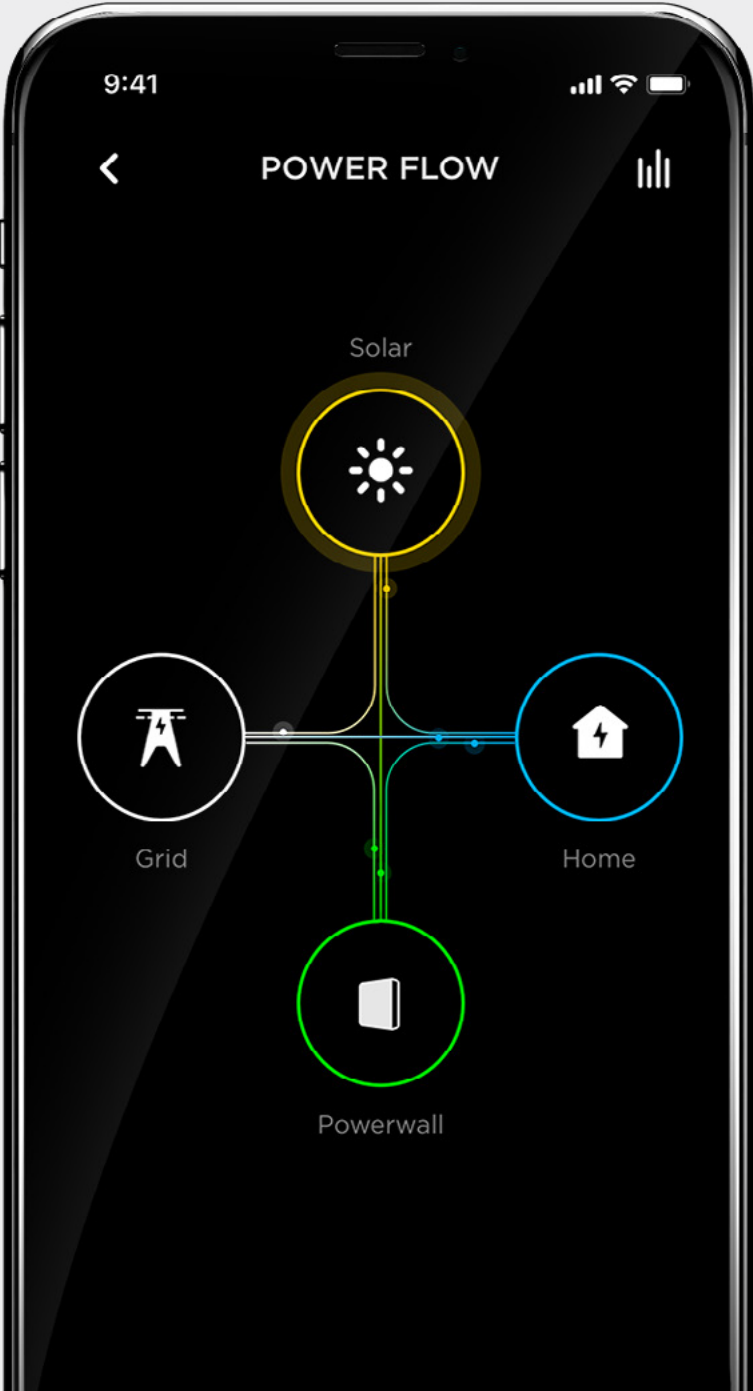


Tesla Energy Plan Customer User Guide



Overview

Connecting Tesla Energy Plan, Powerwall and solar together as part of the Tesla Virtual Power Plant (VPP) maximises the value of your system while helping stabilise the grid to prevent outages in your community.

Each system is working collectively as a network using Tesla's world-leading software, creating the grid of the future and ensuring energy is distributed where it is needed most. On the Tesla Energy Plan, you are helping the grid be more stable, preventing the use of fossil fuels and reducing energy costs for you and those in your community.



Value

- Annual \$220 (incl gst) grid support credits for each Powerwall owned, calculated equally across 365 days and applied to your Tesla Energy Bill monthly.
- Receive a competitive feed-in-tariff for any solar energy exported to the grid.
- Competitive and flexible Time of Use tariffs for energy used from the grid, where you can take advantage of peak, off-peak and solar sponge rates & manually schedule appliances to run when these rates are at their cheapest.
- Support SA's electricity network, while helping to accelerate the world's transition to a sustainable energy future and driving electricity costs down for you and those in your community.
- Leverage Tesla's world leading technology to help minimise the cost of using energy from the grid by reducing imports during peak periods.
- Help support Australia's future energy security.
- Assured 20% back-up reserve in the instance of a grid outage.



System Behaviour

Overview

The Tesla Energy Plan's peak, off-peak and solar sponge periods match the time-of-use periods of SA Power Networks tariffs that you are subject to as a residential customer in South Australia.

Your Powerwall creates value by shifting your home's energy usage from peak to the solar sponge and off-peak periods. This 'load shifting' minimises your bill and allows Tesla to reduce its cost to power your usage in order to offer you low energy rates.

Your Powerwall constantly forecasts your solar consumption and usage based on historical patterns. It uses these forecasts to typically prioritise charging from your solar production when it exceeds your usage (e.g. in Summer typically). When solar production is insufficient to offset your peak usage, it will charge from the grid during solar sponge or off-peak periods (e.g. in Winter). Your Powerwall then discharges during the peak period, helping reduce your electricity bills.

Frequency Support

Your Powerwall is configured to provide frequency support to the grid at all times. This type of service is rarely needed (about once a month on average, although contingency events are unpredictable) and consumes very little energy. Frequency support is a service that all Powerwalls enrolled in the Tesla Energy Plan provide simultaneously as a fleet, which is not only critical to keep the lights on in South Australia, but also generates value that is shared with you in the form of a grid support credits and competitive energy rates.

Traditionally, Fossil Fuels have been used to perform these services, but Powerwall can react 100 x times faster with clean energy.

At times, Tesla may charge your Powerwall from and discharge to the grid for energy arbitrage, using the low rates stored to sell back when energy costs are high

Tesla shares this value with customers through annual grid support credits applied monthly to your bill and competitive Time of Use energy rates. This enables you to take full advantage of lower off-peak and solar sponge times to power your home when your Powerwall or solar is being managed, helping to offset any consumption from the grid during peak times when you are typically using electricity.

Wholesale Market Arbitrage

Tesla's world leading software is constantly assessing the best action to participate in the energy market while reducing your energy bill by learning your consumption behaviour and also assessing opportunities to minimise grid fluctuations by:

- Charging your Powerwall from the grid with cheap Time of Use rates.
- Exporting solar or stored energy from Powerwall to the grid when demand and prices are high.
- This may lead to instances when your Powerwall is idle, waiting for an opportunity to discharge when prices are high.

For example:

If wholesale market prices are low or negative, which is typically due to an oversupply of electricity in the grid (e.g. during solar sponge or off-peak times typically) Tesla may charge your battery or import energy from the grid to take advantage of these prices and cover your home's energy use.

If wholesale market prices are high, which is typically due to an undersupply of energy in the grid (e.g. during peak times or unexpected outages) Tesla may export your solar system or Powerwall's energy to the grid to take advantage of these prices. Sometimes, your Powerwall may be ready to discharge but will wait for prices to increase further, leading it to remain idle.

While your Powerwall is being managed, your system may draw from the grid more frequently depending on the season. For example:

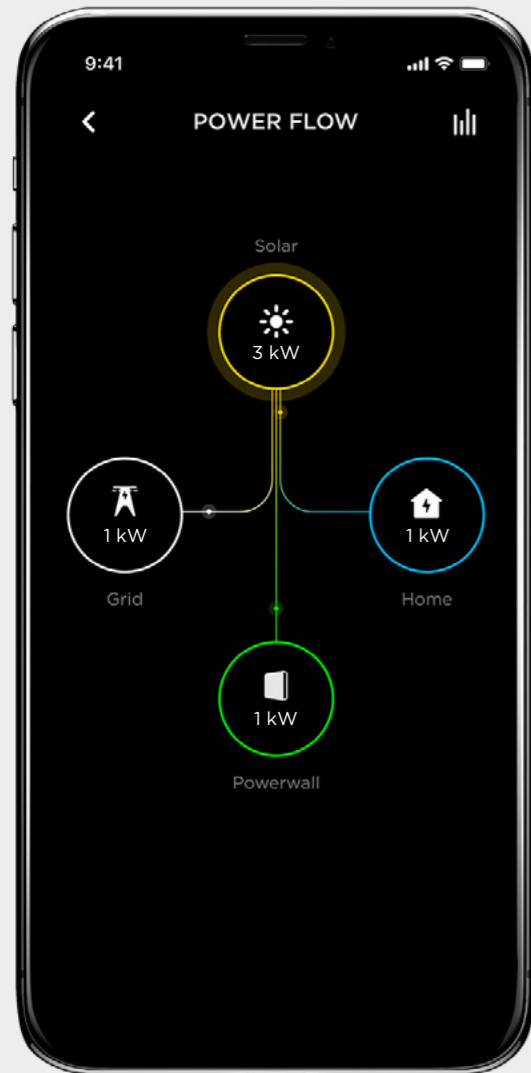
Summer

There will be more solar energy during summer which means your Powerwall will be charged more from solar than the grid.

Winter:

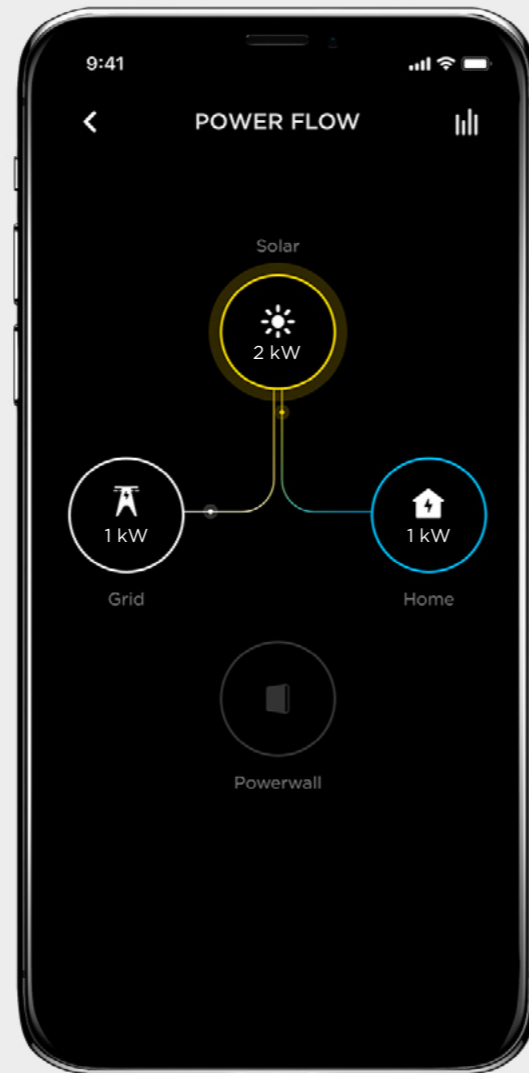
There will be less solar energy which means your Powerwall will be charged more from the grid.

What you may see when there is sun



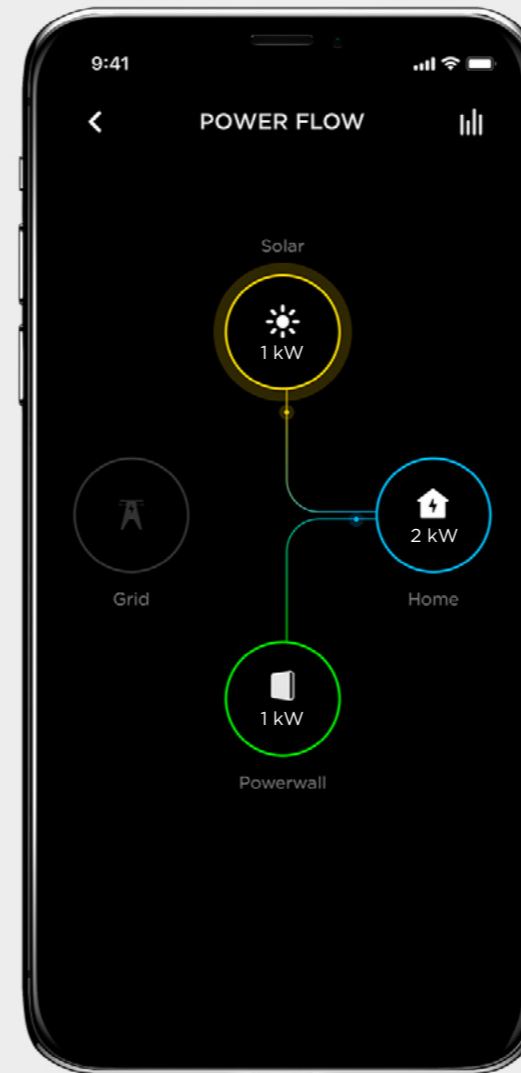
Solar powering the home, Powerwall and the grid

Solar is generating energy, covering your home's energy use, charging Powerwall and exporting to the grid. You are receiving a competitive feed in tariff for your solar exports.



Solar powering the home exporting to the grid

Solar is generating energy to power your home. Powerwall is not charging as it may be full or is planning to charge later in the day. Excess energy is sent to the grid and you receive a feed in tariff.



Solar & Powerwall powering the home

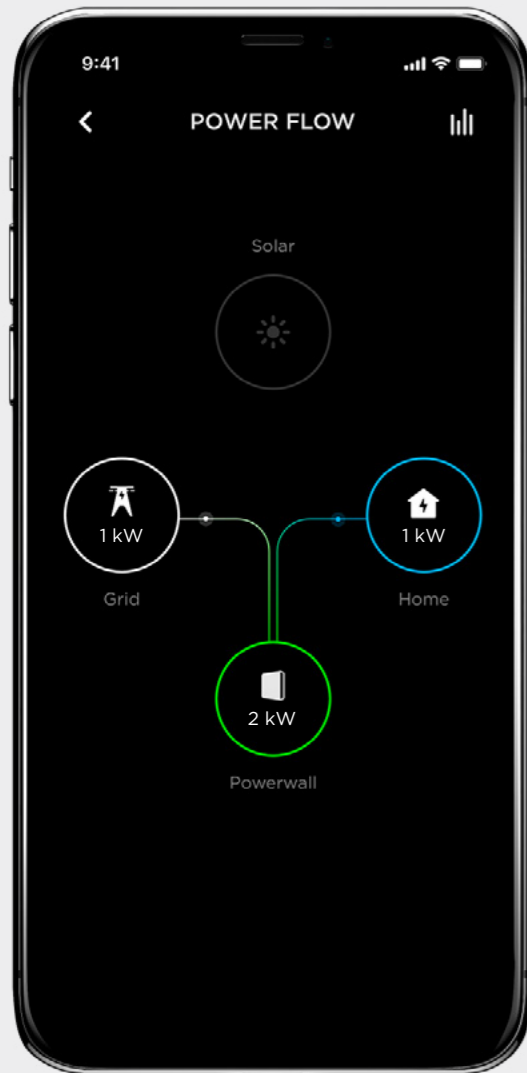
Not enough solar energy is being generated to power your home, so Powerwall provides the additional energy. This is typical of peak period when Powerwall is not empty.



Solar & grid powering the home

Not enough solar energy is being generated to power your home, so the grid provides additional energy. Powerwall is empty or, if during solar sponge or off-peak period, may be waiting for peak period to power your home. Powerwall will charge when there is excess sun available or rates are low. You are charged with flexible time of use rates

What you may see when there is no sun



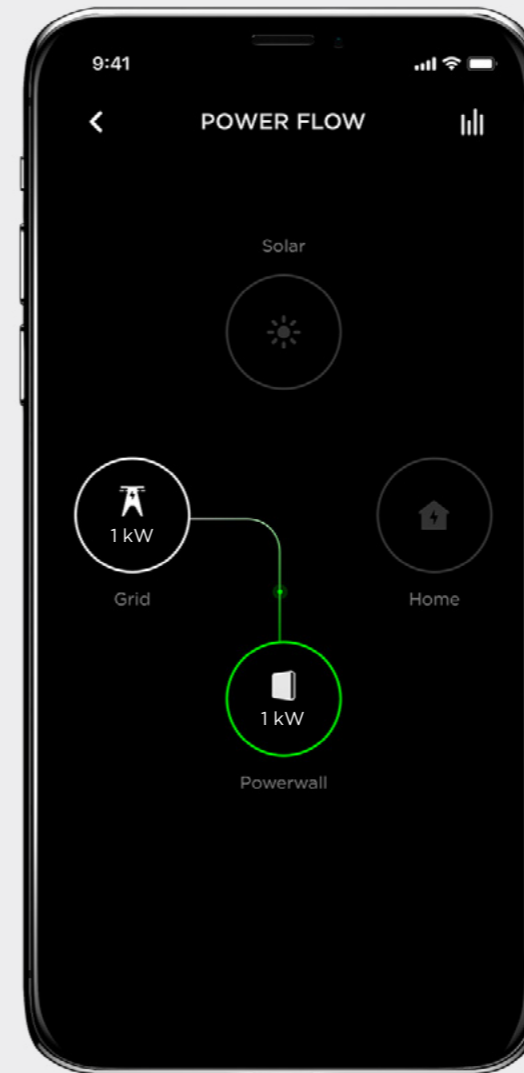
Powerwall discharging to grid while powering the home

Powerwall discharging to grid while powering the home. Powerwall is powering your home while also sending energy to the grid (for grid services or high wholesale prices). You receive a feed in tariff for grid exports.



Grid powering the home

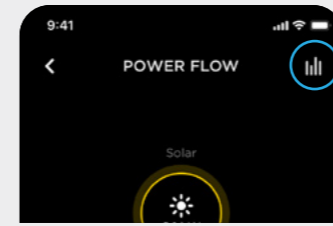
Your home is powered by the grid and you are charged competitively low Time of Use rates. Powerwall has been fully discharged or is reserving capacity to provide frequency support or to optimise energy arbitrage.



Grid importing to Powerwall

Powerwall is being charged from the grid to take advantage of low solar sponge or off-grid rates, or of low/negative wholesale energy prices. You pay the time of use rate to import from grid, but receive grid support bill credits and a feed in tariff for any exports back to the grid.

Understanding Energy Flows - High Solar PV Production



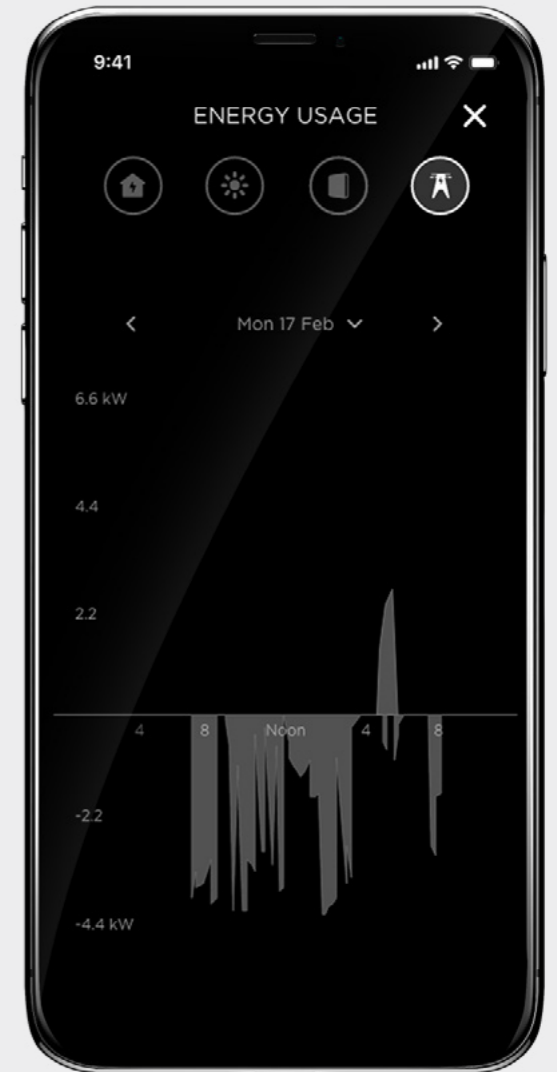
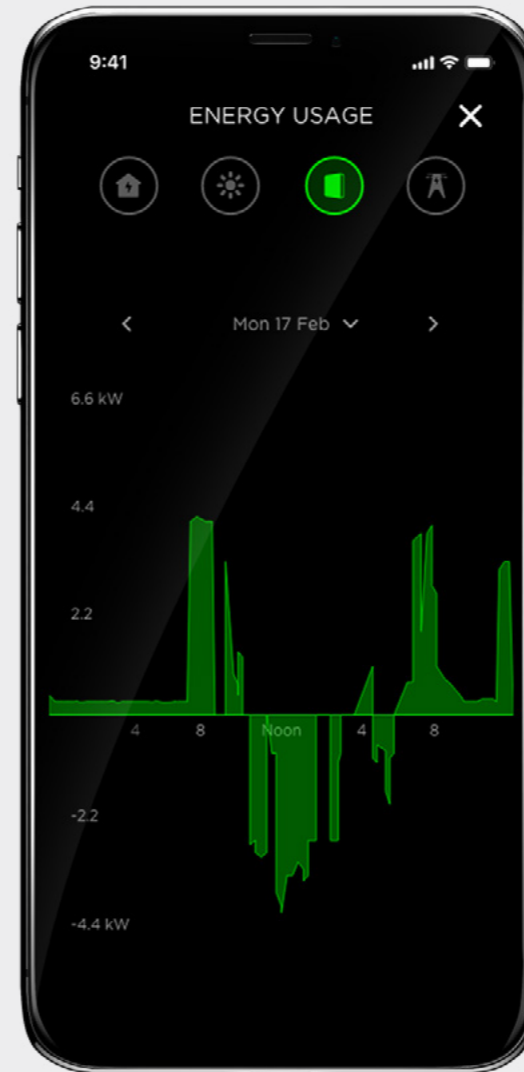
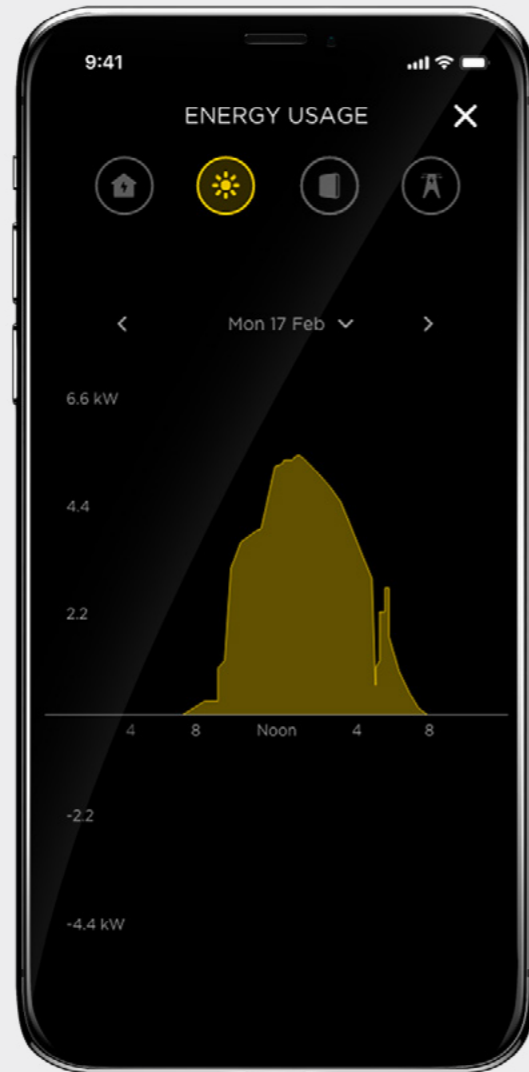
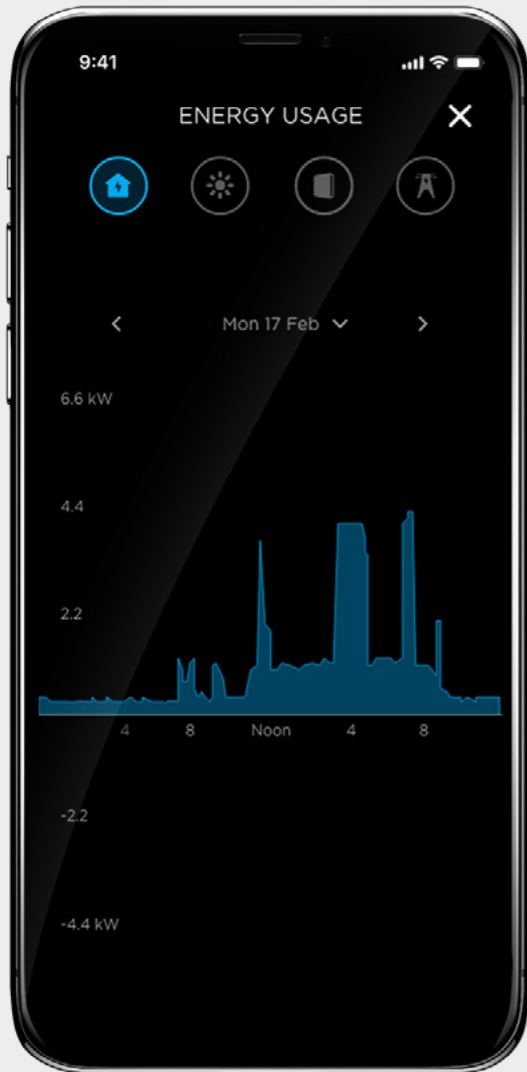
In POWER FLOW, click the graph icon in the right hand corner for detailed performance across the day, week, month and year. As you're part of the Tesla VPP, your Powerwall is optimised and creates value that helps reduce electricity costs for you and others on the VPP. This is normal, is included in your warranty and is creating value and helping reduce electricity costs for you and others on the VPP.

Energy consumed by the home

Solar energy produced

Energy charged & discharged by Powerwall

Energy imported & exported from the grid



Understanding Energy Flows - Low Solar PV Production

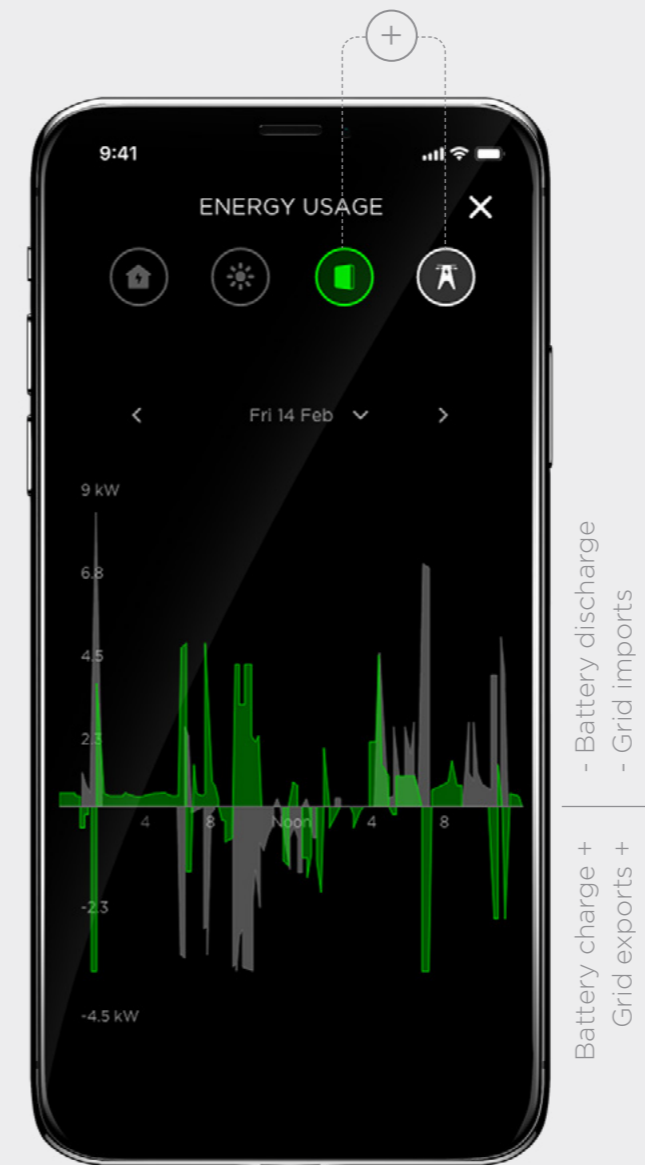
Scenario 1
Powerwall discharging
to cover your home's
energy use



Scenario 2
Solar energy produced +
excess energy not used
by your home or Powerwall
exported to the grid



Scenario 3
Grid imports +
Powerwall charging due
to an oversupply of energy
in the grid or low/negative
energy prices



TESLA