



## Off-grid clean energy powering ABC's Filton Airfield Welfare Hub

An innovative off-grid clean energy system utilising the latest lithium-ion battery technology deployed in a joint venture with ABC Electrification and Network Rail to power the temporary welfare site on the former Filton Runway. Through use of batteries and supporting renewable assets in both solar PV and small wind turbines the intent was to remove the inherent inefficiencies of generators and run the site through a centralised management system; capturing and storing energy that was previously lost during this process for it to only be released from the batteries at a rate in line with actual demand.

### Making Diesel Generators More Efficient

- \* Run over 12 days (288 hrs total) with the compound being provided with 24 hour a day power during works.
- \* The generators operated for a total combined period of 60 hours representing 20% of that period and consuming 459 liters supported by solar PV.






*“Great example of the utilisation of emerging green technology in an established sector to increase efficiency whilst cutting costs and carbon.”*

David Foster, Babcock

- \* The equivalent 150KVA generator running for 12 days constantly on a 30% load would consume approx 4900 ltrs of diesel over the same period.
- \* By reducing the generator running time by 80% there was a reduction in the diesel consumption by **4400 litres saving over £2800 in fuel costs** and **reducing the carbon output by 10 tonnes.**

#### System overview

204 kW of combined battery storage capacity combining 30 kW of solar PV and 10 kW of wind providing 24 hour power.

 System size:	40 kW
 Storage Capacity:	204 kW
 Solar PV Generation:	27,500 kWh
 Wind Generation:	12,300 kWh
 CO2 Offset	18,228 kg/Co2