

NATIONAL APPLIANCE AND EQUIPMENT ENERGY EFFICIENCY COMMITTEE

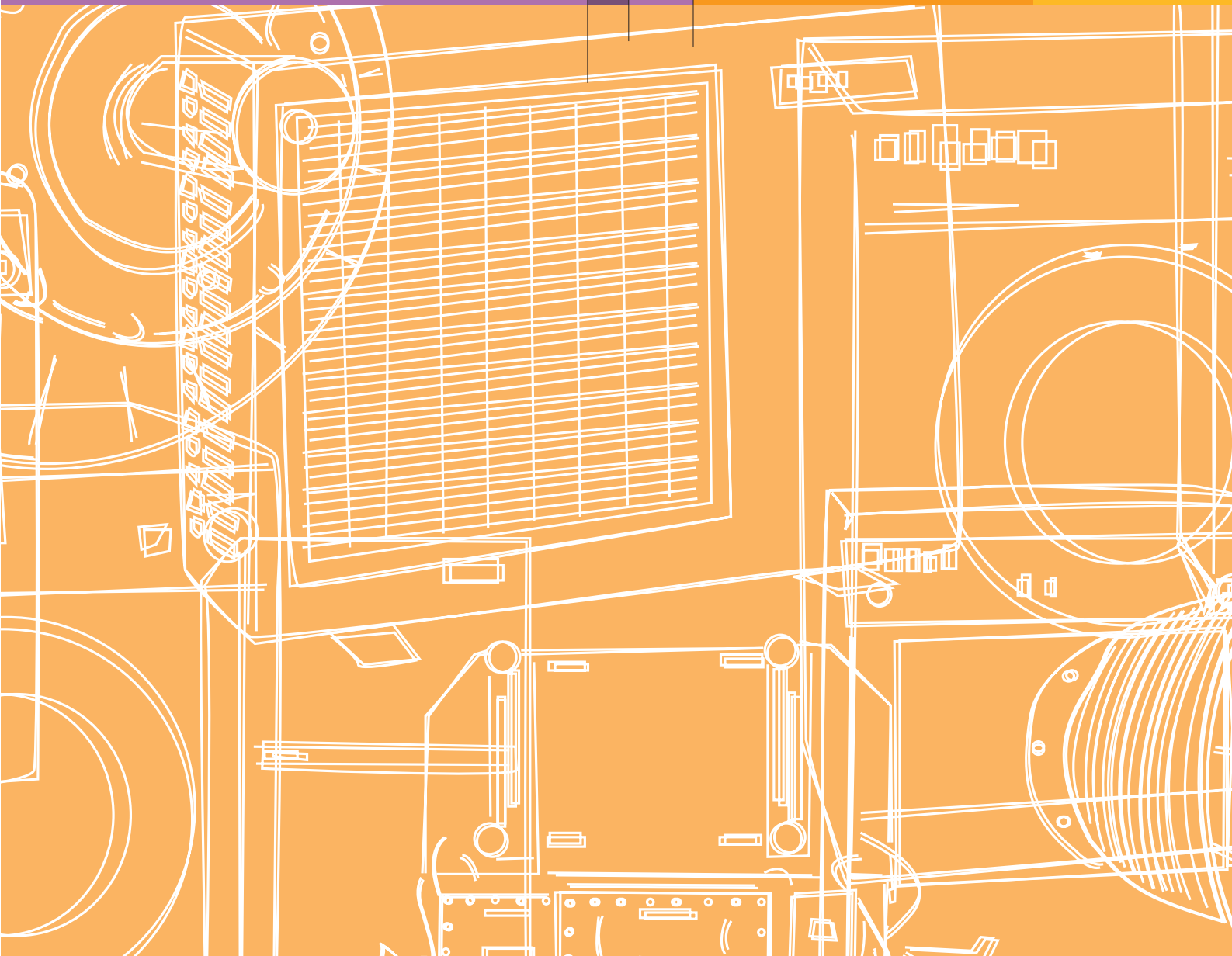
Standby Power Consumption

A long-term strategy to achieve Australia's One-Watt Goal 2002 to 2012



A DISCUSSION PAPER

**July
2002**





Foreword

On behalf of the Ministerial Council on Energy (MCE), which comprises the Commonwealth and all State and Territory Energy Ministers, the National Appliance and Equipment Energy Efficiency Committee (NAEEEC) seeks the views of industry and other stakeholders on the potential elements of an effective standby power strategy. The international community is moving forward on this issue and it is important that Australia take its place amongst the developed nations tackling the standby challenge.

In 2000, Ministers agreed to the 'one-watt' target as government policy for all electrical products. Since that decision, officials have explored ideas with key stakeholders for a program that gives effect to the 'one-watt' target in a timely and cost-effective manner. Most recently, a forum was held in Sydney during April 2002 to discuss some of the proposed policies and processes detailed in this paper.

This discussion paper seeks views on the idea of a ten-year strategy to overcome standby and, in particular, on:

- the type of measures being proposed to address standby over time
- the processes being proposed to identify, implement and communicate standby proposals for specific products.

This proposed strategy describes, for the first time, government proposals to transparently identify those products targeted for attention and provides a realistic timeframe in which to achieve real change. The proposed strategy also describes governments' agenda in this field and explains the proposed processes for addressing that agenda.

With stakeholder help, the strategy aims to deliver greenhouse savings and energy efficiency in a framework of least cost to Australian industry. With the support and financial assistance of all Australian jurisdictions, this discussion paper commences the process of gathering stakeholder views on the concept of a ten-year standby strategy.

I encourage you to comment on the proposals contained in this paper.

A handwritten signature in black ink that reads "Tony Marker".

Dr Tony Marker
Chair, National Appliance and Energy Efficiency Committee

July 2002



Want to find out more about standby or make a submission?

The National Appliance and Equipment Energy Efficiency Committee (NAEEEC) proposes to hold a seminar to discuss with interested parties the proposals for the standby strategy at the Millennium Hotel, William Street, Kings Cross, Sydney on **15 August 2002**. Attendance at this seminar is open to any person but those intending to be present should advise Australian Greenhouse Office staff.

The seminar will be divided into two parts. The morning session will provide information about how the Australian proposals fit within international standby actions and will flesh out the concepts contained in this discussion paper. The afternoon will be interactive, providing opportunities for questions from participants and workshopping a specific product plan (using the television profile attached as a case example).

A more detailed agenda for the day will be forwarded to those persons who advise AGO staff of their intention to attend, before **7 August 2002**.

NAEEEC also seeks your comment on the proposals contained in this plan from any interested person or organisation. Please email your written comments to:

energy.efficiency@greenhouse.gov.au

Alternatively, comments can be mailed to:

Standby Power Strategy
Built Environment Team
Australian Greenhouse Office
GPO Box 621
CANBERRA ACT 2601

Comments received by **15 October 2002** will assist shape government policies to minimise standby power consumption by 2012.



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Executive Summary

Standby power is the energy used by an appliance while plugged in but not performing its central function. The very useful consumer features made possible by standby power can be delivered efficiently, but most often are not. Experts believe standby consumption can be reduced by an average of 75% with design and cost-effective technological improvements.

In 2000, standby power consumption accounted for up to 11.6% of Australia's household electricity usage, costing Australian households more than \$500 million and generating more than 5 million tonnes of carbon dioxide per annum. This is equivalent to the greenhouse impact of more than 1 million cars.

Standby power is a growing problem that is increasingly recognised in the developed world. The International Energy Agency has called on member countries to develop an appropriate response to waste standby power. It is important that any Australian action be undertaken in a manner that is consistent with international policies and programs.

In August 2000, Australian governments agreed to adopt the 'one-watt' vision for the standby power used by electrical household products. The 'one-watt' goal is now also a key plank in this international push to reduce standby power consumption of individual products to less than one-watt.

Since that in-principle decision, energy efficiency authorities have engaged industry and other stakeholders in discussions about how best to give effect to that vision. This discussion paper represents the outcome of those deliberations and proposes a way of translating that general vision to become a reality for targeted household and information technology products.

The paper proposes a process and a toolkit of both voluntary and mandatory measures (including voluntary labelling, product surveys, industry wide agreements, minimum energy performance standards and mandatory labelling) that aims to identify problem electrical products and successfully address waste standby before 2012. It also identifies problem products and provides governments' priorities in this field.

The National Appliance and Equipment Energy Efficiency Committee seek the views of stakeholders on the proposed elements of an effective standby power strategy.

This proposed strategy describes, for the first time, government proposals to transparently identify those products targeted for attention and provides a realistic timeframe in which to achieve real change. Please take this opportunity to comment on the proposals.



Standby Power Definition

The lowest power consumption mode which cannot be switched off (influenced) by the user and that may persist for an indefinite time when an appliance is connected to the main electricity supply and used in accordance with the manufacturer's instructions.¹

Various Power Modes

In-use mode is defined as when the appliance is performing its primary function.

Active standby is when the appliance is poised for use such as a VCR, CD or tape deck turned on but not actually playing. From a consumers point of view the appliance is turned on. Active standby mode is also applied to cordless appliances when they are charging in a base station.

Passive standby mode is when an appliance is switched to off/standby but can be activated by a remote control or is performing a peripheral function such as a clock display.

Off mode is turned off by means of a power switch and there is no obvious function being performed. It is not possible to activate the product with a remote control from this mode.

¹ Source: IEC draft 62301: HOUSEHOLD ELECTRICAL APPLIANCES - Measurement of Standby Power

What is the context of Standby?

What is standby power?

Standby power is a relatively new phenomenon. An ever-growing number of consumer goods and appliances are now designed in a way that they draw power 24 hours a day, seven days a week, every month of the year. Standby is often necessary to power certain core functions or to sense communication for those products that are waiting to provide full services. This power is consumed not while the appliance is being fully utilised but while it awaits instruction; while it is "standing by". However, in many cases, standby power serves no useful function or operates at excessive levels.

Why is standby important?

Consumer appliances offer a range of services and standby has become important to power many of those services. Twenty to thirty years ago, standby power was unheard of - products did not use standby power, they were either 'on' or 'off'. Today, standby power mode is a regular feature of many consumer products. Consumers and government are beginning to realise the cost. It is important to note some appliances use energy even when turned 'off', and some appliances have no 'off' switch.

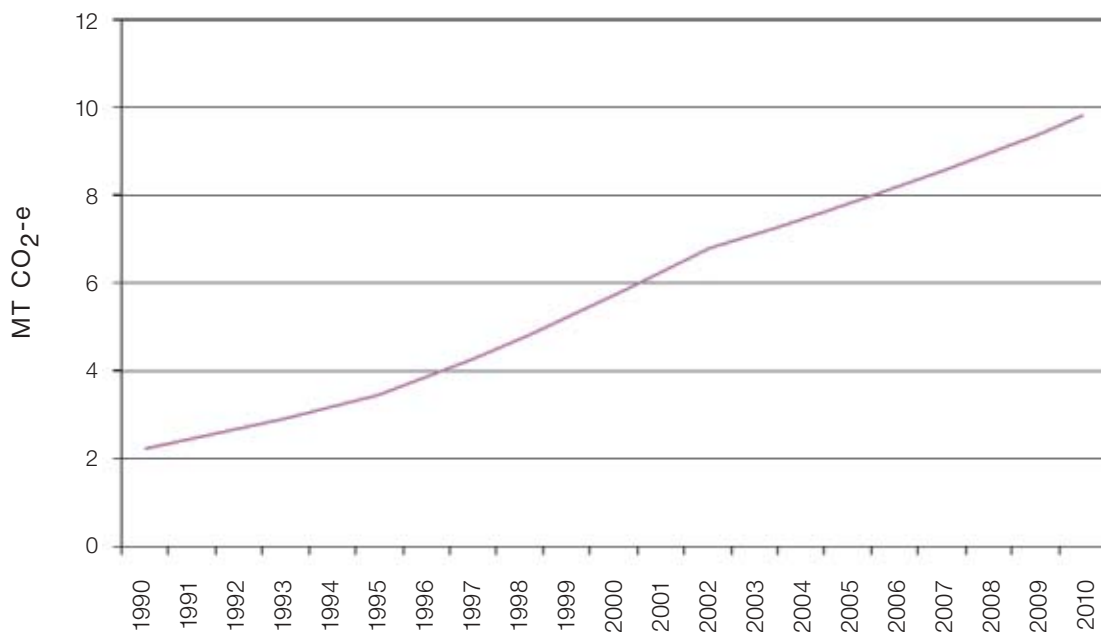
In 2000, analysis of survey results indicated that standby power consumption accounted for 11.6% of Australia's household electricity usage, costing Australian households more than \$500 million. Figure 1 on the following page indicates how emissions from standby are estimated to increase by nearly 500% between 1990 and 2010.

In 2000, standby generated more than 5 million tonnes of carbon dioxide equivalent or more than 1% of Australia's total estimated emissions. Table 1 shows the results of national standby studies throughout the world demonstrating Australia is not alone in facing this challenge.

² Source: EES, 2001, *Quantification of Residential Standby Power Consumption in Australia*, <http://www.greenhouse.gov.au/energyefficiency/appliances/standby/report/index.html>



FIGURE 1: ESTIMATED EMISSIONS FROM AUSTRALIAN RESIDENTIAL STANDBY POWER CONSUMPTION 1990 – 2010 (MT CO₂-e)



Note: Projections include the impact of programs implemented up to 1999. The impact of proposals in this document are not included.

Can standby be fixed?

Australian experts suggest that as much as 75% of the power consumed in standby could be avoided without adversely affecting the product's performance or features. The vast majority of these savings would be cost effective as the remedy often lies in the initial design of the product and not in terms of expensive additional components. The design cycle for many consumer products is quite short and new designs can be implemented over relatively short time periods.


The core issue in standby is raising the awareness of both suppliers and consumers. Suppliers need to address product research and development and consumers need to demand the best-possible products with the lowest possible standby.

When was standby power identified as a problem internationally?

"Nobody can claim to have discovered the problem of standby power because it entered our awareness gradually and piecemeal" says Alan Meier, of Lawrence Berkeley Laboratory in the USA. Dr Meier, however, is credited with raising awareness of standby as a problem with the United States and Japanese governments from the early 1990s. A brief paper on the history and growing awareness of standby power authored by Dr Meier is available from the AGO upon request.

The International Energy Agency (IEA) is the leading international authority developing a work program to assist member countries design policies and programs to reduce standby power consumption.





The IEA has conducted three workshops³ on Standby Power and Australia has participated in all three:

1. "Standby Power: a Global Issue" January 1999, Paris

The objective of the workshop was to facilitate a better understanding of the size of the standby losses and to assess the feasibility of large reductions.

2. "Reducing Standby Power: Opportunities & Challenges" January 2000, Brussels

The main objectives of this workshop were to take stock of recent progress, report on new technical and policy developments, and prepare the ground for greater collaboration on standby power reduction efforts among IEA and EU member countries.

3. "Towards a Harmonised Solution" February 2001, Tokyo

The objective of this workshop was to prepare the ground for a harmonized reduction in global standby power consumption in electrical equipment. The workshop addressed: the conclusions of the IEA Standby Power Initiative, recent research initiatives, new policy developments and technical solutions.

The IEA also put in place three Task Forces in order to address the most relevant items for facilitating international collaboration. Then in 2001, the IEA published a report on the culmination of its activities: Things that go blip in the night – Standby Power and how to limit it. Appendix 1 provides a two-page synopsis of this key publication.

The IEA believes that within ten years products with optimised power management could be the norm rather than the exception. It has recognised the first decade of this century as a window-of-opportunity to ensure that this vision becomes a reality. By working with stakeholders, the IEA wants member governments to encourage the design and introduction of new, more efficient appliances that meet the needs of consumers AND the environment.

³ Source: IEA Standby Power Initiative - <http://www.iea.org/standby/index.htm>

The IEA also talks of the need for international cooperation as so many products and components are traded internationally.

What have Australian governments done about standby?

In 1999, Commonwealth, State and Territory Government agencies responsible for energy matters agreed to consider standby power as a national imperative. In March 2000, a seminar was held in Sydney at which key stakeholders assembled.

A consensus emerged at the forum that Government needs to clearly signal the importance of the issue to stakeholders and the community generally. The principal outcome of this forum was the unanimous recommendation that Governments support a 'one-watt' standby target for all electrical products.

Participants at the forum also recommended that short-term actions should be:

- Collection and publication of product-specific data
- Collection of baseline data on residential usage
- Consumer information programs
- Urgent and specific action to ensure that the set-top boxes used with digital television minimise standby power consumption (these are a major power consumer in the US).

Other recommendations included:

- Strategies should focus on encouraging manufacturers to redesign products, with consumer information also playing a useful role
- While the emphasis should be on voluntary action, this may not suit all products, indicating that other options may be appropriate in some cases.

A complete summary of that day's events is available on the AGO's website at:

<http://www.greenhouse.gov.au/energyefficiency/standby/summary.html>



The seminar proceedings led to the Commonwealth, State and Territory Ministers responsible for energy matters agreeing to a common goal for standby power in Australia. This policy goal is in accord with the international push.

In August 2000, all Australian jurisdictions agreed to:

"...pursue efficiencies in standby power consumption of energy-consuming products, through support for the International Energy Agency's One -Watt program, and endorse its incorporation into the...program of work."

The 'one-watt' target for all electrical products is now government policy throughout Australia. Consequently, the standby power consumption of appliances manufactured or imported into Australia should aim to reach the 'one-watt' goal. To date, government agencies have not translated this target of 'one-watt' into a coordinated program of action.

Executive Order 13221

Energy-Efficient Standby Power Devices

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the National Energy Conservation Policy Act (Public Law 95-619, 92 Stat. 3206, 42 U.S.C. 8252 et seq.), as amended by the Energy Policy Act of 1992 (EPACT) (Public Law 102-486, 106 Stat. 2776), and section 301 of title 3, United States Code, and in order to further encourage energy conservation by the Federal Government, it is hereby ordered as follows:

- Section 1. Energy-Efficient Standby Power Devices. Each agency, when it purchases commercially available, off-the-shelf products that use external standby power devices, or that contain an internal standby power function, shall purchase products that use no more than one watt in their standby power consuming mode. If such products are not available, agencies shall purchase products with the lowest standby power wattage while in their standby power consuming mode. Agencies shall adhere to these requirements, when life-cycle cost-effective and practicable and where the relevant product's utility and performance are not compromised as a result. By December 31, 2001, and on an annual basis thereafter, the Department of Energy, in consultation with the Department of Defense and the General Services Administration, shall compile a preliminary list of products to be subject to these requirements. The Department of Energy shall finalize the list and may remove products deemed inappropriate for listing.
- Section 2. Independent Agencies. Independent agencies are encouraged to comply with the provisions of this order.
- Section 3. Definition. "Agency" means an executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered by the Department of Defense.

"Each agency...shall purchase products that use no more than one watt in their standby power consuming mode."

George W. Bush
The White House
July 31, 2001



What does this discussion paper hope to achieve?

Australian governments face a challenging task as they work together with stakeholders to reduce greenhouse gas emissions. All sectors of the economy need to contribute to meet that challenge. Reduction of standby power is a part of that challenge.

While the IEA and other experts often suggest standby power is 'low-hanging fruit' and therefore should be easy to harvest, the burgeoning presence of standby, often at levels well beyond that required to supply key services, demonstrates the marketplace has not addressed the problem.

Without coordinated and concerted intervention by governments, standby power will continue to expand as a major energy user in the domestic sector. Furthermore, the problem may become so entrenched that it is harder to reverse in the future.

In 2002, NAEEEEC on behalf of all governments through the MCE is undertaking the task of gathering industry and community views on ideas to combat standby. This discussion paper has been released to promote an informed debate. The MCE will consider stakeholder views in developing Australia's ten-year plan to address standby.

In simple terms, this discussion paper:

- reinforces the 2000 government target that products should use 'one-watt' or less in standby mode
- creates a public dialogue to give effect to the 'one-watt' target
- sends a clear message to industry and the wider community about Australian governments' expectations in this field
- provides coherence to the diverse range of programs already operating to reduce standby power consumption, and
- provides a framework to consider additional programs and projects that could be added over the next ten years to ensure the 'one-watt' target becomes a reality.

This discussion paper aims to inform all sectors of the community about options to address standby. The discussion paper will facilitate Australian governments adopting options for change that have the broad support of stakeholders.

The discussion paper provides a *shopping list* of program options that could potentially be used to address standby problem products and the *recipe* that identifies the products to be targeted under the Standby Strategy. It details a coherent structure for government processes addressing standby within specific product groups or types.



What are the present and future considerations?

The inclusion of electronic controls and soft touch switches is having a large impact on current standby levels. Future trends will be further impacted as the 'smart home' becomes a reality, and appliances are networked in a need to communicate with each other.

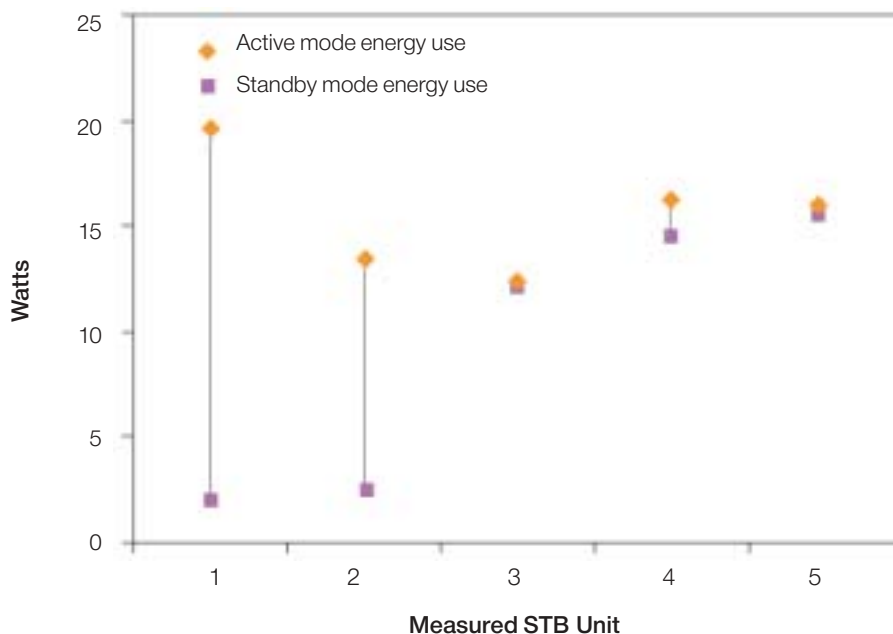
With appliances lasting an average of 15 years and as long as 25 years, it is critical that standby be addressed by manufacturers prior to these new generation products reaching higher penetration levels in Australian households.

The Energy Conservation Centre of Japan believes digital home entertainment appliances will tend to have higher standby than their analog counterparts.

In May 2002, the Australian Greenhouse Office undertook some testing on the five digital set-top boxes (STBs) available on the market at that time. Figure 2 represents both the 'standby' and 'in-use' modes for each of the units tested. If Australia adopted the Energy Star levels (<3W) for STBs, then only two of the five units would have been compliant and eligible to carry an Energy Star label.



FIGURE 2 STANDBY AND IN-USE MODE POWER CONSUMPTION FOR FIVE STBS



Who needs to act?

Obviously, all stakeholders have a role to play but, initially, the role of *manufacturers* and *government* is critical. It is becoming less and less practical for the consumer to physically 'unplug' or switch off appliances that are in standby mode. A more realistic response is to work within a coordinated international framework aimed at changing product design rather than consumer behaviour. Where this is not possible due to unique national or product circumstances, then alternative options need to be available.

Whilst there is an acknowledgement of the need for standby to exist in some products, the range of performance currently on the market suggests that there is much work to be done by industry. In the case of new analog televisions offered for sale in 2002, around 25% already meet the 'one-watt' target when turned off using the remote control. However, around 10% of models still use 10 Watts or more in this same mode, even though they perform similar functions when in that mode. The average power in that mode for all TVs is 4.9 Watts, so there is still a long way to go to meet the target.

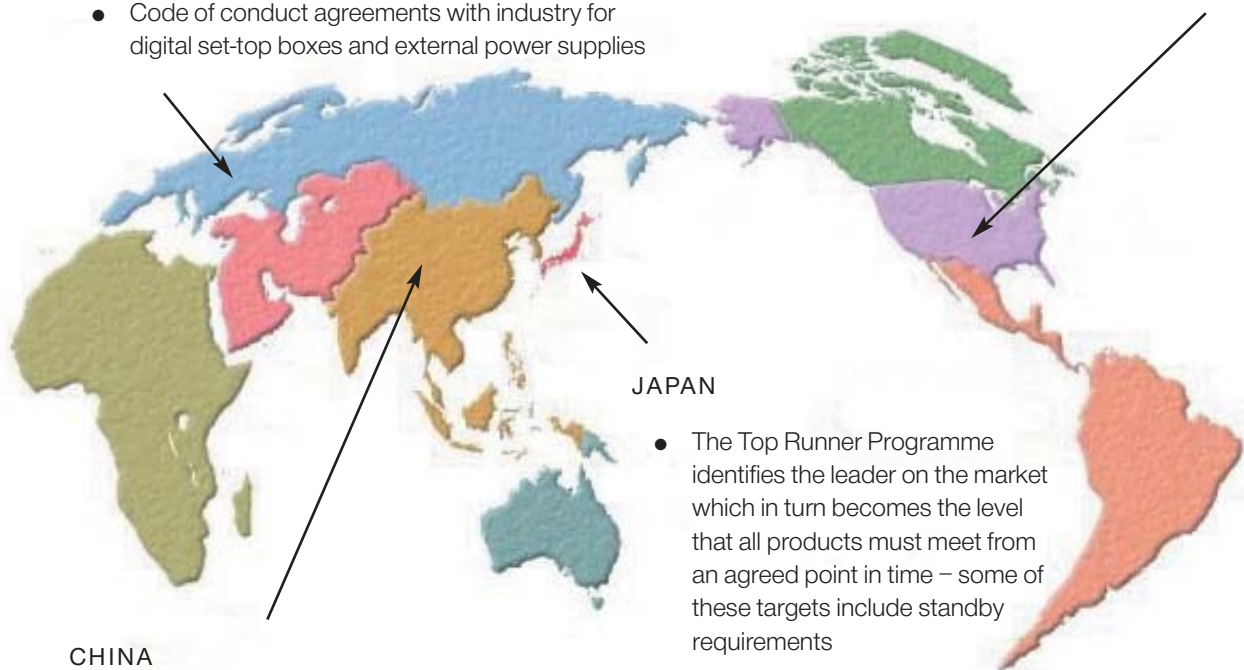
What is happening overseas?

EUROPEAN UNION

- Agreement with audio manufacturer's association to reduce standby to one-watt by 2007
- Energy Star program has been adopted for office equipment
- Code of conduct agreements with industry for digital set-top boxes and external power supplies

UNITED STATES

- Executive order from President Bush requiring government purchases of equipment to meet standby power levels of less than one-watt
- Energy Star levels are coming down to one-watt for many products including home entertainment from 2003



CHINA

- Adoption of Energy Star 'levels' (not program) for televisions and seeking to broaden this application to other products

JAPAN

- The Top Runner Programme identifies the leader on the market which in turn becomes the level that all products must meet from an agreed point in time – some of these targets include standby requirements
- Agreement with several household appliance associations to reduce standby power to one-watt from 2003 for selected products

What is already happening?

The IEA has provided a framework for information sharing on standby. The table below outlines standby power consumption and consequent emissions from some key OECD countries.

TABLE 1: ASSESSMENT OF ENERGY DEMAND AND CO₂ EMISSIONS FROM STANDBY POWER IN THE RESIDENTIAL SECTOR OF KEY OECD MEMBER COUNTRIES 1999⁴

OECD Member countries	Number of households (millions)	Average standby power (W/home)	Total standby power demand (MW)	Total standby energy (TWh/yr)	Total national consumption (TWh/yr)	Standby as % of national electricity	CO ₂ emission ratio (gCO ₂ /kWh)	National CO ₂ emissions (Mt)	CO ₂ from standby power (Mt)	Standby as % of national CO ₂
Australia	7.09	87	617	5.4	188	2.9	852	322	4.6	1.4
Canada	11.7	50	585	5.1	505	1.0	205	489	1.0	0.2
France	23.14	27	625	5.5	430	1.3	76	361	0.4	0.1
Germany	36.03	44	1,585	13.9	532	2.6	528	822	7.3	0.9
Japan	41.37	46	1,903	16.7	1,030	1.6	381	1,159	6.4	0.6
New Zealand	1.26	87	110	1	36	2.8	126	31	0.1	0.3
United Kingdom	21.93	32	702	6.1	351	1.7	483	535	3.3	0.6
United States	101.04	50	5,052	44.3	3,672	1.2	597	5,585	26.4	0.5

⁴ Adapted from IEA publication: *Things that Go Blip in the Night*, 2001 - Please note that the figures are indicative only and that the methodology employed for each individual study was not uniform.

What are Australia's existing measures and activities?

Australian governments have already adopted several measures to combat standby power, though these measures are product specific and their greenhouse abatement impact to date has been nominal.

Initially, the Ministerial decision to create the 'one-watt' target was an attempt to raise industry awareness of this growing problem. It was seen as a simple way to indicate our national priority. Australian governments, however, are not in a position to dictate standby power levels on a voluntary basis on all internationally traded goods. As momentum grows with other countries considering their equivalent of the 'one-watt' target, that may change but, for the present, Australia must create a viable domestic program against the backdrop of these emerging international developments.

The three existing measures that arguably create Australia's current domestic program are outlined below:

Energy Star

ENERGY STAR is an international standard for energy-efficient electronic equipment. It was created by the US Environmental Protection Agency (EPA) in 1992 and has now been adopted by several countries around the world. In 1996, the Sustainable Energy Development Authority (SEDA) in NSW implemented part of the program under licence from the US EPA. In 1999, NAEEEEC commissioned SEDA to expand the state program into a national scheme for home entertainment and office equipment. The USEPA has agreed in-

principle that Australia may extend this program to cover other products included in the US domestic program.

The program currently:

- Publicises to consumers the financial and environmental benefits of purchasing and enabling ENERGY STAR electrical equipment in the home entertainment and office equipment sectors
- Works with managers and staff of suppliers and retailers to support them selling ENERGY STAR compliant equipment, and
- Promotes the identity of companies who manufacture and distribute ENERGY STAR equipment.

Australian governments are large procurers of information technology and audiovisual equipment. They have the ability to assist in market transformation through demanding that the products they purchase have low standby power consumption. Hence, Commonwealth Government policy requires its agencies to:

'...purchase only office equipment that complies with the US Environment Protection Agency "Energy Star" standard, where it is available and fit for purpose.'⁵

In addition to Australia, Energy Star is currently used as an endorsement label in the United States, Canada, the European Union, Japan, Taiwan and New Zealand.

More information on Energy Star can be found at: www.energystar.gov.au



⁵ Department of Industry, Science & Resources (2000) Measures for Improving Energy Efficiency in Commonwealth Operations, www.isr.gov.au/library/content_library/measures12Oct01.pdf

Appliance Energy Rating Label

The mandatory Energy Rating label enables consumers to compare the energy efficiency of domestic whitegoods (refrigerators, freezers, air conditioners, dishwashers, clothes washers and dryers). It also provides an incentive for manufacturers to improve the energy performance of appliances by displaying efficiency in a graphical form to potential customers.

The Energy Rating Label has two main features:

- The star rating gives an assessment of the model's energy efficiency (the more stars the more efficient) that can be readily compared with other models
- The comparative energy consumption (kilowatt hours/year) provides an estimate of the annual energy consumption of the appliance based on Australian Standard testing method.

Annual in-store measurement surveys

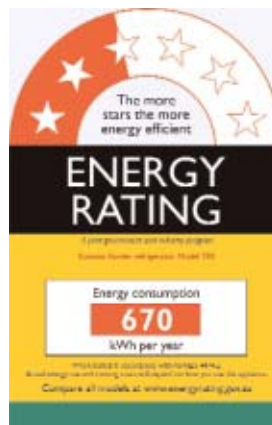
Australian governments have committed to conduct annual surveys of standby power for a representative "basket" of electrical products. The first survey, conducted in January 2001, tested 520 products and the second survey, conducted in February 2002, tested 640 appliances.

The main objectives of the surveys are to:

- Quantify the magnitude and range of electricity used in standby mode by new appliances and equipment offered for sale in the Australian market
- Compare the annual results within each product group in order to track the industry's progress in reducing standby power consumption.

Some of the key findings from the 2002 survey included:

- A large proportion of appliances were found to have power consumption greater than one watt in both passive standby and off modes



The label's comparative energy consumption currently does not include standby energy consumption.

In 2001, Australian governments informed key industry representatives and Standards Australia

International that they were committed to progressively including standby power in the next revision of the testing methodologies and energy labels for the relevant appliance types. All relevant standards will be revised over the next two to three years to include standby power consumption in the values reflected on the label. More information can be found at www.energyrating.gov.au

- It is becoming increasingly common for many products to have no hard "off" switch (for example, a VCR) or to consume significant power in "off mode"
- Results indicate that there is an opportunity for many appliances to improve energy consumption in passive standby and off modes
- Trends for different product groups are mixed. While some products appear to be improving, there is still substantial work to be done for some product types. Some products have poor standby power profiles whilst others in the same product group have good profiles.
- A slight decrease in standby consumption when comparing the results of the 2002 in store survey with those from the 2001 survey.

The surveys provide a regular basis on which to benchmark standby power used by the products entering the marketplace from year to year. The results of the surveys are shared with suppliers and key stakeholders. The Executive Summary of the 2002 study can be found at www.energyefficient.com.au under documents.

What are the potential measures to address standby?

The existing measures, in their current form, only have limited potential to counter standby power consumption across the broad spectrum of products. The measures could be expanded and enhanced to form key parts of a wider, more effective strategy to address standby power. Even then, they would be ineffective if they were the only elements of the standby strategy.

NAEEEC has identified a range of potential measures that could be adopted under the banner of this strategy. The first group of potential actions would be voluntary:

Use of Industry Codes of Conduct

In circumstances where a product type or group of related products were identified as a potential problem, it may be useful to use an industry-wide voluntary agreement. The agreement would seek to focus the attention of suppliers on standby in the design of locally manufactured products or when ordering the imported product.

Possibly brokered through a relevant industry association(s), the agreement could create expectations about the acceptable standby power use for that product. The agreement could contain potential target standby levels and link these levels to milestones during the next ten years. Industry agreements of this kind would carry requirements that participants would report standby power levels to government agencies.

The EU employs a similar model and currently has in place agreements for digital set-top boxes and external power supplies.

An industry awards program could be tied into this agreement that would recognise those companies that are making a substantial contribution to reducing standby power consumption.



This type of arrangement is suitable where there is a reasonably high degree of industry cohesion for the product type and a substantial majority of the market supply is covered by parties to the agreement.

Use of the Australian Standard to specify standby targets

Australian governments have the ability to work with Standards Australia International to use relevant Australian Standards to identify and publicise standby targets for particular products. The publication of standby targets in official Australian Standards provides a ready mechanism for communicating with industry, especially in circumstances where those suppliers are located off-shore.

NAEEEC is proposing to write to Standards Australia International (SAI) to establish an agreed process to use Australian Standards in this way. This action would apply to products beyond those covered by the major whitegood standards. A process with SAI and the relevant standards committee could be developed to cover any other product identified by NAEEEC as at risk of not meeting the 'one-watt' target.

Collect and publish statistics

The annual survey already conducted by NAEEEC will continue as a mechanism to identify potential problem products. Once a product is so identified, all suppliers of those products would be asked to supply more detailed standby data, directly to government, for every product on a regular basis so that improvements over time can be more accurately

monitored. This will enable consumers to perform a comparative analysis to identify those products with lower standby power consumption and facilitate fair reporting of changes over time.



Produce public Annual Reports

NAEEEC intends to produce a regular report on standby activities in Australia, reporting major achievements through the year and other measures of the effectiveness of the Standby Strategy. This report could be a separate document or a part of the

regular Achievements series dealing with energy efficiency issues of a national character. Public information campaigns will also continue and be further enhanced

In addition to the above voluntary measures, NAEEEC wants to explore support for mandatory measures forming part of a coordinated plan to address standby. These measures might include existing tools like minimum energy performance requirements and mandatory labelling but also new measures designed to specifically highlight support for standby performance:

Regulate using Minimum Energy Performance Standards (MEPS)

MEPS is a regulatory tool used to remove the right to sell products that do not meet the minimum energy efficiency levels published in the Australian Standard. This measure relies on State and Territory laws and is supported by a product registration system, generally administered by Electrical Safety agencies. MEPS levels could set a cap on the maximum allowable standby power for specified modes. This approach would be most straight forward for those products that are already regulated for energy efficiency. However, it could be

considered for products groups that are not currently regulated for energy efficiency if scope and magnitude of the problem warranted such an approach.

More information can be found at:

<http://www.greenhouse.gov.au/energyefficiency/appliances/meps>

Regulate using a mandatory label either for all or some products

Mandatory labelling is another measure that could be used. Such a label could be imposed by regulation upon all suppliers and use either the comparison label (like the star rating label for appliances, but emphasising standby power) or an endorsement label format (for example, the Energy Star). Such a label may show comparative standby power data and could be used to promote products with low standby power.

An alternate approach would be to use a label to identify only those products that fail to meet government's standby targets. This option has not been used in this field before but draws on experience drawn from cigarette and hazardous goods labelling. Governments could require ONLY those suppliers who fail to meet well publicised efficiency targets to attach a mandatory label to their product should it continue to fail to meet standby power targets at the end of a formal notice period.

These potential tools represent the possible menu of measures that may be used to address standby in a particular sector, where voluntary measures are not appropriate or have been shown not to work. Government agencies consider the use of mandatory measures to redress a particular problem product, when and where necessary.

Mandatory measures would be subject to the necessary economic justification required of any national law-making proposal and therefore only proceed if the MCE considered the proposal in the community's best interests.

What are the potential government processes for addressing standby?

In addition to the types of measures that government may use, NAEEEC wants to explore support for proposals about processes to identify the strategy elements to be applied to relevant products. NAEEEC proposes to use two steps (ultimately resulting in publications).

The first step is to develop an overarching publication that identifies actions over the period 2002 to 2012 under the banner of Australia's Standby Power Response Strategy. The target date for publishing this strategy is later in 2002 once the MCE determines Australia's standby strategy. The second process could result in specific product plans to address those product types being published progressively between 2002 and 2012 within the scope of the response strategy.

The general ten-year Strategy

After considering the results of this consultation, NAEEEC proposes to recommend that MCE release a publication setting out the strategy for dealing with standby. The content of the publication will reflect stakeholder views. This Strategy could categorise products into three levels of priority, thereby determining when that product type is specifically considered for an individual product plan.

This overview would provide "advance warning" to industry of products targeted for consideration of more detailed, product specific plans. The categories would take global developments into account, and could be related to the timing of more detailed consideration:

1. high priority (2002 – 2004)
2. medium priority (2005 – 2007)
3. low priority (2008 – 2012).

using the following criteria:

- high standby power consumption (particularly when this appears unnecessary to maintain functionality)
- high (or potentially high or growing) ownership or penetration levels
- a large range of standby levels available for that product type.

Effectively, products identified as high or medium categories are those which government is committed to developing more detailed standby power plans in the specified timeframe. Low priority products represent product types at risk of being targeted in the future should their penetration levels or standby power levels increase in the next six years.

The Strategy could commit Government to a process of:

- Identifying product types that appear not to be progressing toward the 'one-watt' target at a satisfactory rate
- Announcing that a product type specific plan will be developed for those products to meet the 'one-watt' target.

A draft product list outlining which products fall into high, medium and low priority can be found at Appendix 2. Throughout the 10-year plan, NAEEEC will continue to monitor each major product group. More intensive product reviews will be progressively initiated in accord with the priority system or on an "as needs" basis arising out of the annual in-store surveys.

It may be necessary to conduct market or technical surveys to fully understand the market structure and the technical and design issues related to the product. The outcome of these reviews could result in the withdrawal or modification of the specific product plan.



Specific Product Standby Plans

The second process for discussion is the development of product specific standby plans, which would also be published. Where NAEEEEC identifies a product as warranting more detailed consideration, it proposes a transparent process along the following lines:

Stage 1: Identification of Problem Product Groups – Initial Actions

If a product group is identified as being "problematic" because of its poor standby profile or lack of progress on standby, a specific standby plan will be developed. With benchmarking surveys each year and other market intelligence, government will have grounds to identify those products that require a specific sectoral plan to address standby. While benchmarking work will generally involve across-the-board monitoring of all products, identified problem product groups will be subject to more in-depth monitoring and evaluation as required.

Product type specific plan:

- Industry associations for the problem sector will be called on to produce their own standby strategy to overcome the problem. Governments will allow the association six months to develop the plan.
- Governments will consider the industry proposal and negotiate an agreed plan for Ministerial endorsement (incorporating voluntary measures during this stage but flagging mandatory measures are a possibility in the future) if necessary.
- Ministerial endorsement will be sought for the agreed action plan
- More detailed benchmarking of products in this product type will occur to monitor performance

Analog Television as an example

Appendix 3 is a draft of a potential product plan for televisions. This example is included to provide a real expression of the likely content of such a plan. This document will be debated at the Standby seminar on 15 August as both an example of this process and as an expression of the likely plan for this product type.

Stage 2: Problem Product Groups – Escalating Policy Actions to Address Product Groups with a Poor Standby Profile

This next stage is where action moves beyond voluntary measures and seeks to impose mandatory measures. Government would move to regulatory intervention ONLY where inadequate progress is evident or the potential for excessive energy use is documented. Any regulatory action would be subject to the usual processes of economic analyses (regulatory impact statements, public consultation) and would only proceed if they were in the public interest and meets governmental regulatory requirements.

Initial work program

Appendix 2 represents the list of electrical products that have been considered for incorporation within the Standby strategy. Based on the initial analysis, the following products would be "high priority" products and subject to profiling during 2003 and 2004.

Information Technology	Entertainment	Appliances
PC Monitor	Digital TV	Clothes Washing Machine
Personal Computer	Digital TV set top box	Clothes Dryer
Photocopier	Pay TV set top box	Dishwasher
Printer	Analog TV	Microwave
Scanner	Integrated portable stereo	Airconditioner
Multi-Function Device		External Power Supplies: <ul style="list-style-type: none">- Dustbuster- Electric Shaver- Mobile Phone Charger- Cordless Home Phone- Answering Machine (independent and combined)

Product type specific plan involving mandatory measures:

- Identify the suppliers or products that are not progressing toward 'one-watt' target
- Advise Standards Australia International that the Part 2 Standard for that product should be amended (or created) to contain a mandatory measure
- Move to begin the RIS process justifying mandatory action
- Seek MCE approval for national regulation
- Move to amend state and territory legislation to permit regulation of standby for the targeted products.

The description of the processes described above is indicative only and NAEEEEC will revise this description following this consultation process.



Profile Content

Appendix 3 provides a draft of an actual profile. These profiles will attempt to address the following issues:

Product Information

- Product type
- Product description
- Current program status and proposals
- Relevant modes for the 'one-watt' power plan
- Known standby data for new products
- Known standby data for installed stock
- Current ownership and trends

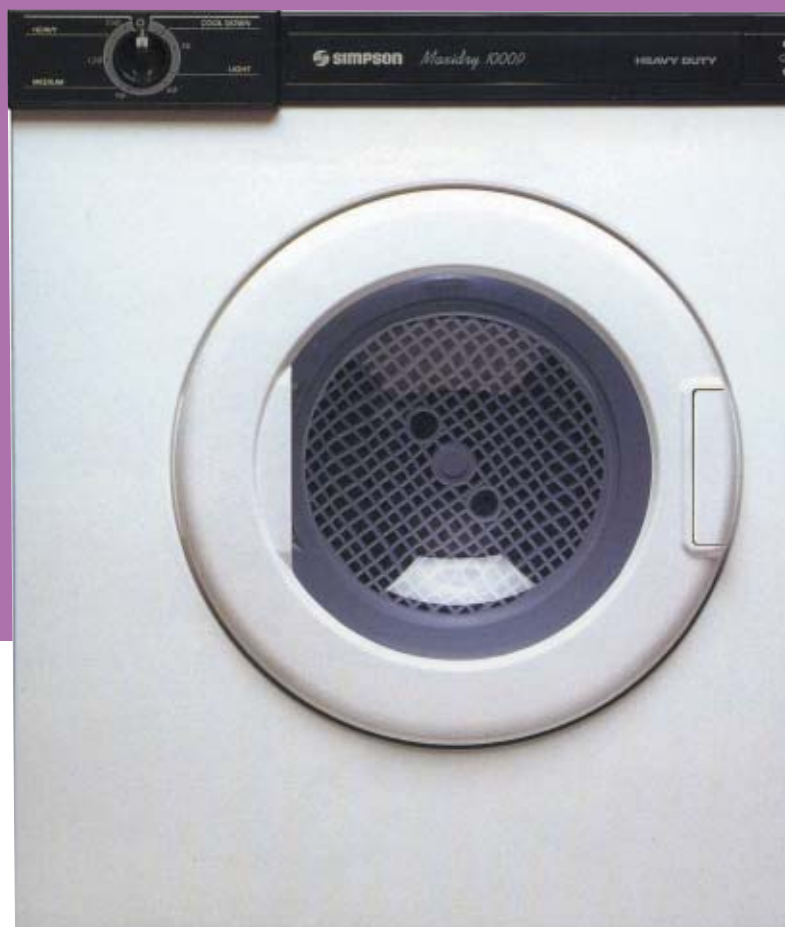
Standby Strategy Information

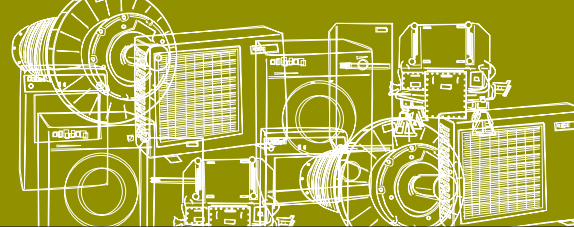
- Target standby levels (and target dates)
- Policy tools identified to be used for the product
- Date by which time voluntary measures should have new product meeting the goal

Next Steps

Over the coming months, NAEDEC will continue engaging with stakeholders to shape Australia's Standby Power Strategy. We encourage any interested parties to make their views known by attending the **15 August 2002** forum and submitting written comments by **15 October 2002**.

All areas of the economy need to play a role in reducing energy consumption and hence mitigating greenhouse gas emissions. This discussion paper looks to contribute to this end by raising the profile of standby power and determining ways to minimise its consumption.





IEA
INTERNATIONAL ENERGY AGENCY



OECD
ORGANISATION FOR ECONOMIC
ORGANISATION DE COOPÉRATION ET

AIE
AGENCE INTERNATIONALE
DE L'ÉNERGIE

OCDE
CO-OPERATION AND DEVELOPMENT
DÉVELOPPEMENT ÉCONOMIQUES

THE IEA STANDBY POWER INITIATIVE: SUMMARY OF A 3 YEAR EFFORT

In March 2001, the International Energy Agency published "Things That Go Blip in the Night: Standby Power and How to Limit it"¹. This publication summarizes a 3-year effort from the IEA to address the growing problem of electricity being wasted in the standby power mode of numerous equipment. The following is an extract from the recent publication and includes a list of concrete recommendations to policy makers.

There is a consensus that standby power modes are less efficient than they could be and are not yet adequately addressed in energy efficiency policies. Standby power consumption provides a good opportunity for reducing both energy consumption and greenhouse gas emissions. Through co-operation among governments, industry and consumers, and the co-ordination of international policies, standby modes can be made more efficient, thereby reducing the overall demand for power. Where it is cost-effective, product design should automatically include low-power standby modes and should minimise energy consumption in standby modes. Existing engineering resources allow for substantial low-cost reductions in standby power consumption. In many cases these can be achieved without affecting the performance of the product.

Given the continuing rapid changes in technology, including the growing prevalence of networked homes and offices, it is critical that countries move forward as soon as possible.

Many of the appliances that consume standby power are internationally traded. So standby power is an ideal candidate for international, co-ordinated action.

Improving energy efficiency is one of the most cost-effective ways to reduce greenhouse gas emissions from energy. The low costs of dealing with standby power and the benefits from energy savings and emission reductions would be spread over all countries.

There are enough energy-efficient solutions already available on the market to make substantial reduction of standby power consumption a realistic objective. In a business-as-usual scenario, some of the low-standby solutions would no doubt be brought to market but not fast enough to compensate for the overwhelming growth of standby power consumption that will come with the next generation of electronic equipment. Tackling the problem from an international platform is the best way to reach the necessary scale to increase the penetration of these technologies in a global market.

The IEA hopes that a co-operative, co-ordinated effort to reduce standby power consumption could, by 2010, result in energy efficiency being incorporated automatically into the design of appliances. It will be normal to minimise standby power consumption and to use standby power modes to optimise overall appliance efficiency.

Reducing standby power at the international level is possible. Indeed it is already happening. Multinational companies have understood the need to improve the energy efficiency of the standby mode of the equipment they sell. This is encouraging, but government intervention can stimulate and reinforce such achievements.

¹ "Things That Go Blip in the Night: Standby Power and How to Limit it"
International Energy Agency – 2001 ISBN 92-64-18557-7
<http://www.iea.org/public/studies/blip.htm>

IEA RECOMMENDATIONS FOR IMMEDIATE FOLLOW-UP ACTIVITIES

1. Standby Power should be included in all test protocols

Standby power should be included in all energy test protocols and in all energy efficiency policies on products with significant standby power requirements.

2. Establish an international voluntary programme

The global and dynamic nature of the market for appliances with standby modes will be best served by co-ordinated efforts among industries and governments. Such efforts could take place in an international working group with representatives from both industry and government. Experts participating in the working group can keep the business community up-to-date on the representation of labels and the prevailing state of technologies in the market place.

3. Develop guidelines for lowering standby use in appliances not covered by any programme

Many of the newest technologies will require some standby power. The "networked home" may potentially be a high-standby home. It is therefore important to develop guidelines for lowering standby power use in new appliances and appliances not currently covered by any programme.

4. Avoid the proliferation of labels to reduce standby power

Some regions or countries have introduced their own label or scheme to encourage the purchase of equipment with low standby power consumption. Should such labels be maintained despite the introduction of a more international scheme, it would be appropriate at least to ensure that the criteria to reduce standby power consumption converge.

5. Address the specific case of set-top boxes for digital television

Television broadcasting is rapidly moving toward digital technology. Set-top boxes are likely soon to represent a significant new standby power demand in most economies. Countries should rapidly co-ordinate their efforts to develop future communication protocols, and their other efforts to deal with the new generation of set-top boxes, to ensure that the standby power mode is as energy-efficient as possible. Service providers have to be closely associated with this work.

6. Include standby power information in existing appliance energy labels

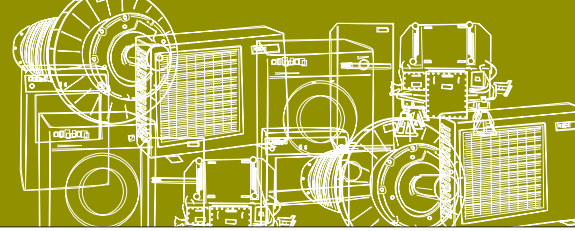
Appliance energy labels exist in most IEA Member countries. In a large majority of them, there is no indication of the energy consumed while the appliance is in standby mode. It may be appropriate to include in forthcoming updates of appliance energy labels an indication of the standby power consumption.

7. Stimulate research on new low-standby technologies

New solutions to reduce standby power should be encouraged. IEA Member countries should consider assisting the research and development activities of manufacturers encountering technical obstacles to reducing standby power.

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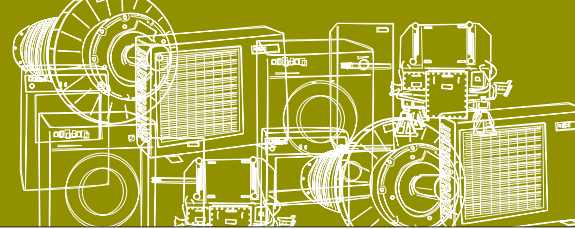


PRODUCT PRIORITY LIST

Product	PRIORITY		
	High	Medium	Low
Home/Office Equipment			
Fax Machine		X	
Laptop computer		X	
Modem			X
PC Monitor	X		
Personal Computer	X		
Photocopier	X		
Printer	X		
Scanner	X		
Multi-Function Device	X		
PC Speakers with separate power supply		X	
Home Entertainment			
Digital TV	X		
Digital TV set top box	X		
Pay TV set top box	X		
Analog TV	X		
DVD		X	
VCR		X	
Integrated portable stereo	X		
Separate sound system components:		X	
- receiver			
- amplifier			
- tuner			
- CD player			
- tape deck			
Kitchen Appliances			
Bread Maker		X	
Coffee Machine			X
Microwave	X		

Product	PRIORITY		
	High	Medium	Low
Major Appliances			
Refrigerator		N/A	
Freezer		N/A	
Clothes Washing Machine	X		
Clothes Dryer	X		
Dishwasher	X		
Air conditioner	X		
Water heater (electric)		N/A	
Water heater (gas with mains connection)		X	
Space heater (electric and gas with mains connection)		X	
Ovens and Ranges (electric and gas with mains connection)		X	
Cooktop (electric and gas with mains connection)			X
Rangehood			X

Other Household Appliances			
External Power Supplies:	X		
- Dustbuster			
- Electric Shaver			
- Mobile Phone Charger			
- Cordless Home Phone			
- Answering Machine (independent and combined)			
Security System			X
Electric Rolladoodr			X
Smoke detector			X
Networked/Smart home product		X	
Motion detector		X	



DRAFT PRODUCT PROFILE – TELEVISIONS (ANALOG)

PRODUCT DESCRIPTION

Analog colour televisions are currently the most common form of television used in the residential sector in Australia. They are based on the European PAL system with free to air broadcasts using VHF and UHF bands. There are also some free to air broadcasts made from satellite and various pay TV broadcasts made via microwave, satellite and cable (these usually go through a converter/decoder to produce a suitable analog output). Most units use cathode ray tube technology, although there are some new units appearing on the market that use rear projection, plasma and LCD technologies.

The average size of TVs installed in Australia is 48cm (nominal diagonal measurement) and this is increasing at about 0.5cm per year.

CURRENT OWNERSHIP AND TRENDS

Colour televisions first appeared on the market in Australia in 1974 (black and white TV was introduced in Australia in 1956). The overall ownership profile for

televisions in Australia is limited with data collection on ownership sporadic. Little state data is available, so a uniform national ownership and penetration has been assumed.

In the 1960's and early 1970's, the ABS census asked households whether they owned a television. The available data suggests that television penetration probably increased linearly from 0% in 1956 (the date of introduction) to about 90% by 1975. It can safely be assumed that the average number of units per household would be limited to 1 in almost all cases until the mid 1970's so penetration would be equal to or close to ownership at that time.

In 1996, an ABS survey found some 98.9% of households had at least one TV (ABS 4172.0-1997) and also recorded some data on ownership (number of TVs per household). ABS 4602.0-1999 also recorded the penetration of TVs at 98.9% but no figures for ownership were provided.

In 2001, NAEDEC commissioned a household telephone survey recording the penetration and ownership of TVs based on a sample of 801 households. A summary of these surveys is shown in Tables 1 and 2.



TABLE 1: PENETRATION OF TELEVISION OWNERSHIP - AUSTRALIA

Year and Source	Penetration
1955	0%
1961 (census – NSW)	48%
1966 (census – NSW)	70%
1970 (census – NSW)	90%
1996 (ABS 4172.0)	98.9%
1999 (ABS 4602.0)	98.9%
2000 (NAEEEC)	99.5%

Source: Census data re-quoted from Wilkenfeld 1989.

TABLE 2: OWNERSHIP DATA FOR TELEVISIONS - AUSTRALIA

TVs	1996 (ABS4172.0)	2000 (NAEEEC)
None	1.1%	0.5%
1 TV	40%	38.6%
2 TVs	40%	39.4%
3 TVs	13.9%	15.3%
4 or more TVs	5%	6.2%
Ownership	1.827	1.895
Saturation	1.847	1.905

Note: 2000 NAEEEC survey found that 4.8% households had 4 TVs and 1.4% had 5 TVs. 1996 values for ownership and saturation assume 4% with 4 TVs and 1% with 5 TVs.

A graphical overview of TV penetration and ownership trends are shown on the following page.

The average age of TVs in the stock was found to be 8 years in the 2000 telephone survey. This compares closely with an average age of 9 years in the standby measurement survey of households in the same year.

RELEVANT MODES FOR THE 'ONE-WATT' POWER PLAN

The majority of televisions in the Australian stock have three main modes: on, passive standby and off. Most new TVs have a "hard" off switch, which disconnects the mains from all electrical circuits in the TV and these have no measurable off mode power consumption. A small proportion of new units have some "off mode" power consumption. Some new TVs also appear to have no off mode (lowest power state is passive standby – unit can always be activated by a remote control), although this is still unusual.

Passive standby mode (where the unit is put to sleep via a remote control) is now standard on most new televisions (more than 90% of new units). Remote controls for TVs were introduced in the late 1980's, becoming a standard feature for nearly all new TVs by the early 1990's. TVs without a remote control (ie most units sold prior to 1990) generally do not have a "standby mode" – they are either "on" or "off".

On mode is not generally relevant for the standby power plan, although the on mode power consumption and the hours of use are critical in determining total energy consumption of TVs (about 80% to 95% of total energy consumption is typically used in on mode).

The household survey conducted in late 2000 made a note of the mode that the TV was in prior to the commencement of power readings. About 40% of TVs were in passive standby mode and about 40% were off. The remaining units were either unplugged or on at the time of the survey. For energy consumption estimates, it can be assumed that about 50% of TVs will be off and 50% are in standby mode when not in use.

The telephone survey of appliance usage asked respondents to indicate the current status of their TV and if the TV was switched on, the normal way that the TV was switched off when not in use. Fifty percent of respondents turned their TV off with a remote. A further 37% turned their TV off at the unit while 13% reported switching off their TV at the switch on the wall. This correlates closely with the findings of the household survey.

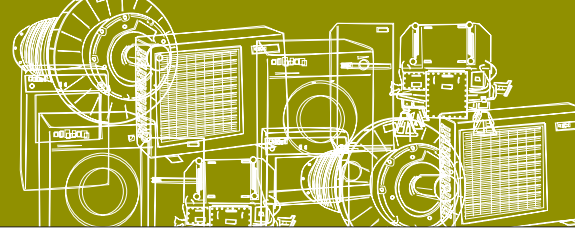
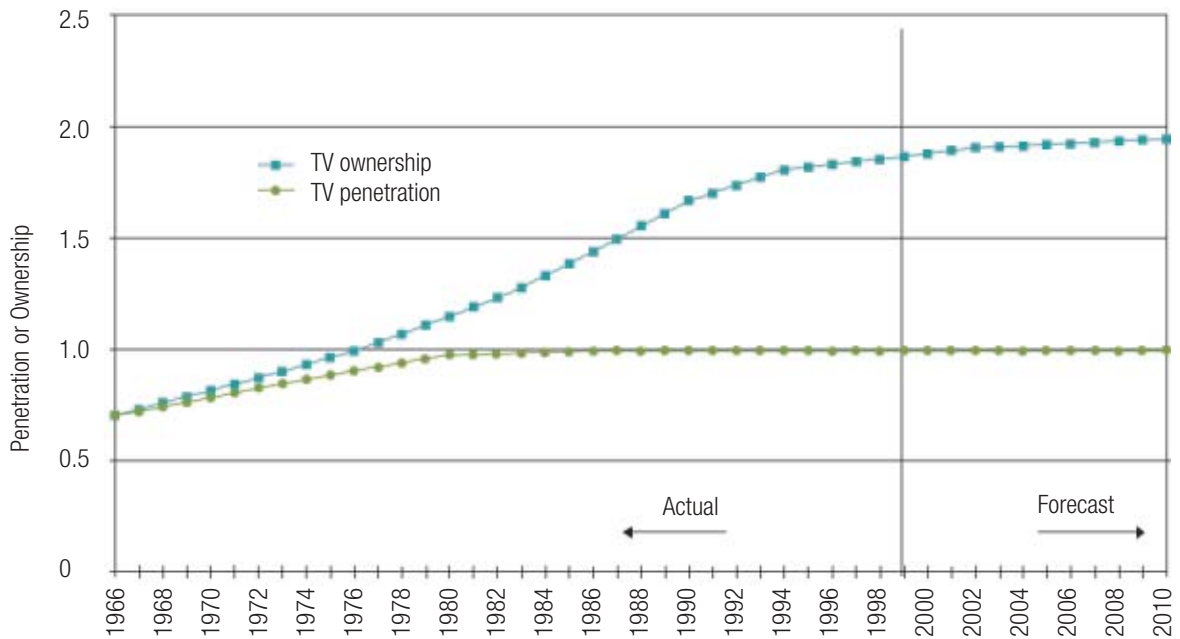


FIGURE 1: TV PENETRATION AND OWNERSHIP IN AUSTRALIA



Source: EES estimates using ABS data

KNOWN STANDBY DATA FOR NEW PRODUCTS

A survey in early 2001 measured the off, passive standby and on mode of some 147 new TVs on display in major retailers in Brisbane and Sydney. A follow up survey on 113 new TVs was conducted in two large retail stores in Melbourne in early 2002. In 2001, the average sized unit on display was 63cm and similarly in 2002, the average size was 62cm. This average is significantly larger than the average installed stock (48 cm).

Both the 2001 and 2002 store surveys found that most new TVs (83% in 2000 and 62% in 2002) have no measurable power consumption in off mode (0.0 Watts). The 2001 survey found that around 10% of new TVs had some power consumption in off mode, but in all cases the measured values for new units was less than 1 Watt (most were 0.1W, average 0.25W for those with some off mode consumption). A further 7% of new products were found to have no "off mode" (ie the lowest power state is standby). In 2002, of those units

with a power consumption of greater than 0.0 in "off mode" (33% of TVs measured) all measured values were less than 1 Watt (only 4% measured greater than 0.2W).

The 2001 store survey found that the average standby power consumption for new TVs was 5.9W. However, the distribution varied from well below 1 Watt (15% of units on display) to over 10 Watts (16.2% on display). In 2002, the average standby power consumption for new TVs was 5.1W, with 24% of units measuring below 1 Watt. Given the significant number of 1 Watt models on display already, this indicates that achievement of a 1 Watt target is quite feasible within a reasonably short time period. However, of concern is the significant number of units on display with a standby power consumption of over 3 Watts. In 2001, only about 30% of units on display would qualify for the current Energy Star requirements for televisions, although in 2002, results showed that there was some improvement in the market with 45% of televisions qualifying for the Energy Star requirements.

KNOWN STANDBY DATA FOR INSTALLED STOCK (HOUSEHOLD SURVEY, 2000)

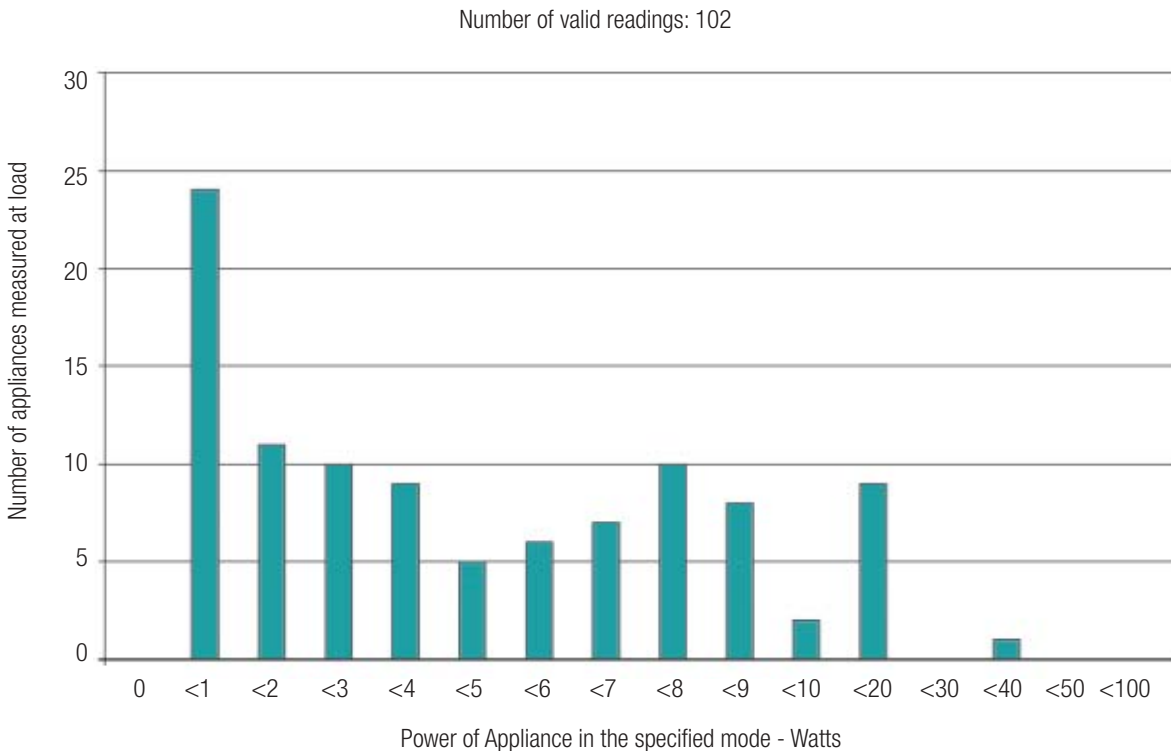
A household survey in late 2000 measured the off, standby and on mode of some 116 TVs installed in 64 households in Melbourne, Brisbane and Sydney. The average sized unit was 48cm. This survey allowed the off and standby mode power consumption to be measured as a function of the age of the television.

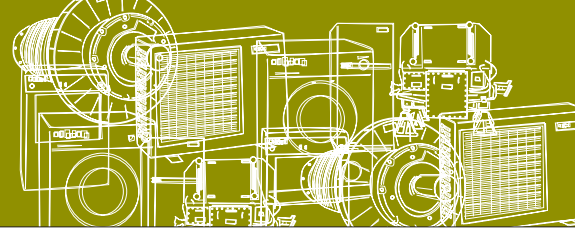
The household survey found that most existing TVs (88%) have no power consumption in off mode, which is a higher proportion than new televisions. Around 8% of existing TVs have some power consumption in off mode, with measured values ranging from 0.1W to

6.5W (average 2.0W for those with some off mode consumption). A further 4% of existing products were found to have no "off mode" (ie the lowest power state is standby, although a review of the data suggests that a couple of these "standby" values may in fact be "off mode" with significant power consumption).

The survey found that the average standby power consumption for all existing TVs in the stock was 9.6W, although there is an obvious improving trend from those purchased in 1990 to 2000 as shown below. With remote controls becoming standard by the early 1990's, the standby power consumption increased from essentially a base of 0 Watts in the mid 1980's to about 15 Watts in 1991. This has steadily decreased in

FIGURE 2: STORE SURVEY – DISTRIBUTION OF TV STANDBY POWER CONSUMPTION 2002





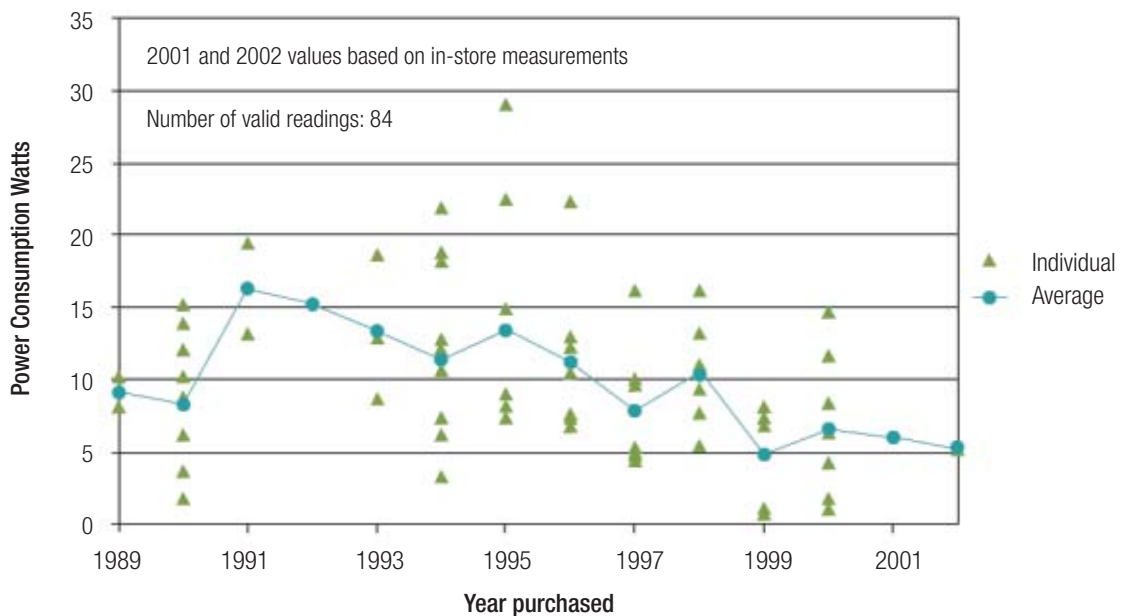
an almost linear fashion to 5.1 Watts in early 2002. Note that the average values from year to year vary due to the relatively small sample size for some years, although the values for 2001 and 2002 are based on relatively large store samples.

"On mode" consumption for TVs is usually quite high (typically in the range 40W to 150W depending on the size and age of the television, average installed stock of 67W, average new unit in 2002 96W for all TV types). Hours of TV watched are well documented by rating agencies – typically around 21 to 25 hours per week per household (up to 1300 hours per year). On power consumption for new and installed TVs appears to be reasonably stable at about 1.5W/cm, although the

range of power consumption for any particular size can vary by a factor of 2 or 3.

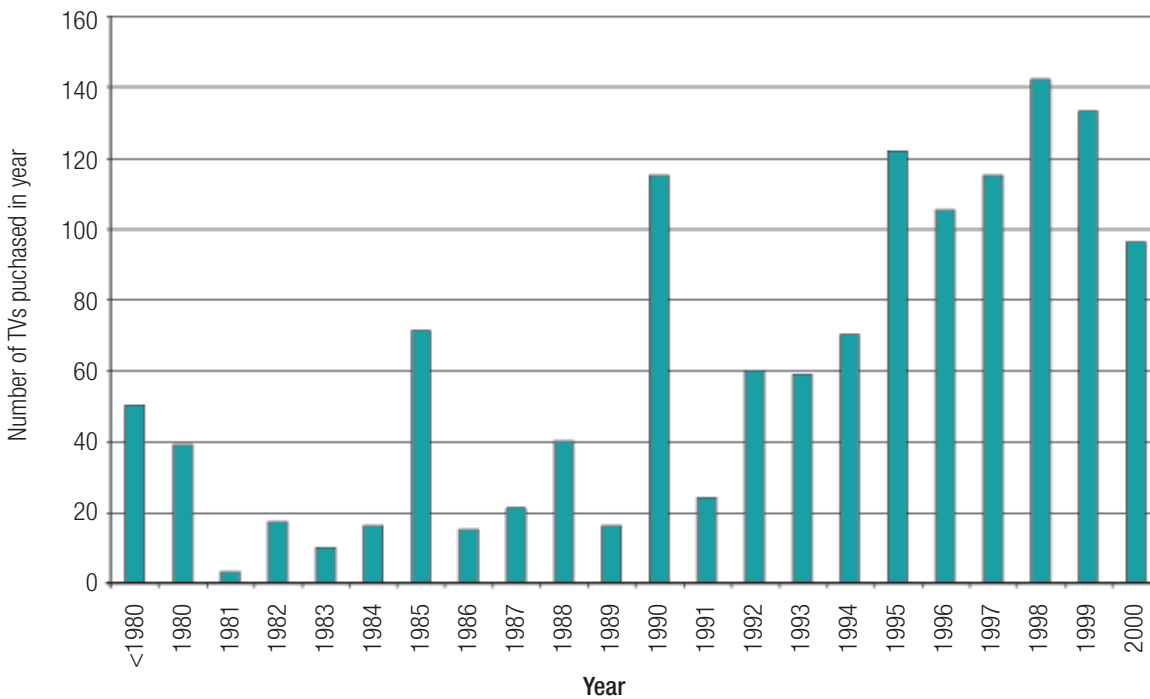
The 2000 telephone survey sought to determine the average age of each television in the household. Of those respondents who could recall the age of their televisions (respondents recalled the year of purchase for 88.2% of all TVs covered by the survey), the average age of the first television was 7.2 years (721 records); the second television was 10.9 years (427 records), the third 12.9 years (145 records), the fourth 12.4 years (39 records) and the fifth 14.3 years (7 records). The age distribution of all TVs covered by the 2000 survey is shown in Figure 4.

FIGURE 3: INTRUSIVE SURVEY – DISTRIBUTION OF TV STANDBY POWER CONSUMPTION BY AGE



Note: Pre-1985 power consumption in standby mode probably not related to remote control

FIGURE 4: AGE DISTRIBUTION OF TVS IN STOCK - 2000



Note the higher frequency of responses of years that are multiples of 5 (eg 1985, 1990) – this age approximation appear more common for periods of > 10 years.

GOVERNMENT TARGET

NAEEEC intends to recommend to the Ministerial Council on Energy that the Australian passive standby consumption for TVs (turned off with remote control) be less than 1 Watt and off mode consumption be less

than 0.3 Watt for all products on the Australian market. This voluntary target should apply to all TVs from the date of the Ministerial decision.

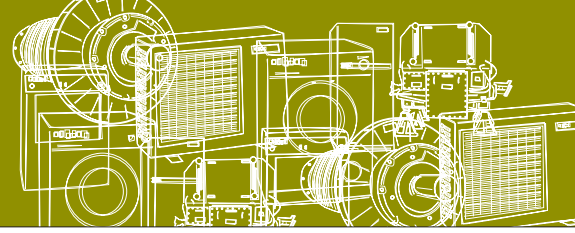
The following voluntary requirements will be inserted into the relevant Australian Standard following the Ministerial decision, with an applicable date.

Product	Off mode power ¹	Passive standby mode power ²
Televisions	Less than 0.3 Watt	Less than 1.0 Watt

Notes: 1. Lowest power when connected to the mains.
2. When switched off using a remote control, where applicable.

NAEEEC intends to recommend that it monitor the marketplace, providing regular updates to MCE and stakeholders until the end of 2005. After that date, NAEEEC will provide a detailed report to MCE advocating

additional measures (should they be necessary) to meet the standby target or advising that the industry has met the standby target.



GOVERNMENT PROPOSALS TO ACHIEVE THIS TARGET

Government agencies intend to take the following actions to assist industry meet the standby targets for these televisions:

- **The Australian Standard**

NAEEEC will request the relevant Australian Standards committee to include the standby measurement and power targets in the next publication of the standard. Subject to Ministerial approval, this would be the first action within the plan.

- **Industry agreement**

NAEEEC intends to offer to establish a voluntary agreement through the Information and Communication Technologies forum within the Australian Electric and Electronic Manufacturers' Association. This group represents suppliers of this equipment. The agreement would seek to more widely promote the standby levels and timetable for implementation. It will build on the agreements with member companies of Energy Star and identify joint opportunities to promote the Standby targets. Subject to Ministerial approval, this action could occur in early 2003.

- **Collection of Statistics**

NAEEEC intends to request television performance data from each supplier in the Australian marketplace in an agreed format. By early 2003, all companies will have been asked to contribute data for their products to a comprehensive database on standby. Public reporting will commence shortly thereafter. In the event that some suppliers do not provide this data, NAEEEC will advise the industry of the identity of those suppliers and include that supplier's products in its annual measurement surveys.

- **Compliance Status**

By 2005, NAEEEC will release a public report detailing progress by the industry towards the government standby targets and identifying proposals for the future. By mid 2006, NAEEEC will announce any additional actions sanctioned by MCE to meet the standby target through unto 2012 or withdrawing the product from monitoring because the industry has already met the standby target.

MORE INFORMATION?

If more information is required please contact the Australian Greenhouse Office by email - energy.efficiency@greenhouse.gov.au or fax 02 6274 1884.

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NAEEEC MEMBER ORGANISATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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