



# Equipment Minimum Energy Performance Standards and Best Practice



AUSTRALIAN  
Greenhouse  
Office

Dr Tony Marker  
Australian Greenhouse Office



# Australia

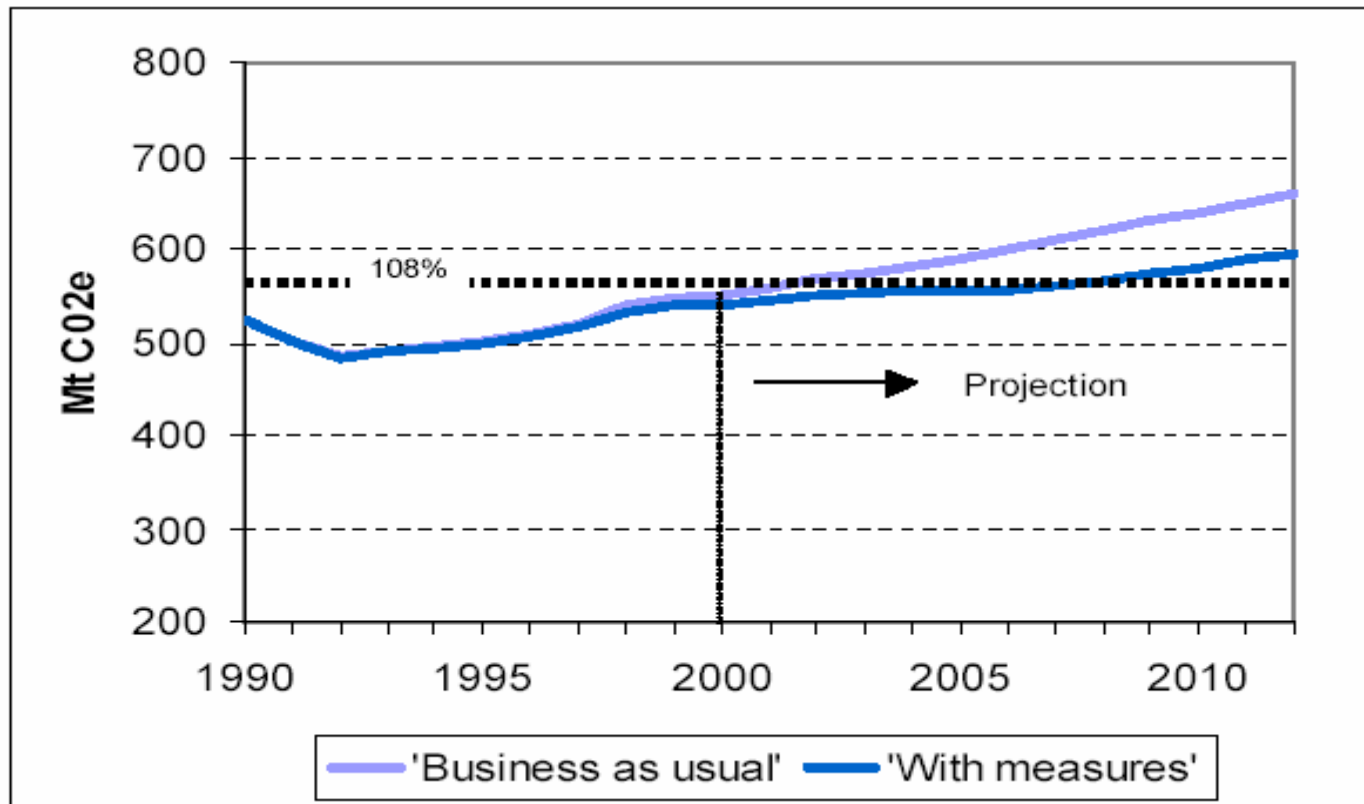
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- **Australia is a federation of 6 states and 2 territories with 19 million people**
- **Energy efficiency is a core element of National Greenhouse Strategy**
- **Energy efficiency regulation is a State and territory matter, and Mutual Recognition Arrangements require national consistency**
- **National labelling program commenced in 1992 but the energy efficiency Standards program started in earnest late 1999 with regulatory MEPS**



# Current Government Policy

On track to Kyoto 108% target





# Australian Greenhouse Office

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- **World's first national agency dedicated to climate change**
- **The AGO manages energy efficiency by coordinating nationally consistent product end-use efficiency standards through State laws (NAEEEP – National Appliance and Equipment Energy Efficiency Program)**
- **Australian Standards for specific products set out the technical detail with Standards being called into State law**







# National Appliance and Equipment Energy Efficiency Program

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- **Mandatory minimum energy performance standards (MEPS) is the main regulatory tool used (if equipment doesn't meet the standard it cannot be lawfully sold)**
- **Australian Government policy is to match world best regulatory practice with a negotiated delay or lag-time to facilitate technology transfer**
  - **debate about when, not whether**





# National Appliance and Equipment Energy Efficiency Program

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- **Workplan for 2002-2004 launched by Minister Macfarlane in March 2002 (Chair MCE)**
- **Workplan includes target products for potential regulation (copy available on AGO web site)**
  - **Refrigeration (domestic and commercial)**
  - **Airconditioning (domestic and commercial)**
  - **Water heating (domestic and commercial)**
  - **Electric motors, transformers**





# **Industrial Equipment Subject to MEPS Regulation**

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- **MEPS first introduced for domestic refrigeration and electric hot water in 1999**
- **Electric motor MEPS (Eff 2 level) with High Efficiency (Eff 1 level) from October 2001**
- **Packaged airconditioners (up to 65kW) from October 2001**
- **Magnetic ballasts for fluorescent lights (European B2 level) from March 2003**





# **MEPS Development Program for Industrial Equipment**

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- **2004**
- **Fluorescent lamps**
- **Distribution transformers (up to 2.5MVA)**
- **Commercial refrigeration (stand-alones/remotes)**
- **2006**
- **Electric motor (Eff 1) and High Efficiency**
- **Three-phase airconditioners (up to 65kW)**







# Electric Motor MEPS

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- **October 2001 MEPS commence for 3-phase motors 0.73kW <185kW**
- **Australian Standard based on European “eff 2” level with “High Efficiency” defined as European “eff 1” level**
- **Announced intention in 2001 to re-visit MEPS level**
- **Consultation with industry on 2<sup>nd</sup> round MEPS began in 2002 with feasibility study**
- **Testing industry support in 2003 for moving to best regulatory practice by 2006 (“eff 1” with new IEC standard)**

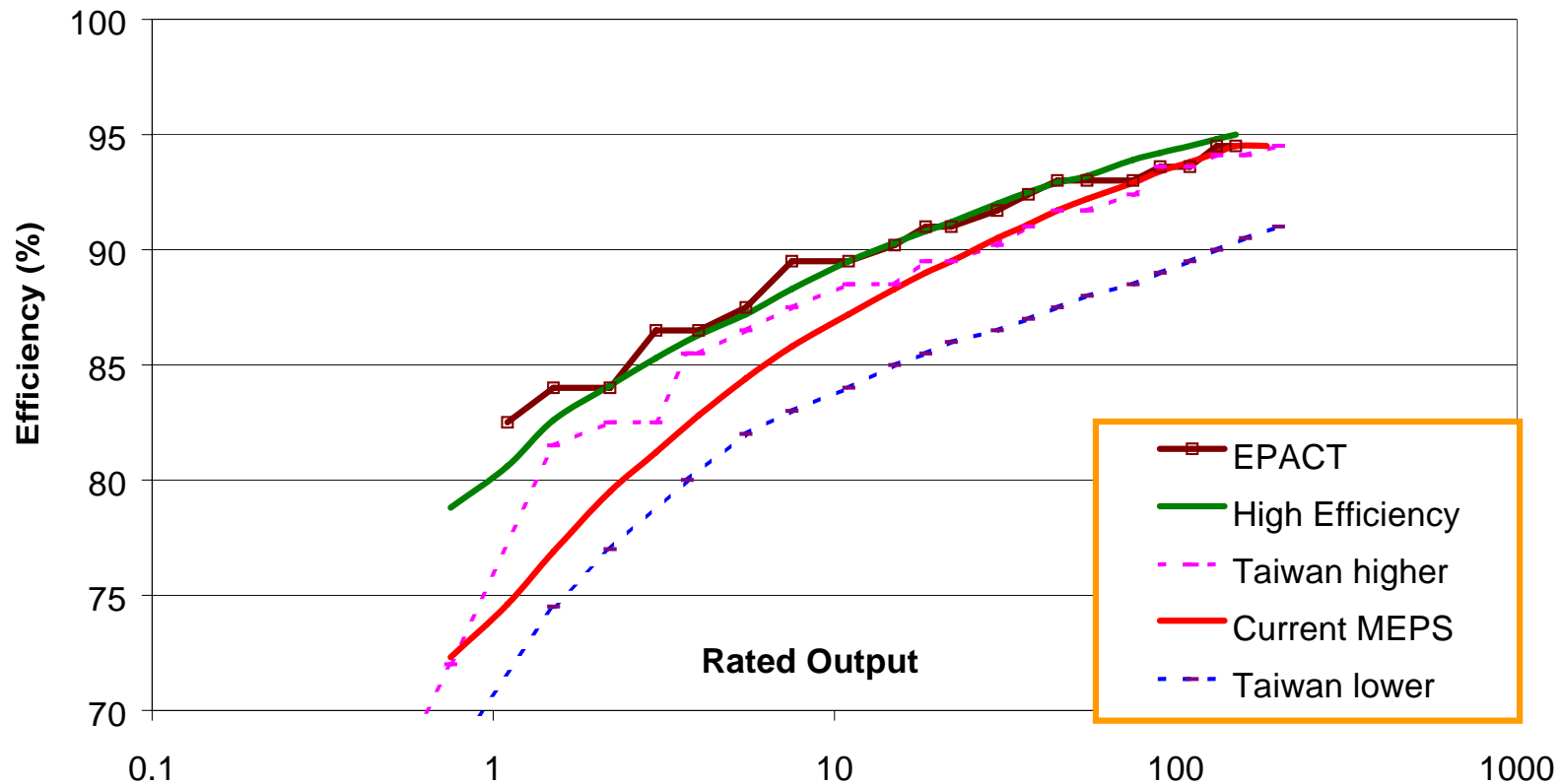
UICC  
United Industries  
Cooperative  
Union





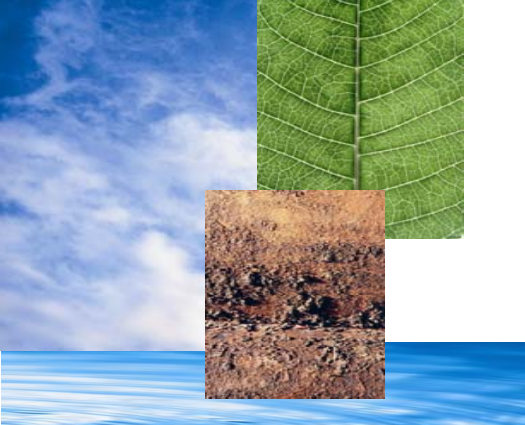
# Comparative Standards Levels

## 2 Pole Motors



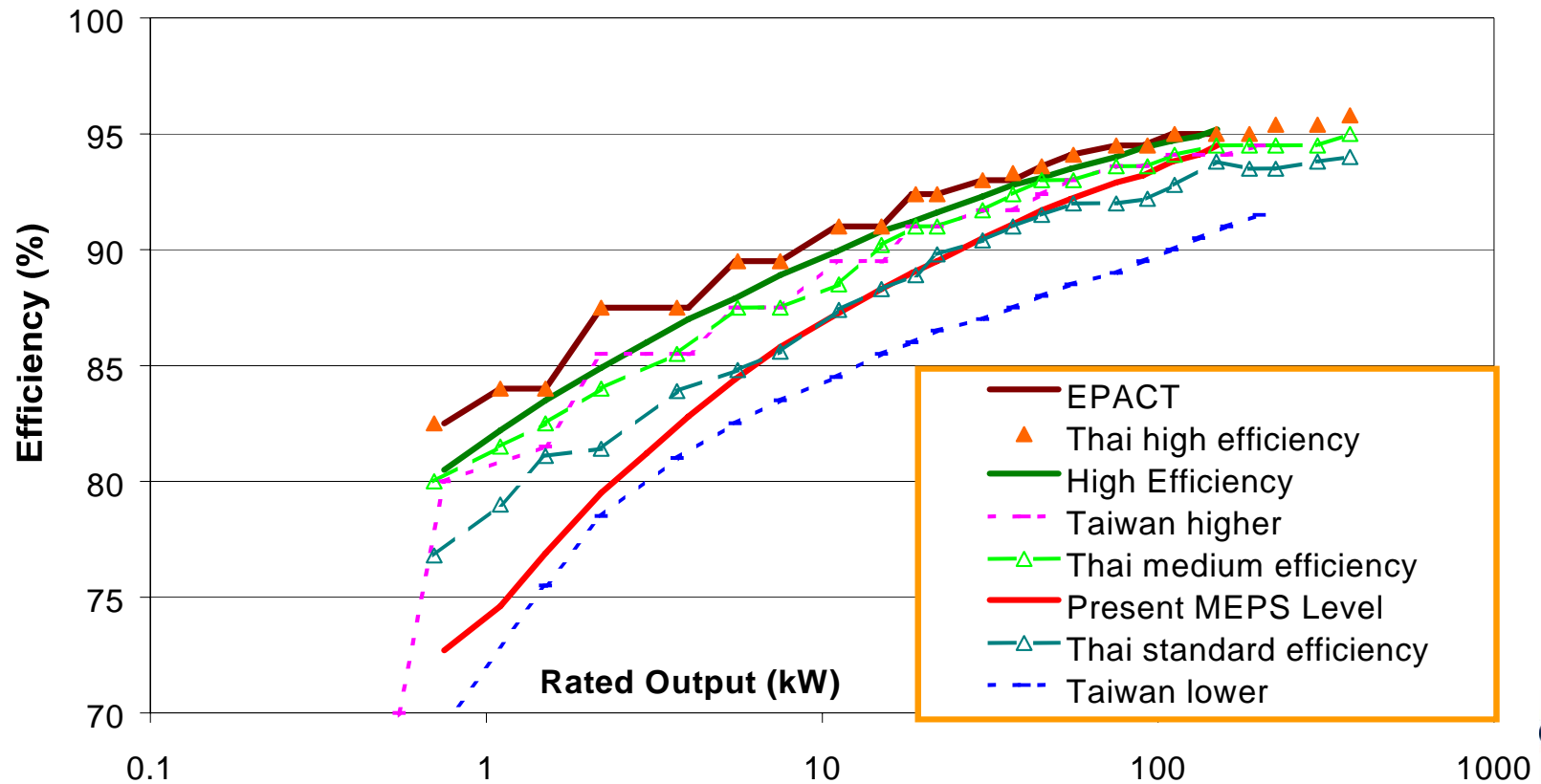
Source: Cogan, David. 2002. "A Review of the Stringency Levels in Australia."





# Comparative Standards Levels

## 4 Pole Motors



Source: Cogan, David. 2002. "A Review of the Stringency Levels in Australia."





# Distribution Transformer MEPS

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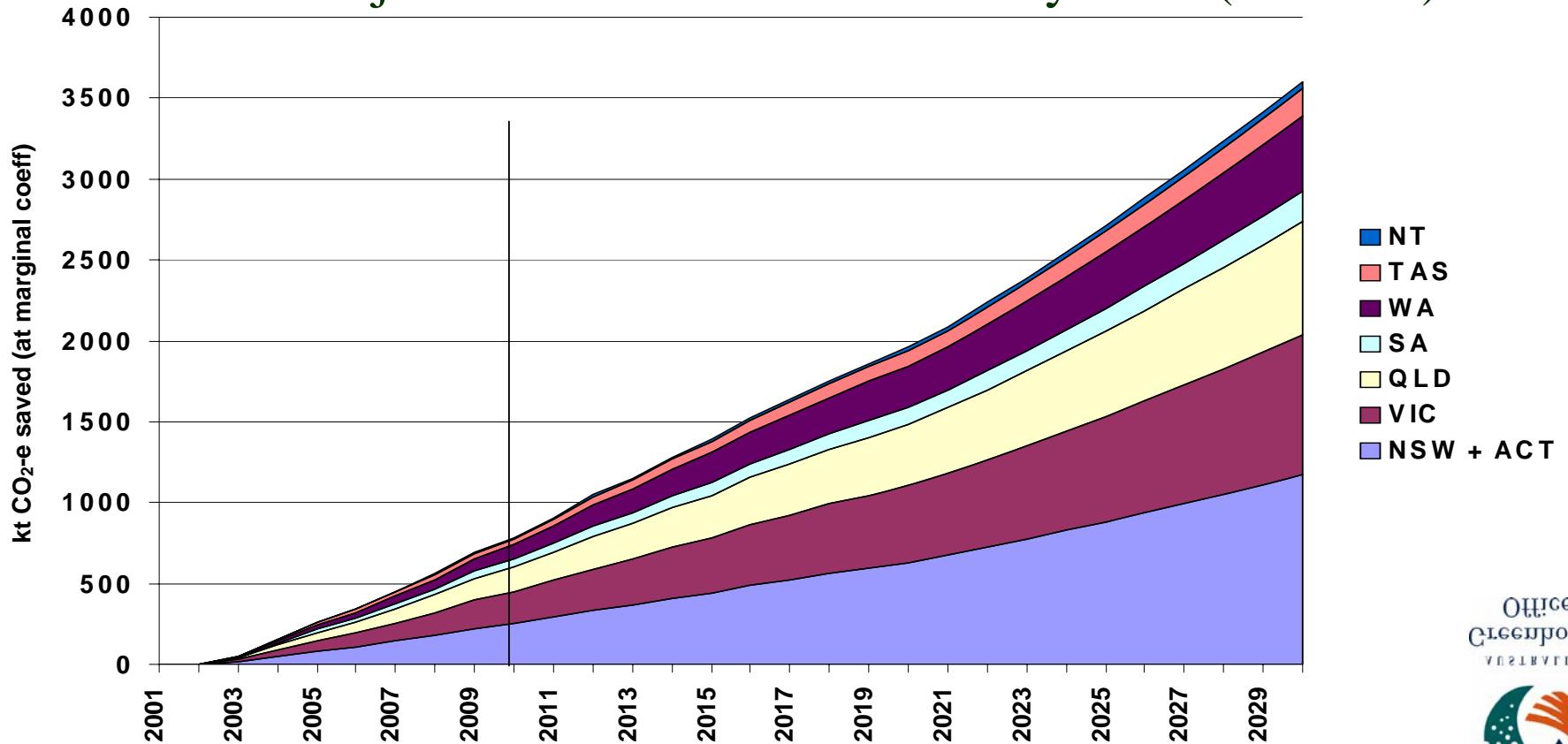
- **Originally government sought to match 1995 Canadian MEPS levels (best regulatory practice)**
- **Both Europe and the USA are considering tougher MEPS levels than Canada**
- **Australian industry has agreed to MEPS more stringent in places than the Canadian levels**





# Projected Emission Reductions

## Projected Emission Reductions by State (2001-30)





# Transformer MEPS Commencement

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- **Australian industry has agreed to these MEPS levels for introduction in 2004**
- **All government agencies have agreed to these levels and the final decision by the Ministerial Council on Energy is expected soon**
- **MEPS applies to the sale of products, based on the date of manufacture or import**





# Future Transformer MEPS

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- **The trigger for another round of MEPS is when a major economy regulates these products with more stringent levels**
- **Australia will match any improvement in transformer efficiency from North America, Europe or Asia with a delay of several years**
- **Should the North American levels increase as proposed, Australia will follow**



# Three – phase air conditioners

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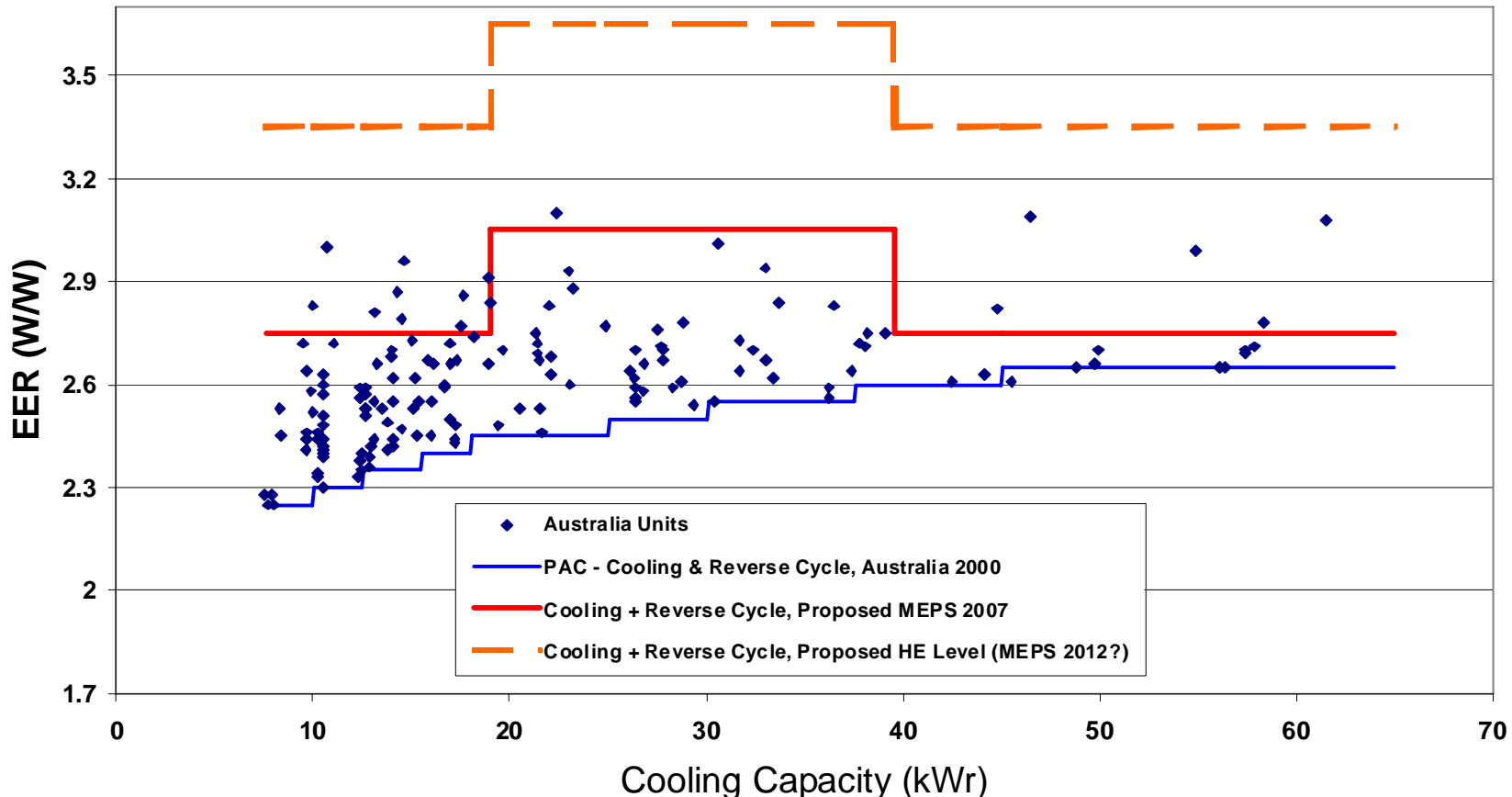
- **2001 MEPS based on 1994 performance level, aiming to cut bottom 50% – 2<sup>nd</sup> stage has begun**
- **In mid 2002, industry agreed in principle to match or exceed the USA levels (world best regulatory practice) and harmonise with single phase.**
- **The new MEPS to commence not earlier than 2007, harmonised with MEPS for single phase (two-stage, 2004 and 2007)**



# Three-phase Air Conditioners MEPS Proposals



3-Phase AC





# Commercial Refrigeration

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- **In 2001, government proposed Canadian MEPS as target in 2003/2004**
- **In 2002, industry representatives proposed more stringent MEPS levels than world best levels**
- **AS 1731 (test method) was published in April 2003, matching European Standard PREN 441**
- **MEPS targeted to commence in 2004 after a regulatory impact statement and MCE approval**





# Other Industry Issues

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- In the context of the regulatory elements of NAEEEP, industry continues to emphasise the need for compliance with energy efficiency requirements
- Governments recognise the need to enforce MEPS and labelling requirements to support industry and protect consumers
- We hope the recent action by the ACCC over a washing machine has strengthened industry confidence
- We have supported significant cooperative best practice activities by industry to complement regulatory change



# Energy Efficiency Best Practice

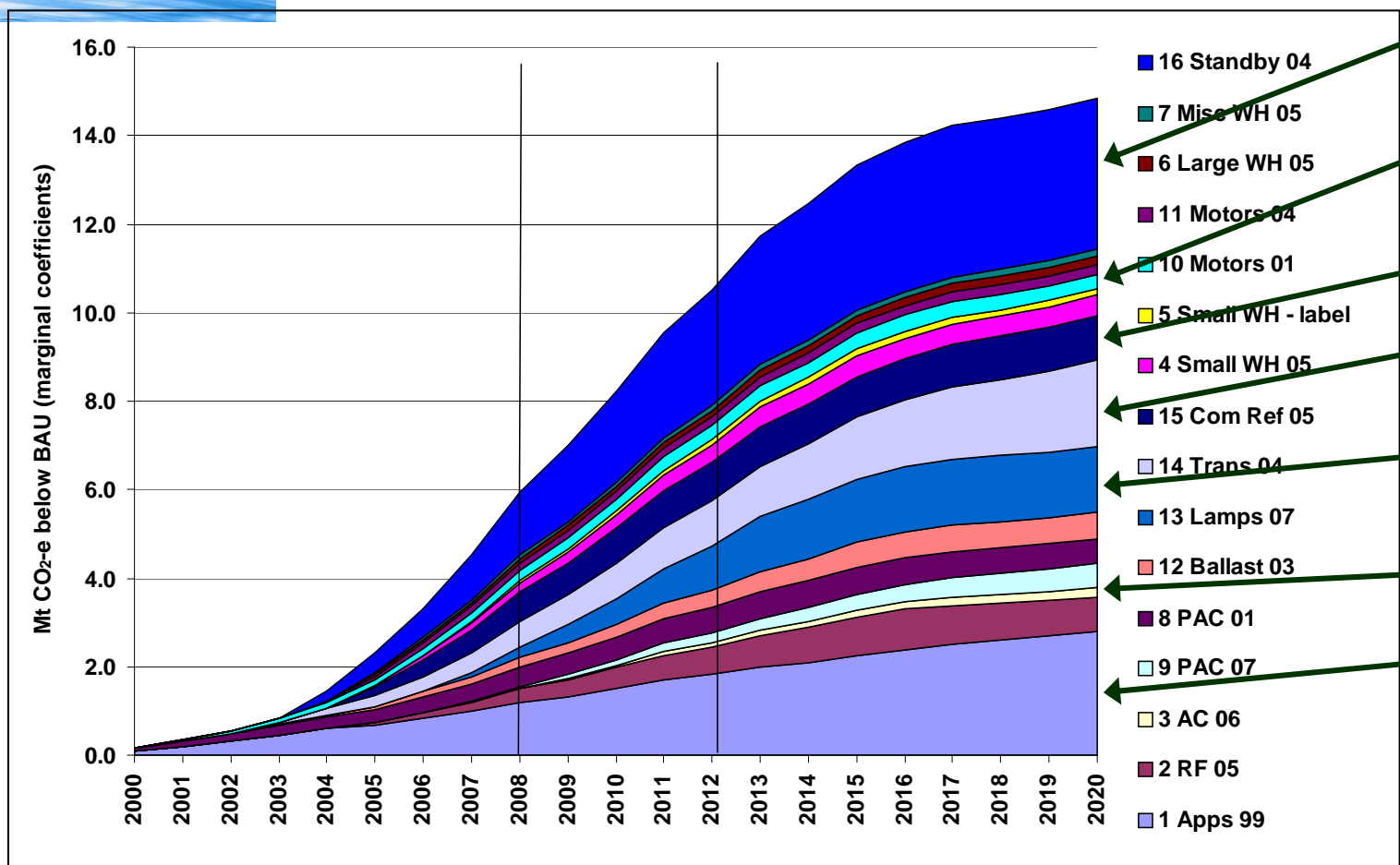
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- **DITR manages EE Best Practice Program, and agencies such as SEAV, SEDA also run industry EE programs**
- **EEBP ([www.industry.gov.au/energybestpractice](http://www.industry.gov.au/energybestpractice)) has an industry sectoral focus, with benchmarking and best practice case studies (e.g. bakeries, wineries)**
- **Motor Solutions Online ([www.industry.gov.au/motors](http://www.industry.gov.au/motors)) has Motor Sector software and a online data base of motors available in Australia – it is designed to drive best practice in motor selection**
- **Online registration of electric motors for MEPS is now being automatically linked to the motors catalogue and appropriate data fields are populated**





# Projected CO2 Impact of NAEEEP



Standby Power 2004

Motors

Commercial Refrigeration

Transformers

Lamps & Ballasts

Air Con

Appliances

1999

Office Greenhouse Association



**Thank You !**



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The lead Commonwealth agency on greenhouse matters





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