Australian/New Zealand Standard™

Energy audits

Standards Australia

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EN/1, Energy Auditing. It was approved on behalf of the Council of Standards Australia on 21 July 2000 and on behalf of the Council of Standards New Zealand on 27 October 2000. It was published on 6 November 2000.

The following interests are represented on Committee EN/1:

Australian Gas Association
Australian Greenhouse Office
Australian Institute of Energy
Australian Institute of Refrigeration Air Conditioning and Heating
CSIRO Energy Management Unit
Department of Industry Science and Resources
Electricity Supply Association of Australia
Energy Efficiency and Conservation Authority of New Zealand
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EN/1, Energy Auditing, to supersede AS 3598, *Energy management programs—Guidelines for the preparation of an energy audit brief.*

The objective of this revision is to assist energy users to decide what level of audit is appropriate for their needs, providing a guide when commissioning energy audits and a uniform basis for preparing and comparing energy audit proposals. It also aims to establish best practice for energy auditors, support the establishment of energy management programs and contribute to the quality of existing energy and other management systems.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

FOREWORD

Energy efficiency has a direct impact on business operating costs and affects the bottom line of every business in Australia and New Zealand. Production and use of energy also has a significant impact on the environment.

Reform of the Australian and New Zealand energy market is also creating significant opportunity for government and business to realise energy cost savings through price competition between suppliers.

It is essential that government and business manage energy effectively in order to —

(a) conserve fossil fuel resources;

(b) reduce emission of greenhouse gases, which contribute to global warming; and

(c) achieve operational and cost efficiencies which impact on business profitability.

An energy audit is best undertaken as part of an energy management program.

Energy audits and surveys are investigations of energy use in a defined area or site. They enable an identification of energy use and costs, from which energy cost and consumption control measures can be implemented and reviewed.

Organizations will gain direct financial benefit from effective energy management. They may also achieve recognition by the community, including potential customers, as an environmentally responsible corporate citizen.

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1 SCOPE

This Standard sets out minimum requirements for commissioning and conducting energy audits which identify opportunities for cost effective investments to improve efficiency and effectiveness in the use of energy.

This Standard covers three levels of audit, as follows:

(a) Level 1.

(b) Level 2.

(c) Level 3.

See Figure 1 and Section 6.

2 OBJECTIVE

The objective of this Standard is to —

(a) assist energy users to decide what level of audit is appropriate for their needs;

(b) provide a guide for energy users when commissioning energy audits;

(c) provide a uniform basis for preparing and comparing energy audit proposals;

(d) establish best practice for energy auditors to provide effective and ethical service;

(e) support the establishment of an energy management program by specifying pre- and post-audit activities for the energy user organization, and suitable reporting;

(f) requirements for the audit; and

(g) contribute to the quality of existing energy and other management systems, e.g. financial, environmental, operational or occupational health and safety management.

3 APPLICATION

This Standard is intended for use primarily by energy users when defining the scope of an audit and may be applied, throughout Australia and New Zealand, to the public, commercial and industrial sectors, and to a range of premises from complex industrial sites or commercial buildings to a single small building.

The Standard will be of assistance also to energy auditors, and may serve as a useful reference document for anyone interested in the field of energy management best practice.

4 DEFINITIONS

For the purpose of this Standard the definitions below apply.

4.1 Energy

The fuel, electricity and heat consumed within the site, building or industrial process. Energy sources can be non renewable and renewable, e.g. wind, solar, biomass.