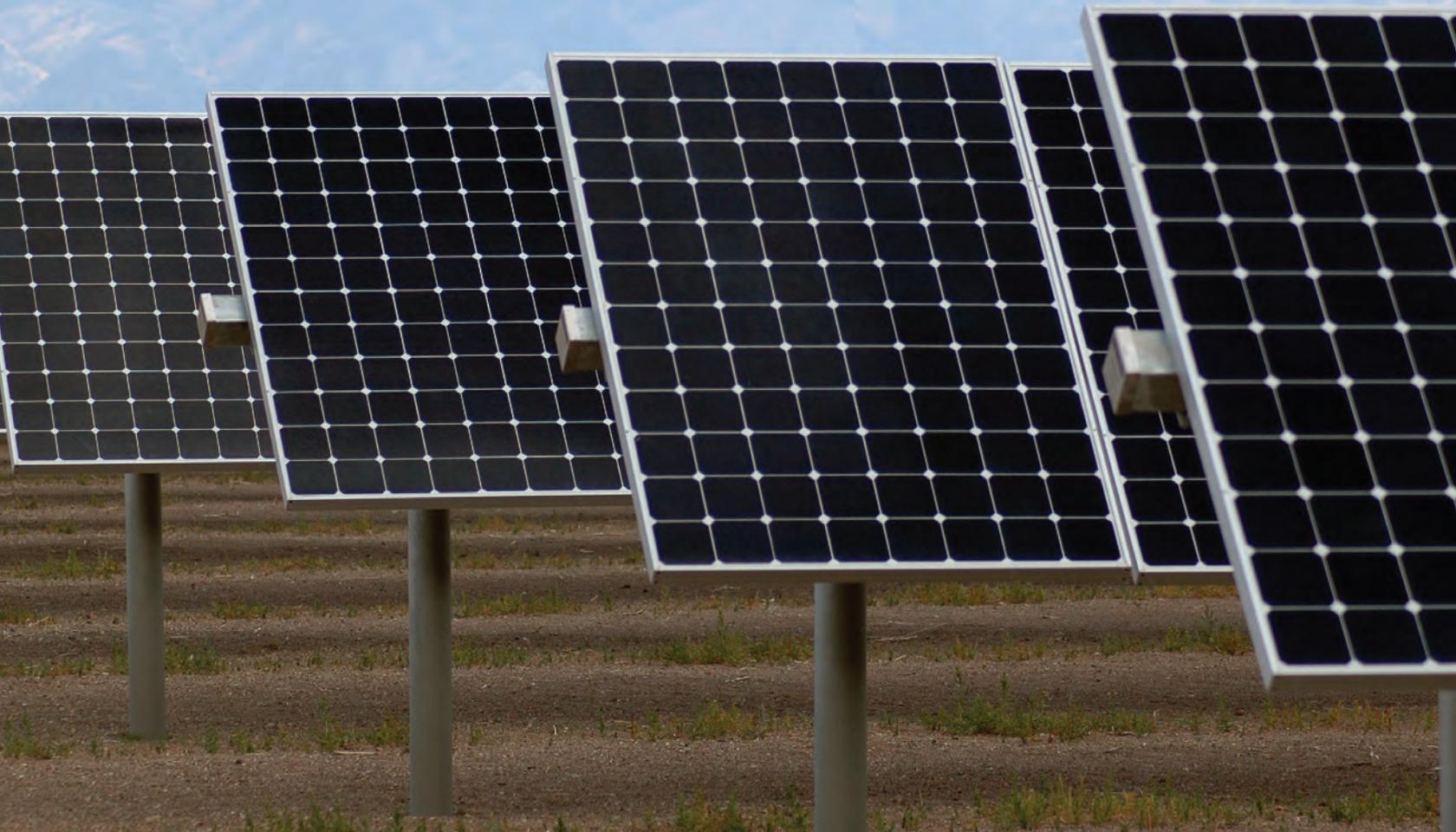


Business Plus Spotlight

Boulder County Business, Magnified.

The Right Energy Choice for You

Xcel Energy is leading the transition to a more sustainable energy system





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As a provider of electricity and natural gas to more than half of all Coloradans, Xcel Energy recognizes the way it produces and delivers energy to serve its customers has a direct impact on the environment.

That's why Xcel Energy is leading the transition to a more sustainable

energy system – one that provides dependable, reasonably priced energy customers need with lower emissions and more renewable resources.

“We’re committed to providing our customers with energy choices that fit their needs and preferences,” said David Eves, president of Public Service Company of Colorado, an

Xcel Energy company. “We know that our customers are looking for more options in how they use energy, how their energy is generated and how they work with their utility.”

Increasing renewables

Renewable energy plays a vital role in Xcel Energy’s diverse energy supply, providing the clean energy customers value – and the company plans to use it more. It is one way Xcel Energy helps customers achieve their environmental goals.

Solar energy is growing in prominence. Xcel Energy, a recognized leader for renewable energy, is ranked among the top 10 U.S. utilities for solar power capacity by the Solar Electric Power Association.

This year Xcel Energy more than doubled the amount of energy under contract in its Solar*Rewards® Community® program, or solar gardens, when it announced winning bids in September for almost 30 additional megawatts of solar energy.

Xcel Energy will soon triple its large solar capacity. The company added 50 megawatts of solar energy to its system in December from Solar Star Colorado III, a plant in the San

Luis Valley that can generate enough electricity to serve about 13,500 homes. And Xcel Energy will add 120 megawatts from the largest solar power plant east of the Rocky Mountains when it opens early next year. The Comanche Solar project in Pueblo, Colorado, can supply the energy needs of about 30,000 homes.

As the No. 1 utility provider of wind energy in the nation for 11 years, Xcel Energy has added vast amounts of wind energy – more than doubling the amount of wind on its system in Colorado since 2010. In October, Xcel Energy made the latest addition of wind energy with 250 megawatts from the new Golden West Wind Energy Project in El Paso County, Colorado. It can generate enough electricity to power over 62,000 homes.

Xcel Energy customers have the option to choose more wind energy for their homes or businesses through the Windsource® program. Xcel Energy pledged this year to donate a tree, through a partnership with American Forests, for each customer who chose to power 100 percent of their energy needs with wind by December. As of the deadline, more



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than 15,000 customers had done so. The donation is expected to reduce more than 13 million pounds of carbon dioxide.

Wind energy records

High levels of electricity generation from renewable sources on Xcel Energy’s system are becoming increasingly common.

This year for the first time the company served more than 50 percent of customer daily load with renewable energy. Xcel Energy set a new record Oct. 2 when wind energy supplied 54.3 percent of the power delivered to Colorado customers for the entire day. And the company set a new hourly record when wind energy supplied 66.4 percent of power delivered starting at 3 a.m. Nov. 11.

Generation like this is possible because of a cutting-edge forecasting system developed in partnership with the National Center for Atmospheric Research, or NCAR, in Boulder. The system improves the predictability of wind resources with high-resolution wind energy forecasts every 15 minutes across Xcel Energy’s service territory for up to a 168-hour period.

The system has also saved Xcel Energy’s customers in Colorado more than \$41 million in fuel costs.

Reducing emissions

Xcel Energy has significantly reduced emissions for over two decades with not only the addition of carbon-free energy sources, but also the modernization of power plants and energy delivery systems, and comprehensive energy efficiency programs.

The company has almost completed a major project for Colorado’s Clean Air-Clean Jobs Act. When finished, more than half of the company’s coal-fueled generation in Colorado will be retired, replaced or retrofitted. This includes seven coal units since 2010, and in 2017, a fourth coal unit at Cherokee Plant in Adams County and the coal unit at Valmont Plant in Boulder County.

One of the easiest ways to reduce emissions is through energy efficiency. In Colorado, Xcel Energy customers have saved enough electricity to help avoid building three power plants since the company began tracking energy efficiency results in 1992. Xcel Energy today has rebates for approximately 1,000 different technologies in over 40 energy efficiency programs.

The company launched a new energy efficiency program this year that is the first step in creating a connected home. Smart thermostats

offer one of the most convenient ways to manage energy use at home and connect through Wi-Fi to smart phones, tablets or computers to control home temperatures. Customer demand soared above sales expectations in the first year. Smart thermostats are available with instant rebates through XcelEnergyStore.com.

Xcel Energy also received approval in December for a new way that Colorado communities can participate in energy efficiency with LED street lights. Based on demand, the company estimates it could convert up to 95,000 cobra head lights to LED lights. Participating communities will pay less for street lighting while achieving 50 percent or greater energy savings. Once all eligible lights are converted, Xcel Energy estimates annual savings of over 50 gigawatt-hours. The program is set to begin early next year.

Milestone in measurement

Because of Xcel Energy’s drive toward a more sustainable energy system, the company’s carbon dioxide emissions in Colorado are expected to fall 35 percent by 2020 (since 2005).

Measuring carbon dioxide is complicated. Xcel Energy has worked to establish consistent, transparent standards for calculating, verifying and publicly reporting all greenhouse gas emissions, including carbon dioxide.

In December, Xcel Energy achieved another milestone as the first U.S. utility to verify and register 10 consecutive years of greenhouse gas emissions data (since 2005) with The Climate Registry, or TCR.

The nonprofit designs and operates voluntary and compliance-related greenhouse gas reporting programs throughout the world. Xcel Energy became a founding member of TCR in 2007.

“Xcel Energy has tangibly demonstrated its leadership and accountability over the years through its rigorous and high-quality greenhouse gas reporting,” said David Rosenheim, executive director of TCR. “Xcel Energy should be commended for its vision and foresight in addressing climate and energy issues.”

Driving innovation

At the same time that Xcel Energy is executing on its clean energy strategy, the company is working to create the future system and services that will take advantage of new technologies and meet the needs of customers.

Xcel Energy supports the



Xcel Energy will add 120 megawatts from the Comanche Solar project, the largest solar power plant east of the Rocky Mountains, when it opens early next year.

development of solar energy resources as these options will play an increasingly important role in customers’ energy future.

Next year, Xcel Energy will propose to the Colorado Public Utilities Commission a new program that would give customers a flexible and easy option to choose solar power for their home or business.

The Solar*ConnectSM program would allow customers to choose the percentage of solar energy they would like to have, as much as 100 percent, and provide price certainty over the length of their subscription. It would involve no set-up time or equipment installation and zero upfront costs.

For businesses, nonprofits and cities, especially those with environmental sustainability goals, it would offer a verifiable way to track use of clean, renewable power using renewable energy credits.

Xcel Energy is also awaiting approval from the Commission on two, new battery demonstration projects under its Innovative Clean Technology program that will explore the future of energy storage for residential and commercial customer

applications – such as micro grids and expanded on-site solar.

Xcel Energy’s Innovative Clean Technology program is designed to further the development, commercialization and deployment of new clean energy projects and other advanced technologies.

Battery storage systems can do more than provide emergency back-up power in combination with solar installations. Xcel Energy’s projects will test in a real-world application how batteries can provide additional grid services, such as regulating voltage on distribution feeders, increasing the ability of feeders to host additional renewable generation to reduce system peak conditions, and storing energy when costs are low to be used again during higher price periods.

“Ultimately, our goal is to use these projects as a foundation for adding more renewable energy onto our Colorado system and to continue providing customers with clean energy choices that they want and value,” said Public Service Company President Eves.

Photos courtesy of Xcel Energy.



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