



DECC Electricity Demand Reduction Pilot: Measuring and verifying savings factsheet

How can I measure and verify savings from my project?

A manual will be provided which will provide guidance on how to measure and report savings. This will build on the approach set out in International Performance, Measurement and Verification Protocol (IPMVP).

In the pilot we are looking to test a full range of measurement and verification (M&V) approaches including:

- Deemed: savings are pre-calculated for a limited list of technologies;
- Partial measurement: combination of metering and estimates/measurement of key variables;
- Full measurement approaches: full metering before and after implementation.

Guidance will be provided on which approaches are suitable for different kinds of projects.

Calculating savings to bid into the pilot

The pilot is testing whether EDR could be delivered as part of the Capacity Market in the long term. For this reason the pilot is seeking to test the extent to which it is possible to incentivise lasting reductions in demand that are relevant to the winter peak period. This is defined as November-February, 4-8pm weekdays.

The savings bid into auction are the total peak-relevant savings for each project. For example, if a 4kW saving from installing a more efficient light is operational for the entire winter peak period then it can be bid in for 4kW. However it was only operational for half the period e.g. 4-6pm then it would count as a 2kW value. To calculate your total peak-relevant savings to bid into the pilot you will need to collate information on the technologies included in your bid and their time of use.

This factsheet is up-to-date at 10 June 2014 and our expectation is that information in it will be final, but remains subject to change as the pilot develops. Further information will be published later in 2014.

What is involved in M&V?

Measurement and verification involves three main stages:

1. **Submit an M&V plan for your project:** this includes calculating the savings for your project, choosing your M&V method, collect/provide baseline data (where relevant), setting out operational verification and reporting activities.
2. **Verify purchase & installation:** confirmation equipment is installed and operating as expected, e.g. invoices, visual inspection etc
3. **Measure and report savings:** readings taken during reporting period including variables that affect demand, any corrections etc.

An overview of the M&V process and key timings is provided on the reverse of this sheet.

Deemed savings

Under deemed approaches savings are pre-calculated. Only technologies on the list can be deemed. Five main technology types are likely to be included on the list: lighting, motors, chillers, heating controls and retail display cabinets. Participants will be able to calculate savings using spreadsheets which will calculate savings relative to the currently installed technology. Participants will have to provide some project-specific information into the calculators e.g. the kW rating of the replacement technology.

Metered approaches

Participants using partial or full measurement approaches involving meters will have to define and collect data for the baseline and reporting period.

Baseline: participants will need to define the length of the baseline period and decide if any adjustments are needed to take account of other factors that will affect demand (e.g. temperature). Data will need to be collected and provided.

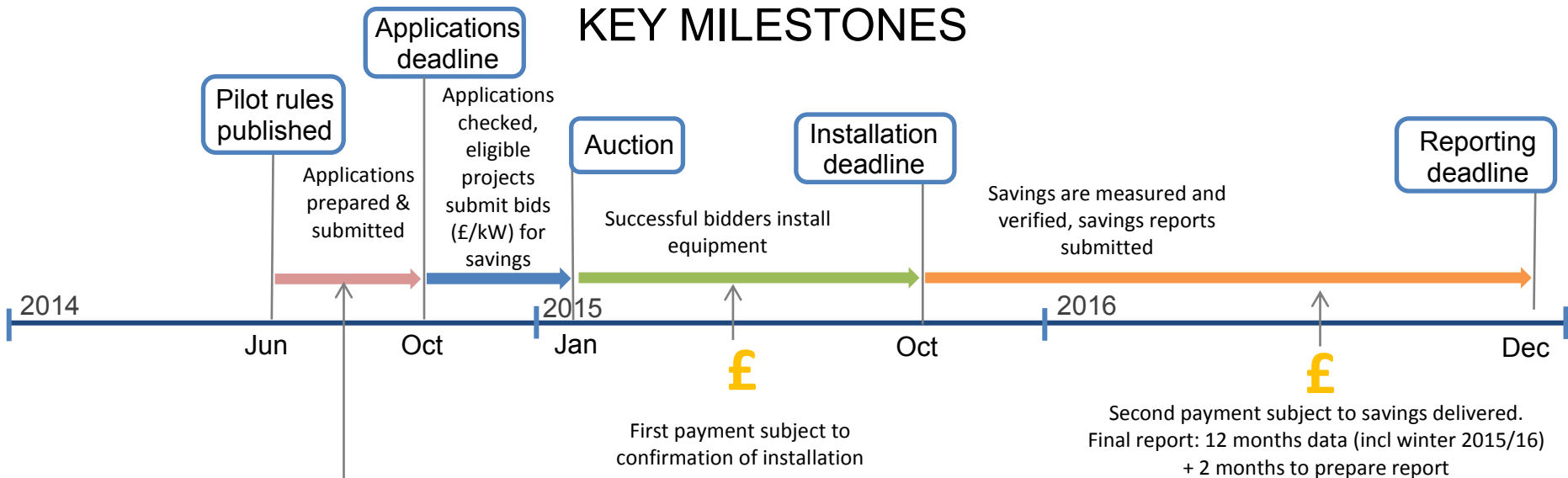
Reporting period: measure and report savings in line with their reporting plan. The length and frequency of reporting will be determined by the nature of the project itself.

Eligibility

Payback periods: Payback is a measure of how long it takes for an investment to pay for itself e.g. a £9,000 investment which delivers annual savings of £3,000 will take 3 years to pay for itself (the payback period). Measures being installed at each individual site included in a bid must have a payback period of 2 years or more to be eligible for inclusion in the pilot.

Eligible costs for the purposes of calculating payback are: equipment costs, installation costs and delivery cost. Eligible savings are the annual £ saving from reduced electricity use. All other costs and savings are ineligible for the purposes of calculating payback.

Short replacement cycle items: standalone items such as filters that are replaced frequently (more often than two years) will not be eligible to be bid into EDR.



Submit M&V plan

Prepare and submit M&V plan using M&V manual:

- Check eligibility
- Calculate total and peak savings for project
- Choose M&V method(s)
- Provide project information (size, location types of measures being installed)
- Define baseline and reporting period
- Collect baseline data and other evidence
- Set out operational verification and reporting activities and timings

Operational verification

Confirm equipment installed and operating as intended e.g.:

- Invoices confirming installation
- Visual inspection
- Measurements from a sample of installations
- Following manufacturer's/supplier's commissioning procedure.

Measurement and reporting

Measure and report savings:

- Demand readings taken during the reporting period
- Details of independent variables that affect demand (where relevant)
- Details of any corrections or changes that have applied to the data along with justifications for any changes

If you have not yet registered your interest in the pilot and wish to do so, or if you have questions, write to: edr-project@decc.gsi.gov.uk