



Department for  
Business, Energy  
& Industrial Strategy

# ELECTRICITY DEMAND REDUCTION (EDR) PILOT EVALUATION

Appendices

July 2019



© Crown copyright 2019

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit [nationalarchives.gov.uk/doc/open-government-licence/version/3](https://nationalarchives.gov.uk/doc/open-government-licence/version/3) or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk).

Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.

Any enquiries regarding this publication should be sent to us at: [edr-project@beis.gov.uk](mailto:edr-project@beis.gov.uk)

---

# Contents

Appendix 1: Glossary and definitions	6
Appendix 2: Summary of approach and work elements	9
Overall approach	9
Appendix 3: Evaluation questions and associated evaluation activities	14
Appendix 4: Theoretical Framework development and use within the evaluation	24
Appendix 5: Primary research	26
Appendix 5a: EDR participants	28
Appendix 5b: Interviews with non-participants	29
Those who dropped out post-successful applications	30
Those who were not successful at application stage	30
Those who did not submit an application	30
External projects	30
Analysis	31
Appendix 5c: BEIS EDR Operations team	31
Appendix 5d: Aggregators	31
Appendix 5e: Wider Population Survey	32
Methods	32
Sample	33
Analysis	35
Select results	36
Appendix 6: Reliability of savings	41
Life-time savings	41
Appendix 7: Cost benefit analysis	44
Application treatment	44
Application lifetime assumption	45
Assumptions in the treatment of recurring costs/benefits	45
Hassle costs	45
Measure life and equipment costs	46
Assumptions for Societal Analysis	47
Other assumptions	47
Inflation	47
Discount rate	47
Appendix 8: Secondary research	48
EDR pilot data	48

---

International Comparisons _____	48
Appendix 9: Qualitative Comparative Analysis _____	50
Appendix 10: Process Tracing to examine the contribution of the EDR pilot _____	54
Appendix 11: Research Instruments _____	60
Full participant topic guide [final stage] _____	60
Introduction _____	60
WCSR report _____	60
Final project report _____	61
Process overall _____	61
Questions to underpin the TF _____	62
Data gaps _____	63
Closing questions _____	63
Full participant topic guide [post-signing of a Participation Agreement] _____	64
Introduction _____	64
Organisational Characteristics _____	64
Organisational journey _____	65
Scheme Design - Impressions and Reactions _____	65
Project-Specific Details and EDR Influence _____	68
Sum up and close _____	71
Withdrawn topic guide _____	72
Introduction _____	72
EDR engagement and experience _____	72
Profile _____	75
Specific questions for DPs: _____	76
Specific questions for Aggregators: _____	77
Closing questions _____	78
Rejected application topic guide _____	79
Introduction _____	79
EDR engagement and experience _____	79
Profile _____	83
Specific questions for DPs: _____	83
Specific questions for Aggregators: _____	85
Non-applicant topic guide _____	86
Introduction _____	86
EDR engagement and experience _____	86
Profile _____	89

---

Specific questions for DPs: _____	89
Specific questions for Aggregators: _____	91
Closing questions _____	92
Non-applicant quantitative survey script _____	93
Introduction _____	93
Extent of EDR exploration _____	93
Profile _____	94
Organisational energy efficiency _____	95
EDR pilot involvement and projects _____	98
Closing questions _____	101
Aggregator research topic guide _____	102
Screen and Introduction _____	102
For those not currently delivering energy efficiency / demand reduction aggregation, 20 minutes (Group 2) _____	105
Wider Population Survey quantitative survey script _____	107
Introduction _____	107
Main script _____	107
Quality assurance and version tracking _____	114
Registration _____	115
Application _____	121
Implement _____	127
Attribution _____	131
Annex 2 _____	132
Original _____	132
Original (continued) _____	134
Participation _____	137
Key comments _____	139
Contribution _____	140
Key comments _____	142

# Appendix 1: Glossary and definitions

**Table 1: Terminology used in the evaluation report and appendices and definitions**

Term	Definition
Attribution	A measurement of the extent to which (and how) the EDR pilot caused the observed impacts and outcomes, compared to what would have happened anyway in absence of the pilot.
Capacity Market (CM)	The Capacity Market ensures adequate reliable capacity is available by providing payments to encourage investment in new capacity/generation or for existing capacity/generation to remain operational. Established as part of the UK Government's Electricity Market Reform.
CRC energy efficiency scheme	CRC is a UK Government scheme that aims to reduce emissions and encourage energy efficiency for large users in the public and private sectors.
Climate Change Agreements (CCAs)	CCAs are voluntary agreements between the UK Environment Agency and UK industry to reduce energy consumption and carbon emissions.
Contribution	A assessment of whether a certain EDR helped to cause the observed impacts and outcomes, compared to what would have happened anyway in their absence.
Context-Mechanism-Outcome combinations (CMOs)	A theory-based approach in which the reasoning (mechanism) and wider circumstances (context) of an organisation's decision (e.g. to participate or not) is hypothesised in advance of the research and then tested to ascertain its accuracy.

Term	Definition
Cost Benefit Analysis (CBA)	A CBA compares the total cost of a programme or project with the total benefits attributable to it and results in the net benefit or net cost of the programme or project.
Deemed Savings	Savings that were calculated using of one BEIS's provided spreadsheet based calculators.
Electricity Market Reform (EMR)	The EMR programme, introduced two key mechanisms – Contracts for Difference (CFD) and the Capacity Market, designed to incentivise the investment required in the UK's energy infrastructure and deliver low carbon energy and reliable supplies, while minimising costs to consumers.. The EDR pilot and the Capacity Market are results of EMR.
Energy Savings Opportunity Scheme (ESOS)	The UK implementation of Article 8 of the EU Energy Efficiency Directive (2012/27/EU). ESOS is a mandatory energy assessment scheme for large organisations in the UK.
Energy Service Company (ESCO)	A company that provides energy solutions including implementing energy efficiency projects and energy management.
In-depth interviews (IDIs)	A qualitative research technique, generally conducted with a small number of respondents, to explore a specific topic(s). Questions are generally open ended and not multiple choice.
Measurement and Verification (M&V)	The process of quantifying savings delivered by an energy savings project or measure.
Process Tracing	An analytical approach that forms a test ('is x true') and then a series of clues that have a probability of being seen if true, or if false.

Term	Definition
Non-participant	A collective term for those who did not fully participate in the scheme, from those who did not apply at all through to those who dropped out post-Participation Agreement.
Qualitative Comparative Analysis (QCA)	An analytical approach whereby a series of conditions are assessed against an outcome in order to ascertain which seem to be necessary / sufficient for that outcome to be realised.
Realist-informed evaluation	A realist-informed evaluation emphasises the importance of understanding not only whether a policy contributes to outcomes (which may be intended or unintended) but how, for whom and in what circumstances a policy brings about these outcomes.
The Public Sector Energy Efficiency Loans Scheme	A programme designed exclusively for public sector organisations whereby loans can be provided to these organisations for energy efficiency improvements and repayments are then fed back into the programme to form new loans. The programme is delivered by Salix Finance Ltd and is often known as ‘Salix loans’.
Wider Population Survey (WPS)	A survey conducted as part of the overall evaluation that sampled large organisations that had not fully participated in the pilot. This was designed to identify action and attitudes in the wider potentially eligible population as well as test appetite for particular support scenarios.



## Appendix 2: Summary of approach and work elements

The purpose of this technical appendix document is to provide further detail on the research and analysis undertaken in evaluating the EDR pilot and details of how this was conducted.

The objectives of the pilot are to (1) examine the viability of EDR in the Capacity Market and (2) learn lessons for Government and wider stakeholders on the delivery of EDR schemes. The learning outlined will contribute towards achieving those aims.

The evaluation was commissioned to address five high-level questions (HLQs) and a number of more specific Evaluation Questions (EQs) that sit under these. A full table of HLQs/EQs and our approach to answering each is provided in Appendix 3.

- HLQ1: What outcomes can be attributed to the scheme and were they as intended?
- HLQ2: Through what levers and mechanisms has the scheme contributed to these outcomes? For whom and under what circumstances?
- HLQ3: Was the EDR Pilot scheme cost-effective?
- HLQ4: Which aspects of the scheme's design and implementation account for the findings of HLQ2 and HLQ3?
- HLQ5: What can we conclude about the viability of EDR in the CM, and what lessons can we draw about any future electricity demand reduction scheme<sup>1</sup>?

### Overall approach

The evaluation of the EDR pilot used a theory-based<sup>2</sup> approach for three main reasons; (1) experimental methods were not applicable, due to the absence of a robust comparison or counterfactual<sup>3</sup>, (2) small numbers of EDR participants limited the

---

<sup>1</sup> The extent to which permanent load reduction can contribute to the security-of-supply agenda was outside of the scope of the evaluation.

<sup>2</sup> As per Tilley & Pawson (1997): <https://uk.sagepub.com/en-gb/eur/realistic-evaluation/book205276>

<sup>3</sup> Despite the absence of a robust counterfactual, analysis from the Wider Population Survey did enable some comparison of 'treatment' and 'non-treatment' groups

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

ability to conduct robust statistical analysis and (3) one of the aims of the evaluation was to generate wider learning. Theory based methods allow a deeper understanding of how the policy is working, for whom and under what circumstances.

The theory based approach included the use of a Theoretical Framework that was developed at the outset. A Theory of Change, which the Theoretical Framework embodies, explains how activities are understood to produce a series of results that contribute to achieving the final intended impacts. The framework was refined and updated throughout the course of the evaluation in light of emerging evidence. The realist-informed approach adopted in developing the Theoretical Framework allowed the exploration of how different types of organisations in different circumstances interacted with the pilot (see Appendix 4).

The evaluation drew upon evidence from a variety of sources, including:

- Interviews with organisations that engaged, to varying degrees, with the EDR pilot scheme. This included organisations only registering interest to organisations fully participating and delivering projects (see appendix 5a for further details). Non-participants were also interviewed, including those who decided to apply but were unsuccessful with their application, and those that were involved in the scheme but dropped out (see appendix 5b).
- Data provided by participating organisations through the scheme's online application portal was used to determine projects' final kW and kWh savings, determine projects' capital expenditures, and triangulate and confirm evidence gathered in interviews (see appendix 8).
- Secondary data sources (e.g. published reports and press releases) were also used to collect comparative information on the GB Capacity Market and international energy efficiency schemes (see appendix 8).
- Interviews with five members of the BEIS Operations and Policy team that managed the EDR pilot. The approach to these interviews is detailed in Appendix 5c.
- Fifteen of interviews with a selection of firms offering aggregator services. The approach for interviews with aggregators is detailed in Appendix 5d.
- The Wider Population Survey; a survey conducted in Summer 2017 of businesses and organisations that were, theoretically, a target audience for EDR, but did not participate in the scheme. The approach for the survey is detailed in Appendix 5e.
- A Participatory Analysis workshop to further explore EDR pilot participation and energy efficiency in general with sector representatives and supply chain audiences.

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

- Analysis to examine the reliability of savings. The approach to analysing the reliability of savings is detailed in Appendix 6.
- A Cost Benefit Analysis (CBA) to assess value for money. The approach for the CBA is detailed in Appendix 7.

The evaluation combined several theoretical and analytical approaches to provide credible evidence as to whether, how, and why the scheme influenced organisation behaviour. The evaluation team has employed these techniques – including Qualitative Comparative Analysis (QCA) and Process Tracing – as part of an approach informed by realist evaluation principles.

QCA was adopted in assessing the characteristics and contextual factors leading to participation and non-participation. Further details about the QCA can be found in Appendix 9. Process Tracing was used to test the extent to which the EDR pilot contributed to a reduction in peak demand in each of the 22 cases where organisations participated in the scheme in full. Further details about the Process Tracing can be found in Appendix 10.

The research instruments used for each element of the primary research can be found in Appendix 11.

The evaluation was delivered concurrent to the pilot implementation, and comprised a number of stages. The timing and focus of these are set out in Table 2. All outputs referred to here are interim deliverables that fed into this final report.

**Table 2: Data collection by stage**

Stage	Duration	Activity and outputs
1	Oct 2014 – Dec 2014	Design of the Theoretical Framework in conjunction with BEIS Review of BEIS data (applications, EOIs, etc.) Phase I non-applicant research Phase I 'lessons learned' report
2	Jan 2015 – Mar 2015	A1 non-applicant, rejected applicant and participant research. Internal early findings reports
3	Apr 2015 – Oct 2015	Updated Theoretical Framework Evaluation plan Internal early findings reports

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

Stage	Duration	Activity and outputs
4	Nov 2015 – Mar 2016	Phase I participant and external project research Phase II non-participant, rejected applicant, non-applicant research Internal early findings reports International comparisons research and report
5	Apr 2016 – Mar 2017	Phase I participant research Phase II participant research In depth interviewing of Aggregators In depth interviewing of the programme team Phase I CBA Participatory analysis of stage 4 findings and emerging stage 5 findings Policy synthesis paper <b>Published interim evaluation report<sup>4</sup></b>
6 and 7	Apr 2017 – Apr 2018	Phase II participant project research Surveying of the wider population (WPS) CBA update Final report of all evaluation findings

<sup>4</sup> <https://www.gov.uk/guidance/electricity-demand-reduction-pilot>

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

The evaluation was delivered concurrently to the EDR pilot. A summary timeline of the delivery milestones for Phase II is presented below. The process was similar for Phase I (albeit with one delivery year).

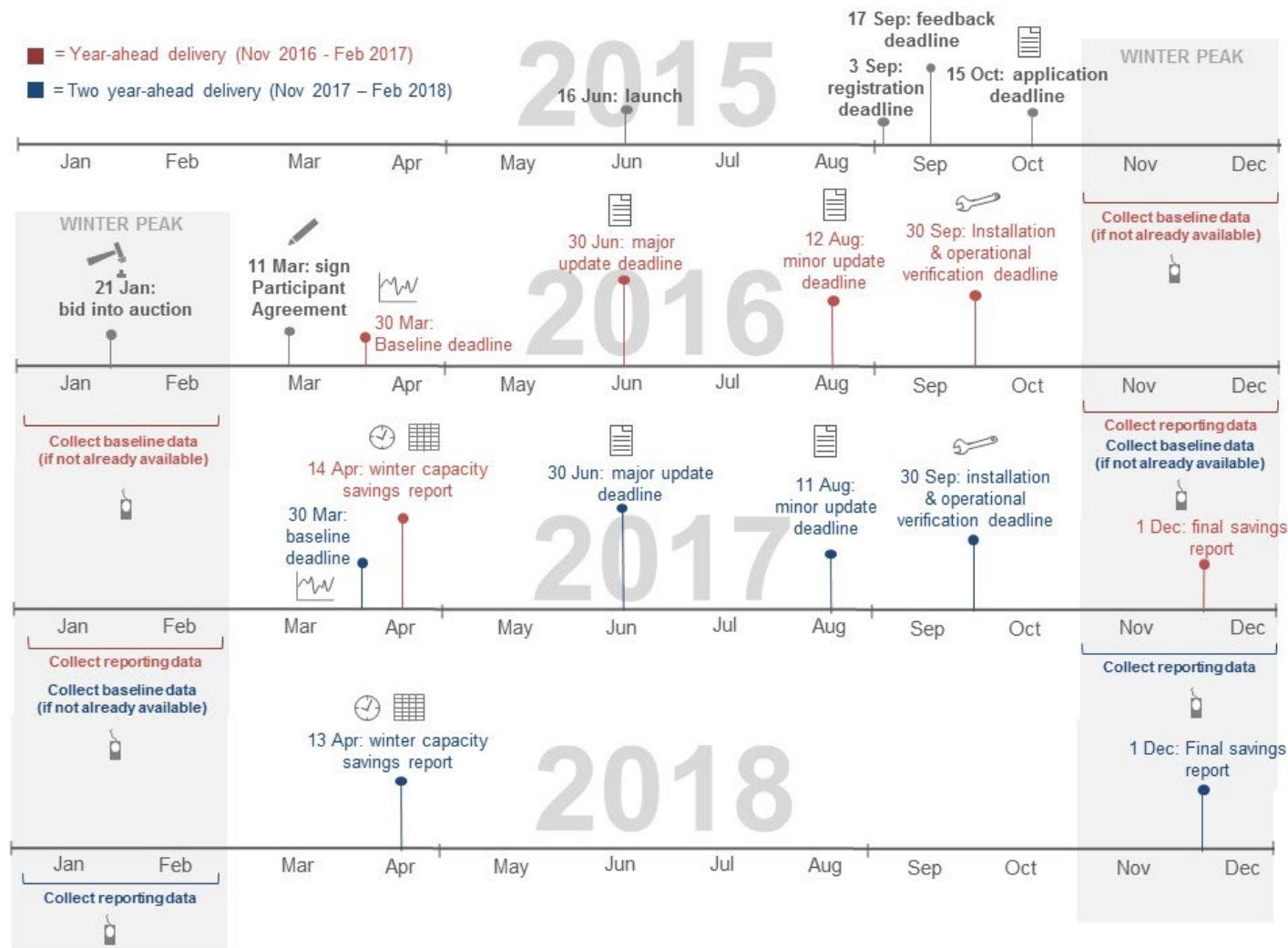


Figure 1: Phase II delivery timeline

## Appendix 3: Evaluation questions and associated evaluation activities

The EDR pilot evaluation sought to answer five high level questions (HLQs), and a number of more specific evaluation questions (EQs) falling under each HLQ. Table 3 provides a summary of data and evidence the evaluation team drew upon with regard to each HLQ and EQ:

**Table 3: Evaluation activities used to answer each high level and evaluation question**

High Level / Evaluation Question	Evaluation Approach
<b>HLQ1: What outcomes can be attributed to the EDR Pilot scheme and were they as intended?</b>	<p>The findings for this HLQ are largely addressed in section 3 of the main report (which discusses scheme impact, attribution and specific scheme design changes) and the conclusions.</p> <p>Evidence gathered in answering individual EQs under this HLQ was synthesised in answering HLQ1. This considered unintended outcomes and wider benefits identified in the primary research elements, as well as intended outcomes captured in the original Theoretical Framework.</p> <p>Conclusions were drawn regarding whether outcomes were ‘as intended’ by comparing observed outcomes (including unintended outcomes and wider benefits) to the Theoretical Framework. Analysis also explored the diversity of participating organisations, technologies and projects undertaken.</p> <p>The Wider Population Survey (WPS) was used to examine recent and planned action amongst non-participating but otherwise similar types of organisation to provide a counterfactual. This helped us to report on what non-participant but ‘in-principle EDR pilot eligible’ organisations are doing in relation to energy efficiency, and enabled us to compare how alike or unlike EDR projects were to those being undertaken by non-participants (using the WPS results from Section 3 of the main report).</p>

High Level / Evaluation Question	Evaluation Approach
<p>1.1 <b>To which organisations did the scheme appeal and which are able to participate and progress in the scheme? Did the EDR pilot scheme have wide appeal/participation as intended?</b></p>	<p>The contribution analysis process – drawing on examination of outcomes in different contexts/circumstances identified in the Theoretical Framework and important conditions identified through QCA – enabled us to compare the profile and circumstances of those participating and progressing to each stage of the scheme with that of organisations that did not.</p> <p>The extent to which the EDR pilot had ‘wide appeal’ was gauged by comparing scheme take up to the population of organisations that were in principle eligible, but was also assessed through the process of exploring and establishing CMO configurations, i.e. in what contexts/circumstances did the intended mechanisms fire, resulting in participation?</p> <p>The evaluation team identified which organisations (out of those who could participate/were targeted) were interested in the scheme, and which worked towards/participated at each stage of the EDR pilot process, as identified in the Theoretical Framework.</p> <p>The Theoretical Framework was tested and refined by comparing actual outcomes to the intended outcomes for each stage of the Theoretical Framework, for organisations in differing circumstances. This led to the identification of additional lines of reasoning (mechanisms) to those included in the original framework, as well as improving our understanding of the circumstances in which organisations responded in different ways to the scheme.</p> <p>The WPS was also used here to infer which types of organisation the scheme appealed to or did not, and why or why not. There were both direct questions on this in the WPS and inferences that could be drawn from responses to questions on payback and workload tolerance, energy efficiency activity and attitudes to energy within the organisation.</p>
<p>1.2 <b>What were the capacity savings and annual electricity demand</b></p>	<p>Capacity savings and annual electricity demand reductions, and their reliability, were determined and assessed through M&amp;V data and deemed</p>

High Level / Evaluation Question		Evaluation Approach
	<b>reductions and were these reliable and additional?</b>	monitoring data from those who implemented projects (if available). The attribution assessment outlined in the 'Reliability of Savings' section was used to determine additionality of the savings and other impacts.
1.3	<b>What kinds of projects/technologies were implemented through the scheme-related investments and were these additional?</b>	Analysis of scheme data was used to determine what kinds of projects and technologies were implemented for those who were successful in the EDR pilot. Interviews with those who dropped out at different stages of the EDR pilot also explored whether the EDR pilot influenced the implementation of projects outside the scheme. The TF and contribution analysis supported this by identifying intended outcomes, alternative outcomes and explanations for participation and progress at each major stage of the scheme towards successful implementation. The attribution assessment determined whether the projects/technologies implemented through the scheme were additional. Attributed actions were also compared to the type of recent and planned action observed in the WPS to determine if the EDR pilot encouraged different types of projects than those implemented outside the scheme, (using the WPS results from section 3 of the main report).
1.4	<b>What outcomes were the results of market activity from aggregators?</b>	Findings from in-depth interviews (IDIs) with Aggregators determined what market activity was undertaken by aggregators (or those who became aggregators). The contribution of this activity to observed outcomes was considered in the contribution analysis in considering alternative hypotheses/theories. Responses obtained in the in-depth interviews were used to test aggregator specific outcomes, contexts and mechanisms. We also used the results of the WPS (specifically the question confirming if the participant had used an ESCO) to report the attitude of the general population with regards to ESCOs or aggregators (although the reader should note that this EQ was specifically investigating aggregators participating in the EDR pilot).



High Level / Evaluation Question	Evaluation Approach
1.5 <b>What, if any, were the wider outcomes of the scheme?</b>	Secondary data and specific questions in the IDIs explored wider outcomes (e.g. non-energy benefits), informed by wider literature (e.g. multiple benefits of energy efficiency) and review of wider outcomes already identified in the evaluation of Phase I of the EDR pilot. The TF supported this by identifying where wider outcomes are intended to be realised, enabling us to test them at the appropriate stage. Attribution assessment was used to determine the additionality of wider outcomes.
1.6 <b>How can the evaluation team demonstrate that the above changes are causally linked to the scheme and that it made a difference?</b>	The contribution analysis tested the causal links (as set out in the TF) which led to outcomes, and that they were additional. The output was a set of contribution stories which detailed whether, where and how the scheme influenced outcomes. The WPS also provided some data on recent and planned action in the wider population useful for comparison and consideration of the counterfactual. This served as a reference point for what the wider population is doing outside of the EDR pilot using the results from 'current and planned energy efficiency activity' section. It also provided evidence for use in contribution tracing within the contribution analysis.
1.7 <b>Were there other potential explanations of these outcomes?</b>	<p>The contribution analysis and attribution assessment enabled both:</p> <ul style="list-style-type: none"> <li>• Assessment of the extent of scheme influence (and in doing so assessed the strength and contribution of other influences), and</li> <li>• Identification of alternative hypotheses where EDR like projects have been implemented outside of the pilot.</li> </ul> <p>As stated, the WPS also provided some counterfactual data on activity in the wider population to see what kinds and size of projects are happening outside of the EDR pilot.</p>
1.8 <b>What was the impact of any outcomes that BEIS had not intended?</b>	Outcomes not intended by BEIS were identified through the interviews conducted. The TF supported this by identifying some unintended outcomes which were specifically tested e.g.

High Level / Evaluation Question		Evaluation Approach
		identifying whether projects which came forward were planned to happen anyway.
	<b>HLQ2: Through what levers and mechanisms has the scheme contributed to these outcomes? For whom and under what circumstances?</b>	<p>The findings for this HLQ are largely addressed in section 3 of the main report (which discusses scheme impact, attribution and specific scheme design changes with headlines from the different techniques deployed) and in the conclusions.</p> <p>Evidence from evaluation questions 2.1-2.5 was synthesised to draw conclusions in order to answer HLQ2.</p>
2.1	<b>Through what means did the scheme influence which organisations participated, did not participate or dropped-out?</b>	The evaluation team identified and explored organisations reasoning in regard to (continued) participation in each step of the EDR pilot process, as identified in the Theoretical Framework, through to successful participation and achievement of intended outcomes.
2.2	<b>Through what means did the scheme influence the outcomes identified (i.e. capacity savings, annual electricity demand reduction, new technologies, behavioural changes, etc.)?</b>	Realist evaluation supported this by setting out intended lines of reasoning (mechanisms) to be tested and the contexts influencing whether these mechanisms 'fired' or not.
2.3	<b>What characteristics of participating organisations – e.g., management capacities, decision making arrangements/governance, sectors, equipment, socio-technical organisation, energy efficiency maturity, etc. – were necessary for the scheme to influence participation and outcomes?</b>	The IDIs explored the contexts which supported the firing of mechanisms identified in the TF; the CMO combinations provided causal explanations. These contribution stories were refined through the QCA and other contribution analysis techniques and reported in an integrated way.
2.4	<b>What broader contextual factors – e.g., markets, activities, location, premises, technologies, etc. – were necessary for the scheme to influence participation and outcomes?</b>	This was focused upon exploring broader factors (outside of the influence of individual organisations). Participatory analysis conducted in Stage 5 (i.e. further exploration with sector representatives and supply chain audiences) supported this.

High Level / Evaluation Question		Evaluation Approach
2.5	<b>Did other policies including other BEIS policies and building regulations reinforce, undermine or in any other way affect the scheme's effectiveness and how?</b>	Take up of other policies, including other BEIS policies, was explored in both the quantitative surveys and in-depth interviews. The TF supported this by identifying other policies, such as CRC, CCAs and ESOS, which could influence the take-up of EDR. The WPS question on reasons for non-participation also provided some evidence here.
<b>HLQ3: Was the EDR Pilot scheme cost-effective?</b>		<p>The findings for this HLQ are addressed in a specific CBA section in Section 3 of the main report and in the conclusions.</p> <p>The cost benefit analysis (CBA) of the EDR Pilot scheme was carried out as part of the overall evaluation effort, drawing on inputs from many of the evaluation activities described for HLQ1, HLQ2 and HLQ4. This included examination of what was happening anyway outside of the EDR pilot (through the data in the WPS, specifically the results from 'current and planned energy efficiency activity' section).</p>
3.1	<b>Do the costs and benefits of the scheme represent value for money (VFM) for society?</b>	In general, the first two evaluation questions under HLQ3 were addressed directly through the CBA. Societal analysis was completed in line with the Green Book approach, and participant analysis was carried out from the perspective of the organisations taking part in the EDR Pilot scheme. Specific questions in the IDIs and participant Final Reports explored the time organisations invested in the scheme vs. the benefits. EDR application documents accessed through the EDR pilot's data portal provide information on kW and kWh savings.
3.2	<b>Do the costs and benefits of the scheme represent VFM for participating organisations?</b>	
3.3	<b>Did the subsidy support the greatest savings at peak at least cost?</b>	Auction prices, portal and interview data and the CBA all supported assessment of cost effectiveness.
3.4	<b>How does the EDR Pilot scheme compare to other energy efficiency schemes in delivering annual electricity savings at least cost?</b>	The team reviewed similar international schemes to explore how EDR compares on incentive levels and scheme rules.

High Level / Evaluation Question		Evaluation Approach
3.5	<b>What is the added value to society of an electricity demand reduction scheme that explicitly rewards peak savings?</b>	The CBA calculated societal benefits directly.
<b>HLQ4: Which aspects of the scheme's design and implementation account for the findings of HLQ2 and HLQ3?</b>		<p>The findings for this HLQ are addressed throughout the main report and in the conclusions.</p> <p>Synthesis and further analysis of evidence from evaluation questions 2.1-2.5 and 4.1-4.6 was undertaken to draw conclusions about which aspects of the scheme design and implementation explained the findings.</p>
4.1	<b>Did the scheme rules (e.g. eligibility, bid size, payments and penalties) attract and retain the participants able to deliver required savings and exclude those that couldn't?</b>	The contribution analysis – and specific questions in the surveys and IDIs – explored and established the influence of scheme aspects in terms of both encouraging participation and creating a barrier or disincentive.
4.2	<b>Were the M&amp;V methods tested appropriate and effective at estimating and verifying savings?</b>	<p>Interviews explored:</p> <ul style="list-style-type: none"> <li>• With those who did not implement projects; whether (and if so what and why) M&amp;V requirements acted as a barrier;</li> <li>• With those who did implement projects within the scheme; views on the M&amp;V requirements, M&amp;V outputs in comparison to applications, and reasons for any observed differences - using both monitoring and primary research methods</li> </ul> <p>Unfortunately, metering data was not available and so actual consumption could not be verified.</p>
4.3	<b>How did the type of auction influence participation and price?</b>	IDIs explored whether the auction influenced participation or drop out, and for those who bid, explored how the auction type, parameters and design influenced bidding strategies employed and how this affected price.
4.4	<b>How did EDR design influence the range of</b>	This involved reviewing what technologies were or were not brought forwards and why. For those which were brought forward, we explored the

High Level / Evaluation Question		Evaluation Approach
	<b>technologies coming forward?</b>	reasons for those being chosen (over others) and how the EDR pilot influenced that.
4.5	<b>Which aspects of EDR design encouraged the implementation of measures/projects and secured reliable savings and electricity demand reduction at least cost?</b>	The evaluation team undertook synthesis and further analysis of data from evaluation questions exploring EDR design (HLQ 2, 4.1, 4.4, 4.4) with M&V data and comparisons to appropriate alternative schemes to identify and explain the influence of aspects of EDR which encouraged desired outcomes.
4.6	<b>How did scheme design and implementation differentially affect different organisations and why?</b>	CMO configurations identified in the TF included consideration of how aspects of scheme design affected different types of organisation. Interviews specifically explored reasons for non-participation and drop out.
<b>HLQ5: What can the evaluation team conclude about the viability of EDR in the CM and what lessons can the evaluation team draw about any future electricity demand reduction scheme?</b>		This was addressed through Section 5 and in the conclusions of the main report. HLQ5 was answered through synthesis of the data and analysis utilised in answering HLQ1-4 and additional research into the structure of the CM and recent auction results.
5.1	<b>Is EDR as currently conceived viable in the CM, either immediately or eventually? Assessment of viability will be on the basis of:</b> <b>a. Whether the scheme can work at scale (volume of savings not number of participants)</b> <b>b. Predicted savings from the scheme are additional and reliable</b> <b>c. The scheme represents value-for-money.</b>	<p>The evaluation team used evidence from HLQ1-4, and recent CM auction results to inform overall conclusions about the viability of EDR in the CM. We used key elements of how viability is defined to inform the answering of the question. This included exploring key aspects which informed whether viability was near or far off.</p> <p>The team also utilised results from the WPS, which included direct questions on the reasons for non-participation in the EDR pilot and appetite for elements required for viable integration within the CM such as the use of the auction for funding.</p>
5.2	<b>Is EDR, with some changes to the existing scheme design, viable in the CM and what would those changes be?</b>	Further exploration of the evidence and analysis was undertaken to address evaluation question 5.2, this involved the determination of what parts of the CM and the EDR pilot posed the most issues for participants (or potential participants). Comparisons to capacity markets in the US

High Level / Evaluation Question		Evaluation Approach
		<p>informed what attributes may be required for energy efficiency to thrive in a capacity market.</p> <p>Again, the WPS direct questions on the EDR pilot scheme – and inferences from appetite for different future policy scenarios – informed this.</p> <p>However, this evaluation is not focused on policy recommendations, and so we have not recommended specific changes.</p>
5.3	<b>What can the evaluation team learn about whether EDR would be viable in the CM in another form, such as being part of secondary trading or a separate auction?</b>	<p>Comparisons to successful capacity markets in the US informed assessment of whether EDR would be viable in the CM in an alternative form and what current differences are.</p> <p>Again, the WPS direct questions on the EDR pilot scheme – and inferences from appetite for different future policy scenarios – also informed this.</p>
5.4	<b>What can the evaluation team learn from the EDR Pilot scheme and supplementary analysis about the potential size of the market for electricity demand reduction schemes and how it is characterised?</b>	<p>Evidence from the evaluation, including the wider population research, informed conclusions about the size of the market and key characteristics. This was also informed by interviews with non-participants which established precise reasons for drop out and therefore what changes would make what difference.</p>
5.5	<b>What would encourage a broader range and greater number of organisations participated in any future scheme?</b>	<p>Evidence from evaluation questions 5.1-5.4, alongside that from evaluation questions 2.1 and 2.2, informed an assessment of what changes would encourage increased take up in future.</p> <p>The exploration of groups reaching different stages – and the contribution analysis for these – helped to assess what other barriers to participation may arise for certain groups once they are helped to progress past their reported barriers.</p> <p>Again, the WPS direct questions on the EDR pilot scheme – and inferences from appetite for different future policy scenarios – informed this.</p>
5.6	<b>What changes in design and implementation of any</b>	<p>Evidence used for ELQ 5.5 was combined with learnings from international schemes to draw</p>

High Level / Evaluation Question	Evaluation Approach
	<p>future scheme would be likely to result in greater and more reliable additional electricity savings at a lower cost to the public purse?</p> <p>conclusions about what changes in design and implementation of any future scheme would be likely to result in greater and more reliable additional electricity savings at a lower cost.</p> <p>Again, the WPS direct questions on the EDR pilot scheme – and inferences from appetite for different future policy scenarios – informed this.</p> <p>However, we have not made specific policy recommendations as this was not a key focus of the evaluation.</p>
5.7	<p><b>What can the evaluation team learn about how a more effective and cost efficient electricity demand reduction scheme could be delivered in different ways?</b></p> <p>Synthesis of broader learnings from evaluation questions 5.1-5.7, including learnings from international comparisons, was used to draw out lessons about how a more effective and cost efficient electricity demand reduction scheme could be delivered.</p> <p>Again, direct questions included in the WPS on the EDR pilot scheme – and inferences from appetite for different future policy scenarios – informed this.</p> <p>Again, we have not made specific policy recommendations as this was not a key focus of the evaluation.</p>



## Appendix 4: Theoretical Framework development and use within the evaluation

The initial Theoretical Framework (TF) was developed at the outset of the evaluation in collaboration with key stakeholders involved in the EDR pilot. This built on the work already conducted by BEIS, specifically the problem tree, journey maps and theories of change.

Realist approaches are used to understand what works, for whom and in what circumstances; as opposed to more traditional evaluation techniques that only seek to answer ‘does it work?’. Context-Mechanism-Outcome (CMO) combinations are designed to articulate hypotheses (which are then tested) as to the reasoning of organisations in arriving at particular outcomes (e.g. participating or not) and what contexts might have influenced that reasoning. Informed by realist evaluation principles, the initial TF sought to identify how different types of organisations in different circumstances might reason about the EDR pilot, and therefore participate, continue to participate, or not. The initial TF informed the evaluation design and lines of questioning used in the primary research in Stages 1 and 2 of the evaluation.

The initial TF was further developed in Stage 3 of the evaluation and restructured to develop specific CMO configurations, thus aligning more closely with realist evaluation principles. These CMOs describe:

- The range of intended and unintended **outcomes** that organisations may reach in relation to the scheme;
- A set of **mechanisms** representing organisational / individual reasoning which may either fire (i.e. occur for that organisation / individual) or not, thus determining the specific outcome achieved;
- **Contexts** in which specific mechanisms are anticipated to fire or not.

The amended theory – informed by evidence obtained in Stages 1 and 2 – was used to inform the evaluation design and research instruments used in all subsequent stages of the evaluation.

All aspects of the TF were tested against real evidence provided in interviews and through the scheme’s online application portal, then refined accordingly if necessary (i.e. with alterations to existing CMO combinations and theories or additions of new CMO combinations where the evidence suggested this should be the case). As part of this cycle, any weaknesses were assessed and gaps or needs for additional data were highlighted.

For full participants, the TF and CMO maps provided a structured way in which both topic guides (and prompts within these) could be designed and within which analysis could be undertaken. They ensured that specific theories were tested and supported, refined or dismissed rather than taking a lead entirely from the responses of respondents or what occurred to them first.

The final TF, reviewed and updated in light of all evidence obtained in the evaluation, can be found in the Context-Mechanism-Outcome (CMO) spreadsheet (attached below as a separate document). It consists of:



A high level theory outlining the key steps in the process and responses from organisations at each stage; supplemented by:

A series of more detailed spreadsheets setting out validated theories as to why particular outcomes (e.g. choosing to apply to participate in EDR) were observed in particular circumstances, detailing specific lines of reasoning (mechanisms) leading to those outcomes. The CMOs are divided up to align with the main stages of the EDR process detailed in the high level theory.

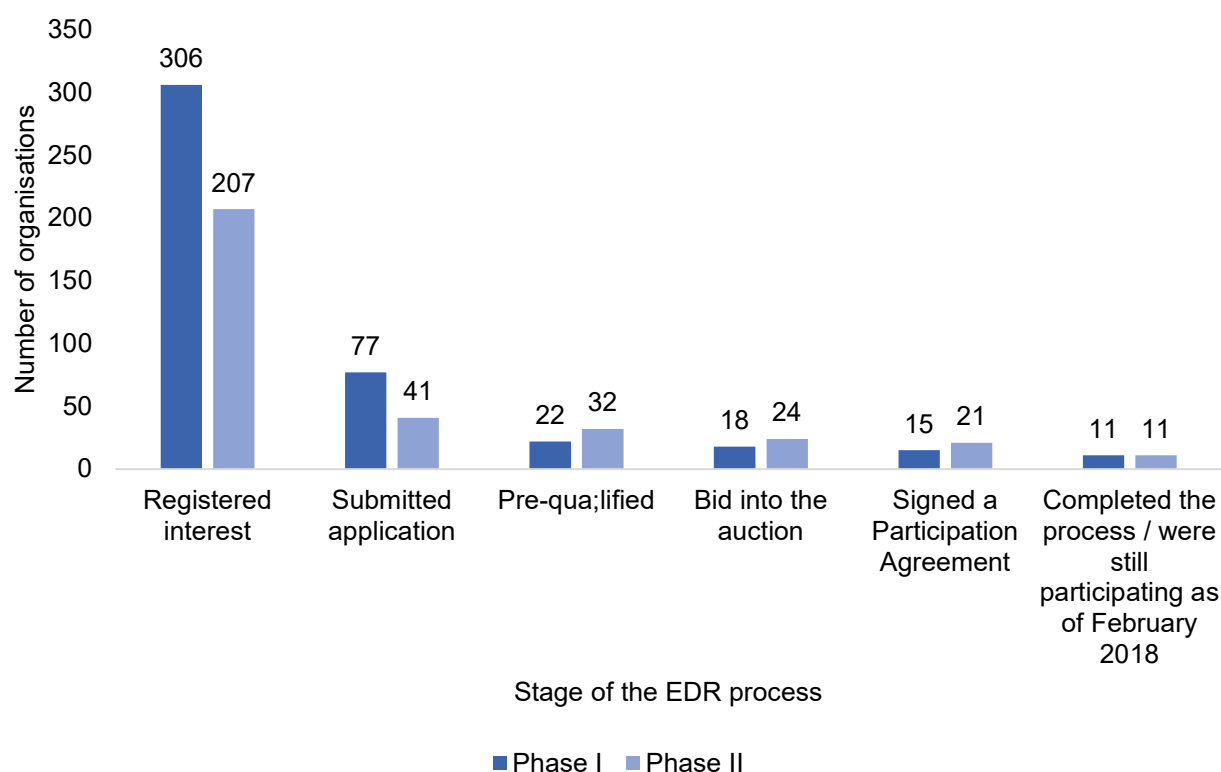
A final sheet summarising the circumstances in which particular lines of 'attribution reasoning' (i.e. differing extents of scheme influence/additionality) were observed.

A key caveat regarding the CMOs beyond the registration theory (implementation theory in particular) is that these CMO combinations are not necessarily representative 'truths' easily applicable to the wider population. This is a result of both the small size of the EDR pilot and limited diversity of projects progressed within the scheme. However, the CMOs should still be transferable and generalisable under the same / similar contexts, and provide indication of the kinds of contexts in which EDR-like policies are likely or unlikely to succeed.

**Reference 1: Final CMO Maps (see Annex 1)**

## Appendix 5: Primary research

The following chart shows the numbers of different organisations progressing to each stage of the EDR scheme process; this provides context for the numbers sampled and reported upon below.



**Figure 2: EDR population organisations**

Once organisations have signed a participant agreement, they are then classified as scheme 'participants'.

The table below summarises participating organisations<sup>5</sup> (IDI) to date (all of which feed into the findings in this report).

<sup>5</sup> Interviews have been conducted with one representative per organisation, usually the individual / lead contact named on application forms or other scheme documentation provided by BEIS. For organisations that had no involvement in the scheme (and so no contact leading their involvement), interviews were conducted with those best placed in the organisation to discuss potential involvement in an energy-related scheme.

**Table 4: Populations and numbers interviewed at different EDR stages**

EDR Phase	Group	Population	Interviews completed
Phase I	Participants – organisations that signed a Participant Agreement post-auction	15	11
	External Projects – organisations progressing EDR like projects outside of the scheme	Screening (quick emails to establish relevance) of 126 organisations; 22 with projects.	19 of 22
	Non-participants <sup>6</sup> – organisations that received information from BEIS about the pilot but did not register interest	605	Initial survey with 199, in depth interviews (IDIs) <sup>7</sup> with 9
	Non-applicants - organisations that registered interest but did not submit a full application <sup>8</sup>	229	Initial survey with 128, IDIs with 43
	BEIS Operation team	2	2
Phase II	Participants at the time of interview (though 9 have subsequently dropped out).	21	20 (11 full participants)
	Wider population non-participants (WPS)	7,097	750
	Non-applicants	166	Initial survey with 120, IDIs with 10.
	Rejected Applicants – organisations whose applications were unsuccessful	9	6
	Non-bidders – organisations that withdrew subsequent to a successful application but prior to the auction	8	2
	BEIS Operation team	3	3
	UK Aggregators	Unknown population	15

<sup>6</sup> This group are usually distinct from the WPS, as they were communicated with directly by the operations team. The wider population study targets often didn't engage with EDR at all.

<sup>7</sup> The sample for in-depth interviews was drawn from respondents to the quantitative evaluation survey. The evaluation team determined the interview sample size before the survey commenced.

<sup>8</sup> Some sent initial documents to BEIS or discussed ideas or plans prior to dropping out.

## Appendix 5a: EDR participants

The evaluation was conducted concurrent to EDR pilot delivery; the overall number of participating organisations (and projects) changed throughout the course of the evaluation, as a result of projects that dropped out of the scheme. 42 organisations (18 in Phase I and 24 in Phase II) bid into the auction, but only 22 of these went on to fully participate in the EDR pilot (11 from each Phase).

The list of all participating organisations was updated periodically, at the beginning of each stage of data collection. Each project has an assigned contact, who were used as the main contact for the qualitative interviews. Databuild staff used both phone and email to set up an appointment time convenient for both the interviewer and the respondent.

All participants were interviewed through qualitative telephone interviews (in-depth interviews); the topic guides used for these conversations are provided in Appendix 11. These were semi-structured interviews; the topic guides included a number of open ended questions. Interviews generally lasted between 30 minutes and an hour.

Participating organisations were interviewed at various stages: after signing a participant agreement, after submitting final measurement and verification documents ('minor update deadline' in Figure 1), after the project was operational and after all EDR documentation was submitted and finalised. Participants were interviewed across all these points, however:

- Eight of the participants were unavailable for the evaluation interviews, and most subsequently discontinued the process anyway. Only one full final Phase II participant did not participate in an interview<sup>9</sup>.
- The interviews were up to date at time of publishing, however some Phase II (winter 2017-18) participants were still completing their documentation and delivering their projects when this report was published.

The interviewer completed a write up sheet after each in-depth interview, which included:

- Existing and secondary data pertaining to the organisation from past surveys, as well as data from the scheme's online application portal. As noted above, data from application forms, case notes from BEIS staff, and post-project reporting provided substantial profile information that fed into the coding of contexts and conditions as well as providing insights and additional evidence for Process Tracing. Scheme data was mined for self-reported kW savings, cost savings, project cost, participation costs, financing costs, M&V information, non-energy benefits and associated savings, communications between BEIS and participants and other information as required.
- Participant responses to interview questions including direct quotes and interviewer notes.
- A code frame for key interview questions, to better enable analysis of the responses and assessment against the analysis approaches described below. The write ups enabled the synthesis and testing of case level data, and further analysis of the whole data set and included coding on the presence of realist contexts, mechanisms and outcomes

---

<sup>9</sup> It should be noted that whilst most engaged with the evaluation interviews, some organisations viewed multiple interviews to be a substantial resource commitment, especially alongside general scheme participation, which included some evaluation and impact assessment elements. The interview topic guides at some stages were substantial.

(the latter in terms of action, attribution and progression through the scheme, including unintended outcomes), and QCA conditions.

The completed write up sheets from each interview were then collated into one dataset for analysis.

Top line findings on key question areas were generated to provide context for the more detailed findings and help to answer some of the EQs through frequencies and crosstabs. For example, this top line analysis showed the number of organisations in each attribution category (scaled up, accelerated, etc.), summarised the reasons reported by organisations for participation, and summarised the different technologies installed through supported projects before then drilling down into the types of organisations providing certain responses and why.

The data collected through in-depth interviews informed the Qualitative Comparative Analysis used to understand the conditions necessary/sufficient for full participation in the EDR pilot (as described in Appendix 9) and Process Tracing used to further explore the contribution of the EDR pilot in the case of each of the 22 fully participating organisations (as described in Appendix 10). This data was also used to update the Theoretical Framework and CMOs.

## Appendix 5b: Interviews with non-participants

Non-participants consisted of the following groups:

- Those who had participated in the scheme and had been successful at the application stage but subsequently dropped out.
- Those who were unsuccessful with their application.
- Those who decided not to apply; in Phase I this group comprised those who had either registered an interest or those who had been informed of the scheme through initial BEIS communications but who did not choose to register their interest or engage with the EDR pilot to any significant degree.
- Potentially relevant to any of the above, those who had taken forward an 'EDR-type' project outside of the scheme.
- We also conducted a small number of conversations with organisations who delivered – or plan to deliver – energy efficiency aggregation services.

No database existed of all potentially eligible organisations who had heard about the EDR pilot and decided not to participate. Scheme data provided by the BEIS programme team was used to recruit non-participants, (e.g. details held on organisations who registered interest, and for those that had received information about the scheme). To understand the population, an initial qualitative survey was conducted amongst non-participants to collect basic organisational data and ask if they were progressing their project without EDR assistance. Additional insight into the wider population (e.g. awareness and perceptions of the scheme), was gained through the Wider Population Survey (see appendix 5e for further details).

The following sections describe the interviewing approach used for each group of non-participants. Research instruments used can be found in Appendix 11.

## Those who dropped out post-successful applications

This group itself comprised a number of organisations:

- Those who signed a Participation Agreement but subsequently dropped out, either due to realising their project would ultimately be ineligible or penalised (because it had changed in some way or there had been site drop out), or the organisation felt that the cost vs reward balance was too unfavourable (4 in Phase I and 10 in Phase II).
- Those who were successful at auction but did not sign a Participation Agreement, again usually due to the reasons described above (3 in Phase I and 3 in Phase II).
- Those who submitted successful applications but did not enter the auction, again usually due to the reasons described above (4 in Phase I and 8 in Phase II).

The number in the first bulleted group changed throughout the scheme but to date, 28 organisations have withdrawn somewhere between application and post-Agreement. The first group were sometimes initially interviewed as participants but we interviewed 14 organisations about their withdrawal. See Appendix 11 for the topic guide for this interview.

We sought to interview this group to understand more about the reason for withdrawal and the relevance of this to the design and requirements of the EDR pilot.

## Those who were not successful at application stage

There were 64 organisations (55 in Phase I and 9 in Phase II) who were unsuccessful at the application stage or withdrew before bidding in the auction. We conducted in-depth, qualitative telephone interviews with 36 (21 in Phase I and 15 in Phase II) of this group using the topic guide in Appendix 11.

We sought to interview this group to understand more about the reason for rejection and the relevance of this to the design and requirements of the EDR pilot.

## Those who did not submit an application

In Phase I there were 229 organisations who expressed initial interest but did not apply and 605 who were invited to register interest but did not. In Phase II there were 166 organisations who expressed initial interest but did not apply and 788 who were invited to register interest but did not.

We conducted a short quantitative telephone survey with 327 of the Phase I group, and then selected 52 from that to conduct an in-depth telephone interview focusing more specifically upon the reasons for non-application. For Phase II we conducted 120 shorter quantitative interviews and 10 in-depth telephone interviews.

We sought to interview this group to understand more about the reason organisation's had chosen not to apply and the relevance of this to the design and requirements of the EDR pilot.

## External projects

This sample were identified from the existing scheme data (so in theory could include organisations for any of the above groups). Our survey comprised a short email screening to ascertain whether a valid external project was being delivered, to which 126 organisations responded, and then telephone interviews with 19 of those organisations.

We sought to interview this group to understand more about the profile of external projects that seemed ostensibly similar to those taken forward within the scheme in terms of technology, scale and timetable. This was intended to provide insight on the design and requirements of the EDR pilot (why had they taken seemingly eligible action but not used the EDR pilot?) as well as any effect of the EDR pilot on action even if not directly supported through the scheme.

## Analysis

In summary, analysis of non-participant data comprised descriptive statistics drawn from the initial quantitative surveys and findings drawn from in-depth interviews. Evidence gathered in interviews with non-participants was drawn upon in several aspects of the analysis including:

- For top-line analysis, the reasons given by respondents for choosing not to progress with EDR.
- For CMOs, the findings enabled creation of 'negative' CMO combinations i.e. reasons for not engaging with the EDR pilot or dropping out from the process at different stages.
- For QCA, evidence for the non-participants on conditions present for them but not participants, or vice versa.
- For Process Tracing, the results provided evidence with which to assess the probabilities for certain clues if the hypothesis were not true and provided evidence towards particular clues (e.g. were organisations taking action anyway outside of the EDR pilot).

## Appendix 5c: BEIS EDR Operations team

We conducted a small number of qualitative telephone interviews with the BEIS Operations team delivering the EDR pilot. Three were conducted during Phase I and two during Phase II, in order to provide insights from BEIS' perspective on scheme design, delivery and participation<sup>10</sup>.

These provided supplementary evidence drawn upon in answering key research questions and interpreting the evidence obtained in interviews with participant and non-participant organisations such as BEIS' view on participation levels and the reasons for this, views on certain aspects of the scheme design etc.

The final stage topic guide for these interviews can be found in Appendix 11.

## Appendix 5d: Aggregators

We conducted qualitative telephone interviews with 15 organisations that self-identified as energy aggregators. These comprised a mixture of those that deliver energy efficiency aggregation and those that have considered doing so but had not done so, at least at the time

---

<sup>10</sup> It should be noted that the individuals making up the operations team changed throughout the process and could only comment on the aspects they were involved in.

of the interview. The sample was purposeful, drawn from existing lists (such as National Grid's list of aggregators<sup>11</sup>) and internet research.

The interviews were intended to provide insight on the aggregator market and operating environment as well as the specific reasons those providing energy efficiency aggregation did not engage with the EDR pilot. The topic guide used for these interviews can be found in Appendix 11.

## Appendix 5e: Wider Population Survey

### Methods

The survey comprised a quantitative telephone survey of 750 large businesses not participating in EDR but that were likely eligible for the EDR pilot. The survey explored organisation profile (size, activities etc.), organisational attitudes and existing action on energy efficiency, typical conditions of action (lead times and preferred payback periods), propensity to act based upon the support scenarios prompted, and preferences on specific features of support (financial mechanism).

A sub-set of the Inter-Department Business Register (IDBR) was used as the sample frame for the survey, providing a mix of large public and private sector groups. Eligible organisations comprised large energy consumers (defined by those who could in theory achieve a demand reduction of at least 50kW, which was defined for the purposes of this survey as organisations with energy bills equal or more than £100k/annum<sup>12</sup>).

For various reasons – practicality, recruitment resource, respondent burden, efficient analysis, and organisational sample size – the survey was limited to one respondent per organisation. Organisations of the size sampled often had a dedicated energy manager or at least an individual with direct responsibility for energy (even if energy only comprised a part of their remit); therefore, these individuals were targeted. Targeted survey respondents were given a brief overview of the survey content via email and to confirm they were best placed to answer our questions. The survey included organisations that contract out energy procurement or management to energy service companies or similar.

The survey ran from July to mid-September 2017. Non-response bias was managed through introducing and exhausting the sample in batches before importing more, limiting the survey to 15-20 minutes, and ensuring sufficiently long fieldwork duration to allow responses. Further screening was conducted at the start of the interview (e.g. electricity consumption and main sector). The survey excluded those who had signed a participation agreement for EDR, but not those that had reached stages prior to that.

---

<sup>11</sup> The most recent version is available here:

<https://www.nationalgrid.com/sites/default/files/documents/Commercial%20Aggregation%20Service%20Providers.xls>

<sup>12</sup> Based on the assumption that people can relate to energy bills more than kW, £100k in annual energy bills was assumed to be a sensible cut-off point.



## Sample

750 businesses were interviewed; responses were weighted on the basis of sector as reported in the IDBR. The IDBR reports there were 9,82513 organisations with over 250 employees in the UK in 2017. We weighted to somewhat fewer due to the need to reflect ineligibility for the survey (either because of low energy consumption or because they were EDR participants). This resulted in an estimated population of 7,097, achieving overall results accurate to  $\pm 3.4$  percentage points at the 95% confidence level.

Table 5 below shows the IDBR population and completed interview numbers by sector and in total. It also shows the confidence interval achieved in the context of the IDBR populations.

---

<sup>13</sup> Source UK business; activity, size and location: 2017  
<https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/ukbusinessactivitysizeandlocation>

**Table 5: Sector samples, population and confidence interval**

<b>Sector<sup>14</sup></b>	<b>Sample achieved (n)</b>	<b>Eligible population weighted to (N)</b>	<b>Confidence interval (±) in percentage points (based upon equally split responses<sup>15</sup> and a 95% confidence level)</b>
Primary	10	86	N/A
Manufacturing	159	1,077	7.5
Construction and real estate	13	509	N/A
Wholesale and retail	73	842	11
Transportation and storage	30	290	16.5
Accommodation and food services	58	431	12
Office-based sector (utilities, Information and communication services, financial, insurance and professional, scientific and technical services)	62 <sup>16</sup>	1,370	12
Public sector (councils, central government, education)	203	1,371	6.5
Human health and social work activities	93	868	9.5
Arts, entertainment and recreation	49	253	12.5
Overall	750	7,097	3.4

<sup>14</sup> Many organisations had multiple site types (e.g. a retailer operating shops, warehouses and administrative offices) making a single categorisation of site activity challenging. Therefore IDBR sector was used for categorisation and not reported activities.

<sup>15</sup> Therefore if responses were split 90%/10% across question responses rather than 50%/50%, there would be a narrower confidence interval on that question for the same sample size. Some intervals are N/A as the sample sizes are so small that there isn't a meaningful confidence interval for stats from this group. Interviews with these groups were just intended to ensure representation in the sample overall.

<sup>16</sup> Fewer interviews than anticipated were achieved in this sector due to the extent to which they were in managed / serviced offices. There was a much higher ineligibility rate for this group than for any other.

## Analysis

The approach used in analysing the survey data was as follows:

- Cleaning of the data (including any amalgamation or creation of new variables as highlighted in the table below).
- Weighting of the data to known sector populations (as per the IDBR classification of sectors).
- Analysis of the dataset to inform the relevant HLQs and EQs and CMOs (where relevant). In addition, analysis of the dataset provided interesting findings outside of the HLQs and EQs (though we would expect these to cover most areas relevant to the evaluation).

This provided the following:

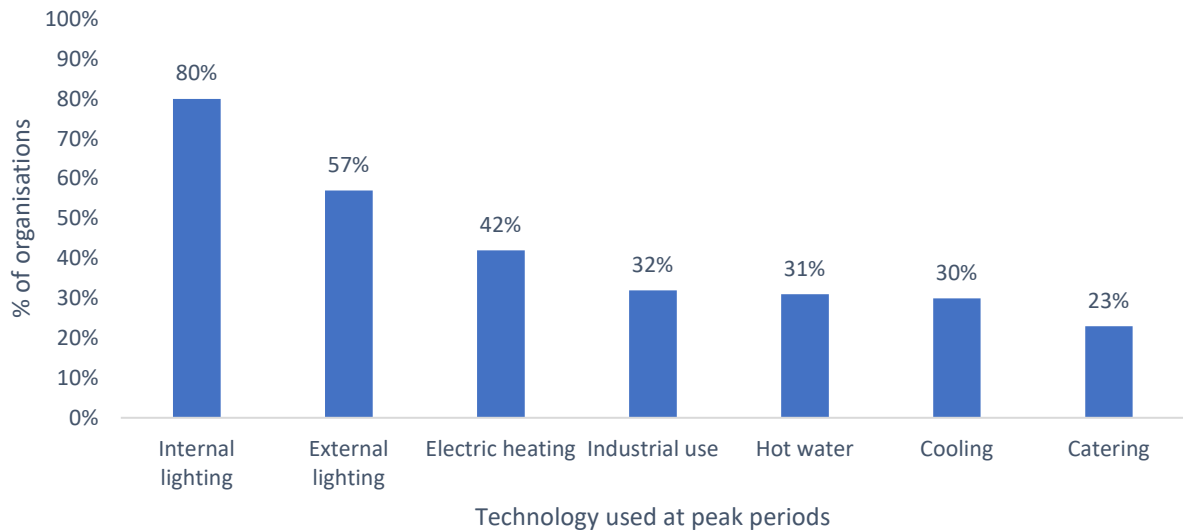
- Frequencies on all questions and crosstabs for a set of standard/agreed upon set of variables.
- An understanding of the UK's large organisations by activity type, the presence of an energy manager, tenure (own vs. rent, etc.), electricity use and other key variables.
- Commonalities and differences between the survey respondents and the EDR pilot participants.
- An understanding of what the wider population is doing in regards to energy efficiency projects. The survey included specific questions exploring recently taken and future planned action and on internal structures and processes relating to energy.
- Variations based on the presence of an energy manager and the importance the organisation places on energy.
- A profile of interest in various technology types. Determined what kinds of organisations are installing or considering installing which kinds of energy efficiency technology.
- Comparison of the pilot participants to the wider population, e.g. investigated if the EDR pilot's large preference for lighting projects is reflected in the general population.
- Indication of acceptable levels of incentives and resource burdens for different types of organisations. Investigated how this varies by activity and technology type.
- Appetite for various delivery mechanisms (grant, auction, loan, etc.) and if the types of organisations that prefer each differs between them.
- Understanding of what types of organisations in the UK are using energy service companies (ESCOs) and those that are not, as well as what kinds of organisations are familiar with the concept.
- Understanding awareness of the EDR pilot in the general population and (for the organisations aware) understand the reasons for non-participation and associated or perceived barriers. These may include both financial and non-financial barriers.
- Report on any other unusual or unexpected results.

## Select results

Main findings from the survey are contained in Section 4 of the main report. This section sets out additional findings pertinent to the EDR pilot scheme rules and respondent views on energy efficiency in general.

### Profile

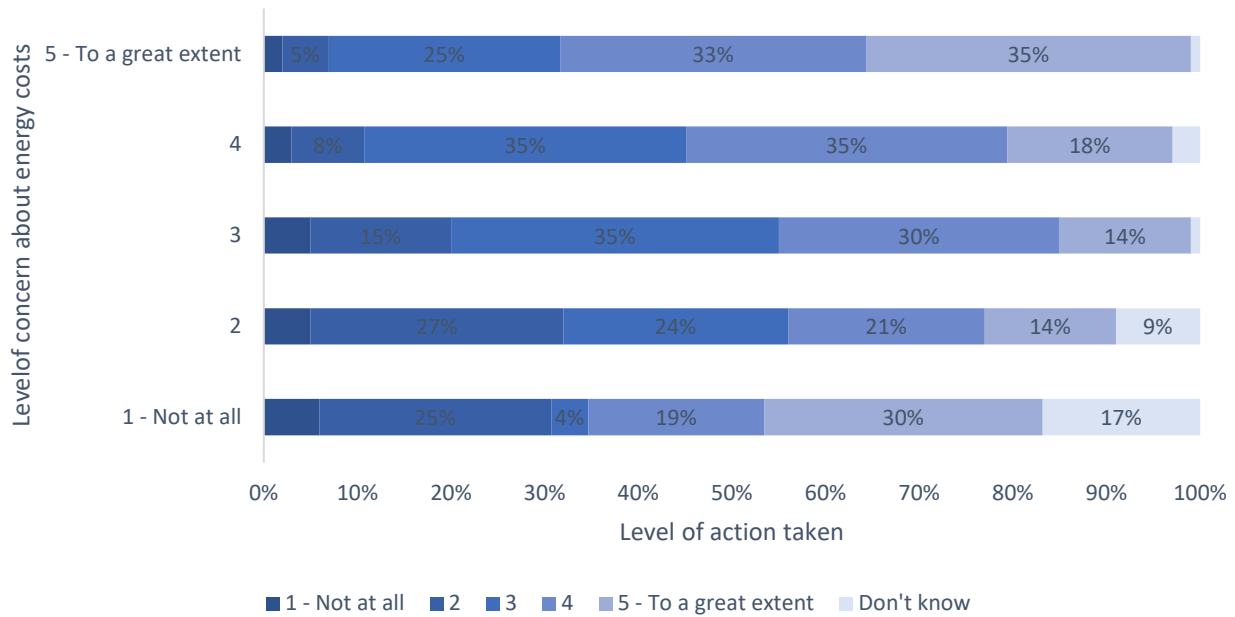
All survey respondents were asked which different technologies were used at any time during the peak period of November – February 4pm – 8pm:



**Figure 3: Technologies used during the Winter peak period [n=750]**

Lighting was the most commonly cited technology used during peak periods, but around a third of respondents were using other prompted measures as well.

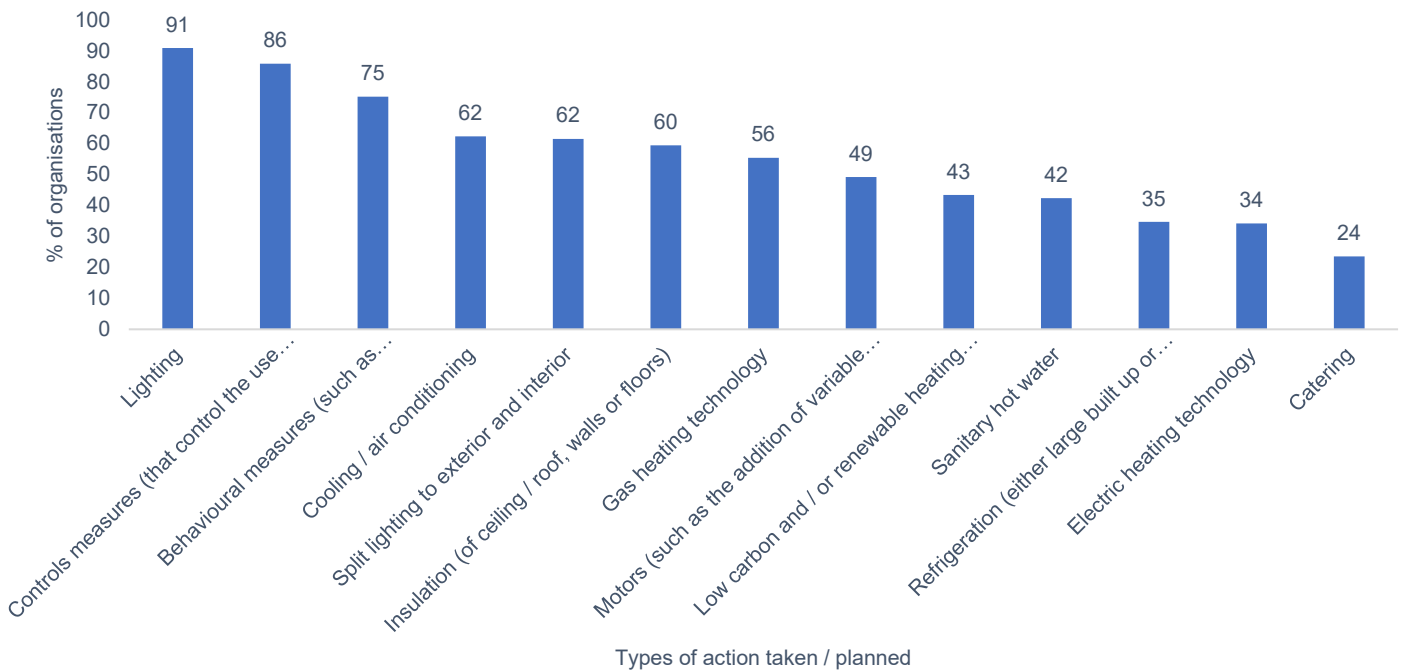
All respondents were asked about the extent to which decision makers in their organisation were (a) aware of the energy efficiency changes that could be made; (b) had implemented these:



**Figure 4: Concern about energy costs vs. the extent to which those have been implemented [n=750]**

This shows a correlation between concern about energy efficiency action and the taking of it but an organisation may view energy as an important area and have taken lots of action to reduce consumption and therefore not be 'concerned' about it.

Respondents were asked whether they had recently taken or planned a range of different energy actions:



**Figure 5: Extent of the taking / planning of a range of energy reduction actions [n=750]**

## Designing a scheme: payback, resource intensity and types of financial support

All survey respondents were asked about general tolerances around payback for energy efficiency projects (see Figure 3). On payback, 63% could quantify a typical payback level; amongst the other 37% of respondents, payback varied considerably depending upon the specific technology and how essential it is (i.e. where technology needs to be upgraded, organisations tend to tolerate much higher payback levels, or even near indefinite payback). Some illustrative quotes from those surveyed were as follows:

*“It generally depends on how attractive the project is. Three years would be ideal, but we do not just base our decision on payback levels, we look at other factors.”*

*“There is no standard; it depends on how the firm is performing, what the project is and the profile of it.”*

*“It depends on ratio of outlay to payback; on smaller projects it can take around two years and with larger projects it can take between three to five years.”*

*“It depends on the site, so varies on rented and owned property.”*

*“Varies by project and depends on implementation, staff training, maintenance, etc. It is not a set time for payback.”*

*“2-3-year payback a very good chance, 3-5 years less likely, >5 years very unlikely.”*

Where respondents could quantify payback, the responses ranged from 0.5 years to 15 years; public sector organisations with no profit incentive tended to have the higher average payback. The average quantified payback limit across all organisations was 4 years.

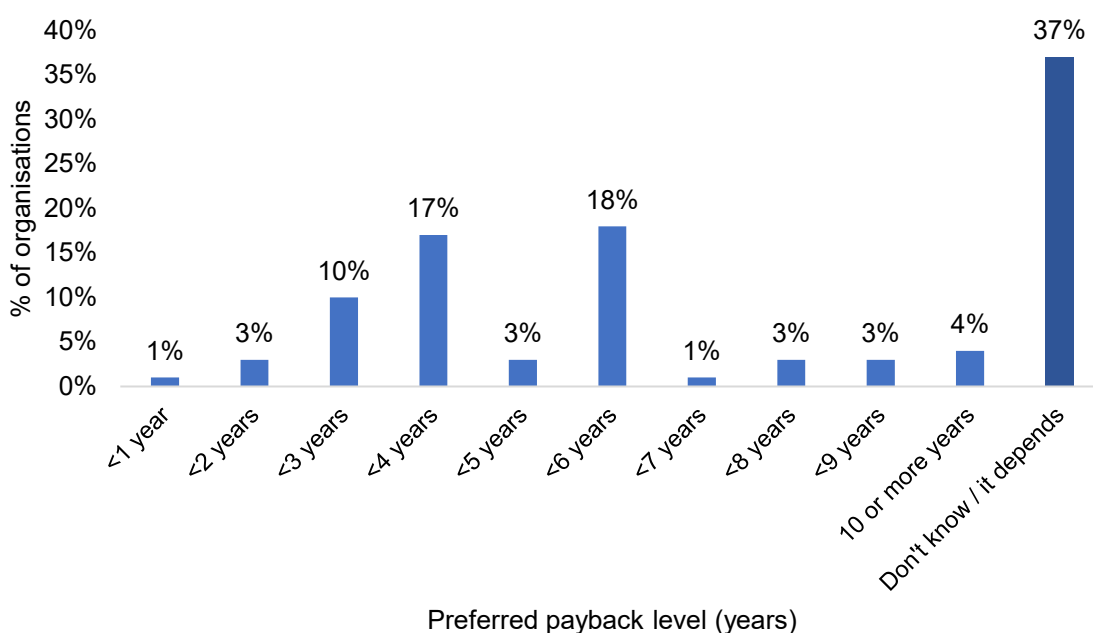


Figure 6: Typical preferred payback broken down by response [n=750]

The survey also asked respondents what kind of administrative resource burden they would be prepared to accept when participating in an energy efficiency scheme (as EDR drop-outs often cited resource burden as a reason for their withdrawal). On resource intensity, only 26% could quantify a typical tolerable level; amongst the other 74% of respondents' tolerable resource intensity varied considerably not only upon the specific technology but also how much money a scheme may deliver i.e. the larger the funding opportunity, the greater the resource intensity they may tolerate. Some quotes:

*"We would cost this into the payback of the project, so would want to recover it over the course of the payback period."*

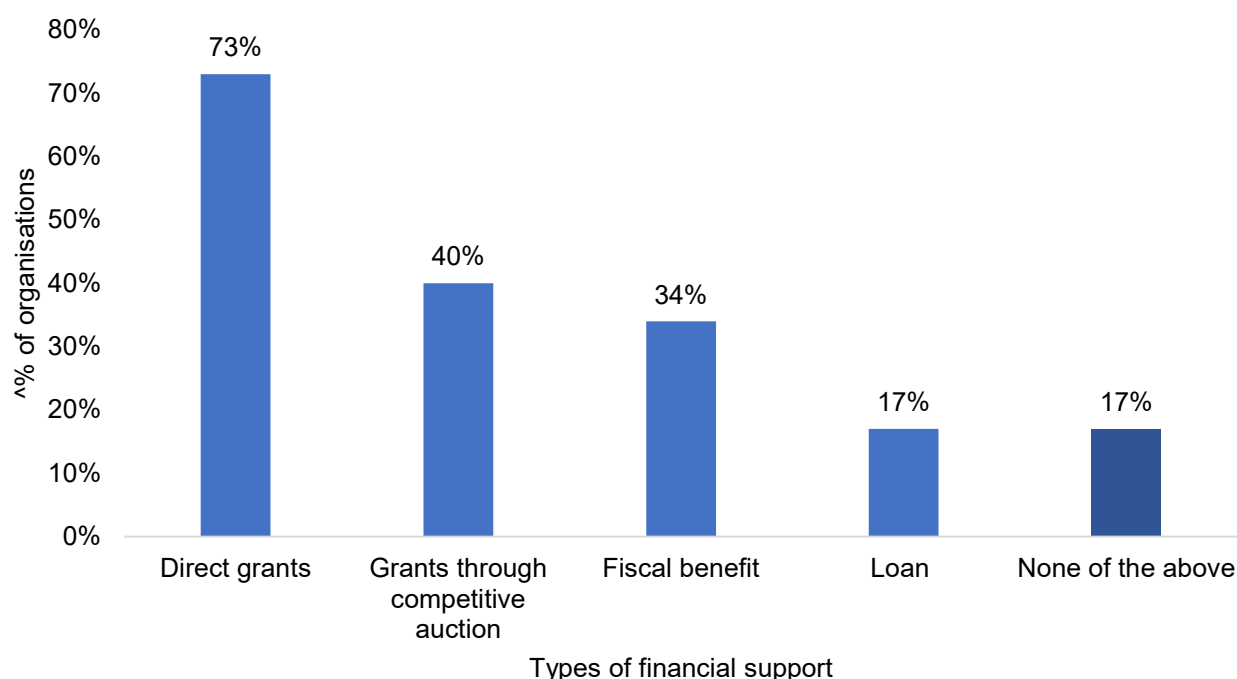
*"We would try and put very little time into this."*

*"Unlimited really if the payback is good enough. We have a small energy team which is constantly looking at projects so we are already paid for."*

*"This would vary case by case depending on what benefits we can get from it."*

Where respondents could quantify maximum resource required, the responses ranged from 1 working day right up to approximately 100 days; those with energy specialists generally tended to have higher resource intensity tolerance (16 days vs. 11 for those without a specialist). The average overall was 12 working days.

Another aspect of a hypothetical incentive options that the survey explored was preference for the type of financial support provided. The chart below shows the extent to which respondents said they would be interested in the incentive option if the following support was offered.



**Figure 7: Financial support that respondents said they would in principle be interested in [multiple choice; n=750]**

The results indicate that by far the most popular support is – perhaps unsurprisingly – a direct grant. However, two-fifths of the sample were still interested in an auction-based grant.

## **Utilising ESCOs**

The survey asked about the awareness and use of ESCOs; 87% of organisations were aware of energy service companies while 44% of all organisations (51% of those aware) have used such companies. Those with energy specialists and those with experience implementing energy efficiency projects were more likely to have heard of ESCOs. Those in the construction and transportation sectors were the least likely to have done so.

## **Awareness of the EDR pilot**

Of those surveyed, 35% of organisations had heard of the EDR scheme and 6% (17% of those aware) had engaged with the scheme to some extent. However, the survey deliberately excluded participants (i.e. those who has signed a participant agreement).



## Appendix 6: Reliability of savings

For the purposes of the pilot, there are four categories of energy (kW) savings, as outlined in Section 3 of the report.

- **Estimated savings contracted in the Participation Agreements.** These were calculated by participants using spreadsheet-based deemed calculators, provided by BEIS. These savings were calculated before equipment installation, as an estimate of what will happen (also called ex ante savings). We have included only those savings that were committed to in Participant Agreements.
- **Estimated savings from projects funded by EDR.** These are a subset of the savings contracted by BEIS and only includes those projects that received an incentive from BEIS.
- **Delivered savings.** Not all participants delivered their projects as planned. Some dropped out of the EDR pilot, some delivered smaller or larger projects, some used different equipment than what was originally planned. The result is that savings post-installation for some projects were different than what was agreed in the Participant Agreements.
- **Delivered savings attributable to the EDR pilot.** This calculation estimates the delivered savings that are directly attributable to the EDR pilot. The evaluation team used interviews, case notes and other sources to determine if the scheme influenced an organisation's decision making during the application stages, to commit to more savings than they would have without EDR support.<sup>17</sup>

Estimates of project kW and kWh savings were taken from the M&V documents submitted by participants. All but one participant elected to use the deemed approach that estimated the savings of different technologies. BEIS had originally planned to conduct on-site metering of EDR projects to verify the deemed savings approach but ultimately this data was not available to review and therefore was not used in the results presented in the report or below. Because of this, insight cannot be provided on how accurate the deemed spreadsheets provided by BEIS were or how accurate self-reported savings figures were. Participants also had the option to use metering equipment to record consumption before and after installation (instead of the deemed spreadsheets).

The deemed savings and interview responses were used to understand how much of the claimed savings can be considered additional and how long these savings persist.

### Life-time savings

Even though EDR provided a payment linked to a single winter of peak savings, projects will continue to provide winter peak (and non-peak) savings over the technology's lifetime. For this reason, the evaluation team calculated winter peak savings for each year of the equipment's life.

---

<sup>17</sup> Where organisations were not interviewed after delivery, other information was used to make this assessment (e.g. earlier interviews and/or portal data).

We used the following methods and assumptions in calculating yearly savings attributable to EDR<sup>18</sup>:

- If a project was fully attributable we included all years of savings in our additionality calculations.
- If a project was accelerated, we included the savings for the years that the project was brought forward.
- If a project was scaled up, we included the “extra” part of the project as attributable to EDR.
- If a project was not attributable, we did not include any of its savings in the additionality calculations.

## Results

Ten years<sup>19</sup> of kW savings are presented below for Phase I and Winter 2016-17 of Phase II. Savings for Winter 2017-18 projects are not reported here as these projects are still delivering. The additional savings vary by year due to additionality status as described above.

---

<sup>18</sup> More details on how accelerated and scaled up projects were calculated is available in Appendix 7.

<sup>19</sup> From year 10 until the end of the measure’s lifetime, the savings will be the same. However lifetime of LED lighting varies based on hours of use and will vary project to project; we therefore have not included savings past 10 years.

**Table 6: Yearly peak kW savings for Phase I projects**

Year	Contracted kW	Contracted kW (funded projects)	Delivered kW (funded projects)	Additional delivered kW (funded projects)
2015	4,518	2,229	2,289	2,162
2016	4,518	2,229	2,289	1,818
2017	4,518	2,229	2,289	957
2018	4,518	2,229	2,289	957
2019	4,518	2,229	2,289	957
2020	4,518	2,229	2,289	957
2021	4,518	2,229	2,289	957
2022	4,518	2,229	2,289	957
2023	4,518	2,229	2,289	957
2024	4,518	2,229	2,289	957

**Table 7: Yearly peak kW savings for Phase II Winter 2016-17 projects**

Year	Contracted kW	Contracted kW (funded projects)	Delivered kW (funded projects)	Additional delivered kW (funded projects)
2016	10,559	6,208	5,821	1,845
2017	10,559	6,208	5,821	1,628
2018	10,559	6,208	5,821	1,134
2019	10,559	6,208	5,821	1,134
2020	10,559	6,208	5,821	1,134
2021	10,559	6,208	5,821	1,134
2022	10,559	6,208	5,821	1,134
2023	10,559	6,208	5,821	1,134
2024	10,559	6,208	5,821	1,134
2025	10,559	6,208	5,821	1,134

## Appendix 7: Cost benefit analysis

The most important assumptions for the CBA modelling are described below.

### Application treatment

As described in appendix 6 there are four different classifications of additionality, each requiring different costs and benefits calculations. For the purpose of modelling “accelerated” and “scaled up” applications, the following assumptions were made:

For accelerated applications for which the applicant could not specify exactly by how much the project was brought forward, 2 years was assumed. The basis for the assumption is 2 years is a feasible timeline for a project to be moved forward, i.e. short enough that the project may have realistically been planned, but long enough that one can reasonably speak of something being moved forward beneficially.

Similarly, for scaled up applications where the applicant could not specify exactly by how much the scale of the project changed because of EDR pilot funding, the default assumption is the project was scaled up by 50%. This is big enough to represent a significant scaling up, but small enough to be legitimately classified as scaling up an existing application, rather than the adding of a “new” project to an existing application.

A 50% increment (scale up) means that 33% of the final project size can be considered additional (50%/150%). For example, if a site was planning to install 100 LED fixtures and then added 50 more fixtures to fit into the EDR pilot, their final project would include 150 fixtures and the 50 additional fixtures would represent 33% of the total project (50/150). The CBA model provides the functionality to adopt a different assumption if desired.

For comparison, the CBA has also been modelled under the assumption that all projects were ‘fully additional’, meaning that for all projects, including accelerated, scaled up and non-additional projects, we have attributed all costs and benefits to the EDR pilot. In addition, we have modelled the costs and benefits that would have emerged without the EDR pilot (‘No EDR’), for which we have made the following assumptions:

- Fully additional projects would not have emerged without the EDR pilot and therefore total costs and benefits are set to zero;
- Non-additional projects would have emerged even without the EDR pilot and all costs and benefits have been included, excluding the EDR payment and hassle costs (which only occur in the pilot);
- For scaled up projects, we count 67% (100-33%) of costs and benefits, excluding the EDR payment and hassle costs; and
- For accelerated projects, we count only the costs and benefits for the original, unaccelerated project timeline (as it would have emerged without the pilot), excluding the EDR payment and hassle costs.

## Application lifetime assumption

The analysis assumed 27.4 years as the expected lifetime of LED lighting installations, as per the assumptions provided by BEIS in *Energy efficient products - helping us cut energy use*.<sup>20</sup>

## Assumptions in the treatment of recurring costs/benefits

The measure life, 27.4 years, is applied from Q4 in 2015 to Q1 in 2043 (for Phase I) and Q4 in 2016 to Q1 in 2044 (for Phase II Winter 2016-17). This is because the pilot required technology to be installed before the winter peak, which starts in Q4. For the purpose of calculations in excel, 27.4 years have been split in annual factors, and have been multiplied with annualised cost and benefit values for Phase I:

- The costs and benefits for the 27 complete years are counted in full (i.e. a factor of 1);
- the costs and benefits in Q4 2015 are counted at a factor of 0.25, i.e. equivalent to one quarter of the year, reflecting that applications were first operational in Q4 2015; and
- for the remainder of the lifetime of the application ( $27.4 - 27 - 0.25 = 0.15$  years) in 2043, costs and benefits are counted at a factor of 0.15.

For Phase II Winter 2017-18 this becomes:

- The costs and benefits for the 27 complete years are counted in full (i.e. a factor of 1);
- the costs and benefits in Q4 2016 are counted at a factor of 0.25, i.e. equivalent to one quarter of the year, reflecting that applications were first operational in Q4 2015; and
- for the remainder of the lifetime of the application ( $27.4 - 27 - 0.25 = 0.15$  years) in 2044, costs and benefits are counted at a factor of 0.15.

## Hassle costs

For Phase I, the reported hassle costs are assumed to take place in 2014, 2015 and 2016 with the following split assumed:

- 2014: 60%
- 2015: 20%
- 2016: 20%

For Phase II Winter 2017-18 this is:

- 2015: 60%
- 2016: 20%

---

<sup>20</sup> Table 4 in *Energy efficient products - helping us cut energy use*, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/328083/Energy\\_efficient\\_products\\_helping\\_us\\_to\\_cut\\_energy\\_use\\_publication\\_version\\_final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/328083/Energy_efficient_products_helping_us_to_cut_energy_use_publication_version_final.pdf)

- 2017: 20%

In calculating hassle costs, we have assumed labour rates as per the following table, provided by BEIS.

**Table 8: Average hourly rates**

Average hourly labour cost rates					
	Director	Senior	Middle	Junior	Clerical
Phase 1	£41.35	£19.25	£14.81	£11.26	£10.12
Phase 2	£54.26	£34.99	£18.11	£19.18	£13.45

## Measure life and equipment costs

Assumptions for the measure life are mainly based on information received from BEIS and research undertaken by DNV GL.

Measure life for incandescent, CFL and LED bulbs and costs for CFL and LED were taken from information provided by BEIS<sup>21</sup>. The lifetimes used were 0.55, 5.5 and 27.4 years for incandescent, CFL and LED, respectively. There is an assumption included in the table that the lights are only used 5 hours a day. The bulb costs from the BEIS data were £2.91 and £3.92 per bulb for incandescent and CFLs bulbs, respectively, in real 2013 prices. These numbers were inflated to real 2016 (for Phase I) and real 2018 prices (Phase II) based on Retail Price Inflation as reported by the Office of National Statistics.

Technology lifetime assumptions for T8 and T12 lighting (25,000 and 20,000 hours, respectively) were from Jo Evans at BEIS. Assuming 5 hours of operation a day, this works out to 13.70 years for T8 and 10.96 years for T12.

Bulb costs for T8 and T12 were determined through online research<sup>22</sup>. T8 and T12 fixtures require ballasts to be replaced periodically in addition to the bulbs. One ballast per fixture and three bulbs per fixture was assumed, since the most common types of fixtures have either two or four bulbs.

Ballast life was assumed to be 15 years<sup>23</sup> for both T8 and T12, and all ballasts were assumed to be electronic, not magnetic.

<sup>21</sup> Table 4 in Energy efficient products - helping us cut energy use, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/328083/Energy\\_efficient\\_products\\_-\\_helping\\_us\\_to\\_cut\\_energy\\_use\\_-\\_publication\\_version\\_final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/328083/Energy_efficient_products_-_helping_us_to_cut_energy_use_-_publication_version_final.pdf)

<sup>22</sup> From prices quoted at [www.lampshoponline.com](http://www.lampshoponline.com) at the time of the assessment.

<sup>23</sup> [http://www.deeresources.com/files/DEER2013codeUpdate/download/EUL-RUL\\_CalculatingDEERValuesForLighting\\_2014-02-05.pdf](http://www.deeresources.com/files/DEER2013codeUpdate/download/EUL-RUL_CalculatingDEERValuesForLighting_2014-02-05.pdf)

## Assumptions for Societal Analysis

For the societal analysis of Phase I participants, the following assumptions were made:

- Avoided peak electricity demand capacity was zero for the current assessment.
- Avoided electricity generation (the value of marginal plant construction) was zero for current assessment.
- Avoided transmission & distribution (the value of avoided T&D expenditures) was zero for current assessment.
- The relevant fuel when calculating avoided fuel costs is based on the long run variable costs of electricity generation.
- Avoided carbon emissions are based on BEIS' modelled prices for traded carbon emissions (central scenario).
- Avoided air quality damage is based on BEIS' cost estimates of air quality damage associated with the use of electricity.
- For the Phase I analysis, policy administration costs (excluding EDR payment) were based on figures provided by BEIS and split as follows; 40%, 40% and 20% in the years 2014, 2015 and 2016, respectively. This split represents our estimate of the likely incidence of time requirements over 2014-2016 for participation in the EDR pilot scheme. For the Phase II analysis, we used actual figures and split as advised by BEIS.

## Other assumptions

### Inflation

With the exception of some bulb cost information provided by BEIS (described above), analysis assumed that all prices and cost information are real 2016 (for Phase I) and real 2018 (Phase II). In updating Phase I results in 2018, for comparison with Phase II results, we applied Retail Price Inflation as reported by the Office of National Statistics so all results would be in 2018 prices.

### Discount rate

Unless participants provided a specific finance rate, it was assumed that the discount rate for participants is 7%. This number is used as a broad proxy for a UK corporate bond rate. The discount rate for the societal analysis is assumed to be 3.5%, which is the social time preference rate (STPR).

## Appendix 8: Secondary research

In addition to the data gained directly from interviews, there were a number of other direct and secondary sources utilised.

### EDR pilot data

The EDR pilot data portal (containing all information submitted by applicants and participants in the EDR) was reviewed as part of the analysis process. This was used to:

- Provide information on the project profile (scale, technology) and any changes to that happened along the project's implementation.
- Provide information on participants' views of the process from standard survey forms, archived emails between BEIS Operations team and participants, and the BEIS Operations team's case notes.
- To highlight the level and type of BEIS support and advice provided, again from the Operation team's notes and archived emails.
- To collate information on kW and kWh impact, wider benefits and resource use from M&V forms, WCSRs and final reports submitted by EDR pilot participants.
- To inform the assessment of certain clues in the Process Tracing [see Section 10].
- To help confirm and triangulate interview results.

### International Comparisons

As part of the EDR pilot evaluation project, a review of international energy efficiency and demand reduction schemes was conducted, to compare the key attributes and learnings from those schemes to the EDR pilot.

The study was a two-part process that included:

- A high-level desk top exercise to identify the key attributes of a number of schemes. The results of this study were summarised in matrix format with brief annotation. This stage was not the main focus but served to inform the selection of candidate schemes for the second stage study. Schemes investigated included:
  - Switzerland's ProKilowatt scheme
  - Germany's Energy Efficiency Tendering STEP Up! scheme
  - Netherlands' WBSO Tax Scheme for Research and Development
  - Netherlands' Energy and Environment Investment Allowance
  - California's energy efficiency portfolio



- PJM's capacity market
- ISO New England's capacity market
- Texas's energy efficiency portfolio
- From the first stage schemes, four were selected for more comprehensive review. This review was combination of further desk-top research coupled with interviews with parties involved in the schemes. These interviews were with external parties (aggregators, service providers, regulatory bodies, Federal and Local Government), as well as DNV GL colleagues working in the markets in which the schemes operate. Schemes investigated include:
  - Switzerland's ProKilowatt scheme
  - California's energy efficiency portfolio
  - PJM's capacity market
  - Texas's energy efficiency portfolio

A set of specific topics were researched for each scheme selected for the comprehensive review:

- High level overview of the energy market in the scheme's location
- Rationale and background of the scheme
- Key technologies and incentives
- Future changes to the scheme
- Annual scheme budget
- Annual scheme savings
- Approach to measurement and verification
- Approach to additionality calculations or measurement
- Interactions with a capacity market (if applicable)
- Interaction of scheme with security of supply (if applicable)
- Key success and failure factors
- Comparisons to the EDR pilot

Sources of information included published scheme data and reports, scheme websites, press releases, interviews with scheme staff and interviews with DNV GL staff working with the scheme or in the same market.

The findings from this work support our assessment of EDR's viability in the GB Capacity Market and also provide lessons for Government on success and failure factors in other similar energy efficiency schemes.

## Appendix 9: Qualitative Comparative Analysis

Qualitative Comparative Analysis (QCA) is a means of systematically considering the extent of association between different 'conditions' (e.g. aspects of an intervention and the wider context) and an 'outcome' of interest.

In the context of the EDR pilot evaluation, the objective of the QCA was to explore and understand the conditions that appeared necessary and/or sufficient, either individually or in combination, for full participation in the scheme.

QCA was applied across phases I and II to all (66) cases of those that had at least expressed interest in Phase I or Phase II and where in-depth interviews were conducted.

**Table 9: QCA by participation category**

Category	Number
Applied to EDR but did not bid	28
Submitted an EDR bid	16
Full participants	22
TOTAL	66

QCA started by utilising interview transcripts to determine which 'conditions' were associated with each case. Both the interviewer and the lead analyst reviewed interview documentation to assign 'conditions'. These conditions were drawn from the initial work with the Theoretical Framework and added to as new conditions became apparent. 'Conditions' closely reflected the 'contexts' in the CMO maps and were based upon those found to be relevant in previous stages. These could then be tested to explore the importance of individual conditions or combinations of conditions.

Example conditions include:

- Organisation has a stated commitment to energy efficiency.
- Organisation has previous experience with energy efficiency projects.
- Organisation bid the EDR maximum.

A full list of conditions tested is available in Annex 2.

These conditions were then subject to a minimisation procedure (assessing and ruling out particular conditions as described in the attached QCA summary sheet) that attempted to

identify the simplest set of conditions<sup>24</sup> that seemed to account for an observed outcome (full participation, application, etc.). Stata software<sup>25</sup> was used to feed in conditions and help identify combinations of conditions that seemed to be sufficient or necessary for the outcome to be observed.

The QCA relationship between contexts (for example, stated commitment to energy efficiency) and outcomes (did or did not participate) provided supporting evidence or clues to the existence of pre-defined mechanisms or mechanisms that may not have been considered, and tested some of the original assumptions in the Theoretical Framework, i.e., did the conditions that seemed to be necessary support the contexts and mechanisms that were theorised to be important in seeing a particular outcome. The results were typically expressed in statements expressed in qualitatively or as algebra. For example, a combination of 'Condition A' and 'Condition B' or a combination of 'Condition C' and 'Condition D' will lead to 'Outcome E'. This allowed:

- Combinations of factors to be identified and potentially merged into one 'condition' in further rounds (as opposed to single factors): in previous stages various 'conditions' around organisational kW demand were amalgamated to a more overarching 'condition' – 'in principle eligible' or resource devoted by level of seniority was amalgamated into a total organisational resource devoted.
- Assessment of equifinality (i.e. allowing that there might be more than one set of 'conditions' leading to an outcome).
- Assessment of combinations of 'conditions' as 'necessary' or 'sufficient' for a given outcome.

Implementing QCA required a structured approach to interviewing – with up-front assumptions about likely important 'conditions' – so that the same information was captured in each interview. Topic guides were written with a set of possible pre-defined conditions in mind, taken from the Theoretical Framework. The challenge of this in the EDR context was that later stage interviews could not be set up to entirely test every possible condition within a reasonable interview timeframe. In addition there was the potential for participant interviews towards the end of data collection to identify additional contextual factors that had not been observed or tested in earlier stages, though this was not ultimately the case.

Findings from the data collection were collated into one database whereby each row equated to an organisation. The team then analysed these within the respondent groups to identify potentially different 'conditions' that correlate with similar outcomes. An example of the grid created for use in the QCA is shown below (where 1 = true and 0=false):

---

<sup>24</sup> 'Conditions' in QCA are not the same as 'contexts' in CMO configurations. For example, one could consider a mechanism to be a 'condition'.

<sup>25</sup> <https://www.stata.com/>

**Table 10: Example QCA grid**

OUTCOME: Participating as of March 2018?	Have dedicated energy efficiency resource / someone for whom things like the EDR pilot might be within their usual remit?	The EDR pilot funded project was already partially developed prior to the scheme?
1	1	0
0	1	1
1	1	1
0	0	1
0	1	0
1	1	1

Early rounds of QCA did not highlight any clear distinctions or linkages, so it was necessary to re-visit the data set to identify further ‘conditions’ (or combinations) of potential importance to the outcomes of interest, and remove those that seemed to be unimportant. For example, as described in the QCA summary sheet (see Annex 2), in establishing conditions for participation we removed or amalgamated factors:

- 'Access to external expertise'; it was very difficult to disaggregate from the presence of a dedicated energy resource, which was really the factor of interest, regardless of whether internal or external.
- 'Ease of completing the application' and 'Significant senior input to the application'; even seemingly quick applications could encounter issues further on in the process or require multiple iterations, sometime even leading to drop out. Conversely, many who participated fully found the process onerous, so this did not seem to be a useful variable even in correlation with conditions like resource or familiarity, as most ostensibly had that too.
- 'Having a project well over the kW threshold' was also removed. The measurement was to some extent arbitrary, but also because it did not seem to have a strong connection to participation (even if in theory smaller projects might be more likely to encounter challenges which took them below the threshold and therefore drop out).

For outcomes, there were a number of different dimensions to explore:

- A binary ‘participated’ vs. ‘did not participate’ comparison.
- Comparison of groups reaching specific stages i.e. those who registered interest vs. those that did not, those that applied vs. those that did not, and so on.
- A binary ‘attributed’ vs. ‘non-attributed’ comparison i.e. the scheme influenced the demand reduction or it did not.

The headline outcomes of the QCA process are shared in an attached Excel document with an explanation of the approach taken to reducing down conditions to those truly necessary i.e. having a viable bid in the application window, having dedicated resource, and having a stated organisational commitment to energy efficiency.

**Reference 2: Key QCA outcomes (see Annex 2)**

## Appendix 10: Process Tracing to examine the contribution of the EDR pilot

Process Tracing was used to evaluate the hypothesis that the 'EDR pilot contributed to peak demand reduction that would not have been realised otherwise'. This was explored in the 22 cases where organisations participated in the pilot in full. This section describes the approach and briefly summarises the results and key conclusions drawn from the analysis.

Process Tracing is a case-based approach to causal inference which focuses on the use of 'clues' within a case to test causal claims. Process Tracing starts with a hypothesis which is then subject to a series of tests which seek evidence one might expect to observe if the hypothesis is true, and evidence one might expect to observe if it is not true (i.e. an alternative hypothesis is true).

As stated, Process Tracing was used to assess attribution, specifically testing the hypothesis in each of the 22 cases where organisations participated in full that 'EDR contributed to a reduction in peak demand'. The alternative explanation was that these organisations would be taking the same action within the same timescales anyway. Process Tracing was also used to test theories in the Theoretical Framework (e.g. feature 'x' of the EDR programme design influenced action), to contribute to answering the HLQs on the extent to which EDR influenced outcomes.

The main clues the team assessed to determine whether this hypothesis or the alternative explanation was true are summarised below. Clues were assessed for each participant. The final tests applied are a subset of those identified in earlier stages of the evaluation, as the following were removed:

- Clues were removed from the final analysis where they were defined as the direct opposite of a pre-existing clue as they would effectively double the effect of that clue on probability calculations.
- The test 'there is documentation to suggest that the project was different in some way prior to engagement with the scheme' as the only available documentation in all cases pertained to the project once an application had been made (so any differences were inconclusive regarding the contribution of the EDR pilot or what would most likely have happened otherwise).

The following types of test were used in process tracing<sup>26</sup>:

- Straw-in-the-wind: if passing, this affirms the relevance of the hypothesis but does not confirm it. If failing, the hypothesis is not eliminated but slightly weakened.
- Hoop: if passing, this affirms the relevance of the hypothesis but does not confirm it. If failing, the hypothesis is eliminated.
- Smoking-gun: if passing, this confirms the hypothesis. If failing, the hypothesis is not eliminated but slightly weakened.

---

<sup>26</sup> From Understanding Process Tracing: David Collier, University of California, Berkeley – Political Science and Politics 44, No. 4 (2011); 823-30.

- Doubly-decisive: if passing, this confirms the hypothesis. If failing, the hypothesis is eliminated. These are rare.

Each causal test or clue was given a probability of being observed if the hypothesis was correct and being observed if the hypothesis was not correct or an alternative was true, as illustrated in Table 11. An example of a hoop test is obtaining evidence to support the 'organisation is implementing a project or action following the launch of EDR that reduced peak demand'. Observing the evidence if the hypothesis was true was given a probability of 1; there could only be peak demand reductions resulting from the EDR pilot if the organisation had implemented a project with this outcome since the launch of the scheme. However, seeing this evidence if the hypothesis was not true was given a probability of 0.9; it is quite likely that we would observe this regardless of the truth of the hypothesis (though slightly less so given one would not expect all organisations in the target audience to have implemented projects in that time period outside the scheme). Probabilities were based on internal discussions and refined with BEIS. Where clues of a similar nature had been used in other similar assessments (e.g. in evaluating the Transitional Arrangements<sup>27</sup>), these were used to inform the probability assessment.

---

<sup>27</sup> Available at <https://www.gov.uk/government/publications/evaluation-of-the-transitional-arrangements-phase-1>

**Table 11: Process Tracing tests and probabilities**

Clue / test	Type of test	Probabilities of observing / not observing if hypothesis is true		Probabilities of observing / not observing if hypothesis is false / alt is true	
		Probability of seeing if hypothesis is true	Equivalent numerical probability if observed	Probability of seeing if hypothesis is false / alt is true	Equivalent numerical probability if observed
The organisation implements a project / action following the launch of EDR that reduces peak demand (whether within EDR or outside).	Hoop test	Very likely	1	Very likely	0.9
The peak demand reduction project was in place to some degree prior to the organisation becoming aware of the scheme.	Straw in the wind	Inconclusive	0.4	Likely	0.6
The project was struggling to make progress prior to the scheme.	Smoking gun	Likely	0.8	Inconclusive	0.5
The organisation has put substantial time into the process (i.e. more than typical).	Smoking gun	Inconclusive	0.6	Unlikely	0.2
The respondent states that the project would not have happened without the scheme, or would have been smaller / less impactful / slower.	Smoking gun	Likely	0.9	Unlikely	0.2
The organisation has implemented projects like the supported one on other sites recently without subsidy.	Straw in the wind	Inconclusive	0.4	Likely	0.6
The project was outside the organisation's typical required rate of return and EDR pilot support brought it within this.	Straw in the wind	Inconclusive	0.6	Inconclusive	0.4
The project is outside the organisation's typical required rate of return but they have progressed it through the scheme anyway.	Straw in the wind	Inconclusive	0.6	Unlikely	0.3



All 22 (11 in each Phase) full participant cases were assessed; the evidence feeding into each clue came from several sources in combination to determine the result of each test for each participant; this helped to triangulate evidence and reduce bias. The sources were:

- Interview responses.
- Documents produced prior to scheme involvement, e.g. showing initial plans and therefore enabling assessment of how these might have changed. (Participants were asked during interviews to provide any relevant documentation.)
- Information and documents in the portal (e.g. application data, and reporting to BEIS including archived emails and the Operations team's case notes), which also helped to show level of involvement.
- Survey results and the activity of those not participating in the scheme which showed what similar types of organisations were doing outside of the EDR pilot.
- Public statements and other public domain data i.e. impact analyses or press releases from the participating organisation themselves.

An initial 50% likelihood of a hypothesis being true was assumed (prior probability based on assuming a 'neutral' position) – equivalent to saying the hypothesis and alternative hypothesis had an equal chance of being true, prior to the tests.

Each case was then assessed using Bayesian updating. This is a statistical inference method where Bayes' theorem is used to update a hypothesis's probability using available evidence.<sup>28</sup> The initial analysis was performed using all clues; however, Bayesian updating requires that all tests and evidence must be stochastically independent from the others in order for the probabilities to be combined in assessing the 'package of evidence'. The excluded clues are still available in the process tracing spreadsheets below but have not been used in the calculation of probabilities. The decisions regarding which tests should be included in assessing the combined package of evidence, and rationale, are summarised in Table 12.

---

<sup>28</sup> This presentation provides a useful summary: <https://astronomy.swin.edu.au/~cblake/StatsLecture4.pdf>

Table 12: Rationale for test inclusion or exclusion

Test in contribution tracing	Included or excluded when combined	Rationale
The organisation implements a project / action following the launch of EDR that reduces peak demand (whether within EDR or outside)	EXCLUDED WHEN COMBINED	All cases implemented a project post EDR that reduces peak demand. Excluded from the analysis given this test is not technically independent from other tests (specifically, not observing this evidence affects probabilities of observing other clues and so is not independent).
The peak demand reduction project was in place to some degree prior to the organisation becoming aware of the scheme	EXCLUDED WHEN COMBINED	This was again observed for all cases. Not observing this would mean probability of observing it was struggling to make progress would not be possible (i.e. it is not independent). So it was excluded.
There is documentation to suggest that the project was different in some way prior to engagement with the scheme	EXCLUDED WHEN COMBINED	This test is not independent from the test relating to whether it was struggling to make progress, as observing it was struggling to progress prior to the scheme greatly increases the chances of the organisation in question making changes.
The project was struggling to make progress prior to the scheme	INCLUDED WHEN COMBINED	Independent of other included tests.
The organisation has put substantial time into the process (i.e. more than typical)	INCLUDED WHEN COMBINED	Independent of other included tests.
The respondent states that the project would not have happened without the scheme, or would have been smaller / less impactful / slower	INCLUDED WHEN COMBINED	Independent of other included tests.

Test in contribution tracing	Included or excluded when combined	Rationale
The organisation has implemented projects like the supported one on other sites recently without subsidy	EXCLUDED WHEN COMBINED	Not independent of other tests - unlikely they would have implemented projects on other sites without subsidy if outside required rate of return.
The project was outside the organisation's typical required rate of return and EDR pilot support brought it within this	INCLUDED WHEN COMBINED	Independent of other included tests.
The project is STILL outside the organisation's typical required rate of return but they have progressed it through the scheme anyway	INCLUDED WHEN COMBINED	Independent of other included tests.

Bayesian updating based on the independent tests resulted in posterior probabilities for each case of the hypothesis being true. These were coded based on the following categories:

- Claim is **very likely** to be true (posterior probability > 80% )
- Claim is **likely** to be true (60% < posterior probability <= 80%)
- Claim is **neither likely nor unlikely** to be true (40% < posterior probability <= 60%)
- Claim is **unlikely** to be true (20% < posterior probability <= 40%)
- Claim is **very unlikely** (posterior probability < 20%)

The analysis indicated that the claim that EDR had contributed to a peak demand reduction was very unlikely to be true in three cases (3), but likely (14) or very likely (5) to be true, based on the combined package of evidence, in all other cases.

In order to further test additionality, statements where interviewees specifically said their project would have gone forward without EDR were excluded and the test was repeated with the rest of the evidence. Most remaining tests pertained to the likelihood that the project would have happened at all outside the scheme, rather than whether it would have happened sooner. In this case, the hypothesis was deemed unlikely in 17 of the 22 cases, neither likely nor unlikely in 3 cases, likely in 1 case and very likely in 1 case. This added weight to the conclusion that most projects implemented within the EDR pilot would have been implemented at some stage anyway in the absence of the scheme (albeit later or smaller).

# Appendix 11: Research Instruments

## Full participant topic guide [final stage]

### Introduction

Good morning/afternoon. My name is X and I am calling from [DNV GL/Databuild Research/CAG Consultants] on behalf of the Department of Business, Energy and Industrial Strategy (BEIS). Thank you for making time to speak to me today.

We are speaking to organisations who participated in the 2015 Auction 2 of the Electricity Demand Reduction Pilot scheme, or EDR, and have followed this through to completion. I understand that you recently submitted the final project report and Winter Capacity Savings Report to BEIS? This is the final time we will be contacting you regarding your A2P project(s); many thanks for the time you have given to date, your feedback is very important in enabling BEIS to make evidence-based decisions about the scheme and policy more widely.

As you have reached completion of the process and this is the final conversation we will be having regarding your funded project, we will be looking to talk to you about the aspects of the process that have taken place in the last couple of months (e.g. the aforementioned reports) along with a broader look back at the process and your organisation's involvement in it.

We will keep any information that you share with us confidential and store it securely, in accordance with the Data Protection Act. Neither you nor your organisation will be identifiable in our report to BEIS, unless otherwise agreed with you.

Before we go any further, some house-keeping:

- Are you are happy for me to record this interview? The recording will not be shared outside the research team but it helps us to focus on the interview and not on taking notes.
- Can we match data mentioned in this interview to data you provided to BEIS as part of the scheme, or in previous evaluation interviews?
- We would like to be able to attribute your responses to your organisation when reporting to BEIS, but equally are happy to keep comments anonymised if you would prefer. I suggest we pick this up at the end so you can make an informed judgement based upon what we have discussed; I just wanted to make you aware at this stage of the conversation.

### WCSR report

- Please can you confirm the winter peak kW and overall kWh savings delivered by the project(s) was \_\_\_\_ and \_\_\_\_ as per your final reporting to BEIS? [Populate with final kW and kWh savings reported in the Winter Capacity Savings Report.] Make sure the respondent is thinking about winter peak only i.e. 4-8pm weekdays between the beginning of November and the end of February.

- How does this kW and cost saving compare to the amount anticipated? [If there is a difference; see 'view application' on the BEIS portal for original kW and annual savings] why is this different than previously reported savings?
- Thinking about the winter capacity savings report, please describe your experience of completing this report?
- Is there any aspect of the report form that you think could be improved? If so, what?
- Highlight any gaps in the report and try to fill.

## Final project report

- I have the final costs listed as £\_\_\_\_, split by £\_\_\_\_ for labour, £\_\_\_\_ for equipment and £\_\_\_\_ for transport. Does this sound correct? Were there any additional costs you encountered since these were reported? [Original total costs can be found in the 'view application' section of the BEIS portal, under 'payback'. Detailed costs can sometimes be found in M&V plans (broken out by labour/etc.) but this is not always available.]
- Was the effort required for scheme participation in line with your expectations?
- [Outline the wider benefits that they described as outcomes of the project in phase 5 interviews and in the final report] Are you able to quantify any of these wider benefits? Or provide any anecdotal evidence to suggest these benefits have arisen? [If not,] how do you know these benefits exist? Were there any benefits realised that you did not anticipate?
- How important are these wider benefits to your organisation? Did they / do they enable a wider range of EE measures and projects to be justified?
- Thinking about the final project report you sent to BEIS in the last few weeks, please describe your experience of producing this report?
- What – if anything – did you find challenging about the reporting process? Is there any aspect of the report form and / or final payment process that you think could be improved? If so, what?
- Highlight any gaps in the report and try to fill. Some of these will be specifically highlighted in the final report by BEIS in blue bold text.

## Process overall

- Looking back over the whole process – from first finding out about the scheme to the submission of your Winter Capacity Savings Report – how would you summarise your experience of the scheme and process?
  - Which aspects have been positive and why?
  - Which aspects have been negative and why?
  - [if they applied for both A1 and A2] Did you experience any differences between the first and second rounds of EDR? If so, what and was this change positive or detrimental?

- If you were running the scheme, what would you change and how?
  - How likely is it that your organisation would look to take part in future schemes like the EDR Pilot? If unlikely, why / what would need to change in order for you to participate in the future?
- From your final report, I see you have reported that your organisation invested \_\_\_\_\_ hours in putting the project(s) through the scheme? Was this specifically for the amount of time spent on scheme participation i.e. in addition to time you would have had to spend to deliver this project internally anyway?
  - Check working days at each stage of the process and staff grade. Update as needed.
  - Were there any detrimental effects of this time being spent? What else would the time have been spent on?
- Did the EDR Pilot Scheme have any influences on your organisation's approach to energy, energy schemes or demand reduction more generally? If so, please describe.
- On reflection, do you feel the benefits of participation in the scheme exceed the costs of participation for your organization (including staff time spent on management/administration of your participation)?
- Would you participate in the scheme again on the same terms? If not, why not / what would need to change for your organization to be interested in participating again?
- At what £/kW price would it no longer have been worthwhile for your organisation to participate in this scheme?
- Are you aware of any alternative schemes that might have provided better value for money for your organisation (e.g. CCAs, FITs, Capital Allowances on Tax, Salix Finance, others)?

## Questions to underpin the TF

- Please can you describe your / your organisation's original rationale for (a) registering interest in the EDR pilot? (b) Then deciding to put a project in once you found out more post-registering interest?
- Not all organisations completed the process. What drivers / reasons do you think your organisation has that meant you saw it through to completion? Happy to capture their speculation on this, but would be even more valuable if they had conversations with other businesses about it at the time, especially where those other businesses were in principle eligible.
- Why did you opt for a lighting technology project as opposed to the other eligible technologies?
- What other technology might you consider in the future for a scheme like EDR? [if any] Why?

## Data gaps

Try to capture any information where there are gaps from previous interviews, in particular around organisation profile and project detail, or gaps in their final report submission to BEIS.

## Closing questions

- Coming to the end now, do you have any other comments on any aspect of the BEIS EDR pilot scheme process or the scheme more generally?
- And just reflecting on our discussion today, are you happy for your answers to be shared with BEIS (either in full or in part)? Responses can be anonymous if you prefer.

## Full participant topic guide [post-signing of a Participation Agreement]

### Introduction

Good morning/afternoon. My name is X and I am calling from [DNV GL/Databuild Research/CAG Consultants] on behalf of the Department of Energy and Climate Change (DECC).<sup>29</sup> Thank you for making time to speak to me today.

As I explained when arranging the interview, we are currently carrying out some work for DECC, speaking to organisations who have participated in the Electricity Demand Reduction – or EDR - Pilot scheme [explain/remind as necessary].

We are interested in capturing some further details based on your feedback to date in order to explore them in greater depth and inform learnings for DECC. The results will be used to inform future decisions regarding future energy efficiency policy (and specifically EDR), so this is an opportunity for your organisation to feed into DECC's decision making.

We will keep any information that you share with us confidential and store it securely, in accordance with the Data Protection Act.

Before we go any further, are you happy for me to record this interview? The recording will not be shared outside the research team. Are you happy with this? (If yes, proceed to record; if no, abort recording and take notes instead).

### Organisational Characteristics

[Review existing information about the organisation from Registration Form / application questionnaires and follow up as necessary, plus discuss new items **in bold**]. Can you tell me:

- Number of employees at your organisation
  - [Confirm Q2 from Registration Form]
- Sector / industry at your organisation
  - Confirm Q3 from Registration Form
- Number of sites in UK
  - Confirm Q4 from Registration Form
- **Main activity at these sites (e.g., office space, production, retail, etc.)**
- Annual electricity consumption UK sites
  - Confirm Q7 from Registration Form
- **Proportion of UK sites operating during the 'winter peak period' (weekdays 4-8pm November-February)**

---

<sup>29</sup> The name change from DECC to BEIS happened while this evaluation was underway and so topic guides have a mix of names.



- **Energy costs as component of total operating costs**

- Choose from: very significant, significant, moderate, minimal.
- [Confirm Q7 from Application questionnaire]

## Organisational journey

- **Significance of energy use at strategic level**

- How significant is energy use as a strategic issue for your organisation? [Explore in depth] What are the specific reasons for this?
- How does the organisation demonstrate this importance? (e.g., establishes targets, dedicates resources)

- **Organisation's approach to managing energy use and managing energy efficiency**

- Journey (identifying and developing energy efficiency opportunities)
  - Building on what we have just discussed, could you describe a bit more about how the organisation identifies energy efficiency projects and how these are taken forward?
- Barriers (distinguishing characteristics along 'journey')
  - Finally, what would you consider to be some of the more common or main barriers you/your organisation has experienced when taking forward energy efficiency projects?

- **Changes to organisational views, policies and practices related to energy management and energy efficiency**

- Are there any aspects of your engagement with EDR that – in the last year and / or going forward – have influenced your organisations views, policies and practices related to energy management and energy efficiency?

## Scheme Design - Impressions and Reactions

- **Initial impressions and interest**

- How did you / the organisation first become aware of the DECC EDR pilot?
- Can you describe the steps you took to find out more about the scheme after first heard about it? [Probe for correspondence/interactions with DECC, reviewing participant handbook, reviewing M&V manual, etc.]
- How close to the deadline for registering interest did you find out about it?
- What was it that made you/the organisation initially interested in the EDR pilot? Explore:
  - Financial support – to what extent was this essential to the project happening? Probe around meeting RoR or making up shortfall on up-front cost. What would have been done otherwise / how would the funding needs have been met?

- To what extent does bidding for opportunities like EDR fit with
  - (a) organisational CSR / reputational strategy?
  - (b) desire to be in close proximity to DECC / Government and show 'willing'? If so, why?
- Did you have any reservations about the scheme / applying? Which of the following would you say is closest to the situation for you / your organisation when you decided to register:
  - Were confident that the organisation had sufficient time and person resource to devote to the EDR pilot process so decided to register? Probe as to whether this was confidence in internal resource availability or availability of funds to source external support if needed?
  - Were unsure of the requirements so unsure if there was sufficient time and person resource to devote to the process but felt it was at least worth registering to find out more? Probe as to when this then became clearer.
  - Felt the scheme process looked too onerous / time-consuming for them but registered just to find out more as this bit wasn't intensive. Probe as to what then persuaded them?
- And once you had registered (and so received more information about the scheme), what then encouraged you to submit a full application? Did anything new discourage you?
- **Experiences with specific elements of EDR Pilot scheme**
  - Effort put into participating in scheme
    - [Review / confirm responses to Q6 from Application questionnaire]
    - Did you ask for advice or support from external sources? [Probe for DECC, consultants, peer organisations, industry/business trade groups, etc.]
  - Overall impressions of / experiences with scheme design and delivery features
    - Thinking more generally about your overall impressions of the EDR Pilot scheme design and delivery elements, what were some of your experiences with and reactions to the various elements of the scheme, including:
      - The timetable for completion of each stage – registration / application / bidding etc.?
      - The amount of time required to complete an application?
      - The objective(s) of the scheme [e.g. Understanding of the objective to reduce electricity demand during the winter peak measured by average kW through the winter peak period - i.e. Not a standard energy efficiency scheme measured in kWh reductions]
      - Eligibility criteria:

- Exclusions due to Climate Change Agreements (or CCAs), Salix funding, or other organisational eligibility criteria]
  - Ability to meet the 50 kW minimum project size through the peak period; was meeting this a challenge? If so, what work was required to get there? What level would have been impossible? What level would have been possible but impractical in the time available?
  - Potential exclusion of technologies
  - Uncertainty in ability to deliver savings and associated penalties if these are not delivered?
- Scheme rules:
  - Maximum bid price of £300/kW
  - Payment schedule [i.e. 80% upon installation of measures and 20% upon verification of impacts]
  - Payback restrictions [i.e. Only projects exceeding a 2 year payback would be eligible]
  - Option of contract length [i.e. is one year or two year contract preferred? Probe for reasons]
  - Penalty regime [i.e. 2% payment reductions for every 1% of savings not delivered]
- Auction features/format [i.e. What effect, if any did it have that this was an auction, with no guaranteed bid price and a risk of losing]
- The measurement and verification (or M&V) approaches: did you understand what was required (at least conceptually?) Did you think some approaches were more or less viable than others? Why?
- Required skills [e.g., were any aspects of the scheme particularly complicated? How was this overcome?]
- Other considerations?
- [If bidder who then withdrew] Why did your organisation withdraw from the scheme having got so far through? What would have had to be different for you to stay in?
- Did you bid into the A1 scheme?
  - If so, how far did you get and why?
  - If not, why not?
- Overall, thinking about the 2015 auction, why do you think your organisation did apply and bid when others (of your size / in your sector) did not?
- **Recommended changes and likely future participation**

- Overall, what changes – if any – to the scheme’s design and delivery features would you need in order to participate in a future scheme like this?
- [if their project is lighting] What changes could be made to encourage your organisation to submit applications and M&V plans for non-lighting technologies?
- Any other changes you’d like DECC to consider in order to impact participation on a wider or larger scale (i.e., to include a wider variety of projects or participating organisations)?

## Project-Specific Details and EDR Influence

OK, now I’d like to move on to talk about the specific applications you submitted for consideration into the auction. Establish whether they had multiple and if so the status of each.

- **Project decision-making leading up to auction, and plans post-auction**

- With regard to the [read short project description], how far along were you in deciding to implement this project before you first heard about the EDR Pilot scheme? [Probe for technical, management, funding, supplier, and scheduling related decisions. Review Q1 “Why make this energy efficiency investment now?” from Application questionnaire for context]
- [if the project was pre-existing to any extent] How and why did this project come about?
- Can you outline why you chose to apply with a [technology being installed] project?
- To what extent did the EDR pilot influence the project?
  - Would it have happened without it...?
  - Would it have happened but smaller scale / less effective tech – please describe...?
  - Would it have happened but slower – how much slower?
  - [if same timing and scale / type of project would have happened regardless] Why go through the process of accessing the funding?
- And to confirm, are you still planning to begin the installation of these measures in [date] and complete by [date]? [Get dates from ‘project details and peak savings’ tab in M&V plan.]

- **Technical review / feedback regarding draft and final applications and M&V plans**

- I’ve reviewed the various iterations of your application and M&V plan. I’ve also reviewed the feedback and recommendations provided to you by DECC.
- What was your general reaction to these initial issues? Were they easy / difficult to resolve?
- How long did this take, how many iterations, etc.? (Review related details on correspondence dates for context.)

- How helpful was the feedback provided by DECC at this initial stage? (Prompt with details as appropriate.)
  - [For applications that required follow up actions before approval by DECC.] Your application was ultimately accepted and you were invited to bid. But, leading up to this final decision, there were a few lingering concerns regarding your application that took time to resolve, such as:
    - [Prompt with issues flagged from “E&V Recommendations” report and “Case Recommendation” template]
      - What was your general reaction to these final issues? Were they easy / difficult to resolve?
      - How long did this take, how many iterations, etc.? (Review related details on correspondence dates for context.)
      - How helpful was the feedback provided by DECC during this final stage? (Prompt with details as appropriate.)
      - Do you recall the letter you received from DECC regarding the final decision regarding your application? Was it clear from this letter:
        - What the next step was (e.g., that you’d get an email inviting you to bid into the auction)?
        - That you were to bid [kW value] and that this couldn’t be changed?
        - Anything about this letter that could have been changed to make it more helpful?
- (If we do not appear to have evidence that this sign-off was sent to DECC, probe to learn if it was sent before asking) Was it particularly difficult or time consuming to get director-level sign-off for the equipment included in your deemed application?
- Do you anticipate any challenges or difficulties in completing the operational verification report by (depending on year of delivery) mid-October 2016 or 2017? (Prompt with any flagged items from Basic Checks review, Final Review, Updated Review, etc.)
- Overall, do you have any suggestions for improving the technical review stages going forward? How so?
- **Payback discussion, quantification/identification of other benefits**
  - In your M&V plan, you calculated the payback for your project at about [X.XX] years. Generally speaking, is this in line with other types of capital improvement projects you regularly put forward to your management?
  - What about typical energy efficiency improvement projects? Do you tend to have a relatively strict payback threshold for “business as usual” projects, say 1 to 3 years which tends to be the industry standard response? Or would you say it varies, and your management has demonstrated willingness to consider projects

with longer paybacks? What criteria or rationale is usually applied when approving these types of projects?

- In addition to the energy cost savings, did you quantify or plan for any other benefits, (prompt if needed) such as:
  - Benefit of reduced maintenance costs
  - Productivity benefits of the new equipment
  - Productivity benefits of improved worker productivity
  - Green benefits to the wider market
  - Green benefits to the participant
  - (Additional) life time of measures
  - Increased sales
  - Waste disposal and product spoilage
  - User environment/ experience benefits
  - Carbon tax credits
  - Others [specify]
- **Bidding strategy, and percent of project costs covered by EDR subsidy**
  - It looks like you bid [X] £/kW and were awarded a total of £[X] for your project.
  - Did you have a particular strategy in mind when you submitted your bid price? Was there a threshold you were trying to meet (in terms of percent of project costs you needed to cover), or were you trying to be as competitive as possible in order to increase the probability you're bid would be accepted? Or was it a combination of factors? [Probe in-depth if respondent is willing to explore/share details.]
  - Have you reviewed the information published by DECC regarding the auction results? What were your general reactions or impressions? Any final thoughts on your bidding strategy in light of these results?
  - [DO NOT ASK IF THEY WITHDREW] It looks like the total funding allocated to your project will cover about [XX] percent of your project costs, which were estimated to be about £[total project costs].
  - [DO NOT ASK IF THEY WITHDREW] Generally speaking, is this level of subsidy ...
    - Worth the time/effort you put into the application and bidding process?
    - Enough to help prioritise or raise the level of importance of the project internally?
  - Have you previously used government-backed schemes to help offset the costs of making energy efficiency improvements? Is the level of subsidy you received through EDR in line with these other schemes?

- **Funding sources, and influence of EDR subsidy**
  - What [other] funding sources are you going to use to finance this project? [Probe any external sources to identify other government-supported schemes; quantify amounts if possible, or request call-back to explore in more depth]
  - Did you consider any other external sources but are not able to use them? Which ones? Why couldn't they be used? Do you typically fund projects like this using these types of funding sources?
- **Consideration of projects other than those submitted in applications, and plans post-auction**
  - Besides the [read short project description], did you consider other projects for the scheme? What were the main reasons these projects didn't go forward in the scheme? [Probe for EDR related barriers, such as kW threshold, payback, M&V requirements, time scales, payment schedule, etc. Also probe for non-EDR related barriers, such as project not fully developed, not cost-effective, funding not approved, etc.]
    - Will any of these projects go forward and be implemented before November 2016? Before November 2017? After?
      - [Probe for EDR influence, if any, within context of responses above]
    - [As appropriate] Are you likely to consider submitting them in future auctions? Why not?

## Sum up and close

- Reflecting on our discussion, are you happy for your answers to be shared with DECC (either in full or in part)?
- Can we match data mentioned in this interview to other data sources?
- Finally, would you be happy to be re-contacted if needed later in this research?

## Withdrawn topic guide

### Introduction

Good morning/afternoon. My name is X and I am calling from an organisation called [DNV GL/Databuild Research/CAG Consultants] on behalf of BEIS. Thank you for making time to speak to me today.

As I explained when arranging the interview, we are currently carrying out some work for BEIS, speaking to organisations who expressed an interest in the Electricity Demand Reduction Pilot scheme, or EDR [explain/remind as necessary], but then withdrew prior to submitting an application.

We are interested in speaking to those who have decided to withdraw from the process in greater depth, to understand both experience of participating up to a point, and reasons for withdrawing. The results will be used to inform BEIS decision making regarding future energy efficiency policy (and specifically EDR), so this is an opportunity for your organisation to feed into that.

We will keep any information that you share with us confidential and store it securely, in accordance with the Data Protection Act. Neither you nor your organisation will be identifiable in our report to BEIS, unless otherwise agreed with you.

Before we go any further, can I just check some house keeping things:

- Are you happy for me to record this interview? The recording will not be shared outside the research team, though anonymised transcripts will be shared with BEIS. Are you happy with this?
- I will check at the end if you are happy for your responses to be shared with BEIS or would rather they remain anonymised.

### EDR engagement and experience

- **I would like to ask you a few questions about BEIS's EDR Pilot scheme and any EDR projects you have progressed outside of the scheme**
  - Confirm A1 status
  - Confirm A2 status
  - Confirm existence and progress of the project they were putting through the scheme.
    - What were your motivations for progressing these project(s)? Why did you design them in the way you did (in terms of technology, scale etc.)?
    - If they had a project in the pipeline already:
      - Did the project already meet your required ROI for such projects?
      - Is there potential for the project to be bigger in scale than it is?
      - To what extent is the project focused upon peak demand?



- **Please can I confirm what it was that made you/the organisation interested in the summer 2015 round of the BEIS EDR pilot?**
  - Providing financial support for an existing project – was this essential i.e. EDR pilot funding was crucial to the business case (in which case if the project has now progressed, how?) or was this to further bolster the rationale for something that was going to happen anyway? In what way was this important – probe on making the ROI stack up, reducing uncertainty / risk in investment?
  - To what extent did organisational goals and strategies drive the desire to investigate it i.e. the scheme fitted those?
  - Would it have been useful, in terms of obtaining internal focus and buy-in, to put forward a project with the 'badge' of the EDR pilot?
  - Is / was there general desire within organisation to be involved in Government schemes, ensuring or continuing a strategic relationship? Why?
  - Were you aware of any of the changes to the process and rules that BEIS made to this second round of the EDR pilot [Probe around flexibility, requirements, increased application support, more straightforward M&V]? If so, how did these affect your level of interest in the second round?
- **Please can you confirm the point you got to with the scheme prior to withdrawing? What elements of the EDR pilot were you/your organisation involved in, and what were your experiences and impressions? Ask depending on whether we have interviewed before and what stage they got to.**
  - Could you describe what steps you took to find out more about the scheme after you first heard of it?
  - Could you describe the main elements of the scheme you experienced? [Probe all key elements]
    - The registration process and form;
    - Marketing (emails, workshops, outreach events, website information, etc.);
    - Specific guidance and information (participant handbook, videos, M&V manual, application forms, spreadsheets, portal, helpline, emailed queries etc.);
  - Did any of these elements either incentivise you to participate or conversely put you off? If so, which and how? Could you briefly describe your experiences of those you mentioned? [What was good, what was less good, and why?]
  - What preparation, if any, did you do before submitting the registration form?
  - What was your experience of completing and submitting the registration form?
  - How helpful did you find BEIS feedback on the registration form? How – if at all – did this inform your application? Did you make any changes (if so, what; if not, why not?)
  - What was your experience of completing and submitting the application including the M&V templates?

- What was your experience of the application form including the M&V templates? What was your view on the requirements?
- In addition to the first review of applications did you seek a pre-check from BEIS prior to the final deadline? How – if at all – did BEIS advice / guidance inform your application? (if so, what; if not, why not?)
- How helpful did you find BEIS feedback on your application prior to final submission? Could it have been improved in any way in terms of content or format? Did you make any changes to your application (if so, what; if not, why not?)
- What further work did you do in finalising M&V or the project prior to withdrawing from the process?
- What did you think of the auction instructions that came with the notice of having pre-qualified?
- What did you think of the auction process itself?
- What did you think of the participant agreement you signed?
- What did you think of the updates to the M&V sheets after implementing the project?
- **Could I ask what were the *main reasons* your organisation decided to withdraw from the 2015 BEIS EDR pilot, especially after having been successful in the application? RECOMMEND AN ITERATIVE REALIST EVALUATION APPROACH OF OBTAINING AN INITIAL REASON AND THEN PROBING THE FACTORS UNDERPINNING THAT. NEED TO BE CAREFUL ON PROMPTING AS THERE IS A DISTINCTION BETWEEN SOMETHING BEING TRUE (E.G. RESPONDENTS FINDING CRITERIA OFF-PUTTING) AND IT ACTUALLY HAVING BEEN A REASON FOR NOT PARTICIPATING.** Potential barriers – and probes if they come up - include:
  - Circumstances changed / became ineligible – in what way? Why not find a replacement project?
  - Pledged kW capacity did not come to fruition?
  - On balance of risks wasn't prepared to commit to delivery
  - [if AGG] Organisations dropped out?
  - **Auction features/format** [i.e. what effect, if any, did it have that this was an auction, with no guaranteed bid price and a risk of losing, change from pay-as-clear to pay-as-bid].
  - **Timescales** [e.g., what are views on the timescales available and why? What would have made it more viable?] [if organisational structure / resources etc previously discussed as a strength; why were these insufficient to ensure application within the deadline?]
  - **The level of work required** [e.g. contract length, amount of paperwork, technical support, M&V requirement, other?] - is this an issue due to the level of resource you could commit to the scheme or the scheme rewards not being worth the resource investment?

- Overall, given what we have discussed above, what would you say was the **most important factor** in influencing your decision not to progress with the scheme? [capture any major changes/points of clarification based on above discussion]
- **How much effort did your organisation invest in the scheme?**
  - How many working days were spent getting familiar with the scheme, completing the Expression of Interest form, reviewing the application and M&V requirements, identifying eligible projects and collecting relevant data to potentially support an application? Would you be able to break this down in terms of staff grade – for example, Director, senior, middle, junior, clerical?
  - Were there any detrimental effects of this time being spent? What else would it have been spent on?
  - Did you seek any additional advice or help from external sources? If so, what types of organisations did you work with and on what aspects of the scheme did they support you?
  - Were there any wider benefits of participating in the scheme even if you didn't bid into the auction?
- **Are you still progressing the project you put forward outside of the BEIS scheme? Bear in mind that for those completing / reaching the M&V update stage then by definition they must have done something.**
  - If so, is the project different in any way to the one you would have implemented through the BEIS scheme i.e. in terms of scale, peak focus or timings? How are you funding the project and what stage is that at? Probe for reverting back to original design.
  - If not, why not?
- **Thinking back to the start of your engagement with the EDR pilot, do you think the scheme has influenced the projects you put forward for the scheme to any degree?** Explore designing a project when they otherwise would not have done, increasing or decreasing the scale of an existing project, accelerating or decelerating an existing project, focusing an existing project more on peak demand reduction or less.

## Profile

**If we have interviewed before.** Thank you; to put your responses into context, we have available the information you provided in the previous interview you participated in <give date>. We have reviewed this prior to the call and wanted to check a few of the details with you and ask a couple of additional questions? [as appropriate]. Please do not worry about saying 'I don't know' to any of the questions. **Only ask for information where there are gaps in data from the survey or registration document.**

**If not interviewed before.** Please can I check a few organisational profile details with you and ask a couple of additional questions? [as appropriate]. Please do not worry about saying 'I don't know' to any of the questions.

## Specific questions for DPs:

- Please can you provide a breakdown of sites in the UK and type(s) of sites? (e.g. office space, production, retail, etc.). Collect high level details, with ranges if respondent unable to provide specifics (e.g. between 25 and 30 sites, of which X% is office space, Y% etc.)
- Please can you state energy consumption levels and significance of these costs compared to overall cost base. Capture whether an estimate is provided, or whether real measured data (and any other relevant specifics – e.g. if it doesn't cover their entire portfolio).
- Can you estimate the proportion of sites operational during the 'winter peak period' – which for the purposes of the EDR Pilot scheme is defined as between the hours of 4-8pm on weekdays between November and February. Collect high level details of site(s) operating hours and what type of use – e.g. our office buildings (x% of our sites) are occupied between the hours of X and Y. Our other sites are... etc. Important to understand if not over whole 4-8pm period, which hours, and whether there is a difference by months.
- Is your organisations affected by peak capacity constraints (including triad / supplier charges for peak use)? If so, how?
- **How significant is energy use as a strategic issue for your organisation / your clients?**
  - What are the specific reasons for this? [Probe for cost savings, carbon/energy reductions, capacity constraints at times of peak demand, productivity improvements, public image/reputation, staying close to perceived Government priorities, compliance with legislation, energy security, etc.]
  - How does the organisation demonstrate this importance? (e.g. targets, resources, CSR)
  - Has this strategic importance changed over time in the past few years? In what way?
  - How much involvement does the organisation have with BEIS, and how has that changed in recent years?
- **What is your organisation's approach to managing energy use, and – within that – managing energy efficiency?**
  - Managing energy
    - [If available] According to the information you provided in the previous survey / on the scheme registration form <summarize responses>. Is that a fairly accurate summary of how energy efficiency is generally viewed and managed within your organisation?
    - [If not available] Can you please describe the existing arrangements within your organisation for managing energy? [Focus respondent on energy efficiency – but recognise the need to discuss the wider context of energy as part of this. Probe to fully explore whether they have: energy plans, energy strategies, energy audits, a dedicated energy manager/ team,

board responsibility, integration of energy management into line management, organisational wide efficiency targets, premises energy efficiency targets, etc.]

- How do you feel about the resources and expertise your organisation has in terms of energy efficiency? Has this changed in the last year or so? [If positive] What do you think it is about your organisation that means you have that energy efficiency capacity / resources / expertise in place? [if negative] Where do you feel the deficiencies are?
- Could you describe a bit more about how the organisation identifies energy efficiency projects? And how are they then taken forward? [Build on the discussion of their management approach to explore how opportunities are identified (e.g. developed in-house, or externally), how are options selected to take forward, whether these are part of existing refurbishments or specific energy efficiency projects or a combination, what internal processes are there (e.g. business cases, board approval etc.), how long the process usually takes, whether it's part of an annual budgeting process, etc.]
- Funding Sources and criteria: How are energy efficiency projects funded by your organisation? Do you rely on internal funding sources, or are other sources also explored? [explore both]
  - [For internal funding] What criteria are typically used, such as payback or internal rate of return? Are there thresholds energy efficiency projects must meet? Are these the same as other capital improvement projects?
  - [For external funding] How regularly do you use external financing or funding? From which sources did/do you obtain external financial support? If you had not received this external financial support, would these projects have gone forward?
- **Barriers** along the “journey”; what would you consider to be some of the more common or main barriers you have / your organisation has experienced when taking forward energy efficiency projects? [Reference those cited in the quantitative survey and explore both the detail of these and potential wider factors influencing / underpinning these e.g. a lack of energy efficiency potential (real or perceived?), not a priority within the organisation, level of disruption, landlord/tenant barriers, gaps in skills/expertise, lack of organisational capacity, technology performance uncertainty, business uncertainty, lack access to capital/financing, recent drops in energy prices].

### Specific questions for Aggregators:

- Please can you describe the specifics of your aggregation ‘role’?
- How much of your organisations activities are related to aggregation?
- What type of aggregation clients and client projects do you work with (nature of organisations, technologies etc)? Do you tend to work with a few large clients or a large number of small clients or a mix? What is the rationale for that?
- What are the perceived benefits to your organisation/others (e.g. clients)? [probe for details of types and scale (e.g. project types, scale, number of sites etc.)];

- Are any clients in principle large enough to take forward EDR or energy efficiency projects themselves? If so, do you know why they opt not to do so?
- How long have you undertaken aggregation activities for?
- How do you approach aggregation? Do you have specific business plans in place relating to aggregation? Could you (briefly) describe them? Have your business plans changed in the last year or so? If so, in what way? Why?
- How do you identify, recruit and retain clients? How are projects implemented for/by clients? How are projects monitored?

## Closing questions

- How likely is it that your organisation will look to take part in future schemes like the EDR Pilot? Summing up, what are the top three things that would need to change in order for you to participate in the future?
- And just reflecting on our discussion today, are you happy for your answers to be shared with BEIS?
- Finally, would you be happy to be re-contacted if needed later in this research?
- Many thanks for your time today.

## Rejected application topic guide

### Introduction

Good morning/afternoon. My name is X and I am calling from an organisation called [DNV GL/Databuild Research/CAG Consultants] on behalf of the Department of Energy and Climate Change (DECC). Thank you for making time to speak to me today.

As I explained when arranging the interview, we are currently carrying out some work for DECC, speaking to organisations who submitted an application to participate in the Electricity Demand Reduction Pilot scheme, or EDR [explain/remind as necessary], but did not pre-qualify.

We are interested in capturing some further details based on your feedback and experiences of the scheme and application process in order to explore them in greater depth and inform learnings for DECC. The results will be used to inform future decisions regarding future electricity demand reduction schemes, so this is an opportunity for your organisation to feed into DECC's decision making.

We will keep any information that you share with us confidential and store it securely, in accordance with the Data Protection Act. Neither you nor your organisation will be identifiable in our report to DECC, unless otherwise agreed with you.

Before we go any further, can I just check some house keeping things:

- Are you are happy for me to record this interview? The recording will not be shared outside the research team, though anonymised transcripts will be shared with DECC. Are you happy with this?
- I will check at the end if you are happy for your responses to be shared with DECC or would rather they remain anonymised.

### EDR engagement and experience

- **I would like to ask you a few questions about DECC's EDR Pilot scheme**
  - Confirm A1 status from quant
  - Confirm A2 status from quant
  - Confirm existence and progress of the project they put forward for the scheme.
    - If progressed: What were your motivations for progressing these project(s)? Why did you design them in the way you did (in terms of technology, scale etc)?
    - If they had a project in the pipeline already:
      - Did the project already meet your required ROI for such projects?
      - Is there potential for the project to be bigger in scale than it is?
      - To what extent is the project focused upon peak demand?



- **What was it that made you/the organisation interested in the summer 2015 round of the DECC EDR pilot?**
  - Providing financial support for an existing project – was this essential i.e. EDR pilot funding was crucial to the business case (in which case if the project has now progressed, how?) or was this to further bolster the rationale for something that was going to happen anyway? In what way was this important – probe on making the ROI stack up, reducing uncertainty / risk in investment?
  - To what extent did organisational goals and strategies drive the desire to investigate it i.e. the scheme fitted those?
  - Would it have been useful, in terms of obtaining internal focus and buy-in, to put forward a project with the 'badge' of the EDR pilot?
  - Is / was there general desire within organisation to be involved in Government schemes, ensuring or continuing a strategic relationship? Why?
  - Were you aware of any of the changes to the process and rules that DECC made to this second round of the EDR pilot [Probe around flexibility, requirements, increased application support, more straightforward M&V]? If so, how did these affect your level of interest in the second round?
- **Thinking back to the start of your engagement with the EDR pilot, do you think the scheme has influenced the projects you put forward for the scheme to any degree?** Explore designing a project when they otherwise would not have done, increasing or decreasing the scale of an existing project, accelerating or decelerating an existing project, focusing an existing project more on peak demand reduction or less.
- **What elements of the EDR pilot were you/your organisation involved in, and what were your experiences and impressions?**
  - Could you describe what steps you took to find out more about the scheme after you first heard of it?
  - Could you describe the main elements of the scheme you experienced? [Probe all key elements]
    - The registration process and form;
    - Marketing (emails, workshops, outreach events, website information, etc.);
    - Specific guidance and information (participant handbook, videos, M&V manual, portal, helpline, emailed queries etc.);
    - Other?
  - Did any of these elements either incentivise you to participate or conversely put you off? If so, which and how? Could you briefly describe your experiences of those you mentioned? [What was good, what was less good, and why?]
  - What preparation, if any, did you do before submitting the registration form?
  - What was your experience of completing and submitting the registration form?
  - What was your experience of completing and submitting the application including the M&V templates?



- What was your experience of the application form including the M&V templates? What was your view on the requirements?
- In addition to the first review of applications did you seek a pre-check from DECC prior to the final deadline? How – if at all – did DECC advice / guidance inform your application? (if so, what; if not, why not?)
- How helpful did you find DECC feedback on your application prior to final submission? Could it have been improved in any way in terms of content or format? Did you make any changes to your application (if so, what; if not, why not?)
- What was your experience of the process by which DECC notified you that the application was not successful?
- [if involved in A1] **Overall, how would you compare your experience of the Summer 2015 DECC scheme to the first one you were involved with in Summer 2014? Especially around:**
  - Less strict scheme eligibility requirements
  - The level of guidance and support provided by DECC
  - Greater flexibility e.g. at the registration form stage
- Were there practical effects of these differences e.g. you decided to apply this time when you did not last time, the process was more straightforward / less time-consuming?
- **Based on your experience of the scheme to date, I would like to now explore some key aspects of EDR Pilot scheme design and delivery. First of all, please can I confirm the reason(s) your organisation's application was not successful in the 2015 DECC EDR pilot?**
- **What do you think influenced this outcome i.e. what factors underpinned the reasons given by DECC for the application being unsuccessful? RECOMMEND AN ITERATIVE REALIST EVALUATION APPROACH OF OBTAINING AN INITIAL REASON AND THEN PROBING THE FACTORS UNDERPINNING THAT.**
  - **Understanding of the scheme** [e.g. understanding of the objective to reduce electricity demand during the winter peak, measured by average kW reduction through the winter peak period – i.e. not a standard energy efficiency scheme measured in kWh reductions]; What would have enabled a better / clearer understanding? Why was this not possible?
  - **Eligibility criteria** [e.g. exclusions due to Climate Change Agreements (or CCAs), Salix funding, or other organisational eligibility criteria] - why had this not arisen as an issue prior to your organisation completing a full application?
  - **Technical factors**
    - Ability to meet the 50 kW through the Winter peak period [probe: what aspects of this were limiting (e.g. lack of peak load potential, lack of time to investigate, etc.)? If the threshold were lowered, how low would it need to go? If they had more time, would have made a difference?] Could they technically have made the 50kW requirement but didn't want to for a

particular reason? In that case why was the scheme an insufficient incentive?

- Potential exclusion of technology/measures [probe to ensure measure(s) would reduce peak electricity demand, explore respondents views as to why they believed they would not be eligible]; could they technically have made the altered the measures their project comprised but didn't want to for a particular reason? In that case why was the scheme an insufficient incentive?
- Whatever the technical reason, why had this not arisen as an issue prior to your organisation completing a full application?
- **Timescales** [e.g., what are views on the timescales available and why? What would have made it more viable?] [if organisational structure / resources etc. previously discussed as a strength; why were these insufficient to ensure application within the deadline?]
- **The level of work required** [e.g. contract length, amount of paperwork, technical support, M&V requirement, other?] - is this an issue due to the level of resource you could commit to the scheme or the scheme rewards not being worth the resource investment?
- Overall, given what we have discussed above, what would you say was the **most important factor** influencing your application not being successful? [capture any major changes/points of clarification based on above discussion]
- **How much effort did your organisation invest in the scheme?**
  - How many working days were spent getting familiar with the scheme, completing the Expression of Interest form, reviewing the application and M&V requirements, identifying eligible projects and collecting relevant data to support an application, putting that application together and revising it following DECC guidance? Would you be able to break this down in terms of staff grade – for example, Director, senior, middle, junior, clerical?
  - Were there any detrimental effects of this time being spent? What else would it have been spent on?
  - Was there any information you would have liked at an earlier stage that would have meant you saved time?
  - Did you seek any additional advice or help from external sources? If so, what types of organisations did you work with and on what aspects of the scheme did they support you?
  - Were there any wider benefits of participating in the scheme even if you weren't successful?
- Are you still progressing the project which was the subject of your unsuccessful application i.e. outside of the DECC scheme?
  - If so, is the project different in any way to the one you would have implemented through the DECC scheme i.e. in terms of scale, peak focus or timings? How are

you funding the project and what stage is that at? Probe for reverting back to original design.

- If not, why not?

## Profile

Thank you; to put your responses into context, we have available the information you provided in the shorter interview you participated in <give date>. We have reviewed this prior to the call and wanted to check a few of the details with you and ask a couple of additional questions? [as appropriate]. Please do not worry about saying 'I don't know' to any of the questions. Only ask for information where there are gaps in data from the survey or registration document.

## Specific questions for DPs:

- Please can you provide a breakdown of sites in the UK and type(s) of sites? (e.g. office space, production, retail, etc.). Collect high level details, with ranges if respondent unable to provide specifics (e.g. between 25 and 30 sites, of which X% is office space, Y% etc.)
- Please can you state energy consumption levels and significance of these costs compared to overall cost base. Capture whether an estimate is provided, or whether real measured data (and any other relevant specifics – e.g. if it doesn't cover their entire portfolio).
- Can you estimate the proportion of sites operational during the 'winter peak period' – which for the purposes of the EDR Pilot scheme is defined as between the hours of 4-8pm on weekdays between November and February. Collect high level details of site(s) operating hours and what type of use – e.g. our office buildings (x% of our sites) are occupied between the hours of X and Y. Our other sites are... etc. Important to understand if not over whole 4-8pm period, which hours, and whether there is a difference by months.
- Is your organisations affected by peak capacity constraints (including triad / supplier charges for peak use)? If so, how?
- **How significant is energy use as a strategic issue for your organisation / your clients?**
  - What are the specific reasons for this? [Probe for cost savings, carbon/energy reductions, capacity constraints at times of peak demand, productivity improvements, public image/reputation, staying close to perceived Government priorities, compliance with legislation, energy security, etc.]
  - How does the organisation demonstrate this importance? (e.g. targets, resources, CSR)
  - Has this strategic importance changed over time in the past few years? In what way?
  - How much involvement does the organisation have with DECC, and how has that changed in recent years?
- **What is your organisation's approach to managing energy use, and – within that – managing energy efficiency?**

- Managing energy
  - [If available] According to the information you provided in the previous survey / on the scheme registration form <summarize responses>. Is that a fairly accurate summary of how energy efficiency is generally viewed and managed within your organisation?
  - [If not available] Can you please describe the existing arrangements within your organisation for managing energy? [Focus respondent on energy efficiency – but recognise the need to discuss the wider context of energy as part of this. Probe to fully explore whether they have: energy plans, energy strategies, energy audits, a dedicated energy manager/ team, board responsibility, integration of energy management into line management, organisational wide efficiency targets, premises energy efficiency targets, etc.]
- How do you feel about the resources and expertise your organisation has in terms of energy efficiency? Has this changed in the last year or so? [If positive] What do you think it is about your organisation that means you have that energy efficiency capacity / resources / expertise in place? [if negative] Where do you feel the deficiencies are?
- Could you describe a bit more about how the organisation identifies energy efficiency projects? And how are they then taken forward? [Build on the discussion of their management approach to explore how opportunities are identified (e.g. developed in-house, or externally), how are options selected to take forward, whether these are part of existing refurbishments or specific energy efficiency projects or a combination, what internal processes are there (e.g. business cases, board approval etc.), how long the process usually takes, whether it's part of an annual budgeting process, etc.]
- Funding Sources and criteria: How are energy efficiency projects funded by your organisation? Do you rely on internal funding sources, or are other sources also explored? [explore both]
  - [For internal funding] What criteria are typically used, such as payback or internal rate of return? Are there thresholds energy efficiency projects must meet? Are these the same as other capital improvement projects?
  - [For external funding] How regularly do you use external financing or funding? From which sources did/do you obtain external financial support? If you had not received this external financial support, would these projects have gone forward?
- **Barriers** along the “journey”; what would you consider to be some of the more common or main barriers you have / your organisation has experienced when taking forward energy efficiency projects? [Reference those cited in the quantitative survey and explore both the detail of these and potential wider factors influencing / underpinning these e.g. a lack of energy efficiency potential (real or perceived?), not a priority within the organisation, level of disruption, landlord/tenant barriers, gaps in skills/expertise, lack of organisational capacity, technology performance uncertainty, business uncertainty, lack access to capital/financing, recent drops in energy prices].

### Specific questions for Aggregators:

- Please can you describe the specifics of your aggregation 'role'?
- How much of your organisations activities are related to aggregation?
- What type of aggregation clients and client projects do you work with (nature of organisations, technologies etc.)? Do you tend to work with a few large clients or a large number of small clients or a mix? What is the rationale for that?
- What are the perceived benefits to your organisation/others (e.g. clients)? [probe for details of types and scale (e.g. project types, scale, number of sites etc.)];
- Are any clients in principle large enough to take forward EDR or energy efficiency projects themselves? If so, do you know why they opt not to do so?
- How long have you undertaken aggregation activities for?
- How do you approach aggregation? Do you have specific business plans in place relating to aggregation? Could you (briefly) describe them? Have your business plans changed in the last year or so? If so, in what way? Why?
- How do you identify, recruit and retain clients? How are projects implemented for/by clients? How are projects monitored?

## Non-applicant topic guide

### Introduction

Good morning/afternoon. My name is X and I am calling from an organisation called [DNV GL/Databuild Research/CAG Consultants] on behalf of the Department of Energy and Climate Change (DECC). Thank you for making time to speak to me today.

As I explained when arranging the interview, we are currently carrying out some work for DECC, speaking to organisations who expressed an interest in the Electricity Demand Reduction Pilot scheme, or EDR [explain/remind as necessary], but then withdrew prior to submitting an application.

We are interested in capturing some further details based on your feedback to date in order to explore this in greater depth. The results will be used to inform DECC decision making regarding future energy efficiency policy (and specifically EDR), so this is an opportunity for your organisation to feed into that.

We will keep any information that you share with us confidential and store it securely, in accordance with the Data Protection Act. Neither you nor your organisation will be identifiable in our report to DECC, unless otherwise agreed with you.

Before we go any further, can I just check some house keeping things:

- Are you are happy for me to record this interview? The recording will not be shared outside the research team, though anonymised transcripts will be shared with DECC. Are you happy with this?
- I will check at the end if you are happy for your responses to be shared with DECC or would rather they remain anonymised.

### EDR engagement and experience

- **I would like to ask you a few questions about DECC's EDR Pilot scheme and any EDR projects you have progressed outside of the scheme**
  - Confirm A1 status
  - Confirm A2 status
  - Confirm existence and progress of the project they were putting through the scheme.
    - If progressed: What were your motivations for progressing these project(s)? Why did you design them in the way you did (in terms of technology, scale etc.)?
    - If they had a project in the pipeline already:
      - Did the project already meet your required ROI for such projects?
      - Is there potential for the project to be bigger in scale than it is?
      - To what extent is the project focused upon peak demand?

- **What was it that made you/the organisation interested in the summer 2015 round of the DECC EDR pilot?**
  - Providing financial support for an existing project – was this essential i.e. EDR pilot funding was crucial to the business case (in which case if the project has now progressed, how?) or was this to further bolster the rationale for something that was going to happen anyway? In what way was this important – probe on making the ROI stack up, reducing uncertainty / risk in investment?
  - To what extent did organisational goals and strategies drive the desire to investigate it i.e. the scheme fitted those?
  - Would it have been useful, in terms of obtaining internal focus and buy-in, to put forward a project with the 'badge' of the EDR pilot?
  - Is / was there general desire within organisation to be involved in Government schemes, ensuring or continuing a strategic relationship? Why?
  - Were you aware of any of the changes to the process and rules that DECC made to this second round of the EDR pilot [Probe around flexibility, requirements, increased application support, more straightforward M&V]? If so, how did these affect your level of interest in the second round?
- **Thinking back to the start of your engagement with the EDR pilot, do you think the scheme has influenced the projects you put forward for the scheme to any degree?** Explore designing a project when they otherwise would not have done, increasing or decreasing the scale of an existing project, accelerating or decelerating an existing project, focusing an existing project more on peak demand reduction or less.
- **What elements of the EDR pilot were you/your organisation involved in, and what were your experiences and impressions?**
  - Could you describe what steps you took to find out more about the scheme after you first heard of it?
  - Could you describe the main elements of the scheme you experienced? [Probe all key elements]
    - The registration process and form;
    - Marketing (emails, workshops, outreach events, website information, etc.);
    - Specific guidance and information (participant handbook, videos, M&V manual, application forms, spreadsheets, portal, helpline, emailed queries etc.);
  - Did any of these elements either incentivise you to participate or conversely put you off? If so, which and how? Could you briefly describe your experiences of those you mentioned? [What was good, what was less good, and why?]
  - What preparation, if any, did you do before submitting the registration form?
  - What was your experience of completing and submitting the registration form?



- How helpful did you find DECC feedback on the registration form? How – if at all – did this inform your application? Did you make any changes (if so, what; if not, why not?)
- What was your experience of completing and submitting the application including the M&V templates?
- What was your experience of the application form including the M&V templates? What was your view on the requirements?
- In addition to the first review of applications did you seek a pre-check from DECC prior to the final deadline? How – if at all – did DECC advice / guidance inform your application? (if so, what; if not, why not?)
- How helpful did you find DECC feedback on your application prior to final submission? Could it have been improved in any way in terms of content or format? Did you make any changes to your application (if so, what; if not, why not?)
- What further work did you do in finalising M&V or the project prior to withdrawing from the process?
- What did you think of the auction instructions that came with the notice of having pre-qualified?
- **Could I ask what were the *main reasons* your organisation decided to withdraw from the 2015 DECC EDR pilot prior to auction, especially after having been successful in the application? RECOMMEND AN ITERATIVE REALIST EVALUATION APPROACH OF OBTAINING AN INITIAL REASON AND THEN PROBING THE FACTORS UNDERPINNING THAT. NEED TO BE CAREFUL ON PROMPTING AS THERE IS A DISTINCTION BETWEEN SOMETHING BEING TRUE (E.G. RESPONDENTS FINDING CRITERIA OFF-PUTTING) AND IT ACTUALLY HAVING BEEN A REASON FOR NOT PARTICIPATING.** Potential barriers – and probes if they come up - include:
  - Circumstances changed / became ineligible – in what way? Why not find a replacement project?
  - Pledged kW capacity did not come to fruition?
  - On balance of risks wasn't prepared to commit to delivery
  - [if AGG] Organisations dropped out?
  - **Auction features/format** [i.e. what effect, if any, did it have that this was an auction, with no guaranteed bid price and a risk of losing, change from pay-as-clear to pay-as-bid].
  - **Timescales** [e.g., what are views on the timescales available and why? What would have made it more viable?] [if organisational structure / resources etc. previously discussed as a strength; why were these insufficient to ensure application within the deadline?]
  - **The level of work required** [e.g. contract length, amount of paperwork, technical support, M&V requirement, other?] - is this an issue due to the level of resource



you could commit to the scheme or the scheme rewards not being worth the resource investment?

- Overall, given what we have discussed above, what would you say was the **most important factor** in influencing your decision not to progress with the scheme? [capture any major changes/points of clarification based on above discussion]
- **How much effort did your organisation invest in the scheme?**
  - How many working days were spent getting familiar with the scheme, completing the Expression of Interest form, reviewing the application and M&V requirements, identifying eligible projects and collecting relevant data to potentially support an application? Would you be able to break this down in terms of staff grade – for example, Director, senior, middle, junior, clerical?
  - Were there any detrimental effects of this time being spent? What else would it have been spent on?
  - Did you seek any additional advice or help from external sources? If so, what types of organisations did you work with and on what aspects of the scheme did they support you?
  - Were there any wider benefits of participating in the scheme even if you didn't bid into the auction?
- **Are you still progressing the project you put forward outside of the DECC scheme?**
  - If so, is the project different in any way to the one you would have implemented through the DECC scheme i.e. in terms of scale, peak focus or timings? How are you funding the project and what stage is that at? Probe for reverting back to original design.
  - If not, why not?

## Profile

Thank you; to put your responses into context, we have available the information you provided in the shorter interview you participated in <give date>. We have reviewed this prior to the call and wanted to check a few of the details with you and ask a couple of additional questions? [as appropriate]. Please do not worry about saying 'I don't know' to any of the questions. Only ask for information where there are gaps in data from the survey or registration document.

## Specific questions for DPs:

- Please can you provide a breakdown of sites in the UK and type(s) of sites? (e.g. office space, production, retail, etc.). Collect high level details, with ranges if respondent unable to provide specifics (e.g. between 25 and 30 sites, of which X% is office space, Y% etc.)
- Please can you state energy consumption levels and significance of these costs compared to overall cost base. Capture whether an estimate is provided, or whether real measured data (and any other relevant specifics – e.g. if it doesn't cover their entire portfolio).

- Can you estimate the proportion of sites operational during the 'winter peak period' – which for the purposes of the EDR Pilot scheme is defined as between the hours of 4-8pm on weekdays between November and February. Collect high level details of site(s) operating hours and what type of use – e.g. our office buildings (x% of our sites) are occupied between the hours of X and Y. Our other sites are... etc. Important to understand if not over whole 4-8pm period, which hours, and whether there is a difference by months.
- Is your organisations affected by peak capacity constraints (including triad / supplier charges for peak use)? If so, how?
- **How significant is energy use as a strategic issue for your organisation / your clients?**
  - What are the specific reasons for this? [Probe for cost savings, carbon/energy reductions, capacity constraints at times of peak demand, productivity improvements, public image/reputation, staying close to perceived Government priorities, compliance with legislation, energy security, etc.]
  - How does the organisation demonstrate this importance? (e.g. targets, resources, CSR)
  - Has this strategic importance changed over time in the past few years? In what way?
  - How much involvement does the organisation have with DECC, and how has that changed in recent years?
- **What is your organisation's approach to managing energy use, and – within that – managing energy efficiency?**
  - Managing energy
    - [If available] According to the information you provided in the previous survey / on the scheme registration form <summarize responses>. Is that a fairly accurate summary of how energy efficiency is generally viewed and managed within your organisation?
    - [If not available] Can you please describe the existing arrangements within your organisation for managing energy? [Focus respondent on energy efficiency – but recognise the need to discuss the wider context of energy as part of this. Probe to fully explore whether they have: energy plans, energy strategies, energy audits, a dedicated energy manager/ team, board responsibility, integration of energy management into line management, organisational wide efficiency targets, premises energy efficiency targets, etc.]
  - How do you feel about the resources and expertise your organisation has in terms of energy efficiency? Has this changed in the last year or so? [If positive] What do you think it is about your organisation that means you have that energy efficiency capacity / resources / expertise in place? [if negative] Where do you feel the deficiencies are?
  - Could you describe a bit more about how the organisation identifies energy efficiency projects? And how are they then taken forward? [Build on the

discussion of their management approach to explore how opportunities are identified (e.g. developed in-house, or externally), how are options selected to take forward, whether these are part of existing refurbishments or specific energy efficiency projects or a combination, what internal processes are there (e.g. business cases, board approval etc.), how long the process usually takes, whether it's part of an annual budgeting process, etc.]

- Funding Sources and criteria: How are energy efficiency projects funded by your organisation? Do you rely on internal funding sources, or are other sources also explored? [explore both]
  - [For internal funding] What criteria are typically used, such as payback or internal rate of return? Are there thresholds energy efficiency projects must meet? Are these the same as other capital improvement projects?
  - [For external funding] How regularly do you use external financing or funding? From which sources did/do you obtain external financial support? If you had not received this external financial support, would these projects have gone forward?
- **Barriers** along the “journey”; what would you consider to be some of the more common or main barriers you have / your organisation has experienced when taking forward energy efficiency projects? [Reference those cited in the quantitative survey and explore both the detail of these and potential wider factors influencing / underpinning these e.g. a lack of energy efficiency potential (real or perceived?), not a priority within the organisation, level of disruption, landlord/tenant barriers, gaps in skills/expertise, lack of organisational capacity, technology performance uncertainty, business uncertainty, lack access to capital/financing, recent drops in energy prices].

### Specific questions for Aggregators:

- Please can you describe the specifics of your aggregation ‘role’?
- How much of your organisations activities are related to aggregation?
- What type of aggregation clients and client projects do you work with (nature of organisations, technologies etc.)? Do you tend to work with a few large clients or a large number of small clients or a mix? What is the rationale for that?
- What are the perceived benefits to your organisation/others (e.g. clients)? [probe for details of types and scale (e.g. project types, scale, number of sites etc.)];
- Are any clients in principle large enough to take forward EDR or energy efficiency projects themselves? If so, do you know why they opt not to do so?
- How long have you undertaken aggregation activities for?
- How do you approach aggregation? Do you have specific business plans in place relating to aggregation? Could you (briefly) describe them? Have your business plans changed in the last year or so? If so, in what way? Why?
- How do you identify, recruit and retain clients? How are projects implemented for/by clients? How are projects monitored?

## Closing questions

- How likely is it that your organisation will look to take part in future schemes like the EDR Pilot? Summing up, what are the top three things that would need to change in order for you to participate in the future?
- And just reflecting on our discussion today, are you happy for your answers to be shared with DECC?
- Finally, would you be happy to be re-contacted if needed later in this research?
- Many thanks for your time today.

## Non-applicant quantitative survey script

### Introduction

[If required – i.e. not continuing from initial recruitment]

Good morning/afternoon. My name is X and I am calling from an organisation called Databuild Research on behalf of the Department of Energy and Climate Change (DECC) thank you for making time to speak to me today. Databuild are a research agency, who have been commissioned (with partner organisations) to undertake an evaluation of the Electricity Demand Reduction scheme.

As I explained when arranging the interview, we are currently carrying out some work for DECC, speaking to organisations who [registered / expressed interest] in the Electricity Demand Reduction Pilot scheme [explain/remind as necessary], but then withdrew prior to submitting an application.

[Additional info if required: the **EDR pilot scheme** will provide financial support to organisations that deliver electricity savings at peak times by installing more efficient equipment.]

Can I just check, I am speaking with <name from initial recruitment>

Please can I confirm that you registered interest in the DECC EDR pilot but did not submit an application?

- Yes - proceed
- No – confirm actual status and terminate interview

I will ask you at the end of the interview whether or not you would be happy to share your responses in an attributable format with the Department of Energy and Climate Change, or whether you would prefer to keep your responses anonymous.

### Extent of EDR exploration

- Do you recall receiving information from DECC in Summer 2015 about the EDR pilot?
- Yes
- No
- Please can I confirm that you did register interest in the DECC EDR pilot that was promoted in Summer 2015 but did not submit a full application?
  - Confirmed A2NA - proceed
  - Did apply / did not register – confirm actual status and terminate interview
- Did you submit any draft or interim applications before deciding not to submit a final application?
  - Yes
  - No

- [if not aware] Based upon the description I gave at the start of this conversation, was this something you would have been interested in had you been aware?
  - Yes
  - No

## Profile

### **NOTE MUCH OF THIS DATA WILL BE IMPORTED FROM REGISTRATION DATA – AND ONLY THEN CHECKED WHERE THERE IS MISSING OR SPURIOUS DATA**

- [Direct Participants] Which of the following 'sectors' most closely describes your organisation/the organisation you represent? [Record verbatim, researcher to code headline sector then sub-category **as per those used in A1**]
- Please can you confirm whether or not you are a public sector body?
  - Public sector
  - Not public sector
- Which of the following best represents your organisation's likely role in any EDR pilot activity: [Prompted, single choice]
  - Direct participant - an EDR project would be delivered within your organisation to reduce your own energy demand [installing measures within own organisation]
  - Your organisation would act as an Aggregator - combining projects from other organisations or households to put forward a single application in the EDR auction and is responsible for meeting the requirements of the contract.
  - Your organisation would act as a consultant to other organisations, supporting the development of their project.
- [Aggregators] Have you previously delivered aggregation services for organisations?
  - Yes
  - No
- [if consultant or aggregator] Why do your clients not deliver energy / EDR projects on their own? [O]
- [if consultant] With respect to client EDR activity, would you typically:
  - Lead the investigation into EDR for the organisation you represent or joint-lead with this organisation? If yes proceed with direct participant questions – asking questions on the basis of the organisation they represented.
  - Play a supporting role [record response and terminate interview].
- What is your job title? [Record verbatim and code; single choice]
  - Director/ Member of the Board
  - Other employee within the organisation

- Energy consultant
- How many people are employed by your organisation / the organisation you represent, in both the UK and globally? [enter into grid as per A1]
- [Direct participants] How many sites does your organisation / the organisation you represent operate from in the UK? [Record verbatim and code]
  - 1-10
  - 11-50
  - 51-100
  - 101-150
  - 151-200
  - 201-250
  - Over 250

### Organisational energy efficiency

- Does your organisation / the organisation you represent measure electricity consumption in annual kWh across its UK sites?
  - Yes [capture kwh and annual period]
  - No
- [if no] Could you estimate what your organisation's / the organisation you represent's electricity consumption is likely to be in annual kWh across its UK sites?
  - Yes [Capture kWh and annual period] - how confident are you in this estimate [Very confident, Fairly confident, or Not very confident]?
  - No
- Which of the following hours within peak demand are your organisation's / the organisation you represent's sites fully operational: [prompt; multiple choices]
  - 4pm-5pm
  - 5pm-6pm
  - 6pm-7pm
  - 7pm-8pm
  - None of the above
- Can you estimate your organisation's / the organisation you represent's kW load across its sites at peak times?
  - Yes [Capture] - how confident are you in this estimate [Very confident, Fairly confident, or Not very confident]?

- No
- Thinking about your organisation/the organisation you represent within the UK as a whole, how significant a component of the total overall operating costs does your organisation/the organisation regard annual electricity costs to be? [Prompted, single response]
  - Very significant component of costs
  - Significant component of costs
  - Moderate component of costs
  - Minimal component of costs
  - Don't know
- Does your organisation/the organisation you represent use any of the following? [Prompted, multiple response]
  - Energy plans (operational)
  - Energy strategies at corporate/ board level
  - Energy audits
  - Dedicated internal energy person / team [capture no. of individuals]
  - Integration of energy management into line management
  - Energy consultants
  - Organisation-wide energy efficiency targets
  - Premises energy efficiency targets
  - A Board member (or equivalent) with specific responsibility for energy efficiency
  - None of the above
- Which of the following Government schemes - or programmes related to reducing environmental impact- has your organisation / the organisation you represent participated in? [Capture verbatim; multiple response]
  - EU Emissions Trading Scheme (ETS)
  - Climate Change Agreement (CCA)
  - CRC Energy Efficiency Scheme
  - Enhanced Capital Allowances (ECAs) for purchases from the Energy Technologies List
  - Greening Government Commitment
  - Low Carbon Network Fund investments
  - Energy Company Obligation (ECO)



- Green Deal
  - Salix
  - Renewable Heat Incentive
  - Other (please specify)
  - None
  - Feed-in Tariffs
  - ESOS
  - DSR
  - STOR
- [all] What are the main drivers for your organisation / the organisation you represent to be considering investing in energy efficiency projects? [Capture verbatim; multiple response]
  - Reduced energy costs
  - Sustainability/ environmental reasons
  - Reputational / CSR
  - Compliance with regulations / commitment
  - Reducing peak demand and/or associated costs
  - Replacement of equipment at end of its useful life
  - Refurbishment of premises
  - Moving premises
  - Improved quality of service for customers
  - Other - please specify [capture verbatim]
- [all] What are the main barriers you/the organisation you represent face in implementing energy efficiency actions? [Capture verbatim; multiple response]
  - Lack of skills within the organisation to enable action
  - Lack of staff resources to enable action
  - Lack of information to enable action
  - Reluctance / lack of Senior Management motivation to drive this type of action
  - Lack of authoritative information i.e. there is awareness of options, but advice isn't sufficiently tailored or we get conflicting advice
  - Lack of resources to develop identified opportunities
  - Uncertainty about the success of the projects

- Uncertainty about the long term costs and benefits of actions
- Reluctance to take action in market that isn't well established – don't want to take action yet in case new and better (cheaper or more effective) options will be available in future
- Funding – the organisation needs shorter payback period on investment
- Funding – capital not available to fund the project
- Cost of auditing / measuring involved with projects
- Energy efficiency undervalued by organisation / lack of SMT support
- Split incentives
- Limitations of the premises
- No further cost effective actions / technologies open
- Other [capture open end and back code].

## EDR pilot involvement and projects

- How did you first hear about the EDR pilot? [Unprompted, single response]
  - DECC Email
  - Other DECC communications
  - Industry body
  - Through electricity provider
  - A partner organisation told me about the scheme
  - Internet research
  - Presentation at an event I attended
  - Colleagues
  - Can't recall
  - Other [record verbatim]
- Have you heard about the EDR pilot through any other sources? [Prompted, single response; eliminate option selected in question above]
  - DECC Email
  - Other DECC communications
  - Industry body
  - Through electricity provider

- A partner organisation told me about the scheme
  - Internet research
  - Presentation at an event I attended
  - Colleagues
  - Other [record verbatim]
  - None
- 
- [ALL] Why did you first register/ or express an interest in the EDR pilot?
    - [Capture verbatim, multi-code]
    - To increase understanding about EDR
    - To develop business
    - It was potential additional support for existing initiatives/activities
    - Always explore Government schemes when open to us
    - Other [record verbatim]
- 
- [Direct participants and non-EOI aggregators] Although you registered an interest in the EDR pilot you/the organisation you represent didn't submit a final application – why was that? [Prompted, allow multiple response]
    - Insufficient potential / opportunities to reduce peak demand too small / less than 50 kW
    - Inflexibility / cannot change operating schedule during 4-8pm
    - No financial benefit from reducing peak demand / insufficient motivation
    - Time scales were too constrained / not enough time to apply
    - Organisation lacked internal technical skills / knowledge to complete application
    - Financial rewards (£300/kW) not sufficient to make projects cost-effective / provide sufficient ROI
    - Financial rewards (£300/kW) not sufficient to justify hassle/effort of submitting application
    - Unable to fund projects / lack of access to capital / financing
    - Payment schedule / first payment does not cover (at least a portion of) upfront cost
    - Risk of not getting funded / uncertainty of auction outcome
    - Wanted a longer contract period
    - Effort to fulfil M&V requirements / complete application too costly / burdensome

- Application / M&V requirements too complex / overwhelming
- Not enough time to fulfil M&V requirements / conduct surveys / develop baseline
- Organisational eligibility criteria / exclusions due to Climate Change Agreements (or CCAs), Salix funding, or other organisational eligibility criteria
- Insufficient resource to prepare a project application
- [aggregators] Lack of profitable business model for aggregation
- Other
- Are you:
  - Currently implementing peak energy demand reduction projects within the next year or so [at your facilities / on behalf of the organisation(s) you represent]?
  - Considering implementing peak energy demand reduction projects within the next year or so [at your facilities / on behalf of the organisation(s) you represent]?
  - Neither
- [If considering or implementing projects] Which of the following types of energy efficiency project? [Prompted, multiple response]
  - Better lighting controls such as motion detectors/ presence detection (PIRs) or daylight auto switch
  - Better heating, ventilation and cooling controls e.g. time or zone controls, better control of plant like boilers and chillers
  - Lighting upgrade
  - Boiler or chiller replacement
  - Replacement of industrial motors with more efficient models or addition of variable speed drive control to existing motors
  - Replacement or refrigerated retail display or storage cabinets with more efficient models
  - Building measures: insulation, draught-proofing, secondary glazing, shading
  - Other equipment purchasing and operational measures [capture verbatim]
  - Don't know [Skip next question]
- [If progressed] What sources of funding are to be used?
  - All internal capital
  - Some internal, some external
  - All external
- How likely is it that your organisation/the organisation(s) you represent will participate in a future EDR Government scheme? [code and probe for further response]

- Very likely – why?
  - Likely – why?
  - Unlikely - why?
  - Very unlikely – why?
  - Don't know/ not sure –why?
- What could DECC change or do differently that would make your organisation/the organisation you represent more likely to take part in future schemes? [Capture verbatim]

## Closing questions

- Finally, as mentioned at the start of the conversation, would you be happy for us to share your responses with the Department of Energy and Climate Change in an attributable format?
- Would it be possible for us to contact you for future research regarding this area?
  - Yes
  - No
- Thank you very much for your time. Would you like the number of the UK Market Research Society if you wish to check our organisation's status as members? [If necessary provide number]

## Aggregator research topic guide

### Screen and Introduction

Good morning / afternoon, I am calling from [DNV/Databuild/CAG] on behalf of BEIS – the Department of Business, Energy and Industrial Strategy (formerly the Department of Energy and Climate Change). We are looking to talk to energy aggregators in order to explore the future potential of this sector and informing future policy. Ideally we won't have to explain 'aggregator', as the sample we are targeting and due to the database sources we are using should be clear that they are on. But if not then we would provide the following description: for the purposes of our research, an aggregator is an organisation that brings customers together in order to gain better prices, service etc. when accessing energy services or participating in government or other programmes. Confirm that they do this. If they are an EDR contact we have already interviewed, mention this for additional engagement / buy in.

- Just to confirm your eligibility to participate in the survey, please can I check which of the following services your organisation provides for customers:
  - Aggregation of energy saving (i.e. demand reduction) activity amongst customers
  - Aggregation of demand side response / load shifting activity amongst customers
  - Tariff management / collective switching for groups of customers
  - Measuring and monitoring of customers energy consumption etc.
  - None of the above [close interview]

If they don't do demand reduction (but do offer at least one other service):

- Is this something you used to provide / have done in the past?
- Have you seriously considered providing energy efficiency / demand reduction or think will you offer this service in the near future? How seriously i.e. formulated a business plan / started to do so?
- Are you still planning to do so?

The conversation will likely be 30 mins so we are happy to arrange an appointment at a date / time of their convenience and ideally send over a brief summary of the data we are likely to need in advance [much rather do this and have them fully engaged / briefed].

On confidentiality, state that responses would ideally be attributable, but fine if not, and suggest this question is revisited at the end of the interview once the questions and responses are known.

Ask for participants consent to record call for quality and note-taking purposes.

### **For those delivering energy efficiency / demand reduction aggregation (group 1)**

- Scale of EE Aggregation activity: (10 minutes)
  - Why did you decide to provide energy efficiency / demand reduction aggregation services? What motivated this? Did you have any reservations at the time?

- How long have you undertaken energy efficiency / demand reduction aggregation activities for?
- What precise role do you play on such activities?
- If they provide other AGG services aside from demand reduction / EE. You said at the start of the conversation that you provide other AGG services aside from energy efficiency / demand reduction. Have you always offered the range of services you do now or has this changed over time? If changed; how and why?
- If they provide other AGG services aside from demand reduction / EE. And how important is the energy efficiency / demand reduction aspect of your business in terms of generating clients and revenue, and / or the importance client's attach to it?
- What is the typical size of your energy efficiency / demand reduction aggregation projects? Looking here for total (in terms of size and income).
- To what extent are your energy efficiency / demand reduction aggregation services provided in conjunction with other services / support as opposed to as a discrete service?
- Where do the energy efficiency / demand reduction projects come from? Are they instigated by you and/or your clients?
- EE Aggregation activity: remind them to be thinking in terms of demand reduction. (10 minutes)
  - Overall, what would you assess as being the key success factors for an aggregation project i.e. what affects whether or not it is successful?
  - Conversely, what in your experience are the key barriers / issues likely to derail a project? If any...what steps have you taken to avert / overcome these and how effective were these efforts?
  - Do you have specific business plans in place relating to energy efficiency / demand reduction aggregation? If so, could you (briefly) describe them? And is this plan likely to change in the short term?
  - What type of clients do you work with? Explore whether there are specific sectors / sizes / geography, or is it a wide range. Regardless of their response... Why? Are there any barriers to working with specific client types and why e.g. some clients they can't reach but would like to?
  - If they provide other AGG services aside from demand reduction / EE; is there any distinction between the type of client you have for demand reduction aggregation and DSR or tariff aggregation? If so, in what way and why?
  - What type of technologies do you work with? Regardless of their response... Why?
  - How do you fund energy efficiency / demand reduction aggregation projects? Explore whether they charge up front, on a delivery / reward basis, or free / included as part of a more holistic service.

- If they charge clients...what is the typical and range of sign up prices / contract lengths?
  - If they charge clients...Would you consider offering no up-front charge to offset client tentativeness e.g. using EDR to offset this, or offering additional costed services? If not, why not?
  - If delivery / reward basis...what tend to be the arrangements (level of reward, criteria etc.).
  - If they do not charge up front...what level of risk are you prepared to tolerate? Or if this varies, upon what basis?
- To what extent do you draw upon external sources (including government schemes)? If not much...why not?
- Were you aware of the EDR Pilot Scheme launched in 2014 and repeated in 2015? If so, did you apply for this?
  - If yes, we will already know how far they got and why.
  - If aware but didn't apply, why not?
- To what extent are you aware of any current or planned support or incentives for energy efficiency / demand reduction aggregation activity?
- Future plans: remind them to be thinking in terms of energy efficiency /demand reduction. (15 minutes)
  - What is your organisation's expectation of continuing to deliver aggregation and why?
  - Do you anticipate any significant changes in the energy efficiency / demand reduction aggregation market overall in the following areas? And if so, why?
    - Client appetite
    - External incentives
    - Other government policy affecting aggregation
    - Technology
    - What impact do you anticipate the removal of diesel generation will have on adoption of peak reduction energy efficiency measures?
  - And how closely do you think these anticipated changes align with what you think the market needs in order to grow? What changes – or prevention of change – do you think is needed to support energy efficiency / demand reduction aggregation activity?
  - Linked to this, what sort of incentives do you think will be most effective in encouraging more energy efficiency / demand reduction aggregation activity? Both for you and your customers?



- If they do DSR and tariffs as well...is there any distinction between the expectations you have for demand reduction aggregation and DSR or tariff aggregation? If so, in what way and why?
- What are your views on a hypothetical future market for all energy related services? (The aggregation market could become more flexible in the future e.g. rather than DSR and EE being distinct, both could contribute).
- Which of those services you can – or could – offer do you see as being cost effective?

### For those not currently delivering energy efficiency / demand reduction aggregation, 20 minutes (Group 2)

- Reasons for not currently providing and future propensity
  - You mentioned at the start of the conversation that you provide [x] services.
  - How long have you undertaken these aggregation activities for? And what precise role do you play on such activities?
  - What motivated you to offer these services (and as opposed to other forms of aggregation)?
  - You said that you had considered / are considering energy efficiency / demand reduction activity. What motivated you to explore this?
  - How seriously did you explore /are you exploring this option?
  - For those that still are; what is your current thinking on this e.g. around potential clients, potential role you would play, how your offer would be packaged? What are the key factors likely to ultimately affect your decision?
  - If decided not to pursue; why did you ultimately decide not to provide this? What is your organisation's expectation of exploring energy efficiency / demand reduction aggregation again in future?
  - Were you aware of the EDR Pilot Scheme launched in 2014 and repeated in 2015? If so, did you apply for this?
    - If yes, we will already know how far they got and why.
    - If aware but didn't apply, why not?
  - Do you anticipate any significant changes in the energy efficiency / demand reduction aggregation market overall in the following areas? And if so, why?
    - Client appetite
    - External incentives
    - Other government policy affecting aggregation
    - Technology
    - What impact do you anticipate the removal of diesel generation will have on adoption of peak reduction energy efficiency measures?

- And how closely do you think these anticipated changes align with what you think the market needs in order to grow? What changes – or prevention of change – do you think is needed to support energy efficiency / demand reduction aggregation activity?
- Linked to this, what sort of incentives do you think will be most effective in encouraging energy efficiency demand reduction aggregation activity? Both for you and your customers?
- Is there any distinction between the expectations you have for energy efficiency aggregation and DSR or tariff aggregation? If so, in what way and why?
- What are your views on a hypothetical future market for all energy related services? Which of those services you can – or could – offer do you see as being cost effective?

Confirm on confidentiality, seek any further contacts, thank and close.

## Wider Population Survey quantitative survey script

### Introduction

Initial: Good morning / afternoon, my name is x and I am calling from Databuild on behalf of BEIS (the Government Department for Business, Energy and Industrial Strategy. Please can I speak to [named contact or – if no contact name in the database – the person or team responsible for energy management within your organisation].

To correct respondent: Good morning / afternoon, my name is x and I am calling from Databuild on behalf of BEIS (the Government Department of Business, Energy and Industrial Strategy). We are conducting research with large energy consuming organisations about their electricity consumption across a range of sectors to help shape future BEIS policies to encourage more efficient energy use. The survey should last about 15-20 minutes and your responses will be used to inform policy development in this area.

Do you have time to participate now? If not, arrange a convenient time for a call-back.

All calls are recorded but only for quality purposes. All responses you give are anonymised i.e. your name and organisation would not be reported. If you are not the correct person, can you recommend who we should speak with?

### Main script

#### Org and site operation questions

1. First, please can I confirm what your role and job title is? [take verbatim and categorise] [O]
  - a. Energy specialist
  - b. Other
2. And how long have you been with the organisation? [years]
3. I have your organisation's core sector as <x>; is that correct?
  - a. Yes
  - b. No [O] Record the sector / activity the respondent claims. If the organisation covers multiple sectors, select the one which generates most revenue for them [back-code by SIC].
4. And how do your UK premises roughly split in terms of numbers of sites doing different activities? [O] [Take verbatim and then back-code; just looking for rough % breakdown across the following]
  - a. Community
  - b. Education
  - c. Emergency Services
  - d. Health

- e. Hospitality
  - f. Factories and industrial buildings
  - g. Military
  - h. Offices
  - i. Retail
  - j. Warehouse/storage
  - k. Leisure
  - l. Sports
  - m. Other?
5. What is the main tenure of your sites?
- a. Owned
  - b. Leased
  - c. Rented
  - d. Mixed
  - e. Don't know

**Electricity use:**

6. I would now like to ask you a little about your organisation's use of energy. Roughly what proportion of your organisation's annual costs are energy – both gas and electricity? [%]
7. And on a scale of 1-5, where 1 is not at all and 5 is to a great extent, to what extent are the energy costs a concern for your organisation?
8. What is your organisation's approximate energy consumption in £s? [O] Go with however respondents prefer to answer this e.g. monthly, quarterly, annual. We can also prompt with ranges etc. rather than having a precise figure, or ultimately just ask if they think it is below or above £100k.
9. What portion of those annual energy consumption in £s are from electricity? Your best estimate is fine [%]
10. To what extent do you use electricity for heating? [single choice]
- a. You do not use electricity for heating.
  - b. You do use electricity but only for a minority of heating needs.
  - c. You use electricity roughly equally with another source
  - d. Electricity is your main heating fuel.
  - e. Electricity is your only heating fuel.

11. Thinking about your organisation's electricity use, which of the following would see significant use from 4-8pm during Winter? Yes / no for each. Any time within 4-8 counts.
- a. Internal lighting
  - b. External lighting
  - c. Catering uses
  - d. Heating
  - e. Cooling
  - f. Hot water
  - g. Industrial uses
  - h. Other

**Current and planned energy efficiency activity:**

12. I'd now like to ask you some questions on your organisations current and planned energy efficiency activity. On a scale of 1 to 5 where 1 is not at all and 5 is a great extent, to what extent do those involved in making decisions on energy efficiency measures within your organisation:
- a. Know the range of energy efficiency measures that are possible?
  - b. Have taken the decision to implement the action(s) that are possible?
13. Which of the following applies to energy management in your building/premises?
- a. Managed by an energy manager who normally works onsite
  - b. Managed by an organisation energy manager who does not normally work onsite
  - c. Managed by someone who is not a full-time energy manager e.g. building or operations manager
  - d. Managed by an enthusiast or energy champion onsite
  - e. No-one responsible for energy management currently, but this is likely to change within the next 12 months
  - f. No-one responsible for energy management
14. And thinking about a project to reduce your energy use, how long does it tend to take within your organisation for a project like this to go from first being identified to being implemented? Perhaps ask for recent examples if they are struggling? [O]
15. Have you ever heard of energy service companies, who provide energy management and installation of energy efficiency improvements to their clients to reduce their energy use, cost and emissions? They sometimes act as aggregators, grouping smaller companies together to get a better deal.
- a. Yes

b. No

16. Have you ever used one?

a. Yes – who? [O]

b. No

**Scenarios and organisational red lines:** Now I'd like to ask you about past and planned energy efficiency activities your organisation has taken and how your organisation makes energy-related decisions.

17. Have you taken any energy efficiency action in any of the following areas: You just have to say yes or no: Prompt all, read the italics if needed.

- a. Control measures (that control the use of heating, cooling and/or lighting)
- b. Insulation (of ceiling/roof, walls or floors)
- c. Gas heating technology [eliminate if they have only use electric heating]
- d. Electric heating technology [eliminate if they have no electric heating]
- e. Low carbon and / or renewable heating measures. (By which we mean heat pumps, biomass or solar thermal.)
- f. Refrigeration (either large built up or small / stand alone refrigeration units)
- g. Cooling/air conditioning
- h. Lighting
- i. Behavioural measures (such as employee trainings or engagement)
- j. Motors (such as the addition of variable speed drives or high / premium efficiency motors)
- k. None of the above
- l. Don't know

I would now like you to think about an electricity reduction measure that your organisation is considering or has recently considered, but has not been implemented. If you cannot think of a particular one just consider a broad area such as heating or lighting. I am going to describe three theoretical schemes that would support electricity demand reduction projects. These will all cover the same three aspects:

- The level of incentive / funding that the scheme would provide, in relation to how this modifies the payback of the project.
- The level of resource burden to your organisation specifically from participating in the scheme (as opposed to any burden you might have incurred anyway by just taking the action outside of the scheme). It may help to think of this in terms of number of people and the time required per person / role, or the cost of a consultant to do this.

For each scheme, please can you rate your likelihood of using this to implement the measure in question.

18. Before we start, please can I check whether you have a particular measure in mind?
  - a. Yes – which [O]
  - b. Thinking of a broad type of measure e.g. heating, lighting – which [O]
  - c. No – just considering generally. If needed, ask them to think of a general (randomly selected) measure type from the list of payback periods.
19. And just to establish a baseline, on a scale of 1 to 10 where 1 is not at all likely and 10 is completely certain, how likely would your organisation be to do this without any supporting scheme?
20. What is the main reason you have not yet implemented this project? [Open]
21. Do you know the approximate payback of this measure?
  - a. Yes – record and use as the input for Q21 below.
  - b. No - use average payback based on measure type

Parameter	Level 1	Level 2	Level 3
<b>Payback (in years)</b>	30% reduction of total number of years	20% reduction of total number of years	10% reduction of total number of years
<b>Resource burden (in days)</b>	Low, less than 7 man days	Medium, 7 to 20 man days	High, more than 20 man days

22. On a scale of 1 to 10 where 1 is not at all likely and 10 is completely certain, how likely would your organisation be to participate in the policy and deliver [the technology they are thinking of if applicable] if you receive a financial incentive that resulted in a [X] year payback for the measure and a [X] resource burden of scheme participation? (If needed, explain the resource burden is only for the scheme participation, not the time spent developing / delivering the project.)

The follow up questions will vary the levels of one parameter only (though the static ones will vary two between – not within – interviews).

23. If 21<8. Using the same 1 to 10 scale, how likely would your organisation be to participate in the policy and deliver [x] if you receive a financial incentive that resulted in a [X] year payback for the measure and a [X] resource burden of scheme participation? (ONE PARAMETER WILL CHANGE TO INCLUDE A LEVEL 2 OPTION)
24. If 22<8. Using the same 1 to 10 scale, how likely would your organisation be to participate in the policy and deliver [x] if you receive a financial incentive that resulted in a [X] year payback for the measure and a [X] resource burden of scheme participation? (SAME PARAMETER WILL CHANGE TO INCLUDE A LEVEL 1 OPTION)
25. If relevant, what payback level does your organisation require in order to invest in a capital project delivering energy efficiency?

- a. Gave figure
  - b. Payback varies by project – how does it vary and why? [O]
  - c. No payback requirements
26. Do you consider the lifetime costs of a measure when considering payback and value for money? By lifetime cost we mean any maintenance / repair costs that might arise.
- a. Yes
  - b. No
  - c. Don't know
27. Which of those factors is generally the most important for your organisation in deciding whether or not to take up a scheme? Prompt and select one.
- a. Payback
  - b. Resource burden of participating
  - c. Both / cannot decide
28. Is there anything else that would affect your likelihood to participate in a scheme?
- a. Yes – please describe [O]
  - b. No
29. [if they rate likelihood at >8 in q19] Without a financial incentive from a scheme as described above, would the measure you are considering be different in any of the following ways?
- a. Would install less efficient technology
  - b. Would install the technology across fewer sites / buildings
  - c. Both
  - d. No difference.
  - e. The measure would never be implemented
30. [if they rate likelihood at >8 in q19] Without a financial incentive, would the measure you are considering be implemented any slower?
- a. Yes – by how much?
  - b. No, quicker – why? [O]
  - c. No difference
  - d. The measure would never be implemented
31. What is the maximum level of resource your organisation would be willing to put into the administration required by a non-mandatory scheme? Either in terms of internal working time (person days) or consultant cost or both or even % of benefit obtained. Can capture a number or ratio of cost to reward.



32. Thinking about monetary incentives from government schemes, which of the following would you in-principle be interested in: Prompt all.
- a. Grants provided directly
  - b. Grants with the level of £s per kW saved that you receive decided through a competitive auction of projects from your and other organisations.
  - c. Loans
  - d. Fiscal benefits
  - e. None of the above
33. Have you heard of the Electricity Demand Reduction Pilot Scheme?
- a. Yes
  - b. No
34. If yes. Did you participate in this?
- a. Yes – Code to what extent: registered interest, started application, completed application,?
  - b. No – why not? [O]

Thank and close.

# Quality assurance and version tracking

Below is the version tracking and QA log for this report and the associated appendices.

**Table 13: Quality assurance and version tracking**

Version	Date	Prepared by	Reviewed by	Comments
1.0	12/3/2018	Elizabeth Steele John Fawcett	Matthew Jones Michael Dodd Karl King	Initial issue.
2.0	26/3/2018	Elizabeth Steele John Fawcett	Michael Dodd Karl King	Response to initial BEIS comments.
3.0	24/4/2018	Elizabeth Steele John Fawcett	Michael Dodd Rafiek Versmissen Karl King	Response to wider BEIS comments. New Capacity Market chapter. Fleshed out appendices to better reflect methods. Added research instruments.
4.0	31/5/2018	Elizabeth Steele Rafiek Versmissen John Fawcett	Michael Dodd Karl King	Response to BEIS comments.
5.0	June 2018	Elizabeth Steele Rafiek Versmissen John Fawcett	Michael Dodd Karl King	Initial response to BEIS comments.
6.0	24/8/2018	Elizabeth Steele John Fawcett	Michael Dodd Karl King	Detailed responses to BEIS comments, addressing formatting issues.

# Registration

Outcome	Scheme resources influencing reasoning	Mechanisms [green = mechanisms which favour participation, red = mechanisms which favour non-participation or drop out]	Contexts with specific relevance to the mechanism [these are not exhaustive but are specific to certain mechanisms, as opposed to more generally true contexts such as 'large organisation' or 'in principle eligible' which would be true across most mechanisms]	All contexts [some of which will still be generally true / important for each mechanism but do not pertain specifically to a mechanism i.e. are not part of a specific configuration / hypothesis]	Databuild comments - 09-03-18
DP / AGG registers	BEIS communications, experience / word of mouth / reports	[AGG only] This could be an interesting business opportunity for us (supporting core business activity and specifically new or existing project plans)	DP / AGG / AGG clients with previous experience of delivering this type of project more likely to recognise the business opportunity and more likely to have a current project that the scheme ties in with.	DP / AGG clients are in principle eligible  Energy manager or equivalent has autonomy to pursue opps like EDR  SMT / owner / directors have personal enthusiasm and interest in the organisation pursuing energy efficiency opportunities	The different mechanisms in place for different organisations choosing to progress at this stage are still accurate, but some specific mechanisms fired more than others. Financial considerations ('was this worth exploring') were strong, though due to the limited time that registering took and the sometimes limited time between finding out and registering, some opted to engage to avoid missing out rather than considering the
	BEIS communications, experience / word of mouth / reports	It's money available for something we plan to do anyway	DP / AGG / AGG clients' have a project at least at concept stage  DP / AGG / AGG clients' have substantial resource available in order to be planning to do something anyway and to believe that they can allocate resource to going through the scheme process.	DP / AGG clients are way above the threshold for demand reduction potential, so less perception of risk and prospect of a larger funding allocation, and potentially increased chance that they perceive energy as a significant cost (so have pre-allocated resource and project ideas in place already).  DP / AGG doesn't need many sites to be eligible, so reducing the level of information that would need to be sourced and included in forms (assuming they are broadly aware of what the scheme will entail at this stage).	
	BEIS communications, experience / word of mouth / reports	It's good for our reputation - and potentially future sales - to be involved in this type of activity	DP / AGG / AGG clients with customers - or audiences they are targeting - that value / demand sustainability are more likely to see how participation in the scheme could translate into reputational benefits.	Individual in DP / AGG able to mobilise support, meaning they can respond more quickly and efficiently to initial comms and be more reassured that they will get the requisite resource throughout the process (assuming they are broadly aware of what the scheme will entail at this stage).  DP / AGG / AGG clients have positive attitude to energy efficiency / EDR, making them potentially more likely to notice and engage with the scheme and potentially more likely to overlook certain challenges / hurdles.  DP / AGG / AGG clients have positive attitude to scheme	

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

BEIS communications, experience / word of mouth / reports	This ties in with our strategy of participating in BEIS / Gov schemes and being closer to BEIS/Gov	<p>DP / AGG / AGG clients with customers - or audiences that they are targeting - that value / demand sustainability are more likely to wish to be closer to BEIS / Gov to evidence their commitment.</p> <p>DP / AGG has lobbying positions that they perceive to be more impactful / authoritative if they have shown willingness to engage</p>	<p>participation in general, making them potentially more likely to notice and engage with the scheme and potentially more likely to overlook certain challenges / hurdles.</p> <p>DP / AGG have resources in place OR has flexibility to allocate / source additional resource, making them potentially more likely to notice and engage with the scheme, and (assuming they are broadly aware of what the scheme will entail at this stage) be more reassured that they will get the requisite resource throughout the process, and are more likely to have individuals with relevant experience and expertise who will find the process more straightforward anyway.</p> <p>Required individuals have time to spend on the scheme OR flexibility to prioritise it over existing tasks, making them potentially more likely to notice and engage with the scheme, and (assuming they are broadly aware of what the scheme will entail at this stage) be more reassured that they will get the requisite resource throughout the process, and are more likely to have individuals with relevant experience and expertise who will find the process more straightforward anyway.</p>	<p>scheme in detail before registering. Organisations, at this stage, were much less likely to have done anything approaching a cost-benefit analysis of participation, most had just done a quick and informal calculation of risk vs reward.</p>
BEIS communications, experience / word of mouth / reports	This ties in with our CSR of engaging with and being involved in schemes seeking this type of outcome	<p>DP / AGG / AGG clients with customers - or audiences that they are targeting - that value / demand sustainability are more likely to have set up some form of CSR as this is perceived to add value to their offer / reputation.</p>	<p>DP / AGG / AGG clients' finances are good, therefore the perception of risk of investing time and resource in a scheme is lessened.</p> <p>DP / AGG / AGG clients' finances are limited, therefore they are more likely to need the scheme funding to make something happen.</p>	<p>It should also be noted that many of the contexts - e.g. lead contact autonomy - have proven to be helpful but are not strictly 'necessary' to participation / the decision to do so.</p>
BEIS communications, experience / word of mouth / reports	Working within the requirements of the scheme could help us to deliver a project more quickly	<p>DP / AGG / AGG clients have - or envisage - hurdles and so see the scheme as a way of overcoming these / doing so more quickly.</p> <p>DP / AGG / AGG clients are organisationally not very engaged in energy efficiency action / demand reduction, hence the value of the scheme in focusing stakeholders and decision makers upon this and increasing propensity to approve projects.</p> <p>DP / AGG / AGG clients have limited resource allocated to delivery of a</p>	<p>DP / AGG / AGG clients have positive perception of BEIS and BEIS programmes, meaning that they are more inclined to take notice of initial comms, look to engage, and perceive that the process will not be too onerous / risky.</p> <p>DP / AGG / AGG clients had a positive experience of Phase 1, or at least think the process will be more straightforward now they are familiar with it, meaning that they are more inclined to take notice of initial comms, look to engage, and perceive that the process will not be too onerous / risky.</p> <p>DP / AGG clients are willing to invest time and money in a project, increasing the chance that there is a pre-existing project and reducing the chance that they will perceive delivery of a project to tie in with the scheme to be too challenging.</p>	<p>There are two positive mechanisms in lighter green and italics. The first - speeding up the project - was recognised by some as a benefit of the process / scheme but did not seem to be cited at this stage as</p>

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

			project and so hope that participation will encourage more to be allocated.	<p>DP / AGG / AGG clients have previous experience of delivering this type of project, increasing the chance that there is a pre-existing project and reducing the chance that they will perceive delivery of a project to tie in with the scheme to be too challenging.</p> <p>DP / AGG / AGG clients have a project in development already, reducing the amount of work (project design / data gathering) that needs to be done to get a project onto the scheme and increasing commitment to deliver.</p> <p>DP / AGG find out about the scheme well in advance of the deadline for registering interest, increasing the time available to identify a suitable project, (for AGGs) scope some clients, organise resources and start gathering relevant information (depending upon the extent to which they are aware of precise scheme requirements).</p>	reasoning for participation. The second - board recognition of a Government scheme - was useful for the application stage when the lead might be making formal representations to a board, but less so here at the registration stage.
BEIS communications, experience / word of mouth / reports	Participating in a BEIS scheme which evidences Gov interest in this area may increase likelihood of business case sign off / SMT support for demand reduction activity	<p>DP / AGG / AGG clients have - or envisage - hurdles to project delivery and so see the scheme as a way of overcoming these / doing so more quickly.</p> <p>DP / AGG / AGG clients are organisationally not very engaged in energy efficiency action / demand reduction, hence the value of the scheme in focusing stakeholders and decision makers upon this and increasing propensity to approve projects</p>	<p>DP / AGG have previous experience of this type of scheme, perhaps indicating engagement with this type of activity that will ensure quicker awareness of the scheme, and also meaning a better handle on likely required inputs and so better preparation for this.</p> <p>DP / AGG / AGG clients have customers that value / demand sustainability, meaning an increased likelihood of seeing strategic benefits in engaging with the scheme.</p>		
BEIS communications, experience / word of mouth / reports	We need funds for a project (we cannot afford to invest in it or because the rate of return is too low)	<p>DP / AGG / AGG clients have limited resources which makes it more likely that external investment is needed.</p> <p>DP / AGG / AGG clients have very strict rules around rate of return which increase the likelihood that they will need external investment (as opposed to decision makers being flexible).</p>	<p>AGG has a substantial client base to draw upon, reducing the amount of effort they need to put in to source a sufficient client base (if they are broadly aware of scheme requirements at this stage) and increasing the range of project options that they can put into the scheme.</p>		

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

<p>DP / AGG does not register but implements / looks to implement EDR-type projects outside of the scheme.</p> <p>DP / AGG does not register nor plans EDR action in the short term, but has increased awareness and interest in EDR generally.</p> <p>DP / AGG does not register</p>	<p>BEIS communications, experience / word of mouth / reports</p>	<p>Perceive that participation would be a lot of hassle</p>	<p>DP / AGG clients have lots of small sites, increasing the required workload at application and reporting stages (assuming they have broad awareness of these requirements), in terms of both gathering the data and then completing forms.</p> <p>DP / AGG finds out about the scheme close to the deadline for registering interest, meaning severely compressed time period in which to complete forms.</p> <p>DP / AGG do not have a pre-existing project, meaning more work would be required to design one from scratch prior to even completing the requisite forms etc.</p> <p>DP / AGG / AGG clients have other schemes / opps, meaning that they have other draws upon their time, as well as alternative routes to achieving financial or environmental or reputational goals.</p> <p>DP / AGG / AGG clients have a negative perception or experience of BEIS / BEIS programmes (including A1), based upon the workloads these have required.</p> <p>DP / AGG / AGG clients' resources are limited, meaning they cannot afford to invest significant resource up front to develop a project idea, or fully engage with the scheme, including completion of registration.</p>	<p>DP / AGG clients are ineligible in some way</p> <p>DP / AGG clients are barely above the threshold for the scheme, increasing perception that investing substantial resource might be challenging.</p> <p>DP / AGG clients have lots of small sites, increasing the level of input in gathering data and reflecting that in the scheme forms (assuming respondents are aware of that at this stage).</p> <p>DP / AGG finds out about the scheme close to the deadline for registering interest, reducing time to work up a project idea / familiarise themselves with the scheme.</p> <p>DP / AGG do not have a pre-existing project, meaning significantly more input of time and resource to participate.</p> <p>DP / AGG client finances are good, reducing the likelihood that they NEED the scheme to deliver projects.</p> <p>DP / AGG / AGG clients have other schemes / opps (e.g. Salix), meaning increased likelihood that they will not be interested in EDR if they perceive the risk/reward calculation to be unfavourable.</p> <p>DP / AGG / AGG clients have negative perceptions or experience of BEIS / BEIS programmes (including A1), meaning decreased likelihood of wishing to participate and more likely an unfavourable view of risk vs reward. Also a reduced chance of them paying attention to EDR comms.</p> <p>DP / AGG / AGG clients' resources are limited, reducing tolerance of perceived substantial resource input.</p> <p>Low level of DP / AGG / AGG client interest in energy efficiency / EDR, meaning reduced likelihood of hearing about the scheme at all (at least until it is too late) and less tolerance of substantial resource input.</p>	<p>Again this was found to be broadly accurate; specific combinations were true in at least one case.</p>
---	--	---	---	--	---

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

and has no expectation of implementing EDR; no change to interest.	BEIS communications, experience / word of mouth / reports	We (perceive that) we wouldn't qualify or would struggle to do so.	<p>DP / AGG clients are ineligible in some way</p> <p>DP / AGG clients are barely above the threshold for the scheme and so more likely to feel they would struggle to put together a project that stays eligible.</p> <p>DP / AGG / AGG clients have experience of BEIS / BEIS programmes (including A1) for which they were not eligible (and potentially aren't aware of how the scheme has changed in phase 2, or are aware and so know that they still aren't eligible).</p>		
	BEIS communications, experience / word of mouth / reports	Perceive that participation carries significant risk on the basis of likely reward vs resource input	<p>DP / AGG clients are barely above the threshold for the scheme and so more likely to feel they would struggle to put together a project that stays eligible.</p> <p>DP / AGG clients have lots of small sites, increasing the required workload at application and reporting stages, in terms of both gathering the data and then completing forms.</p> <p>DP finances are good, therefore reducing reliance on the scheme for taking forward a project and so lower tolerance of resource inputs required.</p> <p>DP / AGG / AGG clients have other schemes / opps, so more likely to view that they don't need the EDR if it is suspected to be resource intensive.</p> <p>DP / AGG / AGG clients have negative perceptions or experience of BEIS / BEIS programmes (including A1), in that they had to input a substantial amount of resource and did not get the desired rewards.</p> <p>DP / AGG / AGG clients' resources</p>		

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

			are limited, therefore they are less likely to feel they can tolerate substantial resource input.		
	BEIS communications , experience / word of mouth / reports	We are focusing on other / better opportunities	<p>DP / AGG / AGG clients have negative perceptions or experience of BEIS / BEIS programmes (including A1), so more likely to feel their other activities are 'better' / more worthy of attention.</p> <p>DP / AGG / AGG clients' resources are limited, therefore they cannot afford to invest these in multiple schemes, so increased chance of EDR being one of those not taken forward.</p>		
	BEIS communications , experience / word of mouth / reports	We only became aware of the scheme shortly before / after the registration deadline had passed	<p>DP / AGG / AGG clients' resources are limited, decreasing the chances of them spending time looking out for / paying attention to things like the EDR launch.</p> <p>Low level of DP / AGG / AGG client interest in energy efficiency / EDR, again decreasing the chance that they are looking out for / paying attention to this kind of opportunity</p>		



## Application

Outcome	Scheme resources influencing reasoning	Mechanisms [green = mechanisms which favour participation, red = mechanisms which favour non-participation or drop out]	Contexts with specific relevance to the mechanism [these are not exhaustive but are specific to certain mechanisms, as opposed to more generally true contexts such as 'large organisation' or 'in principle eligible' which would be true across most mechanisms]	All contexts [some of which will still be generally true / important for each mechanism but do not pertain specifically to a mechanism i.e. are not part of a specific configuration / hypothesis]	Databuild comments - 09-03-18
DP / AGG applies	BEIS communications on the form, BEIS guidance on the scheme and application, the application form	[AGG only] This is an interesting business opportunity for us (supporting core business activity and specifically new or existing project plans)	DP / AGG / AGG clients with previous experience of delivering this type of project more likely to have a current project that the scheme ties in with.	<p>DP / AGG clients are in principle eligible</p> <p>Energy manager or equivalent has autonomy to pursue opps like EDR</p> <p>SMT / owner / directors have personal enthusiasm and interest in the organisation pursuing energy efficiency opportunities</p> <p>DP / AGG clients are way above the threshold for demand reduction potential, so less perception of risk and prospect of a larger funding allocation, and potentially increased chance that they perceive energy as a significant cost (so have pre-allocated resource and project ideas in place already).</p> <p>DP / AGG doesn't need many sites to be eligible, so reducing the level of information that would need to be sourced and included in forms.</p> <p>Individual in DP / AGG able to mobilise support, meaning they can respond more quickly and efficiently to initial comms and be more reassured that they will get the requisite resource throughout the process</p> <p>DP / AGG / AGG clients have positive attitude to energy efficiency / EDR, making them potentially more likely to notice and engage with the scheme and potentially more likely to overlook certain challenges /</p>	At this stage respondents tended to have conducted more formal cost-benefit assessment of participating in the scheme as the likely costs and benefits became clearer. Financial considerations ('was it worth it') were still the primary considerations but most of the other mechanisms were found to some extent. Two mechanisms have been flagged as questionable. For the 'making the project quicker'
		It's money available for something we plan to do anyway	<p>DP / AGG / AGG clients' have a project at least at concept stage</p> <p>DP / AGG / AGG clients' have substantial resource available in order to be planning to do something anyway and to believe that they can allocate resource to going through the scheme process.</p>		
		It's good for our reputation - and potentially future sales - to be involved in this type of activity	DP / AGG / AGG clients with customers - or audiences they are targeting - that value / demand sustainability are more likely to see how participation in the scheme could translate into reputational benefits.		

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

		<p>This ties in with our strategy of participating in BEIS / Gov schemes and being closer to BEIS/Gov</p>	<p>DP / AGG / AGG clients with customers - or audiences that they are targeting - that value / demand sustainability are more likely to wish to be closer to BEIS / Gov to evidence their commitment.</p> <p>DP / AGG has lobbying positions that they perceive to be more impactful / authoritative if they have shown willingness to engage</p> <p>DP / AGG is public sector therefore has an ongoing interest in being close to government (re: upcoming policy changes, access, allocations etc.).</p>	<p>hurdles.</p> <p>DP / AGG / AGG clients have positive attitude to scheme participation in general, making them potentially more likely to engage with the scheme and potentially more likely to overlook certain challenges / hurdles.</p> <p>DP / AGG have resources in place OR has flexibility to allocate / source additional resource, making them potentially more likely to engage with the scheme, and be more reassured that they will get the requisite resource throughout the process , and are more likely to have individuals with relevant experience and expertise who will find the process more straightforward anyway.</p>	<p>mechanism, it was still likely too soon for any leads to be certain that this would be the case and again none cited this in interviews as being a basis for choosing to apply; it was more cited as a retrospective benefit of having engaged. The other is the mechanism on 'the application being seen as reasonable'. Undoubtedly a minority did - and all those that progressed must by definition have seen the application as sufficiently reasonable - but many applicants encountered additional iterations / issues that</p>
		<p>This ties in with our CSR of engaging with and being involved in schemes seeking this type of outcome</p>	<p>DP / AGG / AGG clients with customers - or audiences that they are targeting - that value / demand sustainability are more likely to have set up some form of CSR as this is perceived to add value to their offer / reputation.</p>	<p>Required individuals have time to spend on the scheme OR flexibility to prioritise it over existing tasks, making them potentially more likely to engage with the scheme, and be more reassured that they will get the requisite resource throughout the process, and are more likely to have individuals with relevant experience and expertise who will find the process more straightforward anyway.</p>	
		<p>Working within the requirements of the scheme could help us to deliver a project more quickly</p>	<p>DP / AGG / AGG clients have - or envisage - hurdles and so see the scheme as a way of overcoming these / doing so more quickly.</p> <p>DP / AGG / AGG clients are organisationally not very engaged in energy efficiency action / demand reduction, hence the value of the scheme in focusing stakeholders and decision makers upon this and increasing propensity to approve projects.</p> <p>DP / AGG / AGG clients have limited resource allocated to delivery of a project and so hope that participation will encourage more to be allocated.</p>	<p>DP / AGG / AGG clients' finances are good, therefore the perception of risk of investing time and resource in a scheme is lessened.</p> <p>DP / AGG / AGG clients' finances are limited, therefore they are more likely to need the scheme funding to make something happen.</p> <p>DP / AGG / AGG clients have positive</p>	

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

		Participating in a BEIS scheme which evidences Gov interest in this area may increase likelihood of business case sign off / SMT support for demand reduction activity	<p>DP / AGG / AGG clients have - or envisage - hurdles to project delivery and so see the scheme as a way of overcoming these / doing so more quickly.</p> <p>DP / AGG / AGG clients are organisationally not very engaged in energy efficiency action / demand reduction, hence the value of the scheme in focusing stakeholders and decision makers upon this and increasing propensity to approve projects</p>	<p>perception of BEIS and BEIS programmes, meaning that they are more inclined to engage and perceive that the process will not be too onerous / risky.</p> <p>DP / AGG / AGG clients had a positive experience of Phase 1, or at least think the process will be more straightforward now they are familiar with it, meaning that they are more inclined to engage and perceive that the process will not be too onerous / risky.</p> <p>DP / AGG clients are willing to invest time and money in a project, increasing the chance that there is a pre-existing project and reducing the chance that they will perceive delivery of a project to tie in with the scheme to be too challenging.</p>	they had to invest more resource in to resolve.
		The application requirements seem to be reasonable	<p>DP / AGG doesn't need many sites to be eligible, so minimising the level of per site information required.</p> <p>DP / AGG have participated in other schemes (potentially phase 1), meaning they are more familiar with sourcing and reporting the type of data required by the form, so view it as less onerous.</p> <p>DP / AGG / AGG clients have individuals with specialist expertise who are more likely to be able to understand the requirements and source / interpret / report data more efficiently.</p> <p>DP / AGG putting forward a project already somewhat developed are more likely to already have some of the data required.</p>	<p>DP / AGG / AGG clients have previous experience of delivering this type of project, increasing the chance that there is a pre-existing project and reducing the chance that they will perceive delivery of a project to tie in with the scheme to be too challenging.</p> <p>DP / AGG / AGG clients have a project in development already, reducing the amount of work (project design / data gathering) that needs to be done to get a project onto the scheme and increasing commitment to</p>	

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

		<p>We need funds for a project (we cannot afford to invest in it or because the rate of return is too low)</p>	<p>DP / AGG / AGG clients have very strict rules around rate of return which increase the likelihood that they will need external investment (as opposed to decision makers being flexible).</p>	<p>deliver.</p> <p>DP / AGG find out about the scheme well in advance of the deadline for registering interest, increasing the time available to identify a suitable project, (for AGGs) scope some clients, organise resources and start gathering relevant information.</p> <p>DP / AGG have previous experience of this type of scheme, perhaps indicating engagement with this type of activity that will ensure quicker awareness of the scheme, and also meaning a better handle on likely required inputs and so better preparation for this.</p> <p>DP / AGG / AGG clients have customers that value / demand sustainability, meaning an increased likelihood of seeing strategic benefits in engaging with the scheme.</p> <p>AGG has a substantial client base to draw upon, reducing the amount of effort they need to put in to source a sufficient client base and increasing the range of project options that they can put into the scheme.</p>	
--	--	--	--	--	--

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

<p>DP / AGG does not apply but implements / looks to implement EDR-type projects outside of the scheme.</p> <p>DP / AGG does not apply nor plans EDR action in the short term, but has increased awareness and interest in EDR generally.</p> <p>DP / AGG does not apply and has no expectation of implementing EDR; no change to interest.</p>		<p>Perceive that applying would be a lot of hassle</p>	<p>DP / AGG clients have lots of small sites, increasing the required workload at application and reporting stages, in terms of both gathering the data and then completing forms.</p> <p>DP / AGG do not have a pre-existing project, meaning more work would be required to design one from scratch prior to even completing the requisite forms etc.</p> <p>DP / AGG / AGG clients have other schemes / opps, meaning that they have other draws upon their time, as well as alternative routes to achieving financial or environmental or reputational goals.</p> <p>DP / AGG / AGG clients have a negative perception or experience of BEIS / BEIS programmes (including A1), based upon the workloads these have required.</p> <p>DP / AGG / AGG clients' resources are limited, meaning they cannot afford to invest significant resource up front to develop a project idea, or fully engage with the scheme, including completion of applications.</p>	<p>DP / AGG clients are ineligible in some way</p> <p>DP / AGG clients are barely above the threshold for the scheme, increasing perception that investing substantial resource might be challenging.</p> <p>DP / AGG clients have lots of small sites, increasing the level of input in gathering data and reflecting that in the scheme forms.</p> <p>DP / AGG do not have a pre-existing project, meaning significantly more input of time and resource to participate.</p> <p>DP / AGG client finances are good, reducing the likelihood that they NEED the scheme to deliver projects.</p> <p>DP / AGG / AGG clients have other schemes / opps, meaning increased likelihood that they will not be interested in EDR if they perceive the risk/reward calculation to be unfavourable.</p> <p>DP / AGG / AGG clients have negative perceptions or experience of BEIS / BEIS programmes (including A1), meaning decreased likelihood of wishing to participate and more likely an unfavourable view of risk vs reward.</p>	<p>Again this is broadly accurate; specific combinations were true in at least one case.</p>
		<p>We (perceive that) we wouldn't qualify or would struggle to do so.</p>	<p>DP / AGG clients are ineligible in some way</p> <p>DP / AGG clients are barely above the threshold for the scheme and so more likely to feel they would struggle to put together a project that stays eligible.</p> <p>DP / AGG / AGG clients have experience of BEIS / BEIS programmes (including A1) for which they were not eligible (and potentially aren't aware of how the scheme has changed in phase 2, or are aware and so know that they still aren't eligible).</p>	<p>DP / AGG / AGG clients' resources are limited, reducing tolerance of perceived substantial resource input.</p> <p>Low level of DP / AGG / AGG client interest in energy efficiency / EDR, meaning less tolerance of substantial resource input.</p>	

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

		<p>Perceive that participation carries significant risk on the basis of likely reward vs resource input</p>	<p>DP / AGG clients are barely above the threshold for the scheme and so more likely to feel they would struggle to put together a project that stays eligible.</p> <p>DP / AGG clients have lots of small sites, increasing the required workload at application and reporting stages, in terms of both gathering the data and then completing forms.</p> <p>DP finances are good, therefore reducing reliance on the scheme for taking forward a project and so lower tolerance of resource inputs required.</p> <p>DP / AGG / AGG clients have other schemes / opps, so more likely to view that they don't need the EDR if it is suspected to be resource intensive.</p> <p>DP / AGG / AGG clients have negative perceptions or experience of BEIS / BEIS programmes (including A1), in that they had to input a substantial amount of resource and did not get the desired rewards.</p> <p>DP / AGG / AGG clients' resources are limited, therefore they are less likely to feel they can tolerate substantial resource input.</p> <p>DP / AGG doesn't fully understand the auction format, so less confident in participating.</p> <p>DP / AGG perceives the auction as a risk in terms of getting the funding needed.</p>		
		<p>We are focusing on other / better opportunities</p>	<p>DP / AGG / AGG clients have negative perceptions or experience of BEIS / BEIS programmes (including A1), so more likely to feel their other activities are 'better' / more worthy of attention.</p> <p>DP / AGG / AGG clients' resources are limited, therefore they cannot afford to invest these in multiple schemes, so increased chance of EDR being one of those not taken forward.</p>		

## Implement

Outcome	Scheme resources influencing reasoning	Mechanisms [green = mechanisms which favour participation, red = mechanisms which favour non-participation or drop out]	Contexts with specific relevance to the mechanism [these are not exhaustive but are specific to certain mechanisms, as opposed to more generally true contexts such as 'large organisation' or 'in principle eligible' which would be true across most mechanisms]	All contexts [some of which will still be generally true / important for each mechanism but do not pertain specifically to a mechanism i.e. are not part of a specific configuration / hypothesis]	Databuild comments - 09-03-18
DP / AGG fully participates in the scheme	The auction price obtained, any final BEIS feedback / requirements on the project.	[AGG only] This continues to be an interesting business opportunity for us (supporting core business activity and specifically new or existing project plans)	AGG / AGG clients with previous experience of delivering this type of project more likely to recognise the business opportunity and more likely to have a current project that the scheme ties in with.	Favourable circumstances at earlier stages haven't changed  DP / AGG clients are in principle eligible / application was successful	These CMO combinations are accurate for all full participants. Risk-reward / cost-benefit continued to be the predominant consideration for almost all but other mechanisms were present to some extent.
		It's money available for something we plan to do anyway	DP / AGG / AGG clients' have a project at least at concept stage  DP / AGG / AGG clients' have substantial resource available in order to be planning to do something anyway and to believe that they can allocate resource to going through the scheme process.	DP / AGG clients are way above the threshold for demand reduction potential, so less perception of risk and prospect of a larger funding allocation, and potentially increased chance that they perceive energy as a significant cost (so have pre-allocated resource and project ideas in place already).	
		It's good for our reputation - and potentially future sales - to be involved in this type of activity	DP / AGG / AGG clients with customers - or audiences they are targeting - that value / demand sustainability are more likely to see how participation in the scheme could translate into reputational benefits.	DP / AGG doesn't need many sites to be eligible, so reducing risk of not delivering the project as per application and reducing the level of information that would need to be sourced and included in forms.	
		This ties in with our strategy of participating in BEIS / Gov schemes and being closer to BEIS/Gov	DP / AGG / AGG clients with customers - or audiences that they are targeting - that value / demand sustainability are more likely to wish to be closer to BEIS / Gov to evidence their commitment.  DP / AGG has lobbying positions that they perceive to be more impactful / authoritative if they have shown willingness to engage  DP / AGG is public sector therefore has an ongoing interest in being close to government (re: upcoming policy changes, access, allocations etc.).	DP / AGG / AGG clients have positive attitude to energy efficiency / EDR, making them potentially more likely to overlook certain challenges / hurdles.  DP / AGG / AGG clients have positive attitude to scheme participation in general, making them potentially more likely to overlook certain challenges / hurdles.	
		This ties in with our CSR of engaging with and being involved in schemes	DP / AGG / AGG clients with customers - or audiences that they are targeting - that value / demand sustainability are more likely to have set up	Required individuals have time to	



## Electricity Demand Reduction (EDR) pilot evaluation: appendices

		seeking this type of outcome	some form of CSR as this is perceived to add value to their offer / reputation.	spend on the scheme OR flexibility to prioritise it over existing tasks, making them less likely to view any outstanding BEIS comments etc. as onerous.	
		Working within the requirements of the scheme could help us to deliver a project more quickly	<p>DP / AGG / AGG clients have - or envisage - hurdles and so see the scheme as a way of overcoming these / doing so more quickly.</p> <p>DP / AGG / AGG clients are organisationally not very engaged in energy efficiency action / demand reduction, hence the value of the scheme in focusing stakeholders and decision makers upon this and increasing propensity to approve projects.</p> <p>DP / AGG / AGG clients have limited resource allocated to delivery of a project and so hope that participation will encourage more to be allocated.</p>	<p>DP / AGG / AGG clients' finances are good, therefore the perception of risk of penalties / investing time to finalise the is lessened.</p> <p>DP / AGG / AGG clients' finances are limited, therefore they are more likely to need the scheme funding to make something happen.</p>	
		Participating in a BEIS scheme which evidences Gov interest in this area may increase likelihood of business case sign off / SMT support for demand reduction activity	<p>DP / AGG / AGG clients have - or envisage - hurdles to project delivery and so see the scheme as a way of overcoming these / doing so more quickly.</p> <p>DP / AGG / AGG clients are organisationally not very engaged in energy efficiency action / demand reduction, hence the value of the scheme in focusing stakeholders and decision makers upon this and increasing propensity to approve projects</p>	<p>DP / AGG / AGG clients have previous experience of delivering this type of project, reducing concern that they won't match the project as per application.</p> <p>DP / AGG / AGG clients have customers that value / demand sustainability, meaning an increased likelihood of seeing strategic benefits in engaging with the scheme.</p>	
		We need funds for a project (we cannot afford to invest in it or because the rate of return is too low)	<p>DP / AGG / AGG clients have limited resources which makes it more likely that external investment is needed.</p> <p>DP / AGG / AGG clients have very strict rules around rate of return which increase the likelihood that they will need external investment (as opposed to decision makers being flexible).</p>	AGG has a substantial client base to draw upon, reducing concern that they can't match the application form proposal if there is slight drop out.	
		We are satisfied with the subsidy post-auction	<p>DP / AGG clients are way above the threshold for demand reduction potential, so less perception of risk and prospect of a larger funding allocation, and potentially increased chance that they perceive energy as a significant cost (so have pre-allocated resource and project ideas in place already).</p> <p>DP / AGG / AGG clients' finances are limited, therefore they are more likely to need the scheme funding to make something happen.</p>		



## Electricity Demand Reduction (EDR) pilot evaluation: appendices

<p>DP / AGG initially participates but drops out of the process before completion</p> <p>DP / AGG does not go on to participate but implements / looks to implement EDR-type projects outside of the scheme.</p> <p>DP / AGG does not go on to participate nor plan EDR action in the short term, but has increased awareness and interest in EDR generally.</p> <p>DP / AGG does not go on to participate and has no expectation of implementing EDR; no</p>		<p>Perceive that further participation carries significant risk on the basis of likely reward vs resource input, in particular related to BEIS reporting requirements</p>	<p>DP / AGG clients are barely above the threshold for the scheme and so more likely to feel they would struggle to put together a project that stays eligible.</p> <p>DP / AGG clients have lots of small sites, increasing the prospect of a project</p> <p>DP finances are good, therefore reducing reliance on the scheme for taking forward a project and so lower tolerance of resource inputs required.</p> <p>DP / AGG / AGG clients have other schemes / opps, so more likely to view that they don't need the EDR if it is suspected to be resource intensive.</p> <p>DP / AGG / AGG clients' resources are limited, therefore they are less likely to feel they can tolerate substantial resource input.</p> <p>DC / AGG / AGG client circumstances change, therefore making the project more challenging to deliver.</p>	<p>DP / AGG clients are barely above the threshold for the scheme, so more vulnerable to any changes and increasing perception of risk of failing to deliver impacts as per application.</p> <p>DP / AGG client finances are good, reducing the likelihood that they NEED the scheme to deliver projects.</p> <p>DP / AGG / AGG clients have lots of small sites, increasing perception of risk of not delivering project as per application form.</p>	<p>We removed the mechanism on other schemes offering a better deal as this did not seem to be the reasoning behind any non-participants that had reached this stage.</p> <p>The mechanism for 'insufficient post-auction subsidy' has been put in italics. The application had ultimately failed the cost-benefit assessment for any applicant who dropped out; hence the amount they were getting must have been ultimately insufficient. However, this was more due to rising cost than decreasing benefit and all bidders had received the amount bid in theory.</p>
		<p>Post-auction subsidy not acceptable / sufficient to us</p>	<p>DP / AGG finances are good, therefore less likely to NEED the funding and so accept an auction outcome that is even marginally less than what they were looking for.</p> <p>DP / AGG finances are limited / required rate of return very strict, therefore they cannot afford to deliver if the auction yields even marginally less than originally hoped for.</p>	<p>DP / AGG / AGG clients have other schemes / opps, meaning increased likelihood that they will not be interested in EDR if they perceive the risk/reward calculation to be unfavourable.</p> <p>DP / AGG / AGG clients' resources are limited, reducing tolerance of perceived substantial resource input and tolerance of any penalty risk.</p>	
		<p>We are not (or no longer) confident of delivering the project / savings due to EDR factors so worried about the reputation risk.</p>	<p>DP / AGG / AGG clients have lots of small sites, increasing perception of risk of not delivering project as per application form.</p> <p>DP / AGG has issues with the reporting requirements or cannot comply with EDR's rules.</p>	<p>DP / AGG has had a change in circumstances which have changed the size / nature of the project</p>	
		<p>We are not (or no longer) confident of delivering the project / savings due to non-EDR factors so worried about the reputation risk.</p>	<p>DP / AGG has had a change in circumstances which has changed the size / nature of the project.</p>		

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

change to interest.		We are not (or no longer) confident of delivering the project / savings due to EDR factors so worried about the financial risk of penalty	<p>DP / AGG / AGG clients have lots of small sites, increasing perception of risk of not delivering project as per application form.</p> <p>DP / AGG has issues with the reporting requirements or cannot comply with EDR's rules.</p>		
		We are not (or no longer) confident of delivering the project / savings due to non-EDR factors so worried about the financial risk of penalty	DP / AGG has had a change in circumstances which has changed the size / nature of the project.		

## Attribution

Attribution reasoning	Contexts with specific relevance to the mechanism [these are not exhaustive but are specific to certain mechanisms, as opposed to more generally true contexts such as 'large organisation' or 'in principle eligible' which would be true across most mechanisms]	Databuild comments - 09-03-18
We would not have implemented a project without the scheme	DP / AGG / AGG clients had limited finance / very strict rules around rate of return which would have made the project unfeasible without EDR support.	We have removed all but one of the key contexts for projects that would not have gone ahead without the scheme as all had been conceived to some extent prior to the EDR pilot launch and money was the key consideration in this level of attribution.
We have implemented a more impactful (either larger or better technology) project than we would otherwise have done	<p>DP / AGG / AGG clients have limited expertise and therefore may not have been aware of the most effective technologies</p> <p>DP / AGG / AGG clients have additional buildings / sites that could be included in the project i.e. expansion was possible</p>	
We have implemented a project more quickly than we would otherwise have done	<p>DP / AGG / AGG clients had limited finance / resources so were planning to stretch implementation out over a longer period without the EDR finance.</p> <p>DP / AGG / AGG clients had limited resource / other things to focus upon so less likely to have tightly managed the implementation of the project without the scheme structure / perception of BEIS pressure.</p> <p>DP / AGG / AGG clients wish to be close to BEIS / government so keen to stay within the EDR timescales.</p>	
The project we implemented would have been the same - in terms of size / technology / speed - regardless of the project	<p>DP / AGG / AGG clients finances / resource levels are good, therefore they do not need the EDR funding to deliver the project.</p> <p>DP / AGG / AGG clients had compelling existing motivations for delivering a project and therefore the scheme made no difference to their likelihood of implementing.</p>	

## Annex 2

### Original

Phase	App- lied or not	Bid or not	Fully parti- cipated?	Attri- buted or not	Fully additional i.e. wouldn't have happened otherwise at all?	Ligh- ting only?	Energy a significant issue for them / clients??	Org has formalised and active commitment to tackling EE?	AGG?	Could have accessed other external finance?	Had external expertise / support?	Have dedicated energy efficiency resource who could take the EDR process through?
1	1	0	0	1	1	1	1	1	0	1	0	1
1	1	1	1	1	1	1	1	1	1	1	0	1
1	1	0	0	1	1	1	1	0	0	0	0	1
1	1	1	1	1	0	1	1	1	0	0	1	1
1	1	1	0	0	0	1	1	1	0	0	0	0
1	1	1	0	1	1	1	1	1	0	1	0	1
1	1	0	0	1	0	1	1	1	0	1	0	1
1	1	0	0	1	0	1	0	1	0	0	1	1
1	1	1	0	1	0	1	1	1	0	0	1	1
1	1	1	1	1	0	1	1	1	0	0	1	1
1	1	0	0	1	0	0	1	1	1	1	1	1
1	1	0	0	1	1	1	1	1	0	0	0	1
1	1	0	0	1	0	1	1	1	0	1	0	1
1	1	0	0	1	1	0	1	1	0	0	1	1
1	1	0	0	0	0	1	1	1	0	1	1	1
1	1	0	0	1	0	0	1	1	0	0	0	1
1	1	0	0	1	0	0	1	1	0	1	1	1
1	1	1	1	1	0	1	1	1	0	1	0	1
1	1	1	1	1	0	1	1	1	0	1	1	1
1	1	1	0	1	0	1	1	1	0	1	1	1
1	1	0	0	1	0	0	1	1	0	0	0	0

# Electricity Demand Reduction (EDR) pilot evaluation: appendices

1	1	1	1	1	0	1	1	0	0	0	0	1
1	1	0	0	0	0	1	1	1	0	0	0	1
1	1	1	0	0	0	1	1	1	0	0	0	1
1	1	0	0	1	0	1	1	1	0	1	0	1
1	1	0	0	1	0	1	1	1	1	0	1	1
1	1	1	1	1	0	1	1	1	0	1	1	1
1	1	1	1	1	0	1	1	0	0	0	0	1
1	1	0	0	1	0	1	1	1	0	0	1	1
1	1	0	0	1	0	1	1	1	0	1	0	1
1	1	0	0	1	0	0	1	1	0	1	0	1
1	1	0	0	1	0	0	1	1	0	0	0	0
1	1	0	0	1	0	1	1	1	1	0	0	0
1	1	0	0	0	0	1	1	1	0	0	0	1
1	1	1	1	1	1	1	1	1	0	0	0	1
1	1	0	0	1	1	0	1	1	0	0	0	1
1	1	0	0	1	1	1	1	1	0	1	0	1
1	1	1	1	1	0	1	1	1	0	0	1	1
1	1	1	1	1	0	1	1	1	0	0	1	1
2	1	1	0	1	0	1	1	1	0	0	0	0
2	1	1	1	1	0	1	1	1	1	0	0	1
2	1	1	0	1	0	1	1	1	0	0	0	1
2	1	0	0	1	1	1	1	1	0	0	0	1
2	1	1	0	1	0	1	1	1	1	0	1	1
2	1	1	1	0	0	1	1	1	0	0	0	1
2	1	1	1	1	0	1	1	1	0	0	1	1
2	1	1	1	1	1	1	0	1	0	1	0	1
2	1	1	1	1	1	1	1	1	1	0	0	1
2	1	0	0	1	1	0	1	1	0	1	0	1
2	1	0	0	1	1	0	1	1	0	0	0	1
2	1	1	1	1	0	1	1	1	0	1	0	1
2	1	1	0	1	0	1	1	1	0	1	1	1
2	1	0	0	1	1	0	1	1	0	0	1	1
2	1	1	0	1	1	1	1	0	0	0	1	1
2	1	1	0	1	0	1	1	1	0	1	1	1
2	1	1	1	1	0	1	1	1	0	0	1	1
2	1	1	0	0	0	0	1	1	1	0	0	1
2	1	1	0	1	0	1	1	1	0	0	0	1
2	1	1	0	1	0	1	1	1	0	0	1	1

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

2	1	1	0	1	0	1	1	1	0	0	0	1
2	1	1	1	1	0	0	1	1	0	1	1	1
2	1	1	0	1	0	0	1	1	0	0	0	1
2	1	1	1	1	0	1	1	1	0	1	0	1
2	1	1	1	0	0	1	1	1	1	1	0	1
2	1	1	1	0	0	1	1	1	1	0	0	1

## Original (continued)

Org / clients have previous experience of schemes like EDR / Gov schemes?	Have delivered other projects like the EDR funded one in recent years?	The EDR funded project was already at some stage prior to the scheme?	Bid full amount?	Well over kW threshold?	Multi-site?	Deemed only?	Significant senior input?	Key comments
0	1	0	0	0	1	1	0	We initially created a QCA dataset which mixed some known profile information, direct survey responses, and some variables amalgamated / inferred from survey responses. This original list includes those who progressed to at least submitting an application.
1	1	1	1	0	1	1	0	
1	1	1	0	0	1	1	0	
1	1	1	0	0	0	1	0	
1	0	1	0	1	1	1	1	
1	1	1	1	0	0	1	0	
1	1	1	0	0	0	1	0	
1	1	1	0	1	1	1	1	
0	1	1	0	1	1	1	0	
1	1	1	0	1	0	1	0	
1	1	1	0	1	1	0	0	We then refined down the number of conditions on the basis that some were not widely known so: (a) the existing ones could skew the findings; (b) they were often not known because respondents hadn't cited these conditions as important
1	1	1	0	1	0	1	0	
0	1	1	0	0	1	1	0	
0	0	1	0	0	1	1	1	
1	1	1	0	1	0	1	0	
1	1	1	0	1	1	0	0	
0	1	1	0	1	0	1	1	

## Electricity Demand Reduction (EDR) pilot evaluation: appendices

1	1	1	0	1	0	0	0	(or at least necessary or sufficient) in interviews.  For example, 'Positive Phase 1 experience' was removed as it was not relevant to some and it seemed to have no strong correlation with phase 2 participation. Phase 1 participation could mean an organisation was more familiar / comfortable with the phase 2 process (regardless of whether it was a positive experience) but none described this as a reason for their participation or basis for their ongoing participation, more just a factor that could make it a bit easier.
1	1	1	0	1	1	1	0	
0	1	1	0	1	1	1	1	
0	1	1	0	1	0	1	0	
0	1	1	0	1	1	1	0	
1	1	1	0	1	1	1	1	
1	1	1	0	1	1	1	0	
0	1	1	0	1	1	1	0	
0	1	1	0	0	1	1	0	
1	1	1	0	0	1	1	0	
1	1	1	1	0	0	1	0	
1	1	1	0	1	1	1	0	
1	0	1	0	0	0	1	0	
1	1	1	0	0	0	1	0	
0	1	1	0	1	1	0	1	
0	1	1	0	0	0	0	1	
1	0	1	0	0	1	1	1	
1	1	1	0	1	0	1	0	
1	1	1	0	1	0	1	1	
1	1	1	0	0	1	1	0	
1	1	1	0	1	0	1	0	
0	1	1	0	1	1	1	1	
1	1	1	0	1	1	1	0	
0	1	1	0	1	1	1	0	
1	1	1	1	1	1	1	0	
1	1	1	0	0	1	1	0	
1	1	1	0	1	0	1	0	
1	1	1	0	1	1	1	0	
1	0	1	0	1	1	0	1	
1	1	1	0	1	0	1	0	
0	0	1	1	1	0	1	1	
1	1	1	0	1	1	0	1	
1	0	1	0	1	1	0	0	
1	1	1	0	1	1	1	0	
1	1	1	1	0	0	1	0	
0	1	1	0	1	1	0	1	
1	1	0	0	0	0	0	0	
0	0	1	0	1	1	0	1	

# Electricity Demand Reduction (EDR) pilot evaluation: appendices

1	1	1	0	1	0	1	0
1	0	1	0	1	1	1	0
1	1	1	0	0	1	1	0
1	1	1	0	0	1	1	0
1	1	1	0	1	1	1	0
1	0	1	0	1	0	1	0
1	0	1	0	0	1	1	0
1	0	1	0	1	1	0	0
0	0	1	0	0	1	1	0
1	1	1	0	1	1	1	0
1	1	1	0	1	1	1	0



## Participation

Outcome: Fully participated?	Org has formalised and active commitment to tackling EE?	Have dedicated energy efficiency resource who could take the EDR process through?	The EDR funded project was already at some stage prior to the scheme?	Combination
0	1	1	0	10
1	1	1	1	11
0	0	1	1	11
1	1	1	1	11
0	1	0	1	01
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	0	1	01
1	0	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
1	0	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	0	1	01
0	1	0	1	01

# Electricity Demand Reduction (EDR) pilot evaluation: appendices

0	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
1	1	1	1	11
0	1	0	1	01
1	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
1	1	1	1	11
1	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	1	0	10
0	0	1	1	11
0	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
0	1	1	1	11
0	1	1	1	11
1	1	1	1	11
0	1	1	1	11
1	1	1	1	11
1	1	1	1	11
1	1	1	1	11

## Key comments

We progressed through an analytical process refining the list of variables, removing the following:

- 'Access to external expertise'; it was very difficult to disaggregate from the presence of a dedicated energy resource, which was really the factor of interest, regardless of whether internal or external.
- 'Ease of completing the application' and 'Significant senior input to the application'; for some uninterviewed records we had had to take a proxy of time spent to date, which may not have accurately reflected their subsequent ability to participate. Seemingly relatively quick applications could encounter - sometimes lead to - issues further on in the process / multiple iterations / drop outs etc. Conversely, many who participated fully found the process onerous, so this did not seem to be a useful variable even in correlation with conditions like resource / familiarity, as most ostensibly had that too.
- 'Having a project well over the kW threshold' was also removed. This is partly because the measurement was arbitrary, but also because it did not seem to have a strong connection to participation (even if in theory smaller projects might be more likely to encounter challenges which took them below the threshold).
- 'Lighting' was also removed as this was deemed more of an outcome than a condition; it was factors present in a lighting project (likely already being progressed, quick, easy) that seemed to be having an effect on participation / non-participation.
- 'Energy being a key concern' was too subjective to the particular respondent and was in place for some participants i.e. were they not concerned because they were acting on it?
- The 'Aggregator' condition was removed as whilst in one or two cases they had been able to act flexibly to find new client sites when an existing project had fallen through, they were equally likely to have dropped out due to client reticence. Including as a factor for QCA when it applied to so few applicants seemed less useful, albeit it did contribute to CMO combinations. We also removed 'multi-site' for similar reasons; this could aid flexibility but also increase hassle / complexity.
- The 'org having a formal commitment', 'the org having experience of doing a similar project previously' (which the WPS revealed to be widespread) and 'the org having been part of a previous scheme' were also of limited use as these simply reflected the large business population of applicants to EDR.
- On 'deemed vs. metered', there is strong correlation between projects that fully participated and deemed projects. However, most applications were deemed and based upon lead responses in interviews, this was essentially a proxy for the project being simplistic enough to deliver / continue participating, whereas most metered projects were found to be too hard (hence the strong correlation with participating lighting projects vs non-participant non-lighting projects).

- 'Could have accessed external finance' was also a potential reason for non-participation in early stages (some public sector organisations stated that they opted for Salix as it was easier) but in most cases they did not need the EDR finance for the project to happen and again this condition was potentially quite subjective.

The factors that remained seemed to provide an explanation for all full participation cases - timing, perception of hassle, level of resource availability. The latter is less common than the other two but this was partly assessed on the basis of role description; in reality by definition participating organisations must have had a sufficiently dedicated resource (as they participated). The only issue with this finding is that it highlighted hygiene factors which were usually necessary for full participation, but not explanations of why the same factors ostensibly existed for many other organisations who chose not to participate. Hence the direct questions in the survey on this, which respondents struggled to explain and which seemed to be ultimately down to less tangible characteristics of the responsible individual / team.

## Contribution

Fully participated?	Outcome: attributed or not	Lighting only?	Org has formalised and active commitment to tackling EE?	Deemed only?	Combination
0	1	1	1	1	111
1	1	1	1	1	111
0	1	1	0	1	101
1	1	1	1	1	111
0	0	1	1	1	111
0	1	1	1	1	111
0	1	1	1	1	111
0	1	1	1	1	111
0	1	1	1	1	111
1	1	1	1	1	111
0	1	0	1	0	010
0	1	1	1	1	111
0	1	1	1	1	111
0	1	0	1	1	011
0	0	1	1	1	111
0	1	0	1	0	010
0	0	1	1	1	111
0	1	0	1	0	010
1	1	1	1	1	111
1	1	1	1	1	111
0	1	1	1	1	111
0	1	0	1	1	011

# Electricity Demand Reduction (EDR) pilot evaluation: appendices

1	<b>1</b>	1	0	1	101
0	0	1	1	1	111
0	0	1	1	1	111
0	1	1	1	1	111
0	1	1	1	1	111
1	<b>1</b>	1	1	1	111
1	<b>1</b>	1	0	1	101
0	1	1	1	1	111
0	1	1	1	1	111
0	1	0	1	0	010
0	1	0	1	0	010
0	1	1	1	1	111
0	0	1	1	1	111
1	<b>1</b>	1	1	1	111
0	1	0	1	1	011
0	1	1	1	1	111
1	<b>1</b>	1	1	1	111
1	<b>1</b>	1	1	1	111
0	1	1	1	1	111
1	<b>1</b>	1	1	1	111
0	1	1	1	1	111
0	1	1	1	1	111
1	<b>0</b>	1	1	0	110
1	<b>1</b>	1	1	1	111
1	<b>1</b>	1	1	1	111
1	<b>1</b>	1	1	0	110
0	1	0	1	0	010
0	1	0	1	1	011
1	<b>1</b>	1	1	1	111
0	1	1	1	0	110
0	1	0	1	0	010
0	1	1	0	0	100
0	1	1	1	1	111
1	<b>1</b>	1	1	1	111
0	0	0	1	1	011
0	1	1	1	1	111
0	1	1	1	1	111
0	1	1	1	1	111
1	<b>1</b>	0	1	1	011
0	1	0	1	0	010

1	1	1	1	1	111
1	0	1	1	1	111
1	0	1	1	1	111

## Key comments

Again we removed a number of factors which seemed to be either unimportant - from ratings and interview data - or were too subjective. However, there were a number of conditions that seemed to provide useful contribution stories:

- In phase 2, attribution from aggregators seemed low. As some of the same organisations had attributed in phase 1, this may simply reflect the organisations becoming used to the scheme and still wanting the extra money, but also may indicate that those for whom energy projects are a core business activity were less likely to attribute.
- Where projects were not lighting and not deemed, attribution seemed much more likely. This echoed the theory that the EDR largely helped the more simplistic projects that would have happened to some extent anyway, and that in terms of significant contribution it was the other non-simplistic projects that carried greater value.
- Linked to this, some organisations who applied with 'simplistic' projects but still attributed were often those without in-house board commitment to this type of activity (so EDR incentivisation was needed) or those who couldn't have accessed finance any other way.

---

This publication is available from:

<https://www.gov.uk/guidance/electricity-demand-reduction-pilot>

If you need a version of this document in a more accessible format, please email [enquiries@beis.gov.uk](mailto:enquiries@beis.gov.uk). Please tell us what format you need. It will help us if you say what assistive technology you use.