



//GUIDE NOTE 3

TECHNICAL REVIEW REQUIREMENTS FOR ENERGY SAVINGS ACTION PLANS

Background

The NSW water and energy savings initiatives were introduced by the NSW Government in May 2005. They are administered by the Department of Energy, Utilities and Sustainability (DEUS) and include a requirement for certain businesses, government agencies and local councils to prepare Water and Energy Savings Action Plans.

Savings action plans must be prepared in accordance with the *Guidelines for Energy Savings Action Plans*, available from DEUS. This Guide Note is a supplement to the *Guidelines* to provide extra information on the Technical Review requirements and must be read in conjunction with them.

It provides an overview of the levels of energy audits identified in the Australian Standard and explains why a more detailed Level 3 audit is generally required to ensure that the savings action plan process identifies *all* energy use at a site and enables savings opportunities to be identified, quantified and analysed to a sufficient level for informed decision-making.

For more information, clarification or further advice on the technical requirements, please call your organisation's DEUS energy savings specialist on (02) 8281 7417.

The Technical Review

The intent of the Technical Review for the Energy Savings Action Plan is to provide a detailed breakdown of energy use at a site, identify all possible energy savings measures and evaluate those with a practical application.

The review should be a comprehensive investigation and analysis of a site's energy use, conducted to a level that:

- provides a detailed analysis of where, when and how energy is used
- identifies possible energy saving opportunities
- evaluates those opportunities determined to be practical and potentially cost effective in sufficient detail and accuracy to enable a business case for implementation to be made

The *Guidelines for Energy Savings Action Plans* recommend that the review should be of sufficient detail to enable implementation decisions to be made *without* the need for further investigation or external advice. A Level 3 energy audit under Australian Standard AS/NZS 3598:2000 provides this level of detail.



Scope of Level 2 and Level 3 energy audits

Level 2 audit

The Australian Standard describes a Level 2 energy audit as a preliminary assessment of energy use at a site. It includes:

- the tasks specified for a Level 1 audit. ie walk-through assessment
- a broad calculation of energy of the main energy end uses eg. lighting, equipment. In the absence of separate metering, figures are estimated from plant ratings and operating hours, using appropriate assumptions
- identification of measures to achieve 'predicted' savings
- capital costs and savings estimates to an accuracy of plus or minus 20%

Level 3 audit

A Level 3 audit is the most detailed energy audit, described in the Australian Standard as a 'firm' assessment of energy use at a site. It includes the tasks specified for Level 1 and Level 2 audits, as well as:

- a detailed analysis of energy usage, involving metering, monitoring, analysis and tracking to determine where, when and how energy is used
- capital costs and savings estimates to an accuracy of plus 10% for costs, and minus 10% for benefits
- identification of measures to achieve 'actual' savings and
- recommendations sufficiently detailed and accurate to enable quotations to be invited

A Level 3 audit provides a more detailed breakdown of the energy use across the site and by specific equipment. It moves the assessment from an overview to much deeper levels of detail, enabling the organisation to make informed decisions about investment in energy savings measures, based on a firm business case.

Skills required for detailed technical review

The technical review should be undertaken by an experienced person who:

- understands the intent and aims of the *Guidelines for Energy Savings Action Plans*
- is capable of applying the *Guidelines* to the organisation's specific circumstances
- can conduct the Australian Standard AS/NZS 3598 Level 3 energy audit

More information

For more information on the technical requirements of energy audits and answers to specific questions for your organisation, please call DEUS on (02) 8281 7417 and ask to speak to your organisation's energy savings specialist.



Copies of the Australian Standards can be purchased from Standards Australia at the following website <http://www.standards.com.au/catalogue/script/search.asp>

Related publications available on the DEUS website

Guidelines for Energy Savings Action Plans

Guide Note 1 – Savings Orders – legal requirement to prepare Water and Energy Savings Action Plans

Guide Note 2 – Engaging external assistance to prepare Water and Energy Savings Action Plans

Guide Note 8 – Energy Efficiency Opportunities program and Energy Savings Action Plans

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