

ECM - Northmore Gordon

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ECM

ECM stands for Energy Conservation Measure. It refers to an intervention in equipment or operations intended to reduce energy consumption and achieve measurable savings. In practice, ECMs range from operational changes such as adjusted schedules or control logic, to capital projects such as equipment replacement or system upgrades. Each ECM has a defined boundary, estimated energy effect, assumptions about implementation, and dependencies that must be documented to support investment and performance decisions.

Related guidance

Carbon advisory

Scope 1, 2 and 3 emissions

Certificates

Government schemes

Certificate trading

Measurement and verification

What does ECM stand for and what is its practical meaning?

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How are energy conservation measures identified and documented?

Energy conservation measures are typically identified through energy audits—Type 1, 2, or 3 assessments tailored to the decision needed. Results are documented in an opportunity register that lists each measure's description, boundary, estimated energy effect, assumptions, implementation dependencies, evidence quality, and next decision point. The register keeps energy savings, tariff savings, maintenance benefits and certificate revenue separate, and tracks whether opportunities remain forecasts or have moved to implementation and verification.

What is the relationship between energy conservation measures and business investment decisions?

Energy conservation measures must be evaluated through a formal investment case that compares alternatives on a common basis: the same operating requirements, analysis period, price assumptions and tax treatment. The investment case states the business problem, operational requirements, and compares options by their capital cost, energy savings, tariff effects, maintenance benefits and any

certificate or grant proceeds. This structure allows management to understand which measures merit approval and what assumptions could change the outcome.

How does measurement and verification confirm the performance of energy conservation measures?

Measurement and verification (M&V;) determines the actual effect of an implemented ECM using an agreed boundary, data and analysis. The process establishes what energy use would have been without the intervention, then compares that counterfactual against post-implementation consumption under comparable conditions. This confirms that the ECM achieves its intended outcome and produces credible evidence for internal performance reporting, investment contracts, or certificate schemes. M&V; planning should begin before implementation to preserve baseline evidence.

What documentation should be prepared before implementing an energy conservation measure?

Before implementation, prepare a project brief describing the business problem, site and equipment details, available evidence, the decision needed and target timeline. Document chronologically any prior studies, quotes, commitments or equipment purchases. Establish measurement responsibilities, identify who has authority to approve capital expenditure and operating changes, and agree what must be resolved before investment approval. This coordination prevents evidence from being lost and clarifies which scheme pathways remain available if funding or certificates are being considered.

Can energy conservation measures qualify for environmental certificates or funding support?

Eligibility for certificates or grants depends on the specific measure, location, scheme rules and project timing. Some ECMs qualify for Victorian Energy Upgrades (VEECs), NSW Energy Savings Scheme certificates, or ACCU credits if they meet the particular activity requirements and evidence standards. Before relying on certificate revenue or grant funding in the investment case, establish the applicable scheme, method version, eligibility assumptions and calculation basis. Treat funding as a separate scenario so the ECM's operational merit remains visible even if support is delayed or unavailable.

What happens after an energy conservation measure is implemented?

After implementation, document what was installed, the commissioning date and test records, and any departures from design. Update operating instructions and measurement records to reflect the change. Conduct performance checking to confirm achieved savings against the baseline and forecast. Where results differ from expectations, investigate the causes and apply findings to the next decision. Keep the opportunity register updated so approved and implemented measures remain visible in the organisation's ongoing energy management system.

How do energy conservation measures fit into a staged approach to energy improvement?

Energy conservation measures are prioritised and sequenced through a staged energy optimisation approach. We describe six stages: assess (identify opportunities and missing evidence through audits and metering); build the case (evaluate technical and commercial viability); capture value (identify funding or certificate pathways); deliver (implement and verify); procure (source equipment and environmental attributes); and perform (sustain outcomes and plan next steps). This structure ensures measures are evaluated in sequence and that measurement and funding decisions are made before installation.

How should overlapping energy conservation measures be evaluated?

When two ECMs affect the same load—such as insulation reducing the heating requirement before a boiler replacement—they must be evaluated together, not as separate savings added together. The opportunity register should give interactions their own treatment, showing the combined operating scenario and revised economics. Similarly, distinguish replacement expenditure that would occur anyway from additional cost for the proposed improvement. This prevents overstating benefits and

ensures the investment case reflects realistic combined operation.

What support does Northmore Gordon provide for energy conservation measure assessment and delivery?

We offer energy audits to identify ECMs, investment case development to compare alternatives, feasibility studies to assess viability, measurement and verification to confirm performance, and energy management system support to sustain results across multiple sites. We also assess eligibility for environmental certificates and funding pathways to improve the financial case. Initial enquiries should describe the business problem, site, available energy data and the decision required so appropriate assessment scope can be proposed.