TESLA

SOLAR PANELS
SYSTEM MANUAL

YOUR
SOLAR PANELS SYSTEM

Congratulations on your new solar panels system. Welcome to the Tesla family and the energy revolution. Your beautiful and durable solar system will produce clean, renewable energy for years to come.

This manual walks you through each step of activating, monitoring, and maintaining your solar system. If you have any questions about this manual or other functions of your solar system, please contact Tesla Customer Care.

CONTENTS

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

Your safety is Tesla's top priority. Follow these precautions around your solar system and related electrical equipment. If you believe your solar panels system requires repair, or your inverter displays an error message, please contact Tesla Customer Care for guidance.

SYMBOLS IN DOCUMENT

Throughout this manual, there are steps and procedures that present hazardous situations. The following signal words are used to identify the degree or level of hazard seriousness. Failure to read and comply with any of the limitations noted herein can result in serious bodily injury or death and/or property damage.

DANGER:
Indicates the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if ignored.

WARNING:
Indicates the presence of a hazard that COULD cause severe personal injury, death or substantial property damage if ignored.

CAUTION:
Indicates a hazardous situation which, if not avoided could result in minor injury or damage to the equipment.

NOTE:
Indicates an important step or tip that leads to best results, but is not a safety or damage related.

SPECIFIC SAFETY INFORMATION – READ AND FOLLOW

DANGER: **Your solar system generates electrical current.**
Do not try to service the system, disconnect wires, open electrical panels, or modify any portion of your equipment in any way. Contact with electrically active parts of a photovoltaic (PV) system and related equipment can result in burns, sparks, and lethal shock.

DANGER: Do not walk on the roof without being trained and using required safety equipment. Walking on a roof is a fall hazard and can result in serious injury or death.

NOTE: Opening or altering electrical equipment by anyone other than a Tesla approved technician may void your warranty.

SOLAR SYSTEM COMPONENTS

Inverter A central component that converts solar-generated power from Direct Current (DC) voltage to Alternating Current (AC) voltage for your home's use.

Breakers Switches inside electrical panels that protect your home from harmful power surges.

Disconnect A switch, operated by a large handle, that disconnects or interrupts the electrical circuit.

Neo Gateway For homes without Powerwall, a Neo Gateway is installed for system monitoring.

SOLAR SYSTEM ACTIVATION

Tesla Customer Care notifies you when your utility company approves the operation of your solar system. If your system is approved and not yet turned on, you can activate your solar system with guidance from **Tesla Customer Care**. Turn on your system components in the following order:

Breaker

1. **Turn on the breakers in your main electrical panel**

   Go to your main electrical panel. Most electric panels are mounted on an outside wall, or mounted in a garage, basement, or closet.

   Find the breakers labeled **Solar System, PV, Photovoltaic Backfeed,** or **Tesla**. Switch them ***On***.

   You may have an additional sub-panel. If you do, check to see if there are additional solar breakers in the sub-panel and switch them ***On***.

Disconnect

2. **Switch on the external AC and DC disconnects**

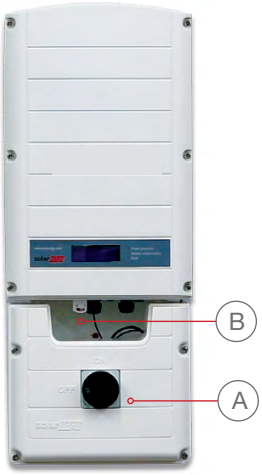
   If your solar panels have one or both of these, switch them ***On.***

3. **Switch on the inverter**

   Inverters commonly installed along with Tesla Solar Panels are shown below. If yours is not shown, or if you need assistance activating your inverter, please contact Tesla Customer Care. Once you complete these steps, it may take about 5 minutes for the inverter to start producing energy.

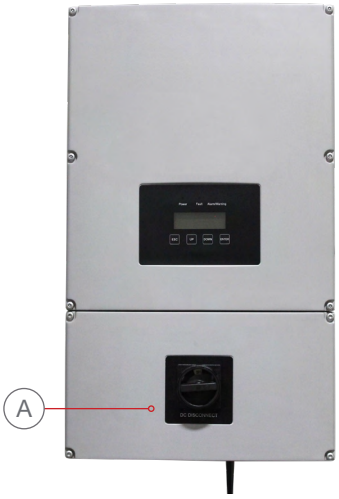
   A. Turn the DC disconnect dial ***On***.
   B. If you have a SolarEdge inverter, turn the power switch ***On***.
      If you have multiple inverters, you can turn them ***On*** in any order.

SolarEdge



ABB

Delta



HOME ENERGY MONITORING

Connecting to Your Neo Gateway

For homes without Powerwall, connect the Neo Gateway to monitor energy production from your solar panel system. For system monitoring, you need an always-on Internet connection, a router with an open Ethernet port, an AC power outlet, and the Gateway.

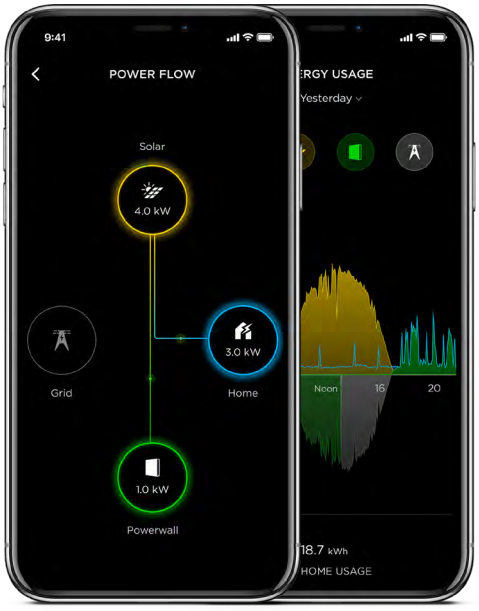
1. **Download the Tesla mobile app on your smartphone.**

2. **Log into the Tesla mobile app.**

3. **Connect the Neo Gateway to your router.**
   Use the included Ethernet cable to connect the Neo Gateway to your router.

4. **Turn on the Neo Gateway.**
   Plug your Neo Gateway into a power strip near your router using the included power supply. The power light on top will glow white.

5. **Watch for a signal.**
   The Neo Gateway should be connected. If you see a **WEAK SIGNAL** notification, move the Neo Gateway closer to the inverter until the notification disappears. For any other error messages, please contact **Tesla Customer Care**.



Tesla Mobile App

Use the Tesla mobile app to monitor your solar panels as well as products like Powerwall or your Tesla vehicle. The app gives you visibility into your solar panels power generation and home energy use. The app also sends alerts from Tesla Customer Care if Tesla detects issues with your solar panels. Most issues can be resolved remotely by Tesla Customer Care. If not, Tesla sends a technician directly to your home.

SOLAR SYSTEM PERFORMANCE

Your solar system performance is measured by how much energy is generated over time. Energy production can vary from month to month based on seasonal weather conditions. Other factors that can hinder production include:

- Unexpected shading due to new tree growth
- Debris or dirt on the panels
- Long periods of rainy or snowy weather

You can find expected performance information on your solar panels layout document. You can also use the Tesla mobile app to follow your energy production in real time.

SOLAR PANELS MAINTENANCE

Solar panels require routine maintenance. Minor care on your part can ensure better system performance.

Shade Management

Shade on your solar panels can hinder electricity production. Keep trees or other tall plants trimmed to prevent shade on your solar panels.

Solar Panels Cleaning

Cleaning your panels occasionally to remove accumulated dust, pollen, and leaves maintains system performance. How often you clean depends on where you live. Ordinarily, you can rinse off panels with a water hose from ground level to remove accumulations. Rinse only the glass cover of the panels; do not rinse wiring or areas underneath panels. For safety and performance reasons, rinse panels only when the sky is overcast, or when the sun is low in the sky, as panels can become hot under intense sunshine.

If you have excessive soiling, such as bird droppings, you may wish to hire a local solar panel cleaning service.

Inverter Service and Replacement

If your inverter is still under its 10-year warranty and you experience an issue with the inverter, please contact Tesla Customer Care to make a warranty claim against the manufacturer and receive inverter service, repair, or replacement.

If your inverter is no longer under warranty and you experience an issue with the inverter, please contact Tesla Customer Care as the system warranty may cover service, repair, or replacement of the inverter.

Snow or Ice

Do not shovel snow off your solar panels. While accumulated snowfall can cover panels and temporarily reduce production, this is not a cause for concern. Your system is designed with annual energy production in mind, and occasional inclement weather is expected.

WARRANTY AND SERVICE

Solar Panels Warranty

Review your Warranty Agreement for detailed information about the coverage of your system over time.

How to Get Warranty Service

In the rare case that your solar system is not operating properly, please contact Tesla Customer Care. If Tesla determines that a problem cannot be diagnosed or resolved remotely, Tesla Customer Care will arrange for service. If the issue is covered by warranty, your solar panels will be repaired at no cost to you. If the issue is not covered by your warranty, Tesla Customer Care will assist you in resolving the issue and any service charges that may apply.

Inverter Warranty

Review your inverter Warranty Agreement for detailed information about the inverter coverage over time, typically 10 years. If you experience any issues with your inverter during the warranty period, please contact Tesla Customer Care to make a warranty claim against the manufacturer and receive inverter service.

If you experience any issues with your inverter after the inverter warranty period, contact Tesla Customer Care. In some systems, Tesla warrants that, after the end of the manufacturer's inverter warranty period, and under normal use and service conditions, your system inverter will be free from defects in workmanship, or from defects in or a breakdown of materials or components, for the remainder of the Solar Panels system warranty, typically a period of 20 years.

FREQUENTLY ASKED QUESTIONS

You can find detailed expansions of these FAQs and more at:
www.tesla.com/support/energy/own/solar-panels/getting-started.

When can I turn on my solar system?

Once the utility has granted permission for your system to operate, Tesla Customer Care will contact you to help turn your system on. If you receive an email, door hanger, or tag on your electric meter regarding your solar system, please contact Tesla Customer Care.

How much energy do my solar panels produce?

The amount of energy that your solar panels produce depends on your system size, as well as environmental factors such as shade, dust, debris, snow, and weather. Refer to your customer agreement for more information on solar panel layout.

Can I see how much solar energy my home is generating and using?

The Tesla mobile app gives you real-time and historical visibility into your solar production and home energy usage. Use the Tesla mobile app to follow your energy production in real time.

How long can I expect my solar panels to last?

Tesla installs solar power systems to be durable and effective over the long term. Many components of your system are designed to last for decades. As an example, testing by outside researchers has shown that solar panels installed by Tesla have a useful life of 35 years. You should review your Warranty Agreement for detailed information about the coverage of your system over time.

If you have a Tesla PPA or lease, then Tesla will remove the system at the end of the contract term, typically 20 years. At the end of the contract term, you may have the option to renew so that you can continue to generate solar power.

Will I still be subject to electric rate increases if I buy solar panels?

Even with solar, you will most likely have a residual utility bill and those rates may fluctuate. The bill depends on the size of your solar panels system relative to your energy demand, as well as your peak hour energy use. You can minimize utility rate changes by using less energy during peak hours. Peak rates may apply only in some markets and with some rate plans.

What happens when the sun goes down?

Your solar panels do not produce electricity in the absence of sunlight. The system inverter goes into “Night Mode” when there is not enough daylight to produce energy. If you have a battery like Powerwall, then you can use stored electricity to help meet your nighttime energy needs. If you don’t have a battery, then at night your home draws power only from the utility grid.

What happens to my solar production on a cloudy day?

Your solar panels still generate electricity on cloudy days, since even diffuse sunlight activates solar power production. Solar panel output on a cloudy day will be less than on a cloudless day, but may still produce a meaningful amount of electricity.

What happens if it snows on my solar panels?

Do not shovel snow off your solar panels. While accumulated snowfall can cover panels and temporarily reduce production, this is not a cause for concern. Your system is designed with annual energy production in mind, and occasional inclement weather is expected.

What should I do if my solar panels have become shaded?

Shade on your solar panels will reduce electricity production. Keep trees or other tall plants trimmed to prevent shade on your solar panel system.

How do I clean my solar panels?

Cleaning your panels occasionally removes dust, pollen, and leaves, and maintains system performance. How often you clean depends on where you live. Ordinarily, you can flush the panels with a water hose from the ground to remove accumulations. Rinse only the glass cover of the panels; do not rinse wiring or areas underneath panels. For safety and performance reasons, rinse panels only when the sky is overcast, or when the sun is low in the sky, as panels can become hot under intense sunshine.

If you have excessive soiling, such as bird droppings, you may wish to hire a local solar panel cleaning service.

Will I still have solar power if there is a utility power outage?

If you don't have a battery like Powerwall, your solar panels will not work during a utility outage due to grid safety requirements. However, if you have both solar panels and Powerwall during an outage, your home's power supply operates as an independent system from the utility grid, running on solar energy during the day and storing excess energy for later use.

Can I add a Powerwall to my existing solar panel system?

Yes, Powerwall can be integrated with your existing solar panels. Powerwall is currently compatible with solar inverters from SMA, SolarEdge, Enphase micro inverter, Delta, and ABB.

Visit www.tesla.com/powerwall to get started adding a Powerwall to your existing solar panel system.

If I have Powerwall, how quickly does Powerwall restore power to my home?

Powerwall can detect an outage, disconnect from the grid, and bring power back to your home in a fraction of a second. Powerwall can keep your appliances running without interruption.

What do I do if my inverter displays an error message?

If your inverter displays an error message, contact Tesla Customer Care. One of our experts will gather the necessary information to ensure that we're able to repair your system as quickly as possible.

What if my solar panels need repairs?

DANGER: Never attempt to fix or repair your solar power system. Your solar panel system operates at high voltage and contact with any live parts can result in burns, sparks, and lethal shock. Only Tesla-approved installers can repair Tesla solar panel systems. Do not disconnect wires, open electrical panels, modify, or damage the equipment in any way. Contact Tesla Customer Care to perform repairs.

What if my roof needs repairs after I've installed solar panels?

DANGER: If you need to make repairs on the roof for any reason, your solar panels may need to be removed and reinstalled. Please contact Tesla Customer Care if you want to start this process.

ADDITIONAL RESOURCES

For resources visit the Tesla Solar Roof Support Pages https://www.tesla.com/support/energy/solar-panels/after-installation/what-to-expect-after-installation.

You can use the Tesla mobile app or visit www.tesla.com/teslaaccount to follow your energy production in real time.

TESLA