

# OUR ENERGY FUTURE

Colorado



# Leading the Clean Energy Transition

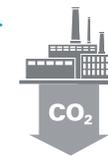
Xcel Energy is the first U.S. energy provider to set aggressive carbon reduction goals for all the ways our customers use energy — electricity, heating and transportation. And in Colorado, we're leading the way toward that cleaner energy future with our customers, communities and many other partners.

Together, these three goals position Xcel Energy to be a net-zero energy provider by 2050.



Our Energy Future  
[xcelenergy.com/OurEnergyFuture](https://xcelenergy.com/OurEnergyFuture)

## A net-zero energy provider by 2050



**100% Carbon-Free Electricity**



**Net-Zero Natural Gas**



**Zero-Carbon Transportation**

Every day, we power millions of homes, businesses and communities across eight states. Our customers rely on us to be there 24/7 with safe, affordable electricity and natural gas. We constantly innovate to offer a cleaner energy mix, smarter solutions and a seamless customer experience. Beyond energy, we support the communities we serve while creating a stronger energy future together.

# Our Clean Energy Vision

As we drive toward our goal to be a net-zero energy provider by 2050, our ambitious goals for 2030 will deliver cleaner energy while continuing to focus on reliability and affordability.

## Electricity

By 2030, our plans reduce carbon emissions 85% from the electricity provided to our Colorado customers as we work toward delivering 100% carbon-free electricity by 2050.

## Natural gas

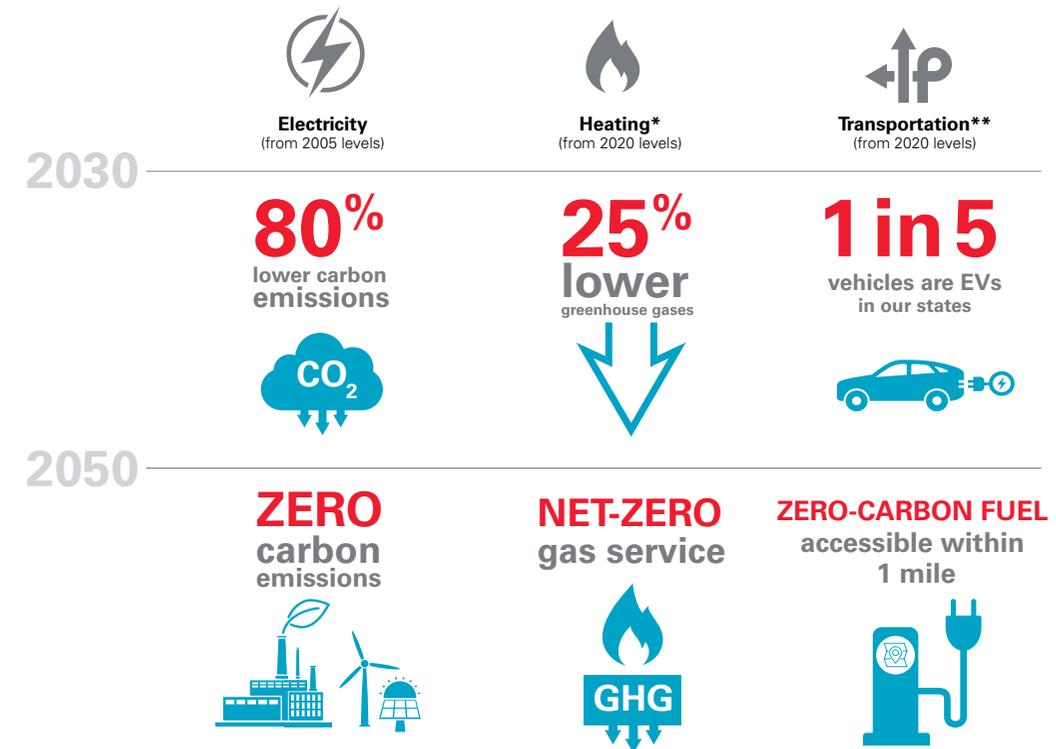
We aim to deliver natural gas service with net-zero emissions by 2050. Our goal for 2030 is to achieve net-zero methane emissions from our distribution system and reduce greenhouse gas emissions by 25% from the supply, delivery and customer use of natural gas.

## Transportation

Beyond our operations, clean electricity can power a cleaner economy, and it starts with transportation — the country’s largest source of carbon emissions. Our vision is to enable one in five vehicles to be electric by 2030 in the places we serve, improving air quality, cutting carbon emissions and saving customers billions of dollars on fuel.

## Net-Zero Energy Provider by 2050

Goals that cover all the ways our customers use energy



\*Spans natural gas supply, delivery and customer use

\*\*Includes the Xcel Energy fleet; zero-carbon fuel is electricity or other clean energy

This table reflects Xcel Energy’s companywide goals — carbon emissions reduction in Colorado is expected to be 85% by 2030.

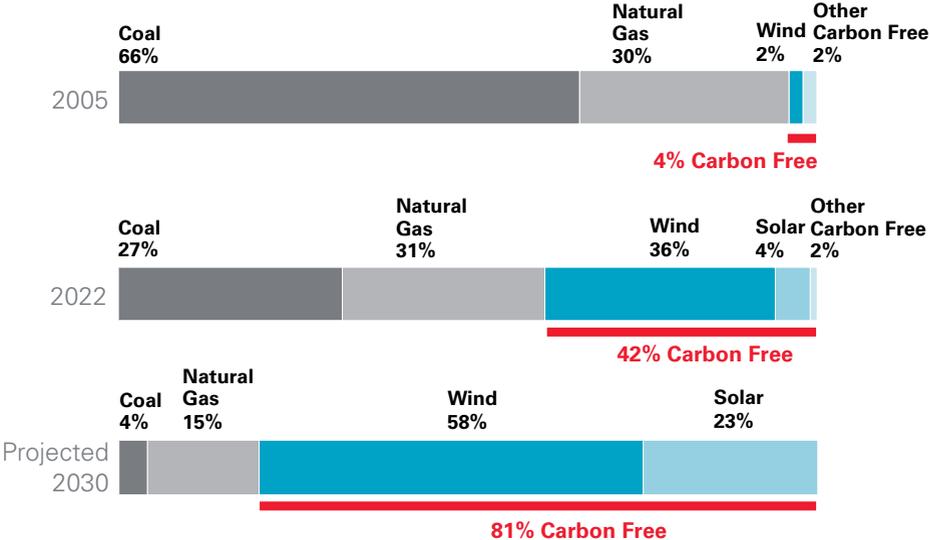


# Our Colorado Clean Energy Plan

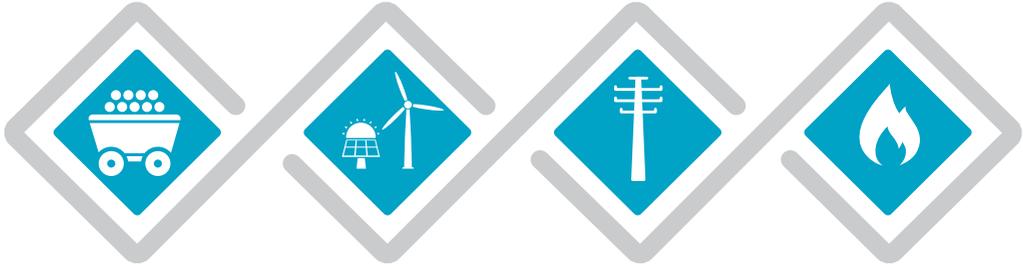
In July 2022, the Colorado Public Utilities Commission approved our Colorado Clean Energy Plan, which is one of the largest, most aggressive clean energy plans in the nation. The plan will reduce carbon emissions at least 85% by 2030 from 2005 levels, end the use of coal by 2030 and add unprecedented amounts of renewable energy resources. As we transition away from coal, we will also add “always available” power sources to help back up wind and solar and maintain grid stability and reliability.

Approximately 80% of customers’ electricity will come from renewable sources by the end of the decade, enabling us to exceed state carbon reduction goals. By the end of 2022, we’ve already reduced carbon emissions in Colorado by 51% from 2005 levels. The elements of this plan all work together to achieve our aggressive clean energy targets while protecting reliability and affordability for customers.

**A cleaner energy mix**



## How we'll get there



**Coal Action Plan**

End our use of coal by the end of 2030 to reduce emissions

**New Clean Energy**

Addition of clean energy resources including wind, solar and storage

**Colorado's Power Pathway**

560 miles of new 345 kv transmission infrastructure

**Maintain Reliability**

Firm dispatchable resources to support the transition

**Driving jobs and economic activity**

Our clean energy plans will create significant benefits for Colorado in the coming decade.

**Thousands of jobs** to build new clean energy infrastructure

**Hundreds of miles of new transmission lines** to increase grid resiliency

**Billions of dollars invested** in the grid to generate and deliver reliable and increasingly clean power

**Quadruple the amount of solar** on our Colorado system

Continuing our nation-leading **growth in wind energy**

# Our Net-Zero Vision for Natural Gas Service

We're committed to net-zero emissions for our natural gas service by 2050. By 2030, our goal is to reduce greenhouse gas emissions 25% below 2020 levels, achieve net-zero methane emissions and exclusively purchase certified natural gas for gas distribution and power generation.

Most Xcel Energy customers rely on natural gas for heating their homes and businesses. Natural gas is a highly flexible and efficient fuel for millions of furnaces, boilers, water heaters, stoves and other appliances across the colder Colorado climate. Natural gas remains the most affordable and flexible option to heat homes and businesses.



Net-zero energy by 2050  
[xcelenergy.com/carbon](https://xcelenergy.com/carbon)

Our strategy covers the supply, distribution and customer use of natural gas. Affordability and reliability are key guideposts as we determine the best mix of strategies to reduce emissions.

We plan to offer voluntary programs to help customers further reduce carbon emissions associated with their natural gas use. This includes expanding our existing conservation programs and piloting electrification options, such as smart electric water heaters, all-electric new building developments and electric and air source heat pumps combined with natural gas furnaces for backup heating.

## 2050 Net-Zero Vision for Natural Gas

**25% net reduction in greenhouse gas emissions by 2030**

Our clean energy vision for the natural gas business covers the supply, distribution and customer use of natural gas.

### Natural Gas Suppliers



#### Influence natural gas suppliers

Purchase exclusively natural gas with certified low-methane emissions by 2030

### Xcel Energy System



#### Operate the cleanest system possible

Achieve net-zero methane emissions by 2030

### Customers



#### Offer more options and cleaner fuels

New and expanded voluntary programs

Pursue low-carbon gas supply



# Our Clean Transportation Vision

Electric vehicles are the next chapter in Xcel Energy's clean energy transition. Our clean energy can significantly reduce carbon emissions from transportation while helping customers save billions of dollars on fuel and delivering cleaner air for everyone.

As we increase the amount of renewable and carbon-free energy on our system, electric vehicle drivers are increasingly plugging in and powering up with cleaner energy. In fact, an electric vehicle powered by Xcel Energy in 2021 was about 55% cleaner than a conventional gasoline-powered vehicle. Based on our plans to further reduce carbon emissions, we expect electric vehicles to be at least 80% cleaner by 2030.



Electric vehicles  
[xcelenergy.com/ev](https://xcelenergy.com/ev)

## Goals for Zero-Carbon Transportation

### Enable One in Five Vehicles in Our Service Areas to be Electric

## 2030

Power one in five vehicles with electricity that has 80% lower carbon emissions (compared to 2005 levels)

Provide programs and infrastructure that deliver affordable EV charging at home, at work and on the go to all customers

Electrify all sedans in Xcel Energy's fleet. Electrify all light-duty trucks and 30% of medium and heavy-duty vehicles by 2030

### Deliver Zero-Carbon Fuel for All Vehicles in Our Service Areas

## 2050

Provide the fueling infrastructure and energy system to run all vehicles on carbon-free electricity or other clean energy

Ensure all customers can access affordable charging within one mile or less of their homes, and underserved communities have opportunities to participate in programs and associated economic benefits

Transition Xcel Energy's entire vehicle fleet to zero carbon

# Driving the Future

To help power the future of clean transportation, Xcel Energy's growing portfolio of electric vehicle programs are designed to make charging at home and on the go easy, fast and more affordable. In addition to home charging, plans include new EV programs and solutions supporting public charging, businesses, multifamily buildings, community charging, transit and electric school buses.

Our plans position Xcel Energy and Colorado as national leaders in accessible, affordable charging options through innovative customer programs and infrastructure.

## The road ahead includes:

- Enhancing the EV Accelerate at Home and Optimize Your Charge programs, which provide charging installation services and incentivize residential customers to charge EVs during off-peak demand hours, respectively.
- Expanding programs to help businesses provide EV charging for employees, renters, fleet vehicles and the public.
- Developing a network of high-speed public EV charging stations in our service territory, making it easier for drivers to charge on the go.
- Helping customers understand the benefits of EVs and their charging options, making it easier to confidently switch to driving an electric vehicle.
- Partnering with cities and municipalities to further expand public charging in Colorado through community charging hubs.
- Ensuring all Xcel Energy customers have equitable access to affordable electric transportation and its benefits.

Enabling **One** in **five** vehicles in the areas we serve to be electric by **2030** delivers significant benefits



**\$1 Billion**

In customer fuel savings annually by 2030



**\$1 or Less Per Gallon**  
(Equivalent)

To drive an EV with Xcel Energy's low, off-peak electricity prices at home



**5 Million Tons of Carbon Emissions**

Eliminated annually by 2030



**Access**

Holistic programs and infrastructure for all customers at home, work and on the go

Note that one in five vehicles being electric by 2030 is the equivalent to at least 1.5 million EVs on the roads in our service areas.

# Reliability & Affordability

Energy runs the economy and powers our customers' lives. We continually invest to improve resiliency and strengthen our infrastructure — the plants, power lines and natural gas system — that serves customers. In everything we do, we work to ensure affordability for our customers as we transition to cleaner energy and provide the reliable service customers count on.

**99.98%** electric reliability, among the top **25%** of energy companies in the nation, with industry-leading storm response

Over **100,000** miles of transmission and distribution lines serve the region reliably

More than **25,000** miles of natural gas lines keep service flowing to customers

Wind energy saved customers **\$3 billion** in fuel costs and tax credits\*

## We work to ensure reliability through

### **A diverse energy mix**

By upgrading technology and diversifying our energy supply, we ensure a reliable mix of resources for managing energy costs and environmental impacts without depending too heavily on any one resource. As we transition away from coal to more renewable energy, clean natural gas is key to ensuring reliability for our customers, as new "always available" carbon-free technologies are developed.

### **Robust distribution and transmission infrastructure**

Through a more dynamic distribution and transmission network, we can improve security, reliability and deliver abundant wind and solar energy to customers. We're also strengthening the resiliency of our systems to respond to the increased threat of storms, wildfires and drought in a changing climate.

### **Grid security**

We work closely with government and industry peers to implement security measures designed to protect our information technology systems, network infrastructure and other assets.

\* Savings companywide between 2017 and 2022

One of Xcel Energy's key priorities is to keep costs low for customers as we work to provide clean, safe, reliable electric and natural gas service. From adding more low-cost renewable energy and securing competitively priced fuel contracts, to making our operations more efficient, we always work to keep customers' bills low.

## Here are just a few ways we work to keep bills low for customers

### **Adding more clean energy**

Adding renewable energy to the grid saves customers money because wind and solar power generate electricity without fuel costs. Xcel Energy's geographic advantages in wind and solar production, along with renewable tax credits and avoided fuels costs, allows us to deliver cleaner energy while also saving customers money.

### **Energy efficiency programs**

We began offering our customers energy-saving solutions decades ago, and today, we provide some of the longest running and most successful efficiency programs in the country, helping customers save energy and money.

### **Managing operating costs**

New technology and process improvements advance the efficiency of our operations, reducing expenses and saving customers money.

### **Building an advanced grid**

Xcel Energy's advanced grid will provide customers over a billion dollars of value through technology that delivers cleaner, safer and more reliable energy. With smart meters and other advanced grid investments, customers will also have greater reliability, faster restoration if there is a power outage and greater opportunities to manage their energy use to save money and integrate greater amounts of distributed energy resources such as EVs, electric appliances, energy storage and distributed generation.

### **Minimizing the impact of natural gas price increases**

A broad range of electricity sources, including wind and solar, helps minimize the effect of natural gas price increases on electric bills. To keep costs down, we purchase a portion of our projected natural gas needs ahead of the winter heating season when prices are lower.



Customer resources and ways to save  
[xcelenergy.com/WaysToSave](https://www.xcelenergy.com/WaysToSave)

# Wind Energy

As a national leader in wind energy, Xcel Energy has steadily expanded its wind portfolio since 2005. We are among the first U.S. energy providers to surpass 10,000 megawatts of wind power on our system.

We completed the nation's largest multi-state wind investment from 2017 to early 2022, adding more than 3,600 megawatts at 14 new company-owned wind farms across seven states, enough clean wind energy to power nearly 1.8 million homes.



Wind energy  
[xcelenergy.com/wind](https://xcelenergy.com/wind)

Colorado customers' electricity generated by wind

2005 = **2%**

2022 = **36%**

2030 = **58%**

Our Clean Energy Plan is estimated to add 2,300 megawatts of new wind energy in Colorado by 2031, delivering economic and environmental benefits for our customers and communities:

**It's affordable**

Wind costs decline as turbine technology continues to improve, and because wind energy has no fuel costs, those savings are passed directly on to customers. Our wind farms saved Colorado customers \$700 million in fuel costs and tax credits between 2017 and 2022.

**It's clean and renewable**

Wind farms require no fuel or water to generate electricity, and there are no carbon dioxide or air emissions from wind turbines.

**It's local**

For rural communities that are home to wind farms, the projects produce new tax revenues that help fund schools and other services. Wind farms also create jobs and new revenue sources for landowners.

# Solar Energy

Solar energy is integral to our plans to reduce carbon emissions by 85% from the electricity we provide in Colorado by 2030. Like wind farms, solar projects lock in long-term savings for customers, since solar has no fuel costs.

We purchase power from large universal solar projects that produce energy for all customers at the lowest cost. Across the states we serve, there are currently more than a dozen projects with enough solar capacity to power about 200,000 homes, and we plan to add more.



The amount of utility-scale solar on our Colorado system will quadruple by 2031.

We will purchase more than 750 megawatts of solar power and 275 megawatts of battery storage under our 2018 Colorado Energy Plan. The following projects are currently underway with targeted completion in 2023:

- Neptune Solar Project in Pueblo County (250 megawatts, plus 125 megawatts of storage)
- Thunder Wolf Solar Project in Pueblo County (200 megawatts, plus 100 megawatts of storage)
- Front Range-Midway Solar Project in El Paso County (100 megawatts, plus 50 megawatts of storage)
- Sun Mountain Solar Project in Pueblo County (200 megawatts)

An additional 1,600 megawatts of solar and 400 megawatts of storage will be added as part of our 2021 Colorado Clean Energy Plan, which will help us achieve our renewable energy goals.



# Colorado's Power Pathway

Transmission is the backbone of the electricity network, with lines and poles moving large amounts of high-voltage power across long distances. We are investing in new "backbone" transmission infrastructure to enable renewable energy development in eastern Colorado, bringing more low-cost electricity to help meet the needs of our growing state.



Colorado's Power Pathway  
ColoradosPowerPathway.com

Colorado's Power Pathway, a \$1.7-\$2 billion investment approved by state regulators in 2022, will add approximately 560 to 650 miles of new transmission line, plus four new and four expanded substations, to deliver carbon-free power to Colorado homes and businesses. The Pathway will:

- Connect 5,000 megawatts of new wind, solar and other resources through 2030.
- Improve the state's electric grid and increase electric reliability.
- Help ensure availability of power during severe weather.
- Deliver clean, low-cost electricity to our customers.
- Create jobs, lease revenue and increased taxes for rural communities.

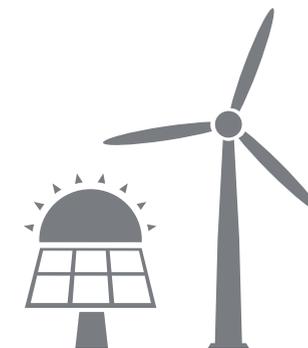
Because Colorado's open transmission system carries electricity generated by Xcel Energy and other utilities and cooperatives around the state, the Pathway benefits everyone in Colorado who uses electricity.

**2016**

**Last major addition or upgrade to backbone transmission in eastern Colorado**



**5,000 megawatts**  
of new wind, solar and other resources



**The energy provided by the Pathway is the equivalent of powering**  
**2.5 million**  
**Colorado homes annually**



# The Future of Clean Energy

Achieving our net-zero emissions commitments by 2050 while continuing to provide reliable and affordable service for customers requires new clean energy technologies that are not yet available at the cost and scale needed.

## Zero-carbon natural gas technologies

Our net-zero natural gas vision will drive technology innovation. Through pilot programs and research studies, we can help build the market for and improve new advanced building technologies such as smart electric water heaters and heat pumps, as well as low-carbon gas alternatives, including hydrogen and renewable natural gas.

Xcel Energy incentivizes Colorado customers to participate in a National Renewable Energy Laboratory study on the real-world effectiveness of cold climate heat pumps at high altitude. Participating customers agree to long-term monitoring of their heat pumps so researchers can analyze and compare the performance to similar equipment in a laboratory environment. The goal is to develop heat pump information for trade partners and customers to use for making buying decisions.

Our focus on innovation and advancing technology also includes direct air capture, where carbon emissions are removed from the environment.

## Zero-carbon “always available” power technologies

As we look beyond 2030 toward eliminating the remaining carbon emissions from the power grid, we need carbon-free technologies that are dispatchable — available anytime or 24/7 — to maintain system reliability while operating high levels of variable wind and solar energy resources.

We're working on the research, development and deployment of advanced technologies with others who share our interests, including through the Low-Carbon Resources Initiative and the Carbon-Free Technology Initiative. In 2022, we established a new business unit to focus on the development of hydrogen and other clean fuels.

**We are evaluating new carbon-free dispatchable technologies as part of our clean energy transition**



**Advanced wind and solar energy systems**



**Long-duration storage**



**Advanced demand efficiency**



**Advanced geothermal**



**Zero-carbon fuels, such as hydrogen and ammonia**



**Advanced nuclear energy, both fission and fusion**



**Carbon capture, utilization and storage**

# Innovative Technology

Rapidly evolving technology is transforming our industry, driving the transition to clean energy and delivering more sophisticated solutions for serving customers. As powerful tools emerge to transform our work, they can also improve productivity, benefitting our customers through better service and products and helping keep energy bills low.

## Advanced Grid

Our Advanced Grid Initiative is an extensive, multi-year project to create a smarter electric distribution grid that provides cleaner, safer, more reliable energy. The \$1.7 billion distribution grid transformation uses industry-leading technology to help us better manage the grid and deliver an improved customer experience through faster outage response and new ways for customers to better manage their energy use.

The initiative enhances our operations through new software, a two-way communications network, new automated field devices and smart meters. Smart meters provide near-real time communication between the customer and Xcel Energy. Smart meters provide new digital tools for customers to better understand and manage their energy use, make smarter energy choices and save money.

## Enhancing the customer experience through our advanced grid



**Improved energy usage insights**



**Increased service reliability**



**New account management options**



**Faster outage response**

## Distributed Intelligence

A smarter energy grid uses new connectivity and data to deliver more insight, control and opportunities to our customers. Through distributed intelligence, information generated by the grid and customers' smart meters can be shared with customer devices, platforms and apps.

Xcel Energy and developers will be able to offer customers new ways to leverage their energy usage information to understand and control their energy use, save money and make the most of clean energy on the system. For example, customers could opt-in to being notified when their heating or cooling system may have an issue that's causing high energy use, or electric vehicle owners could have new ways to plan and track their charging to take advantage of times when renewable energy is most available.

## Drones and robotics

We are a leader in using drones and robotics to improve our operations. Using drones to inspect transmission lines improves the reliability of our service, providing more accurate data safely and at a lower cost than traditional helicopter patrols. Using drones also helps protect the environment, because they often eliminate the need for trucks and helicopters in environmentally sensitive areas.

We also use drones and robotics to inspect other critical infrastructure like wind turbines and power plants to provide an up-close view of where repairs or maintenance may be needed. Drone inspections inside our plants eliminate the need to use a crane, improving safety for our workers and getting the job done more quickly and cost-effectively.

We are committed to developing other uses for drones and robotics, like making repairs to our transmission lines. We are advancing drone technology in collaboration with the Federal Aviation Administration to develop new rules and regulations to protect critical infrastructure.

# Building Stronger Communities

We're committed to the communities we serve, and our employees are deeply engaged — donating money and volunteering time to keep Colorado and our communities strong. We work to power the economy of the states we serve, going beyond the critical services we provide. Xcel Energy provides good jobs for thousands of Coloradans. As one of the largest property taxpayers in the state, dollars flow into the communities we serve, and we've kept customers' electric and natural gas bills below the national average.



Community commitment  
[xcelenergy.com/community](https://xcelenergy.com/community)



Economic development  
[economicdevelopment.xcelenergy.com](https://economicdevelopment.xcelenergy.com)

## Giving back

Colorado employees, retirees, family and friends joined forces at our annual 2022 Day of Service, contributing approximately **6,000 collective volunteer hours** at 64 nonprofit projects across the state. This equates to \$150,000 in economic impact.

We also raised **\$826,000** to support hundreds of nonprofits and United Way chapters during our annual United Way Giving Campaign.

The Xcel Energy Foundation granted **\$1.4 million** to **100** Colorado nonprofit organizations supporting STEM career pathways, environmental sustainability and community vitality.

### A responsible transition to clean energy

As we shift to cleaner sources of energy, we are focused on a just transition — a sustainable economic shift as we retire our remaining Colorado coal plants by 2030. We will continue to transition our coal plants without layoffs, leveraging attrition and supporting our employees with retraining. We also partner with community leaders, state and local government officials, economic development groups and local businesses to foster continued economic growth as coal is phased out.

### Workforce development

We support training the next generation for careers in energy through our membership with the Center for Energy Workforce Development, a non-profit consortium of energy companies, contractors, associations, unions, educators and business partners working together to ensure a skilled, diverse workforce to meet future industry needs. We also attend targeted job fairs and employment events in our communities, partner with state workforce centers and maintain relationships with schools and organizations that hold job fairs specifically for diverse populations and student groups. Through these partnerships, we continuously improve our candidate pool, reduce the need for candidate relocation and support our local economies.

### Diversity, equity and inclusion

We strongly believe in the value of a diverse workforce that reflects the communities and customers we serve. We thoughtfully and intentionally work to create an environment where all employees feel respected, included and empowered to do their best work.



# Innovating for our Customers

Energy plays a vital role in our customers' lives and business operations every single day. That's why we continue to develop innovative solutions with customer needs in mind — to make it easier to save energy and money, while reducing environmental impacts.

The world is changing and so are the needs of our customers. Technological advances have opened up new opportunities, and we never stop looking for ways to help our customers become more efficient and sustainable. We're broadening our services and capabilities to offer more ways to solve our customers' energy challenges. For example, our new, innovative solutions will help business customers take their energy management to the next level by addressing energy waste, carbon emissions, resilience and sustainability, and by automating systems with intelligence to better monitor energy issues and working with them to develop energy action plans that will save money and optimize productivity.



Residential customer programs and services  
[xcelenergy.com/residential](https://xcelenergy.com/residential)



Business customer programs and services  
[xcelenergy.com/business](https://xcelenergy.com/business)

Energy efficiency programs have helped avoid  
**building 25 average-size power plants**  
companywide since 1992



### **Saving energy and money**

Energy efficiency programs help our customers reduce energy use and carbon emissions, and lower costs over the long term. We continually refine our rebates and incentive programs to make energy-saving improvements more affordable for our customers. We have invested more than \$2 billion over the past decade in a portfolio of energy efficiency programs that is among the country's longest running and most successful.

Our rebates and programs can help with equipment and lighting upgrades in homes or businesses of any size. We also offer energy assessment programs and services to help identify savings options. And we work with contractors on new construction and renovation projects to build in energy efficiency from the ground up. We also continue to innovate new demand response products to help lower energy use during peak times, which helps better manage the power grid and keep costs low for customers.

### **Renewable energy**

Although our regular energy mix includes significant renewables, as we move toward reducing carbon emissions 85% by 2030, some customers want to go farther, faster. We are committed to delivering a wide range of renewable energy programs and incentives that support their preferences. These include subscription programs like Renewable\*Connect, Windsource and Solar\*Rewards Community, as well as on-site customer renewable programs like Solar\*Rewards for distributed generation.



# Our Energy Future

Every day, we deliver on our mission to serve customers with safe, reliable and affordable energy. While it's essential to focus on meeting our customers' needs today, our eyes are also on the future as we work with our customers and communities to build a clean energy future for tomorrow.

## Learn More



Our Energy Future



Sustainability Report



Net-zero energy by 2050



Colorado Clean Energy Plan



Electric vehicles



Customer resources and ways to save



Wind energy



Colorado's Power Pathway



Community commitment



Economic development



Residential customer programs and services



Business customer programs and services

