

ADEPT'S PRESIDENT'S AWARDS 2019

WINNER: CATEGORY 1 – DELIVERING CLEAN GROWTH

West Sussex County Council

Summary

County-wide solar PV rollout enabling schools to reduce their environmental impact and save money with no up-front financial commitment or ongoing maintenance burden.

Entry

West Sussex County Council (WSSCC) has a growing track record for developing and delivering successful energy projects including solar farms, largescale battery storage, rooftop solar PV installations and launching its own not-for-profit energy supplier. The authority also manages a programme of work to improve energy efficiency in schools.

With energy costs rising and education budgets under pressure, the county council committed to helping schools to save money and reduce their environmental impact through a large, roof-mounted solar PV rollout. In devising the programme, the authority needed to ensure that installation was efficient and seamless, there was no up-front cost to the schools and that they were not burdened by the ongoing cost of operation and maintenance over the 25-year duration of the project.

The authority devised a financial model using low-cost finance from the Public Works Loans Board (PWLB) to meet the capital cost of installing the systems. Under the model, each solar school would purchase the electricity generated by the panels at a significantly reduced rate compared to electricity they would usually buy from the grid. Surplus electricity not used by the school would be exported to the grid. Income from electricity sales and feed-in-tariffs would ensure that the solar panels paid back the capital cost within a defined period and delivered an ongoing revenue stream for the county council to invest in its services to residents.

Having gained approval for the investment from Members in 2018, the county council procured Portsmouth City Council as its delivery partner and set about a programme of engagement with school business managers, head teachers and governors. The aim was to give all schools the opportunity to understand the long-term benefits of the programme and the way in which it had been specifically designed to minimise the risk and financial commitment for schools. More than 18 months on, 81 solar PV systems ranging in size from 15kW and 250kW have been installed before the withdrawal of the feed-in tariff. The largest possible solar PV systems have been installed at each school to future-proof the investment and prepare for the future deployment of battery storage.

The cumulative impact of a programme on this scale is significant. West Sussex solar schools now have a combined generation capacity equivalent to WSSCC's 29-acre, 5MW solar farm at Tangmere near Chichester. By generating and using their own zero-carbon electricity on site, the schools will also reduce their combined carbon emissions by more than 1,300 tonnes per year and provide pupils with a real-life renewable energy case study that links directly to relevant curriculum subjects. With an electronic energy generation display located centrally within each school, pupils are able to easily track the amount of energy generated. Other benefits include the financial savings, which will continue to accrue over time. In the first year alone the systems will reduce the overall schools energy budget by £158,000. This will increase in the years ahead as the cost of grid electricity is predicted to increase faster than the RPI-linked price of the electricity schools buy from their own solar panels.