



Department for  
Business, Energy  
& Industrial Strategy

# ELECTRICITY DEMAND REDUCTION PILOT

Pilot Data Report (up to December 2016)



February 2017

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## Introduction

The Electricity Demand Reduction (EDR) Pilot Scheme was launched in 2014 and will conclude with a report to parliament in 2019. The EDR pilot is an auction based scheme providing financial support to organisations which deliver electricity savings during winter peak times (Monday to Friday, 4 – 8pm, November to February) by installing more efficient equipment.

This is the first publication of EDR pilot data. The final evaluation reporting is expected by early 2019.

This report presents the outcomes of the pilot as of December 2016. The tables in this report present the outcomes of the pilot at each key stage of the pilot process (see Annex Figure 1 for illustration of these stages). For the pilot Phase I, this includes expressions of interest, applications, the auction and the winter capacity savings delivered in the 2015/16 winter. Information available for Phase II does not include savings delivered as the first of the winter delivery periods for Phase II is winter 2016/17. This document defines each of the summary variables and explains the key differences between each phase of the pilot.

## Background

One of the purposes of the EDR Pilot Scheme is to examine whether capacity savings resulting from the installation of more efficient equipment (which provide lasting rather than temporary electricity reductions) could form part of the Capacity Market. A second objective of the pilot is to learn lessons for Government and stakeholders about the delivery of a potential enduring EDR scheme. Energy efficiency measures installed on a large enough scale would result in a reduction of the demand placed on the electricity system and in turn lower the amount of generation capacity that needs to be delivered to meet that demand.

The pilot is divided into two phases:

### Phase I

The EDR Pilot process first invited participants to submit an Expression of Interest Form by email, and to subsequently submit a more detailed application via the EDR pilot portal to qualify for the auction. Expression of Interest and Application Forms were assessed to ensure that they met the requirements of the EDR Pilot and that the proposed projects should be able to deliver the expected capacity savings. If

## Electricity Demand Reduction (EDR) Pilot

successful, participants were invited to submit a bid into the auction on a £ per kW basis for the average amount of capacity reduction their project was expected to deliver in the specified winter peak period (November 2015 – February 2016). A maximum price was set at £300 per kW. Winning bids were selected on a £/kW basis.

Participants successful in the auction could then choose to proceed by signing a Participant Agreement, committing the participant to a number of obligations, including installing equipment and reporting on the Operational Verification for the measures they bid into the auction, measuring and reporting the capacity savings delivered and participating in the evaluation of the EDR Pilot. In exchange for full compliance, BEIS paid participants their winning bid price multiplied by the average capacity savings committed to in their successful application upon completion of various milestones; the majority of funding was paid on verification of delivery of the committed savings. However if a participant did not deliver the kW savings contracted payment penalties were imposed.

## Phase II

A more streamlined application process was in place for Phase II of the pilot. Those interested in participating entered an enquiry on the EDR pilot portal (providing administrative details) which was followed directly by the submission of a completed application onto the portal. Applications were sent for technical review, as in Phase I, and those successful were invited to participate in the auction. Phase II participants could nominate which of the two delivery winters they were going to deliver the savings offered; winter 2016/17 or winter 2017/18. Those successful at auction then had the choice of whether to continue by signing the pilot participant agreement. This publication includes data for Phase II up to this point in the process. Subsequent data publications due will include data collected over the delivery winters of Phase II of the pilot.

The variables for each stage of the pilot are defined in Tables A and B of the annex. The summary of data for Phase I and the initial stages of Phase II of the pilot are presented in Table 1. Data by Sector and Region for Phase I is presented in Tables 2 and 3; and Tables 4 and 5 contain Phase II data. In Tables 2 and 3 **Expression of Interest** is the number of organisations who completed the expression of interest process, **Application** gives the number of applications to participate in the pilot received, **Technical Review** gives the information relating to those applications which passed the technical review process and qualified to participate in the auction, **Auction** gives the information relating to those applications which were bid into the auction, **Outcome** gives information about physical delivery of kW savings over the winter peak 15/16 and the EDR payments made to participants for the savings delivered.

Table 1: EDR Pilot Summary Data

Summary Data from EDR Pilot	Phase I units of measure as specified	Phase II Unites of measure as specified
Number of organisations		
Expression of Interest/ Registration	306	N/A
Enquiry	N/A	207
Number of applications (an organisation may submit more than one application)	87	54
Passed Prequalification	27	N/A
Passed Technical Review	22	45
Participated in the Auction - organisations	18	24
Number of projects winning funding at auction	22	37
Number of organisations winning funding at auction	18	24
kW savings allocated funds at auction	5,589	23,307
Amount of money allocated at auction	£1.28m	£4.74m
Number of organisations Signed Participant Agreement	15	21
Number of projects Signed Participant Agreement	19	33

## Electricity Demand Reduction (EDR) Pilot

Phase I - kW savings secured with Signed Participant Agreement	4,517	N/A
kW Savings Delivered, which received EDR pilot payment	2,178	N/A
Payment for savings delivered	£0.56m	N/A

## Table 2 – EDR Pilot Phase I – Summary by sector

Sector		Pilot stage				
		Expression of Interest	Applications	Technical Review	Auction	Outcome
<b>Commercial and Industrial</b>	Organisations	96	43	14	10	6
	Applications	*	52	18	13	8
	kW savings	*	*	4,564	3,669	1,724
	Funding (£)	*	*	*	£858,592	£448,137
<b>Public Sector and Charity</b>	Organisations	109	35	9	9	3
	Applications	*	35	9	9	4
	kW savings	*	*	1,920	1,920	453
	Funding (£)	*	*	*	£421,314	£111,899

Table 2 – EDR Pilot Phase I – Summary by sector

<b>Other or unknown</b>		101	*	*	*	*
<b>Total</b>	Organisations	306	*	*	*	*
	Applications	*	87	27	22	12
	kW savings	*	*	6,484	5,589	2,178
	Funding (£)	*	*	*	£1,279,906	£560,036

\* = not applicable / not available

(1) Monetary values rounded to the nearest pound

(2) Categories are combined to avoid disclosing individual organisations' data.

(3) As some organisations had more than one application in the auction and the applications were not in the same sector, summing the number or organisations would result in double counting and an over stated total of the number of organisations participating.



## Table 3 – EDR Pilot Phase I – Summary by region

Region		Expression of Interest	Applications	Technical Review	Auction	Outcome
<b>South, London, Midlands and Wales</b>	Organisations	156	50	10	8	4
	Applications	*	53	10	8	5
	kW savings	*	*	2,131	1,761	724
	Funding (£)	*	*	*	£454,761	£186,310
<b>North East, North West, Yorkshire and Humber, Scotland</b>	Organisations	79	23	9	7	4
	Applications	*	24	10	7	4

Table 3 – EDR Pilot Phase I – Summary by region

	kW savings	*	*	1,929	1,404	816
	Funding (£)	*	*	*	£381,484	£209,928
<b>Multiple sites across GB</b>	Organisations	*	9	7	7	3
	Applications	*	10	7	7	3
	kW savings	*	*	2,424	2,424	637
	Funding (£)	*	*	*	£443,661	£163,798
<b>Unknown*</b>		71				
<b>Total</b>	Organisations	306	*	*	*	*
	Applications	*	87	27	22	12
	kW savings	*	*	6,484	5,589	2,178
	Funding (£)	*	*	*	£1,279,906	£560,036

\* = not applicable / not available

(1) Monetary values rounded to the nearest pound

(2) Categories are combined to avoid disclosing individual organisations' data.

## Table 4 – EDR Pilot Phase II – Summary by sector

Sector		Expression of Interest	Applications	Technical Review	Auction 16/17 delivery	Auction 17/18 delivery	Auction Total
<b>Commercial and Industrial</b>	Organisations	74	27	24	16	5	*
	Applications	*	42	37	22	9	31
	kW savings	*	*	23,824	13,094	9,273	22,367
	Funding (£)	*	*	*	£2,583,860	£1,921,148	£4,505,008
<b>Public Sector and Charity</b>	Organisations	58	11	8	3	3	*
	Applications	*	12	8	3	3	6
	kW savings	*	*	1,465	185	755	940

Table 4 – EDR Pilot Phase II – Summary by sector

	Funding (£)	*	*	*	£46,846	£190,759	£237,605
<b>Other or unknown</b>		75					
<b>Total</b>	Organisations	207	*	*	*	*	*
	Applications	*	54	45	25	12	37
	kW savings	*	*	25,289	13,279	10,028	23,307
	Funding (£)	*	*	*	£2,630,706	£2,111,907	£4,742,613

\* = not applicable / not available

(1) Monetary values rounded to the nearest pound

(2) Categories are combined to avoid disclosing individual organisations' data.

(3) As some organisations had more than one application in the auction and the applications were not necessarily for delivery in the same year summing the number or organisations for each delivery year would result in double counting and an over stated total of the number of organisations participating in the process.

## Table 5 – EDR Pilot Phase II – Summary by region

Region		Expression of Interest	Applications	Technical Review	Auction 16/17 delivery	Auction 17/18 delivery	Auction Total
<b>South, London, Midlands and Wales</b>	Organisations	145	24	19	13	4	*
	Applications	*	28	22	15	4	19
	kW savings	*	*	3,955	2,342	374	2,716
	Funding (£)	*	*	*	£569,816	£100,506	£670,322
<b>North, Yorkshire, and Multi sites across GB</b>	Organisations	62	17	14	7	4	*
	Applications	*	26	23	10	8	18

Table 5 – EDR Pilot Phase II – Summary by region

	kW savings	*	*	21,334	10,937	9,654	20,591
	Funding (£)	*	*	*	2,060,889	2,011,401	4,072,290
<b>Total</b>	Organisations	207	*	*	*	*	*
	Applications	*	54	45	25	12	37
	kW savings	*	*	25,289	13,279	10,028	23,307
	Funding (£)	*	*	*	£2,630,705	£2,111,907	£4,742,612

\* = not applicable / not available

(1) Monetary values rounded to the nearest pound

(2) Categories are combined to avoid disclosing individual organisations' data.

(3) As some organisations had more than one application in the auction and the applications were not necessarily for delivery in the same year summing the number of organisations for each delivery year would result in double counting and an over stated total of the number of organisations participating in the process.

# Annex

## Annex 1 - Table A: Phase I Definitions

Data Variable	Definition
<b>Expression of interest</b>	<p><b>Participants who submitted an Expression of Interest in the pilot.</b></p> <p>The first stage of participation in the EDR Pilot was to complete and return the electronic Expression of Interest Form. If BEIS (formerly DECC) confirmed the participant passed the eligibility requirements, they would then be able to submit an application. In order to formally express interest in participating in the EDR Pilot, the organisation was required to make a number of declarations confirming eligibility. Completing this form was necessary to meet eligibility requirements for the organisation but did not mean the organisation had to submit an application. The Expression of Interest Form also included a number of questions about energy efficiency in the organisation to assist with the evaluation of the EDR Pilot. To participate in the EDR Pilot, both the organisation and the project had to be eligible.</p> <p>Participants and projects must continue to meet the eligibility criteria as set out in their EDR Participant Agreement. Participants were required to meet eligibility criteria in terms both of organisations (organisations and individuals) that can enter the EDR Pilot, and the types of measures and how they will be monitored, that can make up an application.</p> <p>The overall objective for eligibility criteria is to ensure that all applications received for the auction are for projects that are reliable, that would be unlikely to go ahead without support through the EDR Pilot, and are expected to deliver the capacity savings between 4-8pm business days at Winter Peak. Eligibility criteria are set out on pp 11 -17 of the EDR Pilot Participant Handbook (2014)</p>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/367394/EDR\\_participant\\_ha\\_nbook.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/367394/EDR_participant_ha_nbook.pdf).

<b>Registration</b>	Completion of the Expression of Interest and registration questionnaire.
<b>Prequalification</b>	<p><b>Participants that successfully passed prequalification.</b></p> <p>Once a participant had been notified by BEIS after checking the Expression of Interest Form that they have successfully met the eligibility requirements, the participant is required to submit an application form, an M&amp;V Plan and provide supporting evidence required. The EDR Pilot opened for applications on 1 September 2014 and closed for applications on 31 October 2014.</p>
<b>Application</b>	<p><b>Submitted application form, including M&amp;V Plan and supporting evidence required.</b></p> <p>The application form required participants to summarise the proposed project including the total kW winter peak capacity savings, declare whether the project meets all eligibility criteria, and, if the application is from a third-party aggregator, provide evidence of an agreement in principle to install and operate measures at sites included in the application. The capacity savings figure was taken from the M&amp;V Plan and must be in kW (not kWh). The application form also included evaluation questions which were specifically about the project. The evaluation questions were not assessed as part of the application but they were a requirement of the application process.</p>
<b>Technical Review</b>	<p><b>Participants who passed technical review.</b></p> <p>BEIS assessed applications against the eligibility criteria and scrutinised the M&amp;V Plan, seeking advice from technical experts as necessary. The process considered the detail of each project. This included assessing from the application and M&amp;V plans, that:</p> <ul style="list-style-type: none"><li>• all elements of key M&amp;V requirements as set out in the M&amp;V Manual were completed;</li></ul>



- reporting data, as set out in the M&V Manual, was appropriate for the project and provided a sound basis for calculating savings;
- any adjustments applied to the baseline were appropriate for calculating savings;
- payback of at least two years was met for all sites;
- savings quotes were reasonable and not out of proportion to the type and number of technologies being installed in the project; and, in accordance with the M&V Manual an appropriate M&V approach chosen for the project;
- for metered projects, the baseline information was appropriate and correct and of sufficient length and that any adjustments to the data were both appropriate and reasonable;
- any sampling approaches for multiple implementation of the same technology or for establishing a baseline were appropriate and met the accuracy requirements;
- the Operational Verification and reporting procedures were appropriate for the project;
- more detailed scrutiny of the baseline data to check data was reasonable and appropriate, that sufficient metering was in place to capture savings from the project to a sufficient degree of accuracy; and
- any regression analysis or average demand readings was appropriate.

**Participated  
in auction**

**Participants who entered a bid into the auction.**

Participants whose applications passed technical review were invited to enter a bid price for their project into the auction from the notified opening of the auction until the bidding deadline of 10am on 12 January 2015. The auction took place shortly after 10am on the closing date. Those successful at auction were paid the price bid in £ per kW electricity saving delivered at the completion of the winter peak period 2015/16.

**Signed  
Participant  
agreement**

**Participant signed a participant agreement.**

All bidders who were successful in the auction were sent a Participant Agreement within 10 working days of the auction. The Participant Agreement set out the commitments participants were required to sign up to and deliver in order to be able to receive any payment of the funding allocated at auction. In summary, the

commitments in the Participant Agreement comprise three key activities: Operational Verification Obligation, Winter Capacity Savings Report, Final Report.

**Savings delivered (which qualified for EDR payment)**

**Participants receive payment up to the contracted amount for savings delivered as per the Participant Agreement payment schedule.**

Non-delivery, under-delivery or late delivery were all reflected in reduced payments, no payment or termination of the Participant Agreement. For more information on payments and consequences of not meeting obligations, please see Section 8 of the Phase I Participant Handbook. Savings delivered above those for which the participant contracted were not included in this figure as it only accounts savings for which payment was made.

**Payment for savings delivered**

**Total payment made to pilot participants based on savings delivered as per contract.**

Based on £/kW awarded at auction, the delivered kW were paid a total upon completion of all contractual obligations.

This was split into two payments.

## Annex 2 - Table B: Phase II Definitions

Data variable	Definition
<b>Enquiry</b>	<p><b>Those interested in participating in the pilot were asked to sign up for a portal account.</b></p> <p>This registered interest in the Pilot on the EDR Web Portal was followed by the submission of an application to qualify for the auction. This application detailed the proposed project, including how the savings were to be</p>

measured and verified and which winter (one of 2016/17 or 2017/18 the participant proposed to deliver savings). Participants could choose as part of the application to indicate that, beyond the specified core measures in the M&V Plan(s), that they intend to specify a further element of the project (up to a maximum of 40% of the capacity savings from the entire application) at a later stage and indicate a total level of savings that they wished to provide. Registration of participant interest by completing and submitting an online Registration Form was necessary by 3 September 2015.

**Application:** **Participants who filled out the online Application Form and attached M&V Plan, summary sheet & evidence, completed the evaluation questionnaire and submitted the application by 15 October 2015.**

**Technical Review:** **Participants who passed technical review.**

BEIS assessed applications against the eligibility criteria and scrutinised the M&V Plan, seeking advice from technical experts as necessary. The process considered the detail of each project. This included assessing from the application and M&V plans, that:

- all elements of key M&V requirements as set out in the M&V Manual were completed;
- reporting data, as set out in the M&V Manual, was appropriate for the project and provided a sound basis for calculating savings;
- any adjustments applied to the baseline were appropriate for calculating savings;
- payback of at least two years was met for all sites;
- savings quotes were reasonable and not out of proportion to the type and number of technologies being installed in the project; and, in accordance with the M&V Manual an appropriate M&V approach chosen for the project;
- for metered projects, the baseline information was appropriate and correct and of sufficient length and that any adjustments to the data were both appropriate and reasonable;
- any sampling approaches for multiple implementation of the same technology or for establishing a baseline were appropriate and met the accuracy requirements;

- the Operational Verification and reporting procedures were appropriate for the project;
- more detailed scrutiny of the baseline data to check data was reasonable and appropriate, that sufficient metering was in place to capture savings from the project to a sufficient degree of accuracy; and
- any regression analysis or average demand readings was appropriate.

**Participated in auction:**

**Participants who successfully passed technical review, and choose to participate (submit a bid) in the auction.**

**Signed Participant agreement:**

**Those who submitted a successful bid in the auction and chose to continue in the pilot process by signing a participant contract with BEIS.**

Figure 1: Stages of the EDR pilot at which data is collected and reported.

