

Queensland Farmers' Federation

Energy Audit Factsheet

Why get an Energy Audit?

An Energy Audit is an assessment of a site's energy consumption and provides recommendations on how energy use can be reduced or improved. An Audit can advise how much energy you use for each unit you produce or for the water you pump and tell you some cost-effective strategies to reduce your energy use and costs.

Energy Efficiency and Productivity

Energy productivity is the gross value of products delivered for every unit of energy consumed. It is derived from the **total value of output per kWh of energy**. Improving energy productivity means to reduce the amount of energy required to produce each unit of output.

What Type of Energy Audit?

The Energy audit should meet Standard AS-3598: 2014. The standard sets out what should be in an Energy Audit and describes 3 Types of Audit so that you can choose the level of detail that suits your business.

Type 1	Basic energy audit: Or a scoping study, this audit will be based on a site visit and review of your power bills, and gives you some broad estimates of energy savings and opportunities for the site.
Type 2	Detailed energy audit: This audit will provide a more detailed assessment of your energy use and more specific recommendations to a medium level of accuracy.
Type 3	Precision subsystem audit: This is a more specific detailed audit designed to give accurate recommendations on a system like a pump and irrigation system, cold room or processing equipment.

A good description of these audit types including a quick reference guide has been developed by the Energy Efficiency Council [HERE](#).

What's in an Energy Audit?

The Level of detail will vary depending on the Type of Audit but in general, Energy audits will follow a systematic process and include the following and you and the auditor should agree on the scope of the audit:

- A general discussion and site visit to gain an understanding of the site and explain the energy audit process.
- Review onsite energy use from each energy meter using a combination of at least 24 months of bills, may include energy data logging and real time monitoring.
- Energy use break down showing the individual areas of energy use and consumption patterns throughout the year.
- Develop energy use performance indicators to enable you to evaluate energy use and understand your energy productivity.
- Evaluate the efficiency of systems and installed equipment such as cold rooms, pumps, lighting and heating.
- Calculate potential energy efficiency measures. The type of audit will determine the level of accuracy of these measures.
- Assess available energy tariffs to determine cost savings.
- Summary table developed listing recommendation cost, cost, energy and Carbon savings along with the payback for each opportunity onsite.
- Presentation the audit is presented and discussed to ensure each party understands the findings.

Following implementation of audit recommendations, the farm may wish to conduct Measurement and Verification (M&V) to determine whether the implemented measures perform as expected.

Choosing the Right Auditor

The Energy audit standard describes the knowledge and skills that an auditor should have. An auditor should have a working knowledge of The Standard, understand all the major energy uses of your site, and be able to evaluate the costs and benefits and present them to you clearly.

The [Energy Efficiency Council](#) has a listing of suitably qualified energy professionals.