

How the Enforcement of MEPS in Australia has Led to a Paradigm Shift in Suppliers Attitudes

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ABSTRACT

The Australian Government considers the *effective application* of Minimum Energy Performance Standards (MEPS) as one of the key elements of their climate change strategy.

Australia has MEPS in place for products ranging from refrigerators to air conditioners to three-phase electric motors. As such, to supply a MEPS covered product to Australia, it is necessary to register the product via a simple web-based system, and lodge a test report demonstrating compliance with the MEPS (or certification via a recognized partner programme). Many consider such a system as effective in ensuring that poorly performing products are removed from the market. However, to ensure ongoing product compliance, it is necessary to undertake ongoing market monitoring and instigate robust actions against suppliers of products which fail to continually meet their original performance declarations.

In recent years, the Australian government has taken a high profile approach to this market monitoring and enforcement. Through two case studies, one on the non-compliance of an internationally branded air conditioner, the other a non-compliant refrigerator, the paper will demonstrate the major impacts that can result from the comprehensive nature of the Australian MEPS enforcement strategy, including penalties designed to compensate those that have suffered a loss, i.e. the consumer and the environment. Perhaps more importantly, the paper will also demonstrate how this approach appears to be leading to a paradigm shift in supplier attitudes, with a number of suppliers now approaching the government to voluntarily declare when their products are not meeting stated performance levels and offering compensation packages and environmental recompense based on the levels of product non-compliance.

Background

The Australian and New Zealand governments have decided that the energy efficiency of appliances and equipment must improve if they are to meet their internationally agreed greenhouse gas emission reduction targets. To do this, the Equipment Energy Efficiency (E3) Programme was developed to ensure nationally consistent application of minimum energy performance standards (MEPS) and energy labeling. The E3 programme is administered by a committee consisting of representatives of the Australian government, state and territory energy efficiency regulators, and the New Zealand government.

Australia has had an effective labeling and MEPS programme for over twenty years, beginning with voluntary labeling of a limited number of products in New South Wales and Victoria in 1986. The number of products labeled has grown over the intervening years, and it is now mandatory for six consumer products to carry the label when they are sold in Australia or New Zealand. These products are refrigerators, freezers, single-phase air conditioners, clothes washers, clothes dryers, and dish washers. Work is continuing, and labeling is being considered for a number of new products, including televisions, computers and monitors, home

entertainment products, set-top boxes and external power supplies. Recent focus group testing undertaken on behalf of the Australian government shows that over 90% of consumers recognize the energy rating label, and over 80% of consumers use this information on the label at some point when making their purchases.¹

Product labeling complements a robust MEPS programme, which is working behind the scenes to remove the most inefficient products from the market place. Starting in 1999, MEPS have gradually been introduced for the most energy-intensive residential appliances, and some commercial equipment. Products subject to MEPS are listed in Table 1.

Table 1: Products to Which Mandatory MEPS Apply in Australia

Product	Date of Implementation (and Revisions)
Refrigerators and Freezers	1 October 1999 (revised 1 January 2005)
Mains pressure electric storage hot water systems	1 October 1999
Three-phase electric motors (0.73kW to <185kW)	1 October 2001 (revised April 2006)
Single-phase air conditioners	1 October 2004 (revised 1 April 2006 and 1 October 2007)
Three-phase air conditioners up to 65 kW cooling capacity	1 October 2001 (revised 1 October 2007)
Ballasts for linear fluorescent lamps	1 March 2003
Linear fluorescent lamps (from 550mm to 1500mm inclusive with a nominal lamp power >16W)	1 October 2004
Distribution transformers (11kV and 22kV with a rating from 10kA to 2.5MVA)	1 October 2004
Commercial refrigeration (self contained and remote systems)	1 October 2004

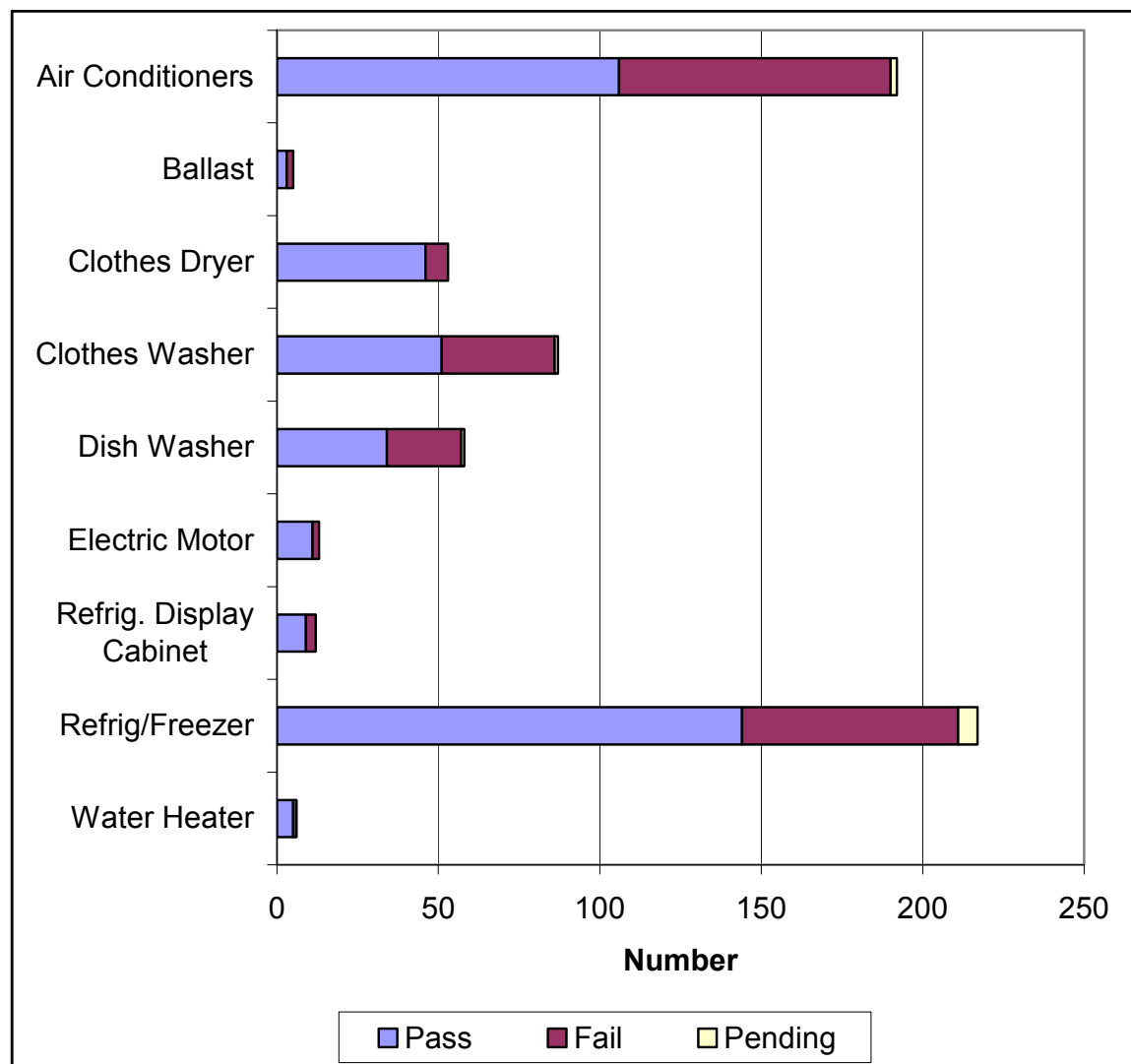
With the proliferation of new appliances and equipment, work is continuing on a range of products, with MEPS being considered for televisions, set-top boxes, other home entertainment equipment, computers and monitors, office equipment, commercial building chillers, close control systems (computer room air conditioners), commercial ice makers, and refrigerated beverage vending machines.

Australia's Approach to Product Compliance

To ensure that products meet their declared energy rating values and are compliant with MEPS, a robust compliance regime has been implemented by the E3 committee. Since 1991, almost 800 check tests have been completed, across all product categories. Of these tests, almost 250 products have been found to have failed the tests, being either non-compliant with MEPS or their energy rating label. Figure 1 provides a breakdown of these check test results across product categories.

¹ "Appliance Performance Labelling in Australia and New Zealand – Final Report on a Quantitative Study among Consumers and Retailers on the Labelling of Household Appliances Conducted during September-October 2005"; Artcraft Research; 2006. Available from www.energyrating.gov.au

Figure 1. Check Test Results by Product Type – 1991 to Present



To demonstrate the E3 Committee's commitment to check testing and to ensure that products perform as claimed by their suppliers, the budget allocated to this task is continually increasing. In the 2007-2008 financial year, AU\$500,000 has been allocated for check testing activities, and this will be doubled in the following year. This reflects not only the increase in the number of products subject to MEPS and labeling, but also the importance consumers place on having accurate information to enable them to make more energy-efficient purchases.

Products are not selected for check testing on a random basis; rather a sophisticated methodology is applied to target those appliances whose non-compliance would represent a significant amount of lost energy savings. Factors including the volume of the sales for a particular model (models with higher volume of sales have greater potential for impact on energy use and the environment as compared with models with low sales), the star rating of the product (models with higher star ratings have higher market expectations regarding performance, and often use claims of higher efficiency as a marketing tool), new entrants to the market which have

not previously been tested (as there is no record of whether the brand complies or not), the age of the model (newer models have the potential to be available on the market longer, and therefore should be selected for testing over older models) and suppliers who may have a history of non-compliant products (these suppliers are subject to greater scrutiny because of a likelihood of continued non-compliance) are all used to determine which models will be check tested.

All products which are found to have failed their check test are de-registered by the relevant State regulator, meaning the product can no longer be sold. Regulators have other options available to them in dealing with non-compliant products, including legal action and fines, and referral of the supplier to the consumer watchdog, the Australian Competition and Consumer Commission (ACCC), for false and misleading advertising. The application of these sanctions varies across the jurisdictions. A recent example of the latter action is the referral of LG Electronics Australia Pty Ltd to the ACCC for a range of air conditioners which did not meet energy-efficiency claims. The outcome of this action was that LG Electronics Australia was required to undertake corrective advertising, and compensate consumers for the additional electricity used by the non-compliant product. The total compensation package in that instance could reach AU\$3.1 million².

In the past, suppliers have waited for non-compliant products to be identified through check testing, and have then dealt with the consequences applied by regulators. If production processes changed or component specifications were altered, and this impacted the energy performance of a product, historically these changes were not brought to the attention of regulators but were dealt with internally by suppliers. However, suppliers now realize the broader implications of allowing non-compliant products to be sold on the Australian market, and detected through E3 check testing. This can be evidenced by some suppliers now accepting responsibility for the potential damage which may be caused by their products if they don't meet their energy performance claims, and voluntarily reporting their products to the Australian government, rather than waiting for the inevitable check test to detect the problem.

Whilst there are deterrents to suppliers of non-compliant products, and some suppliers have been required to compensate consumers as in the case of the LG air conditioner non-compliance, at no point did this original system address the damage caused to the environment by the additional electricity consumed by the product addressed. For this reason, a novel approach has been pursued in recent instances of non-compliance.

Case Study 1 – Voluntary Reporting of Non-Compliance

Recently, two major multi-national companies approached the Australian government to report that internal quality control testing had shown that some of their air conditioning products were not meeting the energy performance claims made on the energy rating label. Both Mitsubishi Electric Australia Pty Ltd (Mitsubishi Electric) and Carrier Air Conditioning Pty Ltd (Carrier Australia) were proactive in declaring this issue, and in developing a solution which was acceptable to both the companies as well as to the Australian government.

² See ACCC media release “LG compensates consumers over misleading energy ratings”, 28 September 2006, available from <http://www.accc.gov.au/content/index.phpml/itemId/763524/fromItemId/2332>

Both companies entered into discussions with the government regarding the most appropriate mechanism to address the non-complying products. Whilst the individual compensation packages varied, both companies agreed voluntarily to compensate both the consumers and the environment for the damage which had been caused by the additional electricity caused by their products in the following manner:

- All products provided to retailers but not sold to consumers were withdrawn from the market and returned to the manufacturer for re-engineering;
- The products were voluntarily de-registered;
- Consumers are to be compensated through a cash rebate equal to the cost of the additional electricity used by the product over its life. This rebate was calculated by independent technical experts, based on average Australian usage patterns and retail electricity prices;
- The companies also agreed to address the environmental damage by purchasing and retiring sufficient carbon offsets from an accredited greenhouse gas abatement scheme equal to the amount of the additional carbon dioxide emitted over the life of the product by the additional electricity used. This was also calculated by independent technical experts, using Australian average usage patterns and electricity emission factors. Both companies have decided to purchase carbon offsets generated in Australia, on the basis that this is where the non-compliance occurred; and
- Retailers and consumers were notified of the non-compliance, and consumers were advised that they were eligible for the rebate.

The compensation packages proposed by both Mitsubishi Electric and Carrier Australia are summarized in Table 2 below.

Table 2. Summary of Compensation Packages

	Mitsubishi Electric	Carrier Australia
Number of Units sold	6,300	850
Compensation to individual purchasers	AU\$46.00	AU\$122.00
Total recompense to purchasers	AU\$289,000	AU\$103,700
Total greenhouse gas emission offsets	2,800 tonnes CO ₂ -e	1,300 tonnes CO ₂ -e

In line with standard E3 practice, the ACCC were notified of these two instances of non-compliance, along with details of the actions being undertaken by the companies. In these cases, the ACCC deemed that the actions agreed to between the Australian government and the companies were sufficient, and advised that the ACCC would take no further action.

Case Study 2 – Refrigerator Detected Through E3 Check Testing

In August 2007, E3 check testing identified a refrigerator which failed a number of performance tests by a significant margin. Even though the expected sales of this product were low, this product had been selected for check testing on the basis of the high retail price of each unit (approximately AU\$4,000 per refrigerator) and the relatively high rating of the product (four stars from a possible six).

Results of the first stage of check testing, where one sample of the product is randomly purchased from a retailer and tested, showed that the product had not only failed to meet the claims made by the supplier, but it did not even meet the MEPS requirements for that size product. Table 3 summarises the results of stage 1 testing.

Table 3. Test Results – Refrigerator

Performance Test	Difference Between Registered Value and Measured value
Volume	+10.1%
Energy Consumption Test	+39.7%
Assessment of MEPS Compliance	Fail

After receipt of the Stage 1 test results, the supplier withdrew the product from the market, and advised retailers of a potential issue with the product. Subsequent Stage 2 testing of a further three randomly selected samples confirmed the initial failure, and the product was deregistered by the Australian regulator in November 2007.

The Australian Government entered into discussions with the supplier in regards to how they proposed to address the consumer and environmental losses caused by their product's poorer than claimed energy performance. As this product was targeted to the high end of the refrigerator market, very few units were sold, and the supplier had very good records of where each unit was sold.

The supplier agreed to voluntarily compensate both consumers and the environment for the additional electricity used by the product over its lifetime. It has been calculated by independent technical experts that each product would use approximately AU\$300.00 more electricity over its life, and would generate an additional 1.82 tonnes of greenhouse gas.

Since the non-compliant product was identified by E3, the supplier has re-engineered the product to rectify the causes of the poor performance. Three samples of the re-engineered product were tested in a laboratory in Australia (accredited by the independent National Association of Testing Authorities (NATA)), and this product meets all MEPS requirements. The supplier intends to register this new product for sale in Australia, and the registration will be accompanied by the NATA laboratory test reports to provide greater comfort to regulators that the product will perform as described.

To maintain customer good will, and the performance reputation of the brand, the supplier has agreed to offer all purchasers of this product the option of receiving either the AU\$300.00 rebate as mentioned above, or a replacement refrigerator – i.e. one of the re-engineered models noted above. Where consumers choose the replacement refrigerator, this will negate the need for the supplier to purchase carbon offsets, however for all products where the consumer could not be contacted, or where they choose the cash rebate, the supplier will purchase the required carbon offsets. The non-compliant products will be returned to the manufacturer.

Conclusion

In pursuing suppliers of poorly performing products or misleadingly labeled products, it is important to the Australian government that all aspects of the non compliance are addressed, including both consumer and environmental detriment. Suppliers are encouraged to find ways of

addressing these issues in a way which suits their business, their product, and their consumers. To date there have been five companies who have voluntarily agreed to develop compensation packages, and in each instance, when referred to the ACCC, no further action has been taken in regard to the false or misleading product information.

There are two important lessons for industry in these matters:

- suppliers are acknowledging the environmental consequences that flow from the sale of mis-described products and are prepared to take action to rectify those consequences
- suppliers are being increasingly proactive in taking responsibility for mis-described products (because these products were not detected through the E3 check-testing program of the Equipment Energy Efficiency Program, but rather by suppliers themselves through their own quality control processes.)

In changing these attitudes, suppliers are now seeing the benefits of being viewed as good corporate citizens, and proactively reporting their own products which may not be performing as expected. Mitsubishi Electric have reinforced their commitment as “a long term supporter of standards, labelling and compliance schemes in Australia”, while Carrier Australia’s voluntary disclosure “demonstrates its commitment to energy efficiency and to MEPS regulations. To ensure ongoing compliance, Carrier Australia and Carrier affiliates selling to Australia are taking steps to make certain all air conditioners are MEPS compliant, and will provide enhanced training and auditing of our design, engineering and manufacturing processes.”