

Method specific scope items – Project Impact Assessment Measurement & Verification (PIAM&V) (Clause 7A of the ESS Rule)

Requirement	Audit Procedure	Audit Tier
Implementation date	<p>Confirm evidence of the implementation date by a completion/commissioning report that:</p> <ol style="list-style-type: none"> is produced by a party responsible for commissioning of the end-user equipment (EUE) clearly identifies the EUE included in the scope of the implementation clearly identifies the location where the implementation occurred, and shows the implementation date and is signed by an appropriately qualified and responsible person. 	1
Energy Savings Certificates (ESC) Vintage	<ol style="list-style-type: none"> Confirm that the ESC vintage matches the year of the last date of the Measurement Period for the Operating Energy Model (for forward creation of ESCs), or Confirm that the ESC vintage matches the end date of the Measurement Period for the Implementation (for annual creation of ESCs). 	1
Activities delivered through third parties must comply with <i>ESS Notice 01/2013 (V3.0) – Minimum requirements of conduct</i>	<p>Review:</p> <ol style="list-style-type: none"> the contractual relationship between Accredited Certificate Provider (ACP) and installers the ACP's process for the training of installers (see below for additional information) the register of installers, and the documented customer service procedures. 	1
Review evidence in relation to purchase or lease of goods that enable the energy savings to be made	<p>Review evidence that shows:</p> <ol style="list-style-type: none"> the complete date and address identifies the recipient identifies the supplier (including their ABN), and provides a brief description of the equipment or service provided. 	1
Confirm M&V Professional has deemed appropriate the ACP's M&V Approach	<ol style="list-style-type: none"> Confirm that the M&V Professional used by the ACP was approved by IPART at the time of writing the Preliminary and final M&V Professional Reports, and that its approval covers the EUE and energy model types used in the relevant implementation. The audit report should include the name of the M&V Professional, the date of their approval and date of sign-off of the M&V Professional Report. Check that the M&V Professional provided an independent opinion over the validity of the energy models. Check that the M&V Professional has appropriately managed any (perceived or actual) conflict of interest that may have arisen in performing its role. 	1

4. Confirm that an M&V Professional has provided a **Preliminary M&V Professional Report** for each implementation that:
 - a) provides satisfactory written explanatory reasoning to support the M&V Professional's opinion over the measurement procedures in relation to the baseline energy models were deemed appropriate **prior** to the Implementation Date¹, and
 - b) includes project information that correlates with the information provided by the ACP, ie, M&V Plan and other supporting evidence on which the Preliminary M&V Professional Report is based.
5. Confirm that an M&V Professional has provided a **final M&V Professional Report** for each implementation that:
 - a) provides satisfactory written explanatory reasoning to support the M&V Professional's opinion over each of the aspects of the ACP's M&V approach listed below:
 - the baseline energy model
 - the operating energy model (not required for annual creation)
 - that measurements of energy consumption, independent variables, site constants and any other relevant parameters have been taken under normal operating conditions
 - the measurement procedures in relation to the operating energy models
 - the procedure for identifying and assigning values for energy consumption, independent variables and site constants
 - the normal year (not required for annual creation)
 - the effective range
 - the interactive energy savings
 - the accuracy factor, and
 - use of a persistence model.
 - b) includes project information that correlates with the information provided by the ACP, ie, M&V Plan/Report and other supporting evidence on which the final M&V Professional Report is based.

¹ This requirement does not apply to ESCs of an Implementation with an Implementation Date on or before 14 August 2020 (refer clause 11.12 of the ESS Rule).

The ACP must provide the Auditor with information evidencing how they developed their baseline energy model, operating energy model and normal year.

1. Auditors must closely review whether the models have been developed and applied in accordance with clause 7A of the ESS Rule.
2. Auditors must:
 - a) check that an M&V Plan, M&V Report and spreadsheets / tools to develop energy models and calculate energy savings have been developed for each implementation.
 - b) confirm that the details in the M&V Plan, M&V Report and spreadsheets / tools are consistent with both the Preliminary and final M&V Professional Reports.
 - c) check that the baseline energy model is dependent on Independent Variables and Site Constants, and where relevant, is established by measurements taken under normal operating conditions.
 - d) review the measurement periods for the baseline and operating energy models to ensure they comply with clause 7A.5(f1) of the ESS Rule by including at least one complete operating cycle (eg, for weather related independent variables, confirm that the measurement period accounts for the seasonal variation and includes time periods during which the independent variable could lead to an increase in energy consumption).
 - e) if an estimate of the mean is used for the operating energy model, but regression analysis is used for the baseline energy model, confirm that an estimate of the mean is appropriate for the implementation.
 - f) where an estimate of the mean is used, confirm that there is no significant variation in the annual energy consumption profile (eg, confirm that annual energy consumption is not subject to seasonal variation).
 - g) review the measurement boundary for the Implementation and ensure that the ACP has defined and documented all items of EUE which are modified, replaced, installed or removed.
 - h) confirm that evidence has been collected by the ACP to demonstrate that adequate metering has been installed to define the implementation boundary. This must be evidenced by an electrical line diagram or piping and instrumentation diagram (P&ID) showing the location of the meter(s) used in measuring the energy consumption.
3. The auditor must test the validity of source data and any assumptions used to support the calculation of ESCs including inspecting, assessing and reconciling supporting documentation used within the spreadsheets / tools to develop energy models and calculate energy savings (eg, Office of Environment and Heritage (OEH's) PIAM&V Tool) including:
 - a) upgraded equipment energy consumption (eg, data logging records, NMI/meter data)
 - b) temperature data (eg, daily temperature records, wet bulb temperature)
 - c) production data (eg, company operation records, Supervisory Control and Data Acquisition (SCADA) data))
 - d) normal year determination (eg, historic production records), and
 - e) ensure that the normal year determination is consistent with the methodology presented in the ACPs M&V Plan.

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<p>Energy savings must be calculated in accordance with the ESS Rule.</p> <p>Appropriate evidence must be available to support inputs to the energy saving calculations.</p>	<ol style="list-style-type: none"> 1. Check energy savings calculations have been correctly carried out in accordance with clause 7A of the ESS Rule. 2. Check the completeness and accuracy of recording, aggregation and transcription of source data into the spreadsheets / tools used for the calculation of ESCs for each implementation included in the audit population. 3. Confirm the use of a persistence model which has been determined to be acceptable to the Scheme Administrator. 4. Confirm the use of the correct accuracy factor to calculate savings. 5. Confirm the use of the correct conversion factor to calculate ESCs. 6. Confirm the number of ESCs claimed as calculated by the ACP (ie, re-perform calculations). 	<p>1</p>
<p>Site visits</p>	<ol style="list-style-type: none"> 1. Conduct a physical examination of purchased or installed products and equipment, checking evidence of the implementation. 2. Check products or equipment to confirm if the number and type are consistent with data records of installed and removed EUE including: <ol style="list-style-type: none"> a) compare products and equipment described in purchase documents, the M&V Plan or signed Nomination Forms to products and equipment currently installed; b) inspect monitoring equipment configuration to confirm if it is consistent with the M&V Plan and other relevant documents. 3. Check area inside and around project boundary to confirm the description matches the M&V Plan and other relevant documents (eg, the presence or absence of air conditioning). 	<p>3</p>

Specific issues to be checked for versions of the ESS Rule

Rule date	Issues
ESS Rule effective from 30 March 2020	<ul style="list-style-type: none">▼ Clause 11.11: General transitional arrangements apply if the implementation date of a project is on or before 29 March 2020.▼ Changes specific to the PIAM&V method include:<ul style="list-style-type: none">- ACPs must comply with PIAM&V Method Requirements published by the Scheme Administrator (clause 7A.16).- Updates to Equations 7A.1 and 7A.3 so that Counted Energy Savings are not multiplied by the Regional Network Factor twice.▼ Clause 11.12: Specific transitional arrangements apply for clause 7A.5A – the new clause 7A.5A does not apply if the implementation date of a project is on or before 14 August 2020.<ul style="list-style-type: none">- Clause 7A.5A was added to the ESS Rule to specify that measurement procedures must be deemed appropriate by a M&V Professional prior to the Implementation Date.