

Title	Undertake a worksite energy assessment for resource efficiency		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to: plan a worksite energy assessment; assess worksite energy use for an organisation; and report on a worksite energy assessment.
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Classification	Zero Waste > Resource Efficiency
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Available grade	Achieved
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Guidance Information

- Recommended texts
Target Sustainability business guides, calculators and worksheets, available at <https://www.ccc.govt.nz/environment/sustainability/target-sustainability/>;
General facilities management (Auckland: Sustainable Business Council, 2003) available at [http://www.sbc.org.nz/search?queries_search_query=Business+Guide+to+Energy+Efficiency](http://www.sbc.org.nz/search?queries_search_query=Business+Guide+to+Energy+Efficiency;);
Auditor Resources (Wellington: Energy Management Association of New Zealand) available at <http://www.emanz.org.nz/auditor-resources>;
AS/NZS 3598:2000 *Energy Audits* available from <http://www.standards.co.nz/>.
- Recommended websites
Energy Efficiency and Conservation Authority – <https://www.eecabusiness.govt.nz/>;
Energy Management Association – <http://www.emanz.org.nz>;
Sustainable Business Council – <http://www.sbc.org.nz/>.
- Candidates for this unit standard are expected to have general understanding of the supply, uses, and measurement of electricity, lighting, and electrical appliances.
- Range
Excludes tariff analysis and Levels 1 to 3 energy audits to the standard of AS/NZS 3598:2000 *Energy Audits*.
- Definitions
Assessment refers to an evaluation of performance to determine current practice.
An *energy assessment* measures and makes recommendations for the efficient use of energy types such as electricity, gas, liquid fuels, solid fuels, and vehicle fuels. It may include single or multiple sites, and machinery and vehicles that are not permanently at a site.
Organisation refers to an entire business entity in the private or public sector or a business unit within the organisation.

Outcomes and performance criteria

Outcome 1

Plan a worksite energy assessment.

Performance criteria

- 1.1 Project specifications are confirmed with the organisation to clarify the type and extent of the assessment.

Range evidence is dependent on workplace context. Larger organisations may focus on major energy sources only, whereas smaller businesses may require an overall assessment of all energy sources.

- 1.2 Information is selected and reviewed from data sources to establish trends in energy use.

Range data sources may include but are not limited to – energy invoices, organisation sub meter data, database searches, economic and statistical trends and forecasts, climate data.

- 1.3 Record format is selected and/or developed to ensure accurate and detailed data is produced to meet organisation's specifications and to calculate energy consumption for at least a 12-month period.

- 1.4 Planning establishes key factors to be included in the assessment.

Range may include but is not limited to – time of use, lighting types, heating, equipment, machinery, vehicles, power factor correction, basic details on energy purchasing options including where appropriate investigation of available tariffs options and metering options, industry benchmarking.

- 1.5 Planning establishes key energy performance indicators in measurements relevant to the type of energy used.

Range measurements may include – kilowatts per year, cubic metres per day, kilojoules per vehicle per kilometre.

Outcome 2

Assess worksite energy use for an organisation.

Performance criteria

- 2.1 A site visit collects data on all end uses of energy in a form that will enable comparisons with established baselines.

- 2.2 A site visit records any wasteful use of energy observed during the visit.

- 2.3 Analysis of energy use establishes energy performance indicators to measure changes in use.

Outcome 3

Report on a worksite energy assessment.

Performance criteria

- 3.1 The report meets the organisation's requirements for data format, type, and detail.
- 3.2 The report recommends options for efficient use of energy that are consistent with the organisation's policies.
- Range options may include but are not limited to – changing hours of use, timer settings, temperature settings, sensors, switch offs, types of light, types of heating, types of machinery, equipment capacity, equipment replacement, equipment removal, insulation, maintenance schedules, recycling, boiler tuning, matching capacity and demand, using night rates, using renewable energy sources, change of fuel, identifying opportunities for further investigation including where appropriate an energy audit done in accordance with AS/NZS 3598:2000 by an accredited energy auditor; evidence of at least three recommendations is required.
- 3.3 The report recommends an action plan that includes a table of opportunities and indicates costs and savings of the recommended actions.
- Range recommendations may include but are not limited to energy – reporting, policies, management, systems; costs and savings accurate to $\pm 25\%$.

Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 June 2011	31 December 2015
Revision	2	21 November 2013	N/A
Rollover and Revision	3	28 June 2018	N/A

Consent and Moderation Requirements (CMR) reference	0014
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.