Metering and monitoring for emissions reduction reporting

Accurate metering supports emissions tracking and enables credible net zero claims to simplify sustainability reporting across your operations.

Who is this for?

Sustainability managers, ESG teams, corporate affairs leads and executive decision-makers responsible for emissions tracking, disclosure and net zero implementation.

Why it matters

As regulatory expectations and investor scrutiny increase, organisations need accurate data on scope 1 and 2 emissions. Whole-of-site billing and default emissions factors may lack the precision required for frameworks like ASRS, NGER, Climate Active, NABERS and Green Star.

Metering offers granular, high-frequency datasets that improve the credibility, transparency and auditability of emissions reporting and associated claims. It enables emissions attribution by site, scope, activity or asset, supporting internal accountability, capital planning and external disclosure.

Metering equips organisations with data to prioritise decarbonisation investments based on carbon impact and enables access to product certification schemes and other market opportunities where detailed emissions reporting is required.

In a net zero economy, credible emissions reporting is foundational. Metering bridges the gap between ambition and action by converting energy usage data into actionable insights.

Key metering benefits

- Allows identification of emission hotspots for informing abatement strategy.
- Improve accuracy and auditability of GHG reporting.
- Enable emissions attribution by site, asset or activity.
- Strengthen internal accountability for net zero progress.
- Support evidence-based capital planning and abatement strategies.

How it works in practice

Most organisations rely on utility bills and standard emissions factors to estimate their footprint. This approach hides variation between sites, systems and usage patterns. Submetering allows real-time, facility-level emissions tracking, broken down by source, function or asset class.

With the right metering systems in place, organisations can:

- track actual emissions from electricity, gas and fuel use.
- attribute emissions to specific areas or systems (like HVAC, lab equipment or fleet charging).
- compare emissions intensity across sites or time periods.
- organise data and tailor outputs to ease accounting requirements under frameworks like GHG Protocol, Climate Active and ASRS.

Sub-metering strengthens both internal governance and external credibility by reducing reliance on estimates and supporting data-driven sustainability decisions.

What to look for in a good system:

- real-time tracking of scope 1 and 2 emissions from electricity, gas and fuel
- compatibility with relevant reporting needs and frameworks
- site, building and process-level disaggregation
- meter-to-emissions factor conversion or API export to reporting platforms
- data continuity and audit trails to support third-party verification.

Real life success stories

1. **Infrastructure company with 14 depots and offices**
   - Installed electricity submeters across all sites.
   - Found that just two sites contributed 42% of total operational emissions.
   - Linked emissions spikes to HVAC scheduling and lighting controls.
   - Prioritised solar and electrification upgrades based on carbon impact, not just energy.
2. **Steel manufacturer in metro NSW**
   - Used supervisory control and data acquisition (SCADA)-connected meters to isolate gas usage by process.
   - Cut gas consumption by 47,000 GJ/year, supporting scope 1 emissions reporting targets.
   - Quantified emissions reductions due to heat recovery to support net zero strategy and company reporting.
3. **Tertiary education provider**
   - Used submetering to separate lab, HVAC and lighting loads.
   - Enabled building-specific emissions tracking and aligned reporting with operational boundaries.
   - Supports NABERS for Universities, where building-level performance needs to be distinguished.
   - Submetered data ensures clear accounting for operational and ownership boundaries and emissions scope designation, aligning with Climate Active's requirement
4. **Logistics operator with EV fleet rollout**
   - Metered EV chargers across six distribution hubs.
   - Enabled disaggregated site-level scope 2 tracking of fleet emissions under Climate Active.
   - Validated the carbon benefits of fleet electrification investments.

Implementation tips

- **Identify gaps:** review where current emissions estimates could be replaced by real metered data.
- **Start with high-impact sources:** pilot submetering on gas boilers, HVAC systems or EV chargers.
- **Support certification:** align metering strategy with requirements for NABERS, Climate Active, Greenstar and product environmental disclosure schemes.
- **Build confidence:** use data to support board-level reporting, KPI tracking, investment proposals and public disclosures.

Related resources

- Climate Active
- Greenhouse Gas Protocol
- National Greenhouse Emissions Reporting Scheme
- Australian Sustainability Reporting Standards (ASRS)
- NABERS Sustainable Finance Criteria
- Unlocking the value: A practical guide for sustainable finance in the Australian real estate sector