

Energy Metering Integrity

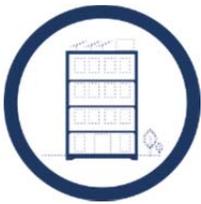
Points Available: 1

Developed in partnership with Carbon Energy Management Technologies.

Aim

To encourage accuracy of metering over the life of the building to inform energy consumption practices and reduce wasted energy.

Rating Tool Eligibility



Green Star
Design & As Built



Green Star
Interiors



Green Star
Performance



Legacy Green Star
Rating Tools

Why is this Innovation Challenge Important?

Within Green Star rating tools, there are provisions and associated requirements for metering to be included in new and existing buildings. While metering can be validated and commissioned at time of installation, there are currently no mechanisms to ensure metering network accuracy is maintained over the life of the building.

Currently, metering accuracy issues are identified in the following ways:

- A significant increase in energy use (adjusted for climate factors such as summer vs. winter);
- Major discrepancies (in excess of 10%) occurring between the total of the private metering and the utility provider's supply meter; and
- An inability to recover energy costs via on-billing to tenants.

Where metering is accurate over time following installation, metering data is trustworthy meaning building tuning can be effective, efficiency improvements can be identified and implemented, problems can be identified almost instantaneously and costs and environmental impacts reduced.

Compliance Requirements

To claim this Innovation Challenge your project team must:

- Demonstrate that the metering network (including sub-meters) has been validated in accordance to a recognised standard or practice, including, but not limited to, NABERS protocol and NMI standards;
- Demonstrate with documentation that all meters on the network have been commissioned to a recognised standard or practice, and that meter functionality is correctly calibrated at time of practical completion;
- Demonstrate that the metering network (including sub-meters) is continually and automatically monitored by a system that is able to produce alerts if any inaccuracies are found. Inaccuracies are defined as in excess of meter tolerances (e.g. 'Class 1' meters shall not have inaccuracies of more than 2% due to metering accuracy class); and
- Demonstrate that where faults have been identified, metering network accuracy has been corrected and validated.

Alternative Compliance Methods

A Credit Interpretation Request (CIR) may be submitted to the Green Building Council of Australia (GBCA) when an applicant wishes to advocate for an alternative yet equivalent method of meeting the Compliance or Documentation Requirements. Any CIRs submitted for this Innovation Challenge will be processed as free-of-charge.

Documentation Requirements

Design Review / Design Submission

Provide the following required documentation:

- **Submission Template** outlining how the project team has addressed the Innovation Challenge. The Submission Template also enables project teams to provide feedback on the Innovation Challenge to inform future developments.

Provide documentation to support the claims made within the Submission Template. This may include:

- **Extract(s) from the contract or specification** requiring that all energy sub-meters be validated in accordance with a recognised standard (e.g. NABERS protocol or NMI);
- **Extract(s) from the contract or specification** requiring the contractor to provide certification that all meters have been commissioned in accordance with a recognised standard and that meter functionality has been correctly calibrated at the time of practical completion;
- **Extract(s) from the contract or specification** requiring that the metering systems are continually and automatically monitored by a system that is able to produce alerts if any inaccuracies are found (inaccuracies being defined as in excess of the meter tolerances); and
- **Extract(s) from the contract or specification** requiring the contractor to correct and re-validate any meters found to be at fault and provide evidence in the form of commissioning logs.

As Built Submission

Provide the following required documentation:

- **Submission Template** outlining how the project team has addressed the Innovation Challenge. The Submission Template also enables project teams to provide feedback on the Innovation Challenge to inform future developments.

Provide documentation to support the claims made within the Submission Template. This may include:

- **Commissioning extracts** demonstrating that all energy sub-meters be validated in accordance with a recognised standard (e.g. NABERS protocol or NMI) and that meter functionality has been correctly calibrated at the time of practical completion.
- **Letter of confirmation from the contractor** demonstrating that the metering systems are continually and automatically monitored by a system that is able to produce alerts if any inaccuracies are found, and that correction and revalidation to any faulty meters are to be carried out.