

ENERGY STAR® Certified EV Charger Marketing Toolkit





ENERGY STAR Certified EV Chargers

Marketing Toolkit

Welcome to the ENERGY STAR EV charger promotion. The following slides provide an overview of available outreach materials, including messaging and creative resources, with easy links to facilitate access.

Partners are encouraged to use these materials as is or to mix and match to create your own look and feel.



Marketing Toolkit Contents

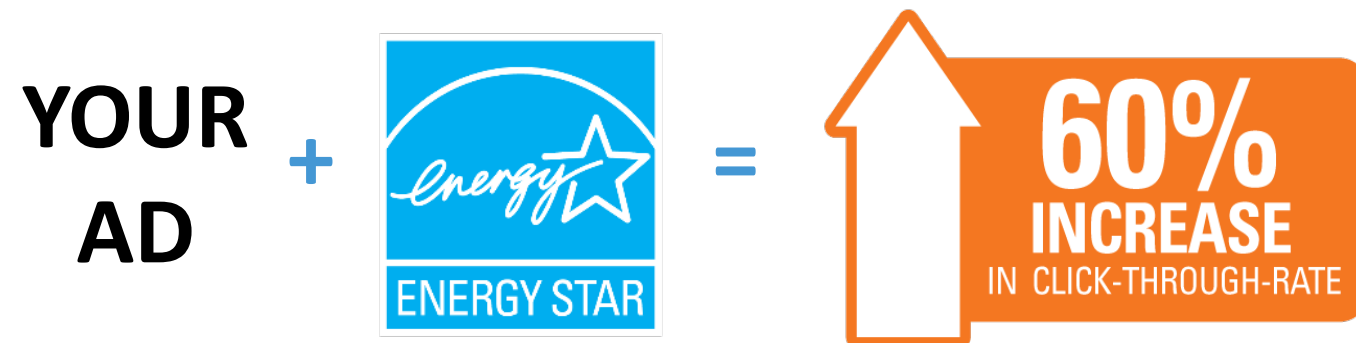
- [ENERGY STAR Marks](#)
- [Messaging](#)
- [Social Media Posts](#)
- [Social Media Graphics](#)
- [Educational Graphic](#)
- [Digital Graphics](#)
 - [Web Banners](#)
 - [Web Buttons](#)
 - [Links for Digital Graphics](#)
- [Factsheets](#)
- [Ask the Expert](#)





ENERGY STAR Marks

- Including the ENERGY STAR certification mark as a visible feature on marketing materials lends credibility, trust, and brand awareness. It serves as an implicit seal of approval and helps differentiate the product.
 - A 2017 study found JD Power Customer Satisfaction indexes for ENERGY STAR partners increased significantly over time compared to non-partners, particularly in the areas of Corporate Citizenship, Communications, and Customer Service.
 - A/B testing conducted by Focus on Energy shows that using the ENERGY STAR logo on ads drove a 60% increase in click-through rate.
- Partners should always use the certification mark when featuring ENERGY STAR certified products.
 - If no product featured; use the Ask About or Learn More marks [available here](#).





EV Charger Messaging

ENERGY STAR AC Chargers (Level 1 and Level 2)

- Driving an electric vehicle can help you save up to \$900 annually on fuel costs and significantly decrease your carbon footprint. For every mile driven using electricity, you can save roughly half of what it costs to drive a similar gasoline powered vehicle – and these benefits are amplified when you charge your vehicle efficiently using an ENERGY STAR certified EV charger.
- EV chargers that earn the ENERGY STAR label are independently certified to save energy and meet safety requirements tested by nationally recognized testing laboratories. Some use smart technology that is networked, allowing remote power monitoring. Certain grid smart chargers may qualify for special energy bill savings programs offered by utilities.
- Level 1 and Level 2 EV chargers that have earned the ENERGY STAR certification use 40% less energy than a standard EV charger in the most common operational mode, standby (85% of the time).
- Some ENERGY STAR certified EV chargers use industry network communication standards and are designed to work with a wide variety of other devices, such as wi-fi routers, electric utility energy management and price signals, etc.



EV Charger Messaging

ENERGY STAR DC Fast Chargers

- The number of electric vehicles (EVs) on U.S. roads is predicted to reach between 30-42 million by 2030 and to require approximately 28 million charging ports (public and private). Currently, 182,000 are projected to be direct current (DC) fast chargers.
 - There are around 50,000 DC fast chargers nationwide, which are increasingly in demand to support the deployments of medium and heavy-duty EV fleets.
- DC fast chargers (up to 65 kW) that have been independently certified to earn the ENERGY STAR label can save roughly 1.5MWh/year of energy, reducing costs by approximately \$185 annually and \$1,650 over the lifetime of the charging station.
- DC fast chargers that are listed on the ENERGY STAR Product Finder with connected functionality support open standards for communication protocols, allowing for:
 - Load dispatch
 - Optimization of energy use through demand-response
 - Price notification, allowing for lower customer electricity costs, and
 - Full vehicle grid integration (VGI)



EV Charger Messaging

Buying Guidance for EV Chargers

- Choosing the right EV charger for your needs depends on how many miles you drive every day and whether you have a fully electric car or a plug-in hybrid (gas and electric).
- **Level 1 Chargers:** Plug into a standard outlet (120 volt) and an hour of charging will provide 2–5 miles of driving range.
- **Level 2 Chargers:** Require a heavy-duty electrical circuit and plug (240 volt) for 10–20 miles of driving range.

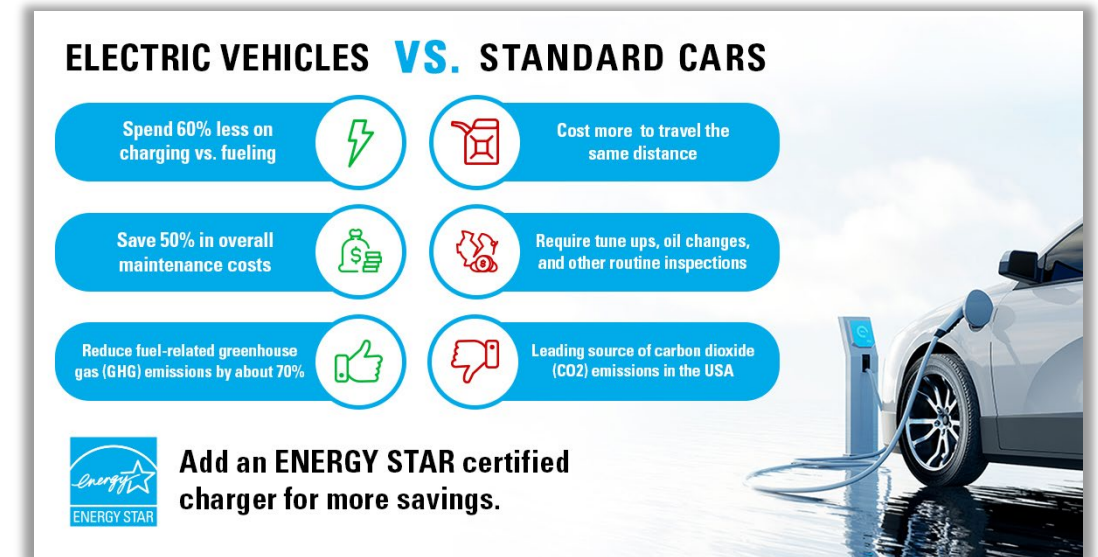
More Tips:

- To prepare for residential EV charger installation, you'll want to make sure that your home is electric-ready and that your panel can handle the increased load from charging your EV at home. An electric panel upgrade is eligible for a tax incentive for homeowners, and more information can be found here:
https://www.energystar.gov/about/federal_tax_credits/electric_panel_upgrade
- **Product Finder:** Use the ENERGY STAR Product Finder for [Electric Vehicle Chargers \(AC-Output\)](#) and [Electric Vehicle Chargers \(DC-Output\)](#) to find the right EV charger for you.
- **Look for Incentives:** Information on federal EV tax credits, state efficiency programs, utility rebate programs can be found [here](#). You can find links to 26 state programs and counting to help cover the costs associated with purchasing and installing an EV charger. Visit the [ENERGY STAR Electric Vehicle & Plug-in Hybrid Incentives](#) page for more information.
- Federal incentives are newly available for the installation of EV chargers for homeowners, for 30% of the cost up to \$1000. These tax credits will be available for EV chargers purchased between January 2023 and December 2032

EV Charger Social Media

- Social media materials include messaging and imagery that you can use as-is or customize as needed.
- **Sample social media posts** are included on the following slides.
- When drafting your post, be sure to tag ENERGY STAR
 - Facebook: Begin typing “@ENERGY STAR” and choose ENERGY STAR from the dropdown list; be sure to make the post public
 - LinkedIn: Begin typing “@ENERGY STAR” and choose ENERGY STAR from the dropdown list
 - X (Twitter): @ENERGYSTAR

[Link to Social Media Graphics](#)





EV Charger Social Media

Sample Social Media

COMPARISON GRAPHIC: Electric vehicles are better for the planet and your wallet! EVs help you save on long-term fuel and maintenance costs, while doing less damage to the environment than standard cars. And an ENERGY STAR certified charger means even more savings, using 40% less energy than standard models. <https://www.energystar.gov/productfinder/product/certified-evse-ac-output/results>

VIDEO: Making the switch to an EV could save you up to 50% on fuel and car maintenance costs. Plus, with rebates and tax credits, you can save big when you buy. Save money and the planet with an electric vehicle. <https://youtu.be/3GTHYC7gCj4>

ASK THE EXPERT: Thinking about making the switch to an electric or plug-in hybrid vehicle? Learn more about EV charging best practices to ensure optimal safety, performance, and energy savings. #AskENERGYSTAR #Innovation #Tech <https://www.energystar.gov/products/ask-the-experts/tips-on-electric-vehicles-and-chargers-with-energy-star>



EV Charger Social Media

Sample Social Media

EV CHARGER: Did you know that EV chargers are typically in standby mode 85% of the time? @ENERGYSTAR certified AC EV chargers use 40% less energy in standby mode and deliver all the features and functionality as other products – a win-win for you and the environment. www.energystar.gov/EVs

EV CHARGER: Maximize the environmental benefits of your electric vehicle! EV chargers that have earned the @ENERGYSTAR label meet strict energy efficiency requirements set by the U.S. EPA, helping you save even more on energy costs! www.energystar.gov/EVs

EV CHARGER: If you're thinking of switching to a hybrid or fully electric vehicle, using an @ENERGYSTAR certified EV charger with it can add additional energy savings and guarantees the highest equipment safety standards. www.energystar.gov/EVs

EV & EV CHARGER: Now is the time to be part of the clean energy future with an EV. Get great performance and savings with rebates, tax credits, and more. Pair your new EV with an ENERGY STAR certified EV charger for better performance and safety. www.energystar.gov/EVs

CHARGING TIPS: Extreme temperatures and weather events can affect EV drivers by impacting charging times, battery health, and driving range. However, while extreme weather may adversely affect EV range and charging, there are several steps you can take to mitigate these impacts. Learn more from the experts at ENERGY STAR: <https://www.energystar.gov/products/ask-the-experts/ev-charging-tips-prepare-extreme-weather>





EV Charger Social Media

Sample Social Media

EV CHARGER PRODUCT FINDER: If you're an EV owner, consider upgrading to an @ENERGYSTAR certified charger. If all AC EV chargers sold in the U.S. met ENERGY STAR requirements, the savings in energy costs would grow to \$17 million in energy savings and 127,000 metric tons of greenhouse gas emissions avoided. Make your energy choices count:

<https://www.energystar.gov/productfinder/product/certified-evse-ac-output/results>

EV CHARGER PRODUCT FINDER: Safety first! All @ENERGYSTAR certified EV chargers are tested for safety by nationally recognized testing laboratories. This isn't always the case for standard products. Let ENERGY STAR help you find the safest, most efficient option for you. <https://www.energystar.gov/productfinder/product/certified-evse-ac-output/results>

COMMERCIAL CHARGING: Did you know that EV DC fast chargers will save up to \$185 each year? @ENERGYSTAR certified EV DC fast chargers will generate over \$1,650 in cost savings during their lifetime, while meeting a minimum active charging efficiency of 93%.

www.energystar.gov/EVs

COMMERCIAL CHARGING: By 2030, the US is projected to need over 180,000 DC fast chargers to support EVs. @ENERGYSTAR certified DC fast chargers produce over \$1,650 in cost savings over their lifetime and guarantee the highest safety requirements.

www.energystar.gov/EVs



EV Chargers - Social Media Graphics

[Link to Download Graphics.](#)

MAKE YOUR ENERGY CHOICES COUNT.

Choose an ENERGY STAR® certified EV charger for more savings!

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EV Chargers - Social Media Graphics

[Link to Download Graphics.](#)

ELECTRIC VEHICLES VS. STANDARD CARS

Spend 60% less on charging vs. fueling	Cost more to travel the same distance
Save 50% in overall maintenance costs	Require tune ups, oil changes, and other routine inspections
Reduce fuel-related greenhouse gas (GHG) emissions by about 70%	Leading source of carbon dioxide (CO2) emissions in the USA

Add an ENERGY STAR certified charger for more savings.



EV Chargers - Educational Graphic

- Long-form graphic with more in-depth education about how to make energy choices that count for you and the climate. Great for sharing in an upcoming newsletter or posting on your website.
- Download includes a **text-only** Word doc so you can copy and paste the content and use in the format that works best for you. Pair it with one of the social media graphics!
- Link to [Download EV Educational Graphic](#)



ENERGY STAR® CERTIFIED VEHICLE CHARGERS

Thinking about an Electric Vehicle (EV)?

Now is the time to be part of the clean energy future with an EV. Get great performance and savings with rebates, tax credits, and more.

- ✓ Driving an EV can save \$1,400 annually on fuel and maintenance.
- ✓ Switching to an EV will reduce fuel-related GHG emissions. See how driving an EV in your area can help the planet with the [Beyond Tailpipe Emissions](#) calculator.
- ✓ Charger access is increasing across the country. Use the [Station Locator](#) map to find public charging stations near you.
- ✓ Check out the federal, state, and local rebates and tax credits available using the [Incentive Finder](#).

Which Charger is Best?

EPA recommends an ENERGY STAR certified EV Charger for better performance and safety.

- ✓ ENERGY STAR certified chargers use the latest technology for energy savings, charging speed, and network connectivity, and meet common standards for easy plug connection to your car.
- ✓ Stay safe—not all EV chargers have been tested to meet nationally recognized safety standards. Look for the ENERGY STAR logo.
- ✓ Talk to your electric provider on how to get the best rates for charging. Avoid charging in extreme temperatures to extend battery life.
- ✓ Federal [tax credits](#) are now [available](#) for the purchase and installation of EV chargers.

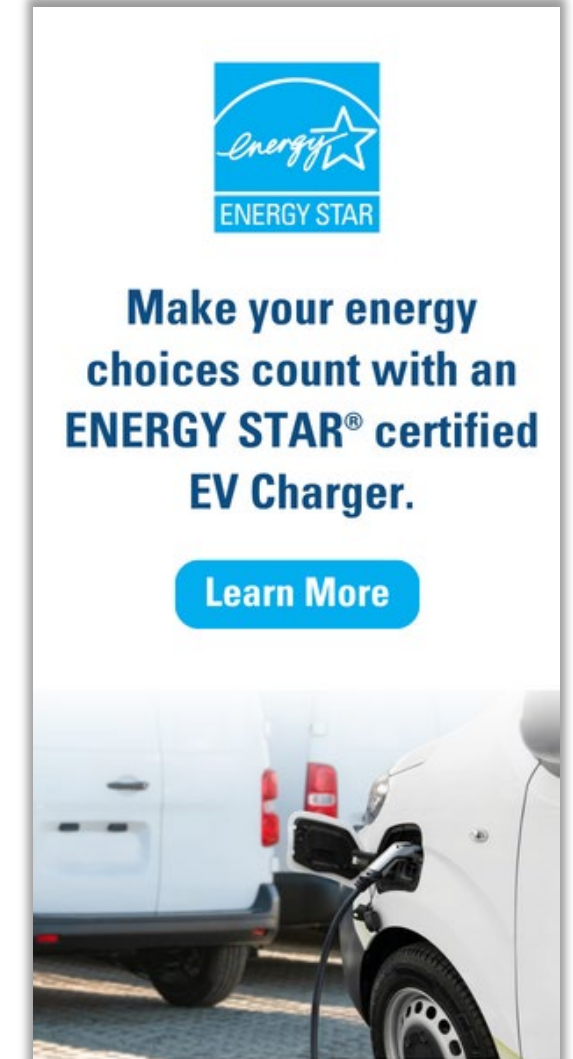
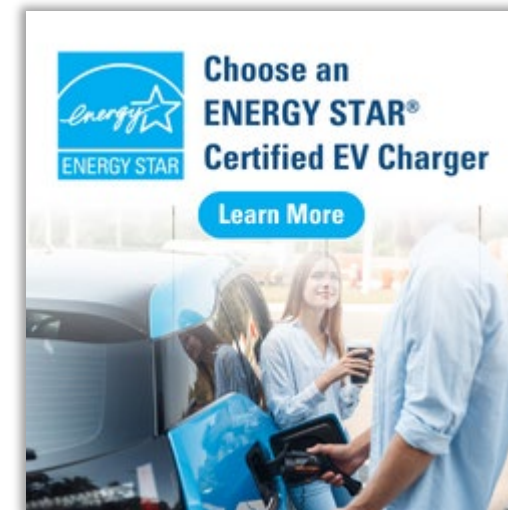


Learn more at energystar.gov/EVs

EV Charger Digital Graphics

- Feature one of the digital graphics on your ENERGY STAR, energy efficiency, or marketplace web pages or in e-newsletters and other communications.
- You can pair the graphics with key messaging found throughout this toolkit.
- **Web banners** are available in two sizes: 625x100 and 1032x234
- **Web buttons** are available in two sizes: 250x250 and 300 x 600
 - See all options on the next slides!

[Link to Web Graphics](#)





Web Banners

Available in sizes 600x100 and 1032x234. [Link to Download Graphics.](#)



 Choose an ENERGY STAR[®] Certified EV Charger.



 Choose an ENERGY STAR[®] Certified EV Charger.

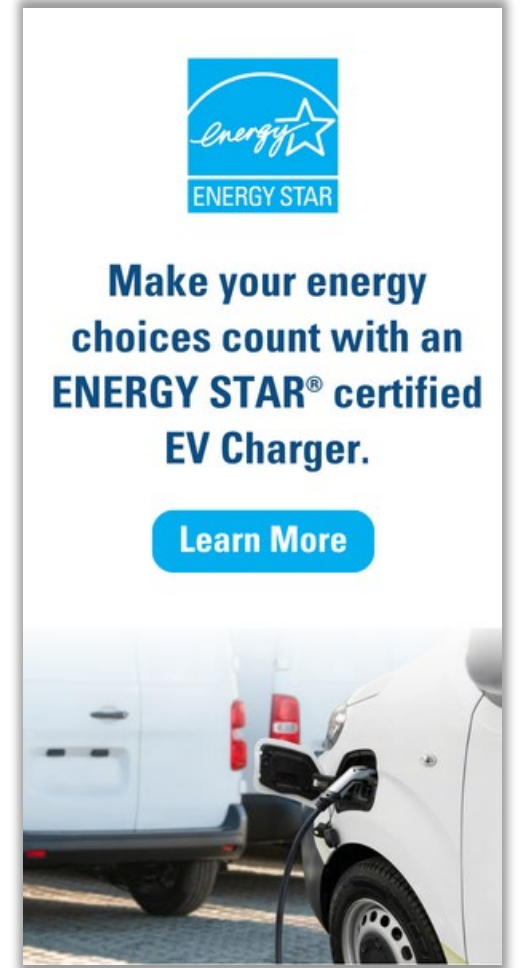
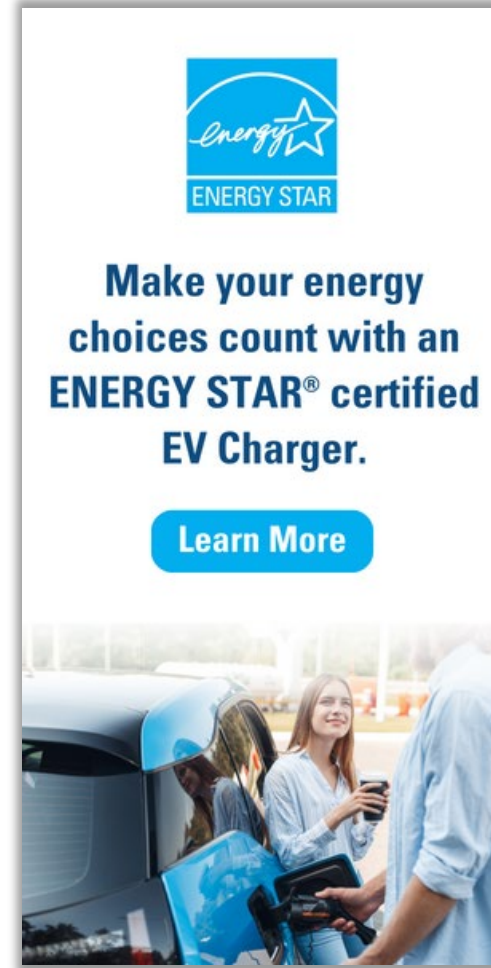
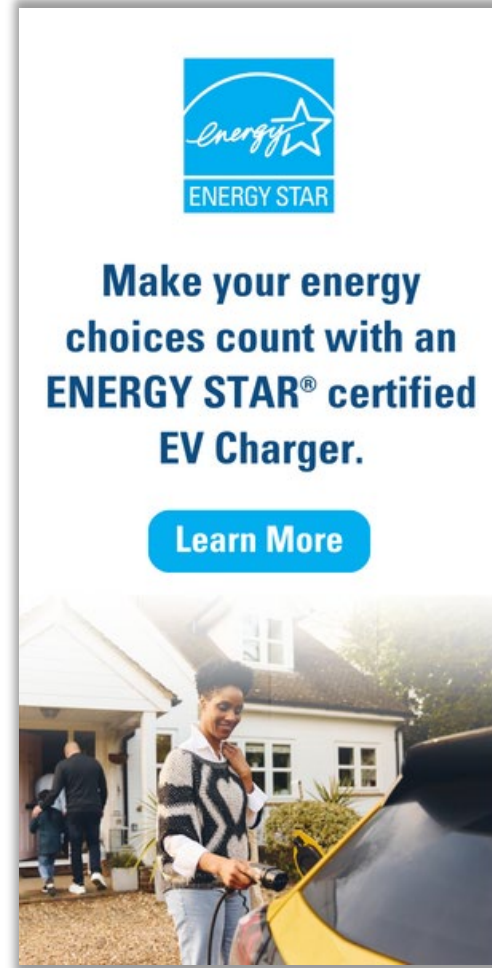
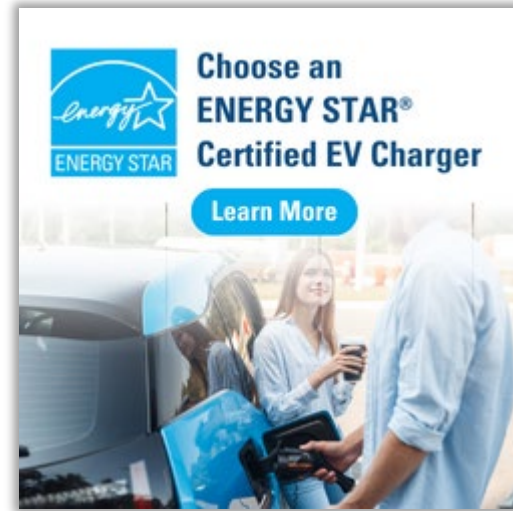
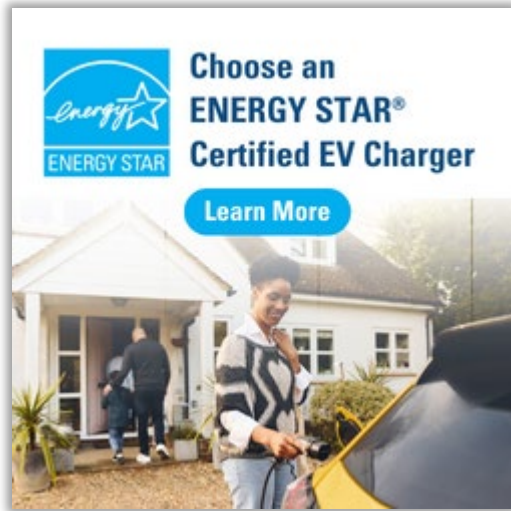


 Choose an ENERGY STAR[®] Certified EV Charger.



Web Buttons

Available in sizes 250x250 and 300 x 600. [Link to Download Graphics.](#)





Suggested Links for Digital Graphics

Use these links when adding these ENERGY STAR web banners and buttons to your website.

- [About ENERGY STAR Certified EV Chargers](#)
- [ENERGY STAR Product Finder – Electric Vehicle Chargers \(AC-Output\)](#)
- [ENERGY STAR Product Finder – Electric Vehicle Chargers \(DC-Output\)](#)
- [Ask the Experts: Tips for EVs and EV Chargers](#)
- [Tax Credits for EVs](#)



Residential EV Charger Factsheet

- Use this factsheet to educate residential customers about the benefits of choosing ENERGY STAR certified EV chargers, how to make their homes EV ready, and where to find certified products.
- The fact sheet is ready to download and print as-is or customize to incorporate your logo.

[Link to Download EV Charger Factsheet](#)



ENERGY STAR® Certified Electric Vehicle

With the steady increase of electric vehicles on the road, an electric transportation future is just smart. As you consider your home is wired and ready for an ENERGY STAR certified EV charger, you'll want to make sure your home is wired and ready for an ENERGY STAR certified EV charger.

Why should I make my home EV ready?

The future of transportation is electric, so even if you don't plan to buy an EV right away, there are things you can do now to make your home EV ready. Installing the necessary wiring at your house will help you change to a cleaner, cheaper transportation fuel. People who don't have it's convenient to have access to EV charging at home. With a home EV charger, you won't have to rely on public charging. When you charge overnight, you can have a full battery every morning, simply plug in.

EV Charger Pre-wiring Guidance

Getting ahead of the game by installing the necessary wiring now is easier. Unless you have immediate plans to purchase an EV, it's easier to buy the latest model when you get your car. Here are the basic steps in getting your house ready for EV charging:

1. Determine the type of charger that will be needed (Level 1 or Level 2).
2. Find the right location for the charger (garage, driveway, or curbside on public road).
3. Check your home's electrical capacity.
4. Schedule installation work.

Learn more about each of these steps at www.energystar.gov/home_upgrade/electric_vehicle_ready.

EV Purchase Incentives

There are both federal and state incentives for the purchase of an EV. You can get up to \$10,000 off the purchase price. Learn more at www.energystar.gov/vehicles-and-hybrids.

ENERGY STAR® is the simple choice for energy efficiency. The ENERGY STAR program has been America's resource for energy efficiency for the environment. Learn more at energystar.gov/products.



EV Charger Incentives

Federal incentives for 30% of the installed cost—up to \$1,000—are available for home EV charger and wiring installation. Learn more at the Alternative Fuels Data Center at afd.energy.gov/laws/10513.

Additionally, there are utility incentives available in some areas. Check with your local utility for details. Visit the ENERGY STAR Rebate Finder for a list of utility companies that offer incentives for the purchase and installation of ENERGY STAR certified electric vehicle chargers: www.energystar.gov/rebatefinder.

Choosing the Right EV Charger

To determine what type of charger you will need, consider the following factors: 1) How many miles do you drive every day?, 2) Do you have a fully electric car, or is it a plug-in hybrid (gas and electric)?

Level 1 (120 volt) Charger

If you have a hybrid car that only goes roughly 15-30 miles on pure electricity, you will not need to upgrade your home electrical system at all. These cars can be served by a standard 120V outlet and a charging cord (provided with the car) that plugs directly into a standard electrical outlet wiring.

240 Volt Chargers

Fully electric cars have large batteries and ranges of 100-400 miles and require a more powerful 240V charger. They provide much faster charging and will allow for daily use of your EV, without worrying about running out of charge.

EV Charger Type	Average Charging Rate (per hour of charging)
Level 1 Plugs into standard outlet (120 volt)	2 to 5 miles of range (depending on environment conditions and battery charge %)
Level 2 Requires heavy duty electrical circuit and plug (like an electric dryer) (240 volt)	10 to 30 miles of range

ENERGY STAR certified EV chargers save energy over time, are fully safety certified and use open communication standards.

- **Energy Savings:** EV chargers are typically in standby mode (i.e., not actively charging a vehicle) for about 85% of the time. ENERGY STAR certified EV chargers provide the same functionality as non-certified products but use 40% less energy in standby mode, reducing their impact on the environment.
- **Safety:** Not all EV chargers that are for sale are safety certified. Ensure your charger meets safety standards by choosing one that has earned the ENERGY STAR label. All ENERGY STAR certified chargers are tested for safety by a nationally recognized testing laboratory.
- **Smart Technology:** Some ENERGY STAR certified EV charger models are connected or "networked," allowing for remote power monitoring and control of the charging state of the connected vehicle. These smart grid ready products may qualify households and property managers to participate in special energy bill savings programs that may be offered by some local electric utilities.



INTRODUCING ENERGY STAR HOME UPGRADE

Making your home electric-ready is one of six high-impact, energy efficiency improvements for your home that are designed to work together to deliver significant energy and cost savings. Count on ENERGY STAR to help you transition from fossil fuels to a cleaner, healthier, and more comfortable home.






Commercial DC Fast EV Charger Factsheet

- Use this fact sheet to educate customers about the benefits of choosing ENERGY STAR certified EV chargers and where to find certified products.
- The fact sheet is ready to download and print as-is or customize to incorporate your logo.

[Link to Download DC Fast EV Charger Factsheet](#)



ENERGY STAR® Certified DC Fast Electric Vehicle Chargers

January 2024

The Importance of DC Fast EV Charging

The number of electric vehicles (EVs) on U.S. roads is predicted to reach between 30-42 million by 2030 and to require approximately 28 million charging ports (public and private). Currently, 182,000 are projected to be direct current (DC) fast chargers.¹ There are around 50,000 DC fast chargers nationwide, which are increasingly in demand to support the deployments of medium and heavy-duty EV fleets.² To promote energy efficiency during the growth of EV infrastructure, the U.S. Environmental Protection Agency (EPA) developed a specification to recognize the most energy efficient EV charging products.³

Specification Overview

ENERGY STAR certified DC fast chargers meet the following criteria:

- **Chargers 50 to 65 kW:** Minimum active charging efficiency of 93% and maximum standby losses*
- **Chargers 65 to 350 kW:** Maximum standby losses*

*The specification offers additional power allowances during standby for products with a high-resolution display or a battery management system.

Connected Functionality

EV chargers listed on the ENERGY STAR Product Finder as connected functionality capable must support **open standards for communication protocols**. Connected functionality allows for:

- Load dispatch
- Price notification – allowing for lower customer electricity costs
- Optimizing energy use through Demand-Response
- Full Vehicle to Grid Integration (VGI)

Bipartisan Infrastructure Law Investments:

The Bipartisan Infrastructure Law is investing in EV charging with the following investments and goals:

- \$7.5 billion in EV charging
- \$7 billion in EV battery components, critical minerals, and materials
- EVs to account for 50% of new car sales by 2030
- Building national network of 500,000 electric vehicle chargers

¹ EEA/EI, June 2022, [EV Sales Forecast and the Charging Infrastructure Required through 2030](#).
² EV Atlas Hub 2023, [Atlas EV Hub: EV Charging Deployment](#).
³ U.S. EPA, 2021, [ENERGY STAR Version 1.1 EV Chargers Specification](#).

All ENERGY STAR Certified EV Chargers:

- ✓ Provide Energy Savings
- ✓ Meet Safety Requirements
- ✓ Use Open Standards

Did you know? ENERGY STAR certified DC EV chargers up to 65 kW will generate:

- Annual cost savings up to \$185, which is equivalent to saving about 1.5 MWh/year.
- Over \$1,650 in cost savings during the lifetime of the charging station.

ENERGY STAR® is the simple choice for energy efficiency. For more than 25 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Learn more at energystar.gov/products/other/ev_chargers



EV Chargers for Commercial Buildings

- Use this factsheet to educate commercial building managers about the benefits of choosing an ENERGY STAR certified DC fast charger, how to increase the convenience of EV charging for tenants and employees, and where to find certified products.
- The fact sheet is ready to download and print as-is or customize to incorporate your logo.

[Link to Download EV Chargers for Commercial Buildings Factsheet](#)



Get Your Building Ready for Electric Vehicles



The number of electric vehicles (EVs) on U.S. roads is predicted to reach 28 million by 2030, and 28 million charging ports (public and private).¹ When not at home, destinations such as stores and will increasingly require charging. EV drivers living in urban areas and on-street parking will benefit from charging at workplaces and commercial properties, increase the convenience and affordability of EV charging, and demonstrate leadership in adopting advanced, sustainable technologies.

Recommendations for EV-Ready Commercial Buildings

- ✓ **Evaluate the need for EV charging.** Conduct a survey of building tenants to assess the current need for charging. Plan for the future – assume that demand will increase and that charging system expansion will be needed.
- ✓ **Determine power availability and the number of EV chargers needed.** Talk with your building engineer and the local electric utility to determine power availability for charging installations at the facility. Take steps to future-proof charging station locations with either the conduit or the main electric supply cables to allow for future expansion, as charging demand grows.
- ✓ **Install and manage your ENERGY STAR EV charger.** Contact EV charger providers; ask for energy efficient, ENERGY STAR certified models and discuss your project needs. The installation of EV charging at your facility according to sub-meter your EV chargers for easier kWh accounting will not be an option, ENERGY STAR Portfolio Manager will allow you to track and reporting needs. Determine whether your local electric utility offers rebates and incentives. Consider whether you want chargers that you can control.
- ✓ **Market your EV charging commitment.** Advertise charging stations to prospective new tenants as a key amenity of the building.

¹National Renewable Energy Laboratory (NREL), *Building the 2030 National Charging Network*



Choose ENERGY STAR® Certified EV Chargers

ENERGY STAR certified EV chargers use 40 percent less energy than a standard EV charger.* Additionally, ENERGY STAR certified DC EV chargers can save up to \$185, which is equivalent to saving about 1.5 MWh/year compared to a standard EV charger. Some ENERGY STAR EV chargers may also offer connected functionality, which would be capable of supporting participation in utility demand response programs through open communication protocols. Use the [ENERGY STAR Product Finder for Electric Vehicle Chargers \(AC-Output\)](#) and [\(DC-Output\)](#) to identify the energy efficient charger that meets your needs. Many utilities offer incentives, such as rebates, for commercial and workplace EV charging infrastructure. Search the Alternative Fuels Data Center's Laws and Incentives database for [financial incentives and programs](#) offered by utilities, governments, and other organizations.

*In standby modes when the charger is idle and not actively charging a vehicle. Idaho National Laboratory determined that an EV charger is in standby mode for about 85% of the time.

EV Readiness for New Construction

More than fifty state and local governments in the United States have enacted [building and zoning codes amendments to ensure EV readiness](#). For example, [Fort Collins](#) requires EV charging outlets in all new commercial, industrial, and multi-family residential buildings, as well as with significant additions or alterations. It is important to determine if there are any current or upcoming requirements in your jurisdiction and get ahead of the curve by ensuring that facilities are EV ready today.

EV-Ready Commercial Buildings Resources

- Find more information on the [ENERGY STAR certified EV chargers webpage](#), including buying guidance.
- See the [Alternative Fuels Data Center](#) website for information about [charging station types](#), [workplace charging](#), [public charging](#), and [financial incentives and programs](#).
- Refer to the [U.S. Green Building Council website](#) for information about the opportunity to earn LEED credits for EV charging stations installed in new buildings as part of the innovation category (green vehicles) under Building Design and Construction (BD+C) as well as Interior Design and Construction (ID+C).
- Explore educational and technical resources at [workplacecharging.com](#) for employers interested in workplace charging.



ENERGY STAR® is the simple choice for energy efficiency. For more than 25 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Learn more at energystar.gov/products/other/ev_chargers



EV Chargers for Residential Buildings

- Use this fact sheet to educate customers about the benefits of choosing ENERGY STAR certified EV chargers and where to find certified products.
- The fact sheet is ready to download and print as-is or customize to incorporate your logo.

[Link to Download EV Chargers for Residential Buildings Factsheet](#)



Building Electric Vehicle-Ready Homes



Over the next few decades, electric vehicles (EVs) are expected to replace traditional vehicles due to growing awareness of their environmental benefits, operational cost savings, and the availability of more EV options. The increasing number of EVs on the road will require additional charging infrastructure. In fact, approximately 28 million EV chargers (public and private) will be needed to support 30-42 million EVs in 2030.¹

Because approximately 80 percent of EV charging happens at home, consumer demand for homes ready for or equipped with EV charging is also growing. An increasing number of localities, such as [Atlanta](#), [Denver](#), and much of [California](#), have begun to require that infrastructure supporting EV charging be included in all newly-built single- and multi-family homes, as do above-code programs such as [ENERGY STAR NextGen](#).

What Does EV-Ready Mean for Homebuilders?

An EV-ready home provides consumers with safe access to a dedicated 240V power supply for Level 2 EV charging. Pre-wiring new homes for charging during construction adds value to the property and can save a homeowner hundreds of dollars in retrofits. By pre-wiring, builders can offer a future-proof product.

There are two paths to make a home EV-ready:

- **Pre-install conduit:** Designate enough space and capacity on the main electrical panel or garage subpanel for at least a 40 amp, 240V dedicated branch circuit. Install conduit linking the electrical panel to the future location of the EV charger, near where cars will be parked (garage driveway, etc.)
- **Wire a Level 2-ready outlet:** In addition to the pre-wire steps, install a 240V grounded alternating current receptacle, allowing a homeowner to purchase a plug-in Level 2 EV charger without the extra wiring expenses. EV chargers are available for a range of outlet types, including the popular NEMA 14-50.

Be sure the charging station is installed according to National Electric Code requirements (between 18 and 48 inches from the ground).

¹National Renewable Energy Laboratory (NREL), *Building the 2030 National Charging Network*, June 2023.

Install ENERGY STAR® Certified EV Chargers

For builders interested in going beyond EV-ready to install EV chargers, consider using ENERGY STAR certified units. **ENERGY STAR certified Level 1 and Level 2 EV chargers use 40 percent less energy than a standard EV charger in standby modes.** Numerous manufacturers in this rapidly growing industry currently offer a selection of certified models.

Some ENERGY STAR-certified EV charger models also meet optional criteria for connected functionality, giving utility customers the opportunity to participate in demand-response programs, where available. Current ENERGY STAR specifications² improve demand-response capabilities by requiring that all certified models listed as 'connected functionality capable' on the [ENERGY STAR Product Finder](#) support **open standards for communication protocols**.

Learn More

- Find more information on the [ENERGY STAR certified EV Chargers webpage](#), including a list of ENERGY STAR certified products and buying guidance when purchasing equipment.
- See the [Alternative Fuels Data Center \(AFDC\)](#) website for information about [charging station types](#), [installing residential charging equipment](#), and how to locate [public charging stations](#).
- Search the [AFDC Laws and Incentives Database](#) for [financial incentives](#) and programs offered by utilities, governments, and other organizations. Also see [example EV-ready policies](#) from various jurisdictions.
- Refer to the [U.S. Green Building Council website](#) for information about the opportunity to earn Leadership in Energy & Environmental Design (LEED) credits for EV charging stations installed in new homes as part of the innovation category (green vehicles) under Building Design and Construction (BD+C).

²U.S. EPA, 2023, [ENERGY STAR Version 1.2 EV Chargers Specification](#)




ENERGY STAR® is the simple choice for energy efficiency. For more than 25 years, EPA's ENERGY STAR program has been America's resource for saving energy and protecting the environment. Learn more at energystar.gov/products/other/ev_chargers 



Ask the Expert: Tips on Electric Vehicles and Chargers with ENERGY STAR

- Educate residential customers about the benefits of electric vehicles, available rebates, and best practices for EV charging at home.
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Tips on Electric Vehicles and Chargers with ENERGY STAR

Gasoline and diesel vehicles are the leading source of carbon dioxide (CO₂) emissions in the USA. In addition to CO₂, combustion engines release pollutants that cause smog and are harmful to human health.

The Benefits of Electric Cars

Electric Vehicles (EVs) benefit the Environment and Public Health

Charging and operating your car with electricity rather than fossil fuel provides environmental benefits, even after accounting for the emissions from electricity used for charging. Over time, as the electricity grid gets cleaner due to the increase in renewable energy sources, the environmental benefit of EVs will grow even further.

EVs Save You Money

Fuel cost savings - Combustion engines are about 20% efficient, meaning that 80% of the burned fuel is wasted as heat. Conversely, electric motors have 90% efficiency, yielding significant fuel cost savings in the long run. A U.S. Department of Energy report [EPA](#) concluded that drivers can save as much as \$14,500 on fuel costs over 15 years of driving an EV compared to a similar gasoline vehicle.

Maintenance cost savings: EVs have modest maintenance requirements due to fewer mechanical parts, which reduce or eliminate the need for tune ups, oil changes, and other routine inspections. This can total up to \$4,600 of lifetime savings, as highlighted by Consumer Reports [EPA](#).

Rebates, tax credits, and other incentives: ENERGY STAR certified EV chargers can be eligible for a tax credit of up to 30% on a system that costs up to \$1,000 (through 12/31/2021). Keep your receipts for purchase and installation and consult a tax professional for details (IRS Form 9811).

In addition, there are many state and local incentive programs that can help cover costs associated with the purchase and installation of an EV charger. Enter your zip code into the [ENERGY STAR Rebate Finder](#) to see what incentives are available in your area.

Carpool and HOV Lane Access: In many areas of the country, EV drivers can access HOV lanes, providing an additional benefit for EV owners.

Charging Your Electric Car

Type of charger: 120 Volt, or 240 Volt?

For fully battery electric cars, that are used regularly, a 240 Volt (minimum 30 Amp) charger is recommended. These chargers provide relatively fast charging (e.g., fully charge from empty in 6-8 hours) and can serve nearly all routine needs.



Ask the Expert: EV Charging Tips to Prepare for Extreme Weather

- Educate EV drivers about how they can mitigate the negative impacts extreme hot and cold weather and maximize their EV charger efficiency.
- Use the ENERGY STAR Ask the Expert identifier on your website and hyperlink it directly to the article, [EV Charging Tips to Prepare for Extreme Weather](#)



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EV Charging Tips to Prepare for Extreme Weather

(Note: The concepts in this article apply to fully electric cars, as well as plug in hybrids, though the negative impacts are much greater for fully electric cars.)

The future of transportation is electric, and electric vehicle (EV) sales have continued to grow in the US - reaching an estimated 1.4 million vehicles sold in 2023. [1] The steady increase in electric vehicles on the roads has led to a better understanding of factors that impact charging efficiency – including the weather. Extreme temperatures and weather events can affect EV drivers by impacting charging times, battery health, and driving range. However, while extreme weather may adversely affect EV range and charging, several steps exist to mitigate these impacts.

Cold Weather Impacts

While EV chargers should operate as usual, cold temperatures may affect how long an EV takes to charge due to vehicle battery changes. There are two important factors to recognize about your battery in cold weather:

- **Slower Charging Rates:** Charging rates may not have a significant impact if charging from a home or a garage for an overnight charge. However, if EV drivers are mid-trip or on a tight timeline to reach their





Ask the Expert: Save Money and the Planet with an Electric Vehicle

- Electric vehicles are better for the planet and your pocketbook! Add an ENERGY STAR certified charger for even more savings
- Use this short video to engage and educate your customers about the benefits of EVs and ENERGY STAR certified chargers.
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