

Adding an extra solar battery

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Renewable solar energy or photovoltaic (PV) systems are rapidly integrating themselves into the UK residential, commercial, and industrial sectors. As a side effect, the country has been seeing a steady uptake in the use of Battery Energy Storage Systems (BESS) to further amplify the potential of these solar systems. But how do we combine these eco-friendly titans to ensure a greener future? This guide will cover everything you need to know when adding batteries to existing solar systems for the first time.

The primary benefit of adding batteries to existing solar systems is the increased energy independence it provides homeowners. With high irradiance (sunny day) values throughout the day, a solar energy system can provide more electricity than a residence needs. A BESS allows homes to store this extra power for later use, such as when the sun isn't shining or on a gloomy day. You may save money on your energy bill by using your extra power at home instead of sending it back to the grid.

The lower energy bill is only one perk; it also provides homes with safety and security. Extreme weather makes it challenging for power companies to maintain a constant supply of electricity, and such extreme weather is becoming increasingly common as a result of climate change.

Adding batteries to existing solar systems ensures a continuous flow of electricity, even if the grid fails. (You will need to get an Emergency Power Supply (EPS) circuit or whole house gateway installed for continuous energy during power cuts). The necessity for energy in an emergency or for activities that require a constant supply of electricity makes this energy independence even more important for households.

The inverter controls all electrical flow in a solar power system. The inverter and battery ratings must match for proper integration. Read the inverter's manual to learn about its features and capabilities before installing the battery storage system. Documentation will contain hybrid system characteristics and battery capacities. By altering these parameters, a battery storage system can easily integrate with an inverter.

Hybrid inverters are a viable alternative which optimises solar panel-battery connection. They make it easy to transfer solar power to a battery bank. Due to its compatibility and performance with PV systems, the Agave hybrid energy storage system with an integrated inverter is a great example.

Adding a battery is a significant step towards energy independence for your house, but doing so requires careful planning and consideration. Below, we've outlined some of the most crucial aspects of this journey.

The effectiveness of a solar system gradually declines over time. You shouldn't stress if your solar panels aren't generating enough power. Here, we'll show UK households how to delay the inevitable degeneration of their solar power setups.

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Performance Analysis - You need to monitor the PV system's output closely and complete a long-term performance study. Evaluate the energy produced at the time of consumption vs the newly installed value. If there is a drastic change in the power reading, it means the panels are getting old.

There is a prominent concern over whether British homeowners should replace their entire solar PV generation equipment. Is it a good idea to swap out the old PV system for a newer, more powerful one that uses batteries to store energy?

Efficiency Enhancement - Due to rapid technological advances, the system's efficiency will increase considerably after it has been completely replaced with new equipment. The freshly installed PV panels will have the most cutting-edge equipment for harnessing the sun's energy and transforming it into usable electricity. Because of this, households will have access to more surplus energy, lowering their energy expenditures.

Warranty - An extended guarantee of twenty years or more covers the new solar panels entirely. This implies that in the event of faults in the PV system, the homeowner has more time to make a claim.

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