

PowerShift Charger

User Manual
Version 1.1 - August 2024

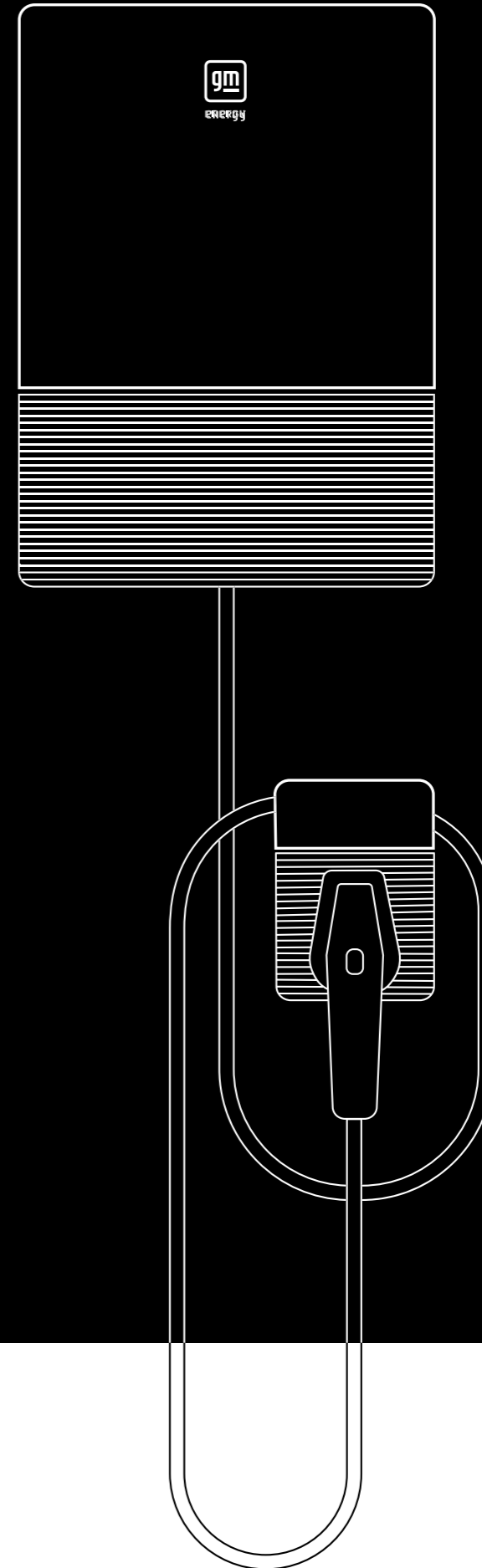


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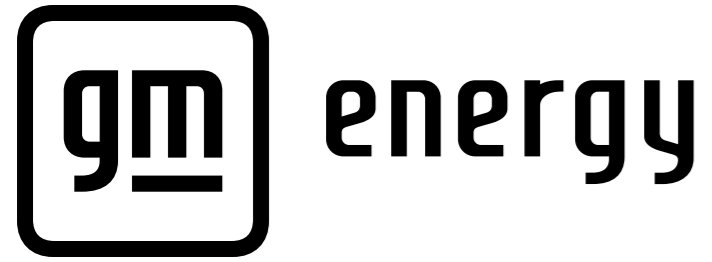
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WELCOME

Congratulations on Choosing the GM Energy PowerShift Charger

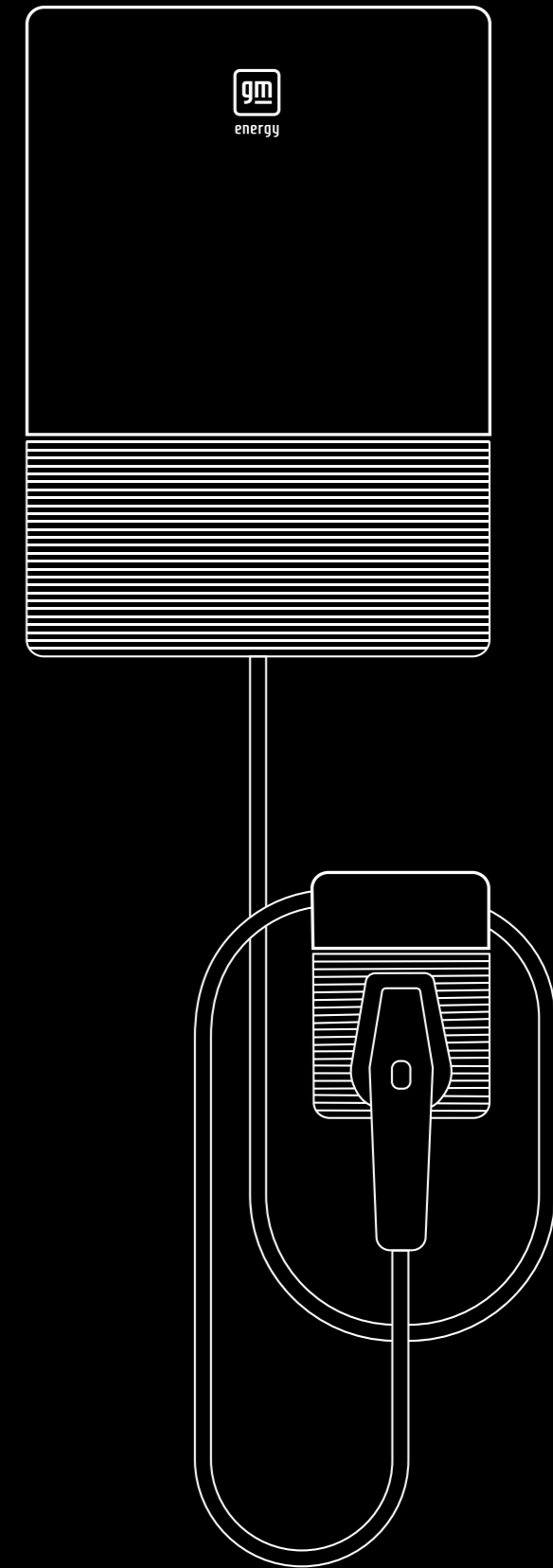
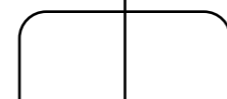
Your new GM Energy PowerShift Charger is designed to help you get the most out of your GM electric vehicle by providing more charging capability than a standard portable cord set.

This guide is designed to familiarize you with the product as well as provide how-to tips, troubleshooting information and more. In the back of this User Manual, you'll find a [Glossary](#) of terms frequently used here and in other GM Energy resources.

This User Manual was created for owners of the GM Energy PowerShift Charger e1.19.

How to use this interactive PDF

Use the **Arrow Buttons** to navigate between pages, or use the **Home Button** to return to the **Table of Contents**.



IMPORTANT SAFETY INSTRUCTIONS

Save These Instructions

To prevent the risk of PROPERTY DAMAGE, SERIOUS INJURY or DEATH, read and follow all warnings, safety precautions and instructions in this User Manual and your GM EV Owner's Manual. Keep this User Manual for future reference.

The GM EV charging solution should be installed only by a licensed contractor and/or a licensed electrician in accordance with all applicable state, local and national electrical codes and standards.

After installation, it's recommended that your system is connected and commissioned with a secure Wi-Fi network.

In the event of a fire in or around the components, evacuate the premises and contact local emergency services.

WARNING

Please read the instructions carefully and follow all safety precautions in the Installation and Operation manual before using these products. Access this manual on the GM Energy website (<https://gmenergy.gm.com/for-home/installation-support>)

WARNING

To reduce risk of fire, electric shock or serious injury:

- Do not attempt to open any equipment unless otherwise directed by this User Manual
- Do not attempt to use any part of the system or fix/alter the components if the system appears physically damaged. Contact the GM Energy Customer Support Center
- Do not store any flammable liquids or gases near the system or its components
- Do not expose any of the equipment to direct flames
- Do not submerge the equipment in water
- Do not use high-pressure water to clean the equipment
- Do not clean the equipment with harsh cleaning chemicals
- Do not remove any labels from the system or installed components
- Do not place foreign objects on top of any of the installed components
- Do not lean any foreign objects on any of the installed components
- Ensure proper clearances are maintained in the area surrounding the installed components
- Ensure components are installed and maintained in areas with proper ventilation
- Do not attempt to alter the wiring of the components. Incorrect wiring can lead to high-voltage exposure

WARNING

To reduce the risk of strangulation, keep small children away from the cord of the Charging Coupler and ALWAYS stow the Charging Coupler after use.

CAUTION

Do not paint the components. Changing the color of the external-facing surfaces can degrade the product life.

Federal Communications Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

GETTING TO KNOW YOUR SYSTEM

The GM Energy PowerShift Charger

Your GM Energy PowerShift Charger is designed to power your GM EV in a safe and reliable way.

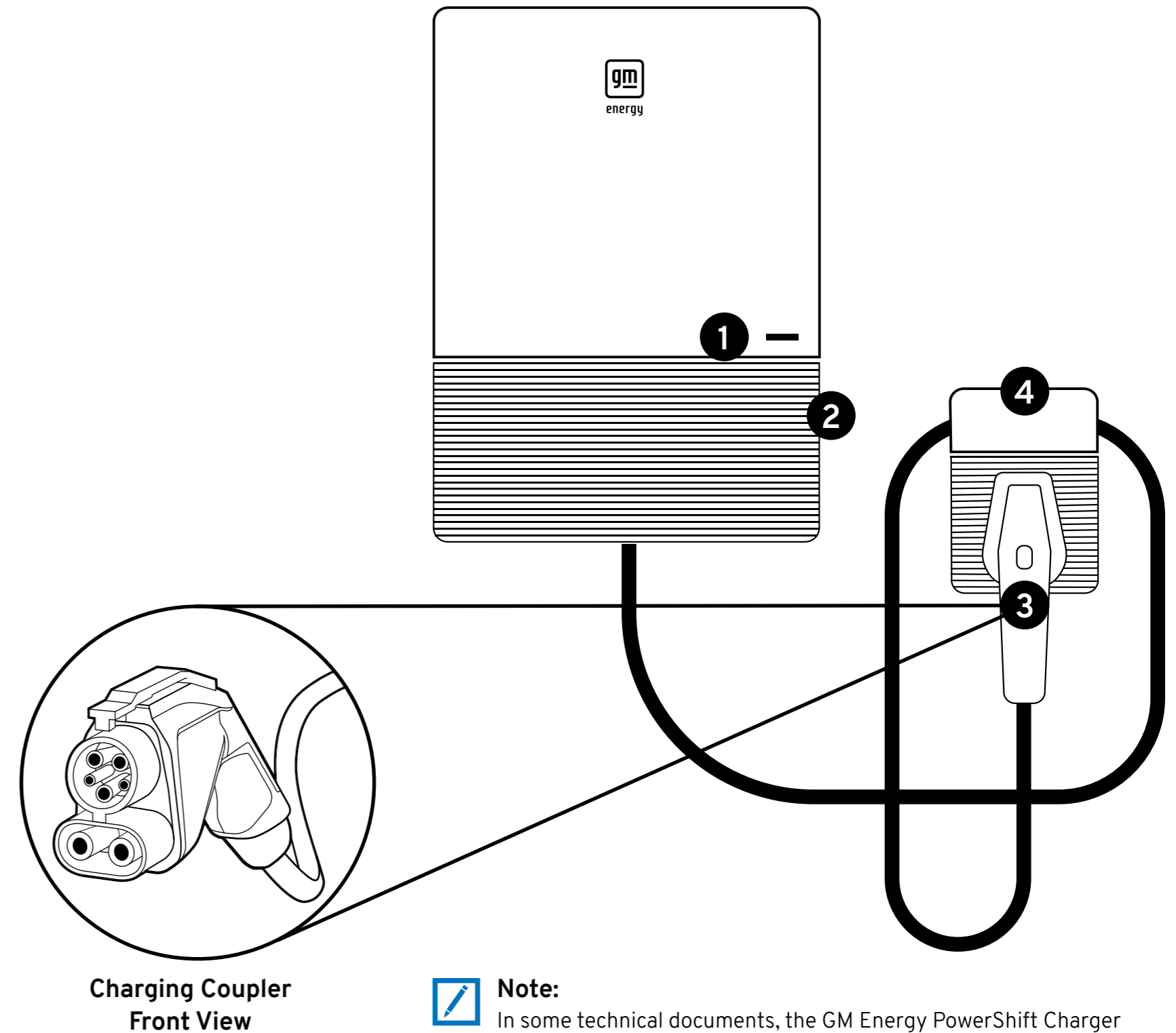
- Includes the Charging Coupler and Charging Holster
- Manages the transfer of electricity to and from your GM EV
- Is capable of up to 19.2-kW charging power
- Can send up to 9.6 kW of discharge power to your home during an outage when paired with the GM Energy Vehicle-to-Home (V2H) Enablement Kit* and a Compatible GM EV

Understanding how it works

Your GM Energy PowerShift Charger uses electricity from your home to charge the batteries in your GM EV.

If you choose to upgrade your system, the GM Energy PowerShift Charger can be paired with the GM Energy V2H Enablement Kit* to manage the bidirectional power transfer needed to send power to your home.

1. **LED Indicator** – Found on the front of the GM Energy PowerShift Charger (on the right side), it flashes different colors and codes to indicate its operating mode. (See the [Decoding the Blinking LED Lights](#) section)
2. **Power Button** – Found on the right side of the charger; press this to stop or start a charging or discharging** session at any time
3. **Charging Coupler** – The device attached to the cord that connects the GM Energy PowerShift Charger to a GM EV. (See the [Charging Your GM EV](#) section)
4. **Charging Holster** – Mounted on the wall adjacent to the GM Energy PowerShift Charger, it provides a safe, convenient place to stow the Charging Coupler when it is not being used. You can loop the power cord around the holster and then rest it on top or securely plug it in



Note: In some technical documents, the GM Energy PowerShift Charger may be referred to as **EVSE** (Electric Vehicle Supply Equipment).

*To learn more about integrating other GM Energy products, visit the [GM Energy website](#) or contact the GM Energy Customer Support Center. **Discharge capabilities are only available when the GM Energy PowerShift Charger is paired with the GM Energy V2H Enablement Kit and Compatible GM EV.

NEED-TO-KNOW ACTION ITEMS

Charging Your GM EV

The front of the GM Energy PowerShift Charger has a small LED Indicator light that flashes in different colors and patterns to signal the charging status. When the circuit breaker is first turned on, this light will blink with a white light. When it stops blinking, the charger is ready. Now you can begin charging your GM EV. (Find more information in the [Decoding the Blinking LED Lights](#) section.)

- Fully uncoil the Charging Coupler from the Charging Holster
- Plug the Charging Coupler into your GM EV's charging port by pushing it into your GM EV's charging outlet until it clicks
- The LED light on the GM Energy PowerShift Charger will blink on and off with a green light, indicating a charging session is in progress
- When the green LED stops blinking, the GM EV has completed its charging session
- You can now disconnect the Charging Coupler and secure it safely on the Charging Holster

The Power Goes Out – Your GM EV Was Plugged In

- The LED light on the GM Energy PowerShift Charger will turn off
- The GM EV can remain connected to the charging system even while the power is out
- Once power is restored, your GM EV will automatically begin charging (indicated by the steadily blinking green LED light)

Troubleshooting

If the GM EV does not seem to be charging:

- Make sure the GM EV is properly plugged in
- If the LED light does not activate, press the Power Button on the right side of the GM Energy PowerShift Charger
- Refer to the [Decoding the Blinking LED Lights](#) section for more information
- Verify your GM EV's battery maximum state of charge settings on your GM vehicle's mobile app*

Troubleshooting Tips

WARNING

Do not attempt to use any part of the system or fix/alter the components if the system appears physically damaged. Contact the GM Energy Customer Support Center for help at 1-833-64POWER.

WARNING

To reduce risk of fire, electric shock or serious injury, inspect the system for any damage. Do not attempt to use any part of the system or fix/alter the components if the system appears physically damaged.

WARNING

To reduce the risk of strangulation, keep small children away from the cord of the Charging Coupler and ALWAYS stow the Charging Coupler after use.

CAUTION

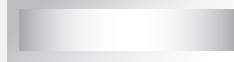




If you have any questions regarding your home's electrical system, contact a professional electrician. If there are any problems with the performance of the GM Energy PowerShift Charger, call the GM Energy Customer Support Center for help at 1-833-64POWER.

*Consult your GM EV Owner Manual or mobile app for more information.


NEED-TO-KNOW ACTION ITEMS

Decoding the Blinking LED Lights

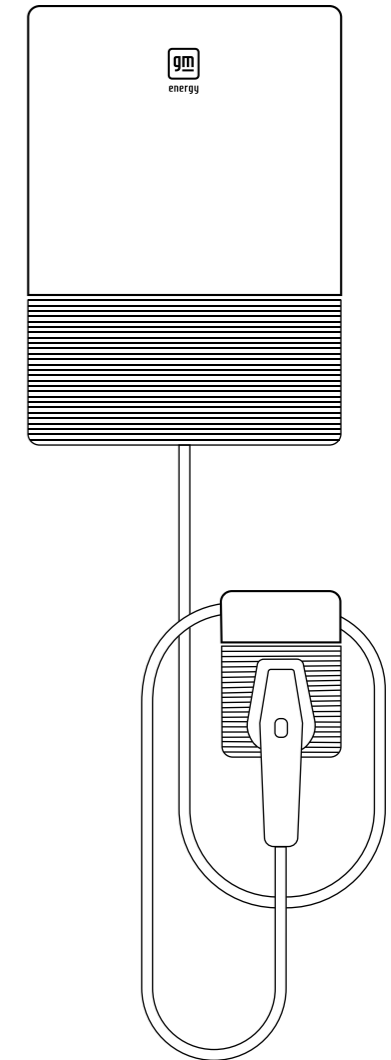
The GM Energy PowerShift Charger features an LED Indicator that signals the system's charge status.

GM Energy PowerShift Charger LED Indicator			
Color	Behavior	Definition	Recommended Action
 White	Blinking	Charger is resetting	No action required
	Solid	Charger is ready but GM EV is not plugged in	Plug in GM EV
 Green	Steadily Blinking (1 second on, 1 second off)	GM EV is actively charging	No action required
	Slowly Blinking (1 second on, 4 seconds off)	Compatible GM EV is actively discharging* power to the home	No action required
	Solid	Compatible GM EV is plugged in but not actively charging or discharging*	No action required. (Leave Compatible GM EV plugged in until you need to drive, so that it's ready in case of a power outage)
 Blue	Solid	Bidirectional charging system is in process of switching from charging to discharging* session	No action required
 Yellow	Blinking	OTA (over-the-air) software update is in progress	No action required
 Red	Blinking	Charger error	Check your vehicle's mobile app (myChevrolet, myBuick, myGMC or myCadillac) for further descriptions. Attempt to unplug and plug in the charging coupler again. If issue persists, or if physical damage is noticeable to the system, please call the GM Energy Support Center before proceeding
	Solid	Installation incomplete	Contact installer

*Discharge capabilities are only available when the GM Energy PowerShift Charger is paired with the GM Energy V2H Enablement Kit and Compatible GM EV.

 **Note:** If the LED Indicator on the GM Energy PowerShift Charger is completely off, the system is not receiving power.

GM Energy PowerShift Charger



WARNING

A red LED light indicates an error or issue that may cause a hazardous situation.

To reduce the risk of fire, electric shock or serious injury, do not attempt to open any equipment or fix/alter any components, and follow the recommended action noted.

USING YOUR GM EV'S MOBILE APP

Built into your vehicle's mobile app (myChevrolet, myBuick, myGMC or myCadillac) is a dedicated interface between you and your GM Energy PowerShift Charger. After your GM Energy PowerShift Charger is installed and commissioned by your installer, you will need to download the app and complete the setup.



Note:

“Commissioned” refers to the step in the installation process that turns the system on, updates system settings and connects the system to your Wi-Fi network. After installation, it's recommended that your system is connected and commissioned with a secure Wi-Fi network. Final approval to operate may be dependent on inspections by local jurisdiction representatives.

Click on your **brand icon** to download the app now! →



First-Time Setup

- If you haven't already, download your vehicle's mobile app* (myChevrolet, myBuick, myGMC or myCadillac) and log in to the system using the account used to purchase your GM Energy PowerShift Charger
- A link for your GM Energy System should appear on the app's home page (next to your vehicle) within 24 hours of **commissioning**
 - If you don't see a link, you can register your system by tapping the “Add Product” link on your account page and selecting “Charger” from the list
- Follow instructions on the app to register your system and connect to your home network and complete the guided setup
- Your GM Energy PowerShift Charger password can be found in your Quick Installation Guide. If misplaced, the password is available by calling the GM Energy Customer Support Center
- If your hardware does not show up in your phone network settings, please reboot the system by pressing the power button on your charger for 10 seconds

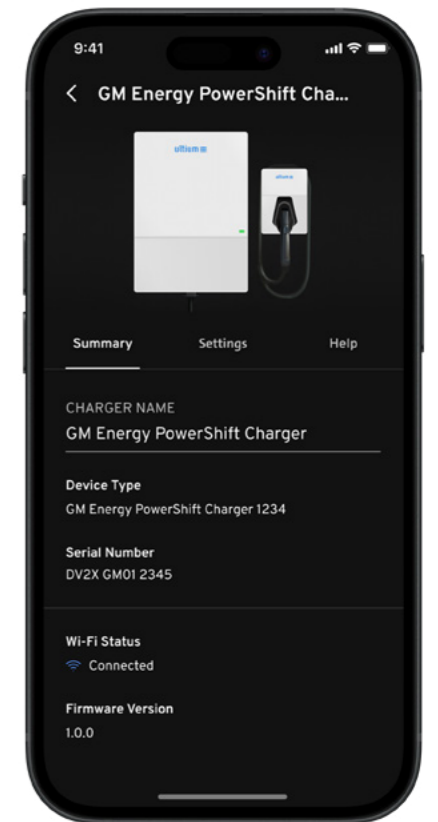
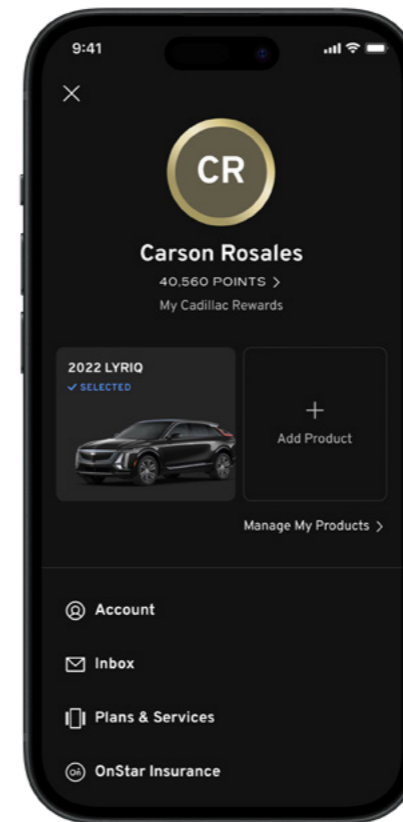
Why You Need the App

This app is your essential connection to the GM Energy PowerShift Charger and any other GM Energy products.

You can use the app to:

- Check the status of the battery level on your GM EV
- Establish a charging schedule
- Configure Wi-Fi settings

To take full advantage of this robust app, open it up and familiarize yourself with its many feature benefits.

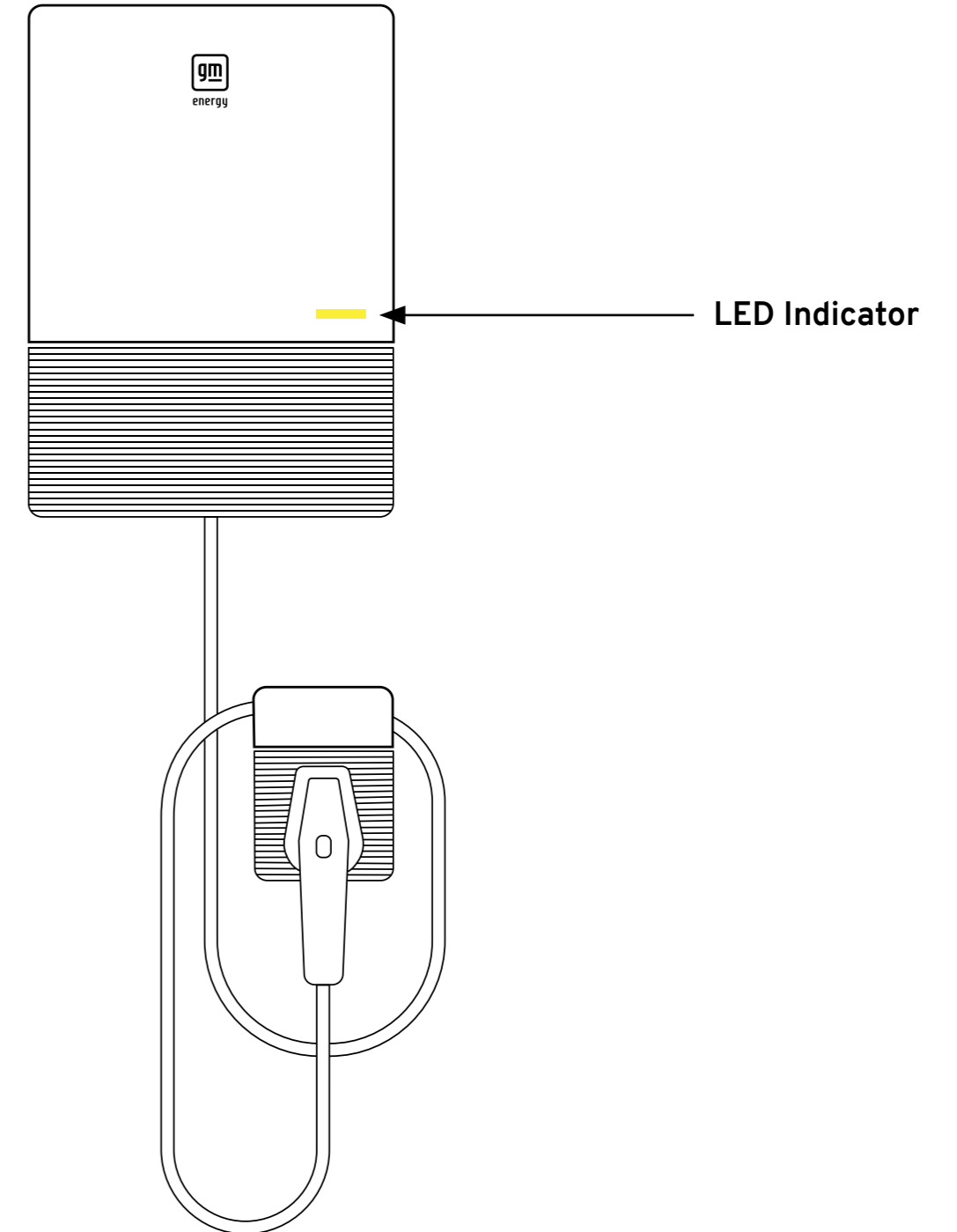


*Available on select Apple and Android devices. Service availability, features and functionality vary by vehicle, device and the plan you are enrolled in. Terms apply. Device data connection required. Actual images and features may vary and are subject to change.

OVER-THE-AIR UPDATES (OTA)

The GM Energy PowerShift Charger is designed to install software updates automatically, using wireless technology. After the update is finished, the system will reboot.

- Designed to work over the life of the system to improve features and fix minor bugs
- Is indicated by a yellow LED light on the GM Energy PowerShift Charger
- Triggers a notification in your vehicle's mobile app (myChevrolet, myBuick, myGMC or myCadillac) that an update is in progress
- The LED Indicator will return to a solid green light (if the GM EV is plugged in)
- If the LED Indicator does not return to normal after two hours, please call the GM Energy Customer Support Center



CARE AND MAINTENANCE

The GM Energy PowerShift Charger does not require any scheduled maintenance. However, make sure its components remain free from debris, ice or snow to optimize product longevity.

Helpful Resources

Call the GM Energy Customer Support Center at 1-833-64POWER.

- Monday – Friday: 8 a.m. – midnight ET
- Saturday – Sunday: Noon – 9 p.m. ET
- Outside business hours, customers can leave a voicemail or contact the support team via email at energyservice@gm.com

The GM Energy website is always available at

<https://gmenergy.gm.com/for-home/resources-and-support>

For issues specific to your GM EV, refer to:

- myChevrolet app
- myBuick app
- myGMC app
- myCadillac app
- Vehicle User Manual

GM ENERGY HOME PRODUCTS LIMITED WARRANTY

GM Energy provides a Limited Warranty for GM Energy Home Products, which are subject to certain terms, limitations and exclusions. Please visit <https://gmenergy.gm.com/for-home/here-to-help> for more information on the GM Energy Home Products Limited Warranty.

GLOSSARY

Frequently Used Terms and Acronyms

This glossary is a quick-reference guide to terms you may encounter in this guide, while talking to a provider or referencing other GM Energy resources.

Alternating Current (AC) – An electric current that alternates direction at regular intervals. Homes run on AC power

Amp (A) – Short for ampere, a unit used to measure electric current (i.e., how fast an electric current flows). Usually used in the context of EV charging (e.g., a 50-amp EV charger)

Battery electric vehicle (BEV) – A vehicle powered purely by a high-voltage battery. There is no gasoline engine and, therefore, zero tailpipe emissions

Bidirectional – Refers to the ability to direct power through charging or discharging. Discharging capabilities are only available when the GM Energy PowerShift Charger is paired with the GM Energy V2H Enablement Kit. This only works on GM EVs equipped with bidirectional technology

Charging – Replenishing an EV battery with electricity from an external source

Charging Coupler – The device attached to the cord that connects the GM Energy PowerShift Charger to a GM EV. Might also be referred to as a charging outlet or charging plug. It functions much like the hose and nozzle on a conventional fuel pump (In technical documents, this may be referred to as a CCS, which indicates it is a standard Combined Charging System)

Charging Holster – The wall-mounted unit that holds the Charging Coupler when it is not in use, included with the GM Energy PowerShift Charger

Charging Session Duration – Generally refers to the amount of time it takes for an EV to be fully charged, starting from the moment it is plugged into an EV charging station until the charging process is completed

Combined Charging System (CCS) – This configuration on the Charging Coupler enables DC fast charging capability

Commissioning – The step in the installation process that turns the system on, updates system settings and connects the system to your Wi-Fi network. Final approval to operate may be dependent on inspections by local jurisdiction representatives

Compatible GM EV – A General Motors electric vehicle that is equipped with discharging capabilities. For compatibility details, refer to the [GM Energy website](#)

Direct Current (DC) – An electric current flowing in a single direction. EV batteries store energy as DC power

Electric Vehicle Supply Equipment (EVSE) – Any equipment, such as a wall-mounted charger or a portable cord set, used to charge an EV. The GM Energy PowerShift Charger is an EVSE

GM EV – A General Motors electric vehicle

GM Energy – An ecosystem of energy management products and services for home, commercial and GM EV customers offering a network of charging stations, dedicated back-up home power and a suite of new products to help create a more resilient grid

GM Energy PowerShift Charger – The wall-mounted unit that delivers bidirectional charging to your GM EV and, in the event of a power outage, to your properly equipped home. In technical documents, it might be referred to as the Electric Vehicle Supply Equipment (EVSE)

ISC – Short Circuit Current

Kilowatt (kW) – A measurement of power (1 kW = 1,000 watts)

Kilowatt-hour (kWh) – A measurement of energy – how much power (kilowatts) can be supplied over a period of time (hours). This stored energy can be used/consumed at different rates. For example, 50 kWh stored in a battery could deliver:

- 2 hours of 25-kW power
- 5 hours of 10-kW power
- 50 hours of 1-kW power

Level 1 charging – The type of charging usually done at home because it uses a typical 120-volt electrical outlet, charging between 8 amps and 20 amps. Level 1 charging is typically done with a portable charging cord

Level 2 charging – Often needs to be professionally installed and can deliver faster charging times than Level 1 chargers, charging up to 80 amps. Your GM Energy PowerShift Charger provides Level 2 charging

Managed charging – Active control of how/when electricity for an EV is replenished via a power source that must also meet other power needs (i.e., demand response)

NEC – Abbreviation for the National Electrical Code. This refers to the U.S. standard for the safe installation of electrical wiring and equipment

OTA – Abbreviation for “Over-the-Air” software installation, the wireless technology that allows a system to automatically download software updates

PE – Abbreviation for “Protective Earth,” it refers to the protective grounding wire used in electric systems and cables. It may also be referred to as a protective grounding device, soil, grounding or simply as the ground wire

Range – The total distance an EV can travel on one full charge before the battery needs to be recharged

Vehicle-to-Home (V2H) – Allows the flow of electricity from the vehicle battery to the home while disconnected from the grid during a power outage

Volt (V) – A measure of the electromotive force that drives electrons through a circuit. Homes in the U.S. run on 120 volts (regular outlets) and 240 volts (higher-powered outlets)

Watt (W) – The basic measurement of power (1 kW = 1,000 watts)