

EEVS Advising Department of Energy and Climate Change (DECC)

Measurement and Verification support for the Electricity Demand Reduction pilot – Phases I and II

In June 2014 DECC launched a pilot scheme to test the concept of paying organisations to reduce their electricity demand, with payments based on the demand they avoid using by installing energy efficiency measures.

The Electricity Demand Reduction Pilot (EDR) has two phases. Phase I covered winter peak capacity savings delivered in the winter of 2015/16, resulting from the auction on 29th January 2015. Phase II applies to winter peak capacity savings for both 2016/17 and 2017/18, based on an auction that took place on 21st January 2016.

EEVS has been working with the EDR team at DECC since December 2013 to deliver expert advice on the design of the scheme and provide resources to support the implementation of Phase I and Phase II of the scheme.

EDR Pilot Background

The EDR project has two objectives:

- 1) To examine the viability of EDR in the capacity market; and
- 2) To learn lessons for Government and wider stakeholders on the delivery of EDR schemes.

The EDR Pilot works by providing a financial incentive to organisations who install more efficient electrical equipment leading to a reduction in their electrical demand during peak hours i.e. between 4-8pm on weekdays (excluding GB-wide bank holidays) between the start of November and the end of February. The payment is based on the avoided demand delivered by installing the energy efficiency measures. This concept is new to the UK, but is used in parts of the US, where units of avoided consumption are often referred to as 'negawatts'. A key part of the EDR Pilot is the measurement and verification requirements, this involves the use of analysis to assess the electricity use before and after installation of an energy efficiency measurement using appropriate adjustments.

Our work with DECC

In December 2013 a team led by Ian Jeffries, provided advice on how to filter participating projects, based on our experience and market information collected through the EEVS / Bloomberg Energy Efficiency Trends research project.

Subsequently, we helped DECC develop the M&V manual and supporting M&V spreadsheets that guided participants through the process of preparing and submitting their project proposals for Phase I. This highly specialist work has been led by EEVS' most experienced CMVP, Hilary Wood.

In September 2014, EEVS seconded a second team to assist in operationalising the delivery of Phase I of the EDR Pilot. The brief was to provide expert advice regarding the eligibility of the Phase I applications and guide the decisions regarding the success of applications.

Following successful delivery EEVS was asked to support the redesign of Phase II of the EDR Pilot based on the key lessons learnt from the delivery of Phase I, resulting in the following changes:

- minimum project sizes were halved to 50kW
- introduced the option to bid for unspecified kW savings at the auction stage (up to 40% of the total project size)
- introduced the choice of delivery year for 2016/17 or 2017/18

The M&V documents and guidance were redesigned to accommodate the Phase II updates and improve the standard of applications. Our team also played an active role in re-designing and improving the processes to support the operational delivery.

Phase II was launched on 16th June 2015. During the registration and application phase, EEVS supported applicants regarding the M&V requirements and also increased awareness through presentations at multi-disciplinary workshops.

Following the application deadline in October, EEVS provided further resource to support the delivery of Phase II of the pilot. Operating within a short window of two months the team gave expert advice on the eligibility of applications and guide decisions regarding application success. EEVS showed great resilience and resource flexibility in increasing the level of support at key times to aid the successful delivery of the project. Working closely with DECC, the EEVS team became an integrated and indispensable part of the EDR team.

24 lead organisations and 37 individual projects across Great Britain were successful in the Phase II auction and £4.74 million was allocated; the organisations will implement their projects over the next two years (depending on delivery year) in order to achieve their agreed kW reduction. EEVS continues to support DECC with the implementation and management of both Phases of the EDR Pilot.