



SOUTH STAFFORDSHIRE COUNCIL BOLSTER RESILIENCE AND FLEXIBILITY WITH POWERSTAR

Client:

South Staffordshire Council

Application:

Site-wide UPS

Demand Side Response

Location:

West Midlands, UK

Technology:

250 kW BESS & UPS

Project Date:

2018

CHALLENGE

South Staffordshire Council were looking to install a battery storage system that not only provided them with site-wide UPS resilience, but one that was also capable of bolstering income from grid revenue schemes and managing the power from their existing 100kW solar array. With on-site servers responsible for critical data, reliable energy resilience was vital to protect systems in the event of power disruption.

SOLUTION

After a thorough site survey and analysis of requirements, Powerstar recommended the installation of a 250kW Battery Energy Storage System (BESS), providing site-wide UPS.

As well as protecting their site and data servers from the risk of power disruption, the battery system can also store excess power from their solar array and manage its export to grid.

RESULTS

The system has already protected the site from five blackouts, providing sitewide resilience for 2.5 hours at peak load. This also allowed South Staffordshire Council to remove their carbon-intensive backup generator while maintaining energy resilience.

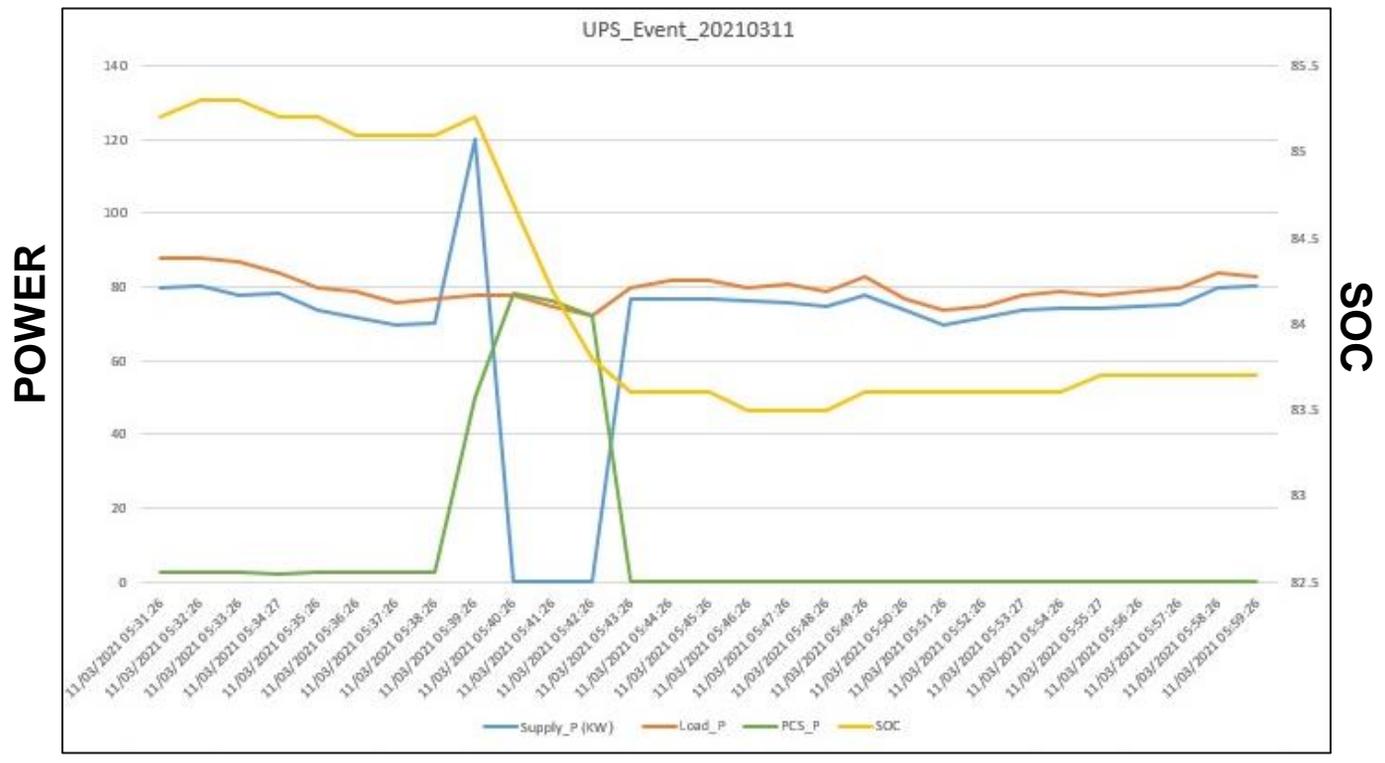
By managing the energy generated by their rooftop solar, the installation also ensures the site generate from solar without exceeding their agreed export capacity, eliminating the risk of penalties from National Grid.



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ANALYSIS

The below graph shows a drop in voltage to 0, denoting a transient power cut as 5:40am on 11 March 2021, for a duration of roughly 3 minutes. The full load for the site was supported by the installed battery UPS system during this time to prevent any loss of power, keeping all electrical equipment, including IT systems and servers, up and running as normal.

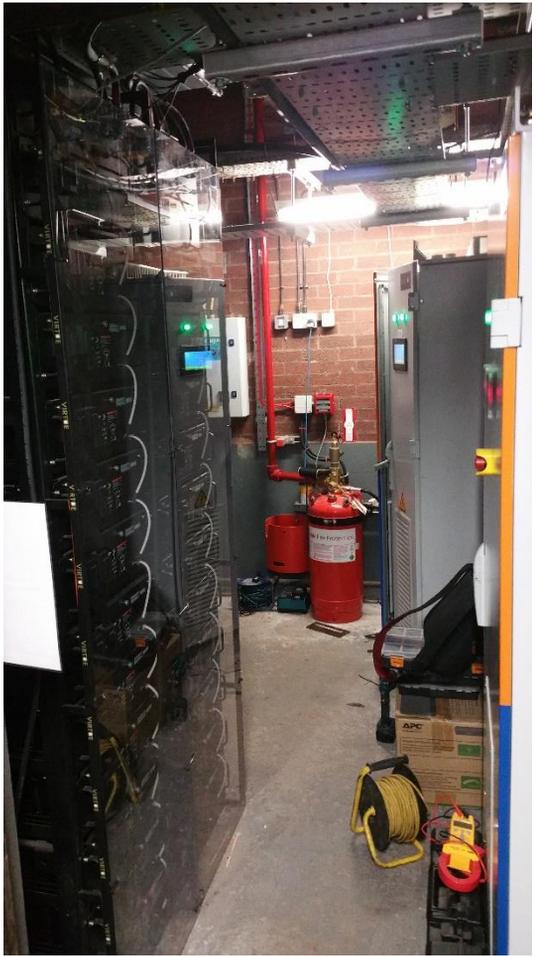




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INSTALLED SOLUTION

The following photos show Powerstar's site-wide UPS battery resilience system for South Staffordshire Council. This solution was installed into an existing room on-site.



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