

Consultation Paper on PIAM&V Method Requirements (No 2) for Deemed Method Implementations

20 October 2021

1 We are consulting on draft PIAM&V Method Requirements

We are consulting with stakeholders on proposed PIAM&V Method Requirements. The PIAM&V Method Requirements (No 2) for Deemed Method Implementations would apply to the calculation of Energy Savings using the Project Impact Assessment with Measurement and Verification Method (**PIAM&V Method**), to account for Energy Savings for which Energy Savings Certificates (**ESCs**) have already been created using the Deemed Energy Savings Method (**Deemed Method Implementations**).

The draft has been developed to facilitate consultation with stakeholders, and to increase clarity and certainty for ACPs, auditors and M&V Professionals regarding the application of the PIAM&V Method with respect to Deemed Method Implementations.

We are not proposing any amendments to the PIAM&V Method Requirements published on 21 February 2020. The proposed PIAM&V Method Requirements (No 2) for Deemed Method Implementations would apply in addition to the existing PIAM&V Method Requirements.

We use many technical and defined terms in this document. These terms are explained in our Glossary at section 7.

2 The PIAM&V Method Requirements (No 2) for Deemed Method Implementations will assist ACPs to create ESCs for existing projects

2.1 History and reasons for further requirements

In June 2021, IPART updated its PIAM&V Method Guide to ensure that guidance on Counted Energy Savings is consistent with the ESS Rule.^a The PIAM&V Method Guide had previously stated that Energy Savings calculated under a different RESA could be excluded from PIAM&V Method calculations as Counted Energy Savings, which was not consistent with the ESS Rule. Counted Energy Savings can only be used to account for ESCs created for the same Implementation, not for ESCs created under another RESA (e.g. under the Deemed Method).

Due to the long time-frames for some PIAM&V projects, projects may have commenced based on the earlier guidance in version 4.2 of the PIAM&V Method Guide. This means that an ACP may have commenced projects on the assumption that it could exclude Energy Savings calculated under the Deemed Method as Counted Energy Savings. We want to ensure that ACPs that had commenced projects based on the previous guidance are not unfairly disadvantaged as a result of the change in guidance.

To allow ESCs to be created for these projects we are considering publishing PIAM&V Method Requirements that would allow ACPs to account for Energy Savings from Deemed Method Implementations within the measurement boundary for a PIAM&V project. This would be a time-limited change which impacts only those projects which meet specific date boundaries. We are not proposing a lasting change to how the ESS Rule may be used. This consultation seeks feedback on the duration of the proposed arrangement in addition to the arrangement itself.

Any ongoing change to operation of the ESS Rule will be subject to the normal consultative process by the Department of Planning, Industry and Environment ahead of the next ESS Rule Change.

2.2 Principles applied to develop further requirements

In developing the draft *PIAM&V Method Requirements (No 2) for Deemed Method Implementations*, we have had regard to the general principles in the IPMVP and guidance published by the Efficiency Valuation Organization (**EVO**).

The *EVO POSITION STATEMENT ON DEEMED SAVINGS* provides discussion of where reliance on deemed savings is and is not appropriate. The position statement deals with why a discrete deemed savings approach does not constitute an M&V method, but does not explicitly describe the scenario where one would determine energy savings attributable to a project by deducting another project's deemed savings from measured energy use.

^a <https://www.ess.nsw.gov.au/Home/Document-Search/Guides/PIAMV-Method-Guide/PIAMV-Method-Guide-V4.3>

EVO states that the use of deemed savings may be acceptable for determining savings at a program level, but not project level. EVO concludes:

It is EVO's position that deemed savings is not an M&V method and cannot be relied upon to reflect an EE [energy efficiency] project's achieved savings.^b

The proposed PIAM&V Method Requirements (No 2) for Deemed Method Implementations would discount the number of certificates that may be claimed, where the measurement boundary for the PIAM&V project includes deemed savings from another project. This is to address what we consider is the reduced reliability of this approach for determining project level energy savings.

In developing the draft PIAM&V Method Requirements (No 2) for Deemed Method Implementations, we have also had regard to the objects of the ESS including the object to create a financial incentive to reduce the consumption of energy by encouraging energy saving activities and the broader public interest. This includes that:

- the public (energy consumers) subsidise operation of the ESS, and
- original Energy Savers should have confidence that reductions in energy consumption claimed by ACPs are attributable to the project they have commissioned and not other projects or factors.

PIAM&V Method Requirements are published by the Scheme Administrator under the ESS Rule. ACPs must comply with the PIAM&V Method Requirements when using the PIAM&V method.^c

3 How to account for Energy Savings due to Deemed Method Implementations

3.1 The ESS Rule requires Non-Routine Events be excluded from the Measurement Period

Non-Routine Events are events which affect energy use, within the chosen Measurement Period, that are not modelled by any Independent Variables or Site Constants. They are required to be removed from the Measurement Period to enable like-for-like comparison of before and after energy savings scenarios. Further, the ACP must ensure "that the percentage of time excluded is less than 20% of the Measurement Period".^d

The implementation of an activity under the Deemed Method within the measurement boundary for a PIAM&V project is a Non-Routine Event if it is not modelled by any Independent Variables or Site Constants. If the Deemed Method Implementation has been in place for more than 20% of the Measurement Period, the PIAM&V project would not be eligible for the creation of ESCs.

^b EVO POSITION STATEMENT ON DEEMED SAVINGS, Efficiency Valuation Organization, 22 October 2019, page 2

^c Clause 7A.16 of the ESS Rule

^d Clause 7A.5(g) of the ESS Rule

Issues with Non-Routine Events due to Deemed Method Implementations may be avoided by excluding them from the measurement boundary (e.g. through the use of sub-metering). Alternatively, the other energy saving activities could be included in the measurement boundary and claimed using the PIAM&V Method rather than under the Deemed Method. However, where projects have already commenced based on the incorrect guidance, ESCs may have already been created for Deemed Method Implementations. In this case the approach to M&V of Energy Savings for the PIAM&V Implementation may already be set and so it may no longer be possible to adjust the measurement boundary.

In these cases, we propose an alternative calculation method to enable affected ACPs to create ESCs for PIAM&V projects without changing the approach to M&V.

3.2 We are proposing to allow Deemed Method Implementations to be excluded as Interactive Energy Savings

Where a Non-Routine Event due to a Deemed Method Implementation accounts for 20% or more of the Measurement Period we are proposing to allow the Energy Savings arising from the Non-Routine Event to be excluded as Interactive Energy Savings. We expect this will most likely affect PIAM&V projects that have chosen the site boundary as the measurement boundary for the PIAM&V Implementation, where the energy consumption of the Deemed Method Implementations has not been measured.

The equations to calculate the annualised Interactive Energy Savings will be based on the Equations and equipment Lifetimes for the relevant Deemed Method under clause 9 of the ESS Rule (and the Regional Network Factor) to come up with an estimate for the annual energy savings attributable to the Deemed Method Implementations.

3.3 Proposed limit to operation of Additional PIAM&V Method Requirements for Deemed Method Implementations

As only projects that have already commenced may have been affected by the correction to the guidance on Counted Energy Savings, we are proposing to limit the application of the PIAM&V Method Requirements (No 2) for Deemed Method Implementations to 2021 vintage ESCs (i.e. ESCs registered for the 2021 calendar year before the legislative deadline of 30 June 2022).

3.4 Interactive Energy Savings Factor

Two conditions in the ESS Rule aim to reduce the potential impact of inaccuracies in the savings calculations: first, limiting Non-Routine Events to less than 20% of the Measurement Period and second, limiting Interactive Energy Savings to not greater than 10% of the total savings.^e

As stated in the *IPMVP Application Guide on Non-Routine Events & Adjustments*:

^e Clause 7A.9(c) of the ESS Rule

Significant discrepancies can arise when engineering estimates of energy use, including Option A [retrofit isolation with key parameter measurement] approaches, are co-mingled with metered energy use. Assumptions used in engineering calculations can sometimes cause significant inaccuracies in estimates.^f

To account for the potential increase of inaccuracy in the calculation of Energy Savings as a result of including Deemed Method Implementations in the measurement boundary we propose another process for determining the Accuracy Factor.^g This process will involve the use of an Interactive Energy Savings Factor, representing the proportion of Normal Year Electricity and Gas Savings attributable to the Implementation under the PIAM&V Method. The Interactive Energy Savings Factor equals the energy consumption predicted using the Baseline Energy Model minus the energy consumption predicted using the Operating Energy Model, plus Interactive Energy Savings attributable to the Deemed Method Implementations (noting that this will be a negative value which will result in these energy savings being subtracted), divided by the difference in predicted Baseline and Operating energy consumption.^h

The effect of this would be to apply a discount on the number of ESCs that can be created based on the percentage of Energy Savings attributable to the PIAM&V project.

4 The consultation process

The draft PIAM&V Method Requirements (No 2) for Deemed Method Implementations are attached to this consultation paper. We are inviting feedback on the draft Method Requirements from stakeholders including:

- ACPs
- M&V Professionals
- PIAM&V auditors, and
- other interested parties.

You should send your submission to ess@ipart.nsw.gov.au with the subject line "Draft PIAM&V Method Requirements (No 2)".

Submissions will close on 8 November 2021.

^f IPMVP APPLICATION GUIDE ON NON-ROUTINE EVENTS & ADJUSTMENTS, INTERNATIONAL PERFORMANCE MEASUREMENT AND VERIFICATION PROTOCOL, October 2020, EVO 10400 – 1:2020, Section 5.10.1, page 69

^g Clause 7A.10(a)(ii) of the ESS Rule

^h Based on the Normal Year Electricity (or Gas) Savings calculated using Equation 7A.2 of the ESS Rule

5 Next steps

We will consider the submissions and the feedback received at the 21 October 2021 M&V workshop in finalising the PIAM&V Method Requirements (No 2) for Deemed Method Implementations, which we expect to publish in December 2021.

6 Questions for consultation

1. For projects for which the ACP had already commenced implementation prior to the update to the PIAM&V Method Guide, what types of projects, and how many, have been affected by the correction to the guidance on Counted Energy Savings? What was the estimated Implementation Date for the PIAM&V projects?
2. For projects which had not yet commenced prior to the update to the PIAM&V Method Guide, what types of projects, and how many, may have been affected by the correction to the guidance on Counted Energy Savings?
3. What activities may be impacted by limiting the use of Interactive Energy Savings to account for Non-Routine Events due to Deemed Method Implementations to 2021 vintage ESCs? Please provide examples if possible.
4. Are there any circumstances under which the use of Interactive Energy Savings to account for Deemed Method Implementations should be allowed for implementations after 2021? If yes, describe the circumstance and reasons.
5. What percentage of your sites with commenced PIAM&V projects have some form of sub-metering? Where there is sub-metering, what percentage of end user equipment is sub-metered?
6. What other options are there for accounting for Deemed Method Implementations under the PIAM&V Method?
7. What other issues would you like to bring to our attention in relation to this proposal?

7 Glossary

Term	Definition
Accuracy Factor	<p>"Accuracy Factor" has the meaning given to that term in clause 7A.10 of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p>
ACP	Accredited Certificate Provider
Deemed Method	Deemed Energy Savings Method in clause 9 of the ESS Rule
Deemed Method Implementations	Implementation of a Recognised Energy Saving Activity for which ESCs have already been created based on Energy Savings calculated using the Deemed Energy Savings Method
End-User Equipment	<p>"End-User Equipment" means electricity or Gas consuming equipment or both, processes, or systems, including the equipment directly consuming electricity or Gas, or both, and other equipment or products that cause, control or influence the consumption of electricity or Gas, or both, and includes (in the context of clause 8.8 of the ESS Rule) a NABERS Building.</p> <p>Clause 10.1 of the ESS Rule</p>
Energy Saver	<p>"Energy Saver" means the person who has the right to create Energy Savings Certificates for particular Energy Savings arising from an Implementation of a Recognised Energy Saving Activity at a Site, as defined in the relevant calculation method of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p>
Energy Savings	<p>"Energy Savings" means the Electricity Savings or Gas Savings or both.</p> <p>Clause 10.1 of the ESS Rule</p>
ESC	Energy Savings Certificate
ESIA	Energy Savings Industry Association

Term	Definition
ESS	Energy Savings Scheme
ESS Rule	<i>Energy Savings Scheme Rule of 2009</i>
EVO	Efficiency Valuation Organization
Implementation	<p>"Implementation" means the delivery of a Recognised Energy Saving Activity at a Site ...</p> <p>Clause 10.1 of the ESS Rule</p>
Independent Variable	<p>"Independent Variable" means a parameter that varies over time, can be measured, and affects the End-User Equipment's energy consumption for the purposes of clause 7A of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p>
Interactive Energy Savings	<p>"Interactive Energy Savings" refers to either the Interactive Electricity Savings or the Interactive Gas Savings for the purposes of Equations 7A.2, 7A.4 or 7A.5 of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p>
IPMVP	International Performance Measurement and Verification Protocol
Lifetime	<p>"Lifetime" means the time period over which Energy Savings will be delivered and for the purposes of Schedules B, C, D, E, and G of the ESS Rule are for reference only, as the relevant time period is already taken into account in the savings factors in those Schedules.</p> <p>Clause 10.1 of the ESS Rule</p>
M&V	Measurement and verification
Measurement Period	<p>"Measurement Period" means the duration of time over which measurement of energy consumption will be taken for the purposes of calculating the Energy Savings under clause 7, 7A or 8 of the ESS Rule, and defined therein.</p>

Term	Definition
	Clause 10.1 of the ESS Rule
Non-Routine Events	<p>"Non-Routine Events" means, for the purposes of clause 7A of the ESS Rule, events which affect energy use, within the chosen Measurement Period, that are not modelled by any Independent Variables or Site Constants. They are required to be removed from the Measurement Period to enable like-for-like comparison of before and after energy savings scenarios. They are typically due to static factors that may include fixed, environmental, operational and maintenance characteristics.</p> <p>Clause 10.1 of the ESS Rule</p>
Normal Year	<p>"Normal Year" is a typical year for the operation of the End-User Equipment at the Site after the Implementation Date for the purposes of clause 7A of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p>
PIAM&V	Project Impact Assessment with Measurement and Verification
PIAM&V Method Requirements	<p>"PIAM&V Method Requirement" means the Project Impact Assessment with Measurement and Verification method requirement and is a requirement Published by the Scheme Administrator under clause 7A.16 of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p> <p>For current PIAM&V Method Requirements refer to Notice 04/2020 - Requirements for PIAM&V - PIAM&V Method Requirements - V1.0</p>
Regional Network Factor	<p><i>Regional Network Factor</i> is the value from Table A24 of Schedule A to the ESS Rule corresponding to the postcode of the Address of the Site or Sites where the Implementation(s) took place.</p>
RESA	Recognised Energy Saving Activity

Term	Definition
Site Constant	<p>"Site Constant" means a parameter that varies between Sites, does not vary over time under normal operating conditions, and affects the End-User Equipment's energy consumption for the purposes of clause 7A of the ESS Rule.</p> <p>Clause 10.1 of the ESS Rule</p>