

SMARTset and Socomec combine to supercharge UPS Electric Delivery Plans



Founded in 1907, UPS is the world's largest package delivery company and a leading global provider of specialised transportation and logistics services. With 2017 revenues of \$66 billion, UPS supports clients in over 200 countries and employs over 434,000 people.

With a central London depot inside the low emission and planned ultra-low emission zones UPS plan to expand their electric fleet to cut costs and improve the quality of London's air.



Challenge.

Charging 118 electric vehicles every night on the grid would have exceeded the capacity of their existing supply.

Increasing the capacity of the local substation was too expensive and would have taken too long to be feasible. UPS needed an alternative solution that could quickly optimise the existing supply to deliver all the power required.

In partnership with Offgrid Energy and UK Power Networks Services, SMARTset software was installed to provide an Energy Management System (EMS) integrated with a Socomec multi-function Battery Energy Storage System (BESS); SUNSYS PCS².

This smart management system delivers dynamic control of individual vehicle charging points to optimise the limited capacity grid supply.

The integrated SMARTset and SUNSYS PCS² solution provides a smart charging system that dynamically controls the charging of connected vehicles according to their needs based on planned routes and battery levels. SMARTset limits the peak load on the network and integrates with SUNSYS PCS² which monitors the depot load, through remote measurement at the substation, and makes stored energy available to the depot to cover any deficit in grid supply.

In addition SMARTset ensures that SUNSYS PCS² is able to generate income through Demand Side Response services, feeding electricity back to the National Grid.



Solution.

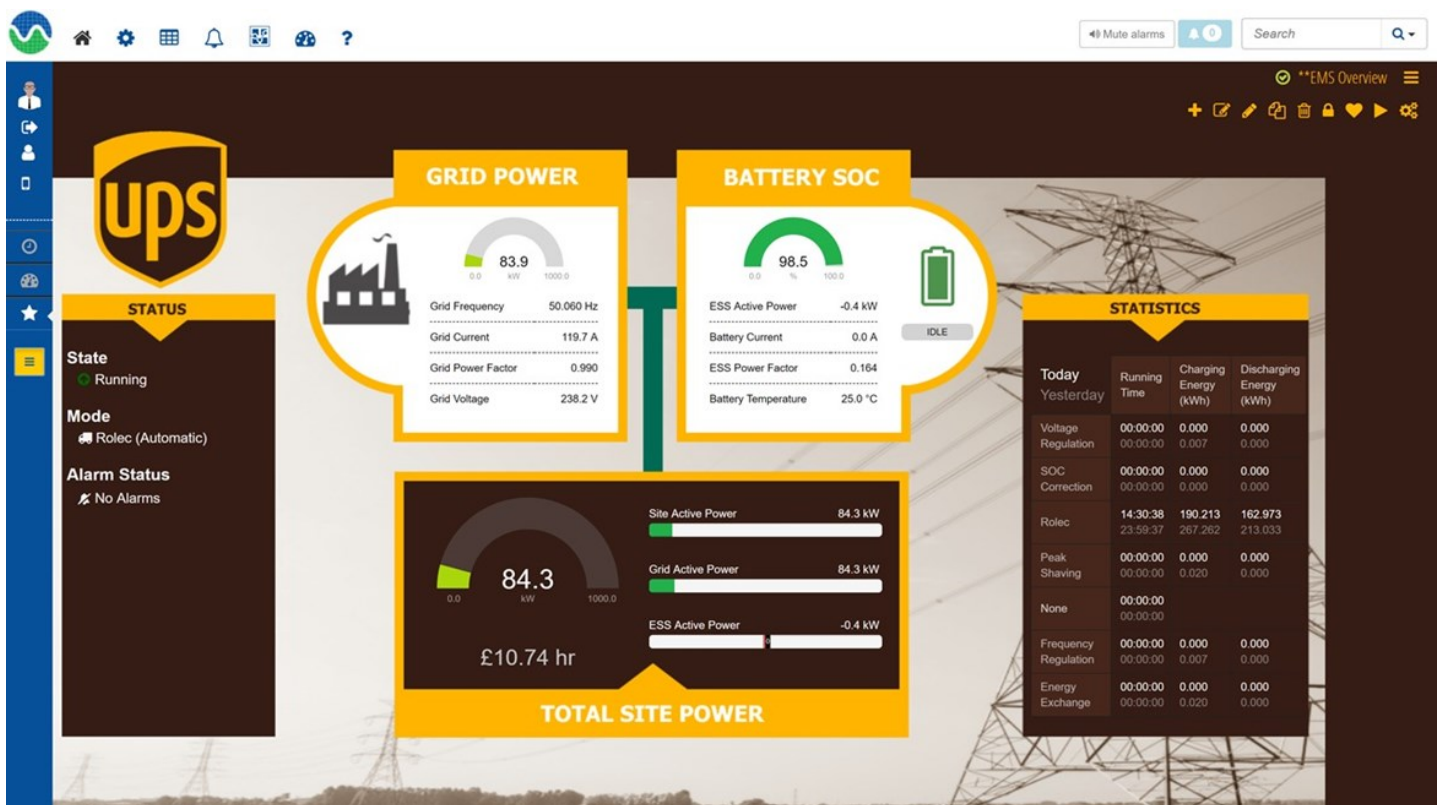


Result.

SMARTset EMS software monitors both the grid supply and the site demand as well as automating control of on-site batteries to optimise charging, maximise the available energy and reduce energy costs.

It also removes the requirement for a new electrical substation, making it faster and cheaper for UPS to increase the size of their Electric Vehicle fleet, cutting running costs and reducing the level of emissions in the capital.

The solution was funded by Innovate UK to provide a proof of concept solution ready to be rolled out across the whole fleet.



About the Socomec BESS

SUNSYS PCS² Power Conversion and Storage System stores energy when the electrical retail cost is low during low demand periods and releases it to supply the loads during peak demand when prices are high.

SUNSYS PCS² supports loads from 33kW to 1MW of power. When directly connected to the grid, SUNSYS PCS² improves the stability and the management by grid operators thanks to:

- voltage & frequency regulation
- load shifting
- peak shaving
- ancillary services for grid support

About SMARTset

SMARTset is an Industrial IoT software solution and Energy Management System. It provides a 'single pane of glass' with infinitely flexible control and visibility of local energy management, storage, usage and grid supply.

- User configurable dashboards of alarms, scheduled controls, historic and real time energy use
- Automated optimisation using; Peak Shaving, Frequency Response, Voltage Regulation, SoC Correction and user defined modes
- Delivered as a Cloud hosted SaaS application or as a Virtual or Physical Appliance

