

# Impact Summary: Commercial Refrigeration (refrigerated display and storage cabinets)

## Section 1: General information

### Purpose

The Ministry of Business, Innovation and Employment (MBIE) is responsible for the analysis and advice set out in this Regulatory Impact Summary. It informs Cabinet’s decisions on proceeding with proposed revisions to energy efficiency regulation for commercial refrigeration in New Zealand.

The Decision Regulatory Impact Statement Refrigerated display and storage cabinets (Decision RIS) referred to in this Impact Summary was prepared by New Zealand’s Energy Efficiency and Conservation Authority (EECA) and the Australian Commonwealth Department of Environment and Energy, under the Trans-Tasman Equipment Energy Efficiency (E3) programme.<sup>1</sup> The Decision RIS contains the final policy proposals for refrigerated display and storage cabinets, which were modified following stakeholder consultation on the Consultation Regulatory Impact Statement (Consultation RIS) in August 2016.

The Trans-Tasman E3 programme is a cross jurisdictional programme through which the Australian Government, states and territories and the New Zealand Government collaborate to deliver a single, integrated programme on energy efficiency standards and energy labelling for equipment and appliances.

### Key Limitations or Constraints on Analysis

#### Scoping of the problem

As this work was undertaken for the trans-Tasman E3 programme, the options analysed are those that are within the scope of the E3 work programme: Minimum Efficiency Performance Standards (MEPS) and the Energy Rating Label. These are the key policy measures used by the E3 programme to improve the energy efficiency of products.

#### Assumptions underpinning impact analysis

The impact and cost-benefit analyses in the Decision RIS: Refrigerated display and storage cabinets (November 2017) (Decision RIS) are underpinned by certain assumptions based on available data, including stock numbers, sales data, industry costs and energy consumption estimates. As most refrigerated storage cabinets are excluded from the current regulatory requirements, an assumption was made that storage cabinets make up an estimated 20 per cent of the refrigerated commercial cabinet market in New Zealand and Australia.<sup>2</sup> All assumptions were tested during consultation with industry stakeholders, who supported the approach taken. See Attachments B and C of the Decision RIS for more details as to the

<sup>1</sup> See “Decision RIS: Refrigerated display and storage cabinets” (November 2017): <http://www.energyrating.gov.au/document/decision-ris-refrigerated-display-and-storage-cabinets-november>.

<sup>2</sup> The estimate was derived as a ratio from the sales of refrigerated display cabinets.

assumptions made.

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## Section 2: Problem definition and objectives

### 2.1 What is the policy problem or opportunity?

Refrigerated commercial cabinets (incorporating both display and storage cabinets) are widely used within the food sector and are commonly used for 24 hours per day, seven days a week – resulting in significant energy use, running costs and greenhouse gas emissions.

Refrigerated display cabinets have been subject to regulation in New Zealand and Australia since 2003. While the current regulations have raised the baseline efficiency of refrigerated commercial cabinets and introduced Minimum Energy Performance Standards (MEPS), there is significant scope to improve them. Problems with the current regulations include:

- The MEPS levels are relatively easy to meet compared to the levels set in other jurisdictions, have not kept pace with the wider range of cabinets now available, and no longer operate to exclude the least efficient products.
- The majority of refrigerated storage cabinets are excluded from the regulatory requirements, even though they account for approximately 20 per cent of sales and can be near-identical to regulated models. The exemption was applied when MEPS was introduced as storage cabinets made up only a small part of the market for refrigerated commercial cabinets at the time.
- Suppliers are required to test their appliances to the complicated Australian/New Zealand standard, which does not apply anywhere else in the world, resulting in an unnecessarily high regulatory burden that contributes to non-registration of products.
- Market and information failures make it difficult for the end-user to obtain information about the comparative efficiency of different cabinets.

The objective of the proposed government action is to resolve problems with the existing regulations, which act together to impede the supply and purchase of energy efficient commercial cabinets. This will be achieved by a move to align with European Standards for different cabinet types, setting MEPS at the more stringent European Commission levels, and introducing online comparative star rating of cabinets using European methodology.

### 2.2 Who is affected and how?

The proposed changes will primarily affect suppliers of refrigerated commercial cabinets and consumers that purchase or hire cabinets. There is support for the proposed changes from manufacturers and importers in Australia and New Zealand, who have been consulted on an on-going basis about all proposals.

The supply chain for refrigerated display and storage cabinets is complex and ownership arrangements vary. Suppliers can be manufacturers or importers. Supermarkets, and to a lesser extent convenience stores, are usually supplied by companies in long term

relationships as preferred suppliers. Large companies may buy direct from factories without a “middleman” – or may become fleet owners (for example, beverage companies) who either hire out cabinets or install them for free.

### **Suppliers**

Under the proposed changes manufacturers and importers may need to source compliant product on the global market or make changes to their production line so that their products comply with the new requirements. There will be additional costs involved in meeting the new requirements but these will be mitigated by reduced costs for suppliers from alternative registration pathways (family groups and “deemed to comply” provisions for low volume/bespoke products – see section 3 below). There are around 50 businesses<sup>3</sup> who manufacture or import for supply in New Zealand.

### **End Purchasers**

Purchasers of commercial refrigeration products may face price increases but these will be more than off-set by the net gains to the purchaser (and end-user) from reduced electricity costs over the lifetime of the product and an overall reduction in the cost of their refrigeration needs. Purchasers of commercial refrigeration products will also benefit from access to more information about the energy efficiency of individual products through the star rating index.

## **2.3 Are there any constraints on the scope for decision making?**

The proposal was developed under the Trans-Tasman E3 programme to build on and improve existing energy efficiency measures. The options have been informed by the scope of the E3 work programme, with a focus on MEPS and labelling as the means of improving the energy efficiency of refrigerated commercial cabinets. Priority was given to options that draw on international standards and that enable New Zealand and Australia to keep their regulations aligned.

## **Section 3: Options identification**

### **3.1 What options have been considered?**

Five policy options were identified as addressing the problems with the existing regulations. Costs and benefits were modelled for the policy options, with each assessed in terms of their effectiveness to address the problem and improve the energy efficiency of refrigerated commercial cabinets.

#### **Option 1 – no changes to current requirements**

- Business As Usual (BAU) – no change to the current MEPS or other regulatory requirements. The energy efficiency benefits from existing requirements will continue with a 1.0 per cent pa efficiency improvement assumed (based on actual sales data). While there will be some improvements under BAU, without the proposed regulatory intervention problems with the existing regulation will continue and the opportunity to achieve significant energy gains will be missed.

<sup>3</sup> For a list of the businesses identified refer to Attachment D, page 125 of the “Decision RIS: Refrigerated display and storage cabinets”.

## **Options 2, 3 and 4 – Regulatory intervention**

### Option 2

- Adopting international (ISO) and European (EN) test methods for display, storage and related cabinets.
- Setting local MEPS to improve the least efficient 10 per cent of cabinets, in groups similar to the European Commission MEPS process (where energy efficiency is calculated per group of cabinets based on an Energy Efficiency Index).
- Adding voluntary online labelling using European energy efficiency grades converted to the current star rating system.
- A “deemed to comply” method of compliance for low volume or bespoke products, which provides an alternative registration pathway and a means of reducing costs and demonstrating compliance where testing in a laboratory setting may be too difficult or expensive.

### Option 3

- The same as option 2 but local MEPS are set to improve the least efficient 30 per cent of cabinets

### Option 4

- The same as option 3 but AU/NZ MEPS are developed to align with EC MEPS levels, improving an average of the least efficient 25 per cent of cabinets. Where Options 2 and 3 applied a flat percentage across all product categories, in Option 4 the amount products need to improve varies between categories from 6 per cent to 59 per cent.

The main advantages of the regulatory intervention proposed by Options 2, 3 and 4 are:

- It will resolve issues with the complexity of the current standards – adopting International Standards will remove issues with the current Australian Standard which is difficult to interpret and apply.
- Importers and manufacturers must comply with more stringent European requirements, including MEPS levels, which will improve energy efficiency.
- Refrigerated storage cabinets will now be subject to regulation, where they are not currently (with current energy savings potential being unrealised).
- Online comparative star rating information will add a cost-effective and accessible means of comparing the energy efficiency of different cabinet models.
- The benefits to Government, suppliers and end users from reduced energy use and greenhouse gas emissions.

Disadvantages include:

- Increased compliance costs for industry in meeting new requirements and sourcing compliant stock.
- An overall increase in the costs for suppliers due to introducing MEPS to previously unregulated refrigerated storage cabinets. Any incremental increases in product cost which may be passed on to consumers will be offset by the savings from decreased running costs.

## **Option 5 – Non Regulatory**

Non-regulatory options were considered in addition to BAU and as an alternative to regulatory intervention, including:

- Incentive schemes.
- Voluntary efficiency standards and certification schemes.
- Buyer education campaigns.

Non-regulatory options were looked at in conjunction with existing MEPS regulations and were not considered as capable of resolving the issues with the current regulations and market.

### 3.2 Which of these options is the proposed approach?

**Option 4** has been identified as the best regulatory option to resolve the identified problems with existing regulation as it does the most to address all the identified problems, yields the greatest net benefit, reduces barriers to international trade (through adopting the international test method), and follows international best practice:

- Option 4 provides the greatest Net Present Value (total benefits less the total costs) in both Australia (\$1,339m) and New Zealand (\$87.4m). While Option 3 removes the least efficient 30 per cent of models from the market (compared with 25 per cent from Option 4), it involves additional compliance costs due to the higher impact on models currently sold within the market.
- The overall benefits of option 4 are greater than the other options despite the costs of each option increasing incrementally with the benefits to be gained.
- Of the policy options being considered, option 4 also has the highest energy savings and greenhouse gas reduction potential and is supported by industry following consultation on all policy options.
- It is the best option to address the regulatory problems, including the complexity and scope of the current standards, and unrevised MEPS and high efficiency specifications.
- The introduction of an online comparative star rating (based on the EU methodology) would resolve many of the issues and barriers within the market that prevent buyers from making informed decisions about the effects that energy use has on a cabinet's life-cycle cost.
- Other registration pathways will be incorporated into the regulatory proposals, including "deemed to comply" provisions, which will reduce testing and compliance costs for low volume manufacturers.

## Section 4: Impact Analysis (Proposed approach)

### 4.1 Summary table of costs and benefits (ongoing)

The costs and benefits apply to products sold over the period 2017-2035.

| Affected parties  | Comment:  | Impact            |
|---|---|-------------------|
| Additional costs of proposed approach, compared to taking no action |   |                   |
| Regulated parties (Manufacturers and Importers)                     | Compliance costs for businesses (testing, staff education and record keeping).                                  | \$NZ 2.11 million |
| Regulators  | Government administration costs (salary, administration, check testing <sup>4</sup> and information provision). | \$NZ 0.48 million |
| Wider   | <i>not applicable</i>   |                   |

<sup>4</sup> Check testing refers to testing a sample of products to gauge compliance rates and identify compliance issues.

|                             |   |                    |
|-----------------------------|---|--------------------|
| government                  |   |                    |
| Other parties               | End users and purchasers (increased price of commercial refrigerators due to higher costs of production). | \$NZ 21.07 million |
| <b>Total Monetised Cost</b> |   | \$NZ 23.65 million |
| <b>Non-monetised costs</b>  | <i>not applicable</i>   |                    |

| Expected benefits of proposed approach, compared to taking no action |   |                     |
|--|---|---------------------|
| Regulated parties  | <i>not applicable</i>   |                     |
| Regulators   | <i>not applicable</i>   |                     |
| Wider government   | <i>not applicable</i>   |                     |
| Other parties  | National benefit – value of avoided electricity demand.   | \$NZ 108.13 million |
|  | National benefit – value of avoided GHG emissions (at \$25 per tonne).  | \$NZ 2.97 million   |
| <b>Total Monetised Benefit</b>                                       |   | \$NZ 111.10 million |
| <b>Non-monetised benefits</b>  | <ul style="list-style-type: none"> <li>• Easier for importers to source compliant product from overseas.</li> <li>• Health and environmental benefits from reducing energy demand and greenhouse gas emissions.</li> <li>• Increased purchaser choice through a wider range of energy efficient and high-performance models becoming available.</li> <li>• Better quality assurance and more accurate information on product energy consumption for end users.</li> </ul> |                     |

This analysis shows that the total monetised benefits from the proposals (\$NZ 111 million) far outweigh the associated costs (\$NZ 23.65 million). The cost benefit analysis in the Decision RIS also shows that option 4 will achieve the greatest overall benefit. See page 70 of the Decision RIS for a summary of the impacts, costs and benefits. See also Attachment C of the Decision RIS for the full cost benefit methodology.

## 4.2 What other impacts is this approach likely to have?

### Current Market Supply

- Cabinets that have a higher Energy Efficiency Index (EEI)<sup>5</sup> will be required to improve their efficiency performance to meet EC MEPS levels.
- This may affect some local manufacturers but the large majority of the cabinet types requiring efficiency improvements are imported, typically from Europe and Asia.

### Suppliers

- Compliance will be simplified for suppliers who will no longer need to access, interpret and comply with the complex and regionally-specific Australian test Standards.
- Product groupings will be aligned with International Standards, making it easier to identify and source compliant stock from the international market.
- Any risk of higher compliance costs for local manufacturers will be mitigated by measures directed at reducing these costs, including the “deemed to comply” registration pathway for low volume or bespoke products (with no test report required but energy efficiency requirements measured or calculated using established methodology).

### Consumers

- Will gain access to a wider range of international appliances over time, due to the removal of current restrictions on testing to the local standard.
- Online comparative star rating will provide much improved information on product energy efficiency and running costs which can then be factored into purchasing decisions.

### Environmental benefits

- Energy savings: 1,986 gigawatt hours of avoided electricity.
- Emissions savings (CO<sub>2</sub>-e cumulative): 256 kilo tonnes of avoided greenhouse gas emissions.

### Impact on other regulatory regimes:

- Refrigerators must also meet requirements for safety and the use of ozone-depleting refrigerants. The proposed measures do not impact on the ability to meet these other requirements.
- Potential impacts on the planned phase-out of hydrofluorocarbons (under the Kigali Amendment to the Montreal Protocol) have been considered and none have been identified.

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<sup>5</sup> The methodology used to assess performance against MEPS.



# Section 5: Stakeholder views

## 5.1 What do stakeholders think about the problem and the proposed solution?

Stakeholder consultation was comprehensive, incorporating several rounds of consultation with manufacturers and importers operating within the industry. The proposals have been finalised following two main rounds of stakeholder consultation, with meetings held in Australia and New Zealand on the product profile in 2013 and then on the Consultation RIS in August 2016. It was agreed by industry that:

- Option 4 was the best policy proposal to achieve alignment with European Standards, test methods and energy efficiency levels.
- Regulatory measures under option 4 should be extended to include storage cabinets.
- Online comparative star rating using European methods (in conjunction with European MEPS levels) should be implemented as part of the proposals, rather than the mandatory labelling originally proposed.

There was almost unanimous support from industry stakeholders, including individual companies, for the proposal to align with European Standards and Test Methods, with Option 4 regarded as the best policy option to achieve this. There was consistent support for an extension of regulatory measures to include refrigerated storage cabinets (supported by all but one of the 16 submissions that specifically mentioned storage cabinets) and the move to harmonise with European energy efficiency levels, as provided by Option 4.

While local manufacturers expressed concern that low-volume suppliers would continue to incur high compliance costs under international standards, there was strong support for a “deemed to comply” provision as a means of reducing costs and demonstrating compliance where laboratory testing may be too expensive.

A Technical Working Group (TWG) convened following the first round of consultation, made up of industry representatives, regulators and independent experts. The TWG considered the technical aspects of the proposals, including the suitability of the international standards for the local market and if any alterations to these Standards would be required.

Industry feedback was sought on the recommendations of the TWG and two submissions were received. One proposed increasing the MEPS level recommended under option 4. The other (from a small local importer) recommended all regulation be abandoned and the European compliance mark be accepted as compliance. Modelling of the costs and benefits was revised to account for changes following the consultation on the TWG recommendations, including the move to online comparative star rating.

# Section 6: Implementation and operation

## 6.1 How will the new arrangements be given effect?

If Cabinet approves the proposed measures, the Energy Efficiency (Energy Using Products) Regulations 2002 will be amended to align with the relevant European Standards and EC MEPS for refrigerated display cabinets, storage cabinets and



associated cabinets.

This will likely include incorporating the relevant technical specifications, by reference, via a Determination, made pursuant to Australia's Greenhouse and Energy Minimum Standards (GEMS) Act 2012.

An implementation date of 1 December 2019 is proposed to allow industry to prepare for the changes. Once the changes are in force:

- Registered cabinets imported or manufactured prior to 1 December 2019 that do not meet the new requirements may only be sold until stock is depleted. New import or manufacture of these cabinets will not be permitted.
- Registered cabinets imported or manufactured prior to 1 December 2019, which already meet those requirements, may continue to be supplied. Registrations will be re-validated and updated and a new test report required.
- Suppliers wishing to import or manufacture models that are not already registered, but meet the new requirements, will need to complete a registration application.
- Unregistered cabinets that do not fall within the scope of the new requirements are not permitted to be supplied, or used for any commercial purpose, at any time.
- The E3 programme will evaluate the effectiveness of the regulatory changes, including analysing sales data and conducting surveys of consumer intent.

These proposals are considered low risk, given they involve changes to local standards to align with internationally accepted test standards and methods. The main implementation risk is that there may be delays with the implementation of the new MEPS levels in Europe but this has been mitigated by the proposed implementation of the EU January 2018 (announced) MEPS levels in December 2019.

## Section 7: Monitoring, evaluation and review

### 7.1 How will the impact of the new arrangements be monitored?

EECA is responsible for monitoring and enforcing compliance with the Energy Efficiency (Energy Using Products) Regulations 2002. EECA will maintain the product registrations database for New Zealand, work with regulated parties to achieve compliance, and undertake market surveillance activities.

Suppliers are required to provide sales information for the products that are subject to MEPS. EECA collects this information annually, using an online web tool. Analysis of the information allows EECA to calculate energy savings from regulated product classes, to monitor changes in the energy efficiency of products and sales volumes over time, and to communicate key messages with regulated industry.

### 7.2 When and how will the new arrangements be reviewed?

The E3 Review Committee provides a regular forum for the industry and government to review the outcomes of the new arrangements.

They will also be reviewed through the E3 programme's ongoing monitoring and reporting

cycle, including a yearly achievements report and prioritisation plan (which details the forward work programme, based on where the most cost effective energy efficiency gains can be made).

In addition, the sales data EECA collects every year will provide some indication as to whether the MEPS and labelling settings are less than optimal, which could prompt earlier review and further stakeholder consultation.