metering, a 2,000 watt system would save about \$300 per year on a homeowner's electric bill.
- ☀ As energy rates rise, the yearly energy cost savings increase as well.

THE RULES:

- ☀ Colorado investor owned utilities with more than 40,000 customers must comply with Amendment 37's solar set aside. Currently, this applies only to Xcel Energy and Aquila but other utilities will be included within a few years.
- ☀ The required percentage of renewable energy accelerates in increments: 3% by 2007; 6% by 2011; 10% by 2015.
- ☀ Qualifying technologies include wind, solar, geothermal, biomass, small hydro, and fuel cells.
- ☀ The amendment specifies that retail electric rates may not be impacted by more than 1% (about \$0.50 on an average residential monthly utility bill).

NET METERING

Net metering is an additional economic incentive for homeowners and businesses that install renewable energy systems that are connected to the grid. Net metering allows PV owners to store excess electricity on the grid and creates a credit on their utility bill. True net metering uses a single meter that runs forward when the home is using electricity from the utility and backward when the PV system produces more electricity than the home or business is using (i.e., supplies power to the grid). Excess electricity production is carried over from month to month and utility bill credits are settled at the end of the year. Net metering eliminates the need for battery back-up on PV systems.

Amendment 37 requires Xcel and Aquila to offer net metering to their customers. Xcel Energy recently implemented new net metering tariffs and rules for residential and commercial customers with solar PV systems up to 10 kilowatts (see side bar). Further negotiation is being conducted at the PUC to design net metering rules for systems larger than 10 kW.

FEDERAL SOLAR TAX CREDITS

The Federal Energy Bill passed in July, 2005 includes the first residential tax credit for solar energy in the past two decades. The bill creates a 30% tax credit for residential solar installations up to a \$2,000 cap. It applies to all forms of solar energy systems including PV and solar thermal technologies that are installed after December 31, 2005 and before January 1, 2008. The tax credit is also available for commercial solar applications with no cost cap. When combined with Amendment 37 rebates, the 30% tax credit applies to the after-rebate purchase amount of new systems. For more detailed information on Federal as well as state incentives for renewable energy, visit www.dsireusa.org.

LEARN MORE

Xcel Energy: www.xcelenergy.com/solar

National Renewable Energy Lab: www.nrel.gov

Americans for Solar Power: www.forsolar.org

American Solar Energy Society: www.ases.org

Colorado Renewable Energy Society: www.cres-energy.org

Colorado Solar Energy Industries Association: www.coseia.org

THE CENTER FOR RESOURCE CONSERVATION

The CRC offers assistance to homeowners and businesses on solar PV systems and those interested in entering the solar industry, including **classes and training seminars**, **information resources**, a **contractor referral network** and a **guide for selecting solar contractors**.

Visit our website www.conservationcenter.org.

Thinking of installing a PV system? Here s the Skinny on Net Metering.

Xcel has two tariffs for net metering PV systems at residential (R) and commercial (C) facilities. They feature true net metering including:

- System size up to 10 kW.
- System owners must meet Xcel s interconnection standards and sign an interconnection agreement.
- Xcel pays for and installs a net meter.
- For any given month, the value of net excess production is carried over to the following month.
- If net production is negative at the end of the year, the customer will be paid at the incremental cost of electricity supply averaged over the prior twelve months.
- Charges otherwise are the same as Xcel s normal R and C tariffs

Contact Xcel to find out more:

Residential Service: 800-895-4999

Business Solutions Center: 800-481-4700

Or visit: www.xcelenergy.com/solar