

DRIVE TOWARD A CARBON-FREE FUTURE:

Electric Transportation Vision



TO OUR STAKEHOLDERS,

Xcel Energy continues to lead the clean energy transition for our regions. We are proud to be the only major U.S. energy provider to develop a comprehensive plan for reducing greenhouse gas emissions across three major sectors of the economy: electricity generation, home and building heating, and automotive transportation. As a clean energy leader, it's important to show a path to reduce not only our own company emissions but also those of our customers across all areas of the economy that we touch.

In 2018, Xcel Energy was the first major power provider to announce a 100% carbon-free goal for the electricity we provide. And in August 2020, Xcel Energy announced an aggressive vision to power 1.5 million vehicles in our service areas throughout the eight states we serve by 2030—roughly 30 times the number of electric vehicles on the road in our states today. By the end of the decade, achievement of our vision means roughly 20%—or one in every five cars—in our service territory will be electric. EVs are an attractive transportation option for our customers because they deliver both environmental and economic benefits—two reasons why I purchased an EV two years ago as an early adopter of this technology.

In the United States, the transportation sector is the largest source of carbon emissions. An EV powered with Xcel Energy electricity in 2021 is 58% cleaner than a conventional gas-powered vehicle, and that number will keep getting better as our electricity becomes cleaner and cleaner. In fact, by 2030, based on our electricity generation carbon reduction targets, an EV will be more than 80% cleaner than its internal combustion counterpart. Starting in 2030 and continuing every year thereafter, 5 million tons of carbon emissions will be removed from the transportation sector, delivering lower emissions for everyone, regardless of if they drive electric or not.

Collectively, EV drivers will save billions of dollars by not spending money at the gas pump, avoiding oil changes and other maintenance costs that aren't required for EVs. And EVs lower our customers' average bills by more efficiently utilizing our distribution grid infrastructure—providing even more economic benefit for our customers.

Xcel Energy has various programs in place to help encourage customers to purchase an EV and charge at home. As part of our EV "Accelerate At Home" program, Xcel Energy will help customers install a Level 2 fast charger at their residence. Customers can charge their EVs overnight at off-peak rates for the equivalent of about \$1 per gallon of gasoline. By 2030, over the course of the year, those fuel savings can add up to at least \$1,000 per customer and over \$1 billion annually.



Xcel Energy is also focused on making this transportation electrification journey in an equitable manner for customers at all income levels. We are working with regulators to develop charging infrastructure solutions for single family homes, multifamily homes, retailers and corporations and supporting ride-sharing services, as well as to offer additional support for income-qualified customers. We also have a dedicated team partnering with business customers to help them transition their vehicle fleets to EVs.

Helping our customers charge their EVs at the best time for the power grid is important for maximizing the benefits of EVs. Our programs and rates help customers realize the savings associated with charging overnight when energy costs are lower, and support more complex managed charging strategies for a variety of charging needs. And because our electric load will increase from EV charging, that will help us pay for the system investment needed while helping keep bills affordable for customers—whether they drive an EV or not.

I could not be more excited about the possibilities to help electrify the transportation sector. We will protect the environment and save money for our customers—that's a win-win for everyone.

Bob Frenzel

A handwritten signature in black ink, appearing to read 'Bob Frenzel', with a stylized, cursive script.

President and CEO

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Executive Summary

Setting a bold vision to power 1.5 million electric vehicles by 2030 across the company's eight-state footprint, Xcel Energy solidified its steadfast support for electric transportation and the vast benefits it delivers to our customers and communities. Achievement of this vision means EVs would make up 20% of all vehicles on the road in those areas, more than 30 times the number today, helping save customers billions of dollars in fuel costs, while significantly cutting carbon emissions from transportation—5 million tons in 2030 and each year thereafter. To support this ambitious vision, announced in August of 2020, Xcel Energy is focused on developing and launching industry-leading programs to assist our customers throughout each step of their transportation electrification journey.

Xcel Energy is the connector within and across the EV ecosystem for our customers, building upon and leveraging our infrastructure and clean, affordable energy as well as our role as a trusted energy advisor, helping our customers realize the environmental and economic benefits of electric transportation while providing an easy and excellent experience. In tandem, we are working to integrate EVs with our distribution system and developing rates and managed charging offerings to encourage charging during low-cost time periods. By making connections and investments—with partners, communities and stakeholders we are accelerating the adoption of EVs and enhancing our customers' EV experience.

Many of our efforts to support transportation electrification started to take root in 2015, when we responded to a call from the Minnesota state legislature to offer a time-of-use EV charging rate for our customers. Even in a nascent EV market, we saw high customer interest around saving money by charging at times that are optimal for the power grid. These early efforts encouraged us to continue to test new approaches, first in Minnesota, and soon after, across other states in our service area, all designed to provide broad-based support for a wide range of customers and EV needs. Our Minnesota residential pilot, first approved in 2018, quickly became the first permanent tariffed program in the country in 2020 allowing energy providers to own charging stations in customers' homes; it was also among the first to use charging stations to measure charging usage for billing. In early 2021, the Colorado Public Utilities Commission greenlighted our suite of Colorado transportation electrification offerings that will result in an estimated 20,000 charging ports being deployed in homes (single family and multifamily), workplaces, communities and corridors throughout the state, with most of these programs launching in 2021.

Through these programs as well as those in Minnesota and Wisconsin, and others that will be available to customers in New Mexico in 2022, we are helping customers with education and advisory services, make-ready infrastructure and charging equipment, rebates and managed charging, to name a few of our offerings. As part of our residential customer advisory services, we offer customers EV information, tools and hands-on experiences like EV test drives at community events. And since over 90% of people buy their new car at an auto dealer, we have created a network of EV dealers that offer customers in-showroom tools, information and the option to sign up for our home charging program in the showroom before they drive their EV off the lot. For our commercial customers, we are supporting make-ready infrastructure for a wide variety of needs, including fleet, workplace and public charging, as well as building our own public charging networks. We're helping customers with fleets assess their electrification opportunities and developing community-level plans to meet local and regional community EV goals.



We embrace an emphasis on equity, as the EV transition should be accessible and affordable. This and other guiding principles—such as the importance of maintaining power grid reliability, flexibility and resiliency, and our focus on fostering partnerships to aid technology deployment—shape our EV Vision strategy. Across the areas we serve, innovative customer programs and vital infrastructure are helping to fast-track the electrification transition. As an added benefit, this will lower costs for drivers, public transit riders and shared mobility users, all energy consumers, and society in the form of more efficient use of infrastructure, affordable electricity bills, lower refueling costs and reduced emissions. We also hope to see benefits on a global scale, given that our EV Vision targets are on a parallel trajectory to the transportation sector emissions reductions that science requires to curb some of the most catastrophic effects of climate change. With the transportation sector being the largest source of carbon emissions, our clean, affordable electricity is exactly what is needed to help significantly tackle the challenge. In fact, today an EV powered with Xcel Energy's electricity is 58% cleaner than a conventional car, and by 2030, it will be 84% cleaner given our goal to reduce carbon emissions from electricity.

Public policy has and will continue to play an important role for both fostering the EV market and enabling energy providers to help facilitate transportation electrification. A prime example is how policy is spurring higher adoption in states like Colorado. With a state electric vehicle tax credit and other supportive policies that have earned it a No. 8 ranking nationwide in the American Council for an Energy Efficient Economy's State Transportation Electrification Scorecard,¹ Colorado also has a relatively high statewide light-duty EV adoption rate when compared with other states nationwide. Minnesota has also been ranked highly by ACEEE and has continued to ramp up its policy efforts, most recently becoming the 15th state nationwide—and the first in the Midwest—to adopt a Zero Emission Vehicle (ZEV) requirement for automakers. On a national, regional and local scale, our company is collaborating with customers and industry, public and nonprofit stakeholders to codify complementary policy strategies like these that support transportation electrification.

Introduction

Benefits of Transportation Electrification

The transportation sector now accounts for the greatest proportion of emissions in the U.S.—at 29%²—when compared with the rest of the nation’s economy. Electric vehicles present a compelling opportunity to leverage carbon reduction efforts in the electric power sector to bring emissions reductions to the transportation sector as well. EVs can also help keep energy bills affordable for our customers. The economic benefits delivered by EVs are plentiful and benefit not only EV drivers, but importantly all energy consumers (regardless of whether they drive an EV or not), and society.³ These benefits, as estimated through a cost-benefit analysis of Xcel Energy’s EV Vision, are represented in Figure 1 below.

Figure 1: 1.5 Million EVs by 2030 Powered by Xcel Energy Will Provide Substantial Net Benefits⁴

Enterprise-Wide Net Benefits of **1.5 Million** Electric Vehicles (Billions of Dollars)



Evidence demonstrates that driving an EV translates to **lower costs for drivers**. Affordable electricity prices allow customers to fuel a vehicle for the equivalent of \$1 per gallon or less when charging off peak, conveniently at their homes. Investment by energy providers helps defray the costs of infrastructure borne by customers.

As an added benefit, Xcel Energy’s EV programs will help **keep bills affordable for all customers**. By encouraging charging to occur when the cost of energy is low, Xcel Energy’s offerings minimize the cost to serve new EV load, which helps both EV-driving and non-EV driving electricity customers.

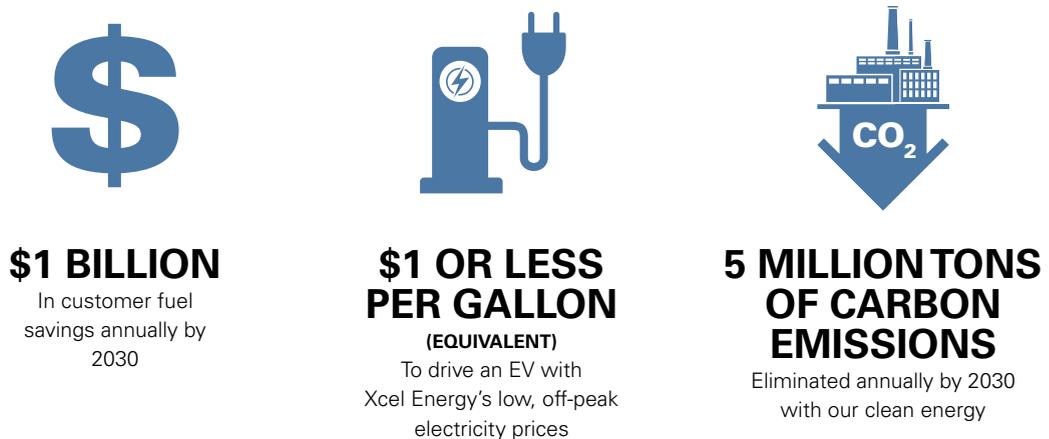
Co-benefits of EVs include **reduced emissions and improved air quality**. Xcel Energy is leading the clean energy transition by providing electricity that is increasingly clean, and we see a potential for EV load to be managed such that more renewable energy can be integrated onto the power grid. An electric vehicle powered by Xcel Energy in 2021 is 58% cleaner than a conventional car, and by 2030, it will be 84% cleaner. As we continue to expand the amount of renewable and carbon-free energy on our system, customers will over time be increasingly charging EVs with even cleaner energy.

Further, more and more research supports the **lifetime environmental benefits of electric vehicles**. Recently a University of Toronto study concluded that at only 20,600 miles the lifetime emissions of an electric vehicle and a comparable gasoline powered vehicle are equal.⁵ Other studies suggest that for larger EVs (small SUVs), lifecycle emissions are even proportionally less—about half in comparison with their fossil-powered counterparts.⁶ These analyses assume the current energy mix of the national electric grid. As Xcel Energy rapidly reduces the emissions intensity of the electricity it provides, this environmental break-even mileage will decrease, making EVs even better for the environment in the future. Additionally, Xcel Energy customers can further reduce that number through participation in one of several renewable energy customer programs.

Our EV Vision

Xcel Energy's **EV Vision** is to power 1.5 million EVs across the areas we serve by 2030. This means that 20% of all vehicles within our footprint would be replaced with electric vehicles by 2030. Through new electric vehicle customer programs, EV charging infrastructure and our energy, we are bringing our long history of clean energy leadership to transportation, developing innovative partnerships with our communities, customers and others. With 30 times more EVs on the road by 2030 than today, we will help cut carbon emissions, lower fuel and maintenance costs for EV drivers, and keep bills affordable for all customers. When announced in August of 2020, we had more than 40 supporters of our vision—ranging from customers, communities, non-profits, elected officials, car manufactures and other businesses throughout the EV ecosystem.⁷

Figure 2: Xcel Energy's EV Vision Will Provide Economic and Environmental Benefits to Customers and Society



Our EV Vision will allow everyone in the communities we serve to experience the benefits of electric transportation and improved air quality. It will reduce carbon emissions from transportation by nearly 5 million tons in 2030 and each year thereafter. Five million tons is equivalent to the carbon removed by 75 million trees.⁸

Meeting the Targets that Climate Science Requires

Reducing emissions from the transportation sector is critical to achieving the emissions reduction commitments the United States has made through the Paris agreement on climate change that limits global temperature increases to well below 2 degrees Celsius and the aspiration of 1.5 degrees Celsius. Our 2030 vision of 1.5 million EVs served, reflecting 20% of the vehicles in our service area being electric by 2030, is on the trajectory of necessary transportation sector emissions reductions per the Intergovernmental Panel on Climate Change Special 1.5-degree Report. In that report, the transportation sector must use low emissions energy for 35%-65% of vehicles globally by 2050 to meet the 1.5 degree target (or 25%-45% to meet the 2-degree target by 2050).⁹

Xcel Energy is a Leader in EV Programs

Xcel Energy has established itself as an industry leader in transportation electrification due to the innovative breadth and design of our diverse programs, all designed to make our customers' transition to electric transportation easier. A strong emphasis on equity, including expanded and enhanced programs for income-qualified customers, is critical to Xcel Energy's approach to make transportation electrification an option for all our customers.

Program Breadth: Meeting the Needs of a Wide Variety of Customers

The Colorado Transportation Electrification Plan (TEP) was, at the time of its approval, the largest utility program plan outside of California and New York. In Minnesota, the company's plan is the largest in the Midwest.¹⁰ Our residential home charging service, EV Accelerate At Home, was the first permanent tariffed program approved in the country allowing energy providers to own charging stations in customers' homes, and was among the first to use charging stations to measure charging usage for billing. In addition, in September 2021, Xcel Energy became the first energy provider to receive approval for a TEP in New Mexico. In Wisconsin, our EV programs are supporting the development of needed charging infrastructure across our large, often rural service area, including the addition of the first private-public direct current fast charger in northwestern Wisconsin. Overall, our portfolio of programs is intended to encourage adoption, maximize the benefits of transportation electrification and minimize the costs, while focusing on supporting charging at homes and in multifamily buildings, facilitating fleet conversions, and increasing access to public charging.

Program Design: Enhancing the Customer Experience and Addressing Barriers to EV Adoption

Focusing on the customer experience and making the transition easier for all our customers is another way we are leading. Our efforts address key customer barriers and facilitate EV adoption in three primary ways, all with a strong emphasis on intuitive solutions:

- (1) improving customer understanding of EV options and the benefits of driving electric, through education and advisory services,
- (2) providing rebates and other programs to lower up-front costs, and
- (3) providing incentives to charge at the best times for the power grid, which lowers costs for EV drivers and all customers through optimizing the time at which EV charging occurs.

All our programs are designed to simplify the transition—such as our EV Accelerate At Home program which is a one-stop, digital experience to have a Level 2 charger installed and maintained in a customer's garage for a low monthly fee, or other programs that support public charging options with infrastructure and charger rebates. We also have an innovative portfolio approach to "Partnership, Research and Innovation" projects that helps us address emerging issues with the aim to increase and broaden access to electricity as a transportation fuel, minimize system costs, increase benefits of electric transportation, and inform future EV programs. The table below provides a summary of Xcel Energy's currently approved or proposed EV programs across its service areas.

Table 1: Summary of Xcel Energy EV Programs¹¹

Category (click on links for more information)	Information & Advice¹²	Lowering Upfront Costs¹³	Charging Optimization¹⁴
Residential, including multifamily			
Commercial & Industrial, including fleets and workplace charging			
Public Charging, including corridors			

Facilitating Access for Everyone

Xcel Energy has prioritized access to the benefits of transportation electrification in the design of our EV programs. Case studies in Colorado and Minnesota exemplify this commitment.

Colorado Transportation Electrification Plan

In Colorado, the company's TEP highlights our commitment to a future where transportation electrification is widespread, and all of our customers have better access to affordable vehicles and charging solutions. This is important to our communities, customers and many others—and it is important to us. So, we are directing at least 15% of the \$110 million Colorado TEP budget toward supporting income-qualified¹⁵ customers and communities, in addition to customers in higher emissions communities (HECs). The company's Colorado residential, multifamily and commercial portfolios offer enhanced rebates to customers and communities that meet certain criteria that identify them as an underserved population. For more information on specific Colorado rebate programs offering enhanced support to either income-qualified customers or customers in HECs, please reference **Appendix A**.

Minnesota: Community Mobility Hubs

Xcel Energy is also prioritizing equity through an innovative community mobility hub program in Minnesota. We are partnering with the cities of Saint Paul and Minneapolis to use our Public Charging Pilot to support installation of community mobility hubs for the Twin Cities EV Spot Network, for which the cities have selected HOURCAR®, a Minnesota nonprofit car-sharing organization, as the anchor tenant. The cities have obtained Federal Congestion Mitigation Air Quality funds to purchase vehicles, chargers and operating services for this new mobility service. Xcel Energy is providing the make-ready infrastructure at these community mobility hub locations. These charging hubs, which will provide 70 charging ports at locations in Minneapolis and Saint Paul, may be utilized by car-sharing services, transportation network companies and the public, including customers who do not have EV charging capabilities at home.

Policy Priorities

Overview

Research suggests that there are a number of barriers impeding EV adoption. They include the following: low customer awareness and familiarity, high upfront costs, limited model availability, and limited access to charging infrastructure. While customers are becoming more and more aware of EVs, there is still a lack of depth in their knowledge that some cite as a barrier to purchasing an electric car.¹⁶ About 60% of Americans surveyed would purchase an EV if it cost the same as a conventional car.¹⁷ Many customers see access to charging as a barrier;¹⁸ however, increasing charging availability can drive adoption. For example, research has shown that an increase in the number of public charging stations can lead to a notable increase in EV adoption.¹⁹ These barriers can all be addressed through a combination of technology innovations, policy and customer programs.

Through our programs, Xcel Energy is bridging the gap to help all customers overcome barriers to vehicle electrification associated with lack of information and awareness, upfront costs and suboptimal incentives to charge when costs are the lowest. In a complementary fashion, the right policies in our cities, states and federally can make EVs more affordable for drivers and businesses, expand charging infrastructure and affordable equipment, and ensure everyone has access to the benefits of this transition.

Guiding Principles

To support the electrification of 1.5 million vehicles across our states and help guide our areas of focus, we use a number of guiding principles that exemplify Xcel Energy's values. We use the following categories of guiding principles in discussions with various stakeholders, which also helped shape the principles, as we work to achieve our ambitious EV Vision.

Affordability & Equity: Xcel Energy is committed to affordable electricity, and our support for electrified transportation is consistent with that objective. By accelerating electric vehicle adoption, developing innovative customer programs, making infrastructure investments, and managing charging in ways that are beneficial to the power grid, this clean and electrified mobility transition is making the power grid more affordable for all customers. Our programs are also deliberate in supporting an equitable transition to electric transportation including access to the benefits from cost savings and air quality improvements.

Reliability, Flexibility & Resiliency: Xcel Energy is responsible for ensuring the power grid can support the transition to electric mobility. This transition is happening now, and with increasing speed and scale. We must be active participants in the integration of electric vehicles to provide planning certainty for the power grid. Key aspects of planning for electrification include load management and ensuring that we have flexible load tools. As we gain insight into new end-uses for electricity, like electric transportation, we can more effectively match variable renewable generation with electricity needs in real time. We also need to have the right programs and price signals in place related to rate design to encourage charging to occur at the best times for the power grid. The transition to electric mobility also presents new options for grid resiliency when considering that vehicle batteries, taken together at scale, can become valuable energy storage assets for renewable and carbon-free energy sources.

Technology and Partnerships: We cannot achieve our EV Vision without new technology development and deployment—innovation that will happen outside of our sector. Support from strategic partners, both in funding and process, can make the electric transportation transition occur faster. Our robust stakeholder engagement process that supports our transportation program development helps foster these partnership relationships.

Supportive Policy: Finally, we need supportive policies for electric mobility. Our customers are driving the transition, and we need policies that help us work together to achieve mutual goals in timely, cost-effective, equitable, and innovative ways. A major focus for us is around access—the power grid needs to be ready for key infrastructure aspects, like charging. We need to provide the right customer assistance, through purchasing advice and customer programs.

Current Policy Landscape

Federal Policy: Strong Support Will Accelerate the Transition

Increasing support for a bold, ambitious approach to clean energy and clean transportation policy in the United States has set the stage for increased EV adoption. The automobile industry has reacted positively to the call from political leaders globally, and at all levels of government in the United States, to help reduce transportation sector emissions, with many automakers announcing commitments to transition their production to fully or majority electric models over the next decade to 15 years, including the necessary and substantial investment commitments.

Continued executive and Congressional support for market-enabling EV policies such as vehicle purchase rebates and tax credits for light-, medium- and heavy-duty vehicles and charging infrastructure, as well as advanced manufacturing, can enable consumer choice, spur market adoption and help Xcel Energy reach its 1.5 million EV Vision. Expanding the availability of consumer incentives where possible, such as for used EVs, will further reduce costs and increase access to EVs for Americans at all income levels, also widening the reach of related environmental and health benefits.²⁰ Concurrently, federal grant programs that provide funding to state and local jurisdictions to support transportation electrification can provide new sources of investment. This will create additional public-private partnership opportunities to test new EV technology deployment and aid the build-out of charging infrastructure in lesser-served areas.

Public policy has and will continue to play an important role for both fostering the EV market and enabling energy providers to facilitate transportation electrification. A prime example is how supportive policy has been correlated with higher adoption in states like Colorado. As of 2021, ACEEE ranked Colorado No. 5 in the nation for transportation electrification outcomes, including a high score on light-duty vehicle adoption. State leadership in transportation electrification is key to unlocking the benefits of our ambitious EV goals. We appreciate the leadership of the state agencies and policymakers in addressing critical questions around transportation electrification, and we value the engagement of the wide variety of stakeholders who participate in the policymaking process.

Industry Engagement and Partnerships

Engagement with stakeholders is critical to understanding and successfully meeting our customers' needs through EV programs. This collaboration is equally essential to informing the policy needed to realize and maximize the benefits of transportation electrification. We are working to be the connector both within and across the EV ecosystem, and our engagement with a wide variety of stakeholders, including our customers, communities and others in the EV industry, is needed to reach our ambitious goals.

The support of effective research partners and member organizations strengthens our engagement as we continue to advance transportation electrification goals through policy and technology development. We partner with various organizations that support electric vehicle technology and policy development. Some of our key organizational partners include:

Research Partners

[Electric Power Research Institute](#)

EPRI's research portfolio offers collaborative projects, customized research opportunities, thought leadership, and innovation to help energy companies simultaneously reduce carbon in the energy sector while maintaining a resilient, reliable and affordable power system on which society depends. Xcel Energy and EPRI work together to understand the EV market transformation, the time-sensitive nature and greenhouse gas reduction potential, and the unique challenges, considerations and opportunities EVs create for energy providers. EPRI's leadership, industry expertise and the collaborative research projects underway are providing a hands-on opportunity to grow, innovate and learn together as the transition to EVs continues.

[National Renewable Energy Laboratory](#)

NREL specializes in the research and development of clean energy, energy efficiency, energy systems integration and sustainable transportation technologies. Funded by the U.S. Department of Energy, NREL works closely with more than 900 global partners including industry, universities, foundations and governments to solve market-relevant problems that result in deployable solutions. Across two campuses, NREL has more than \$1 billion in assets of physical testing space and advanced supercomputing capabilities. This includes some of the world's most advanced electric transportation ecosystem charging, clean generation, electric grid and grid integration research capabilities. Xcel Energy and NREL work together on some of the most pioneering aspects of carbon reduction and electric transportation. These joint initiatives include co-developing fleet electrification methods, conducting an EV technology innovation and research study, and investigating utility and commercial building carbon reduction at scale.

Membership Organizations

[Alliance for Transportation Electrification](#)

The Alliance for Transportation Electrification is a broad and diverse coalition of organizations that advocate for an acceleration of transportation electrification in all states across the country. It brings together electricity providers (both those that are investor owned and regulated by utilities commissions and those that are consumer owned), auto original equipment manufacturers and bus manufacturers, EV Supply Equipment companies, and various other committed organizations.

[Edison Electric Institute](#)

Xcel Energy is a member of the Edison Electric Institute, the trade association representing all U.S. investor-owned electric companies. Through EEI, we share information and advocate for constructive policies relating to electric vehicles in various ways, including by participating in the CEO Task Force on Electric Transportation.

Midcontinent Transportation Electrification Collaborative

The Midcontinent Transportation Electrification Collaborative is a diverse coalition working to speed the adoption of electric vehicles in the Midcontinent region. Facilitated by the Great Plains Institute, MTEC consists of automakers, electricity providers and cooperatives, electric vehicle charging companies, environmental groups and state officials from the region. MTEC works to conduct analysis and make recommendations to support transportation electrification in the region, sharing information to support investments and policies that can accelerate EV adoption.

Zero Emissions Transportation Association

Zero Emissions Transportation Association is the first industry-backed coalition of its kind advocating for the full adoption of electric vehicles. ZETA's members include other energy providers in addition to auto manufacturers, charging and other technology providers. ZETA focuses its policy advocacy on federal initiatives that will accelerate EV adoption and support jobs, secure American global EV manufacturing leadership, dramatically improve public health and significantly reduce carbon emissions.

Conclusion

Over the past decade, U.S. EV adoption increased from nearly 4,000 to 1.139 million,³⁰ and this growth was driven by technology, customer interest, unique partnerships, support from energy providers and policy. Achieving 1.5 million vehicles in our service area will require even more technological innovations and continued policy support, and solutions from energy providers for supporting customers will play an important role. We are working with partners to achieve our EV Vision and bring its many benefits to EV drivers, all our customers, and society. An industry leader in transportation electrification, our broad range of innovative, customer-focused programs are making the transition to EVs affordable, easy and accessible. Further support from policymakers, both nationwide and in the states where we serve, will spur the EV market and complement our efforts. We look forward to continuing to work alongside a diverse range of stakeholders, including nation-leading research partners and industry membership organizations, to make transportation electrification an option for all our customers. Alongside our clean energy leadership, these efforts will bring health and environmental co-benefits to drivers, all our customers, and society, helping the United States meet the climate targets that science requires.

Appendix A

Summary of Rebates for Income-Qualified Populations and/or Higher Emissions Communities as Approved in the 2021-2023 Colorado Transportation Electrification Plan (TEP)	
Program Description	Rebate Amount
Residential Income-Qualified Rebate for Wiring and Charging	\$1,300
EV Purchase and Lease Rebate for New/Used EVs (MSRP cap of \$50,000)	New EV: \$5,500 Used EV: \$3,000
Multifamily (MFH) Income-Qualified Community or HEC Rebate	\$2,200 per port
MFH—Income-Qualified New Construction Rebate for Incremental Chargers Installed Above Code Requirements	\$2,000 per port
Commercial Fleet and Workplace Charging—Income-Qualified Rebate	\$2,200/Level 2 Port or \$45,000/DCFC Port
Community Charging Hubs—Income-Qualified Rebate	Up to \$8,800 for four L2s and up to \$31,200 for DCFC
Small Commercial Business Charger—Income-Qualified Rebate	Up to \$7,500 of EVSI Costs and \$2,000 per port (up to 3 ports)

Notes

- 1 Howard, Bryan et. al., "ACEEE 2021 Transportation Electrification Scorecard." American Council for an Energy-Efficient Economy, (February 2021), 10. <https://www.aceee.org/research-report/t2101>.
- 2 United States Environmental Protection Agency. "Sources of Greenhouse Gas Emissions." United States Environmental Protection Agency. Accessed October 25, 2021. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>.
- 3 Xcel Energy has submitted regulatory filings in Colorado, New Mexico, and Minnesota highlighting these benefits. See Minnesota Docket No. E002/M-20-745, Colorado 20a-0204e, and New Mexico 20-00150-UT.
- 4 Based on an analysis conducted in 2020 by Energy + Environmental Economics (E3) of the costs and benefits of reaching the 1.5 million EV goal over vehicle lifetime. Benefits to customers take into account cost assumptions regarding system investment needed to accommodate 1.5 million EVs and forecasted revenue associated with EV charging on our system. Benefits to society include fuel savings, lower vehicle maintenance costs and carbon emissions reductions.
- 5 Gold, Russell et. al., "Are Electric Cars Really Better for the Environment?" The Wall Street Journal. Published March 22, 2021. <https://www.wsj.com/graphics/are-electric-cars-really-better-for-the-environment/>.
- 6 U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, Vehicle Technologies Office, "FOTW #1208, Oct 18, 2021: Life Cycle Greenhouse Gas Emissions for a 2020 Electric Small SUV Were Half Those of a Conventional Gasoline Small SUV." Office of Energy Efficiency & Renewable Energy. October 18, 2021. <https://www.energy.gov/eere/vehicles/articles/fotw-1208-oct-18-2021-life-cycle-greenhouse-gas-emissions-2020-electric>.
- 7 For a full list of supporters and quotes, see <https://stories.xcelenergy.com/Other/DrivingTogether>.
- 8 See the U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator. Accessed October 28, 2021. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.
- 9 Masson-Delmotte, V. et al. (eds.), "Summary for Policymakers." *Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* (Geneva: World Meteorological Organization, 2018), C.2.4. <https://www.ipcc.ch/sr15/chapter/spm/>.
- 10 Atlas Public Policy, "Electric Utility Filings: Sum of Transportation Electrification Investments." Atlas EV Hub. Accessed October 21, 2021. <https://www.atlasevhub.com/materials/electric-utility-filings/>.
- 11 More detail on EV programs is available at <https://ev.xcelenergy.com>, including which offerings are available in what states.
- 12 Includes both mass market and customer-specific advisory services and community-planning.
- 13 Includes rebates, make-ready infrastructure and chargers.
- 14 Includes both static and dynamic charging optimization programs, time-varying rates and subscription services.
- 15 There are many criteria being used to define "income qualified" for purposes of eligibility for these programs, but the most inclusive category is generally an individual or family that has an annual income of less than 80% of their area median. For example, in 2021 in Denver, an individual making about \$54,000 or less or a family of four making about \$78,000 or less per year could qualify.

- 16 In one consumer survey, when asked about their knowledge of EVs, 68% of respondents said they had heard of EVs but were still fairly unfamiliar with them. Separately, nearly one-third of respondents cited their lack of EV knowledge as a purchasing barrier. See Consumer Reports Survey Research Department, "Electric Vehicles and Fuel Economy: A Nationally Representative Multi-Mode Survey," Consumer Reports, (December 2020), 3-5. https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Electric_Vehicles_Fuel_Economy_National_August_2020.
- 17 Bastin, Zach et. al., "International Electric-Vehicle Consumer Survey: Are battery electric vehicles here to stay?" AlixPartners, (October 2019), 5. <https://www.alixpartners.com/media/13453/ap-electric-vehicle-consumer-study-2019.pdf>.
- 18 Bastin, "International Electric-Vehicle Consumer Survey," 3.
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- 21 Colorado Energy Office, "Colorado EV Plan 2020." Colorado Energy Office. Accessed October 25, 2021. <https://energyoffice.colorado.gov/zero-emission-vehicles/colorado-ev-plan-2020>.
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- 23 Howard, "ACEEE 2021 Transportation Electrification Scorecard," 10-11.
- 24 For more information, see Colorado SB 19-077, C.R.S. § 40-5-107.
- 25 Howard, "ACEEE 2021 Transportation Electrification Scorecard," 11.
- 26 The Minnesota Pollution Control Agency (MPCA) adopted the Clean Cars Minnesota rule on July 26, 2021.
- 27 See pp. 10-14 of Minnesota Public Utilities Commission, "Order Making Findings and Requiring Filings," Minnesota Public Utilities Commission, Docket No. E-999/CI-17-879. Dated February 1, 2019. See also page 8 of Minnesota Public Utilities Commission, "Order Accepting 2020 Transportation Electrification Plans, Adopting Additional Informational Requirements, and Establishing Biennial Filing Requirement," Minnesota Public Utilities Commission, Docket No. E-999/CI-17-879. Dated April 16, 2021.
- 28 This visualization is sourced from data in the ACEEE 2021 Transportation Electrification Scorecard as reported in "Table A7: Scores for transportation electrification outcomes for all 50 states and the District of Columbia," "LD EVs per 100,000 people" column, with additional detail to illustrate the states in which Xcel Energy serves electric customers. Please see Howard, "ACEEE 2021 Transportation Electrification Scorecard," 85.
- 29 Howard, "ACEEE 2021 Transportation Electrification Scorecard," 27.
- 30 See the International Energy Agency (IEA) Global EV Data Explorer for 2010-2020. <https://www.iea.org/articles/global-ev-data-explorer>.

