

Megapack



About Megapack

Battery storage is an increasingly important element of the world’s transition to sustainable energy. To match global demand for massive battery storage, Tesla designed and engineered a new battery product specifically for utility-scale projects: Megapack.

By building a fully integrated product, Tesla significantly reduced the complexity of large-scale battery storage, providing an easy installation and connection process in a product with 10 times the energy density of a Powerpack system. Megapack achieves significant cost and time savings compared to other battery systems and traditional fossil fuel power plants.

Using Megapack, Tesla can deploy an emissions-free 250 MW, 1 GWh power plant 4 times faster than a traditional fossil fuel power plant of that size.

Every Megapack arrives pre-assembled and pre-tested in one enclosure from our Gigafactory – including battery modules, bi-directional inverters, a thermal management system, an AC main breaker and controls. No assembly is required, all you need to do is connect Megapack’s AC output to your site wiring.

For utility-size installations, Megapack can act as a sustainable alternative to natural gas “peaker” power plants, which cost millions of dollars per day to operate and are some of the least efficient and most polluting plants on the grid. Instead, a Megapack installation can use stored excess solar or wind energy to support the grid’s peak loads.

Learn more about [Megapack](#)

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Location

Geelong, Victoria

Victorian Big Battery

Neoen have contracted Tesla to deliver and operate a 300 MW / 450 MWh Megapack system, with market optimisation using Tesla’s proprietary autonomous bidding platform Autobidder.

Tesla’s Megapack system will support the Victorian Government’s 50% renewable energy target (VRET) by 2030, allowing more solar and wind energy to be stored for times of high demand. This provides critical support, security and reliability services over the summer peak period.

About Autobidder

Autobidder provides independent power producers, utilities and capital partners with the ability to autonomously monetise battery assets. Autobidder is a real-time trading and control platform that provides value-based asset management and portfolio optimisation, enabling owners and operators to configure operational strategies that maximise revenue based on their business objectives and risk preferences.

Implemented on the Hornsdale Power Reserve 100MW / 129MWh battery operating in the Australian spot electricity market deployed in December 2017, Autobidder far surpassed revenue expectations in its two and a half years of operation and has fundamentally altered the landscape of Australia's electricity market.

As Tesla continues to deploy Autobidder across key market segments including; Utility, Residential and C&I Virtual Power Plants (VPPs), no other solution has come close to generating a comparable track record of value creation in merchant revenue streams for battery storage. Autobidder's core optimisation technology is operating globally for customers and partners, delivering the key value streams necessary to further accelerate the uptake of energy storage worldwide.

Learn more about [Autobidder](#)

Megapack Applications

Some of the benefits offered by a battery of this size include:

Energy Shifting

Store and dispatch excess capacity from renewable sources

Voltage and Reactive Power Support

Provide power support at local and bulk power levels

Transmission and Distribution Support

Supply capacity to defer or eliminate the need to upgrade infrastructure

Frequency Regulation and Support

Maintain grid stability by rapidly changing charge or discharge power in response to changes in grid frequency

Capacity Support

Discharge at times of peak demand to reduce demands on distribution and transmission infrastructure

Inertia

Virtually emulate mechanical inertia in response to grid disturbances, enabling more renewable generation to reliably replace fossil fuel generation

Market Participation

Provide service to the grid in response to signals sent by system operators

