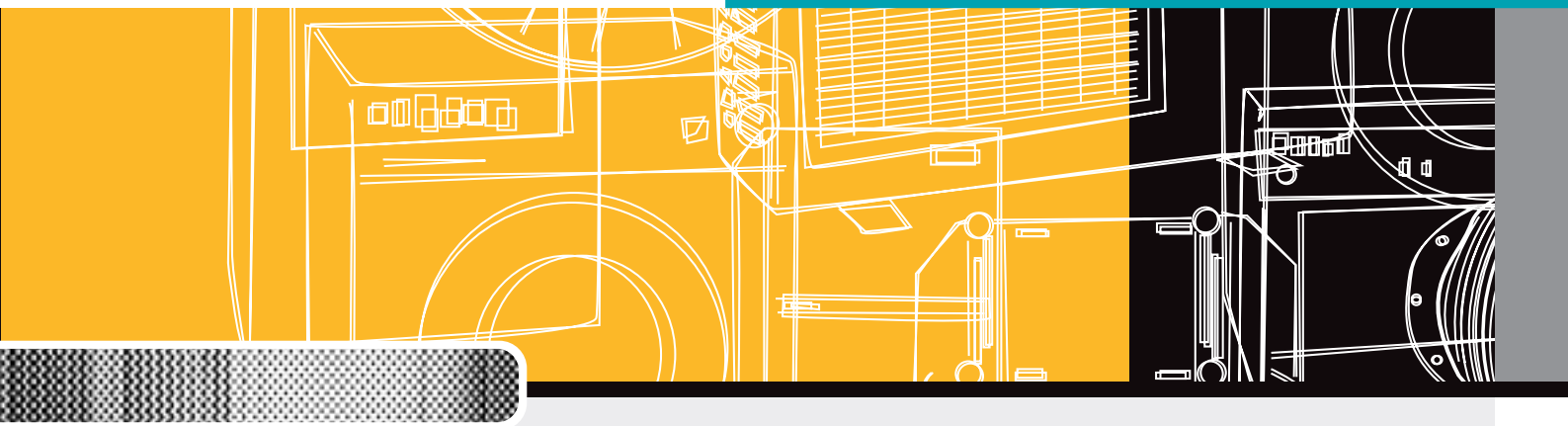
Report No: 2002/02

NATIONAL APPLIANCE AND EQUIPMENT ENERGY EFFICIENCY PROGRAM

ACHIEVEMENTS 2001



AN INITIATIVE OF THE MINISTERIAL COUNCIL
OF ENERGY FORMING PART OF THE
NATIONAL GREENHOUSE STRATEGY

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February 2002

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NAEEEP

WHAT IS IT?

The National Appliance and Equipment Energy Efficiency Program (NAEEEP) is a federal, state and territory government program that uses regulation and complementary voluntary action to reduce the greenhouse emissions generated by domestic appliances, commercial products and industrial equipment. NAEEEP is similar to programs operated in most OECD countries, and the success of the Australian program is recognised internationally.

NAEEEP can be described as the collection of coordinated programs that deliver economic or environmental benefits to the community through improved energy efficiency and reduced greenhouse emissions of appliances and equipment. Improved energy efficiency, where cost-effective, provides economic and environmental benefits to the community by reducing energy costs and greenhouse gas emissions.

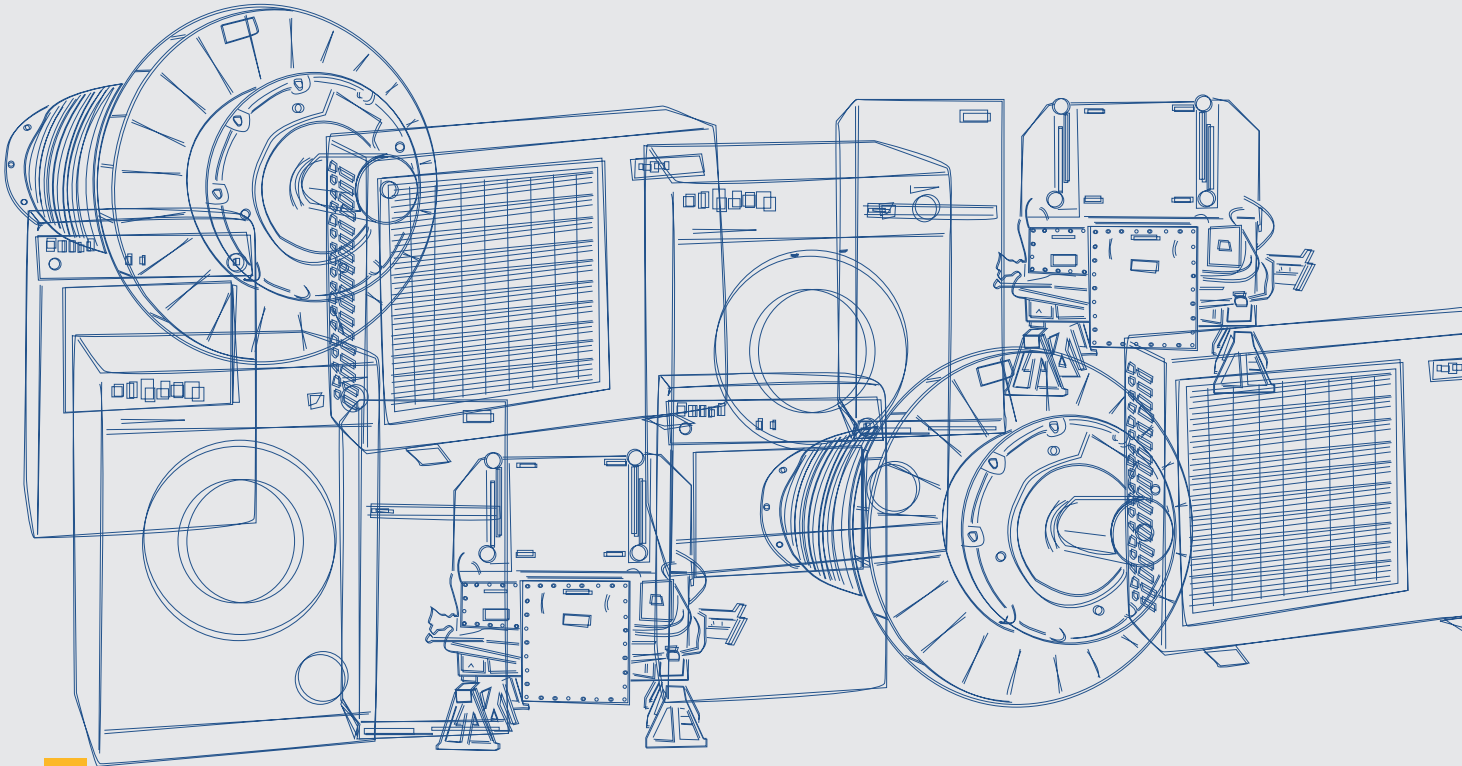
There is scope to further improve energy efficiency and abate greenhouse emissions in the residential, industrial and commercial sectors.

Impediments to the full exploitation of these opportunities persist, principally in the form of market information failure resulting in abatement options and opportunities being ignored.

Government action to stimulate improvements in energy efficiency remains warranted where market forces are either unlikely to deliver optimal outcomes or deliver them more slowly.

Individual jurisdictions have a range of measures in place to meet their own needs and priorities. Collective action under NAEEEP is warranted where the issue needs to be addressed on a nation-wide basis thereby reducing duplication, sharing resources and maximising consistency. Against this background, NAEEEP concentrates on initiatives that:

- achieve optimal effectiveness by being national in character;
- require consistent and coordinated effort to maximise effective delivery throughout Australia in these sectors;
- avoid duplication amongst jurisdictions, saving costs to both industry and government;
- governments agree to pursue initiatives through the National Greenhouse Strategy and are prepared to make the appropriate resources available.



WHO IS INVOLVED?

NAEEEP is administered by a committee comprising representatives from two types of government agencies:

- State and Territory regulatory agencies responsible for administering mandatory energy efficiency labelling and performance standards called into legislation within their respective jurisdictions; and
- Commonwealth, State and New Zealand agencies with a mandate to encourage sustainable energy use and reduce greenhouse emissions.

This committee is identified throughout this report as NAEEEC. Members comprise officers responsible for implementing energy efficiency and greenhouse gas reduction measures in all these jurisdictions. NAEEEC membership expanded in 2001 with current members nominated by:

Australian Greenhouse Office - Commonwealth
Ministry of Energy and Utilities – NSW
Sustainable Energy Development Authority – NSW
Office of Chief Electrical Inspector – VIC
Sustainable Energy Authority – VIC
Department of Industrial Relations – QLD
Environmental Protection Agency – QLD
Office of Energy – WA
Sustainable Energy Development Office – WA
Office of the Technical Regulator – SA
Tasmanian Office of Energy – TAS
Department of Treasury - ACT
Department of Industries and Business - NT
Energy Efficiency and Conservation Authority – NZ

NAEEEC reports to another committee of government officials, the Energy Management Task Force (EMTF). EMTF is responsible for developing policies and funding these measures using monies collected from all Australian jurisdictions in agreed proportion. Both NAEEEC and EMTF advise the Ministerial Council on Energy (MCE), which comprises the various Ministers responsible for energy issues in all Australian jurisdictions.

WHAT DOES IT DO?

The NAEEEC charter identifies its principal activities. The NAEEEC charter states that it will:

- address the relevant measures contained in the National Greenhouse Strategy;
- provide assistance to all States and Territories, as required, in the development and implementation of technical, legal, regulatory and administrative aspects of national appliance and equipment energy efficiency initiatives;
- coordinate the national development and implementation of energy efficiency programs of a non-regulatory nature and enhance existing regulatory programs. (These may include voluntary labelling initiatives, market transformation projects, and similar voluntary actions);
- coordinate national marketing and communication projects to support new and enhance existing energy efficiency programs;
- review existing appliance energy consumption and associated standards and test procedures; (As necessary, initiate reviews of and modifications to existing standards and development of new standards)
- monitor program performance and achievements;
- provide a forum for exchange of information on enforcement/compliance requirements and community information and marketing initiatives;
- administer an effective, coordinated testing regime to verify claims; and
- coordinate broad consultative processes with industry and other interested parties in the development and implementation of energy labelling and associated programs.

The major focus of NAEEEC's work remains the development of nationally consistent codes, rules and regulation of products. The two principle regulatory tools are mandatory minimum energy performance standards (MEPS) that products must achieve and mandatory comparative energy efficiency labelling (appliance labelling). Product efficiency legislation is a state and territory responsibility.

PROGRAM PARTNERS

This program is only possible with the support of the community and the professional expertise and commitment of major stakeholders. As the history of the program shows, a consensus approach involving major stakeholders achieves timely greenhouse abatement. A number of organisations must be identified as partners in the national energy efficiency program.

INDUSTRY ASSOCIATIONS – CONSIDERING PROGRAM PROPOSALS

Members of industry associations contribute their time and expertise to consider program proposals and to participate in Australian Standards committees (and sometimes participate on international committees). The outcomes of the regulatory programs are enhanced through the vigorous participation of industry experts and decision-makers. NAEEEC is working with all stakeholder associations. In this report, NAEEEC highlights several examples of industry cooperation/support in the appliance and air conditioning fields. Future reports will canvass the work of other associations.

In an almost 10 year partnership, the Australian Electrical and Electronic Manufacturers' Association (AEEMA) and the Consumer Electronics Suppliers Association have worked with government to develop appliance labelling and more recently the MEPS program for household appliances.

NAEEEC acknowledges the contribution of industry representatives like the chairman of the Domestic Appliance Division of AEEMA who was recently honoured by his peers. Mr Richard Brown has represented the interests of the industry in environmental matters for many years and has played a major role in such areas as electrical safety, energy efficiency, waste management and product stewardship. Most notable have been his contributions on behalf of Electrolux and AEEMA towards Australia's system of appliance energy labelling.

As the program expands beyond consumer products so too has the involvement of key industry bodies. The involvement of bodies representing the commercial and industrial equipment sectors is crucial to the expansion of the program.

In 2001, the Australian Institute of Refrigeration, Air Conditioning and Heating agreed to work with NAEEEC to assist that industry. In 2002, a complementary package of voluntary measures will assist the air conditioning and commercial refrigeration industry respond to the proposed regulation of its products.

STANDARDS AUSTRALIA – SETTING LEVELS AND TEST METHODS

NAEEEC has an arrangement with Standards Australia to allow relevant standards to be used as the vehicle to establish regulatory requirements for energy labelling and MEPS. This arrangement allows all jurisdictions to develop nationally consistent laws by calling the content of these standards into regulation. Standards are used as the means of specifying the necessary technical information on which the legislation is based.

Representatives of NAEEEC participate in appropriate Standards committees to:

- Ensure that the outcomes are fair to all Australian manufacturers and importers; and
- Balance the interests of industry with those of consumers and the broader community within the context of governmental environmental objectives.

Standards Australia secretariat staff within the Electro-technology and Building & Construction Divisions provide invaluable assistance to the program.

NATA – HELPING TO MEASURE COMPLIANCE

The National Association of Testing Authorities, Australia (NATA) provides accreditation services for laboratories engaged in the testing of appliances for energy labelling purposes. NAEEEC has a policy of using NATA accredited independent laboratories (or equivalent) in its program of testing products to verify energy labelling or MEPS compliance. NATA works with NAEEEC to conduct laboratory proficiency testing, ensuring a high level of reproducibility exists between NATA accredited laboratories.

This partnership aims to improve community confidence in the accuracy of the energy labelling program and MEPS program.

CONSUMER PROTECTION AGENCIES – HELPING TO ENFORCE THE RULES

Last year, the Australian Competition and Consumer Commission (ACCC) agreed to consider taking action under the Trade Practices Act 1974 in response to suppliers misleading consumers with mislabelled or non-MEPS compliant appliances. NAEEEC also works with state based consumer affairs authorities on a similar basis.

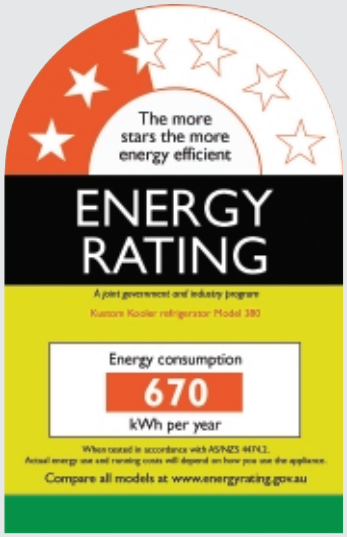
These relationships enhance existing State and Territory based sanctions against suppliers of mislabelled products with the very real deterrents offered by the national and state consumer protection regulators.

CORE FUNCTIONS OF NAEEEP

WHY HAVE A NAEEEP?

Energy consumed by equipment and appliances is a major source of greenhouse emissions attributable to the industrial, commercial and residential sectors. Codes and standards programs are amongst the most cost effective and widely used measures used to combat these greenhouse emissions throughout the world. In 2001, 26 of the 29 OECD countries have either a performance standard or labelling code program.

Last year, an assessment of the effectiveness of appliance labelling from 1986 - 1999 indicated NAEEEP had reduced greenhouse gas emissions by approximately 5 million tonnes carbon dioxide equivalent (Mt CO2-e) from "Business-As-Usual" (BAU) projections.



In 2000, a study projected that the mandatory elements of the 1999-2001 work plan over the period 2000-2015 might reduce greenhouse gas emissions by a cumulative total of over 80 Mt CO2-e with the average abatement during the Kyoto Protocol Commitment period of 2008 to 2012 as much as 7 Mt CO2-e per annum reduction below the business-as-usual projection if all products were regulated as estimated.

Without the mandatory program, voluntary market based initiatives were not expected to deliver abatement on anywhere near this scale.

IS IT VALUE FOR MONEY?

The cost of this program can be reported as the direct costs to the public sector of NAEEEP and the direct costs to the community of regulating products offset by the economic and environmental benefits of products using electricity efficiently.

The public sector direct costs are in the order of $3 million pa. This figure includes the staff costs absorbed by all members of NAEEEC and direct funding contributions of around $1.1million for the 2001 calendar year. The direct costs to industry in participating in NAEEEP activities are very hard to estimate but would be at least equivalent to those absorbed by the public sector. These direct costs, however, are really only a small part of the overall picture of the costs and benefits of the program.

In 2002, NAEEEC will publish a major review of the total costs and benefits of the program achieved through the regulatory activities over the three years finishing in 2001. In economic terms, the program still appears on track to realise the vast majority of the net present value estimate of $1.2 billion benefits by 2015 projected in 2000. The original projection, using a 10% discount rate, identified total benefits in the order of $2.2 billion which will be offset by costs in the order of $1 billion – these costs are primarily in the form of increased product purchase costs rather than program costs. This analysis shows the community saves $30 for each tonne of greenhouse gas abated by the program.

NEW MINISTERIAL ARRANGEMENTS

After a review of Ministerial Council arrangements in 2001, the Australian and New Zealand Minerals and Energy Council was disbanded and replaced with the Ministerial Council for Energy (MCE).

In December 2001, MCE considered accepting responsibility for NAEEEP. The MCE is the new energy policy council but, at the time of preparing this report, the process of transferring responsibility had not been finalised. The implications for the program in changing Ministerial Councils also had not been resolved. The impacts upon the membership of NAEEEC or content of NAEEEP arising out of the change will be reported in the next report.

SIMILAR NEW ZEALAND PROGRAM

The passage of the Trans Tasman Mutual Recognition Agreement (TTMRA) in 1998 impacted on this program. From that date, products able to be sold in one participating jurisdiction were acceptable in all other jurisdictions. In circumstances where New Zealand had only a voluntary labelling and no MEPS program, the TTMRA raised the prospect of products manufactured in or imported through New Zealand avoiding the mandatory program when sold in Australia.

In April 2001, the New Zealand agencies, the Energy Efficiency and Conservation Authority and the Ministry for the Environment released a discussion paper proposing a mandatory program similar to NAEEEP, legislated under the Energy Efficiency and Conservation Act 2000. The Minister of Energy, the Hon Peter Hodgson, has since announced that the regulatory framework will be designed to mesh with the Australian program and the regulations will commence from April 2002. The New Zealand proposal includes mandatory labelling and MEPS on a range of equipment types that are regulated or proposed for regulation in Australia.

The creation of a regulatory program in New Zealand will give rise to new TTMRA issues . Under that arrangement, products that may be lawfully sold in one jurisdiction may be sold in any other jurisdiction, irrespective of meeting local regulatory requirements. The effect of the mutual recognition principle in the TTMRA is to create "lowest common" standards for all jurisdictions.

While New Zealand moving to a mandatory scheme represents a major step toward common regulatory schemes, TTMRA issues continue because the two regulatory schemes are not yet fully harmonised. The TTMRA encourages Australia and New Zealand officials to harmonise the respective energy efficiency programs as far as possible. Australian industry has encouraged all governments to set common MEPS and labelling goals for both sides of the Tasman to lower business costs, enhance trade and maximise environmental benefits.

FUTURE WORK PROGRAM

In March 2001, NAEEEC released a discussion paper identifying the products targeted for consideration within NAEEEP during 2002 to 2004. A copy of the discussion paper is available at www.greenhouse.gov.au/energyefficiency/ . By the close of consultation in August, almost all submissions received supported the proposed activities.

NAEEEC has taken account of submissions and developed a potential work program reflecting the aspirations and desires of key stakeholders. The new work program is awaiting formal approval by the Ministerial Council on Energy and will be published early in 2002.

GAS APPLIANCES

The National Greenhouse Strategy charged NAEEEC with a role in gas appliance efficiency. During its first work program, NAEEEC sought to work with the gas appliance manufacturers and their associations. Several reports were commissioned, industry engagement undertaken and cooperative ventures commenced (for example, NAEEEC offered the Australian Gas Association assistance to develop its website along the lines of electrical appliance site, www.energyrating.gov.au).

NAEEEC members, however, are generally not the officials responsible for gas appliance efficiency in their respective jurisdictions and this function is currently under review. The MCE is considering options for the advisory committee role on gas appliances. A major consultancy was commissioned in 2001 by several NAEEEC members to examine options to improve gas product efficiency and the framework of support offered by government agencies. This report will be available in 2002 and may result in moves to bring gas appliance work into line with the electrical product program.

ACHIEVEMENTS 2001

NEW MEPS FOR 3-PHASE ELECTRIC MOTORS AND AIR CONDITIONERS

ANZMEC gave final approval to impose MEPS for these 3-phase products from not earlier than 1 October 2001. Almost all jurisdictions had passed regulations mandating the performance requirements by the end of 2001 as set out in AS/NZS 1359.5 and AS/NZS 3823.2 respectively. These products were first identified as candidates for MEPS in 1994.

Product	NPV of costs $M(a)	NPV of benefits $M(a)	Net benefits $M(a)	Benefits /costs	CO2-e saving Mt (i)
2001 MEPS for 3-phase electric motors	92	165	73	1.8	0.33
2001 MEPS for airconditioners & heat pumps	78	480	402	6.2	0.53

(a) Net Present Value of costs and benefits compared with BAU case, at 10% discount rate (i) Average annual reduction below BAU during Kyoto Protocol commitment period.

The above table demonstrates the projected benefits to the community of almost $0.5 billion by 2015 with abatement of almost a million tonnes of greenhouse each year over the Kyoto period. In addition to MEPS, the new motors standard identifies a high efficiency performance level for motors and provides a basis for voluntary performance levels for air conditioners with the current MEPS levels remaining in force until at least 1 October 2005. The process for negotiating the next round of MEPS for both these products is scheduled to commence in 2002.

CONSULTATION COMPLETED FOR LIGHTING BALLASTS, DOMESTIC REFRIGERATORS AND SMALL STORAGE ELECTRIC WATER HEATERS

During the year, NAEEEC completed all necessary public consultation and economic analysis processes that would justify the Ministerial Council regulating these products. At year end, the relevant Ministers were still considering the recommendations. The recommendations have the full support of NAEEEC members and have been endorsed by key industry representatives and withstood the rigour of public scrutiny. NAEEEC expects that Ministers will make a decision early in 2002.

Product and proposed MEPS implementation	NPV of costs $M(a)	NPV of benefits $M(a)	Net benefits $M(a)	Benefits /costs	CO2-e saving Mt (i)
Proposed 2005 MEPS for refrigerators and freezers	170	462	292	2.7	0.47
Proposed 2005 MEPS for small electric water heaters	49	249	200	5.1	0.32
Proposed 2003 MEPS for fluorescent lamp ballasts	19	260	241	13.7	0.27

(a) Net Present Value of costs and benefits compared with BAU case, at 10% discount rate (i) Average annual reduction below BAU during Kyoto Protocol commitment period.

These initiatives will abate over 1 million tonne of greenhouse each year during the Kyoto period and save purchasers almost $750 million over the lifetime of the products. Other ways of measuring the impact of these initiatives include:

- Most of the 300 odd fridge and freezers models on the market today will not meet the new MEPS level and will need to be re-engineered to meet the proposed MEPS scheduled to commence on 1 January 2005;
- By 1 January 2005, small mains pressure storage water heater standing heat losses will be reduced by 30% over the models available today;
- In 2003, lighting ballasts that currently comprise over 80% of the market will no longer be made or imported into the Australian market in favour of higher efficiency models.

REGULATION CONSIDERED FOR OTHER EQUIPMENT TYPES

In March 2001, NAEEEC released plans to consider regulating the efficiency of distribution transformers and commercial refrigeration. NAEEEC rejected regulating a number of equipment types including air compressors, evaporative air conditioners, packaged boilers and commercial electric water heaters. In December 2001, NAEEEC announced plans to consider regulating those domestic water heaters not already covered by MEPS to meet equivalent levels and a second round of MEPS for larger mains pressure units. Plans were also announced at that time to strengthen existing MEPS levels for larger main pressure electric storage water heaters by matching recently announced US levels.

Copies of the public profiles (summarising the technical analysis and economic justification for these decisions) can be found at www.greenhouse.gov.au/energyefficiency

GALAXY ENERGY AWARDS 2001 - RECOGNITION OF APPLIANCE EXCELLENCE

The national Galaxy Energy Awards were held in Melbourne in November 2001 as part of the 'Reach for the Stars' Program, and were jointly hosted by Sustainable Energy Authority Victoria and the NSW Sustainable Energy Development Authority, with the Australian Greenhouse Office a major sponsor. The annual awards recognise excellence in the design, manufacture, promotion and sale of energy smart household appliances in Australia.

Fisher & Paykel Appliances won the premier Award, the 2001 Galaxy Star Award which is presented to the company that best demonstrates a commitment to and achievements in the development and marketing of energy smart appliances.

Major Galaxy Energy Awards were also presented to:

- Environmental Excellence: Brivis Climate Systems
- Most Innovative Appliance: Bosch SGS0905AU dishwasher
- Best Retailer: AGL Energy Shops
- Outstanding Retail Operation: Mod Cons, Geelong

Galaxy Product Awards were also presented to the individual electric and gas appliances that are the most energy efficient in their respective categories. Award winning companies can use the Galaxy Energy Award logo as a sticker on appliances, in point-of-sale material, brochures and in advertisements, and are also promoted to retailers and consumers as part of the 'Reach for the Stars' Program.

More information on the Awards, and a complete list of award winners can be found at: www.seav.vic.gov.au/galaxy

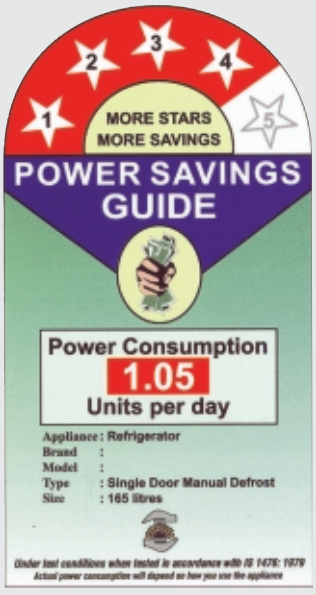
INTERNATIONAL RECOGNITION OF NAEEEP

NAEEEP is increasingly recognised by other countries as a potential model for their codes and standards programs for product energy efficiency. For example:

- In April 2001, New Zealand announced that its "MEPS and energy labelling regime will be similar to the equivalent Australian scheme";
- India is proposing to use our appliance label as a broad model for its comparative energy efficiency labelling;
- Fijian officials have explored gaining access to the Australian appliance database to use the labelling and MEPS scheme within the Pacific.

NAEEEC is increasingly asked to lead international energy efficiency initiatives. The International Energy Agency project to address standby power is an example. Australia was the first nation to formally adopt as government policy the 1 watt target for all electrical appliances and it will also be the first to release a comprehensive strategy to combat standby from 2002 to 2012. Australian officials have taken key roles on international fora shaping the response to standby power:

- Dr Tony Marker, the Chair of NAEEEC, led sessions of the IEA standby power workshop in Japan during February 2001;
- Lloyd Harrington, NAEEEC's technical adviser, is the Chair of IEC TC59 Working Group 9 which is developing methods of measuring standby power. A committee draft should be available by late 2002.



Australia's policy of matching world best regulatory standards is a policy idea that has resonance in other countries. In November 2001, Dr Marker presented papers explaining the policy at two conferences in China and also held discussions with officials from a number of Hong Kong agencies. Three NAEEEC members attended the Regional Symposium on Energy Efficiency in Thailand organised by the Collaborative on Labelling and Standards program held in Bangkok during May 2001. They presented papers on the aspects of our MEPS and labelling schemes.

ENERGY EFFICIENCY: SOLUTIONS FOR BUSINESS AND GREENHOUSE

NAEEEC hosted a one-day seminar attended by more than 130 business leaders, policy makers and technical specialists on 27th March 2001 in Melbourne.

The morning session focused on the potential of energy efficiency to be a low - and negative - cost means of greenhouse gas abatement. It also discussed the potential for business to leverage energy efficiency to its own advantage. Keynote speakers included:

- The Hon Candy Broad MLC, Victorian Minister for Energy and Resources
- Peter Szental, Director, Sustainable Energy Industries Association
- Dr Clive Hamilton, Executive Director, The Australia Institute
- Mike O'Neill, Managing Director, Whirlpool Australia
- Jack Gringlas, CEO, CMG Motors
- David Filipovic, Managing Director, Mod Cons (a retailer of energy efficient appliances)

The afternoon session allowed for an in-depth discussion of energy efficiency measures proposed by government agencies associated with NAEEEP. This was the fourth and most successful forum held by NAEEEC providing stakeholders with information about the program and an opportunity to influence policy makers on its future direction.

CONTINUING ACTIVITIES

STANDARDS DEVELOPMENT – MAINTAINING OUR STANDARDS

A number of proposed changes to the test Standards have been prepared for consideration by standard committees as a result of the appliance round robins conducted in 2000. Some of these are detailed below. NAEEEC has shared the results with other stakeholders as part of the process of continually improving public confidence in both appliance labelling and minimum energy performance standards. NAEEEC has assisted suppliers to also test the same units used in the "round robin" in their own laboratories.

THE APPLIANCE PROGRAM

AIR CONDITIONERS –

Packaged Air Conditioners – As a demonstration of competence, the University of NSW (the only Australian laboratory with NATA accreditation for air conditioner testing) was contracted to test a total of four packaged air conditioning units supplied by industry. Industry representatives and NATA representatives witnessed these tests in November 2001. All units passed MEPS, with a more detailed assessment by the NATA witness available early in 2002.

Inverter Type Air Conditioners - In December 2001 a preliminary set of part load tests were conducted on an inverter type air conditioner. The results from these and subsequent tests will help to inform the process of amending the standard to more accurately measure performance of these types of air conditioners.

CLOTHES DRYERS –

Round robin testing in the previous financial year demonstrated that several issues needed more detailed work.

Moisture Retention and Buoyancy - moisture retained within the internal ducting (where relevant) as well as buoyancy effects were a cause of inter-laboratory discrepancies. A revised test procedure to overcome these problems and this new procedure was tested at each NATA laboratory registered for clothes dryer testing. The tests using the new procedure demonstrated a reproducibility error of < +/- 1%. This new procedure has now formed a draft amendment to the standard.

Moisture Conductivity Impact Assessment – Some autosensing dryers utilize conductivity sensors to terminate the drying program. Experts believe that the operation of these sensors is effected by the conductivity of the water used to moisten the load prior to testing. This parameter is not currently specified in the Australian Standard for dryers (the draft IEC dryer standard does cover this aspect). Tests were conducted late in 2001 to determine what, if any, impact the conductivity of the water used for the test has on the results of the test. The results, to be finalised early in 2002, will be used to inform the EL15/4 Standards Committee as to the need or otherwise for the standard to be amended to cover this aspect.

CLOTHES WASHERS –

Round robin testing in the previous financial year demonstrated that several issues needed more detailed work.

Reference Detergent Development - Problems with the supply of the current reference detergent for top loading machines necessitated a review of the potential supply options. In May 2001 a contract was let to Specialty Chemicals in association with the University of NSW Analytical Laboratories to develop and market a new reference detergent suitable for use in top loading washing machines (and possibly front loading machines as well). Meeting strict tolerance requirements has presented numerous challenges in the development phase but a final product is expected to be available early in 2002.

Swatch Calibration - The object of this testing program is to develop a method for calibrating various AS 9 swatch batches against a reference batch. An appropriate test method was determined in 2001 with reference testing to commence as soon as a suitable reference detergent is available (a condition set by the Standards committee).

Reflectometer Correlation Procedure - The purpose of this project was to provide a suitable method for establishing acceptable limits of reflectance measurement correlation between a non Category A reflectometer and a Category A reflectometer. A total of five laboratories participated in this trial providing results early in 2001. An amendment to the washer standard will be made when the other issues are resolved.

DISHWASHERS -

Development of Revised Standard - In the first half of 2001, a series of tests were conducted on 4 reference dishwasher machines at each of the three independent NATA accredited laboratories. The tests were conducted to the Australian Standard except, that in an attempt to improve the repeatability of the wash scores, a drying time of 15 hours was adopted (in line with the draft IEC standard for dishwashers). The results of the tests provided useful information regarding reproducibility of the test. The tests will help to improve the test method and move Australia closer to international practice.

Calibration Test Procedure - As part of the upcoming amendments to the dishwasher standard, the reference machine test program has been altered from Economy half 55 to Gentle 45. To accommodate this change it was necessary to determine appropriate calibration tolerances as set out in Appendix H for the new program. In 2001, Test Research was commissioned to conduct calibration tests on 4 reference dishwashers. The results provided appropriate values and tolerances for each parameter covered in the calibration check procedure.

ELECTRIC STORAGE WATER HEATING –

Round robin testing conducted in 1999 and 2000 indicated that the inter-laboratory differences in heat loss measurement could be unacceptably high and that these differences resulted from discrepancies in measurement techniques adopted by different laboratories.

Revisions to the test procedure designed to address this problem have been formulated and the University of NSW commissioned in early 2001 to conduct a series of development tests designed to fine tune these revisions. The goal was to aid the development of a new AS/NZS 1056.1 heat loss test method and ensure that such tests would be accurate, practical and repeatable. The tests were successfully completed in mid 2001 and recommendations from the report are currently being incorporated into the new standard, which is scheduled to be completed by mid 2002.

DIGITAL TELEVISION (SET TOP BOXES) –

NAEEEC members raised issues with the standards committee to improve the energy efficiency of these units, particularly in "standby" mode.

HOME ENTERTAINMENT EQUIPMENT -

The "Energy Star" voluntary endorsement program for internationally traded products has been operating in Australia for a number of years (with a NAEEEC member, SEDA, delivering the national program). The international efficiency levels developed by the US Environmental Protection Agency have been adopted in Australia.

REFRIGERATORS / FREEZERS –

A full revision of the test method is under way to move the test method closer to ISO where feasible. This includes updated approaches with regard to the placement of temperature sensors that take into account the internal design and configuration of modern refrigerators and freezers. The refrigerator committee has been very active within the ISO refrigerator committee making extensive comments on draft documents.

THE EQUIPMENT PROGRAM

A number of commercial and industrial equipment types have been brought into the energy efficiency regulatory net. Australian standards specify the method of test and the performance levels required of suppliers. The following equipment standards are under active development:

INDUSTRIAL THREE-PHASE ELECTRIC MOTORS:

The test method and the MEPS levels have been published by Standards Australia and MEPS came into force on 1 October 2001;

THREE-PHASE ELECTRIC AIR CONDITIONER SYSTEMS UP TO 65KW:

The test method and the MEPS levels have been published by Standards Australia and MEPS came into force on 1 October 2001;

BALLASTS FOR FLUORESCENT LAMPS:

The test method was developed for Australia and New Zealand and it has received support from Asia Pacific economies as representing a method potentially suitable for the wider international community. MEPS levels and their timing are still to be finalised with industry.

OFFICE EQUIPMENT:

The "Energy Star" voluntary endorsement program for internationally traded products has been operating in Australia for a number of years (with a NAEEEC member, SEDA, delivering the national program on its behalf). The international efficiency levels developed by the US Environmental Protection Agency have been adopted in Australia.

DISTRIBUTION TRANSFORMERS:

Options for MEPS have been actively canvassed with industry and a range of MEPS proposals are being analysed through the RIS process.

COMMERCIAL REFRIGERATION PRODUCTS:

Options for MEPS have been actively canvassed with industry and a range of MEPS proposals for self contained (including vending machines) and remote refrigeration systems and commercial icemakers are being analysed and developed. In some cases, new test methods are being adopted from Europe and the USA.

INTERNATIONAL STANDARDS DEVELOPMENT - 2001

Committee/working group	Standard number	Product	Dates	Delegate
IEA Standby Forum	Various	Various	February 2001	Tony Marker, Lloyd Harrington
Domatechnica workshop on standby power	Various	Various	March 2001	Lloyd Harrington
EPA Energy Star Workshop	Various	Various	March 2001	Allison Purnell
MT14 of IEC SC59D	IEC61121	Clothes Dryers	March 2001	Lloyd Harrington, (Richard Bollard)
TC59 working group 9 (standby)	Various	Multiple (horizontal standard)	March 2001	Lloyd Harrington
CLASP Symposium on Labelling and MEPS	Various	Various	May 2001	Shane Holt, Lloyd Harrington, Michael Grubert
MT15, WG13 of IEC SC59D and sub groups	IEC60456	Clothes Washers	June 2001, October 2001	Lloyd Harrington, (Richard Bollard)
WG2 of IEC SC59A	IEC60436	Dishwashers October 2001	April 2001,	Lloyd Harrington, Richard Bollard
IEC TC59 General Meeting	Various	Various	October 2001	Lloyd Harrington
WG1 of ISO SC86SC5	ISO refrigerators	Refrigerators	Correspondence	Lloyd Harrington, Geoff Day, Lindsey Roke
WG1 of ISO SC86SC6	ISO5151,	Ducted and non ducted air conditioners	Correspondence	Allan Tayler ISO13253
WG5 of ISO SC86SC6	ISO15042	Multi-split air conditioners	Correspondence	Allan Tayler
IEC SC2G	IEC60034	Industrial motors	Correspondence	Brenton Watkins

APPLIANCE DEREGISTRATION - CHECK TEST FAILURE

Under state energy efficiency legislation, a prescribed electrical appliance must be registered in one jurisdiction to be sold lawfully throughout Australia. State energy regulators have a range of administrative and legal sanctions that can be imposed in the unusual event that a supplier markets mis-labelled products. The Administrative Guidelines set out the process followed by regulators to ensure the supplier has a fair opportunity to comment on the check test result.

Regulators withdraw registration in circumstances where the check testing processes establishes the product does not meet the claimed label requirements after contact with the supplier.

In 2001, regulators deregistered seven appliances arising from check test results. The outcome for a further 3 units referred late in 2001 are still pending.

Product Type	Brand	Model	Outcome of Referral
Air conditioner	FEDDERS	1AE109N6E/ 1AE109N6B	Registration cancelled 31 October 2001
Air conditioner	FEDDERS	1AE109N6E/ 1AE109N6B	Registration cancelled 31 October 2001
Air conditioner	ADSAKA	KFR-35W/C	Registration cancelled 19 October 2001
Clothes Dryer	ARISTON	AL1250CT	Registration cancelled 11/2001
Refrigerator	LG	GR131SSF	Registration cancelled. Subsequently registered with higher CEC
Refrigerator	WHIRLPOOL	WRN42*WG6	Registration withdrawn by applicant and subsequently re-registered with higher CEC
Refrigerator	WHIRLPOOL	WRX 38*WG6	Registration withdrawn by applicant and subsequently re-registered with higher CEC

NAEEEC PUBLICATIONS IN 2001

Title	Content	Date	Copy obtainable from:
Overall Program			
Efficiency program Achievements 2000	Review of program progress through 2000	March 2001	Australian Greenhouse Office
Future Directions 2002-2004	Overview of program plan for next 3 years	March 2001	Australian Greenhouse Office
Greening Whitegoods	A report into the energy efficiency trends of major household appliances in Australia from 1993 to 2000	December 2001	EES website, www.energyefficient.com.au
Appliances			
Air Conditioning Challenge – Program Options	Ideas for a best practice program for air conditioning in the commercial sector	February 2001	Australian Greenhouse Office
Verification Testing - Household Refrigerators & Freezers	Results of an inter-laboratory round robin for refrigerators and freezers that was conducted during 2000	March 2001	Australian Greenhouse Office
Verification Testing - Household Electric Clothes Dryers	Results of an inter-laboratory round robin for clothes dryers that was conducted during 2000	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Miscellaneous Water Heaters	Technical support document	March 2001	Australian Greenhouse Office
Quantification of residential standby power consumption in Australia	Results of recent survey work on standby including household survey	April 2001	EES website, www.energyefficient.com.au
International Review of MEPS for Electric Resistance Storage Water Heaters	Compares MEPS levels for electric water heaters in force around the world.	May 2001	Australian Greenhouse Office
Costs and benefits for revised small electric water heater MEPS for 2004/5	Regulatory Impact Statement	June 2001	Australian Greenhouse Office
Costs and benefits for revised refrigerator MEPS for 2004/5	Regulatory Impact Statement	August 2001	Australian Greenhouse Office

Title	Content	Date	Copy obtainable from:
Consideration of Miscellaneous Electric Water Heaters for Minimum Energy Performance Standards	NAEEEP Product Profile	Nov 2001	Australian Greenhouse Office
Review of the Minimum Energy Performance Standards for Mains Pressure Electric Resistance Storage Water Heaters	NAEEEP Product Profile	Nov 2001	Australian Greenhouse Office
Equipment			
MEPS and Alternative Strategies for Fluorescent Lamp Ballasts	Regulatory Impact Statement	February 2001	Australian Greenhouse Office
Review of the Minimum Energy Performance Standards for Lamps	Technical support document	March 2001	Australian Greenhouse Office
Minimum Energy Performance Standards – Commercial Water Heaters	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Minimum Energy Performance Standards - Distribution Transformers	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Distribution Transformers	Technical support document	March 2001	Australian Greenhouse Office
Minimum Energy Performance Standards - Evaporative Air Conditioners	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Evaporative Air Conditioners	Technical support document	March 2001	Australian Greenhouse Office
Minimum Energy Performance Standards MEPS - Packaged Air Compressors	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Packaged Air Compressors	Technical support document	March 2001	Australian Greenhouse Office

Title	Content	Date	Copy obtainable from:
Minimum Energy Performance Standards - Packaged Boilers	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Packaged Boilers	Technical support document	March 2001	Australian Greenhouse Office
Minimum Energy Performance Standards - Remote Commercial Refrigeration	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Remote Commercial Refrigeration	Technical support document	March 2001	Australian Greenhouse Office
Minimum Energy Performance Standards - Self -contained Commercial Refrigeration	NAEEEP Product Profile	March 2001	Australian Greenhouse Office
Analysis of Potential for Minimum Energy Performance Standards for Self -contained Commercial Refrigeration	Technical support document	March 2001	Australian Greenhouse Office

ANNEXURE:

NAEEEC MEMBER ORGANISATIONS

The Commonwealth, New Zealand, each State and each Territory are represented on NAEEEC and participate in its deliberations. Representatives are drawn from officials within Government departments, agencies and statutory authorities or from persons appointed to represent those bodies. Representatives are usually a senior officer directly responsible for energy efficiency. The membership is currently under review and may expand to include other agencies working in these fields.

The ***Australian Greenhouse Office*** is the lead Commonwealth agency for greenhouse matters. The Australian Greenhouse Office (AGO) is responsible for monitoring the National Greenhouse Strategy in a cooperative effort with States and Territories and with the input of local Government, industry and the community. An AGO officer is the chair NAEEEC and others provide support for its activities.

The NSW ***Ministry of Energy and Utilities*** provides policy advice to the NSW Government and operates a regulatory framework aimed at facilitating environmentally responsible appliance and equipment energy use. The Ministry is represented on the Energy Management Task Force through which the appliance and equipment related elements of the National Greenhouse Strategy will be progressed.

The NSW ***Sustainable Energy Development Authority*** was established in February 1996 with a mission to reduce the level of greenhouse emissions in New South Wales by investing in the commercialisation and use of sustainable energy technologies.

The ***Office of the Chief Electrical Inspector*** is the Victorian technical regulator responsible for electrical safety and equipment efficiency. Its mission is to ensure the safety of electricity supply and use throughout the State. The corporate vision of the Office is to demonstrate national leadership in electrical safety matters and to improve the superior electrical safety record in Victoria. The Office's strategic focus is to ensure a high level of compliance is sustained by industry with equipment efficiency labelling and associated regulations.

Sustainable Energy Authority is a state government agency established to contribute to the reduction of greenhouse gases, and support and facilitate the development and use of sustainable energy options to achieve environmental and economic benefits for the Victorian community.

The ***Electrical Safety Office, Department of Industrial Relations***, is the Queensland technical regulator responsible for electrical safety and appliance and equipment energy efficiency. The office ensures compliance with electrical safety and efficiency regulations throughout Queensland.

The ***Environmental Protection Agency***, a Division of Sustainable Industries, is Queensland's lead agency in the promotion of energy efficiency, renewable power, and other initiatives that reduce greenhouse gas emissions throughout the State. The key aim of the unit is to achieve increased investment in sustainable energy systems, technology and practice.

The Western Australian ***Office of Energy*** seeks to promote conditions that enable the energy needs of the Western Australian Community to be met safely, efficiently and economically.

The Western Australian ***Sustainable Energy Development Office*** promotes more efficient energy use and increased use of renewable energy to reduce greenhouse gas emissions while increasing jobs in related industries.

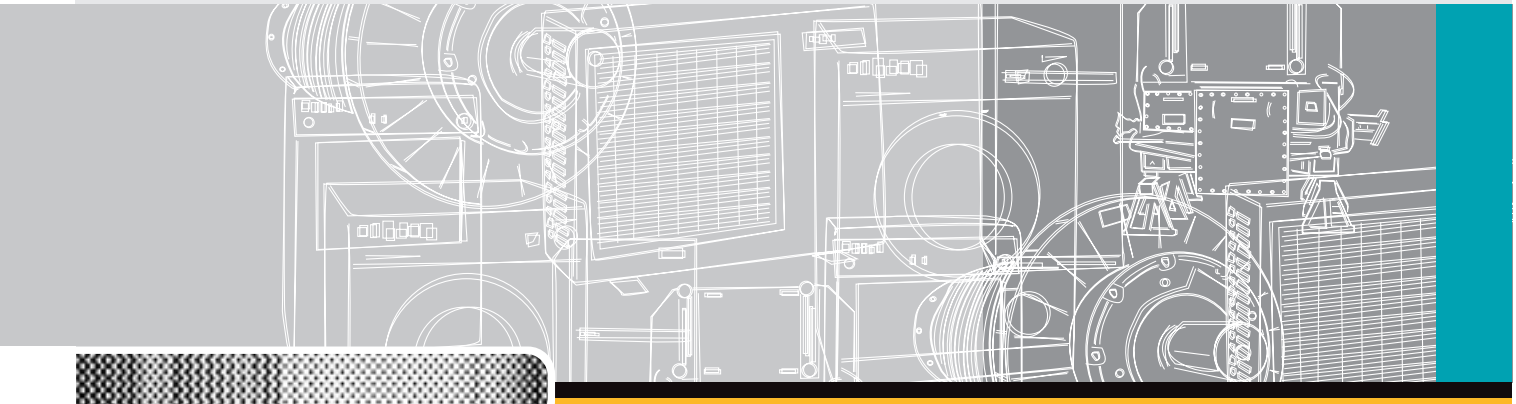
The ***Office of the Technical Regulator*** seeks to ensure the coordinated development and implementation of policies and regulatory responsibilities for the safe, efficient and responsible provision and use of energy for the benefit of the South Australian community.

The Tasmanian Government's interest is managed by the ***Office of Energy, Planning and Conservation.***

The Australian Capital Territory's interest is managed by the ***Energy and Water Reform Branch, Industry Policy and Regulation Branch, Department of Treasury.***

The ***Department of Employment, Education and Training*** is responsible for the administration of regulations in the Northern Territory regarding various aspects of safety, performance and licensing for goods and services including electrical appliances.

The ***Energy Efficiency and Conservation Authority (EECA)*** is the principal body responsible for helping to deliver the New Zealand Government's extensive sustainable energy future. EECA's function is to encourage, promote and support energy efficiency, energy conservation and the use of renewable energy sources.



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or any member organisation working
on the National Appliance and Equipment