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Additional questions? Please email us at RepoweringTransportation@xcelenergy.com .

Vehicles

1. **How does Xcel Energy support electric vehicles?**
   Xcel Energy is pleased to provide electric vehicle drivers with access to safe, clean, reliable energy services at a competitive price for homes, businesses, and now for electric vehicles. More specifically, Xcel Energy is planning for the increased adoption of electric vehicles when it comes to customer solutions, market policies, and managing the electric system. Xcel Energy EV experts are happy to answer most of your electric vehicle questions at RepoweringTransportation@XcelEnergy.com. Additionally, to help support the development of the market members of the Xcel Energy Repowering Transportation team are actively involved with local collaborative organizations like Drive Electric Minnesota and Colorado Electric Vehicle Coalition. When it comes to continuing Xcel Energy's operational excellence with reliable and affordable energy, studies have suggested that for the foreseeable future there is no need to build more power plants to meet the needs of electric vehicles. Still the Company is continuously researching and trialing new technologies to make the most of the opportunities from electric transportation.

   For even more information, you might be interested in the Electric Vehicle Charging Pilot (2014), Assessment of leading electric vehicle promotion activities in United States cities (2015), Drive Electric Minnesota, and Refuel Colorado.

2. **How does a plug-in electric vehicle work?**
   A plug-in electric vehicle is a vehicle that can be plugged into an electrical outlet or charging device to recharge its battery. There are two types: battery electric vehicles, which run only on electricity, and plug-in hybrids, which run mainly or solely on electricity until the batteries are depleted and then are powered by an internal combustion engine.

3. **How does paying for kilowatt-hours compare to buying gasoline?**
   The U.S. Energy Department has created a website to determine an eGallon, or the cost of fueling a vehicle with electricity compared to a similar vehicle that runs on gasoline. In Xcel Energy territories the standard cost of electricity for driving is about $1 per gasoline gallon equivalent, but vehicles charged on Xcel Energy's off-peak rates can be refueled for less than $0.75 per gallon equivalent.

   EVs are nearly three times as energy efficient as gasoline vehicles. According to the Environmental Protection Agency, EVs will travel roughly three miles per kilowatt-hour. This means driving an EV is like getting $0.75/gal gasoline in a 25 MPG vehicle.

   Xcel Energy's Rate Advisor can help narrow down your rate options for your home and electric vehicle.

4. **How much electricity does an electric vehicle use?**
   Like a conventional vehicle, MPG and total gasoline use varies with the vehicle and driving habits. However, generally speaking, an electric vehicle efficiently drives about 3 miles on 1 kWh. A "typical" EV driver that travels about 10,800 miles a year would use about 300 kWh per month.

Charging

5. **How do I charge an EV?**
   Charging and fueling electric vehicles is different than using gasoline, but it is still easy and achievable.
   - Almost all EV drivers get a mobile charging adapter that plugs in to a common 120 V outlet. Others may choose to install fixed charging equipment at their home or work.
   - Most electric vehicle drivers are charged at home; convenience is a key advantage to electric vehicles. The workplace is the second most popular place to charge.

   Most EV drivers purchase a mobile cord-set that stays with the car to plug in anywhere (but mostly at home). With

the cord-set, EVs can be charged with a conventional household outlet which can work nicely for people with a roundtrip commute of less than 50 miles per day. A faster charge can be obtained by upgrading your home to a 240 V Level 2 charging station. Talk to your car dealer for details regarding charging needs for your specific vehicle. Consult with a qualified electrician regarding any upgrades to your electric equipment. Contact Xcel Energy if you are seeking to install any chargers with electric demand of more than 5 kW.

6. **How long does it take to charge?**
The true answer is: It depends. But, this table provides a general summary of charging options.

Charging Type	**Level I & Mobile Adapters**	**Level II**	**Fast Charging**
Charging Time	6–16 hours	4–8 hours	.5–4 hours
Charging Rate	2–5 miles of range per hour	10–20 miles of range per hour	50–200 miles of range per hour
Installation	120 V Outlet (Common outlet for most use)	240 V Outlet (Like an electric clothes dryer)	Dedicated wiring and breaker is required
Power Demand	Up to 3.3 kW	Up to 7.2 kW	20 kW to 175 kW

7. **What is the difference between Level 1 and Level 2 charging?**
Level 1 charging would be accomplished by simply plugging the 120 V cord-set that comes with most new plug-in vehicles directly into the outlet in your garage. Provided that you don't have another appliance plugged into this circuit (like a refrigerator), this can be a very effective and economical way to keep your vehicle charged. Level 1 charging can add approximately five miles of range per hour of charge – or roughly 60 miles of recharge each night. No separate charging station is required and it avoids the expense of a dedicated 240 V circuit.

Level 2 charging requires a dedicated 240 V circuit and Level 2 Electric Vehicle Supply Equipment (EVSE). Charging at Level 2 can add roughly 12 to 25 miles of range per hour (or higher depending on the car). While the faster recharge time may be more desirable, in some instances, a panel upgrade (from a local electrician) and service upgrade (from Xcel Energy) may be required. Please consult a licensed electrician to determine if your existing panel can accommodate Level 2 EVSE.

8. **Who do I contact to set up a charging station for my car?**
Work with your electrical contractor to evaluate your home's wiring, electrical outlets and other hardware that can support the charging requirements of your new electric vehicle. Contact Xcel Energy if you have any questions about fast charging, metering, and rate options.

Please Note: Xcel Energy can only perform work outside the home at your meter/electrical panel location to enable the necessary utility service to the house.

9. **What does it cost to get plug-in ready?**
Total cost varies depending on current electrical design, local code requirements, the rate and charging options you choose and other factors. Potential costs include the following:

Charging equipment installation: This cost can be provided by your licensed electrical contractor.

Second electrical meter installation: You'll need to budget for the installation of a second electrical meter and service panel if you decide to switch to Xcel Energy's EV pricing plan. This allows your home's electric load to be

measured on the existing meter while a second meter and dedicated breaker is used to measure your electric vehicle's energy usage. There is no up-front cost for the meter. But there is likely a cost for an electrician to install the equipment to house the meter.

Electrical panel upgrade: This applies to customers who choose the faster charging Level 2 option, which uses 208 to 240 volts. This adds significant load to your electrical panel, resulting in an electrical panel upgrade. The upgrade cost can be provided by a licensed electrical contractor.

Utility service upgrade: A service upgrade may be required for residential chargers above 5 kW. Furthermore, your home may require utility electrical system upgrades in order to charge the vehicle and/or accommodate a second meter. This cost can be determined by Xcel Energy after an assessment.

Rocky Mountain Institute's Pulling Back the Veil on EV Charging Station Costs provides more information about charging costs at different locations

10. **How do I charge my electric vehicle when I'm not at home? Where else can I charge it?**
If your vehicle is capable of charging at 120 volts, you will be able to plug your vehicle into any standard outlet for charging while away from home (assuming you can get permission to plug your vehicle from the outlet owner).

    Plug-in hybrid electric vehicles have gasoline engines, so you can always buy gasoline as you ordinarily do to extend the range of your vehicle.

    With battery electric vehicles, to avoid inconveniences you will want to fully charge your vehicle before you leave home, especially if the round trip you are taking is close to the range of the vehicle. If the trip is longer than the range of the vehicle you will need to plan where you will be able to recharge your vehicle. PlugShare has a free, interactive map of public charging stations across the country.

11. **Are electric vehicles going to cause grid stability issues?**
It is not anticipated that electric vehicles will cause a need for new generation in the foreseeable future. Similarly, there aren't likely to be regional issues due to electric vehicles. But, there may be issues at the local level if a handful of neighbors all charge their electric vehicles during distribution peak times with high demand chargers. Xcel Energy is evaluating these situations in order to continue to provide safe, reliable service.

12. **What rate options do I have for charging my electric vehicle?**
There are three rate options for charging your electric vehicle. You may charge on the Flat Rate, the Time of Use Rate, or the EV Rate. On the Flat Rate, your energy usage is billed at the standard price offered to all Xcel Energy customers, which is a good option if you prefer to charge your EV mid-day. On the Time of Use Rate, your entire home's energy usage, including your EV, pays less during off-peak hours and more during on-peak hours, a good option if you are able to shift your home usage to off-peak times. The EV Rate applies only to your electric vehicle, and offers a low off-peak rate for electric vehicle charging only.

13. **What is the DOE Work Place Charging Challenge?**
The U.S. Department of Energy's Workplace Charging Challenge began in early 2013 and according to the DOE, has about 150 (businesses/universities/organizations) partners. They're working within their communities to accelerate the development of worksite PEV charging infrastructure, while supporting cleaner, more convenient transportation options.

    Please view the DOE's Progress Update and Xcel Energy's partner page for more information.

EV Rate General Information

14. **What charging equipment can I install for the EV Rate?**

EV chargers that use 120 V, 240 V or 208 V (network) are all allowed. Available voltage will be dependent on existing distribution facilities in the area. Please let us know what kind of charger so we may plan accordingly, particularly if the charger has a demand of more than 5 kW.

15. **How much will I save on the rate? How much will it cost?**
    On any Xcel Energy rate, customers save by driving with electricity as opposed to gasoline. Even with current low gas prices, electricity provides a significant financial advantage over gasoline. As mentioned above the cost per gasoline gallon equivalent is about $1 for standard rates and $0.75 cents for off-peak rates.

    Using those assumptions, a driver that travels about 10,800 miles per year could spend about $864 at $2 per gallon with a vehicle getting 25 MPG. An electric vehicle traveling the same annual mileage with comparable 3 miles per kWh efficiency could pay $324 to 432 per year, a savings of more than half.

16. **Which rate should I enroll in?**
    It depends on your preferences and energy use patterns. Use the rate advisor at Xcelenergy.com/RateAdvisor to narrow down your options. You may also call Xcel Energy at **1-800-895-4999** so we can help you confirm which rate plan will work best for you.

17. **How is the EV Rate different from the existing Time of Use Rate?**
    Our EV Rate and our Time-of-Day Rate share the same on- and off-peak schedule from 9 a.m. to 9 p.m. on-peak and vice versa. However, the Time-of-Day rate is a "whole-house" rate, while the EV rate utilizes a separate meter in addition to the house meter. (At $4.95, the additional cost of the EV Rate meter is about have that of the Time of Day or Standard Rate "whole-house" meters). Assuming typical monthly EV usage of about 300kWh the monthly savings from off-peak charging would be about $8.60.

18. **How does enrollment in the Windsource program ensure I am driving with renewable energy?**
    Renewable Energy Credits are retired on your behalf, as part of the Windsource program. This ensures that the energy used to drive your car if off-set by renewable energy that is not accounted for in any compliance, programs or other areas.

19. **I live in an apartment with an attached garage for all cars. Can I subscribe to the EV Rate?**
    Multi-family structures have many different arrangements. Talk to your HOA to determine their policies and whether the meter should be on their service or the resident's service.

EV Rate Enrollment and Application Process

20. **What is the process for enrolling?**
    1. Call Xcel Energy at 1-800-895-4999 so we can help determine which rate plan will work best.
    2. If a fast charger is being installed, contact builders.call.line@xcelenergy.com to check the load increase.
    3. Contact an electrician for an estimate on the meter housing equipment installation, and share the contractor brochure with him or her.
    4. When the meter housing is installed, inspected and energized, visit xcelenergy.com/EVRates and complete the application form.
    5. Send the completed inspection document to builders.call.line@xcelenergy.com.
    6. We'll visit your home and install an off-peak meter next to the existing meter.
    7. Once the meter is installed you can start charging and saving.

21. **How long must I be on the rate? What if I want to change rates?**
    You must be on the EV Rate for a minimum of one year. Keep in mind there is some initial cost associated with the equipment for the rate.

22. **What information do you need for my application?**

- Contact information: First and Last Name, Address, City, State, Zip, Email
- Account Number (Find this by logging in to MyAccount)
- Project information: Meter location (Pictures of serial numbers of car, charger or meter)
- Vehicle information: Electric Vehicle Charging Type, Electric Vehicle Model, Electric Vehicle Year, Electrician Used
- Miscellaneous: Marketing Source, Bumper Sticker, Meter Stocker Installation Acknowledgement, Terms & Conditions Acknowledgement

23. **Can I use the additional meter for electricity other than charging the electric vehicle?**
No. This rate is intended for electric vehicles only. You might consider the Time of Use Rate if you seek financial benefits from using other household appliances during off-peak hours.

24. **Can I submit an application before I install the meter socket and other associated wiring?**
Please install the meter socket prior to applying.

25. **How long does it take before I can start charging off-peak?**
As long as the associated equipment passed an inspection prior to the arrival Xcel Energy's Field Metering representatives, it should take less than 15 business days.

EV Rate Billing and Metering

26. **Why is there a service & facility charge on my Xcel Energy bill?**
This cost is associated with the metering hardware, plus administrative systems for providing electricity to the separate meter.

27. **Why is parallel metering set up required? Why can't I set up a sub-meter?**
Separate, parallel meters are considered an industry best practice and they're what we require for all additional services – including this new Minnesota EV Rate. As you can probably guess homes and their electrical systems vary, so we expect customer costs associated with this metering configuration will vary as well. Preliminary conversations with electricians have suggested estimates between $500 and $1,500.

28. **Can I participate in Saver's Switch if I am on the EV Rate?**
Yes, you can participate in Saver's Switch on your house meter. But, because the EV meter is used only for charging your car, there isn't an opportunity to save energy on that meter.

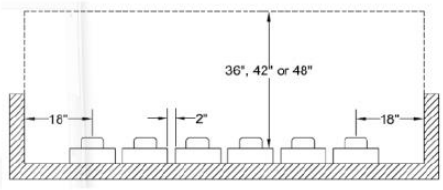
29. **Can I participate in Solar*Rewards if I am on the EV Rate?**
Yes, you can participate in Solar*Rewards on your house meter, however your EV meter will not be connected to the solar photovoltaic system.

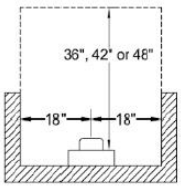
30. **I don't understand my bill. Is there anything that can help me?**
Yes, please review the Metering & Billing FAQs. This guide will explain your EV Rate bill.

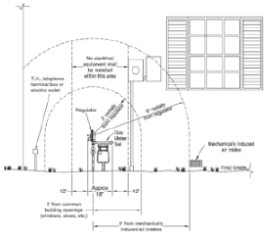
31. **How do I get billed for electricity if I plug in at home, work, a public charging station or a friend's house? What if a friend charges his/her vehicle at my house?**
Electricity used when charging an electric vehicle at home will appear as a charge in the customer's normal monthly utility bill. When charging at a friend's house, that electricity usage will appear on the friend's bill. We anticipate that billing systems for vehicle charging outside the home will evolve over time in ways similar to how customers today pay for gasoline. If your place of employment has a charging station, ask your employer how the electricity from the charger is billed.

32. **Where do I install the meter socket and service box?**

The second meter socket must be installed outside and grouped by the existing meter socket at a vertical height of 4’ to 6’ measured from final grade to center of the meter. The minimum horizontal dimensions of the platform shall meet the National Electrical Code® requirements for working space as specified under Meter Clearances in the Standards for Electrical Installation & Use manual. Additionally, clearances around the gas meter should be met. See the following diagrams and Drawing CR-10 in the Standard for Electric Installation and Use Book for reference.







1) Area within dashed lines shall be clear of all obstructions.
2) 18" clearance shall be maintained to either side of the center line of the meter socket per NEC.
3) 36", 42" or 48" clearance shall be maintained in front of meter socket per NEC.
4) Height of working clearance shall be per NEC.

33. **Does it have to be a duplex meter socket?**
No. For new construction, a duplex meter socket may be a good option. But, it is not required on an existing premise. If two separate sockets are being used, they should be next to each other with the two masts for an overhead service as close to each other as possible. The second meter socket should be vertically aligned, (from the center point) with the existing socket and within 24” horizontally, from the main house meter.

34. **Is a lever bypass meter socket required?**
Yes. The meter socket for the EV must be a lever bypass from a manufacturer on our approved list. It must also conform to all other standards as depicted in section 4.13 from our Standard for Electrical Installation and Use.

35. **What voltage charging equipment can I install on the EV rate?**
EV chargers that use 120 V, 240 V or 208 V (network) are all allowed. Available voltage will be dependent on existing distribution facilities in the area.

36. **Can I install this as a sub-meter?**
No. Industry best practice for safety is a dedicated service.

EV Rate Billing and Metering

37. **What does it cost to set up my home for the EV Rate?**
You must hire a licensed electrician at your own expense to connect appliances to the dedicated meter for the electric vehicle charging. This includes the installation of a duplex socket meter, associated conduit and wiring, and potentially a new breaker box. The estimated cost for this installation is about $300-900. In some complex installation situations it may be more.

38. **Is a socket meter with a lever bypass required for the sub-meter?**
Yes, the meter socket for the EV must be a lever bypass from a manufacturer on our approved list. It must also conform to all other standards as depicted in section 4.13 from our Standard for Electrical Installation and Use.

39. **Where must the meter socket be installed?**

The EV meter must be located outside, within 24" from the firm service meter, unless an exception has been granted prior to the installation to locate it elsewhere. In cases where the firm service meter is located indoors, the EV meter should be located in the same general area so that the meters are grouped together. All of our requirements for meter locations can be found in section 4.14 in the Standard for Electrical Installation and Use manual.

The meter must be at least 3' high with a maximum of 6'6" per 4.14 in the Standard for Electrical Installation and Use manual.

40. **Can I install the meter socket on a garage or a detached garage?**
If the main house meter is on the garage and complies with section 4.14 from the Standard for Electrical Installation and Use, you may install the meter socket for the EV on the garage.

For customers wishing to charge their vehicle in a detached garage, there are two options:

1. The customer may participate in the EV rate by installing the EV meter within 2' of the existing meter. If the main house meter is not on the garage, a line can be run to the detached garage.
2. The customer may participate in the Time of Day rate instead of the EV Rate, and install a Time of Day meter on the detached garage. In this case, the panel can be used for additional charges besides an electric vehicle. A second service would need to be requested and started at an extra cost to the customer.

41. **Can I install a fast charger?**
Yes. Prior to installing a DC fast charger or an AC Level 2 charger, please call the Builder's Call Line at 1-800-628-2121 to check if a significant load increase will necessitate a service upgrade. With prior notification, we can make the necessary system modifications to continue to reliably serve the EV customer and surrounding community.

42. **Is an additional under or above ground service line needed?**
No.