

Energy Efficiency Training

Many savings in energy cost can be obtained through low cost to implement energy conservation measures. Studies have shown that changing staff behaviour to avoid energy wastage and look for efficiency opportunities can save to upto 20% of energy use. Creation of an Energy Manager role within your business can lead to sustained savings.

Anser can provide tailored training and support to:

- Understand the economics and billing of different sources of energy used within the business
- Identify common causes of energy waste
- Measure energy use and losses
- Establish a maintenance and monitoring program
- Set up a “cost centre” to track energy cost
- Train staff in the Energy Manager role

Anser use an Energy Manager certified by the Association of Energy Engineers to develop training and conduct audits.

Measurement & Verification

Measurement and Verification (M&V) is an often overlooked component of energy conservation to measure investment. The International Performance Measurement and Verification Protocol (IPMVP) sets down standards for assessing the effectiveness of measures and recognises four M&V methods. Key to the approach is establishment of an energy baseline which is used to determine future savings. Without an M&V plan do you really have confidence that you are obtaining the savings promised?

Anser use a Measurement and Verification Professional certified by the Efficiency Valuation Organisation to prepare M&V plans.

Electricity & Gas Tariff Review

Electricity and gas tariffs can be complex to calculate and difficult to monitor. Many people do not understand how the bill is determined and what are the opportunities to reduce cost. Anser will:

- Check the bill is accurate against metered use
- Check the tariff is presently the best available for your current and foreseeable operation
- Check if the site is contestable and obtain pricing from other electricity or gas retailers
- Identify ways to reduce cost by shifting time of use, peak lopping & power factor correction
- Review the metering installation and opportunities to use sub meters, interval meters or data loggers.

Solar Generation & Storage

Solar PV installation can be a cost effective investment with medium term payback periods and should be considered after energy efficiency options have been exhausted. Battery storage is rapidly becoming cost effective. Anser can analyse your energy costs and pattern of use and design optimally sized non-exporting systems to reduce daytime or peak grid consumption. Anser will:

- Optimise the system sizing and configuration
- Estimate the system cost and payback period
- Develop technical specification for tender
- Installation, or management by sub contractor
- End to end project management



27 Outram Street
West Perth WA 6005
Tel: +61 8 9321 2788
Fax: +61 8 9321 6399
info@anser.com.au
www.ansertechnical.com.au



Energy Management & Procurement



Anser are qualified Engineers and Business Consultants with experience in a broad range of industries. Our aim is to empower your organisation to achieve its goals.

Cost Effective

Energy is a major cost for most businesses. As with other input costs regular monitoring and review is important. A small investment or change in behaviour can yield substantial savings. Anser only recommend NPV positive investments.

Competitive Edge

What are your competitors and peers energy cost? Is your energy intensity putting you at a disadvantage? Find out by benchmarking your operation against other industry standards.



Energy Services

Anser will provide the following services to help your organisation reduce energy use, costs and greenhouse gas emissions:

- Energy Audits - Levels 1 to 3 (per AS 3598:2014)
- Employee training on energy efficiency
- Independent Measurement and Verification
- Independent Electricity and Gas Tariff review
- Solar quotation, design and installation
- Lighting quotation, design and installation
- Management of electrical projects

Level 1 Basic Energy Audit

- A “walk through” inspection of the facility identifying areas of energy use and possible inefficiency or waste.
- Analysis of energy utility tariffs to identify unseasonal variations and to ensure the best tariff is selected.
- The overall energy consumption of the site is evaluated and compared against benchmarks to determine whether energy use is reasonable or excessive*.
- Indicative savings of short payback measures (< 2 years) will be calculated and favourable options recommended.
- A brief report will be provided summarising the findings and recommending whether or not a detailed (Level 2) Energy Audit would be cost effective.

Level 2 Detailed Energy Audit

- A standard energy audit for general applications.
- Identifies the sources of energy to a site, the amount of energy supplied, and how this energy is consumed.
- Basic inventory of equipment (lights, pumps, motors)
- Basic review of operating schedules, production levels and patterns of use*.
- May include spot measurement and metering (e.g. light levels, airflow, temperature)
- Develops energy use profile based upon metering and/or operational data.
- Quantify energy savings opportunities through economic analysis of estimated costs and savings.
- A detailed report will be provided with options, cost estimates and economic assessment of medium term payback options (< 4 years). Assess the potential for further savings through a Level 3 Audit.

Level 3 Precision Subsystem Audit

- A detailed analysis of energy usage including use of additional metering and monitoring equipment.
- Establishment of a energy baseline which may be used to forecast energy savings before and after measures*.
- May cover the whole site or concentrate on a single industrial process or facility.
- Detailed inventory and specification of selected equipment.
- Detailed record of operating schedules, production levels and patterns of use are required.
- May install local metering, measurement of site parameters and/or data logging.
- A comprehensive report suitable for investment decision on large capital or longer payback (>4 years) conservation measures, including:
 - Energy and demand profile graphs,
 - Detailed costs and savings of proposed measures,
 - Economic analysis with NPV, IRR and/or payback,
 - A draft Measurement and Verification Plan for the proposed measures.
- A presentation to senior management or the board.

* Note: The client will need to supply information such as floor area, operating schedules and energy bills.

Lighting & Electrical

Anser will provide lighting and electrical design, maintenance and monitoring solutions to deliver project outcomes.