

Regulatory Impact Statement

Proposal to introduce Minimum Energy Performance Standards and labelling for televisions

Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by the Ministry of Economic Development. It provides an analysis of options to improve the energy performance of televisions sold on the New Zealand market through the application of standards and labelling.

The analysis includes:

- Current and forecast impacts of televisions on electricity demand
- Barriers to consumers purchasing more efficient televisions.
- The impact on consumers of purchasing more efficient models.
- The impact on suppliers and manufacturers of requiring more efficient models (including the cost of compliance).

The recommended option will align New Zealand regulation with the minimum energy performance standards (MEPS) and energy labelling standards that have been in Australian Regulation since 2009. These are joint Australia and New Zealand standards that draw on international standards. Aligning regulations for this product between the two countries will contribute to the objectives of the Trans-Tasman Mutual Recognition Arrangement (TTMRA) and the Closer Economic Relations (CER) Agreement.

The proposed measures are not expected to restrict competition or impose significant costs. Many suppliers to the New Zealand market also supply to Australia; therefore their products already comply with the proposed regulation. Market data and feedback from industry stakeholders indicates that suppliers can easily source compliant products. Products will not need to comply if they have been locally manufactured or imported before the date the standards are incorporated into regulation. Industry will incur administration costs to register their products (but no registration fee) and may incur costs to test their product (if it has not already been tested to the standard or an equivalent standard).

The proposal recommends a staged introduction of MEPS as this is the first time the trans-Tasman home entertainment industry has been regulated for energy efficiency. The MEPS will be introduced at 'Tier 1' and will transition to 'Tier 2' within 1-2 years, in line with Australian timelines and subject to a market review, the necessary Cabinet approval, and confirmation that local industry will have adequate lead-in time to make the transition. Tier 2 is where the largest benefits will accrue.

(Signature of person)

(Date)

Status Quo and Problem Definition

Televisions now rank as the fourth largest energy-using product in New Zealand households (behind hot water systems, refrigerators and space heaters) and use more electricity than clothes washers, clothes driers and dishwashers combined. National electricity demand from televisions is estimated at three petajoules per annum.¹ This is equivalent to 6% of electricity demand from the residential sector and 2% of total electricity demand in New Zealand². The amount of electricity used by televisions is rising, and this trend is projected to continue and can be attributed to several factors:

- An increase in the use of televisions: they are on for an average of 48.8 hours per household per week and used for an increasing range of purposes – including gaming, internet use and listening to music;
- An increase in the number of televisions per household – most households now have at least two television sets in use: one third of households have three or more;
- The increasing size of televisions – the average screen size sold in New Zealand is now approaching 100 cm (40 inches) and some are in excess of 150cm (60 inches) – the largest models can use as much electricity as a household refrigerator;
- The increased energy demands of newer technologies (plasma and liquid crystal displays) which can use up to twice as much electricity as older ones (cathode ray tubes). Flat panel display televisions (plasma and liquid crystal display/LCD) now have an estimated 84% market share;
- Rising television sales in response to falling prices for flat screen technologies and the transition from analogue to digital broadcasts. Annual sales are estimated at approximately 295,000 and annual growth in television sales is estimated to be between 2.5 - 3.5 per cent per annum

Consumer research undertaken by the Australian Government³ and New Zealand's Energy Efficiency and Conservation Authority⁴ indicates that many consumers are unaware that televisions are one of the highest users of household electricity or that they use more energy on average than appliances such as dishwashers and clothes washing machines, which already display an energy rating label. However, when informed of how much energy televisions use, consumers support the labelling of televisions and think that these would influence their purchase decision.

Although consumers rank the cost of televisions highly as a purchase criterion, they lack the means to compare how much electricity different televisions use and how much they cost to operate. The price of a television is not linked to its electricity use:

¹ EECA Discussion document: Proposed Minimum Energy Performance Standards and Labelling for Televisions; December 2010;

<http://www.eeca.govt.nz/sites/all/files/files/20101222-proposed-meps-televisions.pdf>

² Source for residential and total electricity demand is the Ministry of Economic Development's Energy Data File 2010, p.106, available at:

<http://www.med.govt.nz/upload/73585/EDF%202010.pdf>. To convert gigawatt hours to petajoules, a conversion factor of 1 gigawatt hour = 0.0036 petajoules was used.

³ Energy Efficiency – Perceptions of Potential TV Buyers; August 2008; GfK Marketing Services on behalf of the Australian Commonwealth Department of the Environment, Water, Heritage and the Arts

⁴ EECA TV Usage and Purchasing; June 2009; Nielsen

market analysis indicates that televisions of the same size and technology, sold at the same or a similar price, can vary widely in the amount of power they draw⁵. This lack of available information on, or a clear price signal linked to, energy efficiency means that consumers do not tend to consider whole-of-life costs when buying a television.

In turn, the lack of consumer awareness of, or ability to identify, the energy performance of televisions means that there is little demand for energy efficient televisions and little incentive for industry to introduce more efficient technologies to New Zealand markets.

Regulation of televisions in Australia and elsewhere

Australia introduced minimum energy performance standards (MEPS) and energy rating labels for televisions in late 2009. Minimum energy performance standards are set at a level equivalent to 1-star (the minimum rating) on the energy rating label, with the intention to transition in 2012 to a level equivalent to 3-stars (possibly 4) out of a maximum 10 stars.

Under the status quo is a potential risk to Australia that television suppliers could exploit the lack of regulatory standards in New Zealand by exporting non-compliant televisions to Australia via New Zealand so that the Trans-Tasman Mutual Recognition Arrangement (TTMRA) would apply. This would mean that, although non-compliant, the televisions would still be legal for sale. Under this scenario, Australia could seek an exemption from the TTMRA for televisions. However, this scenario could potentially benefit New Zealand businesses in the short term by allowing for televisions to be exported from New Zealand to Australia at competitive prices.

Besides Australia, many economies are considering or have implemented standards and labelling programmes for televisions, including: Brazil, Chile, the European Union, Japan and the United States. Under the status quo, there is a risk to New Zealand that our market could increasingly become a dumping ground for products do not meet overseas standards for energy performance. This may give New Zealanders access to televisions that are cheaper to purchase but it is likely the increased running costs of the television would outweigh any upfront savings.

Recent decisions and trans-Tasman issues

Cabinet endorsed the E3 forward work plan in August 2009 [Cab Min (09) 30/6 refers]. This is a joint work plan for Australia and New Zealand to develop/adopt common energy efficiency standards for products sold on both markets. The work plan includes investigation of minimum energy performance standards (MEPS) and energy rating labels for televisions and a range of other products.

This proposal has been developed within the parameters of the Equipment Energy Efficiency (E3) forward work plan, which effectively rules out some alternative options from consideration. All the options investigated for E3 work plan items are a variation on minimum energy performance standards (MEPS) and/or energy labelling. The variations considered may include different timeframes for introduction, energy efficiency levels or product coverage, or whether to introduce voluntary or mandatory standards.

⁵ EECA Discussion document: Proposed Minimum Energy Performance Standards and Labelling for Televisions; December 2010; Appendix D

Australia introduced mandatory MEPS and labelling standards for televisions in 2009 but this work stream was deferred in New Zealand. In December 2010 Cabinet approved consultation on the proposal to incorporate MEPS and labelling standards for television into New Zealand regulation, consistent with Australia. The consultation ended in February 2010.

In New Zealand, MEPS and energy labelling standards become mandatory when cited in the Energy Efficiency (Energy Using Products) Regulations 2002 (the Regulations): The Regulations list products subject to MEPS and labelling requirements, and the relevant standards, under Schedules 1 and 2. The Regulations are administered by the Ministry of Economic Development and enforced by the Energy Efficiency and Conservation Authority (EECA). MEPS and/or labelling currently apply to a range of household products including household fridges and freezers and room air conditioners (heat pumps). Under the E3 workplan, MEPS are being considered for a range of products besides televisions, including compact fluorescent lamps; personal computers and monitors; and home electronics in standby mode.

Existing energy efficiency measures

ENERGY STAR for televisions

EECA launched a New Zealand ENERGY STAR® specification for televisions in October 2009. ENERGY STAR is a voluntary endorsement mark used globally to promote highly energy efficient products (usually the top 25%). The ENERGY STAR mark does provide independent verification of performance claims, but as a voluntary scheme, does not apply to all models available on the market place, only to high performing models made by those manufacturers who participate in the programme.

Limited use of Australia's energy rating label on NZ televisions

Some suppliers are voluntarily labelling selected models with the energy rating label that is mandated in Australia. The energy rating label allows consumers to compare the energy performance and running costs of different models. However the label is not being applied to all models and only the better performing models tend to get labelled so the limited application of the label does not give consumers a consistent basis for comparison. Moreover there is currently no monitoring of the use of the label in New Zealand to verify that the label is being used appropriately.

Emissions Trading

The New Zealand Emissions Trading Scheme (NZETS) provides a pricing mechanism for greenhouse gas emissions, which will eventually lead to the cost of greenhouse gas emissions impacts being reflected in electricity prices. Among other impacts, the NZETS will give electricity consumers an incentive to reduce their electricity consumption. However, it is unlikely that this would lead directly to improvements in the energy efficiency of televisions (television manufacturers are not subject to the NZETS), or enable consumers to identify products that use less electricity, without other changes in the market (such as the consistent application of standards and labelling).

Objectives

The main objectives of the recommended option are to:

- To maintain consistent standards with Australia, with respect to commercially traded goods, in accordance with the trans-Tasman Mutual Recognition

Arrangement (TTMRA) and Closer Economic Relations (CER) Agreement (in order to realise the wider economic benefits that come from closer economic relations with Australia);

- Improve energy performance in order to reduce energy consumption, energy costs and energy-related greenhouse gas emissions from televisions to below the level projected under a business as usual scenario;
- Provide consumers with clear, consistent information about the energy performance and running costs of televisions;
- Ensure that New Zealand does not become a dumping ground for televisions that do not meet energy efficiency standards specified elsewhere, including Australia; and
- Complement existing measures to promote the energy efficient televisions.

Alternative Options

Voluntary standards: To the extent that an Australia/New Zealand minimum energy performance standard is already published and can be complied with in New Zealand on a voluntary basis, voluntary standards are already part of the status quo. However, there is no oversight of who applies the standards and how, and no process in place to verify claims of compliance. Options for voluntary standards (such as an industry Code of Practice) were considered and discussed with industry in Australia and New Zealand during preliminary investigation and consultation for this proposal. To be successful in achieving the stated objectives, a voluntary programme would need to have a good level of participation, be effectively enforced, and be as visible as a point of difference to the consumer. Stakeholder feedback indicated that a significant number of suppliers would not participate in a voluntary programme and that a limited proportion of the televisions available would be covered. It would therefore achieve fewer benefits than the preferred option while incurring similar administrative costs. For these reasons, this option was not explored further.

Voluntary labelling: The voluntary use in New Zealand of Australia's mandatory energy rating label is discussed above. The label was initially voluntary in Australia also (although it was always intended to become mandatory). Many local industry members only agreed to participate in the voluntary scheme on the understanding that it would become mandatory in future. Australia's experience with the voluntary scheme was that only some suppliers participated, and these suppliers were able to label their models selectively. The tendency under a voluntary scheme is for only the better-performing products to be labelled, meaning that there is no basis for consumers to compare between poor and average performance.

Mandatory testing and labelling only: This was not considered as an option but post intervention evaluation studies demonstrate that the net benefit from introducing minimum energy performance standards and energy performance labelling together significantly outweigh the benefits from introducing energy performance labelling on its own⁶.

Preferred Option

The preferred option is to incorporate standards for televisions into the Energy Efficiency (Energy Using Products) Regulations 2002. The standards would cover:

⁶ For one such study, see <http://naecec.energyrating.com.au/reports/2006-ref-impacts-draft.pdf>

- **a method for testing** the energy use of televisions (using the international method developed by the International Electrotechnical Commission);
- **an energy rating label** for televisions to come into force no earlier than October 2011 to allow consumers to compare the energy use and related costs of different models on the shop floor. This would be the existing label used in Australia (and shown voluntarily on some models here) which is based on the highly recognizable labels that appear on refrigerators, heat pumps, and other household appliances;
- **minimum energy performance standards:** MEPS require new products entering the market to meet certain energy performance requirements before they can be made available for sale. Manufacturers and suppliers need to declare (and be able to verify) that their products are tested to a common method and that they meet MEPS criteria. Their claims are verified from time to time through check-testing and registered suppliers may be asked to provide a copy of the original test report. The proposed MEPS would come into force no earlier than October 2011. A staged introduction would start with entry level minimum energy performance standards (Tier 1 MEPS) equivalent to a 1-star rating on the energy rating label). Within one to three years, the MEPS would transition to Tier 2, equivalent to a 3 or 4-star rating on the energy rating label⁷. (Having introduced the Tier 1 MEPS in 2009, Australia plans to commence a market review for televisions next year, to establish the case for transitioning to Tier 2 MEPS in 2012.)

The new standards and labelling scheme will apply to all television sets available for sale in New Zealand, but excluding:

- both rear and front projection televisions;
- television sets or display devices that do not have a television tuner;
- televisions that are battery operated.

Impact analysis

Summary of Costs and Benefits

Costs and benefits have been assessed out to 2020. This assessment has used a 5% discount rate to account for the value of long term environmental and social benefits associated with energy efficiency.

	Benefits			Costs		Summary		
	Total benefit (\$M) excluding CO ₂ savings	Emissions saved (kt CO ₂ -e)	Energy saved (GWh)	Business compliance cost (\$M)		Total cost (\$M)	Net benefit (\$M)	Benefit-to-cost ratio
				total (\$M)	p.a. (\$M)			
Scenario 1	977	2.8	4,100	0.85	0.09	35.2	941.8	28:1
Scenario 2	1,218	3.4	4,800	0.85	0.09	35.2	1,188	35:1

⁷ Out of a maximum ten stars

Scenario 1 shows costs and benefits from introducing a two-phase MEPS and energy labelling, and setting Tier 2 MEPS at level equivalent to **three stars** on the energy rating label. This scenario is more conservative than Scenario 2 and we have used this as our main scenario in the report to Cabinet.

Scenario 2 shows costs and benefits from introducing a two-phase MEPS and energy labelling, and setting Tier 2 MEPS at level equivalent to **four stars** on the energy rating label.

Notes on the cost benefit analysis

Total costs are based on a nominal price increase of \$100.00 per television that will result from introducing Tier 2 MEPS, multiplied across all the television sales forecast over the affected period⁸. No cost is attributed to Tier 1 MEPS as this has been set at an introductory level that industry can easily achieve.

Total costs do not include compliance costs borne by businesses as these are assumed to be passed on to the consumer. However, for clarity, the compliance costs for business have been shown in the cost and benefit summary, to indicate the short term costs that television suppliers will bear as a result of the proposed regulation; they are also discussed below.

Total costs do not include:

- Taxpayer costs – but these are summarised below
- Cost to electricity retailers, i.e. lost revenue owing to a reduction in the electricity demand from televisions.

Costs to business are similar under Scenarios 1 and 2, as similar changes are required for products to meet either efficiency level and the compliance costs for suppliers will be the same. The key impact to consider is how setting Tier 2 MEPS at a higher level will affect product availability and consumer choice. Final recommendations on levels for Tier 2 MEPS will be made later on, pending the outcomes of a market review.

Total benefits are avoided energy costs achieved under MEPS compared to Business as Usual, for the televisions forecast to be sold over the period. Total benefits do not include reduced investment in new generation arising from a reduction in national electricity demand.

Scenarios 1 and 2 show benefits that have been modelled on televisions being on for ten hours a day on average and left on standby (and therefore still drawing some power) the remainder of the time. This figure was based on a 2007 survey in the United States which found that televisions were being left on for an average of 8.3 hours per day per household⁹. This figure was scaled up to take account of the

⁸ The analysis assumed that Tier two MEPS would be introduced in 2013. While a cost increase has been attributed to the introduction of Tier 2 MEPS, this is arguably conservative, seeing that no correlation has been established between the cost of televisions and their energy performance.

⁹ Discussion Paper: Television Energy Rating Labels: The case, and proposal, for MEPS and Labelling Televisions; Report 2007/10; Digital CEnergy Australia (pp21-2), available at: <http://www.energyrating.gov.au/library/pubs/200710-tv-meps-labelling.pdf>

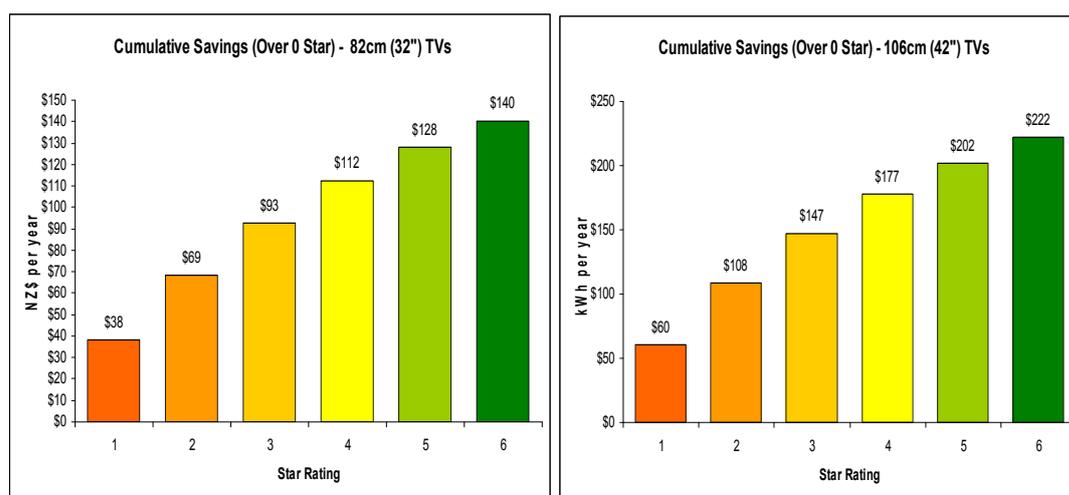
growing use of televisions for other purposes, such as gaming, listening to music and radio, or as a computer monitor. Research commissioned by EECA (carried out subsequent to the cost benefit analysis commissioned by the E3 Committee) indicates that hours of use in New Zealand houses may be only around 6 hours per day; however, there will still be a benefit to cost ratio of 16:1 under these conditions¹⁰.

Costs to the taxpayer

The cost to taxpayers to implement television MEPS is estimated at \$50,000 per annum in total. This comprises about \$30,000 per annum in pro-rata contributions to the Equipment Energy Efficiency (E3) programme (jointly funded by Australia and New Zealand) and additional direct costs of about \$NZ 20,000 per annum for local administration. This is an indicative figure and represents a portion of the total government overhead. No increase in overall costs is expected. This adds up to total taxpayer costs of \$0.5M over the ten-year assessment period.

Impacts on consumers

EECA estimates households buying an average 82cm (32 inch) television that is MEPS compliant (rated at 1 star) could save up to \$38 per year, \$380 over the estimated ten-year life of the television. For a 106cm (42 inch) model, these savings increase to around \$60 per year or \$600 over the lifetime of the television. Savings from buying a television with a higher star-rating are illustrated below for both sizes of television.



Currently there is no evidence that links energy efficiency with purchase price¹¹. Therefore removal of the least-efficient models from the market would not remove the cheapest television models. As such the choice of models and the price-range for televisions is not expected to change after Tier 1 MEPS is introduced. For Tier 2 MEPS, increases to the retail price of televisions have been factored into the cost

¹⁰Regulatory Impact Statement: Proposed Minimum Energy Performance Standards and Labelling for Televisions, May 2009; issued by the Equipment Energy Efficiency Committee under the auspices of the Ministerial Council on Energy; available from: www.energyrating.gov.au/library/pubs/200916-decision-ris-tvs.pdf (see section 5.1.3 pp43-4)

¹¹ EECA Discussion document: Proposed Minimum Energy Performance Standards and Labelling for Televisions; December 2010; <http://www.eeca.govt.nz/sites/all/files/files/20101222-proposed-meps-televisions.pdf>

benefit analysis, to ensure that conservative benefits are estimated. Price increases were estimated at an average of \$100 per television sold in the first year after the introduction of the Tier 2 MEPS, \$50 per television sold in the second year, and \$0 by the third year.

Business compliance costs

The recommended option is not expected to restrict competition or impose significant costs.

An estimated 30 suppliers will be affected by the proposed measures. There are currently no New Zealand owned or based manufacturers of televisions. All the major suppliers operate in both Australia and New Zealand and therefore most suppliers in the New Zealand market already meet the requirements of the relevant standards under Australian regulation. These suppliers will incur no additional compliance costs other than to report annual sales data to EECA. As is the case for existing MEPS and labels, there will be no requirement for independent testing by an accredited laboratory. Suppliers will self-certify conformance with MEPS and the achieved energy rating. These requirements should not cause delays in bringing stock to market. It is assumed that any increases in testing and registration costs will be passed on to the consumer. The costs to test each model have been estimated at \$1,000 NZD (\$800 AUD) approximately.

Latest market data from Australia show that energy use by televisions has improved 25-33% since 2007 when the proposed MEPS were first announced. This suggests that few models would now fall short of the proposed MEPS compared with around 20% of models two years ago. It also signals that a transition to Tier 2 MEPS in coming years is achievable and unlikely to be onerous for industry. Voluntary labelling notifications in Australia show that many 2009 plasma models are achieving energy ratings of 3 stars, and most LCD models are achieving 5 star energy ratings.

Consultation

Consultation with industry representatives to discuss MEPS and labelling proposals dates back to 2007. EECA met with local suppliers in Auckland in October 2008, and recently consulted on this proposal in January/February 2011.

Industry representatives are on the Standards committee which developed the test method, and the proposed MEPS (which is the lower option), which was chosen in response to industry feedback and takes into account industry concerns. New Zealand industry supports the proposed MEPS as a means to align regulations and costs with Australia, and between major New Zealand industry players. Feedback on the recent consultation centred on ensuring importers had time to advise their supply chains of MEPS requirements.

The proposed regulations are consistent with New Zealand's international obligations under the World Trade Organisation's Technical Barriers to Trade Agreement and have been notified through the WTO TBT notification process. The Australia and New Zealand Standard applies equally to products produced locally and overseas.

Conclusions and Recommendations

The introduction of MEPS and labelling for televisions will provide \$977 million in net benefits from reduced energy costs. The energy savings are estimated at 4,100 gigawatt-hours, and reduction in greenhouse gas emissions amount to 2.8 megatonnes. The economic and environmental benefits are significant and would

reduce the burden on national energy demand. Aligning these standards with Australia will uphold the principles of the Australia New Zealand Closer Economic Relations Trade Agreement and the trans-Tasman Mutual Recognition Arrangement (TTMRA). Maintaining alignment will also reduce business compliance costs. Accordingly, we recommend the proposed MEPS and labelling for televisions be adopted.

Implementation

An amendment will be made to the Energy Efficiency (Energy Using Products) Regulations 2002 to incorporate the relevant Australia/New Zealand Standards by listing them under Schedules 1 (for MEPS) and 2 (for labelling) of the Regulations. Industry stakeholders will be notified well in advance of the introduction date to allow them to prepare for the introduction of MEPS and labelling and register their products in advance. From the introduction date, businesses will be required to register products that have not already been registered under existing MEPS and labelling for TVs in Australia. Registrations will be made to an existing database shared with Australia and support and information will be available to help businesses complete their registrations. Applicants will need to certify that the product has been tested and labelled correctly, disclose its energy performance, and be capable of supplying a test reports.

Compliance activities: Compliance will be achieved primarily through raising awareness of the regulations, helping industry members understand their obligations and working cooperatively with business to achieve compliance. Businesses that repeatedly fail to meet their obligations could incur penalties of up to \$10,000 for each instance of non-compliance under the Regulations. Fines would be pursued as a last resort, and publicised to create a disincentive for further non-compliance and to instil public confidence that the Regulations are effectively policed. Independent testing will be carried out by accredited laboratories on selected models to verify their performance claims. Selection will be based on factors such as past performance, high performance claims, market share, and complaints received.

Monitoring, Evaluation and Review

Sales data for televisions will be collected annually and used to compare actual and forecast energy savings under MEPS. An annual report on the impacts of MEPS and energy labelling for televisions will be made to the Energy Efficiency and Conservation Authority Board and shared with stakeholders. The relevant standards will be reviewed every three to five years. Independent testing will be used to determine the rate of compliance with MEPS and energy ratings. The rate of compliance with labelling requirements will be monitored under EECA's existing retailer compliance surveys (which cover all labelled products under the programme).