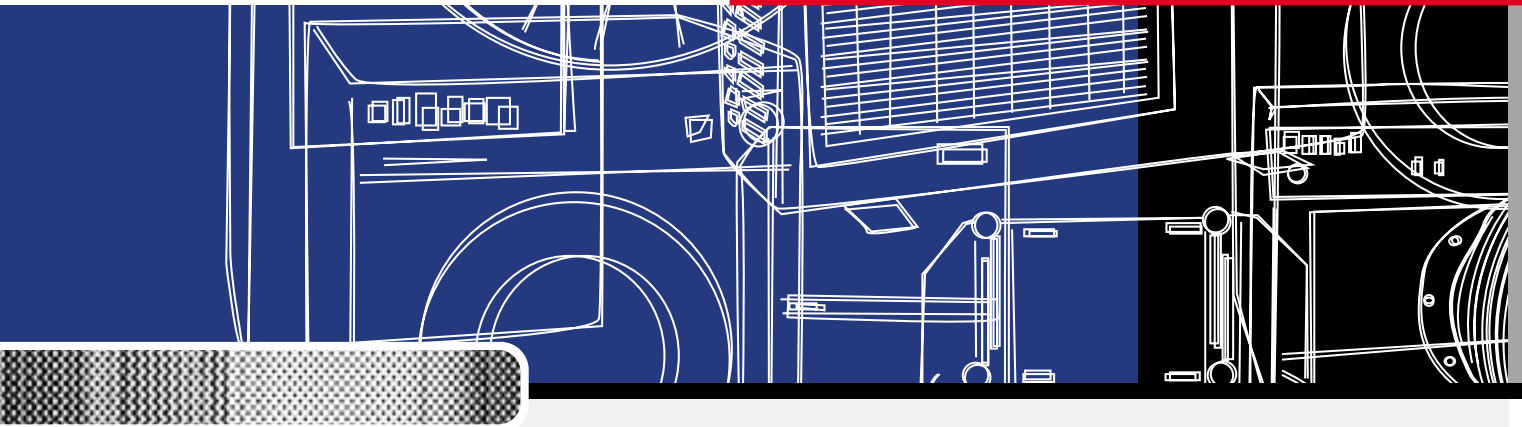


*NATIONAL APPLIANCE AND EQUIPMENT  
ENERGY EFFICIENCY PROGRAM*

***FUTURE DIRECTIONS** 2002-2004*



**A DISCUSSION PAPER**

*March 2001*

AN AUSTRALIAN AND NEW ZEALAND MINERALS  
AND ENERGY COUNCIL INITIATIVE FORMING PART  
OF THE NATIONAL GREENHOUSE STRATEGY

## PREFACE



As Chair of the National Appliance and Equipment Energy Efficiency Committee, I am pleased to introduce this second discussion paper detailing proposals to improve this long-running program for 2002–2004.

This program is part of the *National Greenhouse Strategy*, first agreed by all Australian Governments in November 1998, and targets the energy efficiency of consumer appliances, industrial and commercial equipment.

In 1999, I introduced the first "Future Directions" paper explaining proposals to expand and enhance our program. Those proposals received general stakeholder support and were subsequently endorsed by Australian and New Zealand Minerals and Energy Council, the ministerial body responsible for energy efficiency matters.

In 2001, I introduce refinements to the original proposals to consolidate the substantial gains made in improving this national regulatory program in 1999. That said, the current set of proposals offer important improvements to this program, which continues to be one of the most cost effective national greenhouse reduction measures undertaken by governments.

This discussion paper advises interested parties how the various government agencies intend to refine existing regulatory and related policies to reinforce the existing goals of the *National Greenhouse Strategy* and to propose the group of products targeted for regulation.

These proposals rely on improving the already strong involvement of industry and other interested parties in the program. I want to encourage you to consider involving your organisation in commenting upon these proposals.

With your help, the program can continue to deliver substantial greenhouse savings and further improve energy efficiency in a framework of least cost to Australian industry and maximum benefit for the community.

In tandem with this process, governments are considering a *National Energy Strategy*, which may also impact on the future shape of this program.

Dr Tony Marker  
Chair, NAEEEC

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## ABBREVIATIONS

AGO	Australian Greenhouse Office
ANZMEC	Australian and New Zealand Minerals and Energy Council
CO <sub>2</sub> -e	Carbon dioxide equivalent
EMTF	Energy Management Task Force
GHG	Greenhouse gas
MEPS	Minimum Energy Performance Standards (also called minimum energy efficiency standards)
NAEEEC	National Appliance and Equipment Energy Efficiency Committee
NAEEEP	National Appliance and Equipment Energy Efficiency Program
NGRS	<i>National Greenhouse Response Strategy 1992</i>
NGS	<i>National Greenhouse Strategy 1998</i>
OECD	Organisation of Economic Co-operation and Development
RIS	Regulatory Impact Statement

## EXECUTIVE SUMMARY

Co-sponsored by industry and government, the energy efficiency and greenhouse gas abatement program for consumer appliances and industrial equipment has traditionally focussed on mandatory measures contained in State and Territory regulation.

The national program commenced in 1992, coordinating the mandatory energy efficiency labelling scheme which now applies to six types of major electrical appliances. During the work period 1999–2001, the regulatory program also included minimum energy performance levels for three types of domestic electrical appliances in 1999 and should include two types of commercial equipment later in 2001.

The national program has embraced the goal of matching the best minimum energy performance and labelling standards developed by our major trading partners. It has met the *National Greenhouse Strategy's* immediate goal of expanding and enhancing the Australian program but the challenge of continuing to expand product coverage remains.

Energy agency officials want your views on the ideas proposed in this discussion paper.

The National Appliance and Equipment Energy Efficiency Committee has the responsibility to implement the Australian and New Zealand Minerals and Energy Council's 1999 decision to include within the program any appliance and equipment type used in Australia that is regulated by a major trading partner. This "overarching" decision means that any consumer appliance or industrial equipment type could be subject to the program but only after a full cost benefit analysis of any legislative proposals and formal community consultation. If both those stages indicated support for including that product in the program, ANZMEC would consider implementing the proposals for an individual product type.

In this paper, NAEEEC proposes a number of refinements to the process that has been adopted to implement this "overarching" decision. In particular:

1. NAEEEC proposes to consider using not only the regulatory proposals enforced by major trading partners but, where sensible, also to use quasi regulatory energy efficiency standards providing such regulation is cost-effective and in the community interest.
2. NAEEEC proposes to only use the technical levels developed by any of our international trading partners as the basis for all future product regulation and forgo developing unique Australian MEPS levels negotiated with local stakeholders for products not subject to similar programs overseas.

NAEEEC also proposes to commission and publish independent expert studies to project the impact of this second triennial work plan and to evaluate the outcomes of the first triennial.

This discussion paper contains work proposals for the program over the three-year period, 2002 to 2004. The paper is produced to assist interested parties understand the future direction of the program and open discussions on these proposals. Key stakeholders have assisted NAEEEC to develop these discussion proposals.

### *Our invitation*

You are also invited to nominate as a participant in a forum to be held on 27 March 2001 in Melbourne to discuss these measures. Your comments will assist in refining the proposed work program for 2002–2004.

This paper has been prepared to foster consultation with stakeholders. At the conclusion of the consultation process, the discussion proposals contained in this paper will be revised and submitted to ANZMEC Ministers for endorsement.

*This paper has been prepared to foster consultation with stakeholders. At the conclusion of the consultation process, the discussion proposals contained in this paper will be revised and submitted to ANZMEC Ministers for endorsement in 2001.*

## NAEEEC

The National Appliance and Equipment Energy Efficiency Committee (NAEEEC) comprises officials from the Commonwealth, State and Territory government agencies, together with representatives from New Zealand, responsible for implementing product energy efficiency initiatives in those jurisdictions. NAEEEC reports through other committees to the Australian and New Zealand Minerals and Energy Council (ANZMEC), which is made up of the Ministers with portfolio responsibility in this field.

ANZMEC, amongst other things, is the body responsible for monitoring the implementation of the *National Greenhouse Strategy* in the field of consumer appliances and industrial and commercial equipment. The Energy Management Task Force (EMTF) is charged by ANZMEC with managing the overall policy in this field and funding the national program. NAEEEC reports through EMTF.

The charter of NAEEEC encompasses the following functions:

- ▶ to provide assistance to all States and Territories, as required, in the development and regulatory implementation of technical, legal, and administrative aspects of national appliance and equipment energy efficiency initiatives;
- ▶ to coordinate the national development and implementation of energy efficiency programs of a non-regulatory nature and enhance existing regulator programs. These may include voluntary labelling initiatives, market transformation projects, and similar voluntary actions;
- ▶ to coordinate national marketing and communication projects to support new, and enhance existing, energy efficiency programs;
- ▶ to 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;
- ▶ to monitor program performance and achievements;
- ▶ to provide a forum to exchange information on enforcement/compliance issues and community information and marketing initiatives;

- ▶ to administer an effective, coordinated testing regime of the energy efficiency claims of suppliers;
- ▶ to coordinate broad consultative processes with industry and other interested parties in the development and implementation of energy labelling and associated programs.

The current member organisations of NAEEEC are listed in Annexure Three.

This charter recognises the maturity of the program and the need for a “holistic” approach to government policies for greenhouse gas abatement in the appliance and equipment field. The focus of the program continues to be the delivery of nationally consistent regulation. The implementation of most voluntary programs remains an individual jurisdictional responsibility.



## PROGRAM ENERGY AND GREENHOUSE IMPACT

NAEEEP has been effective, and has achieved significant energy and greenhouse savings compared to a business-as-usual scenario. By 2000, the appliance labelling program saved in the order of 5 million tonnes of carbon dioxide equivalent (compared to business-as-usual projections) since its beginnings in some jurisdictions in the late 1980s.

Between 2000 to 2015, the regulatory aspects of the program are projected to save a further 81 million tonnes of carbon dioxide equivalent. This projection is based solely on the impact of the mandatory proposals contained in the NAEEEC Work Program 1999–2001. These regulatory measures are scheduled to come into effect in the early part of the first decade of this century. By 2002, NAEEEC notes that the national program will have expanded to include some types of commercial and industrial equipment as well as a greater range of domestic appliances.

Furthermore, NAEEEC has demonstrated the community benefits derived from expanding the program in both energy and greenhouse terms. For those regulated products modelled in detail, the value of the electricity saved will exceed the additional cost of purchasing the more efficient products in a ratio of almost two and a half to one. The cost of emission reductions for those products regulated through the 1990s results in a benefit exceeding A\$30 per tonne CO<sub>2</sub>-e (net present value at 10 per cent discount rate). In less technical terms, the program is good for appliance and equipment purchasers, good for suppliers and good for the environment (achieving the triple bottom line).

In this discussion paper, NAEEEC recommends proposals to refine the major refocus that occurred to the program in 1999. These refinements will continue to expand the program while offering all parties certainty in regulatory direction.

In a separate process, the Prime Minister instructed the Commonwealth Department of Industry, Science and Resources to develop proposals for a National Energy Strategy. The outcome of that process could also impact on the structure and future direction of this program.



## THE NATIONAL GREENHOUSE STRATEGY

The world's climate scientists continue to provide a clear message—the balance of evidence suggests humans are having a discernible influence on global climate. The jury is no longer in any real doubt about the importance of the issue.

Energy consumed by equipment and appliances continues to be a major source of greenhouse emissions attributable to the industrial, commercial and residential sectors. While changes in behaviour can play a part in reducing energy use, improvements in energy efficiency have a key role, especially in the short term. Government support can provide an important stimulus to commercially develop energy efficiency products.

Although Australia only contributes just over 1 per cent of total greenhouse gas emissions, our per capita emissions are amongst the highest in the world. This program represents one of the most cost-effective ways to combat emissions from products.

Australian Governments recognise the importance of climate change and are committed to making a responsible contribution to international efforts to respond to this environmental threat. Like 26 of the 29 OECD countries in 2001, Australia includes a "codes and standards" energy efficiency program, as part of that response.

The *National Greenhouse Strategy* provides the strategic framework for Australia's greenhouse response and is the primary mechanism to meet our international commitments. It extends the appliance program launched in 1992 by all Governments to address this sector. Under the *National Greenhouse Strategy*, Government initiatives can be grouped under three areas:

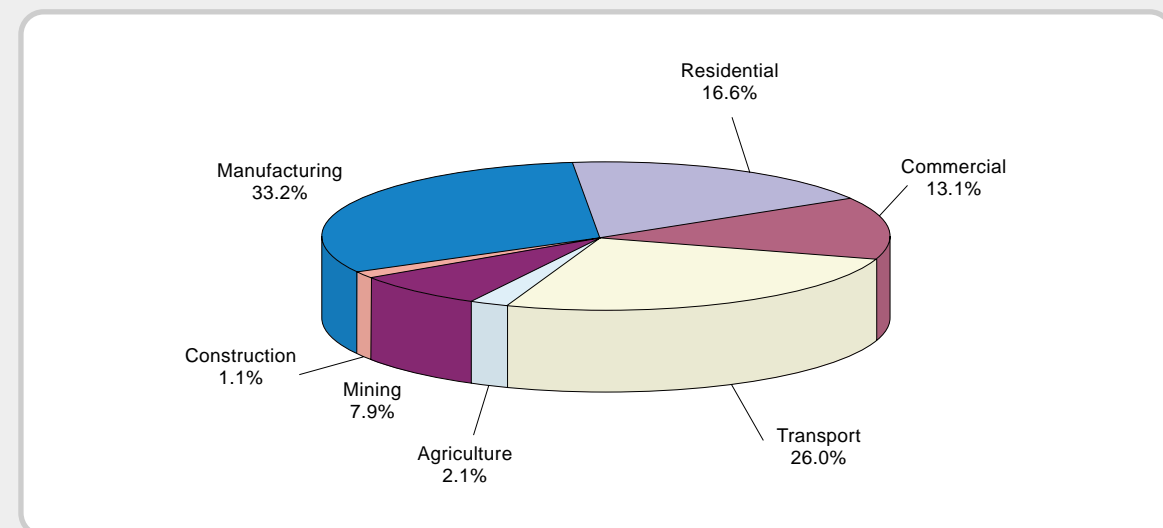
- ▶ fostering knowledge and understanding of greenhouse issues;
- ▶ limiting greenhouse emissions; and,
- ▶ laying the foundations for adapting for climate change.

This discussion paper focuses on the codes and standards program, which falls under the second of those points and, in particular, explores proposals to refine, expand and improve end-use energy efficiency regulation for consumer appliances, commercial and industrial equipment.

The *National Greenhouse Strategy* demands a broader, more effective program for appliances and equipment. With approval of its first Work Plan, NAEEEC has achieved that immediate goal but now must continue to capture further greenhouse abatement opportunities associated with appliances and equipment.

ANZMEC wants NAEEEC to review the present policy framework and explore stakeholder support for further refinements or improvements to NAEEEP.

Share of Greenhouse Gas Emissions by Sector, Australia, 1998



## THE NATIONAL GREENHOUSE STRATEGY FOR PRODUCT ENERGY EFFICIENCY

The original appliance program was created under the 1992 *National Greenhouse Response Strategy*. The 1998 *National Greenhouse Strategy* sought to expand and enhance the original program in accord with the Prime Minister's Climate Change Statement released in November 1997. With respect to appliances and equipment, the Prime Minister said that Australia would expand and improve existing greenhouse gas abatement policies in the field of codes and standards.

The *National Greenhouse Strategy* gives effect to that vision in the following terms:

*Improvements in the energy efficiency of domestic appliances and commercial and industrial equipment will be promoted by extending and enhancing the effectiveness of existing energy labelling and minimum energy performance standards.*

The original program was based on mandatory energy labelling for six types of domestic appliances in most Australian states. By 1999, the program secured a government commitment to introduce minimum energy performance standards (MEPS) in law for three domestic appliances types in October 1999 and to consider introducing

MEPS for two types of industrial equipment from 2001. MEPS legislation has the effect of making unlawful the sale of products that do not meet these minimum energy performance levels, specified in the relevant Australian Standards.

NAEEEC believes that the coverage of MEPS, energy labelling and other related programs in the residential sector will increase from 35 per cent of emissions in 1999 to 65 per cent of emissions in 2005 (including voluntary programs). In the commercial sector the only significant program in force in 1999 was Energy Star for office equipment with some secondary flow on effects from the residential MEPS program (mainly refrigerators and water heaters). The commercial sector program coverage for MEPS is expected to increase to more than 40 per cent of greenhouse emissions by 2005 (including lighting, refrigeration, water heating, air conditioning, electric motors). About 55 per cent of industrial greenhouse emissions is covered by electric motor systems.

More detail on how the appliance regulatory scheme operates can be found at the website maintained by the Australian Greenhouse Office: [www.energyrating.gov.au](http://www.energyrating.gov.au)



## IMPROVEMENTS TO THE PROGRAM

In this discussion paper, NAEDEC will use the same framework to explain proposals to improve the program as was used in 1999. This includes three components:

1. Product coverage
2. Communication
3. Procedures and timetable

These components provide a convenient way to explain the changes but the interactive nature of the program means that changes identified under one component may impact on other parts of the total program.

The table below summarises how stakeholders will be engaged in the program.

Components	Stakeholder Engagement
<p><b>1. Product coverage</b> Continue the program goal of potentially including any product that may contribute significantly to greenhouse gas emissions or energy demand</p>	<p>Stakeholders continue to support the program goal of matching our trading partners' best MEPS or labelling levels for any consumer appliance or commercial/ industrial equipment <b>subject to satisfying:</b></p> <ul style="list-style-type: none"> <li>▶ the agreed selection criteria;</li> <li>▶ cost benefit analysis that complies with the Regulatory Impact Statement process; and</li> <li>▶ community consultation supporting its inclusion in the program.</li> </ul>
<p><b>2. Communication</b> Continue transparent planning processes for each new product including formal opportunities for stakeholder comment</p>	<p>Stakeholders continue to support NAEDEC consulting publicly when developing the strategy for each new product type and using the optimum mix of measures to achieve greenhouse gas abatement and energy demand reductions (including appropriate voluntary initiatives to support regulatory measures).</p>
<p><b>3. Legislative goals and timetable</b> Maintain expedited development processes with adequate notice of those regulatory goals</p>	<p>Stakeholders continue to endorse the implementation process followed by NAEDEC for each product subject to regulatory intervention.</p>

Annexure Two explains how these components are combined to develop a timetable for MEPS implementation.

### Residential sector energy emissions (CO<sub>2</sub>-e), Australia



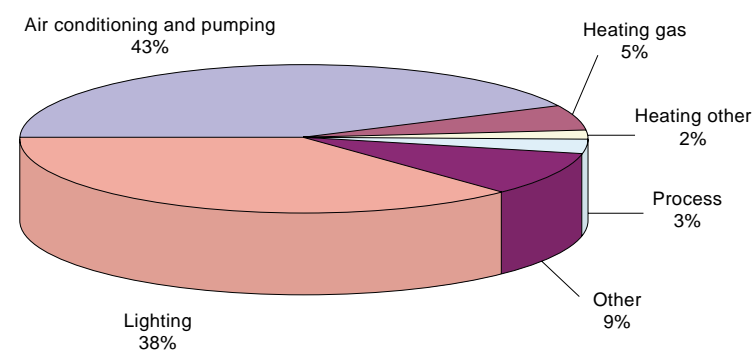
Notes:

\* Labelling and MEPS applies to refrigerators and freezers

\*\* Labelled appliances in 1999 are washers, dryers and dishwashers, to be expanded by 2005 mainly through Energy Star to cover TVs, VCRs, audio equipment, office equipment and standby.

\*\*\* Electric water heater MEPS covers heat losses, not all hot water use, total emissions are shown.

### Commercial equipment end use emission estimate



Note: The four main product groups are electric motors (which impacts on almost all of these end use categories), packaged air conditioners, lighting ballast and office equipment.

## POLICY CHANGE: PRODUCT COVERAGE

In 1999, ANZMEC agreed in-principle that NAEEEC could consider including in the program any type of consumer appliance, industrial and commercial equipment identified as a likely contributor to growth in energy demand or greenhouse gas emissions. The program tools are mandatory labelling, MEPS and endorsement schemes (including labelling).

ANZMEC requires NAEEEC to ensure the product under consideration for regulation:

- ▶ satisfies the regulatory strategy published with respect to the product;
- ▶ meets the community cost benefit analysis required under the National Competition Principles when governments contemplate national regulation; and
- ▶ is generally acceptable to the community.

Upon agreeing to the 1999 proposal, ANZMEC instructed NAEEEC to provide three-year work plans, which identify products potentially subject to the program. These plans must be the subject of consultation with stakeholders and provide a transparent method of communicating potential areas for program expansion.

ANZMEC will consider regulation for a product in a two-stage process; initially, within a NAEEEC work plan identifying that product as a potential candidate and, finally, at the conclusion of the regulatory development process.

This process ensures regulation is only contemplated after expert technical development of regulatory options and formal community consultation.

The second such triennial NAEEEC work plan proposal for the years 2002 to 2004 (inclusive) is contained in this paper.

In producing this second work proposal, NAEEEC applied the product selection criteria previously agreed by ANZMEC. NAEEEC is not recommending any change to this process of considering product regulation.

## SELECTION CRITERIA - NO CHANGE

The criteria for determining whether the introduction of MEPS or mandatory labelling is justified for a particular product have remained largely unchanged since 1993. Based on Canadian experience, these criteria are used to establish the necessity and appropriateness of regulatory market intervention. The criteria (including the addition of "potential savings of greenhouse gas emissions" in its own right as an additional criterion to reflect its enhanced importance to the program) and the staged application process are reported in the first discussion paper released in 1999.

In essence, the criteria weigh factors like potential energy or greenhouse savings, environmental impact of fuel type, opportunity to influence purchase, market barriers, access to testing and administrative complexity to determine the priority of one product over another.

NAEEEC is not recommending any change to the selection criteria during the next triennial period.



## 1999 POLICIES - CHANGE PROPOSED

In 1999 ANZMEC agreed that Australia would match the best MEPS level of our trading partners after taking account of test method differences and other differences (eg climate, marketing and consumer preference variations). This new policy represented a radical change of direction from the previous Australian practice of debating the technical possibilities for MEPS levels with all stakeholders. The new policy covered any product regulated by mandatory labelling or MEPS programs in other developed countries. However, NAEEEC recognised that it should complete the process already begun for products where mandatory labelling or MEPS had been under active consideration for sometime in Australia or New Zealand. In these cases where the MEPS levels had been resolved (but not instituted), ANZMEC instructed NAEEEC to complete the analysis on the basis of the levels negotiated with local stakeholders. These products were all part of the *National Greenhouse Response Strategy 1992*.

Against this background the new policy is to commence with the new work program. This seemingly simple policy change will change the nature of future regulatory debates. All parties can now have confidence that a proposed MEPS level is technically feasible. Debates should now focus on when, not if, regulation can commence. Annexure One explains how the regulatory impact process is followed for MEPS.

### PROPOSAL 1: Australia to match trading partners' MEPS levels

With the completion of the first work program (1999–2001), the practice of encouraging local technical debates is no longer consistent with Government policy. By the end of 2001, NAEEEC will have completed the regulatory impact assessments for the NGRS products identified in the 1992 program. ANZMEC will consider final proposals for those remaining products this year. In the future, Australia will not need to engage in technical debates to determine MEPS levels in isolation from the major world markets.

Case study one illustrates how the absence of an agreed process and the need to determine an appropriate MEPS level for Australia caused extraordinary delays while government and stakeholders strove to reach agreement on those issues.

### Case Study 1 – MEPS for Electric Motors:

Governments first raised the concept of MEPS in 1992. Initial feasibility reports were commissioned in 1993 and updated in 1994. These reports showed that motor MEPS were likely to be feasible and cost effective, but precise levels for Australia were not proposed at that time. In 1997, consultants were commissioned to undertake a detailed market analysis and propose precise MEPS levels. Two options were canvassed: MEPS levels that would have removed either 20 per cent or 40 per cent of the motors that were on the market in 1996. Cost benefit analyses showed both proposed MEPS levels to be highly cost effective.

The lack of a formal framework for consultation and MEPS negotiation between government and industry hindered progress. The consultant report was widely circulated to the major stakeholders (motor manufacturers and importers) in 1998. By 1999, industry had signalled support for the more stringent MEPS levels which would have removed 40 per cent of the models on the market in 1996.

In 2000, a formal RIS was completed, confirming cost effectiveness of the proposed levels. In 2000, a revised test method for motors was also published (AS/NZS 1359.102.3). The revised method essentially provided equivalent results to the US test method (recognised as superior to the European method, which had been used in Australia to date). Both methods are now accepted under the regulatory Australian Standard (AS/NZS 1359.5) with MEPS and prescribed "high efficiency" levels to both test methods published in late 2000. MEPS are scheduled to commence in late 2001, nine years after the initial consideration.

In 1997, USA and Canada regulated MEPS levels for motors (Canada had less stringent MEPS levels for motors from 1995). The Australian proposal for motor MEPS in 2001 (which is somewhat less stringent than the US/Canadian 1997 levels) had progressed to a point where finalising the MEPS levels agreed locally was more desirable than recommencing the process using the policy of adopting world's best practice. The North American levels will be considered for adoption at the end of the motor MEPS stabilisation period (in the second round of MEPS to commence not earlier than late 2005).

**PROPOSAL 2: Australia to consider matching major trading partners' quasi regulatory schemes for potential MEPS and labelling in Australia**

NAEEEC proposes to expand the scope of the policy of matching the best MEPS and mandatory labelling levels of our trading partners. This policy is currently limited to matching the levels specified in regulation in the overseas country. In some economies (or in some economies for particular products), the regulatory tool of minimum energy performance standards is not used (or is not the only tool used) to drive energy efficiency. The culture in those economies is to use voluntary schemes to encourage improved energy efficiency rather than use mandatory MEPS levels contained in law.

In particular, the Japanese "Top Runner" program establishes voluntary performance levels that are voluntarily followed without exception. It is in effect a quasi-regulatory standard. In the USA, the *Energy Star* voluntary program operated by the US Environment Protection Agency results in "defacto" standards for certain products. At present, NAEEEC only uses the MEPS and mandatory labelling levels enforced by the US Department of Energy as a potential target to match MEPS.

NAEEEC wants to assess whether matching the voluntary levels overseas will result in net benefit to the Australian community sufficient to warrant regulating that product under the MEPS or mandatory labelling program.

Case study two illustrates the effectiveness of the NAEEEC policy of matching world's best practice and the consensus approach enabled industry and government to work together in a cooperative fashion. By expanding the MEPS goal from solely regulatory to include matching quasi-regulatory levels, the capacity of the program to deliver consensus outcomes will be enhanced.

**Case Study 2 – Revised Refrigerator MEPS:**

MEPS for refrigerators and freezers in Australia were first seriously proposed in 1992 and a feasibility report published in 1993 showed that these were likely to be cost effective. After lengthy negotiations with industry (mainly over the test method) and disputes over the MEPS levels, the regulation creating MEPS for refrigerators and freezers came into force in late 1999. Australian Governments committed not to change these levels for a minimum of five years.

The 1999 MEPS levels were developed on a statistical analysis of the 1992 Australian market, seeking to affect 50 per cent of the then available models. The delay in implementation meant that the Australian levels for 1999 were significantly weaker than the 1993 US MEPS levels.

In April 1997, the US Department of Energy published revised MEPS levels for refrigerators for implementation in 2001. These essentially meant a 30 per cent reduction in energy from the 1993 US levels for most groups and were therefore substantially more stringent than the Australian 1999 levels.

In late 1999, NAEEEC commissioned an analysis of the US 2001 levels and an initial estimate of these levels under the Australian test method were circulated to industry for comment. As the first product under its new policy of "matching world's best practice", NAEEEC convened a working group to examine the US 2001 MEPS levels in detail. This group drawn from industry, government and consumer bodies commissioned a wide range of work including consultant reports and an extensive testing program on Australian and US refrigerators to confirm the analytical and modelling work undertaken for the project.

After working intensively together throughout 2000, the working group came to a consensus position on new MEPS levels for Australia in 2004 that were equivalent to US 2001 levels. The revised standard, including the new MEPS levels, is due to be published in early 2001 and a RIS will be conducted in early 2001.

**NEW TARGET PRODUCTS – POLICY CLARIFIED**

Products that will be considered for inclusion in the program are included in the table titled "Products recommended for possible inclusion" printed later in this paper. While most of these products are included in mandatory labelling and MEPS programs, some products are only covered by so called "voluntary" or quasi regulatory programs.

As mentioned previously, in designing the strategy for each product, NAEEEP may adopt voluntary measures where regulatory measures do not meet the feasibility criteria or where voluntary schemes augment regulatory measures.

In some cases, a group of products may be targeted for a voluntary initiative. For example, the Galaxy Energy Awards provides promotional support for whitegoods or the Energy Star endorsement label used to identify office and home entertainment equipment that meets certain standards for standby power consumption.

*Australia will match the best MEPS and labelling levels from overseas*

In its 1999 work program, NAEEEC explained that any product subject to the program will have its MEPS levels fixed for a minimum of 4 years. Based on industry comments, NAEEEC understands that industry may not fully understand the benefit matching world's best practice in terms of how long MEPS and labelling levels may apply.

**Case study three – MEPS for electric storage water heaters**

MEPS for electric storage water heaters commenced from October 1999. Australian Governments agreed to maintain the MEPS levels at these levels for at least five years.

Unlike domestic refrigerators and freezers, the MEPS levels for mains pressure electric units (80 litres and larger) were the best in the world when they were introduced in 1999. Indeed, they were not exceeded until those announced by the USA in January 2001 which come into force in January 2004.

Whereas NAEEEC is now proposing a major change for refrigerators and freezers from 2004 to match US practice, the MEPS levels for these water heaters may remain fixed until 2005 or 2006. The more stringent MEPS level of the USA operating from 2004 is the target that Australia seeks to match in around 2005 or 2006.

Case study three illustrates the benefit to industry once a product matches that "best" level; those MEPS will remain fixed until another economy improves upon them. This may mean the levels remain constant for years after the minimum.

Annexure Two describes the MEPS processes and how future MEPS levels can be negotiated within known timetables.

*Australia's regulatory program aims to become the best in the world*

The result of these policy changes will endorse and reinforce the "internationalisation" of the national program. While Australian standards for any particular product will continue to match (and generally not exceed) the best levels of our trading partners, over time the comprehensive Australian program will become the best national energy efficiency program in the world.

**ECONOMIC JUSTIFICATION – NO CHANGE**

NAEEEC is not recommending any change to the economic justification processes required for national regulation-making adopted in 1999.

ANZMEC will only finally approve including a new product after a detailed cost benefit assessment establishes the economic benefit. Australian governments have agreed that every proposal for new legislation be subject to a Regulatory Impact Statement (RIS) and governments will only support legislative intervention:

- ▶ where the community benefit outweighs the costs; and
- ▶ where the objective can only be achieved by regulatory means.

This means that each product nominated in the work program will be considered for inclusion but will be included only after favourable cost benefit analysis within the RIS framework. Stakeholders and the community will have the opportunity to comment on the economic justification presented in the draft RIS. The Commonwealth Office of Regulation Review monitors this process.

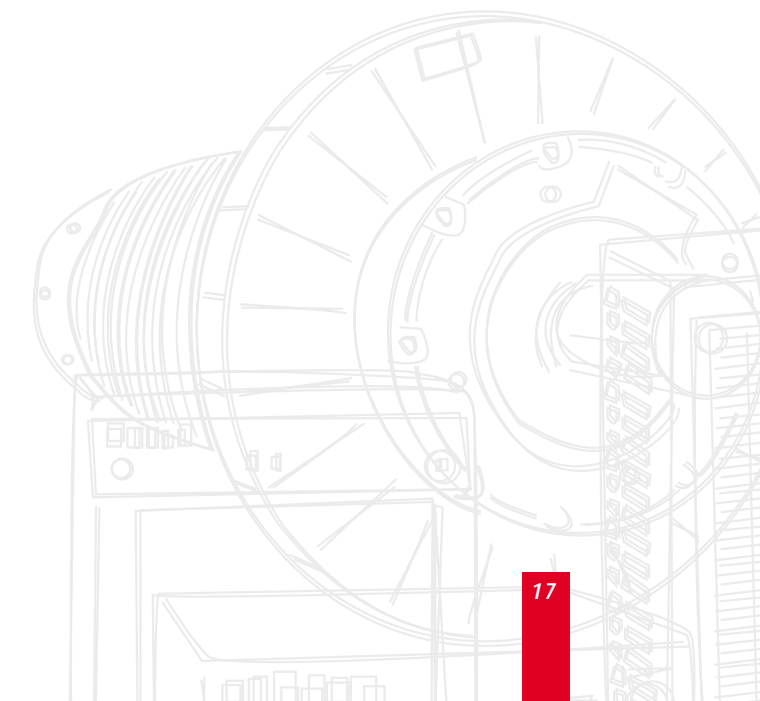
ANZMEC will make the final decision on whether an individual product is included in the program after the cost benefit analysis, community consultation and expert reports are available.

## PRODUCTS IN THE PROGRAM

The following table lists the products that are already included to the program and remain high priorities:

End Use Group	Appliance or equipment type	Energy Type	Current Status
Household refrigeration	Refrigerator, refrigerator-freezer	Electric	Mandatory labelling in place, MEPS implemented in 1999, revised MEPS scheduled for 2004 (equivalent to US 2001)
	Freezer	Electric	Mandatory labelling in place, MEPS implemented in 1999, revised MEPS scheduled for 2004 (equivalent to US 2001)
Commercial refrigeration	Remote refrigeration (compressor not located with cabinet)	Electric	Public plan due released in 2001
	Self-contained refrigeration	Electric	Public plan due for release 2001
Household cleaning appliances	Dishwasher	Electric	Mandatory labelling in place MEPS review due for release in 2001
	Clothes washer	Electric	Mandatory labelling in place MEPS review due for release in 2001
	Clothes dryer	Electric	Mandatory labelling in place MEPS review due for release in 2001
Household cooking appliances	Stoves and cook tops	Electric	Public plan due for release in 2001
Other consumer products	Swimming pool motors	Electric	Public plan due for release in 2001
Heating and cooling	Air conditioner (single phase)	Electric	Mandatory labelling in place. Heat pumps (no cooling) covered from 2001
	Air conditioner (three phase to 65kW cooling)	Electric	Voluntary labelling and mandatory MEPS scheduled for implementation in 2001
	Air conditioner (evaporative)	Electric	Public plan due for release in 2001
Domestic water heating	Storage water heater (≥80 litre, mains pressure)	Electric	MEPS implemented in 1999. Revised MEPS currently under consideration
	Small water heaters (< 80 litre, mains pressure)	Electric	MEPS implemented in 1999 Revised MEPS scheduled for 2004
	Non-mains pressure water heaters (eg gravity fed and coil)	Electric	MEPS plan due for release in 2001
Commercial water heating	Commercial water heating	Electric	MEPS plan due for release in 2001
	Gas boilers	Gas	Public plan due for release in 2001

Lighting	Fluorescent lamp ballast	Electric	MEPS and efficiency marking under development for 2002-3
	Lamps – all types	Electric	MEPS plan due for release in 2001
Office equipment	Personal computer	Electric	Voluntary Energy Star
	Visual display unit	Electric	Voluntary Energy Star
	Printer	Electric	Voluntary Energy Star
	Fax machine (plain paper)	Electric	Voluntary Energy Star
	Photocopier	Electric	Voluntary Energy Star
Home Entertainment	Televisions	Electric	Voluntary Energy Star
	Video Cassette Recorders	Electric	Voluntary Energy Star
Standby power	Consumer products	Electric	Range of product specific measures within the umbrella concept of the "One Watt Initiative"
Industrial & commercial equipment	Distribution transformers	Electric	MEPS plan due for release in 2001
	Air compressors	Electric	MEPS plan due for release in 2001
	Motors	Electric	MEPS and voluntary high efficiency marking scheduled for implementation in 2001



## PRODUCTS PROPOSED FOR POSSIBLE INCLUSION

The following table lists the new products that NAEEEEC believes should be at least considered for inclusion in the program. NAEEEEC considers that these products may meet the selection criteria although they have not been subject to detailed analysis, cost benefit justification or community consultation. This table forms the basis for planning expansion of the program over the next three years. Programs to be considered include mandatory energy labelling, MEPS and endorsement labelling.

End Use Group	Priority	Appliance or equipment type	Energy Type	Current Status
Heating and cooling	2	Central heater/warm air furnaces	Gas	Voluntary (industry) labelling, MEPS in parts of APEC
	2	Space and room heaters	Gas	Voluntary (industry) labelling, MEPS in parts of APEC
	3	Space and room heaters	Solid Fuel	Labelling under consideration (NZ)
	4	3 phase air source heat pumps (no cooling)	Electric	Covered by parts of APEC
	5	Dehumidifiers	Electric	MEPS in Canada
	4	Packaged boilers (hydronic heating)	Gas	Covered by some OECD countries
	4	Non air source heat pumps	Electric	Covered by parts of APEC
	3	Commercial chillers	Electric	Covered by some OECD countries
	5	Furnaces & boilers	Oil	Covered by some OECD countries
Water heating	1	Storage	Gas	Voluntary (industry) labelling, preliminary studies carried out, covered by some OECD countries
	1	Instantaneous	Gas	Voluntary (industry) labelling, preliminary studies carried out, covered by some OECD countries
	2	Storage	Solar	Preliminary studies carried out
	1	Non mains pressure storage	Electric	Preliminary studies carried out, covered by some OECD countries
	5	Storage	Oil	Covered by some OECD countries
	2	Commercial (including unfired)	Various	Covered by some OECD countries, revised US MEPS 2001
	5	Rice cookers	Electric	Covered by parts of APEC

Lighting	4	Compact fluorescent lamps	Electric	Covered by some OECD countries and parts of APEC
	4	Outdoor & street lighting	Electric	Covered by parts of APEC
	3	High intensity discharge	Electric	No MEPS in place but may be worth further investigation
Electronics	1	Televisions	Electric	Covered by some OECD countries and parts of APEC
	2	Video Cassette Recorders	Electric	Covered by some OECD countries and parts of APEC
	2	Other home entertainment	Electric	Energy star, MEPS covered by parts of APEC
	2	Computers and computer peripherals	Electric	MEPS and other targets in parts of APEC
	2	Office equipment (photocopiers, fax)	Electric	MEPS and other targets in parts of APEC
	2	Cable set top boxes	Electric	Energy Star in USA
	2	Plug transformers	Electric	High energy growth projected, covered by some OECD countries
Other	5	Irons	Electric	Covered by parts of APEC
	3	Small motors	Electric	Covered by parts of APEC
	5	Fans	Electric	MEPS covered by parts of APEC
	4	Pumps	Electric	MEPS covered by parts of APEC
	5	Exit signs	Electric	Energy Star in USA



## POLICY CHANGE: COMMUNICATION

### *Commencing the process for a product*

In 1999, ANZMEC agreed to develop, and release for comment, regulatory plans for each new appliance or equipment type to trigger consideration of its inclusion in the program.

The nomination of a specific appliance or equipment type within the potential scope of the program is only the first step to improve and expand the program. NAEEEC will only achieve its objectives for each product if only the most appropriate measures are used, in optimum sequence, and with support of stakeholders.

NAEEEC will develop individual product plans to explain the detail of the regulatory proposal, the inherent trade-offs, compromises and other decisions taken to ensure widespread support for the final plan for any new product. In 2001, NAEEEC proposes to release the first of these plans for commercial and industrial equipment.

Type of Commercial	Industrial Equipment
Commercial refrigeration (separate plans for packaged and remote units)	Distribution transformers
Commercial water heating (and some remaining residential water heating)	Air compressors
Lamps (all types)	Gas boilers
Evaporative air conditioners	

Similar plans will be released in 2002–2004 for the new products targeted for inclusion in the program. All stakeholders will have an opportunity to comment on each of the proposals. The plan will propose the most appropriate combination of measures available under the program and seek comment from stakeholders. In the past, the program has concentrated on mandatory measures though, increasingly, voluntary marketing and information elements are being incorporated into plans for particular products to achieve its overall goal of improving energy efficiency and lowering greenhouse emissions.

While NAEEEC is not recommending any change to this aspect of the program, a clear presentation on the process of MEPS development and implementation is contained in the flowchart in the attachments to this paper.

### *Measuring and evaluating the Program's Success*

In 2000, NAEEEC commissioned an expert to project the likely impacts of all of the regulatory projects contained in the first triennial plan over the period 2000 to 2015. The projection study covers only regulatory (not voluntary) measures included in the expanded and enhanced program.

The study, "Projected Combined Impacts From An Extended and Enhanced Program March 2000", may be found on the AGO website: [www.greenhouse.gov.au/energyefficiency](http://www.greenhouse.gov.au/energyefficiency)

While NAEEEC has undertaken such studies previously on a product-by-product basis, this was the first time that the totality of the program study had been captured in a single report. The study was used to demonstrate the dramatic expansion of the program that should save almost 11 Mt CO<sub>2</sub>-e per annum by 2015 over business-as-usual projections.

This study provided information to demonstrate to stakeholders not only the impact of regulatory actions on products of interest to them but also how that product compared to others within the program.

NAEEEC recognises the importance of testing whether product regulation actually delivers the projected community benefits over time. NAEEEC will publish in 2002 a major study of sales of domestic appliances. This report will be used to show the real greenhouse and energy savings that have been achieved since the national appliance program began in 1992.

Furthermore, NAEEEC will commission experts to evaluate the overall impact of the program on industry and commercial equipment in the first triennial period, 1999–2001. This report will be published in 2002.

### *Consumer Understanding*

NAEEEP is one of the longest running and most visible greenhouse reduction programs operated by governments.

Energy efficiency labelling is justified because it empowers motivated consumers to purchase more efficient, less greenhouse intensive products. NAEEEC has measured consumer understanding of the program and the mandatory label in particular.

Energy efficiency may not be the most important consideration for all consumers buying appliances but it is certainly a key factor for a significant number of consumers. Around 85 per cent of recent or prospective appliance purchasers remember the label (and its key elements). About half use the label when making their purchasing decision while only 14 per cent of consumers do not consider energy efficiency "at all" or "particularly important".

The research that established these figures allows NAEEEC to confidently assert the program has general community confidence. NAEEEC will continue to publish consumer views about the program.

NAEEEC wants to provide stakeholders with an effective opportunity to be actively involved with the program and is committed to undertaking this consultation in an open, transparent way. This paper is a demonstration of that commitment as is the publication of "Achievements 2000", a report of the outcomes of the program for that year.

## NO POLICY CHANGE: TIMETABLE AND PROCESS

In 1999, ANZMEC agreed to fix the time taken to develop and implement the legislative elements of program and to formalise the goal of meeting world best existing MEPS for new appliances and equipment types. The timetable revised and republished in this report is at March 2001.

NAEEEC is not proposing to recommend any changes to the current procedures. NAEEEC wants the system established in 1999 to be given time to settle down. During the next triennial work period, NAEEEC may need to make some procedures for particular products but only after informing affected stakeholders and considering their views.

## FUTURE PRIORITIES

Should ANZMEC accept the above proposals to expand and improve the program, NAEEEC wants all stakeholders to be aware of the impact of those proposals on the existing program. NAEEEC has produced a draft work program commencing in 2002 and continuing through into 2004.

The following list of projects reflects draft priorities and establishes a challenging NAEEEC program for the next three years. The scope of the changes and our commitment to existing projects means that all new work cannot be commenced immediately. NAEEEC has the resources to commence all identified projects within the triennial period and hopes to have substantially advanced its work program within three years given the constraints of the proposed timetable explained in this paper:

## PROPOSED WORK PROGRAM 2002 TO 2004

2002	Monitor international developments in MEPS and labelling for all product types.
	Continue work with Gas industry in Australia to accelerate program development for water heating appliances (residential and commercial).
	Commence MEPS (second round) development of electric motors to broadly align with Canadian and US levels.
	Commence MEPS (second round) development of packaged air conditioner to broadly align with either the North American and Japanese levels currently in force.
	Finalise MEPS development for distribution transformers as negotiated during 2001.
	Finalise MEPS development for residential electric water heaters (other than mains pressure) as negotiated during 2001.
	Finalise MEPS development for commercial refrigeration systems as negotiated during 2001.
	Finalise MEPS development for lamps as negotiated during 2001.
	Expand standby energy consumption program of residential and commercial appliances and equipment (voluntary and mandatory options).
	Examine program options for home electronics (including televisions, VCRs, audio systems etc).
2003	Investigate program options (MEPS, labelling, voluntary measures) for selected office equipment, including computers and computer peripherals.
	Monitor international developments in MEPS and labelling for all product types.
	Commence work with Gas industry in Australia to accelerate program development for space heating appliances (residential and commercial).
	Investigate policy options for small electric motors (<1kW, single phase).
	Investigate policy options for selected heating and cooling equipment including heat pumps and chillers.
	Investigate policy options for selected space conditioning equipment such as non-air source heat pumps and dehumidifiers.
	Investigate policy options for gas and oil fired boiler and water heating systems.
	Investigate policy options for compact fluorescent lamps, HID lighting systems and street lighting.
2004	Monitor international developments in MEPS and labelling for all product types.
	Complete all of the above studies.

The proposed NAEDEC work program may be further expanded as a result of decisions arising from the National Energy Strategy and other Commonwealth Government policy initiatives.

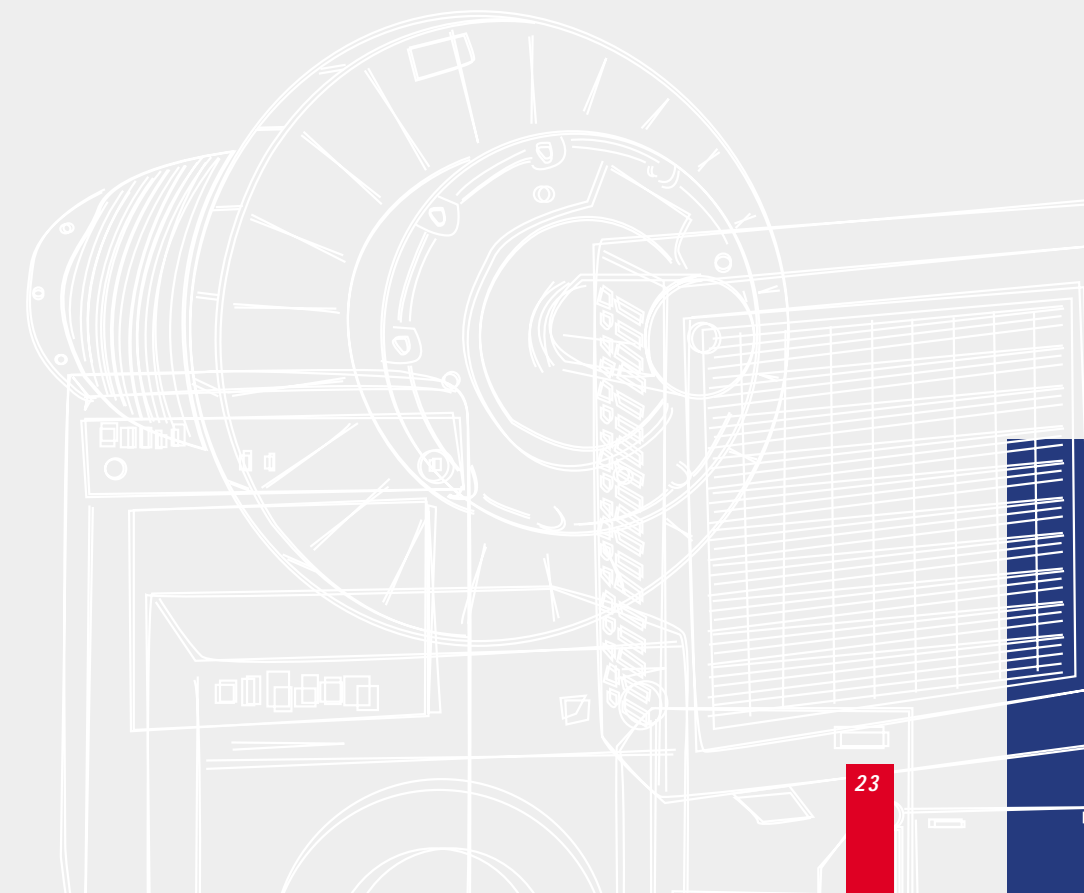
## YOUR EVALUATION

NAEDEC would appreciate your views on these proposals to improve and expand the program. Your views, together with those of other interested persons, will be used to further refine the proposals contained in this discussion paper for submission to ANZMEC.

You can express your views in a number of ways. You can write to the Australian Greenhouse Office (using the final page of this discussion paper). You can email comments to the contact officer at the following email address: [energyefficiency@greenhouse.gov.au](mailto:energyefficiency@greenhouse.gov.au).

You can communicate your views through your industry association or representative group. The Australian Greenhouse Office on behalf of NAEDEC will seek the views of all stakeholder representative groups before the industry forum. NAEDEC members will undertake extensive consultation with representative organisations and key stakeholders aiming to complete these consultations by 30 April 2001.

ANZMEC Ministers may consider the report from NAEDEC in late July 1999. This report will contain the revised proposals outlined in this discussion paper together with a compilation of stakeholder comments. Thank you for taking the time to read this discussion paper.



Annexure One

**REGULATORY IMPACT STATEMENT CRITERIA**

*Principles Used When Advocating Regulation*

In Australia, the national energy efficiency program for products is generally regulatory in nature. Australian governments are committed to the principle that any potential national regulation should be the most effective and the most efficient option of achieving the desired policy goal. Legislative proposals (even for environmental and social policy goals like greenhouse gas mitigation), which impact on the way people and industry behave, must be subject to the formal impact assessment process embodied in the Regulatory Impact Statement (RIS). The RIS process is explained in great detail in documents produced by the Commonwealth Office of Regulation Review.

This annexure discusses the more specific issue of how the energy policy tools of MEPS and mandatory labelling are subject to the RIS process to ensure the best regulatory outcome for the community. It explains the criteria used by NAEEEC to determine the preferred regulatory option amongst a range of differing regulatory options within the RIS framework.

Any RIS must identify the alternatives to “black letter” law that could wholly or partly achieve its objective. These alternatives are examined using the economic tool of cost benefit analyses to establish the positive and negative effects experienced by different parties when implementing a proposal. Mandatory labelling for example addresses the market failure of poor information while MEPS is a tool directed at addressing the problems of split incentives (where the purchaser of the equipment does not pay the

energy bills) and greenhouse externalities (where government sets environmental goals beyond which the market would otherwise deliver).

Where MEPS and labelling offer the best option in comparison to alternatives to regulation, NAEEEC will go further and establish the most effective and efficient regulatory option. Where a number of MEPS scenarios (combinations of levels and start dates) are contemplated, NAEEEC will strive for the regulatory option which has the highest net public benefit.

In other words, NAEEEC will examine a range of options within the scope of regulation to ascertain the highest positive value of benefit minus cost to the community, provided that:

- ▶ The benefit cost ratio is 1 or greater (without assigning monetary value to greenhouse emissions but allowing for uncertainty); and
- ▶ All other relevant criteria (eg product quality, effective market competition and consistency with Australia’s trade objectives) are met.

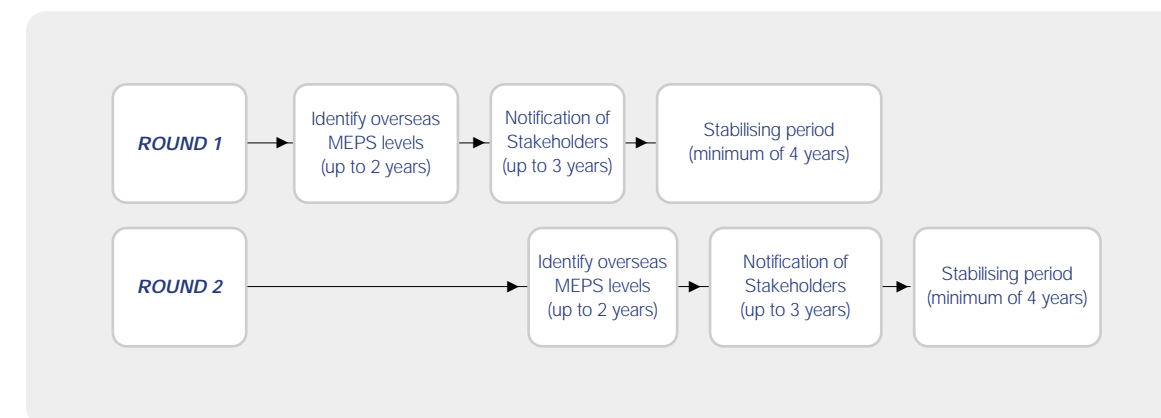
Stakeholders should note that this process looks at overall benefits to the entire community. It even allows for the net costs to some stakeholders to be outweighed by the net benefits to others within the community. In the context of product energy efficiency, the process assumes that the additional costs incurred by suppliers (manufacturers, importers and retailers) in developing and selling energy efficient products will be passed onto the end user.

Annexure Two

**MINIMUM ENERGY PERFORMANCE STANDARDS**

*An iterative process*

The following scheme is an attempt to show how future rounds of MEPS can be developed to seamlessly replace existing MEPS in a planned fashion.



Note: For round 2 and subsequent rounds, the end of the notification period can be planned to coincide with the end of the stabilising period of the previous round, but this can also occur later (but not earlier).

**Identification of overseas MEPS levels**

This stage includes:

- ▶ a review of current and proposed overseas MEPS levels;
- ▶ identification of countries from which the proposed MEPS levels are being drawn;
- ▶ detailed technical analysis of the MEPS levels including equivalence under AS/NZS test methods;
- ▶ collaboration with stakeholders to develop equivalent levels on a consensus basis;
- ▶ development of changes to AS/NZS test method (if any); and
- ▶ undertake Regulatory Impact Statement which includes cost benefit analysis.

**Notification of stakeholders**

This is the minimum formal notice period that government provides to industry on the forthcoming MEPS levels and the implementation date. The maximum period is three years, which will be provided where there is significant local production and little advanced warning of MEPS. Less formal notice is generally required where most products are imported or already comply with the proposed MEPS level.

**Stabilising period**

This is the minimum period that government guarantees that the MEPS levels will remain in force without change. Four years is generally the minimum, but longer periods could be allowed where there is significant local production or where Australian MEPS levels are already at or close to world’s best practice.

The first two stages could be as long as five years but NAEEEC will strive to reduce these periods to the shortest time acceptable to all stakeholders.

## NAEEEC MEMBERS

### *Member organisations*

The **Australian Greenhouse Office** is the lead Commonwealth agency for greenhouse matters. The Australian Greenhouse Office is responsible for overseeing 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 chairs NAEEEC and others provide secretarial and project support for its activities.

The NSW **Ministry of Energy and Utilities** operates a regulatory framework aimed at facilitating environmentally responsible appliance and equipment energy use. The Department is represented on the ANZMEC Energy Management Task Force through which the appliance and equipment related elements of the National Greenhouse Strategy are being 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.

The **Sustainable Energy Authority Victoria** is a state government agency with a charter to facilitate energy efficiency and the development and use of renewable energy to achieve environmental and economic benefits for the Victorian community and to contribute to the reduction of greenhouse gas emissions.

The Queensland **Department of Minerals and Energy** Electrical Safety Office has responsibility for energy efficiency initiatives in this state.

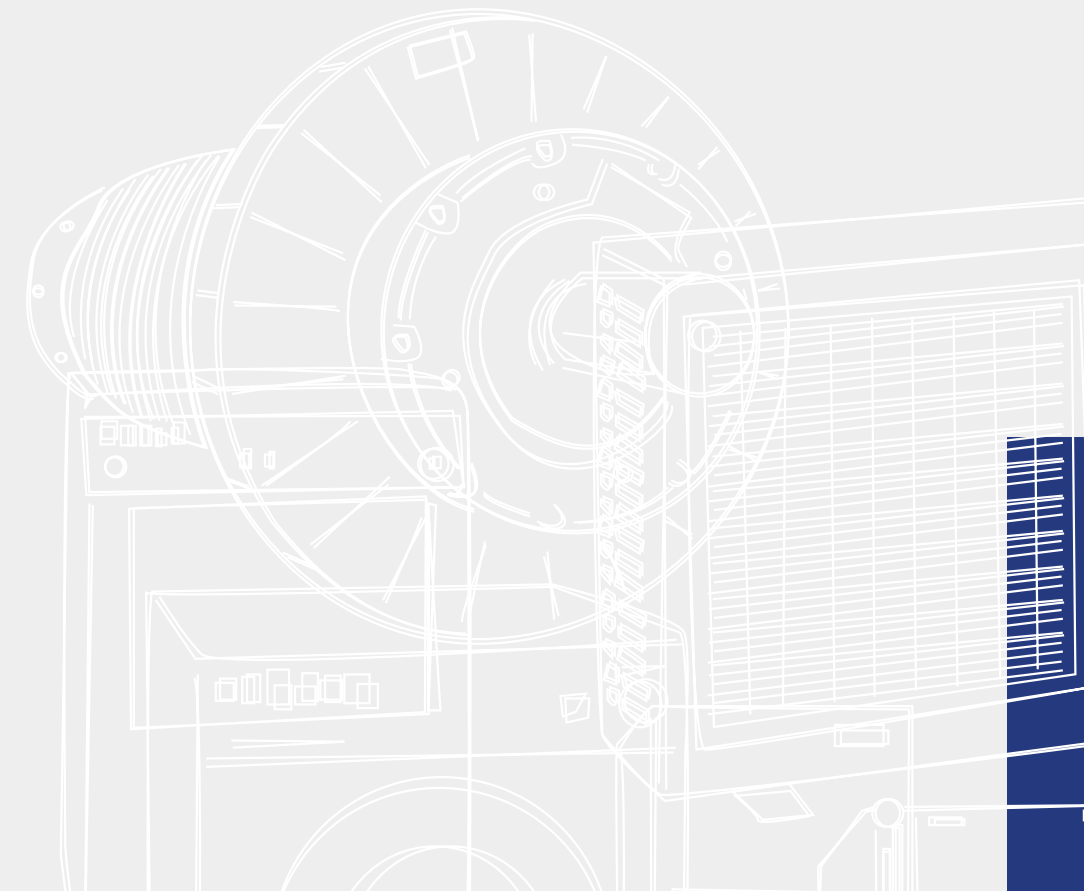
The Queensland **Environmental Protection Agency** is the lead agency for renewable energy and is also responsible for energy efficiency initiatives in this state.

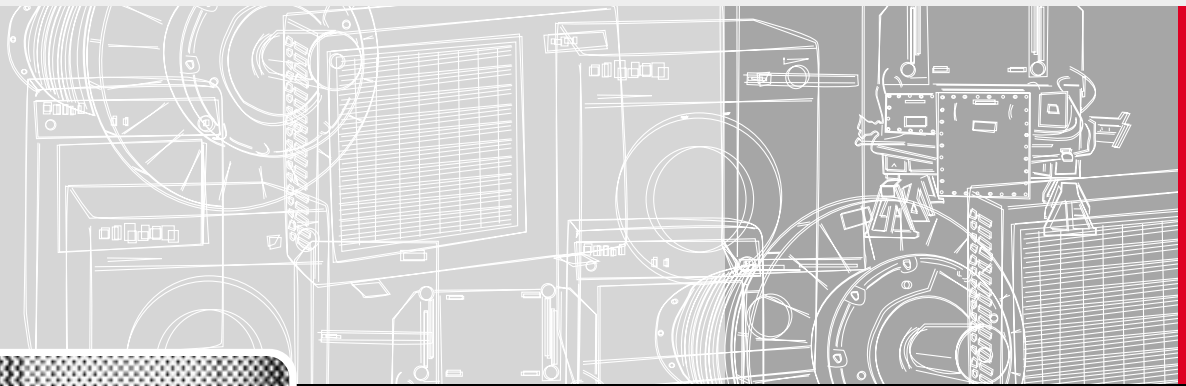
The Western Australian **Office of Energy** seeks to promote conditions that enable the energy needs of the Western Australian community to be met safely, efficiently and economically.

The South Australian **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 **Energy Efficiency and Conservation Authority** is an independent agency of the New Zealand Government charged with identifying and implementing practical measures to reduce energy consumption – “Helping New Zealand use energy wisely”.

NAEEEC also has, as members, the Tasmanian **Office of Energy Planning and Conservation**, the ACT **Department of Urban Services** and the Northern Territory **Department of Transport and Works**.





For more information contact:

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Email: [energy.efficiency@greenhouse.gov.au](mailto:energy.efficiency@greenhouse.gov.au)

or any member organisation working  
on the National Appliance and Equipment  
Efficiency Program.