

**Consultation
Regulation Impact Statement:
National Legislation for Appliance and Equipment
Minimum Energy Performance Standards (MEPS)
and Energy Labelling**

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Executive Summary

Australian governments have long supported policies that encourage more efficient use of energy for a range of reasons including energy security, economic efficiency, ecologically sustainable development and greenhouse gas reduction. The emphasis in the current policy setting is on greenhouse gas reduction and assisting households to transition to a low-carbon future. Energy efficiency measures are a key element of the Government's approach, in addition to an emissions trading scheme and the renewable energy target.

Energy labelling and Minimum Energy Performance Standards (MEPS) under the Equipment Energy Efficiency (E3) program seek to address problems relating to lack of information on the energy performance of appliances and equipment and incentives that may result in poor energy efficiency choices.

The MEPS and labelling program is operated on a national basis through co-operative action by State and Territory Governments. This approach recognises that the appliance and equipment market in Australia is a single unified market, with firms manufacturing and distributing products nationally. However, the rapid expansion in the program in response to policies to reduce greenhouse gas emissions has highlighted problems with the program in its current form. The problems relate to:

- inconsistencies and inefficiencies in the administration of the program;
- the monitoring of program impacts;
- the scope of the program and appropriate targeting of products and efficiencies; and
- the risk of unintended environmental problems, which the program has no direct capacity to address.

Inconsistencies in process and application add considerable complexity and cost to the administration of the program relative to a single national approach. They also raise compliance costs for business and have the potential to create added uncertainty and risk. Delays to implementation of the energy efficiency measures under the program also reduce the benefits expected to flow to consumers of energy using appliances and equipment.

The current approach is also relatively inflexible. The efficiency and effectiveness of the program is limited by the fact that the current regulatory framework does not provide for coverage of products using energy forms other than electricity or non-energy-using products, even though such products impact on energy efficiency and greenhouse gas emissions.

The regulatory measures under the program, which are designed to improve energy efficiency, can at times have unintended adverse impacts. Dangerous or toxic materials may be used to improve the energy efficiency of a product, such as mercury in energy efficient lighting.

Where alternative regulatory powers would need to be used to address issues that are beyond the scope of the current MEPS and labelling program, it may be more cost-effective to adopt a more comprehensive and streamlined approach such that all issues

could be dealt with under a single regulatory framework, consistent with other environmental regulation.

Options for reform

Three broad options are available for improving the regulatory framework. There is also a range of approaches within these categories that could be considered:

1. maintain the current regulatory framework, but address inconsistencies to the extent possible;
2. co-regulation, in which the states, territories and the Commonwealth all pass identical legislation and regulations. Co-regulation could be led by a Territory under the Territories power (option 2a), State-led (2b), or Commonwealth-led (2c);
3. Commonwealth regulation, either through a referral of power (option 3a) or use of the constitutional power of the Commonwealth, with the responsible minister bound by Ministerial Council on Energy (MCE) or Council of Australian Governments (COAG) decisions (3b), or with the minister not bound (3c).

In practice, expansion of the scope of the program could be achieved only through the development of new regulations, suggesting that a new regulatory approach is needed. A simpler and more streamlined approach offers the chance of delivering the greatest net benefit to the community.

The forms of co-operation and the freedom that jurisdictions could retain for unilateral action vary considerably. A truly national approach would minimise the risks of unilateral action and inconsistency across jurisdictions. A single national regulator to oversee the program is more likely to result in a consistent approach to compliance and monitoring. It also means suppliers need only deal with one regulator rather than a number of regulators. Commonwealth involvement would also streamline the use of border controls, where these provide the simplest and most cost effective method for ensuring compliance and enforcement of the energy efficiency measures.

Use of Constitutional Commonwealth regulation with the minister not bound by inter-jurisdictional committee (3c) offers the greatest consistency and the most streamlined regulatory, governance and enforcement arrangements, and the greatest certainty for business. On the other hand, option 3b would have the advantage of formalising jurisdictional participation in the decision making process. It may also facilitate co-operative arrangements for delivery of services such as registration, within a unified regulatory structure in which the Commonwealth would be the sole regulator. Options 3b and 3c have somewhat different advantages and disadvantages, but either could provide the framework necessary to increase the efficiency of the energy labelling and MEPS program.

Consultations

DEWHA published a *Discussion Paper* prior to the preparation of this Consultation RIS, held a series of six public forums in capital cities and received 25 written responses.

These indicate that the regulatory and administrative problems identified in this RIS are indeed significant issues for stakeholders, particularly with regard to the need for national consistency. There was also broad support for the extension of the scope of the program to products using other energy forms and selected non-energy-using products. Opinion differed about the value or cost of requiring the disclosure of information in advertising, on whether local or international test standards should be used, and the value of greenhouse-related information.

Of the ten responses from manufacturers, importers or industry associations to the question *What legislative model would your business/industry prefer, and why?:*

- eight preferred Commonwealth regulation (either referred or Constitutional);
- one importer preferred self-regulation to mandatory regulation; and
- one association preferred maintaining the current legislative model (but with revised and expanded legislation to achieve better national consistency), on the grounds that it would retain state expertise in the regulatory development process and registration facilities, and also to avoid problems that have arisen with other schemes administered solely by the Commonwealth.

The publication of this Consultation RIS marks the beginning of a formal consultation period. Written submissions are invited, up to 1 March 2010. As the process is a formal one, submissions are generally made public, except for information that is indicated as confidential by the respondent

Public forums during the consultation period are planned for Sydney, Melbourne, Adelaide, Perth, Brisbane and Canberra.

All submissions and stakeholder views on this Consultation RIS will be taken into account in the preparation of the Decision RIS. This will be reviewed by the Office of Best Practice Regulation (OBPR) before it is forwarded to Ministers to assist in their deliberations. The outcomes of the public forums and the content of the written submissions will be summarised and made public subsequent to the finalisation of the Decision RIS.

Recommendations

On the basis of the analysis in this RIS, it is recommended that:

1. There be a transition to a new national regulatory framework for the national energy labelling and MEPS program.
2. To ensure national consistency and efficiency of implementation, now and in the future, the preferred framework should be based on Commonwealth regulation (i.e. options 3a, 3b or 3c).

3. If this proves impractical, regulatory options in which the Commonwealth plays a lead role should be explored (i.e. options 2a or 2c).
4. The new regulatory framework should retain the provisions to cover any product using electricity, and also contain enabling provisions to implement each of the following measures:
 - A. coverage of products using energy forms other than electricity;
 - B. coverage of non-energy-using products which impact on the energy use or efficiency of regulated products;
 - C. labelling (or otherwise indicating) the greenhouse gas impacts of covered products;
 - D. setting greenhouse gas-intensity standards for covered products; and
 - E. minimising the (non-energy) environmental impacts of regulated products.
5. The implementation of specific measures under the provisions above should be subject to regulation impact assessment on a case by case basis.
6. The new regulatory framework should include requirements for suppliers of registered products to report annually on the national import, sales or supplies of each registered model (Measure F).
7. The new regulatory framework should include requirements to display label images or key data prominently when products are displayed, promoted, marketed, sold or supplied at any point in the supply chain (including internet) and in any product specification, brochure, advertising, magazine, catalogue and website where a registered product is profiled (Measure G; similar to WELS requirements).
8. The new regulatory framework should define 'sale' and 'supply' in a way that:
 - a. is consistent in all jurisdictions;
 - b. covers all imports of products (other than previously owned household products for own use);
 - c. covers all modes of transfer of ownership of new products to end users in Australia (whether retail sale, wholesale, hire, lease or other);
 - d. covers situations where the product is delivered to end users as part of a service without actual change of ownership; and
 - e. impacts on the initial purchase and period of use, but not on used, resold or refurbished product (unless offered as new).
9. The new regulatory framework should ensure that:
 - a. agreed measures take effect in all jurisdictions at the same time;
 - b. no jurisdiction can implement energy labelling or MEPS requirements that are different from those in other jurisdictions; and
 - c. 'grandfathering' provisions are harmonised across jurisdictions, and across programs (i.e. WELS, energy labelling and MEPS) in cases where a product type is subject to more than one mandatory program.

10. The new regulatory framework should provide for control of product imports as a means of enforcing compliance.
11. The new regulatory framework should ensure consistency across all jurisdictions with regard to:
 - a. offences (whether civil, criminal or both); and
 - b. penalties (preferably as penalty points rather than fixed monetary amounts).
12. The new regulatory framework should enable any jurisdiction to initiate and complete enforcement action with regard to any product supplied in its territory, irrespective of where the product is registered (with the Commonwealth having this power with regard to products supplied in the Territories).

Submissions on this Consultation RIS

Submissions are invited on any of the material in this document, but particularly the following questions:

1. Which recommendations do you support? (for detailed responses, please refer by number).
2. Which recommendations do you not support? (Please give reasons).
3. If there is to be a new framework based on Commonwealth regulation, would you prefer option 3a (referral of State powers), option 3b (use of the constitutional power of the Commonwealth, with the Minister bound by MCE or COAG decisions), or option 3c (use of the constitutional power of the Commonwealth, with the Minister not bound as in 3b)? Why?
4. If there is to be a new framework based on co-regulation, would you prefer option 2a (territory-led), option 2b (state-led) or option 2c (Commonwealth-led)? Why?
5. Will the recommended approach achieve national consistency?
6. Will the recommended approach improve compliance and enforcement?
7. Will the recommended approach lower costs?
8. Will the recommended approach deliver the greatest net benefit to the community?
9. Are there other problems or issues facing the energy labelling and MEPS program, which have not been identified in this RIS? If so, how should these be resolved?
10. What costs would be anticipated if the proposals to expand scope of energy labelling and MEPS (for example, with respect to coverage of non-electric products or non-energy products) were applied to your product?
11. What would be the costs to your company or industry of reporting annual sales of each product you have registered for energy labelling or MEPS (Measure F)?
12. What would be the costs to your company or industry of including energy labelling information in media other than the physical label (Measure G)?

Submissions on this Consultation RIS should be forwarded, no later than 26 February 2010, to GEMS@environment.gov.au or to:

GEMS Legislation Taskforce
Renewables and Energy Efficiency Division
Department of the Environment, Water, Heritage and the Arts
GPO Box 787
Canberra ACT 2601

Glossary

ACA	Australian Consumers Association
ACCC	Australian Competition and Consumer Commission
AEEMA	Australian Electrical and Electronic Manufacturer Association
AGA	Australian Gas Association
AGO	Australian Greenhouse Office
AiG	Australian Industry Group (successor to AEEMA)
AMEC	Australian Minerals and Energy Council (of Ministers)
ANZMEC	Australian and New Zealand Australian Minerals and Energy Council (successor to AMEC)
APP	Asia-Pacific Partnership
AS	Australian Standard
AS/NZS	Australian and New Zealand Standard
BAU	Business as Usual
BCA	Building Code of Australia
CAFÉ	Corporate Average Fuel Efficiency
CCEC	Co-ordinating Committee on Energy Efficiency (AMEC officials group)
CESA	Consumer Electronics Suppliers Association
CFL	Compact Fluorescent Lamp
COAG	Council of Australian Governments
CPRS	Carbon Pollution Reduction Scheme
DCC	Department of Climate Change
DEWHA	Department of the Environment, Water, Heritage and the Arts
DPIE	Department of Primary Industries and Energy
DR	Demand Response
E3	Equipment Energy Efficiency (Committee and Program)
EANSW	Energy Authority of NSW
EES	Energy Efficient Strategies
GAMAA	Gas Appliance Manufacturers Association of Australia
GEMS	Greenhouse and Energy Minimum Standards
GWA	George Wilkenfeld and Associates
MCE	Ministerial Council on Energy (successor to ANZMEC)
MEPS	Minimum Energy Performance Standards
MRA	Mutual Recognition Act
MRET	Mandatory Renewable Energy Target
NAEEEC	National Appliance and Equipment Energy Efficiency Committee
NAEEEP	National Appliance and Equipment Energy Efficiency Program
NATA	National Association of Testing Authorities
NEM	National Electricity Market
NFEE	National Framework for Energy Efficiency
NSEE	National Strategy on Energy Efficiency
NR	No Regulations case
OBPR	Office of Best Practice Regulation
OP	Off-peak (electricity tariff)
ORER	Office of the Renewable Energy Regulator
PC	Productivity Commission
PR	Proposed Regulation case

RECs	Renewable Energy Certificates (as determined by ORER)
RET	Renewable Energy Target (successor to MRET)
SA	Standards Australia (successor to SAA)
SAA	Standards Association of Australia
TTMRA	Trans-Tasman Mutual Recognition Act
WELS	Water Efficiency Labelling and Standards Scheme

1. The Problem

Australian governments have long supported policies that encourage more efficient use of energy for a range of reasons including energy security, economic efficiency, ecologically sustainable development and greenhouse gas reduction. The emphasis in the current policy setting is on greenhouse gas reduction and assisting households to transition to a low-carbon future (Appendix 1). Energy efficiency measures are a key element of the Government's approach, in addition to an emissions trading scheme and the renewable energy target.

End users, whether householders or businesses, demand energy services (e.g. heat, cold, light and power) rather than energy (e.g. electricity or natural gas). There is typically a choice between consuming more energy with a less efficient appliance, or less energy with a more efficient appliance. In many cases the more efficient appliance costs no more, but even if it has a higher capital and installation costs it may still be the preferable choice if it saves enough in expected energy costs (with appropriate discounting for time and risk).

Current energy prices do not fully reflect the cost of environmental pollution associated with greenhouse gas emissions and a range of cross-subsidies exist, particularly in the retail sector. Even if energy prices were fully cost-reflective, end users might fail to adopt energy efficiency improvements that are cost-effective for them. There are several levels of potential failure in the markets for energy services that may result in consumers making poor choices in relation to the energy efficiency of the appliances and equipment they buy, including:

- 'Imperfect information — markets may under supply energy-efficient technologies and services because consumers (and sometimes vendors) do not have access to sufficient or accurate information about their energy efficiency options. Without information buyers are not able to make fully informed choices.
- Split incentives — markets may under supply technologies and services because the person purchasing an energy-using technology is different from the person who benefits from its use, and the incentives facing the purchaser differ from those of the user. A landlord, for example, may not take full account of the running costs when making decisions about the installation of appliances and equipment.
- Bounded rationality — in an ideal world, individual consumers and producers would have sufficient information and the ability to process that information, to make the most appropriate decisions. But individuals are limited in their ability to obtain and process complex information and to handle the uncertainties that invariably arise in a dynamic and evolving operating environment. In this sense, their rationality is said to be bounded' (PC 2005).

Energy labelling (both voluntary and mandatory) and minimum energy performance standards (MEPS) under the Equipment Energy Efficiency (E3) program are the main vehicles for addressing these market failures in the appliance and equipment market. However, the rapid expansion in the program in response to greenhouse gas reduction policy has highlighted problems with the program in its current form. The problems relate to:

- the administration of the program;
- the monitoring of program impacts;
- the scope of the program and appropriate targeting of products and efficiencies; and
- the risk of unintended environmental problems, which the program has no direct capacity to address.

Administration problems

The MEPS and labelling program is currently jointly funded and administered on a national basis (and in New Zealand) using a cooperative approach. Most of the States and Territories rely on laws relating to electrical products for implementation of the standards and labelling requirements. Other regulations, including Australian Government regulations, may be called upon where necessary for effective and efficient implementation of the requirements, but this is not a standard element of the current regulatory framework.

The program originally started with five products, but now covers 14 product groups and includes over 31 000 registered models. Another 4 products are being investigated for their suitability for inclusion in the program. As the scope of the energy labelling and MEPS program increases, so does the number of administrative and regulatory ‘events’ that need to occur in each State and Territory, adding considerable complexity and cost to the administration of the program relative to a single national approach.

Frustrated with the time it can take to achieve national consensus, some governments have sought to impose specific requirements in their jurisdiction. South Australia, for instance, considered accelerating the rate of increase in air conditioner MEPS levels faster than the nationally agreed timetable, but was initially persuaded to abandon the proposal after strong representations from the air conditioner industry and from some of the other states.

In 2009 the Queensland Government unilaterally adopted higher MEPS levels for some classes of air conditioner, to apply in that state only. This was a significant deviation from the national program in that the action was taken without a Regulation Impact Statement (RIS) and required the Queensland Government to gazette a temporary exemption under national mutual recognition provisions.

In December 2009 the South Australian Government also gazetted requirements for air conditioners to be sold in SA from 1 January 2010, that differ from the nationally agreed program.¹ A Fact Sheet announcing the changes states that ‘From 1 January 2010, South

¹ http://www.governmentgazette.sa.gov.au/2009/december/2009_094.pdf.

Australia will have the highest energy efficiency standards for window wall, split system and ducted air conditioners in the country.²

Such actions have the potential to undermine the integrity of the program, and fail to recognise that appliances and equipment are sold in a national market. They also impose a significant compliance burden on affected industries, potentially reducing the benefits delivered by the program.

National consistency has also sometimes been compromised in practice by the inability of all jurisdictions to enact agreed regulation at the same time. This creates uncertainty and adds risk for suppliers captured by the program.

Delays in the publication of Australian Standards, in the completion of regulatory impact assessments and MCE approval processes, and timetables that may sometimes be unrealistic in the first place can also lead to departures from agreed implementation dates.

The program also suffers from a range of problems that arise from inconsistencies in the approach taken by each jurisdiction. Four states offer product registration service —New South Wales, Victoria, Queensland and South Australia. New Zealand also participates in the program and offers registration. Registration rules and processes are reasonably consistent, but there is some variation in the fees, enforcement methods and penalties as well as differences in the treatment of ‘grandfathering’ of individual models.

There are key definitional differences, such as in the meaning of 'supply', which means there is variation in the rules which industry faces and the application of those rules across the jurisdictions. The level of enforcement varies from jurisdiction to jurisdiction depending on resource availability and government priorities. Even slight differences add complexity, can be confusing and add to the overall cost of complying with and administering the system.

Compliance with stated energy performance levels can be determined at various points in the production and distribution chain. For products that are not manufactured in Australia, and which are widely distributed once imported – such as lamps – the most efficient and cost-effective point of compliance checking is at the border. Large shipments can be checked before they enter the wholesale and retail distribution system, after which detecting non-compliance and tracing those responsible becomes much more difficult and expensive. An increasing share of appliances and equipment sold in Australia are imported. However, because there is no Commonwealth regulation under the current regulatory framework enforcement of compliance with the MEPS and labelling requirements at the border cannot be readily achieved. This reduces the effectiveness of the program and likely adds to compliance costs.

Under the current system, offences relate to the sale or supply of products. This means that non-compliant products can still be legally imported for the importer’s own use. This is not a significant problem in many sectors, but where products are of a high value (e.g. distribution transformers), some companies consider it more cost effective to directly

² http://www.dtei.sa.gov.au/_data/assets/pdf_file/0015/44214/Air_conditioner_-_fact_sheet_for_consumers.pdf.

import non-compliant products than to purchase from local suppliers who would be obliged to offer only compliant products. This distorts competition and undermines the integrity of the program.

Monitoring

It is difficult to monitor the effectiveness of the program due to difficulties in obtaining sales data. Jurisdictions can only require reporting of information specific to their jurisdiction so there is no way to obtain information on a national basis. Consequently even jurisdictions which had the power to require the reporting of compliance information have abandoned it.

Instead the E3 Program purchases sales data from a market monitoring company and uses consultants to match model numbers to the register. The arrangement only covers products that are sold primarily or substantially through retail channels: whitegoods and air conditioners. This approach has reasonably high coverage for some products but lower for others, and no coverage at all for industrial equipment supplied directly from manufacturers or importers to end users.

The inability to monitor the program effectively makes enforcement difficult, potentially reducing the effectiveness of the program. It also makes it difficult to evaluate the cost effectiveness of the program because it is often not possible to accurately measure the actual costs and benefits of the program.

Problems relating to the scope of the program

The program currently applies to electrical products only (while MEPS for gas-fired water heaters are being developed only a few States have the power to regulate for it). Yet market failures in relation to appliances and equipment apply equally whether the products are operated using electricity or an alternative fuel. Many appliances, particularly those used for water heating, space heating and cooking, can use a range of fuels, including natural gas and liquefied petroleum gas. Separate regulations would need to be used to address the energy efficiency of these products. This adds an unnecessary layer of complexity to the program.

Issues of energy efficiency extend beyond the design of appliances and equipment themselves, and the form of energy they use. Related products, such as the ductwork for air conditioners, can have a major impact on product performance. Control systems, which may be sold separately but connected to appliances or equipment can also impact on their energy performance. Claims made about the energy performance of products are subject to the *Trade Practices Act 1974*, but there is no consistent standard or guidelines for the provision and disclosure of energy performance information. This has the potential to undermine the benefits that can be achieved from the E3 program.

A key objective of the E3 program is to contribute to Australia's efforts to reduce greenhouse gas emissions. Fuel sources vary in their greenhouse gas intensity. However, the program targets energy efficiency not greenhouse efficiency. The program does not have provisions to apply greenhouse gas intensity labelling or greenhouse gas intensity

standards. Consequently, buyers cannot readily compare the greenhouse emissions associated with products using different fuels. This means that the program does not directly address information asymmetries and perverse incentives related to the greenhouse gas intensity of appliances. Such information may become increasingly valuable as consumers become more aware of the importance of their greenhouse footprint and see value in reducing it..

Labelling is intended to make reliable information on energy use and, potentially, greenhouse impacts, available at the points in the decision process where it can influence the purchase decision. The average buyer uses multiple sources of information in making a purchase decision, including showrooms and advertising material through printed and electronic media (including the internet). Many retailers provide information on the energy consumption and energy efficiency rating of the products they sell in advertising material on a voluntary basis. (Where relevant, they are required to provide water efficiency labelling information under the WELS Act). This information is not necessarily in the same format as the physical label applied to products.

It is not possible to determine how early in the information search process products may be short listed, or a final purchase decision made. However, currently there is no capacity to require suppliers to provide energy efficiency information other than directly with the product. It is possible that this hinders informed decision making.

Associated environmental impacts

The current regulatory approach targets energy efficiency. However, some methods for improving energy efficiency may result in adverse impacts to the environment or health, such as increasing the mercury content of fluorescent lighting products in response to more stringent energy efficiency standards or noise pollution associated with heat pump technology. Such negative externalities are not currently captured by the E3 program because it does not incorporate a power for addressing issues not directly related to energy efficiency. Such issues are dealt with using other regulations such as standards or special legislation.

As MEPS requirements expand and become more stringent the risk of perverse outcomes may also increase. Relying on the standards process or on special legislation is cumbersome and slow. If this aspect of the program is not addressed it could potentially increase the risk of the program creating unintended adverse impacts on environmental or health outcomes.

2. Objectives

Australia has agreed under the Kyoto Protocol to contribute to global efforts to reduce greenhouse emissions. The Government has decided to cap emissions and use an emissions trading scheme as the main vehicle for addressing emissions. It has also decided to adopt complementary measures, including energy efficiency measures, where such measures can be demonstrated to be beneficial.

The general objective of this proposal is to contribute to Australia meeting its obligations under the Kyoto Protocol and any subsequent international agreements, by:

- bringing about reductions in greenhouse gas emissions from the use of appliances and equipment below what they are otherwise projected to be;
- reducing the cost of abatement;
- assisting households to transition to a low-carbon future; and
- promoting national consistency and streamlined and simplified administrative and regulatory processes.

3. Options

This chapter assesses a range of regulatory options to address the problems identified in the previous chapter, as well as a number of measures that could be implemented under those regulatory options.

Options for achieving national consistency

The state, territory and Commonwealth governments have different powers, so the impact of regulation implemented by each has inherent differences. The Commonwealth Government has powers to make regulation for the entire country with respect to a limited number of matters set out under section 51 of the Australian Constitution.

The states cannot independently regulate interstate or international trade, and can only regulate the activities of corporations on a national basis through cooperation with other states. The Commonwealth can regulate the activities of corporations but not the activities of un-incorporated entities like sole traders.

Table 1 sets out the powers of state and Commonwealth governments to regulate a range of matters relevant to this RIS. Most aspects of the energy labelling and MEPS program involve both entities and activities, and the program as a whole could potentially be linked to international treaties (e.g. for the reduction of greenhouse gas emissions), so it could be regulated under a range of powers.

Table 1. State, territory and Commonwealth regulatory powers

	State and territory governments (a)	Commonwealth government (b)
Powers to regulate entities		
Un-incorporated entities (e.g. businesses constituted as sole traders or partnerships)	Yes	Not directly
Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth (e.g. wholesalers and large retailers)	No	Yes: Corporations Powers 51(xx)
Powers to regulate activities		
International trade	No	Yes: Corporations Powers 51(xx) and Trade and Commerce Powers 51(i)
Interstate trade	Yes – in conjunction with other states	Yes: Corporations Powers 51(xx) and Trade and Commerce Powers 51(i)
Trade within State boundaries	Yes	Only if by a corporation or if External Affairs Power invoked
Installation of non-compliant products	Yes	No, unless by a corporation
Powers to regulate other matters		
To satisfy the obligations of an international treaty	No	Yes: External Affairs Powers 51(xxix)
Incidental matters (e.g. compliance and enforcement provisions)	Yes	Yes: Incidental powers 51(xxxix)

(a) Commonwealth's Territories Power enables it to regulate for all matters within the power of state governments, but only within the borders of a territory. (b) Relevant section of Australian Constitution indicated.

There are three broad governance options available for implementation of the MEPS and labelling program with some variation within the categories available. These are:

1. Maintain the current legislative model of state and territory legislation in which the Commonwealth does not have powers.
2. Co-regulation, in which the states, territories and the Commonwealth all pass identical legislation and regulations which can nevertheless change independently ('mirroring'), or pass 'applied' legislation under which changes in the lead regulation take effect automatically in all others:
 - 2a Territories power-based co-regulation: co-regulation, using the Commonwealth's territories power to develop legislation which would then be adopted by other jurisdictions, either entirely or with some amendments;
 - 2b State-led co-regulation.: this is similar to (2a) but with a state rather than a territory playing the lead role;
 - 2c Commonwealth-led co-regulation.

3. Commonwealth-based regulation:

3a Referred Commonwealth regulation: new Commonwealth legislation based on a referral of powers from the states and territories;

3b Constitutional Commonwealth regulation: new Commonwealth legislation based on Commonwealth constitutional powers, with the responsible Commonwealth Minister bound by the decisions of a high level inter-jurisdictional committee (e.g. MCE or COAG);

3c. As for (3b), but with the Minister not bound by the decisions of a high level inter-jurisdictional committee.

All options, except Option 2b, were raised in the *Discussion Paper on proposed national legislation for Minimum Energy Performance Standards (MEPS) and Energy Labelling* (Discussion Paper 2009). Option 2b has been added as a result of the consultation on the discussion paper, and Options 3b and 3c have been more clearly differentiated.

Table 2 summarises the options.

Table 2. Overview of Regulatory options

Option	Description	Co-regulation not involving Commonwealth	Co-regulation involving Commonwealth	Commonwealth-based regulation
1	Current regulatory framework	✓		
2a	Territories power-based co-regulation		✓ Mirror or applied	
2b	State-led co-regulation		✓ Mirror or applied	
2c	Commonwealth-centred co-regulation		✓ Mirror or applied	
3a	Referred powers Commonwealth regulation			✓
3b	Constitutional Commonwealth regulation – Minister bound by high level inter-jurisdictional committee			✓
3c	Constitutional Commonwealth regulation – Minister not bound			✓

All options are likely to involve continuing co-operation between jurisdictions in the overall governance of the labelling and MEPS program, in the development and implementation of specific measures and in administration.

The spectrum of possible arrangements is very wide. At one end of the spectrum are the present arrangements, in which the states and territories have direct regulatory responsibility and the Commonwealth does not, but this is tempered by co-operative governance and resourcing arrangements. At the other end of the spectrum the Commonwealth would have complete regulatory responsibility, but most likely (although not necessarily) tempered by co-operative governance arrangements.

The options in Table 2 lie along this spectrum, but the details of implementation could move each one more towards one end or the other, as it were. Therefore the options should be seen as typical or indicative, rather than exhaustive and mutually exclusive.

In Options 1, 2a, 2b, 2c and 3a all states and territories would need to pass appropriate regulation to ensure the scheme applied consistently Australia-wide.

Ongoing co-operation has advantages; it can allow each jurisdiction to advocate for its policy priorities, and allow the parties to work together to develop a better scheme overall, so mitigating some types of risk. Conversely, potential downsides associated with ongoing co-operation include ongoing resource commitments from each jurisdiction, and potential delays as changes are agreed and implemented, so exacerbating some types of risk.

The forms of co-operation and the freedom that jurisdictions retain for unilateral action vary considerably. In Option 1 any significant Commonwealth role in the program is technically subject to the consent of the states and territories, while under Option 3a and 3b the reverse would be true. In the variants of Option 2 the jurisdictional relationships would be more equal. In Option 3 the Commonwealth would be dominant.

Under the current arrangements and any framework that relies on State and Territory regulation the *Mutual Recognition Act* constrains unilateral action. Temporary exemptions to the Act are available for a year. A relatively significant hurdle is required where a jurisdiction seeks a permanent exemption from the Act.

With regard to Options 2a, 2b and 2c there is a wide range of possible arrangements, each with different levels of constraint on unilateral action. Under Option 3a referral of powers to the Commonwealth can be reversed, but if legislation is required to do this it creates a high practical hurdle.

The key elements of each option are set out in Table 3.

Table 3. Key elements of Options

Option	Description	Lead legislation	Complementary Regulation	Governance	Administration
1	Current regulatory framework	None	States/territories pass legislation and regulations in own jurisdiction	Co-operative arrangements between all jurisdictions Commonwealth may play leadership role (optional)	Model can provide for centralised or decentralised administration, enforcement etc. Regulators in states/territories, Commonwealth support
2a	Territories power-based co-regulation	Territory regulation drafted and implemented by Commonwealth	States/territories mirror or apply the lead legislation and regulations in own jurisdiction	Co-operative arrangements between all jurisdictions Commonwealth may play leadership role (optional)	Model can provide for centralised or decentralised administration, enforcement etc.
2b	State-led co-regulation	Lead-state legislation	Commonwealth and other states/territories mirror or apply the lead legislation and regulations in own jurisdiction	Co-operative arrangements between all jurisdictions Lead-state may play leadership role (optional)	Model can provide for centralised or decentralised administration, enforcement etc.
2c	Commonwealth-led co-regulation	Central Commonwealth legislation and regulations	States/territories mirror or apply the lead legislation and regulations in own jurisdiction and address any gaps in Commonwealth powers	Co-operative arrangements between all jurisdictions Commonwealth may play leadership role	Model suits centralised administration, enforcement etc. but can also support decentralised options
3a	Referred Commonwealth regulation	Central Commonwealth legislation and regulations	States refer powers to Commonwealth	Commonwealth leadership Optional co-operative engagement of other jurisdictions (could provide for effective full centralisation)	Model suits centralised administration, enforcement etc. but can also support decentralised options by agreement
3b	Constitutional Commonwealth regulation	National Commonwealth Legislation and Regulations	None	Commonwealth leadership, but Minister bound by majority decision of high-level inter-jurisdictional committee (e.g. COAG or MCE)	Model suits centralised administration, enforcement etc. but can also support decentralised options by agreement
3c	Constitutional Commonwealth regulation	National Commonwealth Legislation and Regulations	None	Commonwealth leadership Optional co-operative engagement of other jurisdictions (could provide for effective full centralisation)	Model suits centralised administration, enforcement etc. but can also support decentralised options by agreement

Measures for improving the scope and effectiveness of the program

Measures for improving the efficiency of the energy labelling and MEPS program to better address market and regulatory failures involve an expansion to the scope of the program to include any or all of the following:

- A. Provision for coverage of products using energy forms other than electricity;
- B. Provision for coverage of non-energy using products;
- C. Provision for implementing greenhouse gas emissions-intensity labelling;
- D. Provision for implementing greenhouse gas-intensity standards (to replace MEPS or in addition to MEPS);
- E. Provision for regulating the environmental impacts associated with covered products;
- F. Mandatory reporting of annual sales data by suppliers of registered products; and
- G. The requirement to disclose energy efficiency (or greenhouse intensity) information in other promotional material.

Expanding the scope of the program to include any or all of these measures cannot be considered independently of the regulatory framework, because they are not possible under the current framework (ie Option 1 in Table 2) and would be more difficult to implement under some regulatory options than others.

It would, however, be possible to achieve a more consistent national approach without widening the scope of the program. For this reason measures for achieving a consistent national approach are considered separately to measures associated with the scope of the program. The flexibility of the regulatory framework for accommodating changes to the scope of regulation and improving efficiency are, however, considered in comparing the advantages and disadvantages of each regulatory framework option.

There is also an important distinction between including an enabling provision, or a legal capacity to undertake these measures, and actually undertaking them. At this stage only enabling provisions are proposed for Measures A to E above. All proposals to use these powers would be considered on a case by case basis.

However, it is proposed that whatever regulatory framework is implemented, it should immediately require:

- Measure F: the mandatory reporting of annual sales data by suppliers of registered products; and
- Measure G: The requirement to disclose energy efficiency (or greenhouse intensity) information in other promotional materia..

Impact analysis

Criteria for evaluating the governance options

Each of the regulatory options would be feasible and have different strengths and weaknesses if applied to the energy labelling and MEPS program. The appropriateness of each option is evaluated under four main groups of criteria according to the impact on:

- consistency and risk;
- administrative efficiency and cost;
- overall program efficiency and cost-effectiveness; and
- simplicity and effectiveness of compliance and enforcement.

In order to achieve a consistent national approach it is necessary to be able to implement a common set of rules, definitions, registration processes, compliance and enforcement arrangements (including data collection, fees and charges, and penalty arrangements). It is also necessary to be able to ensure implementation of the labelling and/or standards on a common date in all jurisdictions with consistent transitional arrangements. The capacity to enforce the rules must also be consistent regardless of how a product is supplied, whether it is imported or locally made and where it is registered or sold.

The efficiency and effectiveness of the arrangements will be determined by the capacity to streamline processes (including the development and implementation of regulations, operation of registration processes and procedures, collection, monitoring and reporting of data), use competitive arrangements for the provision of services (e.g. registration and testing), ensure appropriate allocation of costs (such as registration charges) and ensure adequate collection and use of data.

Appropriate incentives should be put in place to ensure appropriate levels of compliance and keep enforcement costs to a minimum. The system also needs to be sufficiently flexible to allow for special circumstances.

Affected parties and the nature of the impacts

The main affected parties of the MEPS and labelling program are consumers, product suppliers and governments.

1. The public administrative costs of the program comprise the cost of developing the regulations and the ongoing costs of administering, enforcing, monitoring and reviewing them. Under the current arrangements these costs are mainly borne by taxpayers, but recovered in part from equipment suppliers (and ultimately purchasers) through registration charges, contributions to testing charges and fines.
2. Industry administrative costs of the program are generally related to the products covered. The program can impact on manufacturers and importers, installers and retailers. Each model of a product covered by regulations must be tested for compliance and registered. Labels must be fixed where required.

Suppliers may need to alter their model range, production processes, product designs or components to comply with MEPS or to meet changes in consumer preference caused by labelling. Affected suppliers must keep records and may be required to collect and provide data to regulators.

In addition to these on-going costs there may be one-off administrative and legal costs imposed by participation in the development and review of the regulations and standards, and in the transition to a new regulatory regime.

These costs are initially borne by equipment suppliers, but mostly passed on to their customers in the price of equipment. These costs have not been separately estimated for this RIS, but are included in consumer costs and benefits (see category 3 below).

Wholesalers and retailers may have to adjust their stock to ensure they purchase and sell compliant products. They also bear some costs in ensuring that products display correct labels and in training staff to explain labels to customers. Installers would also be impacted if the program were extended to non-energy using products.

The program also provides marketing benefits for the suppliers, installers and retailers of energy-efficient appliances and equipment.

3. Consumers potentially face increased costs for equipment as a result of the imposition of higher efficiency standards or labelling requirements. They benefit from the additional information that aids product selection and from reduced expenditure on energy in cases where they purchase a more efficient product than they might otherwise have done. Measures are only put in place where the average consumer is expected to benefit, but there will always be some consumers who do not use their products intensively enough to recover the extra costs of raised efficiency standards.

There are other parties that are indirectly affected by the program. This includes energy utilities, test laboratories and standards making bodies. These indirect impacts are not considered in any detail in this RIS.

Aggregated costs and benefits

The costs of the program impact on the initial purchase price of appliances and equipment, but once a more energy efficient product is purchased the energy and monetary savings are locked for the service life of that product.

The net present value (NPV) of projected costs and benefits is a more accurate gauge of the long term value of the program than costs and savings in any one year. It is projected that the E3 Program will return net benefits of over \$M 22,400 for Australian energy users over the period 2009-2024 (NPV in 2008 dollars, at discount rate of 7.5%). This gives an overall benefit/cost ratio of 2.9 (E3 2009). It is also estimated that cumulative emissions

avoided over the period 2000-2020 will be about 250 million tonnes CO₂-e.³ Consumer costs account for over 97% of the total annual costs of the energy labelling and MEPS program, and consumers capture all the benefits.

The annual costs and benefits of any specific measure are sensitive to the date of implementation and, for MEPS, the stringency of the level. Slippage in implementation dates caused by the regulatory process reduces the impacts of individual measures, but this trend is counteracted by the increases in program scope (see Appendix 2).

If a regulatory regime facilitates more products being added to the program, more rapid implementation or more stringent MEPS levels, its impact on net benefit (i.e. benefit less cost) will almost certainly far exceed any difference it could make to industry and government costs.

³ Or 218 Mt if electricity emissions intensity falls as predicted under a 'CPRS-5' scenario in which Australia's medium-term target is 5 per cent below 2000 levels by 2020.
http://www.treasury.gov.au/lowpollutionfuture/report/html/00_Executive_Summary.asp

Option 1. Current Regulatory Framework

The current regulatory framework for the energy labelling and MEPS scheme is based on regulations made under electrical safety and electrical product efficiency legislation in each participating State and the ACT.⁴ There is no Commonwealth regulation. The jurisdictions have used their best efforts to ensure the regulation delivers effectively similar outcomes across Australia, but a number of differences have developed over time.

The main advantage of Option 1 is that there is a system of state and territory regulations already in place, and a complete governance and administrative structure. In addition to the formal arrangements there is an accumulation of informal experience and working arrangements. These arrangements are familiar to industry and other stakeholders and the costs are known.

Under this option it would be possible to address many of the existing jurisdictional inconsistencies through amendment to the state- and territory-based regulation. Some inconsistencies, such as differences in penalties and how they are imposed, may persist. Streamlining of the existing arrangements would reduce costs to government and business and therefore ultimately the end consumer. The overall impact on costs would likely be small as the program would still require separate implementation of the MEPS and labelling requirements in each jurisdiction.

Even if there were regulatory consistency, reliance on separate regulators would mean that administrative differences would remain. Similarly, reliance on separate jurisdictional legislation means that there is the potential for regulatory inconsistencies to develop over time if no effective controls are put in place.

In addition, the system cannot guarantee implementation of MEPS requirements on a fully consistent basis as this may be affected by events in the individual jurisdictions. Thus the potential for inconsistency or delay remains.

This option retains the flexibility for each jurisdiction to select their own MEPS levels from Australian Standards or even to adopt different technical standards. This creates further co-ordination challenges and increases the risks and compliance costs for business. Were jurisdictions to implement their own standards it would undermine the integrity of the program.

One of the key disadvantages of the current regulatory framework is its lack of flexibility. The current framework is largely confined to electrical products because it is implemented via electrical safety and electrical product regulations. This means that any expansion in the MEPS and labelling requirements to competing fuel technologies, advertising requirements and the like cannot be achieved without using a combination of (amended) current regulations and new regulations in each state and territory. Thus the current regulatory approach cannot easily be amended to better target greenhouse gas emissions in

⁴ The sole Australian exception is the Northern Territory, which does not regulate for MEPS and which regulates for labelling under the *Consumer Affairs and Fair Trading Act and Consumer Affairs (Product Information) Regulation 1993*.

a competitively neutral manner or readily deal with any associated environmental issues. While this is a cumbersome approach, it does avoid potential conflicts between the MEPS and labelling requirements and other legislation.

The current regulatory framework could be amended to provide for data collection, monitoring and reporting. However, jurisdictional limits would still apply. This constrains the capacity of the system to deliver a comprehensive and simple system.

At best, Option 1 could harmonise the compliance stages and processes (e.g. make infringement notices universal) but would still require state and territory regulators to initiate and pursue compliance action, and the levels of resource commitment and urgency may vary, as they do now.

While Option 1 could correct many of the administrative inconsistencies currently facing the program, addressing other important issues, expanding the scope of the program and maintaining consistency in the longer term would be difficult to achieve. Over time, the benefits from this approach to reform are expected to be small.

Option 2. Co-Regulation involving Commonwealth

The following sections explore three co-regulatory models where the primary difference is the jurisdiction that acts as lead legislator.

All three models could be given effect either as ‘mirror’ legislation or as ‘applied’ legislation. A mirror legislative model requires each participating jurisdiction to replicate the lead legislation in full. An applied legislative model requires each participating jurisdiction to enact legislation referring to (or ‘calling up’) generic provisions contained within the lead legislation.

Option 2A. Commonwealth Territory-led co-regulation

Under its powers to make laws for the government of any territory⁵ the Commonwealth could implement a central Act in one of its territories to establish the key elements of the regulatory framework, including the regulator, provisions for calling up Australian Standards or equivalents, registration provisions and penalties.

Legislation could be enacted prohibiting the manufacture, import into a territory, sale or installation of equipment or products (using any type of energy, or not using energy) that fail to meet specified standards. The scope could be wide enough to support all of Measures A to G, but only within the geographical boundaries of that territory. The Commonwealth (or the territory) could also provide a single regulator recognised in all jurisdictions, or the framework could empower regulators in more than one jurisdiction. Greater consistency would likely be achieved with a single regulator rather than multiple regulators. Similarly, there is a range of possible arrangements regarding governance and the roles and responsibilities of relevant ministers from each jurisdiction.

This option would need to include Commonwealth regulation as well as territory legislation, particularly if import restrictions are to be part of the framework.

An example of Territories power-based co-regulation is the Corporations Law (see Box 1).

This option could eliminate many of the delays currently experienced whenever regulatory amendments are required — except to the extent that jurisdictions retained the power to make variations, or variations were forced on them by differences in regulatory approach, (e.g. with regard to whether penalties are defined in monetary terms or penalty units).⁶

There may also be some time savings in relation to the implementation of regulations due to the more streamlined approach, but any savings might be expected to be small as the bulk of the effort relates to analysing and determining the technical feasibility of standards and gaining agreement from all affected jurisdictions.

⁵ s. 122 of the *Commonwealth of Australia Constitution Act 1900*

⁶ For example, states would need to decide whether or not to use a common definition of penalty units and common values of units. This could be achieved by stating in the definitions section of each Act that the term ‘penalty unit’ has the same meaning as in the central Act.

Box 1. The Corporations Law — an example of Territory-led Co-Regulation

The Corporations Law is established in the *Corporations Act 1989* (Cth), which was an Act of the Australian Capital Territory and Northern Territory made by the Commonwealth Government, following agreement between the Commonwealth, states and territories. The states then each passed Corporations (Commonwealth Powers) Acts that referred specific matters to the Commonwealth Parliament for the purposes of section 51(xxxvii) of the Australian Constitution, enabling the Commonwealth Parliament to make laws that apply in each state.

A Corporations Agreement⁷ between the jurisdictions addressed a range of matters including the establishment, roles and responsibilities of the Australian Securities Commission (making it the sole administering authority for companies and securities regulation in Australia⁸). The Corporations Agreement also sets out the roles, responsibilities and functioning of the relevant Ministerial Council upon which each jurisdiction is represented.

The Corporations Agreement addresses a range of other matters including the establishment and alteration of the national Corporations Law; administrative and financial matters; and investigations and prosecutions.

Option 2B. State-led co-regulation

State-led co-regulation would require agreement that one of the states implement a central Act to establish the key elements of the regulatory framework. The other states and territories (and, most likely, the Commonwealth) would then apply the law as set out in the central Act in statutes within each jurisdiction ('applied' legislation) or replicate the legislation in full ('mirror' legislation). This option would need to include Commonwealth regulation if import restrictions are to be part of the framework.

The lead state could also provide the regulator. Alternatively state-led co-regulation could empower a Commonwealth-based regulator, or regulators in more than one jurisdiction. There is a range of design possibilities and governance arrangements.

This option would entail completely new central regulation in the lead State and in all other participating jurisdictions, and repeal of the existing regulation. State-led co-regulation has a well-established precedent in the national approach to regulation of the National Energy Market (NEM) (see Box 2).

⁷ Commonwealth of Australia, 2006, Corporations Agreement 2002 as amended. Accessed 9 October 2009 at http://www.treasury.gov.au/documents/495/PDF/Corporations_Agreement_2002_as_amended.pdf

⁸ Subject to the *Australian Securities and Investments Commission Act 2001* (Cth)

Much like co-regulation based on the Commonwealth's territories power, State-led co-regulation is capable of providing for national consistency by only requiring that the central regulation be changed. This option could eliminate many of the delays currently experienced whenever regulatory amendments are required – except to the extent that jurisdictions retained the power to make variations, or variations were forced on them by differences in regulatory approach, (e.g. with regard to whether penalties are defined in monetary terms or penalty units).⁹

Box 2. The National Electricity Law — An example of State-led Co-Regulation

An example of State-led co-regulation is the regulatory framework for the National Energy Market (NEM). The central Acts are the *National Electricity (South Australia) Act 1996* and the *National Gas (South Australia) Act 2008*. Regulations (subordinate legislation) are also established in South Australia.

Each jurisdiction that participates in the NEM applies the national electricity and gas law, centred on the South Australian Acts, by application of statutes, for example the *National Electricity (Victoria) Act 2005*.

This regulatory framework establishes the national governance structure for energy markets, which includes the Australian Energy Market Commission (which is responsible for matters such as policy and governance), the Australian Energy Regulator (established under the *Trade Practices Act 1974*) and the Australian Energy Market Operator. The Commission is responsible to COAG through the Ministerial Council for Energy, while the regulator is accountable to the Commonwealth Government as one of the constituent entities of the Australian Competition and Consumer Commission (ACCC).¹⁰

National Electricity and Gas Rules are made under the regulatory framework, and Memoranda of Understanding between the state governments define the Operator's emergency powers for both gas and electricity markets.

The Commonwealth does not participate in the NEM and does not apply the national electricity law. Its involvement is via the ACCC. With energy labelling and MEPS there are no separate statutory bodies and the regulators actually operate the program. Without Commonwealth regulatory participation Option 2b would resemble Option 1 (albeit with a mechanism for simultaneous implementation of measures).

⁹ For example, states would need to decide whether or not to use a common definition of penalty units and common values of units. This could be achieved by stating in the definitions section of each Act that the term 'penalty unit' has the same meaning as in the central Act.

¹⁰ Source: AEMO, 2009, *Governance*. <http://www.aemo.com.au/governance.html> accessed 8 October 2009.

Option 2B could avoid the delays currently experienced whenever regulatory amendments are required, if regulations by the lead state flow on to all. Once the national template legislation is enacted in one jurisdiction and applied in the other jurisdictions, subsequent legislative amendments would only be required by the lead legislator and these amendments would be automatically picked up and applied by the other jurisdictions' application acts. However, any delays in the lead state (eg during election prorogations) would impact on all jurisdictions.

Greater consistency would likely be achieved with a single regulator rather than multiple regulators. It would be possible to design the regulatory framework to widen the scope of the program to cover any or all of Measures A to G.

There may also be some time savings in relation to the implementation of regulations due to the more streamlined approach, but any savings might be expected to be small as the bulk of the effort relates to analysing and determining the technical feasibility of standards and gaining agreement from all affected jurisdictions.

Option 2C. Commonwealth-centred co-regulation

Commonwealth-centred co-regulation would entail the Commonwealth implementing a central Act that established the key elements of the regulatory framework. The states and territories would then apply the law as set out in the central Act in statutes within each jurisdiction, or pass 'mirror' legislation to address any gaps in Commonwealth powers (such as regulating non-incorporated entities).

The Commonwealth could also provide the regulator, or there could be regulators in more than one jurisdiction. There is a range of design possibilities and governance arrangements.

The Commonwealth and State/Territory Acts would establish the framework for the scheme, but would not address matters of detail such as which products were regulated or what standards were specified.

Implementation of individual measures would not require amendment to the primary legislation, but could be addressed through a subordinate instrument (e.g. secondary legislation, or a ministerial determination) that called up an Australian Standard, say, or other technical documents. These would be given effect by the Commonwealth, presumably following consultation with all participating jurisdictions and the normal regulatory processes of government, including regulatory impact assessments.

This option would allow for expansion in the scope of the program for data collection on a national basis.

This option would entail completely new central regulation by the Commonwealth and in all other participating jurisdictions, and repeal of the existing regulation.

An example of Commonwealth-centred co-regulation is the Water Efficiency Labelling and Standards (WELS) scheme, which is analogous to the energy labelling and MEPS scheme

(see Box 3). The energy labelling and MEPS program has much in common with WELS.¹¹ While a number of stakeholders have criticised aspects of the administration of WELS, this does not necessarily reflect on the regulatory model but on its specific implementation. Many of the issues raised stem from the Commonwealth assuming primary responsibility for program administration, in the absence of agreements for state-based regulatory support. Given that much of the expertise in the administration of labelling and MEPS lies with the states, it is likely that such agreements would be made.

Box 3. The Water Efficiency Labelling and Standards scheme — an example of Commonwealth-centred co-regulation

The central Act for the WELS scheme is the *Water Efficiency Labelling and Standards Act 2005* (Commonwealth). That Act was drafted jointly by the Commonwealth and Victoria, with Victoria also preparing the model mirror Act for States and Territories (the *Water Efficiency Labelling and Standards Act 2005* (Victoria)).

The Commonwealth minister calls up the single technical standard for WELS through a ministerial determination, which is remade from time to time as the standard changes. The relevant standard is Australian Standard AS/NZS 6400, and it addresses matters including test procedures, mandatory minimum standards, star ratings, and labelling requirements.

There is a Commonwealth WELS regulator. The regulatory framework provides for agreements to be made for state-based regulatory support, but to date these provisions have not been used.

Major policy decisions such as potential expansion of the scheme are made through a ministerial council (Environment Protection and Heritage Council). Section 18(4) of the *Water Efficiency Labelling and Standards Act 2005* requires the Minister to have the agreement of the majority of participating states and territories before making a relevant determination.

Commonwealth-centred co-regulation could be designed to adopt all those aspects of the current state-based scheme that jurisdictions wish to retain, subject to ensuring consistency. It would provide for ongoing national consistency, only requiring change in the central regulation when the scheme needs to be amended.

Option 2C may still have, or be perceived by industry stakeholders to have, some potential for state-based variations that compromise national consistency from the outset through the arrangements they put in place giving effect to the central Act. Inconsistencies could also arise temporarily, if amendments to the mirror legislation are required from time to time.

¹¹ WELS also has an intergovernmental committee, analogous to the E3 Committee, with one official from each participating jurisdiction, established by an agreement between Ministers. This committee oversees implementation of the Scheme, provides a forum for consultation between jurisdictions, and provides advice to the regulator, the minister or the ministerial council.

To the extent that it provides for greater national consistency and streamlining of processes the benefits to government, business and consumers would be akin to those outlined for the above co-regulatory options. For business and consumers there may be some additional benefits from adopting an approach similar to the WELS scheme as familiarity with that scheme is likely to aid understanding of the MEPS scheme and vice versa. There may also be future opportunities for amalgamation of the schemes or aspects of the scheme providing potential benefits from further streamlining.

Assessment of Options 2a, 2b, 2c

All variants of Option 2 would require the establishment of a new legislative framework, which would entail significant transitional costs relative to maintaining the existing arrangements. It does, however, offer greater prospect for achieving national consistency and more streamlined processes. Option 2 could also be designed to accommodate an expansion to the scope of the program¹² and data collection on a national basis. It would likely be more cost-effective and efficient to adopt a single regulator (whether Commonwealth or other) rather than multiple jurisdictional regulators.

Co-regulation would reduce but not eliminate the potential for jurisdictional variation. For Options 2a and 2b, this could occur in the period before jurisdictions enact legislation referring to the central Act. Once the co-regulation framework is in place however, all jurisdictions would call up the same regulations, although depending on the arrangements there could still be some scope for delay. Variants where jurisdictions would draft individual but complementary ('mirror') legislation present the greatest risk that jurisdictional variations would develop over time.

In circumstances where the Commonwealth has a limited regulatory role, obstacles may exist to the scheme being able to make full use of the significant compliance and enforcement resources of Commonwealth agencies like the Australian Customs Service. Nevertheless, it would be expected to achieve the objectives set for the program and improve outcomes for affected parties.

Each of options 2a, 2b and 2c would enable monitoring on a national basis as suppliers of registered products could be required to report annually on the sale of each registered model, identified by the energy labelling or MEPS registration number, as is the case in New Zealand. This would impose some modest additional administrative cost on suppliers and governments, but better data would enable the program to be made more cost-effective, would support compliance enforcement and allow for better evaluation of the actual costs and benefits of the program.

Improved consistency and streamlining of the regulatory framework will reduce risks for business and reduce compliance costs. Any cost savings for business would likely be passed on to consumers. Faster implementation of the requirements will benefit those consumers that achieve greater energy savings (in excess of capital and installation costs) than they might otherwise have realised under the current arrangements.

¹² Those states with existing legislation covering gas appliance safety would need to ensure that the new co-regulatory arrangements did not conflict with them.

Option 3. Commonwealth Regulatory Options

In this option the states would either refer the necessary powers to the Commonwealth, or the Commonwealth would proceed without such referral.

The other variation is with regard to governance: the responsible Commonwealth minister may be bound by the decisions of, or at least bound to consult, a high-level inter-jurisdictional committee (e.g. MCE or COAG) — or not be so bound.

These two variations are technically independent, but voluntary State referral of powers to a Commonwealth Minister on the basis that the Minister would no longer be bound to consult the States on the use of those referred powers is not considered a likely option.

Option 3A. Referral of Powers – Minister Bound

Section 51(xxxvii) of the Australian Constitution authorises the Commonwealth Parliament to make laws with respect to matters referred to it by the states (s. 122 gives it powers to make laws for the territories).

For this option to be effective all states would need to agree to refer powers so that the Commonwealth could establish a national energy labelling and MEPS scheme. The form of referral could be by subject matter (broad) or text based (more narrow). Under the latter, which is more usual, states and territories authorise the Commonwealth to deal only with very specific matters on their behalf – in this case, the powers to make regulations for the energy labelling and MEPS in accordance with the agreed scope of the program.

The Mutual Recognition Scheme, which is intended to promote the freedom of movement of goods and of service providers in a national market in Australia is an example of the referral of powers.¹³ (At the same time it is an example of the limits on the degree of consistency that can be achieved through referral of powers).¹⁴ A description of the Mutual Recognition Scheme is provided in Box 4.

The governance arrangements for referring powers to the Commonwealth for MEPS and labelling would entail giving the Commonwealth minister discretion. This could be subject to and limited by decisions of the MCE, for example. This arrangement could be embodied either in a memorandum of understanding between MCE members, or the legislation could state that the Minister is required to act in accordance with an MCE recommendation or that the MCE has the right of veto.

There is a precedent to this decision-making process in the WELS Act, which requires the Commonwealth minister, before making a determination that water using or water saving

¹³ *Intergovernmental agreement relating to Mutual Recognition, 1992*, http://www.coag.gov.au/mutual_recognition/docs/mra_text.pdf accessed 9 October 2009

¹⁴ Under the Mutual Recognition Scheme individual jurisdictions can temporarily exempt a good on health, safety or environmental grounds for up to 12 months. This triggers a review that must lead to one of three outcomes: harmonised standards, a permanent exemption, or a return to mutual recognition (Productivity Commission, 2009, *Review of Mutual Recognition Schemes - Research report*. Chapter 2. <http://www.pc.gov.au/projects/study/mutualrecognition/report/?a=85268> accessed 9 October 2009).

products of a specified kind are WELS products, to have agreement to the terms of the determination from a majority of the states and territories that have corresponding WELS legislation (see Box 3).

If states were to refer powers with the agreement that the Commonwealth could amend the resulting legislation when necessary, Option 3a could theoretically achieve a scheme in which consistency could be maintained in the longer term. However this option does not guarantee consistency. Jurisdictions may refer different powers, making it difficult to implement consistent national legislation. In addition, there are no constitutional constraints on jurisdictions, in the future, electing to withdraw their referral of powers with respect to the scheme and, subsequently, enacting their own legislation.

The most likely administrative arrangement would be a central Commonwealth regulator, potentially with additional regulators in some states or territories.

The advantages and disadvantages of Option 3a are very similar to those of Option 2, including the option of binding the lead regulator by inter-jurisdictional agreement. It would also require the establishment of a new legislative framework, which would entail significant transitional costs relative to maintaining existing arrangements. Option 3a does, however, offer greater prospect of achieving national consistency and more streamlined processes. It could also be designed to accommodate an expansion to the scope of the program and data collection on a national basis. It would likely be more cost-effective and efficient to adopt a single regulator (whether Commonwealth or other) rather than multiple jurisdictional regulators.

Box 4. The Mutual Recognition Scheme — an example of Referral of Powers

In 1992, the Commonwealth, state and territory governments signed the Intergovernmental Agreement on Mutual Recognition which provided, among other matters for ongoing co-operation between jurisdictions and the role of Ministerial Councils. The Commonwealth then passed the *Mutual Recognition Act 1992* (Cth). The states and territories could choose to implement the Mutual Recognition Scheme either by referring their power to enact mutual recognition legislation to the Commonwealth Government, or by adopting the Commonwealth legislation. The Mutual Recognition Scheme is, therefore, a hybrid of regulatory Options 2c and 3a.

The states did not include a provision for ongoing amendment of the Commonwealth's *Mutual Recognition Act*, so changes require the agreement of all participating jurisdictions.

Option 3B. Commonwealth Constitutional Powers – Minister Bound

The Commonwealth Government's powers are limited in the Australian Constitution. The Commonwealth does not have a specific power to legislate with respect to the objectives of energy labelling and MEPS.

However, the Australian Constitution could support Commonwealth legislation dealing with energy efficiency, greenhouse gas emissions levels or broader environmental issues in particular contexts. The Commonwealth Parliament could rely on a combination of the corporations power in s 51(xx), the trade and commerce power in s 51(i), and the external affairs power in s 51(xxix) to enact legislation which would meet the objectives of energy labelling and MEPS to a significant extent.¹⁵

Commonwealth legislation would have national effect, negating the need for state-based regulation for the energy labelling and MEPS scheme.

There are several examples of regulatory frameworks that have been established using the Commonwealth's Constitutional powers. For instance, the *Renewable Energy (Electricity) Act 2000* relied substantially on the Commonwealth invoking section 51(xx) of the Constitution (the corporations power) to require that energy supplied to consumers by constitutional corporations comprises a certain quantity of renewable energy.

Option 3b would entail a single Act with no further regulation by the States and Territories. Under Option 3b, States and Territories could maintain a policy and implementation role, while no longer having to administer legislation.

The governance arrangements could be the same as for Option 3a (and the WELS Scheme) with the powers of the Commonwealth being subject to, and limited by, decisions of a body such as the MCE.

A single piece of legislation, administered by a single regulator could be adopted to ensure national consistency. The legislation could incorporate an expansion to the scope of the program and data collection on a national basis. Once the legislation were established, changes could be made more quickly than under other frameworks, because only one jurisdiction would need to regulate, although this would be subject to approval by a multijurisdictional body.

Option 3b would ensure enduring consistency across jurisdictions both in the scope of the scheme and the compliance regime. Offences and penalties would be nationally consistent and enforced by a single agency. While Options 2a, 2b and 2c and Option 3a could be designed to also achieve this outcome, they all face the possibility that States may, at some point, choose to implement state-based variations. This would not be possible under Option 3b (or 3c).

Option 3b would considerably reduce the regulatory and administrative burden on the other jurisdictions. As with Options 2a, 2b, 2c¹⁶ and 3a, Option 3b would eliminate the need for

¹⁵ The use of the external affairs power to extend energy labelling and MEPS regulation to products that do not consume energy or non-energy related environmental matters would depend on whether it can be established that the detail of the proposed measure is within the scope of Australia's existing international obligations, say to implement Australia's obligations under the UNFCCC and the Kyoto Protocol.

¹⁶ Assuming that Options 2a, 2b or 2c adopt an applied – rather than mirror – legislative model. Under mirror legislation, any amendments to the scheme would still require amendments to legislation in each jurisdiction.

coordinated implementation of regulation and the possibility for delay occurring across jurisdictions, but delays could still be experienced at the Commonwealth level.

Option 3C. Commonwealth Constitutional Powers – Minister Not Bound

Option 3c is identical to Option 3b, except that the responsible Commonwealth minister would not be bound by a high-level inter-jurisdictional committee.

This would not preclude the continuation of officer-level working arrangements, such as the E3 Committee, or the delegation of what would then be Commonwealth functions to the states or territories or the engagement of private service providers (e.g. for product registration).

A single piece of legislation, administered by a single regulator, would overcome the regulatory constraints of the other models. Legislation could be established to cater for an expansion to the scope of the MEPS and labelling program. Once the legislation were established, changes could be made more quickly than under other frameworks, because only one jurisdiction would need to regulate.

Option 3c would ensure enduring consistency both in the scope of the scheme and the compliance regime. Offences and penalties would be nationally consistent and enforced by a single agency. While Options 2a, 2b and 2c and Option 3a could be designed to also achieve this outcome, they all face the possibility that states may, at some point, choose to implement state-based variations. This would not be possible under Option 3c (or 3b).

Option 3c would considerably reduce the regulatory and administrative burden on the other jurisdictions. It would offer the quickest route whenever regulatory amendments are required, because the minister would have no obligation to consult the MCE or other nominated inter-jurisdictional committee.

Unlike the other models considered in this RIS, Option 3c does not depend on ongoing co-operation between all jurisdictions. However, this could be a disadvantage or risk, in that it would completely transfer the core decision-making role from the states and territories to the Commonwealth Government.

If this option were adopted with the acquiescence of the jurisdictions, it would still be a significant departure from historical arrangements and would risk losing established expertise and working arrangements. There could be some (possibly temporary) loss of effectiveness as a result.

Assessment of Options 3a, 3b, 3c

There would be a single regulator under Option 3 which should ensure greater national consistency than Option 1 or Option 2 with multiple regulators. A single regulator could ensure compliance, but could still sub-contract or delegate compliance functions to state agencies or other entities. There are increased opportunities for the scheme to be supported by other Commonwealth agencies, such as the Australian Customs Service. Option 3 could

readily accommodate an expansion to the scope of the program including covering energy forms other than electricity and non-energy using products, greater disclosure of label information, associated environmental impacts, and greenhouse labelling and standards. Commonwealth regulation could contain provisions to require the reporting of jurisdictional and/or national sales.

Under Option 3a state referrals could be limited or reversed, and subject to the condition that the arrangement be reviewed before any amendments. Options 3b and 3c would ensure continuing consistency.

Any variant of Option 3, once implemented, would provide more certainty for stakeholders than any other option. Commonwealth regulation would eliminate the potential for jurisdictional variation — for the duration of the referral of powers under Option 3a, and permanently under 3b and 3c.

Of all the options this one would represent the greatest change in the regulatory framework of the energy labelling and MEPS program, and this would entail some risk. On the other hand, it would offer the greatest opportunity to advance the objectives of the program.

The risk would be reduced if all jurisdictions agreed to, and co-operated in, the transition to Commonwealth regulation, and/or participated in continuing governance arrangements.

The Commonwealth may need to bear the entire administrative costs of the program, rather than three quarters as is currently the case.

Given that new principal and subordinate legislation would be required by the Commonwealth, the transitional costs would be similar to or greater than Option 2 (co-regulation). For Option 3a the referral process could be very time consuming (over 18 months), even before Commonwealth legislation could be developed. However, the duration of the transition is likely to be shorter under Options 3b and 3c on account that one jurisdiction, rather than nine, would need to develop and enact legislation through parliament.

Summary and Assessment of Options

The regulatory options considered above represent a continuous spectrum rather than a set of discrete and mutually exclusive options. Each model could be implemented in various ways, such that the differences between them could be either reduced or magnified.

The regulatory option most likely to meet the objectives of the proposal is one in which:

- the risk to stakeholders is minimised because changes take effect with minimum lead time, take effect in all jurisdictions simultaneously, and no jurisdiction can implement different labelling or MEPS requirements;
- there is a unified administrative and data collection framework;
- the legislation enables and supports efficient and cost-effective operation of the program (with regard to coverage of products irrespective of their energy type, coverage of non-energy-using products, use of label data in other media, and greenhouse labelling and standards); and
- there is a unified compliance framework which makes use of Commonwealth powers in relation to border controls.

The model most likely to deliver this is one where identical legislation applies in all jurisdictions and the Commonwealth has at least an equal regulatory role. A summary of each option against the evaluation criteria is set out in Table 4.

The initial analysis shows a relatively low probability that Option 1 (status quo) will be able to meet the evaluation criteria into the future. The history of the energy labelling and MEPS scheme to date has shown a tendency for states to consider, and even implement state-based variations from time to time, so there would be some possibility of this occurring in future if the regulatory arrangements allowed for it. The existence of this possibility would also reduce certainty for businesses.

The other options are more likely to satisfy the evaluation criteria, with Option 3c (Constitutional Commonwealth regulation, with minister not bound by inter-jurisdictional committee) likely to offer the greatest consistency and the most streamlined regulatory, governance and enforcement arrangements.

However, option 3b would temper the risk of friction between jurisdictions and the Commonwealth by formally involving the jurisdictions in the program's governance. It may also facilitate co-operative arrangements for delivery of services such as registration, within a unified regulatory structure in which the Commonwealth would be the sole regulator.

If multiple regulators were retained (as would be possible under Option 2) there would be a continuing risk of differences in interpretation, even under a common applied legislative framework.

While Options 2a, 2b, 2c and 3a could potentially provide national consistency, that would depend on the states not choosing – now or in the future – to reserve the power to implement variations in their jurisdiction, whether through the drafting of their regulation, or by later opting out of the scheme.

Option 3b has many of the advantages of Option 3c, although the timeliness and responsiveness of the scheme could be slowed under this option because the relevant Commonwealth Minister and, therefore, Regulator, would need to obtain the agreement of a ministerial council prior to any regulatory change.

Features to speed up the implementation of measures (if determined to be cost-effective) could be incorporated into any of the regulatory frameworks; e.g. by enabling the use of technical standards other than those developed or published by Standards Australia.

Table 4 Summary of assessments of options

Evaluation Criterion	Objective, criterion or additional measure	1. Enhanced state-centred regulatory framework	Co-regulation involving Commonwealth			Commonwealth-based		
			2a Territory based	2b State-centred	2c Commonwealth-centred	3a Referred state powers	3b Commonwealth only: bound	3c Commonwealth only: unbound
Impact on policy consistency and risk	Regulatory consistency	No greater; may be less	More consistent	More consistent	More consistent	Conditionally consistent	Most consistent	Most consistent
	Stakeholder certainty	No greater than now	Higher	Higher	Higher	Highest but conditional	Highest but conditional	Highest unconditional
	Other risks	Most scope for unilateral action	Risk reduced by need to co-operate	Risk reduced by need to co-operate	Risk reduced by need to co-operate	Withdrawal of referrals	Governance disagreement, delay	Greatest departure from current
Impact on administrative efficiency and cost	Administrative consistency	More, but not complete	More consistent	More consistent	More consistent	Conditionally consistent	Most consistent	Most consistent
	Administrative costs	Little change	Little change	Little change	Little change	Commonwealth to bear	Commonwealth to bear	Commonwealth to bear
	G. Data for impact monitoring	Could be required	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
Impact on program efficiency and cost-effectiveness	A. Non-electric product coverage	Needs new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
	B. Non-energy-using product coverage	Needs new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
	G. Disclosure of label information	Difficult to achieve	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
	F. Associated Environmental impacts	May be covered	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
	C. Greenhouse labelling	Electric only unless new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
	D. Greenhouse standards	Electric only unless new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation	Part of new legislation
Impact on compliance and enforcement	Compliance & enforcement	Slightly more effective	More effective	More effective	More effective	Most effective	Most effective	Most effective
	Compliance risks to realising benefits	Highest	Lower	Lower	Lower	Lowest	Lowest	Lowest
Impact on costs and benefits	Private costs and benefits	Lowest net benefit	Higher net benefit	Higher net benefit	Higher net benefit	Highest net benefit	Highest net benefit	Highest net benefit
RANKING(a)		4	3	3	3	2	1	1

(a) 1 indicates highest ranking (most likely to meet objectives), taking into account both evaluation criteria and stakeholder preferences

Impact of improving the scope and effectiveness of the program

Measures for improving the efficiency of the energy labelling and MEPS program to better address market and regulatory failures involve an expansion to the scope of the program to include any or all of the following proposals.

A. Coverage of energy forms other than electricity

Information failure, split incentives and other market failures occur in the market for energy-using appliances and equipment regardless of the form of energy used. Extension of the MEPS and energy labelling program to cover products using forms of energy other than electricity, including solar-assisted and gas appliances, would allow for better targeting of the program at the key identified market failures and allow the program to capture all competing greenhouse gas emitting appliances and equipment.

This would provide for a consistent national approach to the regulation of appliances and equipment that emit greenhouse gases. It would simplify current regulation-making processes as it would rely on specific regulation rather than on the combination of existing regulations to achieve the desired regulatory outcomes. It could also reduce the risk that MEPS and labelling regulation would conflict with other regulations (such as gas safety regulations).

This would also provide for a competitively neutral approach where all forms of energy-using or greenhouse gas emitting products are treated on an equal footing. The imposition of performance standards would, however, create a barrier to entry into the market for appliances and equipment, which could reduce competition. The extent of any anti-competitive effects would depend on the stringency of the standards imposed. This would be assessed on a case by case basis, as is the current practice with labelling and MEPS proposals for electric appliances.

For producers of appliances and equipment that use non-electrical energy there would be a greater risk of regulation and these suppliers may potentially face higher costs as a result of having to comply with performance standards and labelling requirements. They would, however, benefit from greater clarity, consistency and predictability of the regulatory approach.

Retailers and other product distributors would also be affected by expansion to the scope of the program. Retailers have compliance obligations (e.g. to ensure that products display correct energy labels) and need to be able to explain labels to customers and deal with any resulting shifts in preference.

A consistent national approach would avoid the risk of the development of alternative labelling and energy performance testing methods for use in brand differentiation, marketing and advertising. It would reduce opportunities for false and misleading advertising (such behaviour also has the potential to tarnish the integrity of honest

programs). For consumers a consistent national approach is likely to be less confusing and therefore more likely to be used in making choices about the best equipment to buy.

B. Coverage of non-energy using products

As noted in chapter 1 products that do not themselves consume energy directly, such as the ductwork for ducted air conditioners, can have a major impact on the energy consumption and efficiency of appliances. Expanding the program to cover such products would ensure better targeting of the program at the key identified market failures and capture all energy efficiency and greenhouse gas aspects of appliances and equipment. Products should, however, only be covered by the program where a consistent and reliable testing method can be developed.

Products that could potentially be covered (subject to detailed cost-benefit analysis) include:

- insulated flexible and rigid ductwork for air conditioning: the same principles apply as for ceiling and wall insulation, in that ductwork can be rated and labelled for its thermal resistance;
- building materials with thermal properties, including windows, wall cladding, framing and roofing materials; and
- lighting controls: timers and presence sensors.

Expansion of the program to cover such products would avoid the need to develop separate and/or complementary regulations in cases where government intervention is warranted. Coverage of non-energy using products is not possible within the current labelling and MEPS regulatory framework, so additional regulations would be required, possibly on a product by product basis.

Coverage would provide for greater scrutiny and reduce opportunities for false and misleading advertising in relation to energy and greenhouse gas performance claims. This would potentially reduce the burden on the ACCC and the cost and time required to pursue action under the *Trade Practices Act 1974* (see Box 5).

For producers of the affected equipment there would be a greater risk of regulation and these suppliers may potentially face higher costs as a result of having to comply with performance standards and labelling requirements. This could affect both producers of the products and installers (such as plumbers and electricians) where the selection of components and materials and installation methods impact on energy efficiency.

Box 5. False and misleading advertising in relation to insulation

The E3 Program first conducted tests on the accuracy of the performance claims made for building insulation materials in 2004, partly in response to concerns raised by the air conditioning industry (E3 2008). Further testing in 2007 led to the E3 Committee referring three suppliers to the ACCC, which took court action against two and issued a letter of warning to the third, who had withdrawn from the market.¹⁷

Although any party could in theory have investigated the claims, undertaken or commissioned the tests and referred the matter to the ACCC, the E3 Committee was uniquely placed to do so, because:

- the suspect products were brought to its attention by related industry stakeholders (as is often the case with suspected non-compliance with appliances and equipment);
- it had the resources and the technical expertise to commission compliance tests; and
- the matter was directly related to the core program objectives of increasing the efficiency of energy use.

Box 6. The Windows Energy Rating Scheme (WERS) scheme

The Windows Energy Rating Scheme (WERS), managed by the Australian Windows Association, enables windows to be rated and labelled for their annual energy impact on a whole house, in any climate of Australia. The technical ratings were originally developed with assistance from the AGO. Participation is voluntary, but participating companies agree to have their rated windows tested to AS 2047 by an accredited laboratory, agree to an annual compliance audit, pay necessary fees and give notice of withdrawal.

The choice of products to be rated and whether to notify the WERS administrator for publication on the website is optional, which means that poorly-performing products need not be labelled.¹⁸ It is not known whether the program has been evaluated.

In the case of windows the power to cover non-energy-using products would be justified on two grounds – indirect impact on the performance of heating and cooling equipment and similarities with the energy label – which means that potential misuse of the label in WERS could negatively impact on consumer confidence in the appliance label.

The existence of a power to cover non-energy-using products does not mean it would need to be invoked in all cases. Where there is already a voluntary program in place the awareness that mandatory powers exist would increase the incentive for both participation and compliance in the voluntary scheme.

¹⁷ <http://www.accc.gov.au/content/index.phtml/itemId/789623/fromItemId/632284>

¹⁸ In its response to the *Discussion Paper*, a major manufacturer has recommended the mandatory labelling of glass and windows.

Much like co-regulation based on the Commonwealth's territories power, State-led co-regulation is capable of providing for national consistency by only requiring that the central regulation be changed. This option could eliminate many of the delays currently experienced whenever regulatory amendments are required – except to the extent that jurisdictions retained the power to make variations, or variations were forced on them by differences in regulatory approach, (e.g. with regard to whether penalties are defined in monetary terms or penalty units).¹⁹

Alternatively, this measure could be implemented within a regulatory framework that supports enforcement of compliance at import, so simplifying the enforcement regime.

The imposition of performance standards would also raise barriers to entry into the market, which could limit competition depending on the stringency of the standards imposed. There could also be flow on effects to suppliers of the related appliances and equipment to the extent that it raises the overall cost of installing equipment (such as ducted air conditioning).

C. Greenhouse gas emissions labelling

The energy efficiency label addresses information deficiencies and enables consumers to make informed choices about the efficiency of the products they buy. This addresses under investment in efficient products where there is little correlation between capital costs and running costs.

However, currently consumers cannot easily use the energy label to compare the greenhouse emissions associated with the energy use of products using different energy forms. Consumers would need to have a reasonable knowledge of the greenhouse gas intensity of different energy types in order to calculate the greenhouse gas emissions of competing products based on energy efficiency information alone.

Information on greenhouse gas intensity could potentially become increasingly valuable to consumers concerned about the environmental impact of their purchases as greenhouse gas emissions are constrained especially if policies to limit emissions significantly increase the price of energy.

Comparative information on greenhouse gas emissions can be added to the information on energy use and efficiency conveyed to potential purchasers by the energy label. However, it may not be practical to add it to the label itself, for a number of reasons:

- not all competing and substitutable products may carry an energy label;
- the physical greenhouse intensity of electricity, in particular, can vary by location and over time: even over the course of a day as generation mix changes. The locational and temporal variability of the types of electricity generation means that it is not practical

¹⁹ For example, states would need to decide whether or not to use a common definition of penalty units and common values of units. This could be achieved by stating in the definitions section of each Act that the term 'penalty unit' has the same meaning as in the central Act.

to readily indicate in a simple form the likely greenhouse gas emissions or intensity on an energy label; and

- the energy label is subject to space limitations and adding new information risks compromising the comprehensibility and effectiveness of the label with excess information.

There is, however, nothing to prevent the information that supports and supplements the label, notably that obtainable from the '*energyrating.gov.au*' website, conveying information about the comparative greenhouse impacts of competing products, just as it does now on energy prices, provided that fair means of comparison can be devised. The advantage of having enabling provisions to do this is that it would enable development of a consistent national approach. This would prevent suppliers or retailers publishing conflicting or confusing statements about the greenhouse gas intensity of the products they sell.

Such an enabling provision should nevertheless be used with caution. A principal value of the energy labelling scheme is its credibility among consumers (Artcraft 2006). This could be placed at risk if the scheme conveyed information that was controversial and not supported by established methods of calculation, or conversely if the information had to be so general and qualified that it had little or no value for decision making.²⁰

Greenhouse gas emissions labelling should be applied to specific products (whether directly or via the *energyrating.gov.au* website) only after a thorough assessment of its merits.

It is difficult to gauge the advantages and disadvantages of greenhouse labelling for suppliers of electrical goods that compete with alternatively fuelled goods. While these suppliers would operate in a more competitively neutral environment, a broadening of the requirements may highlight the fact that conventional electricity generally has a higher greenhouse gas intensity than the main alternatives. This could have a negative impact on their capacity to compete with alternatively fuelled products resulting in some loss in market share over time.

Consumers would benefit from the provision of consistent information on the energy and greenhouse performance of competing appliances and equipment and from the energy savings that might be realised from purchasing equipment that is more efficient and uses a less greenhouse-intensive form of energy. They may, however, face higher capital (and installation) costs for the purchase of the equipment. Where performance standards are imposed that reduce the availability of the affected equipment there may be some loss of choice and competition, which could also have a negative impact on prices.

²⁰ There are also greenhouse impacts associated with a product's manufacture and operation that go beyond its energy consumption. Some products use refrigerants with a global warming potential, but calculating the contribution to lifetime greenhouse impact would require a range of assumptions about leakage and top-up rates and the ultimate disposal or recovery of the refrigerant charge at the end of the service life. Estimating the energy use and associated emissions 'embodied' in the materials of a product requires even more layers of assumptions.

D. Greenhouse gas-intensity standards

The imposition of greenhouse gas performance standards (e.g. as thresholds for greenhouse gas-intensity) could address market failures relating to greenhouse gas reduction. Energy services such as lighting can only be met by electric technologies, so greater efficiency of use automatically leads to lower greenhouse gas emissions. Greenhouse gas performance standards would likely be most effective when used in combination with coverage of energy forms other than electricity.

The impact of greenhouse gas performance standards would be much the same as the general impacts of energy labelling and MEPS. However, greenhouse gas intensity standards would need to be carefully crafted so that they did not exclude product types that may be needed for niche markets where special circumstances might warrant exemptions.

Greenhouse gas performance standards, if applied, would probably need to co-exist with MEPS rather than replace them, and products would need to meet both criteria. (This is not unusual – for example some appliances need to meet both energy and water efficiency requirements). Even if a product meets greenhouse gas performance standards because it uses energy forms of low greenhouse gas-intensity (e.g. natural gas) consumers still need to outlay capital and energy costs, and there may still be an economic case for imposing MEPS if market failure can be demonstrated.

E. Regulating associated environmental impacts

The current regulatory framework does not cover non-energy environmental matters directly associated with regulated products, or perverse outcomes such as increasing the mercury content of fluorescent lighting products in response to more stringent lighting energy efficiency standards. Sometimes the inherent design of an energy efficient technology may also make it more noisy – for example heat pump water heaters have motors whereas electric resistance water heaters do not.

Toxic materials may be controlled under general health and safety guidelines or specific product standards. MEPS for compact fluorescent lamps are scheduled to take effect from November 2009, when state regulations reference set AS/NZS 4847.2-2008 *Self-ballasted lamps for general lighting services*. Apart from energy efficiency this standard also specifies limits on lamp mercury content, and calls up AS/NZS 4782.3 *Procedure for quantitative analysis of mercury present in fluorescent lamps* as the means to measure it.²¹

As MEPS requirements become more stringent the risk of perverse outcomes may well increase. The incorporation of powers to address the issues directly in relation to regulated products would be valuable both for risk management and as a potential deterrent.

There are likely to be advantages from a more direct and streamlined approach to dealing with the potential adverse impacts of performance standards and labelling requirements. This does, however, create the possibility for overlap between the MEPS and labelling

²¹ <http://www.energyrating.gov.au/cf2.html>

requirements and other regulations. Consequently the best approach should probably be determined on a case-by-case basis. An enabling provision in the MEPS and labelling regulations would at least allow for regulation of the potential externalities of the program and provide more options for providing the most cost effective and efficient approach.

Comments are sought on the advantages and disadvantages of this proposal.

F. Mandatory reporting of annual sales data

In order for regulation to be effective it must be enforceable. To ensure that regulation addresses the problems for which it was designed and meets the intended objectives it is also necessary to regularly monitor the regulation and review it to evaluate its effectiveness.

It is not possible under the current regulatory framework to comprehensively monitor the program and assess its effectiveness. A requirement for mandatory reporting of annual sales data by suppliers of registered products would allow this to occur.

A mandatory reporting requirement would impose some modest additional administrative costs on suppliers. The costs of collecting the information should be low, because in most cases this would simply mean accessing existing stock control and movement databases. The costs of reporting the information would be lower if only one report were required to a single regulator, rather than multiple reports to multiple regulators.

Governments would also face some additional data processing costs. Some of the additional costs to government would be offset by a reduced need to purchase sales data from market monitoring companies and use consultants to match model numbers to the register.

Improving the quality of data would enable government to better enforce compliance with the requirements of the program ensuring greater likelihood that the program achieves the desired outcomes. This should improve confidence in the program delivering overall benefits to all affected parties.

Comments are sought on the likely costs and benefits of mandatory reporting of annual sales data.

G. Label information in other media

Energy labelling is intended to make reliable information on energy use and, potentially, greenhouse impacts, available at the points in the decision process where it can influence the purchase decision. It aims to address information asymmetries and assist consumers to make informed choices. This promotes competition, encourages improved efficiency and innovation.

In 2006, 88% of appliance purchasers said that they referred to the energy label during the search or final decision process (Artcraft 2006). At least 82% of purchasers actually visited a showroom (Table 5).

However, the average buyer uses multiple sources of information: 68% obtained information from retailer advertisements, brochures or websites, 48% from manufacturer or importer brochures and 27% from manufacturer or importer websites. It is likely that the share of purchasers obtaining information via the internet would have risen since 2006

It is not possible to determine how early in the information search process products may be short listed, or a final purchase decision made. If buyers encounter energy-related information early in the process it will alert them to the importance of energy efficiency, as well as guide their choice. The more widely disseminated the information the greater the chance that it will be influential.

At present there are no powers to require the display of images of energy labels, or key label data such as star ratings, in product brochures, in advertising media or the internet, such as exist in the WELS legislation. The consistent display of energy label information at these points would have a potential to reach nearly twice as many contact points as the physical labels themselves (Table 5). Once the costs of obtaining energy consumption information are incurred by product suppliers, the additional cost of communicating this information via other channels is low.

Most major appliance manufacturer and retailers provide detailed information on the products they sell on their web sites on a voluntary basis. This sometimes includes energy consumption and energy efficiency ratings, where such information is available. Given this the costs of adding energy information to all such communications are expected to be low. Greater prominence and consistency in provision of the efficiency performance information on appliances and equipment would be expected to deliver a net benefit.

Comments are sought on the likely costs and benefits of expanding the labelling requirements.

Table 5 Sources of information used in appliance purchase

Source	% of respondents nominating	
	Unprompted recall	Prompted recall
Retailer – salesperson	63	82
Retailer – ads, brochures or website (a)	33	68
Workmates, friends or relatives	23	71
Manufacturer/importer – website (a)	13	27
Consumer organisation	13	41
Energy or gas label on the appliance	10	78
Manufacturer/importer – ads or brochure (a)	10	48
Manufacturer/importer – phone or mail	3	12
The <i>energyrating.gov.au</i> website	2	15
Homemaker shows on TV	1	22
Building or energy information centre	0	20
Other	16	15
Unsure	1	1
Average number of sources used per person	1.9	5.0

Artercraft (2006). Survey of 1,730 recent or intending purchasers of household appliances and water heaters. Over-adds because buyers used multiple sources of information. (a) Potential additional display point for label information that is not consistently used at present

Indicative quantifiable costs and benefits of the reform

The achievement of net benefits under the scheme largely depends on the number of products covered, the stringency of MEPS levels, the effectiveness of information measures, the level of product innovation by suppliers and the level of compliance.

Streamlining the administrative arrangements to improve the regulation making process and expanding the scope of the program to broaden coverage might be expected to improve the timeframes in which higher efficiency standards or improved information could be put in place, leading to greater energy savings. Assessment of these impacts provides an indicative guide to some of the costs and benefits of reform.

Table 6 summarises the three main categories of on-going program costs and benefits, with their estimated dollar magnitude in 2009/10. It indicates the relative scale of administrative costs and the private costs which are almost entirely independent of them. Even small changes in private costs due to the breadth of program coverage, the speed of implementation, the stringency of MEPS and changes in compliance rates are far more significant than large changes in public administrative costs. Therefore the impact of different regulatory options on the former is more important than on the latter.

This is an optimal analysis in that it covers all of the measures in the current E3 work program, including:

- energy labelling and MEPS for a range of gas products; these were included on the assumption that enabling regulations would be in place by the target implementation dates.
- the phase-out of greenhouse-intensive water heaters (i.e. electric storage water heaters). The planning for this is well advanced, and the current assumption is that it will be implemented through state and territory plumbing or other regulations. If so this measure would not be affected by the form of energy labelling or MEPS regulation.

In determining the cost and benefits of reform it is assumed that all suppliers and products will comply with the measures when implemented. In reality even small changes in compliance rates have significant impacts on costs and benefits (Table 7). A more detailed assessment of the potential impacts of the E3 program is provided in Appendix 2.

It is estimated that increasing the energy savings from all E3 programs (including those already implemented) by just 1% in 2009 and 3% in all subsequent years, through faster identification and removal from the market of non-complying products, would result in the cost and emissions savings indicated in Table 7. Allowing for additional compliance checking costs to government of \$1.5M per year, as well as higher capital costs to users from the purchase of more efficient appliances due to higher compliance levels, the benefit/cost ratio of raising compliance levels is about 6, compared with B/C ratios of about 3 for the program as a whole (E3 2009).

This indicates the high value of changes to the program structure which enhance compliance, and conversely the high costs of aspects which compromise or reduce compliance.

Table 6 Main Cost and Benefit Categories and Potential Impact of Regulatory Framework

Cost Category	Activity	\$M Cost 2009/10	\$M Benefit 2009/10	Aspects of regulatory framework impacting on cost and benefits
1 Public Admin (a)	Compliance tests	1.5	NA	<ul style="list-style-type: none"> • Ability to achieve consistent and efficient administrative arrangements
	Other govt admin costs	7.2	NA	
	Registration charges	-0.6	NA	
	Net govt admin costs	8.1	NA	
2 Industry	Industry costs	NE (b)	NA	<ul style="list-style-type: none"> • Ability to achieve and maintain national consistency
3 Private (c)	Gas products (e)	23.2	17.9	<ul style="list-style-type: none"> • Ability to cover non-electric products
	Electric products	794.0	1543.1	<ul style="list-style-type: none"> • Ability to cover more products • Ability to set higher and more precise MEPS levels (eg with better data) • Ability to communicate label information in advertising, etc • Ability to communicate greenhouse gas impacts of product choice • Ability to support faster implementation
	All energy products (f)	817.2	1561.0	
	Non-energy products	NE (g)	NE	<ul style="list-style-type: none"> • Ability to cover non-energy products
3 (d)	Compliance effect (h)	15.0	54.0	<ul style="list-style-type: none"> • Level of compliance achievable

(a) Table 12 (b) Not separately estimated – included in Category 3 (c) Extracted from E3 (2009) (d) Table 7. (e) Private costs projected to exceed benefits in 2010/11 only (f) Exclude phaseout of greenhouse-intensive water heaters, which is likely to be achieved outside MEPS program. (g) Not estimated as the specific non-energy-using products which the program may cover have not been agreed. (h) Costs and benefits of a 3% improvement in actual product energy efficiency; a 3% reduction would reverse the costs and benefits.

Table 7. Estimated cost and benefits of higher MEPS and labelling compliance rates

	In 2009/10	2009-2020	NPV in 2009 (a)
PJ energy avoided	1.1	26.0	NA
Mt CO ₂ -e emissions avoided	0.3	5.33	NA
\$M energy costs saved	54	1483	852
\$M additional capital cost to users	15	199	121
\$M additional compliance costs to govt.	1.5	18	12
B/C ratio (a)	3.3	6.8	6.0

Source: GWA (2008). (a) At 6% discount rate

Consultations

First Stage

The first stage of the consultation process sought the views of stakeholders on a range of issues related to the present operation of the energy labelling and MEPS scheme and on its possible enhancement.

In August 2009 DEWHA released a *Discussion Paper on proposed national legislation for Minimum Energy Performance Standards (MEPS) and Energy Labelling*. The paper was advertised on the DEWHA website and also sent direct to peak industry and consumer bodies and the relevant state, territory and Commonwealth government agencies (about 50 entities in total). Written submissions were invited by 25 September 2009.

Between 10 and 21 September DEWHA held half-day public information forums in Sydney, Melbourne, Adelaide, Perth, Brisbane and Canberra. DEWHA officials also held separate meetings with state and territory officials. A total of 56 representatives of industry, standards and testing bodies and 28 state and territory officials attended the public forums.

The *Discussion Paper* posed 31 questions, ranging in scope from very high level – the form of legislation preferred – to administrative details. The questions and the respondents are listed in Appendix 3.

Responses were received from:

- 9 industry associations
- 8 manufacturers (air conditioners, building products, commercial refrigeration, computers, industrial fans, pool heaters, water heaters)
- 3 government agencies
- 5 others (importers, consultants etc)

This Consultation Regulation Impact Statement was reviewed and approved for publication by the Office of Best Practice Regulation (OBPR).

Second Stage

The publication of a Consultation RIS marks the beginning of a formal consultation period. Written submissions are invited, up to 1 March 2010. As the process is a formal one, submissions are generally made public, except for information that is indicated as confidential by the respondent.

Public forums during the consultation period are planned for Sydney, Melbourne, Adelaide, Perth, Brisbane and Canberra.

All submissions and stakeholder views on this Consultation RIS will be taken into account in the preparation of the Decision RIS. This will be reviewed by OBPR before it is forwarded to Ministers to assist in their deliberations. The outcomes of the public forums

and content of written submissions will be summarised and made public subsequent to the finalisation of the Decision RIS.

Responses to Discussion Paper

The need for a national energy labelling and MEPS program is widely accepted by manufacturers, importers and their associations. However, there was a range of views and concerns expressed in responses to the questions in the *Discussion Paper*.

The responses, which are summarised in Appendix 3, indicate that the regulatory and administrative problems identified in this RIS are indeed significant issues for stakeholders, particularly with regard to the need for national consistency. There was also broad support for the extension of the scope of the program to products using other energy forms and selected non-energy-using products. Opinion differed about the value or cost of requiring the disclosure of information in advertising, on whether local or international test standards should be used, and on the value of greenhouse-related information.

Recommendations

On the basis of the analysis in this RIS, it is recommended that:

1. There be a transition to a new national regulatory framework for the national energy labelling and MEPS program.
2. To ensure national consistency and efficiency of implementation, now and in the future, the preferred framework should be based on Commonwealth regulation (i.e. options 3a, 3b or 3c).
3. If this proves impractical, regulatory options in which the Commonwealth plays a lead role should be explored (i.e. options 2a or 2c).
4. The new regulatory framework should retain the provisions to cover any product using electricity, and also contain enabling provisions to implement each of the following measures:
 - A. coverage of products using energy forms other than electricity;
 - B. coverage of non-energy-using products which impact on the energy use or efficiency of regulated products;
 - C. labelling (or otherwise indicating) the greenhouse gas impacts of covered products;
 - D. setting greenhouse gas-intensity standards for covered products; and
 - E. minimising the (non-energy) environmental impacts of regulated products.
5. The implementation of specific measures under the provisions above should be subject to regulation impact assessment on a case by case basis.
6. The new regulatory framework should include requirements for suppliers of registered products to report annually on the national import, sales or supplies of each registered model (Measure F).
7. The new regulatory framework should include requirements to display label images or key data prominently when products are displayed, promoted, marketed, sold or supplied at any point in the supply chain (including internet) and in any product specification, brochure, advertising, magazine, catalogue and website where a registered product is profiled (Measure G; similar to WELS requirements).

8. The new regulatory framework should define ‘sale’ and ‘supply’ in a way that:
 - a. is consistent in all jurisdictions;
 - b. covers all imports of products (other than previously owned household products for own use);
 - c. covers all modes of transfer of ownership of new products to end users in Australia (whether retail sale, wholesale, hire, lease or other);
 - d. covers situations where the product is delivered to end users as part of a service without actual change of ownership; and
 - e. impacts on the initial purchase and period of use, but not on used, resold or refurbished product (unless offered as new).

9. The new regulatory framework should ensure that:
 - a. agreed measures take effect in all jurisdictions at the same time;
 - b. no jurisdiction can implement energy labelling or MEPS requirements that are different from those in other jurisdictions; and
 - c. ‘grandfathering’ provisions are harmonised across jurisdictions, and across programs (i.e. WELS, energy labelling and MEPS) in cases where a product type is subject to more than one mandatory program.

10. The new regulatory framework should provide for control of product imports as a means of enforcing compliance.

11. The new regulatory framework should ensure consistency across all jurisdictions with regard to:
 - a. offences (whether civil, criminal or both); and
 - b. penalties (preferably as penalty points rather than fixed monetary amounts).

12. The new regulatory framework should enable any jurisdiction to initiate and complete enforcement action with regard to any product supplied in its territory, irrespective of where the product is registered (with the Commonwealth having this power with regard to products supplied in the Territories).

6. Review

All regulations are reviewed at intervals, either when they are about to lapse due to ‘sunset’ provisions, when conditions change or when they prove inadequate for the problems or issues they are intended to address.

The energy labelling and MEPS program does not operate under a single Act; its current regulatory basis is a framework of state and territory regulations. While each of these can be reviewed (and repealed) in isolation, their effectiveness can only be assessed when the entire framework is reviewed at the one time.

The last review before the present one was carried out in 1999, when states and territories wished to assess the costs and benefits of implementing ‘model regulations’ to support the program. The present review is also based on a decision by states, territories and the Commonwealth, embodied in the *National Strategy on Energy Efficiency*:

‘Subject to a regulatory impact analysis, national legislation will be established to provide a nationally consistent policy framework covering appliance and equipment minimum energy performance standards and labelling, streamlining governance arrangements and regulatory processes, simplifying compliance and enforcement responsibilities for all stakeholders, and reducing transaction costs for business.’ (COAG 2009)

Whichever regulatory option is adopted, there would need to be continuing review of the framework’s effectiveness. With co-regulatory options all parties would need to agree on the timing and terms of reference for each review, unless a common review timetable were included in the regulations. On present indications, this would probably not occur more frequently than every 10 years.

If a framework based on Commonwealth Constitutional powers were adopted, the legislation could be and should be reviewed more frequently – perhaps three years after initial implementation, and then at six year intervals. However, too frequent reviews would be costly, would divert resources from program management and could undermine one of the main reasons for changing regulatory structure: to achieve greater consistency and stability and to reduce regulatory risk for stakeholders.

As individual program measures would continue to be subject to formal regulation impact assessment, there would be frequent opportunities for stakeholder consultation, and any problems with the regulatory framework as a whole would soon become apparent.

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Appendix 1 National Policy Context

Greenhouse gas reduction and energy efficiency

The efficient use of energy underpins a wide range of economic and environmental objectives, including the reduction of greenhouse gas emissions. Up to now, programs to increase the efficiency of energy use faster than business-as-usual (BAU) have been the mainstay of Commonwealth and State government greenhouse gas reduction strategies.

Table 8 summarises projected contributions of national programs to greenhouse gas reductions from the stationary energy sector during the Kyoto Protocol commitment period and in 2020, before the impacts of the proposed Carbon Pollution Reduction Scheme (CPRS) are factored in. On these indications, energy efficiency programs would contribute about 44% of the total reduction in stationary energy emissions in 2020, compared with 34% for renewable energy programs, including the Renewable Energy Target (RET).

The suite of regulated energy labelling and Minimum Energy Performance Standards (MEPS) programs covered by this Regulation Impact Statement are projected to contribute about 22% of reductions. With the phaseout of greenhouse-intensive water heaters, which may need to be implemented through different regulations, the total impact would rise to 29%, making these measures the largest single contributor to national emissions reduction after the RET.

The introduction of the CPRS would not necessarily reduce the case or scope for government energy efficiency programs. Energy labelling and MEPS predate the emergence of climate change as a public issue. The original rationale for the programs was lack of information, split incentives and other failures in the market for energy and energy services. As long as these market failures persist, and can be efficiently addressed by the programs, there is a continuing case for them quite apart from their value in reducing greenhouse gas emissions. In fact the monetary benefits of using energy more efficiently would increase once the CPRS adds the costs of emissions permits to energy prices.

Energy efficiency policies and programs have been under considerable scrutiny over the last few years, beginning with an inquiry by the Productivity Commission (PC 2005). The need for energy efficiency policies to complement an emissions trading scheme was also covered in the *Wilkins Strategic Review of Australian Government Climate Change Programs* (Wilkins 2008) and the *Garnaut Climate Change Review* (Garnaut 2008). The Treasury report on economic modelling for the CPRS states:

‘This report does not examine the role of policies such as support for research and development into low-emission technologies, and energy-efficiency standards. Where these policies tackle other market failures, such as the public good value of innovation, asymmetric information and split incentives, they could reduce the cost of achieving Australia’s emission reduction objectives’ (Treasury 2008).

Table 8 Projected impacts of energy efficiency and other programs on stationary energy emissions (excluding CPRS effects)

Programs	Mt CO ₂ -e/yr below BAU 2008-12 (a)		Mt CO ₂ -e below BAU in 2020 (a)		Mt CO ₂ -e below BAU in 2020 (revised)(b)	
E3 (Labelling and MEPS)	7.7	21%	18.4	22%	19.8	22%
End use source substitution (c)	0.1	0%	2.5	3%	6.4	7%
Other energy efficiency programs	7.4	20%	19.4	23%	19.4	22%
Renewables (d)	11.6	32%	29.9	36%	29.9	34%
Other (e)	9.7	27%	13.5	16%	13.5	15%
Total	36.5	100%	83.7	100%	89.0	100%

(a) GWA estimate based on DCC (2008), Table 2.5. (b) With energy labelling and MEPS impacts updated from E3 (2009) (c) Phaseout of greenhouse gas-intensive water heaters (d) Includes effect of 20% renewable energy target. (e) Mainly increased efficiency and fuel substitution in fossil fuel generation

Changes in the energy efficiency of products will also have an impact on the economics of energy supply systems, especially the electricity network, where investment requirements are dominated by peak loads rather than energy throughput. If energy efficiency programs reduced energy consumption equally irrespective of the time of day or season of the year, they would cause an equal reduction in peak load. This is rarely the case. For example, increasing the efficiency of household air conditioners has only a minor impact on summer peak load (NAEEEP 2004/22). Phasing out greenhouse gas intensive water heaters will remove a large off-peak load from the market and could increase day-time peak loads from solar-electric and heat pump water heaters (GWA 2009a). The ability of equipment to use electricity at times of high availability of renewable generation will also be important in the transition to a lower-CO₂ energy supply system.

The increasingly complex relationship between energy use and demand means that specific policies are needed to co-ordinate the two at the system level, an approach sometimes called ‘smart grids’, and at the end use equipment level, sometimes called ‘demand response’.

National Strategy on Energy Efficiency

Australian governments have long supported the more efficient use of energy as a policy objective in its own right, and also as a means of supporting other policy imperatives, which at various times have included energy security, economic efficiency, energy market reform, ecologically sustainable development and, more recently, greenhouse gas reduction.

Commonwealth Government involvement in energy efficiency can be traced back to 1977, when in the aftermath of the 1973-74 ‘first oil shock’ a National Energy Advisory Committee of officials was established to report on actions for ‘energy conservation.’ In 1978 the Commonwealth and states agreed to initiate the National Energy Conservation Program focussing initially on liquid fuel use in transport and industry (GWA 1993).

The program subsequently came under the supervision of the Australian Minerals and Energy Council of Ministers (AMEC) and its Coordinating Committee on Energy Conservation (CCEC). In 1990 AMEC was succeeded by the Australian and New Zealand

Minerals and Energy Council (ANZMEC) and then in 2001 by the Ministerial Council on Energy (MCE).

In August 2004 the MCE agreed to a comprehensive *National Framework for Energy Efficiency* (NFEE) consisting of ‘nine integrated and inter-linked policy packages which extend, or further develop, a range of cost effective energy efficiency measures that are currently being implemented at a national or jurisdictional level.’²² One of these was ‘appliance & equipment energy efficiency’, i.e. the energy labelling and MEPS program.

In July 2009, Australian governments signed the *National Partnership Agreement on Energy Efficiency* (COAG 2009a), giving effect to the *National Strategy on Energy Efficiency* (NSEE).

The NSEE has four key themes:

1. Assisting households and businesses to transition to a low-carbon future;
2. Reducing impediments to the uptake of energy efficiency;
3. Making buildings more energy efficient; and
4. Government working in partnership and leading the way.

Under theme 2 there are three elements:

- 2.1 Electricity markets
- 2.2 Appliances and Equipment
- 2.3 Transport

Under 2.2 there is a measure to ‘establish national legislation for Minimum Energy Performance Standards (MEPS) and labelling, and over time move to add Greenhouse and Energy Minimum Standards’ (Table 9). The NSEE states:

‘Subject to a regulatory impact analysis, national legislation will be established to provide a nationally consistent policy framework covering appliance and equipment minimum energy performance standards and labelling, streamlining governance arrangements and regulatory processes, simplifying compliance and enforcement responsibilities for all stakeholders, and reducing transaction costs for business.’ (COAG 2009)

The present document is part of the regulatory impact analysis process for Measure 2.2.2.

²² <http://www.ret.gov.au/Documents/mce/energy-eff/nfee/about/stage1.html>

Table 9 Measure 2.2.2 from *National Strategy on Energy Efficiency*

Measure	Key elements	Indicative Pathway
<p>Establish national legislation for Minimum Energy Performance Standards (MEPS) and labelling, and over time move to add Greenhouse and Energy Minimum Standards (GEMS).</p>	<p>Measure is intended to include an overhaul and streamlining of the MEPS process to include target timelines for development and implementation of new standards. Including gas products in MEPS and labelling. GEMS legislation expected to cover non-electrical appliances and system components that affect the energy efficiency of appliances (e.g. air conditioner ducting).</p>	<p>Stage one: Australian Government tasked with leading an officials group to consider form of national legislation. Undertake stakeholder consultation, including regulatory impact analysis (RIA) process. As part of this RIA process, the issues and processes for including greenhouse and energy minimum standards will be examined. Stage one will be completed when the RIA process is complete. Expected to be mid-2010. Stage two: New legislation drafted or amendments to existing legislation and regulations. Bill(s), including a simplified and nationally consistent compliance and enforcement scheme, to be introduced and legislation enacted in Parliament. Stage two will be complete when the draft Bill(s) have been passed, target implementation timeframe is second half of 2010.</p>

Appendix 2 Operation of Energy Labelling and MEPS

Background

Energy Labelling

Energy labelling is a system for communicating reliable information about the energy efficiency or energy performance of a product to potential buyers, in a way that assists them to use this information in the selection process. It primarily addresses information failure, although it also helps address bounded rationality. The more that buyers trust and come to rely on energy labels as a shorthand for communicating complex information about energy use and efficiency, the more likely they are to take energy efficiency into account in their decisions.

The simplest type of energy label is an ‘endorsement label’ which indicates that a product meets some criterion which is not obvious to the buyer, although it is usually documented in some way. An example is the US ‘Energy Star’ label, which was originally implemented for globally traded information technology products. There are also ‘informative’ labels which indicate energy use or running cost, and ‘comparative’ labels which indicate relative energy efficiency, either on an absolute scale or in relation to highest and lowest efficiencies among products on the market.

Appliance energy labelling first appeared in the energy policy statements of the NSW and Victorian governments after the second oil shock of 1979. The first serious steps to implementing a labelling program were taken by the Energy Authority of NSW (EANSW) in 1982 (GWA 1991).

Refrigerators and freezers were selected as the first to be labelled because they represented a substantial use of electricity, there was evidence of efficiency variation between models, and because it was thought (mistakenly, as it happens) that the necessary test data were readily available. The need for a more reliable test quickly became apparent, and the EANSW referred the matter to the Standards Association of Australia (SAA, now known as Standards Australia) which took some years to develop a test.

At the very beginning of negotiations, the appliance industry strongly expressed the view that if the scheme were to be implemented at all, it would best be implemented nationally. The EANSW referred the matter to AMEC, which in 1983 ‘agreed that a supervised voluntary energy labelling scheme, commencing with refrigerators and freezers, be implemented in early 1984’ (AMEC 1983).

Between 1983 and 1985, AMEC tried to negotiate a voluntary labelling scheme with the Australian Electrical and Electronics Manufacturers Association (AEEMA, now AiG), the Electronic Importers Association (forerunner of CESA), and the major firms in the appliance industry. When it became apparent that AMEC was unable to resolve the issue, the NSW and Victorian energy ministers jointly announced their decision to introduce a common system for the mandatory labelling of refrigerators and freezers.

The two governments finalised the scheme during 1986. NSW originally proposed an energy consumption label with the title 'Energyguide' with a kWh figure and a table allowing running costs to be read off at different tariff levels, similar in format to the US label. Victoria proposed that the label also contain a star rating indicating efficiency in relation to a standard task. The governments agreed the basis of the ratings, the form of the label, the title ('Energy Rating') and set the maximum number of stars arbitrarily at six. The label design was both 'informative, in that it displayed kWh/yr consumption, and 'comparative' in that it displayed a star rating.

Although the scheme was based on SAA tests, the text of these, the form of the label and the rating algorithms were spelt out in regulations under the *NSW Electricity Development Act 1945*, and the *Victorian State Electricity Commission Act 1958*. The first regulations for refrigerator and freezer labelling took effect in NSW in December 1986, and coverage for different model classes was phased in over a year or so. Air conditioner and dishwasher labelling commenced in 1987 and 1988.

Labelling started slightly later in Victoria, because of the need for a Regulatory Impact Statement. In 1990, Victoria went beyond the NSW program and initiated the labelling of clothes dryers and clothes washers. The South Australian government required the labelling of refrigerators and freezers from mid 1990 under the *Electrical Products Act 1988*, and in 1991 phased in the labelling of all other products covered by the Victorian Act.

Energy labelling was effectively a national program by 1990, because the three labelling States covered nearly two thirds of the Australian population, and suppliers preferred to label all products, including those shipped to states without regulations. While there was a degree of regulatory consistency with regard to the products already labelled, there was no overall framework for managing, changing or expanding the program. The need for such a framework was identified as early as 1991 in order to deal with, among others matters, the need to revise the rating algorithms because of bunching at the top of the star rating scales (GWA 1991).

In May 1992, the Commonwealth, states and territories agreed to introduce legislation to eliminate regulatory impediments to a national market in goods and services. The Mutual Recognition Agreement provided for all jurisdictions to enact legislation so that goods that could be sold lawfully in one state or territory could be sold freely in another. This meant that the states with energy labelling regulations could not enforce them against products imported from non-labelling states. This principle was extended to New Zealand by the *Trans-Tasman Mutual Recognition Act 1997* (TTMRA).

In 1992 the Commonwealth Department of Primary Industries and Energy (DPIE) set up a National Appliance and Equipment Energy Efficiency Committee (NAEEEC) of officials to co-ordinate and expand the national energy labelling program, and to manage the introduction of MEPS. By 1999 all jurisdictions except Tasmania, the ACT and New

Zealand had labelling regulations. (NSW and other Australian jurisdictions had to obtain temporary exemptions from TTMRA to protect their labelling programs).

Following a regulation impact assessment in 1999 (GWA 1999) all jurisdictions implemented regulations requiring energy labelling and (except for the NT) MEPS. The energy labelling, MEPS and related activities managed by NAEEEC since 1996 were originally styled the National Appliance and Equipment Energy Efficiency Program (NAEEEP), which published its first triennial work program in 1999 (NAEEEP 1999). By then Commonwealth responsibility for the program had passed to the Australian Greenhouse Office (AGO) created in 1998. In 2004, following New Zealand's agreement to participate, NAEEEP was restyled the Equipment Energy Efficiency (E3) Program, now managed by the E3 Committee.

MEPS

Minimum energy performance standards (MEPS) can be set in different ways. The simplest is an absolute performance threshold which every unit of a given product type must meet. There are also 'corporate' or even industry-wide standards in which some models can fall below a referenced efficiency level provided that a sales-weighted target is met (e.g. the US Corporate Average Fuel Efficiency, or 'CAFÉ' program for motor vehicles).

MEPS address a range of market failures:

- split incentives – MEPS forces product purchasers such as builders or rental property owners to install energy efficient appliances even though they are not the beneficiaries of the lower running costs. (They are free to recover the extra costs in sale or rental prices, and in most case are able to do so because the regulations affect all parties equally, so none are at a competitive disadvantage);
- positive externalities – MEPS can be used to introduce new, more efficient products which no individual suppliers would risk introducing on their own;
- bounded rationality – MEPS makes decisions less complex by reducing the purchase options to products which meet the selected efficiency threshold;
- non cost-reflective energy price – MEPS can be set to optimise both energy supply costs (not just retail prices) and equipment capital costs; and
- negative externalities – MEPS can be set on the basis of shadow prices for externalities such as greenhouse gas emissions, which may not be reflected in energy pricing at all.

Absolute MEPS levels can be used strategically in a number of ways. 'Low-level' MEPS may exclude very few models on the market at the time, but protects consumers by preventing the entry of low-efficiency models or the diversion of models from other countries which adopt higher MEPS levels. 'Mid-level' MEPS are set on the basis of cost-benefit analysis, so that a significant share of models are excluded, but those left on the market are more cost-effective for buyers, even if their average price is somewhat higher. 'High-level' MEPS address the positive externality problem directly, by mandating the introduction of completely new energy efficient models on the basis of engineering

analysis of product design and construction. This was the approach used to set MEPS for the standing heat loss of electric storage water heaters in 1999.

In Australia, MEPS was one of the measures adopted by COAG as part of the 1992 *National Greenhouse Response Strategy*. After considering the findings of a cost-benefit analysis carried out in 1993 (GWA 1993) ANZMEC agreed in 1995 that MEPS would be introduced for household refrigerators, freezers and storage water heaters. The ANZMEC decision was followed by extensive discussions between Commonwealth and state officials and the appliance industry, during which the MEPS levels were finalised and an implementation date of October 1999 was agreed. By 1999 the AGO was investigating MEPS for a range of non-household products: electric motors, fluorescent lamp ballasts and packaged air conditioners.

The 1993 analysis found that cost-effective purchase decisions were being passed up, especially in the refrigerator and freezer market. It also found that the allowable heat losses for electric storage water heaters were high by world's best practice standards, and that reductions in allowable heat losses would be cost-effective for purchasers, even though the price of water heaters would increase. It was argued that labelling of water heaters would not be effective, so MEPS represented the best option for realising the cost-effective potential. Since then MEPS have been implemented for a number of products, including those covered by energy labelling.

Mandatory vs voluntary Implementation

Non-regulatory alternatives are considered whenever RISs are undertaken for an energy labelling or MEPS proposal. The following section reviews those most often proposed as alternatives.²³

Voluntary and Industry-led Labelling

Market participants may choose to co-operatively adopt a common method for displaying or disclosing product information in a form that they consider to be of interest to purchasers. It is most unlikely that an individual firm could take the risk of introducing a label unilaterally, because its competitors could easily question its validity and introduce alternative labels of their own which show their own products in a better light.²⁴

Consumers also tend to dismiss single-company labels not backed by recognised industry association or a non-profit agency such as the Heart Foundation or the Cancer Council.

Industry-led voluntary labelling only works effectively if there is a single industry association, it has near universal coverage of an industry and is able to discipline members

²³ Other options considered from time to time, such as 'feebate' programs which impose higher taxes on less efficient products and use the proceeds to lower taxes on more efficient products - are no longer possible since the flat rate Goods and Service Tax replaced the former differentiated wholesale tax regime.

²⁴ Participants may also collude to adopt a form of labelling which shows products in a favourable light, rather than call attention to negative aspects which may be of more importance to buyers.

in case of non-compliance. The Australian Gas Association (AGA) gas appliance labelling scheme started at a time when the AGA comprised gas utilities with quasi regulatory powers to set performance standards for appliances connected to their networks. Those utilities no longer have those powers, and although the scheme is still operating there are difficulties in updating the label or MEPS levels and in developing energy tests precise enough to form the basis for enforceable compliance testing.

One positive feature of the AGA labelling program is that less efficient products of the labelled categories also carry labels (although the AGA does not label some categories of space heater which are all of low efficiency, such as decorative heaters). More recent industry-led programs have only been able to get participating suppliers to label better-performing products. This was identified as a major weakness of the Australian Water Association's voluntary 'AAA' water efficiency label, and one of the reasons for the introduction of the mandatory WELS scheme (GWA 2003).

Another drawback is enforcement of compliance. The maximum sanction for non-compliance by a participant in an industry-led scheme is generally a termination of the licence to use the label, or at most expulsion of the offending firm. Industry associations rarely have the power to fine, and are usually reluctant to refer their members to the Australian Competition and Consumer Commission (ACCC).

Voluntary MEPS

In an effective voluntary MEPS scheme suppliers would have to agree to withdraw those products from the market that do not meet the agreed MEPS level. This would have more commercial cost than simply labelling better performing products, so the incentives not to participate, or if participating not to fully comply, would be far greater.

There is no known example of a successful MEPS scheme being introduced voluntarily anywhere in the world. In the late 1970s the Japanese Ministry of Trade and Industry struck agreements with a number of Japanese appliance manufacturers under which they would meet sales-weighted energy efficiency targets for selected products. There was a unique relationship between government and industry in Japan at the time, and as the Japanese market was then supplied entirely by local manufacturers there was no risk of circumvention by importers (GWA 1993). These conditions have not been repeated, even in Japan, where the extensive MEPS program is now on a mandatory footing.

Another form of quasi voluntary MEPS can sometimes be enforced for products where the government is the main customer. The US Government, the largest single purchaser of information technology (IT) in the world, made compliance with the Energy Star standards a condition of supplying these products for government tender. The US Government also persuaded a number of large corporations to adopt similar IT tender requirements, so creating a critical market mass of demand. There are no other products for which government constitutes such a large proportion of the market.

Main elements of the current Program

Appliance and equipment energy labelling and MEPS should be considered as a unified program. The following section outlines the background to the main functions and elements, so the emerging problems can be better understood.

Identification of target products

Energy labelling and MEPS are only applicable to products where the benefits are likely to outweigh the costs. In general these represent significant current (or projected) energy use, either individually (e.g. swimming pool pumps) or because they are so widespread (e.g. external power supplies or fluorescent lamp ballasts, of which there may be several in each home and dozens in each office). Analysing and projecting energy use at the product level is necessary for any energy efficiency program, whether energy labelling, MEPS or other. This task is now undertaken by the E3 Committee, which published a major study of energy use in the residential sector in 2008 (EES 2008) and is collecting data on other sectors.

Once significant end uses are identified, the E3 Committee commissions ‘product profiles’ to consider the policy case for intervention, and where this is warranted, the most appropriate form of intervention – energy labelling, MEPS, or both.

Standards and Testing

Energy labelling and MEPS rely on credible, repeatable and reproducible tests of the energy consumption of products over defined operating periods or operating cycles. At the same time it is necessary to define performance standards such as temperatures to be maintained within refrigerators or air conditioned spaces, washing and drying performance or light output, so products cannot gain higher energy ratings at the cost of performance. The tests are generally published as Australian or joint Australian and New Zealand standards, although they may be based on international standards.

State regulations no longer specify the tests in full technical detail, as they did originally, but call up the relevant published standard. The energy test is now usually in Part 1 of the product standard, and the labelling requirements and MEPS levels, if any, in Part 2.

Most tests involve physical samples, but for products such as larger air conditioners or electricity supply transformers the standards sometimes provide for a simulation alternative to a full physical test.

There is also some control over the quality of the test laboratories carrying out the tests. Suppliers can generally submit test results from their own or any other laboratory for initial registration purposes, but for compliance checking governments prefer to use independent laboratories accredited with the National Association of Testing Authorities (NATA) or its overseas certification affiliates.

Setting MEPS levels

The standard called up in the regulations contains the current MEPS levels for that product. The likely trend in future MEPS levels can be indicated to stakeholders by a number of mechanisms:

- preparation and publication of longer term plans, such as the ‘10 year Strategies’ that have been developed for standby power, lighting and gas products. These strategies can indicate when the E3 Committee plans to introduce, review and increase MEPS levels and energy labelling, where justified through regulatory impact analysis. Strategies for other product categories, including for commercial refrigeration, are being developed;
- committing to a regular review process, e.g. to review MEPS levels every three, four or five years after implementation. At present, MCE decisions usually incorporate a minimum ‘stability period’ for the proposed MEPS level, to give suppliers some certainty. The end of that period represents the earliest date at which a different (usually higher) MEPS level could take effect, although the process of review and analysis leading up to a change could commence earlier. An obligation to review could be included in the regulatory framework, but this could raise resource implications, both for the regulator and the manufacturers affected. The consequences of missing review deadlines would also have to be considered;
- reducing the technical risk of MEPS pathways, by clearly identifying the next increment, but not the timing. This has been done with electric motors, where the standard with the initial MEPS levels also contained higher efficiency levels, which suppliers could use to designate ‘High Efficiency’ products. It was understood by stakeholders that these levels would eventually become the next MEPS level, at a time to be determined after a further RIS; and
- reducing the technical and the regulatory risk of MEPS pathways, by committing to the timing as well as the level of the next increment. This approach was tried for air conditioners (E3 2009/04), but was disrupted by one state’s departure from the agreed schedule.

Implementation of Requirements

The date at which a product must comply with the requirements for energy labelling or MEPS is generally called the date of implementation. The date may be set out in regulations, or in the standards called up in regulation. It is usual for measures to apply to different sub-categories of products at different times, to spread the load on suppliers and test laboratories.

The treatment of non-complying products may also differ, from an outright ban on sale or supply after the implementation date, a defined period when stocks manufactured or imported before the implementation date can be sold, or an indefinite period during which such stocks can be sold (sometimes called ‘grandfathering’).

The point of legal liability can also differ. ‘Import’, ‘manufacture’, ‘sale’, ‘supply’ and ‘offer to supply’ are all commonly used terms, but not necessarily consistently defined from state to state. Some products may not exist as unique physical entities at all until they are assembled from components on site. There may also be differences (or lack of clarity) about the application of requirements to products imported by persons or companies for their own use, and as to what constitutes ‘new’ and ‘used’. The general intent of energy labelling and MEPS is to impact on the initial purchase and period of use, not on resold or refurbished product. However, some products not previously sold or used may escape coverage on the basis of a notional transfer of ownership that makes them exempt.

Registration

Registration forms the administrative basis of energy labelling and MEPS in Australia, although not necessarily in other countries. The supplier of every model of every product covered by energy labelling or MEPS must register the details with one of the state regulators empowered to register (NSW, Victoria, Queensland or SA) or with the New Zealand regulator. Registration has the following functions:

- Recording a description of each model and the contact details of its supplier for correspondence and compliance enforcement purposes;
- Recording the claimed energy performance characteristics of the product, usually supported by a copy of the test results;
- Recording an image of the energy label (if applicable) for that product;
- Providing the basis of a user-searchable database of products, so that the energy efficiency characteristics can be easily compared. This expands the impact of the information beyond the models that a potential buyer may encounter in a showroom, and also to products that are not required to carry physical labels;
- Providing the basis for monitoring trends in product energy efficiency, by enabling model energy characteristics to be readily matched with model sales data; and
- As a compliance filter: if a model discovered in the field is not registered, it does not comply with the regulations.

Registration and maintenance of the register represents a major administrative load for the energy labelling and MEPS program, the costs of which are partially recovered in registration fees. To prevent the accumulation of obsolete registrations, as occurred early in the life of the program, there are now provisions for automatic deregistration after 5 years unless the supplier advises that a model is still available. There are also provisions for suppliers to advise that a model is no longer on general offer, but needs to remain on the register so that old stock can be legally sold. These models can then be moved from the ‘public’ website to a secondary list.

Energy Labelling

The program elements above apply whether a product is subject to energy labelling only, MEPS only, or both. For products subject to energy labelling, there are additional requirements relating to the content of the label, its attachment to the product and its display at the points of sale, supply or in advertising.

The rules (or ‘algorithms’) for converting energy test results to the star ratings and kWh values to be printed on the label are usually in Part 2 of the relevant product test standard, as are the rules for size, format, print styles, colours and location and mode of attachment (e.g. adhered to a prominent location on the face of the unit and not obscured by other stickers, or if the label is a swing tag, printed on both sides).

Where there are ‘opt-in’ energy labelling provisions, suppliers who opt in are generally required to abide by the same obligations for label content as apply to mandatory labels – if the label is found to be non-compliant, the breach cannot be exonerated simply by ‘opting out’ and ceasing to label.

Energy labelling regulations originally applied only to the display of information on products and on the registration website. However, some energy test standards designate products that exceed specified levels of performance as ‘High Efficiency’ (HE). If a supplier claims a product to be HE in the registration declaration, but compliance testing later establishes this not to be the case, energy labelling regulations would prohibit the use of the designation on labels or on the *energyrating.gov.au* website.²⁵ However, use of the designation in product brochures or advertising would be controlled by the *Trade Practices Act 1974* rather than energy labelling regulations.

At present there is no requirement to display images of energy labels, or key label data such as star ratings, in product brochures or in advertising media. Many manufacturers, importers and retailers do however include this information voluntarily in their brochures, websites, and sometimes in advertisements. The WELS scheme on the other hand requires the display of label images or key data to be prominent when WELS products are displayed, promoted, marketed, sold or supplied at any point in the supply chain (including internet) and in any product specification, brochure, advertising, magazine, catalogue and website where a registered product is profiled.

Compliance Checking

Suppliers of products covered by the scheme must comply with registration, MEPS requirements (if applicable) and energy labelling requirements (if applicable). Detection of an unregistered product in the field is *prima facie* evidence of registration non-compliance. However, there could be genuine confusion about whether a product is covered by a ‘model family’ registration, which applies to a range of models that are superficially different but identical in their energy performance and consumption (e.g. stainless steel and white enamel variants of dishwashers, or left and right hand opening refrigerators, or identical models sold under the different brand names owned by the one supplier).

²⁵ The website www.energyrating.gov.au lists all models registered for energy labelling and for compliance with MEPS, along with their energy consumption and energy efficiency rating (if applicable).

MEPS compliance can only be verified by an energy test. Products can fail to comply with MEPS either because their energy consumption is found to be higher than the MEPS level or their level of performance during the energy test is below the specified minimum.

Products can fail to comply with energy labelling requirements if the information on the label is not as claimed, or if the label is missing or fails to comply with the Standard (e.g. in format, size, colour or mode of attachment). The absence of a label is easy to verify, but determining whether the label attached corresponds with the one registered for that model needs to be checked against the model number and the registration database. Verifying the accuracy of the information on the label generally requires a compliance test, as for MEPS compliance. For products subject to both MEPS and labelling, a compliance test could indicate compliance with both, compliance with neither, or compliance with MEPS but not labelling. For example, a product could pass MEPS but be significantly less efficient or have a lower capacity than claimed, so requiring withdrawal of the label and registration of a new label, generally with a lower star rating.

DEWHA manages most aspects of compliance checking on behalf of the E3 Committee, and notifies regulators when products fail. Some jurisdictions conduct in-store labelling audits on their own initiative.

Compliance Enforcement

When a specified article is found to be unlabelled or carrying the wrong label, the jurisdiction in which the breach is detected is responsible for bringing the matter to the attention of the retailer. Jurisdictions have different levels of label enforcement, from none at all to regular store inspections to occasional targeted store inspections following reports or surveys. The E3 Committee or energy labelling regulators may arrange with other agencies such as fair trading or consumer protection agencies to undertake this work, or contract with industry associations or market survey companies on a commercial basis.

If a product is suspected not to comply with MEPS or meet the level of energy efficiency claimed on the label, the jurisdiction in which the product is registered is responsible for bringing the matter to the attention of the supplier and working through the process of verifying the breach, resolving the dispute if possible and, as a last resort, initiating prosecutions. The Commonwealth can and does co-ordinate the actual testing and notifies suppliers of the test results, but it cannot initiate compliance enforcement action under the states' and territories' labelling legislation. However, where non-compliance is established the Commonwealth (on behalf of E3) can pursue remedies beyond those available under the state regulations, for example with the ACCC.²⁶

²⁶ Energy labelling and MEPS programs lend themselves to penalties based on the damages suffered by equipment buyers, calculated as the additional lifetime energy costs incurred due to the non-compliance. While the current state and territory regulations do not explicitly provide for this, it has in fact occurred under the supervision of the ACCC.

Offences and Penalties

The existence of any regulation creates an offence for non-compliance with it. The nature and level of that offence can be defined in different ways, and carry either civil or criminal penalties.

The state and territory regulations create the following offences:

- supplying or offering to supply a specified article which is not currently registered for energy labelling or MEPS (as applicable)²⁷;
- supplying or offering to supply a specified article where the energy label is missing or obscured;
- showing information near the label that conflicts with information on the label (e.g. ‘whatever the label says, this is the most energy-efficient product you can buy’);
- making a false or misleading declaration, e.g. with regard to the energy efficiency of a product;
- for a registration holder, failing to notify the regulatory authority of any change of contact details;
- failing to supply a sample for testing on the valid request of the regulatory authority; and
- failing to meet the costs of compliance testing by the regulatory authority if tests show that the model does not comply.

While the general intent is the same, offences and penalties and the processes for pursuing and expiating them differ by jurisdiction. Penalties for proven offences can be defined in fixed monetary terms or in ‘penalty units’ which can be adjusted over time (e.g. to account for inflation). In NSW, SA and Victoria regulations allow for the designation of lesser offences as ‘infringement offences’ which can be expiated with a lesser penalty, potentially allowing the matter to be settled more quickly and at less cost.

Sales and Data Monitoring

Energy labelling and MEPS programs are intended to lead to faster rates of improvement in the energy efficiency of targeted products than if the program did not exist (the ‘BAU’ case). It is possible to track the sales-weighted energy efficiency of products before and after program implementation. Pre-implementation tracking is usually imprecise, because often there is no standard energy test or complete list of models until these are created for labelling or MEPS purposes. This makes it difficult to compare pre- and post-implementation trends.

Post-implementation monitoring can make use of the register of models and their energy efficiency, and data on the sales of each model, where this can be collected. The NSW energy labelling regulations originally allowed for the reporting of sales data for each model registered in NSW, but as other states did not follow suit it was not possible to build

²⁷ The definitions of terms such as ‘offering to supply’ and ‘supply’ or sale differ between some jurisdictions.

up a picture of national trends, and the provision was not included in subsequent model regulations.

The E3 Committee currently purchases data on the retail sales of energy labelled household products collected by a commercial market monitoring company, and uses consultants to match this to model registrations and so derive sale-weighted efficiency and price trends.²⁸ This has good coverage of household appliance sales, but incomplete coverage of air conditioners, many of which are supplied by installation companies and other non-retail channels. There are no practical ways to collect data on non-household products, other than direct from the importers or manufacturers. The New Zealand regulations require suppliers of registered models to report the numbers imported, sold and re-exported.

Regulatory Impact Analyses and Review

Tracking sales-weighted product energy efficiency does not on its own indicate the impact of an energy labelling or MEPS program. It is necessary to estimate the ‘counter-factual’ or ‘BAU’ case: what the trend would be in the absence of the program. In 1995 COAG adopted guidelines for Regulatory Impact Analysis (the latest version is COAG 2007) which set out the various forms of impact and cost-benefit analysis required for *a priori* assessment of proposed regulations.

These guidelines were first formally applied to the entire national program in 1999 (GWA 1999) and have been used many times since for extension of coverage to additional products and for revisions to energy labelling requirements or MEPS levels. RISs project both BAU and ‘with-measures’ trends in energy prices, energy use and product costs, and calculate costs and benefits from the divergence of the two trends. There have been post-evaluations, where actual with-measures trends have been compared with the RIS projections (EnergyConsult 2006). However, once a program is implemented it is not possible to track BAU trends, so even post-evaluations rely on a degree of judgement to estimate program impacts.

Regulatory and Administrative Basis

The objective of developing a consistent national energy labelling program actually predates the implementation of energy labelling by NSW and Victoria in 1986. A national co-ordination framework was set up in 1992 with the establishment of the NAEEEC, but it took several more years for all states and territories to adopt reasonably consistent regulations. A 1996 review of the regulatory requirements found:

- ‘no means of coordinated revision of the label design or the mathematical algorithms determining star ratings...
- no means of enforcing MEPS...
- continuation of the inefficiencies associated with differing regulations in the jurisdictions which have labelling schemes’ (Day 1996).

²⁸ The latest published analysis is at <http://www.energyrating.gov.au/library/pubs/200606-greening.pdf>

By 1999 all jurisdictions except Tasmania and the ACT had labelling regulations, and in the following years all (including the original labelling states) adopted the model regulations which form the basis of the program today. The costs and benefits of adopting model regulations – including the powers to set MEPS – were the subject of a RIS commissioned by MCE (GWA 1999; this was the first NAEEEP RIS prepared to COAG Guidelines).

The national energy labelling and MEPS program scheme now comprises three elements:

1. the legislation and subordinate regulations of the states and territories;
2. the Australian Standards (or joint Australian and New Zealand Standards) incorporated by reference into the state and territory legislation, which contain the detail of the minimum energy performance and labelling requirements; and
3. the *Administrative Guidelines* used in conjunction with the above elements.

The *Administrative Guidelines* help administer the program in a uniform and consistent manner, but where there is conflict or inconsistency between state and territory legislation and the *Guidelines*, the legislation prevails to the extent of any such conflict or inconsistency.

While the opportunity to set up a national energy labelling and MEPS framework from the start was missed in the early 1980s, the elements of such a framework have gradually evolved, with the establishment of NAEEEC in 1992, MCE's 1999 endorsement of model regulations referencing Australian Standards, and the subsequent enactment of regulations in the states and territories. The scope and complexity of the measures now are vastly greater, and a degree of co-ordination has been imposed by use of common standards and common *Administrative Guidelines*, but the regulatory basis of the program has not been reviewed since 1999, and is in many ways essentially unchanged since 1986.

Product and Energy Form Coverage

After energy labelling was introduced for the six original appliances between 1986 and 1990, no further products were added to the program until MEPS were introduced for electric storage water heaters and refrigerators in 1999. In 2000-01 the graphics of the label design were updated, and the algorithms for some products were revised so that most models scored fewer stars on the new label than the old, to address bunching at the top of the scale. This change was accompanied by a co-ordinated national information campaign, and the transition was achieved without major disruption or customer confusion (NAEEEC 2004/05).²⁹

In the following years the program expanded to non-residential products, with MEPS for 3-phase electric motors introduced in 2001, packaged air conditioners in 2001, fluorescent lamp ballasts in 2003 and electricity supply transformers in 2004. In 2005 a more stringent

²⁹ <http://www.energyrating.gov.au/library/pubs/200405-labeltransition.pdf>

MEPS level was introduced for refrigerators. This was the first instance of a ‘second round’ MEPS level, reinforcing the principle that as product energy efficiency increases, the program needs to adjust both MEPS and labelling rules.

Since 2002 the NAEEEP has published two workplans, covering the periods 2002-2004³⁰ and 2005/06 to 2007/08.³¹ A third workplan for the triennium 2008/09 to 2010/11 was not separately published, but the contents were covered in E3 (2009).

Table 10 indicates the products and product groups covered by the program, and the years that measures affecting those products took effect or are intended to take effect. The inclusion of gas appliances in the work program is provisional, and depends on the expansion of the regulatory scope, which is one of the subjects of this RIS.

Coverage of Modes of Electricity Use

The scope of energy labelling and MEPS in the 1980s was originally restricted to electricity used while the product was performing its main function of refrigeration, clothes washing or space cooling. In the 1990s there was a proliferation of electronic devices such as video recorders and computers, which were generally switched on all the time and consumed far more energy in ‘standby’ mode than when performing their main function. Chargers for portable devices such as mobile phones and laptops led to further growth in standby energy. Finally, electronic circuits migrated to ‘traditional’ whitegoods and space conditioning devices, most of which now have permanent standby power consumption.

The labelling and MEPS program has expanded its scope to cover energy use in standby in a number of ways. Standby power criteria for IT, office and electronic entertainment products (computers, displays, printers, copiers, DVD players etc.) originally developed by the US Energy Star program are now used globally, and the Australian labelling program now also has an Energy Star component.³² The Australian government participates in the International Energy Agency’s ‘One Watt’ initiative which aims to ensure that no IT product, appliance or battery charger has a standby power that exceeds this level.³³ More recently, Australia has joined an Asia Pacific Partnership (APP) project to align the standby power approaches of member countries.³⁴ Standby power is now also factored into the energy consumption value used as the basis for product energy labelling and for MEPS compliance in Australia.

³⁰ <http://www.energyrating.gov.au/library/pubs/200201-workplan.pdf>

³¹ <http://www.energyrating.gov.au/library/pubs/200501-naeeep-workplan.pdf>

³² The US Energy Star label is an ‘endorsement’ label which originally indicated that a product met certain standby power requirements. It has since been expanded in the USA to indicate that other products (e.g. refrigerators) meet specified levels of operating energy efficiency. This second use of Energy Star conflicts with the star rating element of the Australian energy label and has not been adopted in Australia.

³³ <http://www.energyrating.gov.au/library/pubs/2008-aceee-standby.pdf>

³⁴ <http://www.energyrating.gov.au/library/pubs/2008-app-standbyreport-initial.pdf>

The Asia Pacific Partnership on Clean Development and Climate Change (APP) members are Australia, Canada, China, India, Japan, Republic of Korea, and the United States of America.

Table 10 Products and measures covered by E3 Program

Product or product group	Measure	Residential	Other
Household refrigerators & freezers	Energy labelling 1986 Label enhancements 2000, 2008 MEPS 1999, 2005	✓	
Electric storage water heaters (large)	MEPS 1999	✓	
Electric storage water heaters (small)	MEPS 2005	✓	
Electric storage water heaters (miscellaneous)	MEPS 2005	✓	
Clothes washers, dishwashers, clothes dryers	Labelling 1986, 1990 Label enhancements 2000	✓	
Household air conditioners	Energy labelling 1986 Label enhancements 2000, 2010 MEPS 2004-2010	✓	
Packaged air conditioners	MEPS 2001, 2010		✓
Chillers	MEPS 2009		✓
Close control air conditioners	MEPS 2009		✓
Televisions	Labelling 2009 MEPS 2009	✓	
Set top boxes	MEPS 2009	✓	
External power suppliers	MEPS 2009	✓	✓
Commercial refrigeration (display cabinets)	MEPS 2004		✓
Fluorescent lamp ballasts	MEPS 2003	✓	✓
Linear fluorescent lamps (tri-phosphor)	MEPS 2005	✓	✓
Incandescent lamps	MEPS 2009	✓	✓
Motors (3 phase)	MEPS 2001, 2006		✓
Power supply transformers	MEPS 2004		✓
Standby energy (range of products)	One-Watt target, 2013	✓	
Swimming pool & spa equipment	MEPS 2011	✓	
Gas water heaters	MEPS 2009	✓	
Gas space heaters	MEPS TBC	✓	
Gas ducted heaters	MEPS TBC	✓	
Personal computers & monitors	MEPS TBC	✓	✓
Water heaters	Greenhouse Standards 2010	✓	
Clothes washers, dishwashers	Energy impacts of WELS 2006	✓	✓

Source: E3 (2009)

The program is also expanding to cover important aspects of product performance. In 2004, following summer blackouts in a number of cities partially due to household air conditioner load, the E3 Committee investigated the potential for air conditioners and other major appliances to receive and respond to demand response (DR) signals from electricity utilities, as a low-cost way of managing critical peak loads.

If appliance manufacturers incorporate interfaces in their products, utilities can connect to them by a range of physical pathways (e.g. wireless, powerline carrier, cable or internet) in the confidence that the final link can be made at low cost and the appliance will respond in a predictable way. It is then up to the utilities to negotiate the required degree of control over the appliance by offering customers pricing or other incentives.

To this end, the E3 Committee has supported the development of a new Australian DR Standard (AS4755) and is investigating the costs and benefits of mandating compliance with this standard for all air conditioners sold in Australia.

MCE has given the E3 Committee a formal role in developing appliance load control capabilities to support smart metering. In the *Smart Meter Decision Paper* attached to its Communiqué of 13 June 2008, MCE stated:

‘MCE notes that uptake rates of direct load control of appliances can drive significant benefits identified in the study. To support voluntary uptake of direct load control services further, MCE agrees that consideration should be given to adjusting some appliance standards, such as air-conditioning, to include the HAN standard. MCE requests advice from the NSSC on recommendations to integrate this capability into priority appliances. This analysis should be undertaken in conjunction with the existing appliance energy standards work currently being conducted by both the Equipment Energy Efficiency (E3) Committee of the National Framework for Energy Efficiency and Standards Australia.’

This could be achieved through the current regulatory framework.

Related Programs

The energy labelling and MEPS program is related to several other programs through a range of mechanisms:

- common products and tests: clothes washers and dishwashers, which have been energy labelled since 1990, became subject to mandatory water efficiency labelling in 2005, under the *Water Efficiency Labelling and Standards Act 2005* (Cth). The information used for both labels comes from the same standard tests, which has widened the stakeholders in those tests to include government water agencies and supply authorities;
- common (or conflicting) policy objectives: the objectives of energy and water efficiency often coincide, for example in the promotion of low-flow showers. However, the objectives may be in conflict if a product is water-efficient but not energy-efficient, or vice versa. For some products, water and energy may be substituted to achieve a given outcome or service. Similarly, replacements for ozone-depleting substances may not be as energy-efficient, or materials used in certain devices (e.g. mercury in compact fluorescent lamps) may create disposal issues.
- overlap of markets: where energy labelling and MEPS impact on substitutable or competing products, there is pressure to extend coverage so that no product is at a competitive disadvantage, either by being included and having to bear the costs of testing, or conversely by being excluded and so not able to claim comparable or higher energy ratings. This has arisen in the water heater market where gas, electric, solar and heat pumps all compete, in space cooling where air conditioners and evaporative coolers compete, and to a lesser extent in space heating.

- use of common rating scales, images and approach: the energy rating label is one of the most widely recognised marks or logos in Australia, with 94% unprompted awareness, which is matched only by leading global brands (Artcraft 2006). For this reason, the same design is used with different colouring for the WELS label. Aspects of the design such as the arch shape, the colours, the use of rating stars and a 5 or 6 star rating scale have also been adopted by other energy-related programs such as the Windows Energy Rating Scheme (WERS).³⁵ This means the E3 program needs to manage and protect what amounts to valuable intellectual property in the energy label, and ensure that it is not used in ways that could damage or discredit the MEPS and labelling program.
- new building requirements: energy labelling and MEPS are intended to cover all regulated products offered for sale anywhere in Australia. MEPS levels are generally determined on the basis of the projected average costs and benefits, because it is not known where the product will be used. However, one situation where costs or benefits could differ significantly from the average is for fixed appliances such as water heaters, space heaters, lights or air conditioners installed in new buildings. The costs of installing more efficient technologies are generally lower than the average, because there is no pre-existing system which may be in a sub-optimal location (e.g. an inside water heater) and the building design can be optimised at zero or low cost to accommodate the more efficient products (e.g. by better thermal insulation, orientation or the provision of higher capacity piping or wiring).

Also, the energy and monetary benefits of more efficient products will be higher where installed in buildings which are more intensively used, such as commercial buildings.

For this reason the Building Code of Australia (BCA) has begun to incorporate minimum energy efficiency requirements that are higher than the general MEPS levels. An example is the proposal for the BCA to adopt a 5 star gas energy rating as the MEPS levels for gas water heaters, while the general MEPS level would be 4 stars.

Greenhouse Gas Emissions

The objective of reducing greenhouse gas emissions was not anticipated when the initial energy labelling scheme was developed in the early 1980s, although it was firmly on the national policy agenda by the time of the first investigation of MEPS in 1993.

All product Regulation Impact Statements since then have quantified the reductions in greenhouse gas emissions expected from the reduction in electricity use from that MEPS or energy labelling initiative. However, the reductions were given no monetary value in cost-benefit analyses because there was no CO₂ price signal. All initiatives up to the present have been implemented solely on the basis that they address a demonstrated market failure and are cost-effective in terms of energy price savings alone. At the same time, the associated greenhouse gas savings have formed an important part of the national greenhouse gas reduction strategy (Table 8).

³⁵ <http://www.wers.net/>

The introduction of the CPRS will change the situation in a number of ways. It is expected that energy prices will increase as electricity generators, gas producers and others pass on the costs of purchased emissions permits (or realise the market value of permits that may be allocated free). This will increase the value to end users of selecting more efficient products, so increasing their sensitivity to energy labelling in markets subject to influence by information. All else being equal, it would also support a case for higher MEPS levels in markets subject to failure.

In the context of a CPRS, energy efficiency measures would not be expected to increase national abatement, but can reduce the need for imported permits. In addition the Australian Government has committed to take account of voluntary action and the evolution of the carbon price in future cap setting, providing a further feedback that reinforces the important contribution that energy efficiency measures can play. Where efficiency increases occur in sectors that would otherwise not adjust fully to emission prices due to market failure this would reduce the overall cost to the economy of adjusting to the national emissions cap.

Indicators of program activity and performance

Budgets

There is no published budget for the energy labelling and MEPS program in its entirety. Some elements are funded by jurisdictions individually, and some from a common program fund, the National Framework for Energy Efficiency (NFEE). Under a funding model, established by NAEEEEC in 1992, the Commonwealth contributes 40% to the fund each year and the states and territories the other 40%, shared according to population, with New Zealand contributing 20%.

In addition to its NFEE contribution, each jurisdiction allocates staff resources (salaries and overheads) to the program, generally within the energy or environment portfolios. In the jurisdictions without provisions for registering products, the resource allocation amounts to a small part of the work of one officer, mainly for dealing with NFEE administration and the biennial E3 Committee meetings. In the registering states, significant staff resources are allocated to registration.

Fees are \$150 per registration in NSW and SA and \$162.40 in Queensland. In 2008/09 Victoria increased its fee from \$150 to \$285 (CPI-indexed), after a RIS concluded that the charge was not meeting costs.³⁶ However, cost-recovery of registration should be kept in perspective: registration fees represent less than 5% of the total program budget, and would represent less than 10% even if doubled (Table 11).

The only other program income is voluntary supplier contributions to a revolving fund which covers a proportion of compliance testing costs. Suppliers of products which pass

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[http://www.vcec.vic.gov.au/CA256EAF001C7B21/WebObj/ElectricalSafety\(EquipmentEfficiency\)Regulations2009RIS/\\$File/Electrical%20Safety%20\(Equipment%20Efficiency\)%20Regulations%202009%20RIS.pdf](http://www.vcec.vic.gov.au/CA256EAF001C7B21/WebObj/ElectricalSafety(EquipmentEfficiency)Regulations2009RIS/$File/Electrical%20Safety%20(Equipment%20Efficiency)%20Regulations%202009%20RIS.pdf)

compliance tests are invited to purchase the test reports as well as the tested units, which would be valuable for calibration of the supplier's test laboratory. Income is therefore dependent on how many tests are completed, and how many suppliers choose to participate.

The estimated total program budget in 2008/09 was about \$10.3M, of which \$2.4M was the NFEE fund and \$7.9M jurisdictional costs, covering staff, overheads and program costs not met through the NFEE fund. In all, the Commonwealth contributes about three quarters of the national total of 37 full time equivalent staff, and about three quarters of the program funding (Table 11).³⁷

Over the 9 years to October 2009, Victoria accounted for 52% of registrations, NSW for 19%, Queensland for 14%, SA for 5% and New Zealand for 9%. These ratios vary from year to year with changes in the location of appliance manufacture and as new products are added to the program. The NSW share of registrations rose to more than 39% in 2009, mostly for power supplies, which themselves accounted for half of the year's activity.

Table 11 Estimated administrative resource commitment by jurisdiction 2008/09, MEPS and energy labelling

	\$ '000											
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	State & Territ.	Comm	Total	Comm share
Staff and overheads	230	340	367	69	61	7	23	5	1101	6800	7901	86%
NFEE Contributions (a)									1200	1200	2400	50%
Total									2301	8000	10301	78%
Registration Revenue	191	180 (b)	62	13	0	0	0	0	446	0	446	0%
Share of registrations (c)	40%	33%	19%	2%								
Staff (FTE)	1.6	1.5	4.0	0.6	0.6	0.2	0.2	0.15	8.85	28	36.85	76%

Source: Personal communication from agencies. (a) Excludes NZ contribution (20% of NFEE total of \$3M)

(b) Projected to approximately double in 2009/10, with announced fee increase. (c) Oct 2008 to Oct 2009.

6% of registrations were in New Zealand

Apart from registration, the major areas of program expenditure are:

- product compliance testing (\$500,000 in 2007/08 and projected to increase to \$1.5M in 2009/10, including tests to develop new standards);³⁸
- maintenance of the www.energyrating.gov.au website, which includes a searchable listing of all registrations and label data;
- in-store energy label compliance checks;
- general research on technology and energy use trends;
- research and preparation of product profiles on specific products;
- preparation of Regulatory Impact Statements;

³⁷ The authors sought information from the jurisdictions in a standard format, to try to ensure that costs and overheads were reported consistently. However, it is likely that jurisdictions used different interpretations of energy labelling and MEPS activities and costs.

³⁸ <http://www.energyrating.gov.au/library/pubs/200803-achievements.pdf>, p8
<http://www.energyrating.gov.au/pubs/circuit-breaker-2009-09.pdf>

- detailed monitoring and end use metering studies (e.g. product standby power surveys in homes and stores);
- Australian Standards development;
- participation in international standards development;
- collection and analysis of annual sales data;
- consumer research; and
- liaison with stakeholders (there are now regular stakeholder forums for the household appliance, air conditioner and home electronics industries).

Estimated program expenditure in each of the last three completed financial years, and projections for the next two, are summarised in Table 12. The Commonwealth resource commitment was significantly expanded in 2008/09 (Figure 1). This coincided with a major increase in the range of products covered or being investigated for coverage (Table 10) and with a surge in the estimated annual energy saved by the program (Figure 1).

Table 12 Estimated national administrative resource commitment 2006/07 to 2010/11 MEPS and energy labelling

	\$ Million				
	2006/07	2007/08	2008/09	2009/10	2010/11
Staff & overheads - Comm	2.2	3.2	6.8	4.8	6.5
NFEE Contributions – Comm	0.8	0.8	1.2	1.4	1.4
Total Comm	3.0	4.0	8.0	6.2	7.9
Staff & overheads - S&T (a)	1.1	1.1	1.1	1.1	1.1
NFEE Contributions - S&T	0.8	0.8	1.2	1.4	1.4
Total S&T	1.9	1.9	2.3	2.5	2.5
Registration Revenues (b)	0.45	0.45	0.45	0.63	0.63
Staff & overheads - Total	3.3	4.3	7.9	5.9	7.6
NFEE Contributions – Total (c)	1.6	1.6	2.4	2.8	2.8
Total Program	4.9	5.9	10.3	8.7	10.4
Net of registration revenues	4.5	5.5	9.9	8.1	9.8

Source: Personal communication from agencies. (a) Assumes S&T resource commitments were and will remain at 2008/09 level. (b) Allows for expected doubling of Vic revenues in 2009/10. (c) Excludes NZ contribution (20% of NFEE total)

Table 13 High level program performance indicators

	2006/07	2007/08	2008/09	2009/10	2010/11
GWh saved compared with BAU (a)	4932	5802	7621	10434	13029
	\$ Million				
Energy costs saved (a)	738.6	875.0	1,181.5	1,617.7	2,256.7
Additional capital costs (a)(b)	274.5	299.8	386.2	1,239.9	1,272.7
Net admin costs (c)	4.5	5.5	9.9	8.1	9.8
Total costs	278.9	305.2	396.0	1,248.0	1,282.5
Admin/total costs	1.6%	1.8%	2.5%	0.6%	0.8%
Energy savings/costs	166	160	120	200	231

(a) Source: E3 (2009) (b) Includes testing and labelling costs recovered in equipment prices. (c) Table 12

The program expenditure of \$10.3M in 2008/09 should be compared with a total program costs to energy users of \$396M in the same year, of which \$386M (97.5%) is estimated to be the increase in the capital costs of equipment purchased due to greater investment in more energy-efficient equipment – either forced by MEPS or voluntarily incurred as a result of access to energy label information (Table 13).

These capital cost impact estimates are compiled from RISs carried out prior to MEPS implementation, and it is likely that they are greatly overstated. Detailed evaluations following the implementation of MEPS in Australia and elsewhere have been unable to detect any price increases attributable to rises in product efficiency levels, which were themselves clearly detectable (Ellis 2006).

The estimated value of energy saved as a result of the program is estimated at \$1,182M in 2008/09 alone (Table 13), indicating a gross benefit cost ratio of 3.0, even if the full capital cost impacts above is assumed. The program’s administrative costs were a relatively insignificant 2.5% of the total costs to energy users, and the ratio of program benefits to program administrative costs was about 120 to 1.

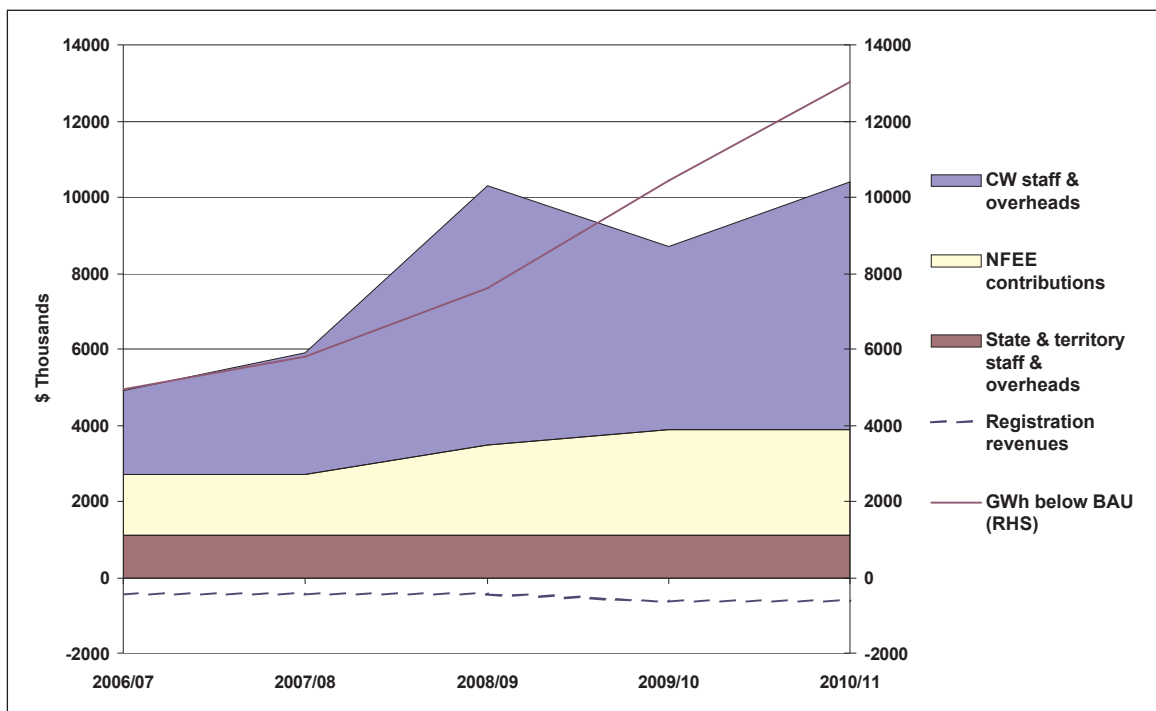


Figure 1 Program resource commitments and electricity savings, 2006/07 to 2010/11

Number of Products and Models Covered

The fourteen product groups currently subject to mandatory energy labelling and/or MEPS account for over 31,000 separate registrations (Table 14). Some of these cover ‘families’ of models. Many registrations are for products that are no longer sold, but which still remain on the register pending the automatic 5 year deregistration which now applies to all products (unless the supplier requests renewal of the registration, which is at no cost).

About 3,000 registrations were processed nationally in 2008/09, i.e. about 10% of the register in that year alone.

This rate of activity may well continue over the next two years due to the registration of new product groups:

- incandescent lamps – MEPS to be phased in for various types between November 2009 and October 2012; and
- transformers and converters for halogen lighting systems – MEPS intended to take effect from October 2010.

Otherwise, most of the new products in the current E3 work program involve model numbers in the hundreds rather than the thousands, with the exception of personal computers and monitors, for which coverage and registration options have yet to be considered in detail.

Table 14 Number of current registrations for energy labelling and/or MEPS

Product	Number of registrations (c)	% of total
Refrigerators and freezers	3334	10.6%
Dishwashers	1153	3.7%
Clothes washers	958	3.1%
Clothes dryers	229	0.7%
Total major appliances (sum of above)	5674	18.1%
Air Conditioners	7251	23.1%
Electric water heaters	439	1.4%
Televisions (a)	136	0.4%
Set top boxes	178	0.6%
Total household products	13678	43.6%
Fluorescent lamp ballasts	147	0.5%
Fluorescent lamps	1362	4.3%
Total lighting products (b)	1509	4.8%
Electric motors	9047	28.8%
Electricity supply transformers	157	0.5%
Commercial refrigeration	2432	7.7%
Total non-residential products	11636	37.1%
External power supplies	4559	14.5%
Total all registrations	31382	100.0%

Source: www.energyrating.gov.au accessed October 2009 (a) May not be complete list. Energy labelling and MEPS became mandatory from 1 October 2009. (b) Will increase with phasing in of MEPS for incandescent lamps and extra low-voltage lamp power supply converters between 2009 and 2012. (c) Note that this includes models which manufacturers may no longer offer for sale.

Compliance Activity

The E3 program has conducted about 120 compliance tests per year up to 2007/08. This rate is projected to rise significantly, with the tripling of the testing budget in 2009/10. Table 15 summarises the results of 18 months of tests. The 171 tests conducted over that period represented about 0.6% of the total number of registrations for those product categories.

The test regime is not random. It targets products which the E3 Committee has reason to believe may be non-compliant because of unrealistically high efficiency claims, public or competitor complaints, a poor compliance record for that brand or that laboratory, or discrepancies found in testing by others, such as the Australian Consumers Association (ACA), which regularly tests products for its magazine *Choice*.

If a product passes an initial screening test, it is considered a 'confirmed pass'. Of the 171 products tested, 100 passed on the screening test and another 13 on subsequent follow-ups, giving a confirmed pass rate of 66%. Failures take longer to resolve, partly because the regulations in the various registering states specify different sequences of actions before an ultimate finding of non-compliance. Table 15 indicates that of the one third of product tested that were not confirmed as passing, only 12% were confirmed as failures and the other 22% were unresolved, at least during the period reported. This may be an indication of excessively long resolution times, with the danger that suppliers can continue to sell suspect products for several months after the initial test.

The ultimate sanction is deregistration of a product so that it can no longer be lawfully sold. There were 22 deregistrations in 2005/06, 16 in 2006/07 and 18 in 2007/08. Most were involuntary after confirmed failures of compliance tests, but some were 'voluntary' deregistrations where the supplier agreed to withdraw a product after their own tests or the initial compliance screening test. Again, the sequence of events leading to either outcome would have been different according to the state of registration, raising the possibility that suppliers could act according to their assessment of the latitude in the local regulations and the speed and stringency of their enforcement, and not just on the merits of their case.

Table 15 Compliance test results, January 2007 to June 2008

Tests	% reg Models(a)	Passing initially	Pass Confirmed after further tests	Failing initially	Fail Confirmed after further tests	Outcomes pending	Confirmed Pass rate (b)
Refrigerators and freezers	29	0.9%	10	11	17	9	38%
Dishwashers	11	1.0%	8	9	3	1	82%
Clothes washers	23	2.4%	5	8	17	2	35%
Clothes Dryers	4	1.7%	2	3	2	0	75%
Air Conditioners	17	0.2%	7	9	10	7	53%
Electric water heaters	8	1.8%	6	6	2	0	75%
Fluorescent lamp ballasts	20	13.6%	16	20	4	0	100%
Fluorescent lamps	29	2.1%	28	28	1	0	97%
Electric Motors	15	0.2%	8	9	7	2	60%
Electricity supply transformers	5	3.2%	3	3	1	0	60%
Commercial refrigerators	10	0.4%	7	7	1	0	70%
Total	171	0.6%	100	113	65	21	66%
Share of total	100%		58%	66%	38%	12%	22%

Source: E3 (2008) (a) Per cent of registrations for that product category current at October 2009. Per cent of registrations at time of testing may have been lower. (b) Confirmed fail rate not representative because many outcomes pending

The actual compliance rates for a true random selection of products is not known, but it is understood that an analysis of tests on several hundred refrigerators randomly purchased and tested by the ACA over many years indicates that the average tested consumption is only about 2% higher than the labelled value.³⁹ This would indicate both a very high level of testing compliance, and also that the E3 test program is well-targeted, because it obtains such a high rate of failure among an otherwise highly compliant group.

This conclusion may not hold for other product types, where non-compliance rates are suspected to be much higher. Smaller air conditioners represent a particularly high risk group. There are over 7,200 models from hundreds of brands. Air conditioners are highly traded internationally, and shipments are often brought in by small importers (who may then exit the market) or by retail chains direct. Some models could be sold without being registered at all, and some before any compliance tests are possible.⁴⁰

Even air conditioners from large established brands such as LG have been found to be non-compliant. In September 2006 the E3 Committee concluded a joint enforcement action with the ACCC, and LG gave court-enforceable undertakings to compensate purchasers of five air conditioner models identified by the test program as having failed one or more of the validity criteria, up to a total of \$3.1 million.⁴¹

Air conditioners also represent a compliance problem for energy labelling. Table 16 summarises the results of the most recent surveys of labelling within stores Australia wide. These were carried out over the period straddling the introduction of the new label formats in 2000/01 – hence the count of ‘old’ label appearances in 2001.

Table 16 Label compliance surveys, 1998-2005

		Correct label	Old label	No label
Major Appliances (a)	1998	94%	0%	6%
	2001	81%	12%	7%
	2004	96%	0%	4%
	2009(c)	98%	0%	2%
Air conditioners (b)	1998	61%	0%	39%
	2001	37%	26%	37%
	2005	80%	1%	19%
	2009(c)	91%	0%	9%

Source: Millward Brown for NAEEC, 2004 and 2005 (a) Total 35,373 units in 373 stores. (b) Total 1,554 units in 100 stores. (<http://www.energyrating.gov.au/library/details2005-labelaudit.html>) (c) Australian Refrigeration Council, July 2009; Total 26,652 units in 393 stores.

³⁹ Energy Efficient Strategies, personal communication October 2009.

⁴⁰ In New Zealand, where sales must be reported, products sometimes appear in sales reporting that do not appear on the energy labelling register.

⁴¹ Commenting on the matter the Chair of the ACCC, Mr Graeme Samuel said: “Consumers need to have confidence that they can use the star rating of an air conditioner to make an informed choice between competing brands. ‘The ACCC, the Australian Greenhouse Office and state energy regulators will continue working together to ensure compliance with the energy labelling system.’ (E3 2007).

The energy labelling rates for major appliances (refrigerators, freezers, clothes washers, dishwashers and clothes dryers) has been consistently high, with a relatively smooth transition to a new label in 2001. The level of compliance compares well with the European Union labelling program. A study released in January 2009 found that only 61% of appliances across all 29 EU countries were correctly labelled.⁴²

However, the labelling compliance rate for air conditioners in Australia was still only 80% in 2005, even though labelling has been mandatory for air conditioners since 1987, only a year less than for refrigerators. The same market factors that encourage or enable non-compliance with MEPS for air conditioners also apply to labelling. On the other hand, the non-compliance rates did halve between 2001 and 2005, and halve again between 2004 and 2009.

Energy Trends

The E3 Committee undertakes analyses of program impacts at three to four year intervals. The latest of these, published in 2009, estimates the impact of all of the measures listed in Table 10. Figure 2 indicates the electricity savings projected for each measure. Figure 3 illustrates the trend in total household electricity use. The top line (black) indicates the trend as it would have been had the E3 Program not been introduced. The second line (red) indicates the current trajectory of household electricity demand given the measures already in place. The third line (green) indicates that the addition of the new measures proposed in the 2008-11 work plan could actually stop growth in household electricity use altogether.

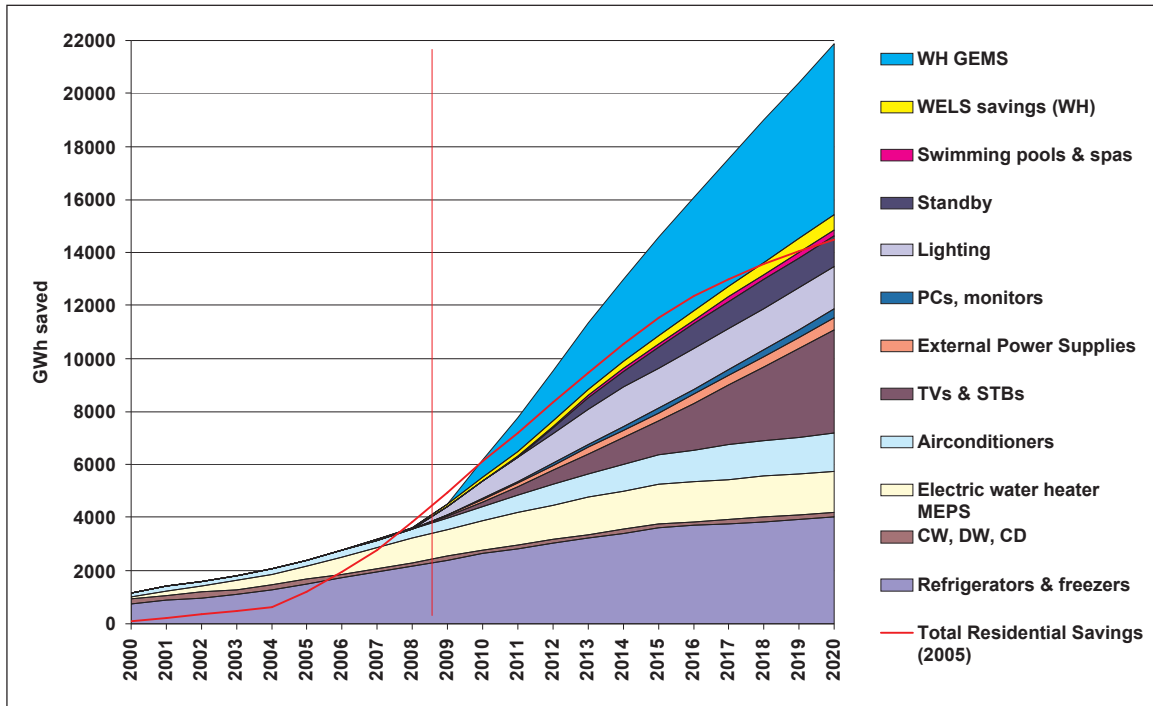
E3 Program measures already implemented will reduce household electricity use in 2020 by about 13% compared with BAU, and measures currently planned could bring about a further reduction of nearly 15%. The relative magnitude of savings from 'old' and 'new' measures is shown at the bottom of the diagram.

The projected reduction in electricity use from E3 Program measures outside the residential sector is illustrated in Figure 4. Up to the present, the savings have been dominated by the motors, transformers and packaged air conditioner programs. Because these and other products covered by non-residential measures are used widely in manufacturing, mining, utilities and commercial buildings, it is very difficult to allocate savings to specific sectors of the economy.

For the non-residential sector, electricity savings below BAU are projected to reach about 10,300 GWh per annum by 2020, compared with nearly 22,000 GWh per annum in the residential sector. Lighting products account for nearly 30% of the projected electricity savings between 2009 and 2020, followed by transformers (21%), air conditioning products (20%), motors (13%) and computers and electronic devices (9%). Figure 5 indicates that about 78% of the energy savings will come from MEPS programs, 11% from labelling programs and 11% from combined programs.

⁴² <http://www.energyrating.gov.au/pubs/circuit-breaker-2009-09.pdf>

Figure 2. Projected electricity savings, residential users



Source: E3 (2009)

Figure 3. Projected total electricity use in the household sector

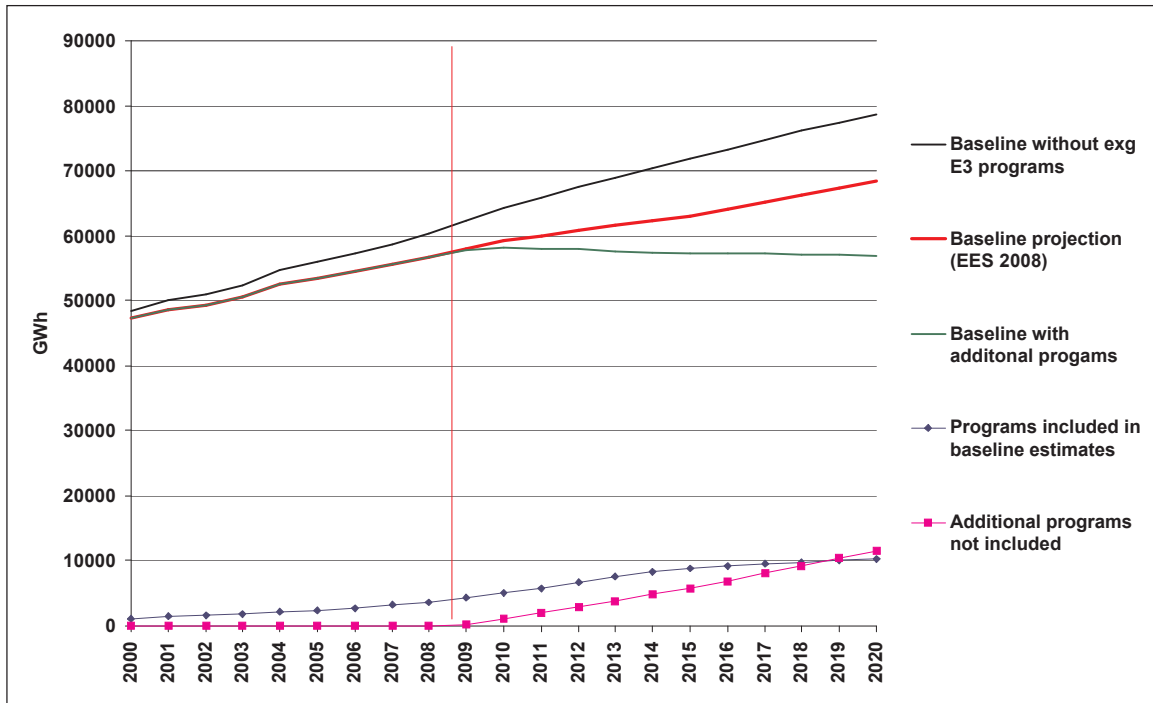
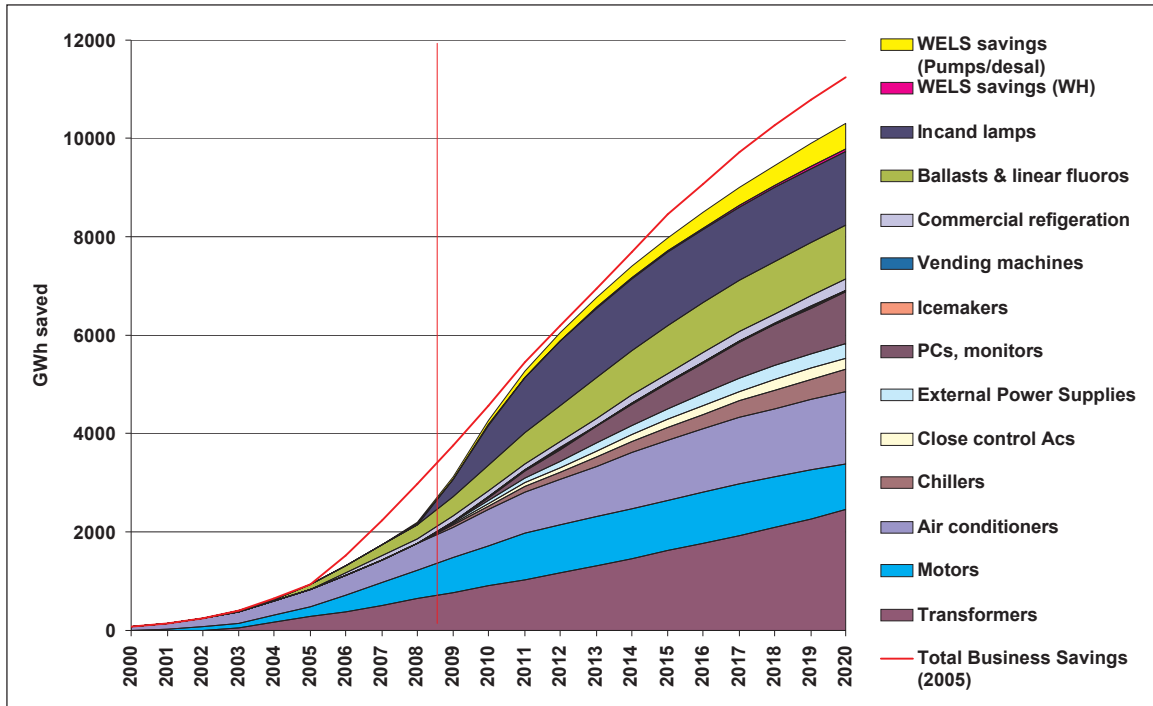
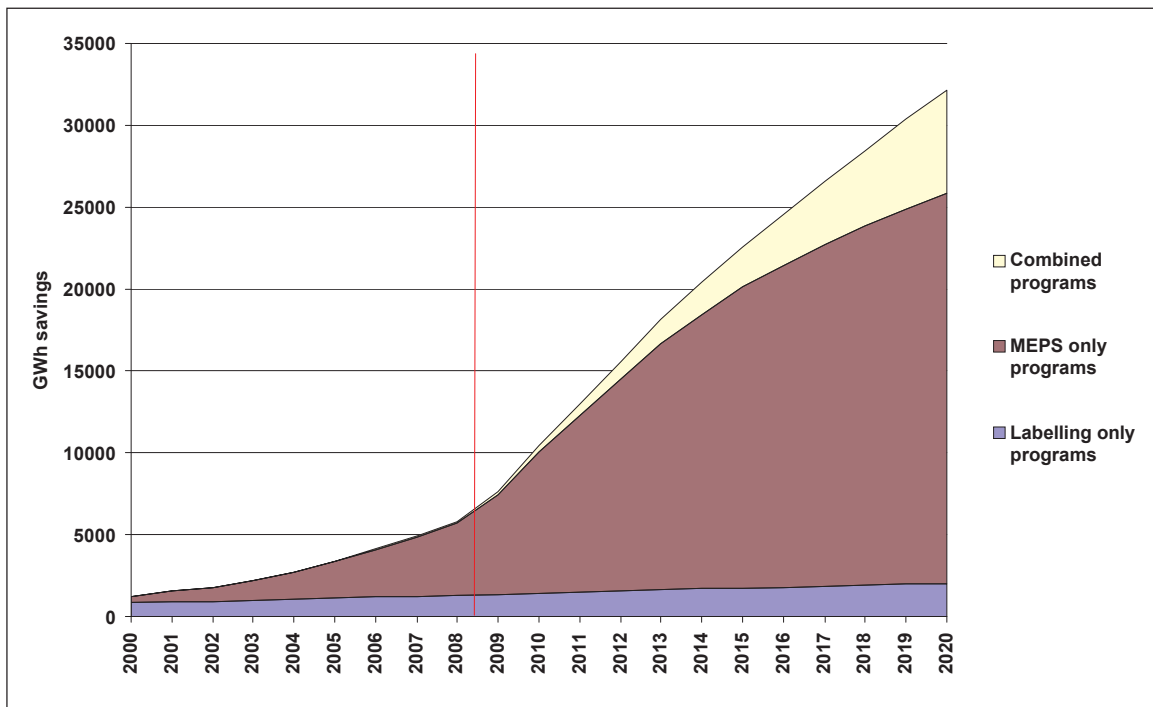


Figure 4. Historical and projected impacts of E3 programs on non-residential sector electricity use, Australia



Source: E3 (2009)

Figure 5. Projected electricity savings by type of E3 measure, Australia



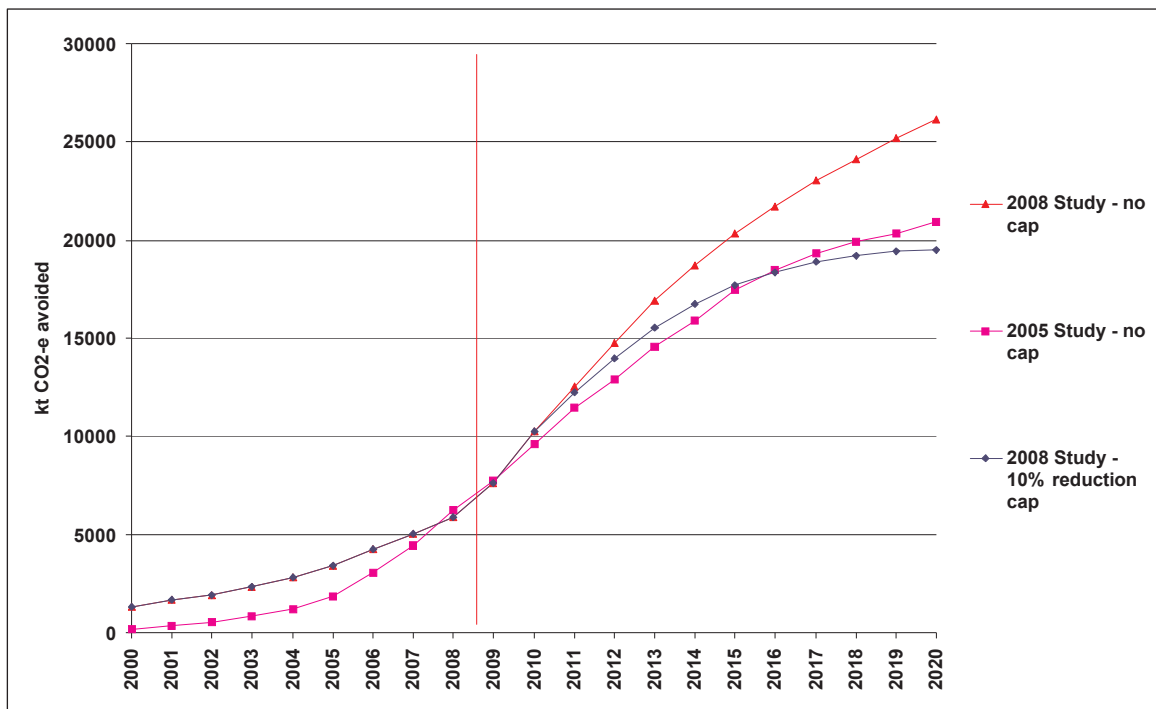
Greenhouse Impacts

It is difficult to predict the greenhouse benefit of each kWh avoided under a CPRS regime where national emissions will be capped at a level still to be decided. The likely adoption of an emissions cap also changes the *effect* of the energy saved by E3 Programs from ‘greenhouse gas savings’ to ‘greenhouse gas emissions avoided’. Part of the uncertainty is the share of the reduction effort that will be made at the level of electricity generation and the share made at the point of end use.

Figure 6 illustrates the projected trend in emissions avoided through the E3 Program, with and without the reduced emissions intensity of electricity expected from the CPRS. It is estimated that cumulative emissions avoided due to the E3 Program over the period 2000-2020 would be 250.2 Mt CO₂-e, or 218.2 Mt if electricity emissions intensity falls as predicted under a ‘CPRS-5’ scenario.⁴³

Over the period 2009-2020, about 83% of the greenhouse gas emissions avoided by the E3 Program will come from increases in product efficiency or the substitution of natural gas for electricity, and 17% from reductions in electricity supply intensity.

Figure 6. Emissions avoided at various greenhouse gas intensities



Source: E3 (2009)

⁴³ i.e. a scenario in which Australia’s medium-term target is 5 per cent below 2000 levels by 2020. http://www.treasury.gov.au/lowpollutionfuture/report/html/00_Executive_Summary.asp

Table 17 Projected costs and benefits, Australia, E3 measures impacting electricity use (7.5% discount rate)

Product	Undisc	Undisc	Total	Disc	Disc	Net	Benefit/	Mt CO2-e saved				Disc	Disc	Net	Benefit/
	saving	saving	saving	saving	cost	benefit	Cost	2000-08	2009-20	2000-20	In 2020	saving	cost	benefit	Cost
	2000-08	2009-40	2009-40	2009-40	2009-20	2009-20	2009-40					2009-24	2009-24	2009-24	2009-24
Refrigerators & freezers	\$ 2,096	\$16,436	\$18,532	\$ 7,217	\$ 668	\$ 6,549	10.8	13.0	31.6	44.6	2.4	\$ 6,101	\$764	\$ 5,337	8.0
CW, DW, CD	\$ 266	\$ 702	\$ 968	\$ 319	\$ 348	-\$ 28	0.9	1.7	1.4	3.1	0.1	\$ 274	\$424	-\$ 150	0.6
WH MEPS	\$ 472	\$ 5,127	\$ 5,599	\$ 2,434	\$ 191	\$ 2,243	12.8	4.2	13.4	17.6	1.0	\$ 2,161	\$225	\$ 1,936	9.6
Airconditioners	\$ 327	\$ 5,415	\$ 5,742	\$ 2,238	\$ 628	\$ 1,610	3.6	1.9	9.2	11.1	0.9	\$ 1,839	\$760	\$ 1,080	2.4
TVs & STBs	\$ -	\$ 9,811	\$ 9,811	\$ 3,757	\$ 2,095	\$ 1,662	1.8	0.0	12.6	12.6	2.3	\$ 3,013	\$2,565	\$ 448	1.2
External Power Supplies	\$ -	\$ 985	\$ 985	\$ 482	\$ 129	\$ 353	3.7	0.0	2.3	2.3	0.3	\$ 462	\$161	\$ 301	2.9
PCs, monitors	\$ -	\$ 635	\$ 635	\$ 290	\$ 193	\$ 97	1.5	0.0	1.3	1.3	0.2	\$ 275	\$236	\$ 38	1.2
Lighting	\$ 3	\$ 3,795	\$ 3,797	\$ 2,086	\$ 209	\$ 1,877	10.0	0.0	11.5	11.5	0.9	\$ 2,086	\$257	\$ 1,829	8.1
Standby	\$ -	\$ 2,444	\$ 2,444	\$ 1,125	\$ 109	\$ 1,016	10.3	0.0	5.1	5.1	0.7	\$ 1,072	\$117	\$ 956	9.2
Swimming pools & spas	\$ -	\$ 752	\$ 752	\$ 286	\$ 109	\$ 177	2.6	0.0	1.1	1.1	0.1	\$ 225	\$131	\$ 94	1.7
WELS savings (WH)	\$ 14	\$ 1,898	\$ 1,912	\$ 732	\$ -	\$ 732	NA	0.1	2.7	2.8	0.3	\$ 578	\$0	\$ 578	NA
GH-intensive WH phaseout	\$ -	\$15,349	\$15,349	\$ 6,201	\$ 3,001	\$ 3,201	2.1	0.0	31.2	31.2	4.4	\$ 5,143	\$3,647	\$ 1,496	1.4
Total Residential Savings	\$ 3,177	\$63,350	\$66,528	\$27,167	\$ 7,678	\$19,489	3.5	20.9	123.5	144.4	13.5	\$23,230	\$ 9,286	\$13,944	2.5
Air conditioners	\$ 445	\$ 5,706	\$ 6,151	\$ 2,424	\$ 137	\$ 2,286	17.7	2.7	10.2	13.0	0.9	\$ 2,018	\$167	\$ 1,851	12.1
Chillers	\$ -	\$ 1,497	\$ 1,497	\$ 569	\$ 140	\$ 429	4.1	0.0	2.1	2.1	0.3	\$ 446	\$171	\$ 274	2.6
Close control Acs	\$ -	\$ 807	\$ 807	\$ 323	\$ 32	\$ 291	10.1	0.0	1.3	1.3	0.1	\$ 262	\$37	\$ 225	7.1
External Power Supplies	\$ -	\$ 696	\$ 696	\$ 340	\$ 91	\$ 248	3.7	0.0	1.7	1.7	0.2	\$ 326	\$115	\$ 211	2.8
PCs, monitors	\$ -	\$ 2,003	\$ 2,003	\$ 919	\$ 585	\$ 334	1.6	0.0	4.1	4.1	0.6	\$ 872	\$742	\$ 130	1.2
Icemakers	\$ -	\$ 95	\$ 95	\$ 44	\$ 10	\$ 33	4.2	0.0	0.2	0.2	0.0	\$ 38	\$12	\$ 25	3.1
Vending machines	\$ 1	\$ 53	\$ 55	\$ 21	\$ 3	\$ 18	7.3	0.0	0.1	0.1	0.0	\$ 17	\$3	\$ 14	5.0
Commercial refrigeration	\$ 40	\$ 843	\$ 883	\$ 358	\$ 77	\$ 281	4.6	0.2	1.5	1.7	0.1	\$ 297	\$91	\$ 206	3.3
Incand lamps	\$ -	\$ 3,778	\$ 3,778	\$ 2,119	\$ 67	\$ 2,052	31.4	0.0	11.8	11.8	0.9	\$ 2,119	\$83	\$ 2,036	25.5
Ballasts & linear fluoros	\$ 133	\$ 2,932	\$ 3,066	\$ 1,532	\$ 93	\$ 1,439	16.5	0.8	7.8	8.6	0.6	\$ 1,482	\$115	\$ 1,367	12.9
WELS (WH)	\$ 2	\$ 155	\$ 157	\$ 62	\$ -	\$ 62	NA	0.0	0.2	0.3	0.0	\$ 49	\$0	\$ 49	NA
WELS (pumping)	\$ 4	\$ 866	\$ 870	\$ 326	\$ -	\$ 326	NA	0.1	2.4	2.5	0.3	\$ 253	\$0	\$ 253	NA
Motors	\$ 243	\$ 2,801	\$ 3,044	\$ 1,399	\$ 233	\$ 1,166	6.0	2.0	9.0	10.9	0.5	\$ 1,267	\$285	\$ 982	4.4
Transformers	\$ 171	\$ 4,468	\$ 4,639	\$ 1,804	\$ 275	\$ 1,530	6.6	2.1	13.9	15.9	1.4	\$ 1,460	\$332	\$ 1,129	4.4
Total Business Savings	\$ 1,039	\$26,700	\$27,739	\$12,239	\$ 1,744	\$10,495	7.0	7.9	66.3	74.2	6.0	\$10,908	\$ 2,155	\$ 8,754	5.1

Source: E3 (2009) All \$ values are millions of 2008 dollars

Table 18 Projected costs and benefits, Australia, E3 measures impacting residential natural gas use (7.5% discount rate)

	Undisc	Undisc	Total	Disc	Disc	Net	Benefit/	Mt CO2-e saved				Disc	Disc	Net	Benefit/
	saving	saving	saving	saving	cost	benefit	Cost	2000-08	2009-20	2000-20	In 2020	saving	cost	benefit	Cost
	2000-08	2009-40	2009-40	2009-40	2009-20	2009-20	2009-40					2009-24	2009-24	2009-24	2009-24
Water heater MEPS	\$ 1	\$ 782	\$ 783	\$ 326	\$ 88	\$ 239	2.7	0.0	1.4	1.4	0.2	\$ 275	\$104	\$ 188	2.6
Space Heater MEPS	\$ -	\$ 1,319	\$ 1,319	\$ 510	\$ 75	\$ 436	5.8	0.0	2.2	2.2	0.4	\$ 413	\$92	\$ 338	4.5
WELS (hot water saving)	\$ 4	\$ 523	\$ 527	\$ 220	\$ -	\$ 220	NA	0.0	0.9	0.9	0.1	\$ 185	\$0	\$ 185	NA
Extra gas use – WHs	\$ -	-\$ 2,820	-\$ 2,820	-\$ 1,160	\$ -	-\$ 1,160	NA	0.0	-4.8	-4.8	-0.8	-\$ 972	\$0	-\$ 972	NA
Total Gas Savings	\$ 5	-\$ 197	-\$ 192	-\$ 104	\$ 162	-\$ 266	-0.6	0.0	-0.3	-0.3	0.0	-\$ 99	\$ 196	-\$ 261	-0.5

Source: E3 (2009) All \$ values are millions of 2008 dollars

Table 19 Projected costs and benefits, Australia, E3 Program as a whole (7.5% discount rate)

	Undisc	Undisc	Total	Disc	Disc	Net	Benefit/	Mt CO2-e saved				Disc	Disc	Net	Benefit/
	saving	saving	saving	saving	cost	benefit	Cost	2000-08	2009-20	2000-20	In 2020	save	cost	benefit	Cost
	2000-08	2009-40	2009-40	2009-40	2009-20	2009-20	2009-40					2009-24	2009-24	2009-24	2009-24
All Measures	\$ 4,221	\$89,854	\$94,075	\$39,303	\$ 9,585	\$29,718	4.1	28.8	189.5	218.2	19.5	\$34,039	\$11,636	\$22,437	2.9
Ex WELS	\$ 4,212	\$88,310	\$92,522	\$38,696	\$ 9,585	\$29,111	4.0	28.7	185.9	214.6	19.0	\$33,551	\$11,636	\$21,949	2.9
GH-intensive WH (net)	\$ -	\$12,529	\$12,529	\$ 5,041	\$ 3,001	\$ 2,040	1.7	0.0	26.5	26.5	3.7	\$ 4,171	\$ 3,647	\$ 524	1.1

Source: E3 (2009) All \$ values are millions of 2008 dollars

Appendix 3 Submissions on Discussion Paper

Table 20 List of Respondents

1.	Mr Ben Rose	Environmental consultant
2.	ebm-papst A&NZ Pty Ltd	Industrial fans
3.	Treasury (Commonwealth)	
4.	CSR	Building products
5.	Sunbather Pty Ltd	Solar pool heating
6.	Australian Duct Manufacturers Alliance (ADMA)	
7.	Air conditioning and Mechanical Contractors Association of Australia (AMCA)	
8.	HP	Computers
9.	ACT Government	
10	Australian Industry Group (AiG)	
11	Air-Conditioning & Refrigeration Equipment Manufacturers Association of Australia (AREMA)	
12	Computers Off Australia	Non-profit organisation
13	Daikin	Air conditioners
14	Energy Efficiency and Conservation Authority, New Zealand (EECA)	
15	JANDS Pty Ltd	Audio, lighting, staging
16	The Japan Refrigeration And Air Conditioning Industry Association (JRAIA)	
17	Lighting Council of Australia	
18	Orford Refrigeration	Commercial refrigeration
19	QEC Global	Rep importers of elect goods
20	Rheem	Water heaters
21	SAA Approvals Pty Ltd	Electrical product safety approval certification company
22	Consumer Electronics Suppliers Association (CESA)	
23	Dell	Computers
24	Australian Information Industry Association (AIIA)	Information ICT
25	Australian Computer Society (ACS)	

The following summary of responses to the questions in the *Discussion Paper* are not individually attributed. The intention is to convey the range of responses, not to indicate the frequency of responses.

1. What are the benefits and costs of greater consistency for your Business/industry (for example, nationally consistent commencement dates for regulations, or a nationally consistent compliance and enforcement scheme)?
 - Need Commonwealth legislation to avoid inconsistencies in air conditioner standards.

- Need consistency between MEPS and the Building Code of Australia.
 - National legislation, or a binding inter-governmental agreement would assist smoother timing and processes.
 - The policy and regulatory framework should be broadly in line with other countries and jurisdictions, so existing framework should be replaced by the US EPA Energy Star.
 - Requirement to register new products should only occur where market failure is evident.
 - Australia should seek to align with ‘world’s best practice’ at a pace appropriate to Australian industry capabilities.
 - Consider the findings of the Electrical Regulatory Authorities Council review with regard to compliance across jurisdictions.⁴⁴
 - There should be the greatest possible harmonisation of energy efficiency legislation and legislative processes and timeframes between New Zealand and Australia.
 - Program should hold to agreed implementation dates; changes compromise industry planning and logistics.
 - Suppliers need the certainty of a published standard to commence the development process.
 - Creating a roadmap or schedule of deliverables helps industry to plan.
 - Significant costs and complexity occur in regulations developed at a non-national jurisdiction level.
 - Importers do not have the ability to distinguish among jurisdictions for importing, so the earliest adoption becomes the implementation date for the country.
2. Are there other products that could be covered under the legislation? Please provide examples, including an explanation why it may be appropriate.
- Wood heaters, gas heaters, ducted air conditioning, televisions, computers, electric jugs and kettles.
 - Speed controls for fans.
 - Solar pool heating.
 - Across product categories, eg a reverse cycle split system versus a gas furnace, or versus evaporative coolers.
 - Ducting, insulation, installation and service, industry training.
 - ‘Thin client’ elements of computer networks.
 - Automobiles and boilers.

⁴⁴ Proposed Electrical Equipment Safety System: Final Regulation Impact Statement. Electrical Regulatory Authorities Council (ERAC), May 2009

- Daylight harvesting devices, timers, presence sensors, combined timers/presence sensors.
3. What other products that do not consume energy have a direct impact on the energy performance of the appliances and equipment in your industry?
 - Building materials such as bricks, wall cladding, framing, roofing materials
 - Glass, glazing and windows
 - Flexible ducting
 - Ducting and insulation systems
 - Insulation characteristics of buildings
 - Transmission losses of power lines
 - Glazing and insulation
 - Embodied CO₂-e emissions data
 - Installation and commissioning practices
 4. What additional fuel sources could be covered under the legislation (e.g. wood)?
 - Wood and wood fuel pellets gas
 - Gas, oil
 - Batteries, methane and renewables.
 5. What other issues could be examined when considering regulation of products that use gas or other fuels? Please provide examples, including an explanation of each issue.
 - Embodied emissions from the production of the appliance
 - Provision for recycling
 - Global warming potential of refrigerants.
 6. What could be the costs and benefits of regular, three yearly reviews of product standards for your business/industry?
 - Two years is acceptable, but need to know in advance
 - Need twelve months from when the final regulation and standard are in place, ie, not from earlier deadlines that can and do change
 - Industry needs appropriate time period which may be greater than three years.
 - Would provide an effective planning horizon, allow certainty, but needs government to commit too
 - May increase administrative burden, increase costs to industry, limit consumer choice, and deflect resources away from priority areas and more effective measures.

- Prefer four yearly to accommodate large number of low volume appliances
 - Should align with changes to international standards.
7. Would the development of long term strategies for additional product categories be beneficial to your business/industry? If so, how?
- Need to avoid trade barriers and ensure customer has free choice for products.
8. What are the key factors that should be taken into account in reviewing standards for your products?
- Grandfathering as basis for compliance
 - Don't support mandatory requirement for labelling
 - More dialogue with suppliers and stakeholders
 - Timing, level of maturity of product design and potential for viable improvement in energy efficiency
 - Worldwide, standards
9. Are there administrative processes which could be streamlined or codified in the legislation?
- Harmonisation, ie replace existing with Energy Star voluntary program – reduces duplication and administrative and financial burden.
 - More self-certification and self-declaration against pre-defined and harmonised criteria..
 - Standards Australia processes.
 - All performance standards adopted should be internationally recognised standards.
 - Uniform rules on complaints; agreed timeframes for dispute resolution.
 - Maximum statutory timeframes, embedded in legislation, for approvals of applications for registration and notification to suppliers of passed or failed check test results.
10. Does the current product registration process meet the needs of your business/industry?
- Could streamline tests by requiring all at same time, e.g. electricity and water.
 - Yes, but website is slow and multiple registrations are difficult.
 - Takes too long; needs clearer guidelines on product classes.
 - Different fee levels from state to state; registrations take too long.
11. Should there be a requirement that test reports supplied by manufacturers for product registration purposes be from an appropriately accredited laboratory? Please explain why or why not.

- Greater check testing is required.
 - Yes.
 - Principle of self-declaration of conformance must be maintained.
 - Shouldn't be required for commercial refrigerating appliances.
 - Should allow third party assessors, similar to electrical safety approvals.
 - If third party testing is required any accredited laboratory be capable of delivering results.
12. What key processes could benefit from the development of target timeframes? If any of these processes or activities are delayed: A. what could be the costs to your business or industry, and B. what problems could arise?
- Publication of RISs
 - Publication of standards
 - Government approvals..
13. How much notice would your industry prefer prior to a new or revised MEPS or energy labelling requirement coming into effect?
- Without clear timelines, not able to make technical changes.
 - Manufacturers can only start to work after the official announcement is made.
 - Minimum 12 months after publication of standards or rules.
 - Minimum 18 months
 - Minimum.2 years.
14. In your industry, what legal measures would act as an incentive to comply with the proposed legislation?
- A more rigorous compliance and enforcement regime.
 - On-the-spot fines for minor breaches
 - Enforceable undertakings for major breaches.
15. In your industry, at what point or points in the supply chain (e.g. import/supply/installation) should an offence apply?
- At point of sale or supply, not on installation.
 - The burden of compliance should remain on the manufacturer, whether based locally or overseas.
 - At import, supply and installation.
 - At point of entry [customs] for imported product, on supply for locally manufactured.
 - Vary according to type of product.

16. Should the penalties vary for different products to better reflect the differences in the purchase or manufacturing cost of products and energy use?
- Should reflect purchase cost and energy use.
 - Should be consistent with other penalties under such regulations as the Trade Practices Act, eg, fine based rather than consequential damage based..
 - Should be graduated according to ‘performance risk’.
17. Is it possible to provide consumers with meaningful information on the greenhouse performance of appliances or equipment in your sector?
- Yes, should be done for standard conditions using average emission factors and a website showing performance.
 - Opposed to greenhouse performance being incorporated into MEPS as getting information is, complex, expensive and time-consuming.
 - Greenhouse performance is difficult to measure and varies across Australia, so would compromise labelling if added.
 - Only where an agreed method of calculation or test exists.
 - UK Energy Savings Trust’s Carbon Footprint Calculator would be a useful tool to emulate.
 - Use system such as Total Equivalent Warming Impact [TEWI] for refrigeration and air conditioning.
 - Overcomplicated and of questionable value.
 - Object; out of step with major overseas markets.
18. If greenhouse performance were to be included in the legislation, would a minimum greenhouse standard or label work best for your product? Could both of these tools work in your industry?
- MEPS, star rating should include embodied emissions.
 - Do not support inclusion of a greenhouse performance standard in the legislation
 - An additional product label is very problematic.
19. Would it be possible to adjust any information on the greenhouse performance of products to reflect the greenhouse coefficient of each state or territory (e.g. through a website where you could select your state or territory)?
- Yes
 - Do not support additional labelling or information due to cost and complexity.
20. If so, how regularly would information on greenhouse coefficients need to be updated?
- Annually.
21. Is it possible for your business/industry to provide similar information in relation

to the Australian market, including exports?

- Yes - already supply import statistics to ABS.
 - Yes, but need to consider freedom of information implications and commercial sensitivities.
 - Should be industry-wide basis: individual company information is confidential, and of doubtful value to the program.
 - Suppliers collect and maintain market data on their products their for own use, but usually commercially sensitive and not necessarily in the required format.
 - Market data on individual products is extremely sensitive, but could devise a scheme with appropriate safeguards.
 - Yes, provided it stays confidential.
 - Should be up to individual companies.
 - Yes, provided normal commercial confidentiality is maintained.
22. At what point or points in the supply chain would it be most appropriate to collect this data?
- Point of importation.
23. What would be an appropriate reporting period for your industry (e.g. monthly, quarterly, six monthly or annually)?
- [no specific responses]
24. How much would it cost your business to collect such data (on a monthly, quarterly, six monthly or annual basis)?
- [no specific responses]
25. Could the existing MEPS and energy labelling program be streamlined or improved by placing legislative requirements (e.g. reporting) at different points along the supply chain?
- On sale is most appropriate point.
 - Do not support changes to existing points in supply chain.
26. What is the appropriate point in the supply chain for your industry (e.g. import, manufacture, supply, installation or commissioning) for the proposed legislation to take effect, and why?
- Should be left up to manufacturers to define, not legislation.
 - The higher up the supply chain the regulation applies, the higher the administrative efficiency.
 - At import and manufacturing points.
27. What are the main advertising mediums used by your business/industry? (e.g. television, radio, newspapers, brochures or product catalogues)?

- Magazines, internet, email, brochures, industrial shows, websites, newspapers, magazines, television and radio ads, etc.
28. What would be the costs and benefits to your business/industry of requiring product advertising to display the energy label?
- The energy label should be an important part of effective marketing, but the question of compulsion requires more consideration.
 - Increased costs
29. Are some forms of advertising your business/industry uses more conducive to inclusion of the energy label than others (e.g. brochures versus product catalogues)?
- [no specific responses]
30. What type of information have consumers sought from your business/industry in making purchasing decisions? Has it included information on the energy rating label, running costs or greenhouse gas emissions?
- Have received requests for this information from customers.
 - Have an on-line energy savings calculator.
31. What legislative model would your business/industry prefer, and why?
- Prefer Commonwealth legislation as product does not vary by state.
 - Prefer national rather than provincial or state model.
 - Support a co-regulatory model in which jurisdictions [including Commonwealth] have an equal say in the eventual national standards.
 - The model that is the most effective response to market failure, probably a 'national legislation' approach,.
 - New Commonwealth legislation, preferably based on Commonwealth constitutional powers.
 - New Commonwealth legislation based on a referral of powers.
 - Model 5 [Commonwealth legislation based on constitutional powers] for all the stated reasons.
 - Federally administered with no state involvement.
 - A model where Commonwealth legislation sets a single standard across Australia for all jurisdictions.
 - Model 5 the preferred option.
 - Model 1, ie, maintain current legislative model but with revised and expanded legislation to achieve better national consistency.
 - Would prefer self regulation over mandatory compliance.

Appendix 4 Legislation

Victoria:

- Electricity Safety Act 1998 (see part 5)
([http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubLawToday.nsf/a12f6f60fbd56800ca256de500201e54/6D2740E9AC410CD4CA2574EB0000CD39/\\$FILE/98-25a051.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubLawToday.nsf/a12f6f60fbd56800ca256de500201e54/6D2740E9AC410CD4CA2574EB0000CD39/$FILE/98-25a051.pdf))
- Electricity Safety (Equipment Efficiency) Regulations 1999
([http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubLawToday.nsf/b12e276826f7c27fca256de50022686b/5C7E4361449BFB38CA25759F00219E9A/\\$FILE/09-37sr001.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubLawToday.nsf/b12e276826f7c27fca256de50022686b/5C7E4361449BFB38CA25759F00219E9A/$FILE/09-37sr001.pdf))

New South Wales

- Electricity (Consumer Safety) Act 2004
<http://www.legislation.nsw.gov.au/fullhtml/inforce/act+4+2004+cd+0+N>
- Energy and Utilities Administration Regulation 2006
(http://www.austlii.edu.au/au/legis/nsw/consol_reg/eauar2006463.txt/cgi-bin/download.cgi/download/au/legis/nsw/consol_reg/eauar2006463.rtf)

Queensland

- Electricity Act 1994
<http://www.legislation.nsw.gov.au/fullhtml/inforce/act+4+2004+cd+0+N>
- Electricity Regulation 2006 (Chapter 7: Energy Efficiency and Performance of Electrical Equipment). <http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/E/ElectricR06.pdf>

South Australia

- Electrical Products Act 2000
<http://www.legislation.sa.gov.au/LZ/C/A/ELECTRICAL%20PRODUCTS%20ACT%202000/CURRENT/2000.78.UN.PDF>
- Electrical Products Regulations 2001
<http://www.legislation.sa.gov.au/LZ/C/R/ELECTRICAL%20PRODUCTS%20REGULATIONS%202001/CURRENT/2001.224.UN.PDF>

Tasmania

- Electricity Industry Safety and Administration Act 1997
http://www.austlii.edu.au/au/legis/tas/consol_act/eisaaa1997499.txt/cgi-bin/download.cgi/download/au/legis/tas/consol_act/eisaaa1997499.txt
- Electricity Industry Safety and Administration (Energy Efficiency) Regulations 2009
http://www.austlii.edu.au/au/legis/tas/num_reg/eisaer20092009n10813/

Western Australia

- Electricity Act 1945
http://www.austlii.edu.au/au/legis/wa/consol_act/ea1945139/
- Electricity Regulations 1947
http://www.austlii.com/au/legis/wa/consol_reg//er1947248/

Northern Territory

- *Consumer Affairs (Product Information) Regulations 1993*
http://www.austlii.edu.au/au/legis/nt/consol_reg/cair496.txt/cgi-bin/download.cgi/download/au/legis/nt/consol_reg/cair496.txt

New Zealand

- Energy Efficiency and Conservation Act 2000
<http://www.legislation.govt.nz/act/public/2000/0014/latest/DLM54948.html>
- Energy Efficiency (Energy Using Products) Regulations 2002
[http://www.legislation.govt.nz/regulation/public/2002/0009/latest/DLM108730.html?search=ts_regulation_Energy+Efficiency+\(Energy+Using+Products\)+Regulations+2002_rese&sr=1](http://www.legislation.govt.nz/regulation/public/2002/0009/latest/DLM108730.html?search=ts_regulation_Energy+Efficiency+(Energy+Using+Products)+Regulations+2002_rese&sr=1)