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| Update to Victorian Energy Upgrades  Measurement and Verification Specifications |
| Summary of changes to Specifications Version 3.0  and response to consultation |

This document provides the finalised changes to the Measurement and Verification (M&V) Specifications. It is broken into two sections – the changes in brief and our responses to consultation submissions.

## Summary of changes to M&V Specifications

### Multiple premises projects

A set of changes which will allow a single project to include multiple essentially identical upgrades at multiple essentially identical premises. Projects will determine measurement boundaries and savings consistently at each premises.

Example: a large chain wishes to “roll out” a standard energy efficiency upgrade across multiple essentially identical sites. They are able to do this under a single project.

### Multiple VEEC creation methods

These changes allow a single project with multiple measurement boundaries to create VEECs in the way most appropriate for each measurement boundary.

Example: a project has two upgrades at the same premises, with distinct measurement boundaries. One upgrade is behaviour based and cannot use forward creation of VEECs. The behaviour-based efficiency measure uses annual creation of VEECs, and the hardware upgrade is able to use forward creation.

### Non-uniform time intervals - single measurement boundary

Data covering non-uniform time intervals can be used to construct energy models if it is utility data.

Example: a project is using gas utility billing data to create a baseline energy model. Some gas utility bills cover periods of up to 60 days, while the shortest bill covers only 15 days. The project is able to use this data to create a baseline energy model.

### Different time intervals - different measurement boundaries

This change will allow different measurement boundaries which use the same utility source to choose different length time intervals.

Example: a project has two different gas efficiency upgrades with distinct measurement boundaries located at the same premises. Both measurement boundaries have a gas utility meter with monthly billing, but one upgrade also has a submeter which records hourly data. The measurement boundary with monthly billing uses an energy model with month long time intervals. The measurement boundary with hourly data is able to create a model using one-hour time intervals.

### Operating/reporting period measurements

This set of changes allows projects with multiple measurement boundaries to begin measurements for the operating or reporting period when not all upgrades in other measurement boundaries are complete.

Example: a large industrial premises wishes to upgrade lighting in 20 identical 24-hour warehouses over a period of five months. Each warehouse has a dedicated measurement boundary and no interactive effects with the others. The project plans to use sampling to determine the effects of the multiple identical upgrades. Measurements of reporting period energy on upgraded warehouses are able to be made before the final lighting upgrade is finished.

### Feedback from other government organisations

Through discussions with other government organisations we have identified several items which were not fully achieving the policy intent. Changes have been made to address this, including the following:

* Definitions - the definition of **upgrade** has been amended to include behaviour changes, in line with previous versions of the M&V Specifications;
* (1) - the services affected by an upgrade are to be consistent across multiple premises projects;
* (3)(a) - projects with multiple premises may use multiple methods of certificate creation, but this is to be applied consistently across all premises in the project;
* (3)(b) - projects with multiple premises must determine measurement boundaries in a consistent manner;
* (4) – projects with multiple premises may use the same independent variable(s) and equation structure
* Equation 2 and Equation 3 – AF has been raised to the power of the normal year savings divided by the absolute value of the normal year savings in order to account for negative savings in energy
* (9)(c) – measurement boundaries must be determined in a consistent manner across all premises in a multiple premises project;
* (9)(d) – a site may have multiple measurement boundaries, provided there are no interactive effects between these boundaries
* (11)(v) – the National Greenhouse Accounts Factors published by the Commonwealth Department of the Environment August 2016 will be used;
* (21)(d)(i) – time intervals used to calculate savings of the same energy source for the same measurement boundary must be of the same length (they may be different for different measurement boundaries);
* (21)(d)(ii) also applies to operating periods.

## Responses to public consultation on proposed changes to the Measurement and Verification (M&V) Specifications (May-June 2019)

### Multiple premises projects - Ownership

During the public consultation period Victorian Energy Upgrades hosted an information session which was attended by over thirty people. The issue of project ownership and ownership of energy savings was raised by stakeholders during question time at this information session.

The Essential Services Commission has confirmed that they can accept one owner and one energy consumer/saver per premises in a project with multiple premises.

### Multiple premises projects - Transitional arrangements

We received a submission regarding transitional arrangements between Version 2.0 and Version 3.0 of the Specifications. After Version 3.0 of the Specifications has been officially released there will be a period of 6 months before the rules come into effect. Essentially identical projects which have already submitted a scoping plan or a project plan will be able to be combined into a single project in the majority of cases. The ESC have advised that there are some technical issues which may arise from combining projects which have already had a variation, or which have already submitted an impact report.

### Other feedback

As a part of the consultation, we also asked for any general feedback on how to make the method more user-friendly. Feedback was received regarding the effective range, and cases in which temperatures outside of the effective range may affect M&V projects. A suggestion was made to allow a flat savings profile when calculating savings for temperatures outside of the effective range (i.e. savings would not be extrapolated according to the energy model but would be assumed constant outside of the effective range).

The M&V method was designed around the basic principles of the International Performance Measurement and Verification Protocol (IPMVP). One of these principles is to be conservative. Because of this we would not allow calculations to go infinitely far outside of the effective range. The current structure of the Specifications means that choosing a longer time interval to build energy models comes with greater consequences when an interval is not valid. We do not want to encourage use of shorter baseline periods or less frequent measurements by allowing savings calculations to occur outside of the effective range.

The suggestion was not incorporated into Version 3.0 of the Specifications, but the department will continue to monitor this issue and the impacts it is having on projects.