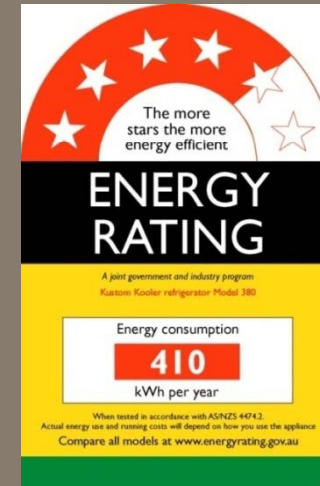




Australian Government
Department of Climate Change
and Energy Efficiency

The Equipment Energy Efficiency Program



Andrew Fairs
Manager, Business and Government Programs



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Minimum Energy Performance Standards

- MEPS programs are made mandatory in Australia by state government legislation and regulations which give force to the relevant Australian Standards.
- Regulations specify the general requirements for MEPS for appliances, including offences and penalties if a party does not comply with the requirements.
- Technical requirements for MEPS are set out in the relevant appliance standard, which is referenced in state regulations. State based legislation is necessary because the Australian constitution gives Australian States clear responsibility for resource management issues, including energy.



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Equipment Energy Efficiency (E₃)

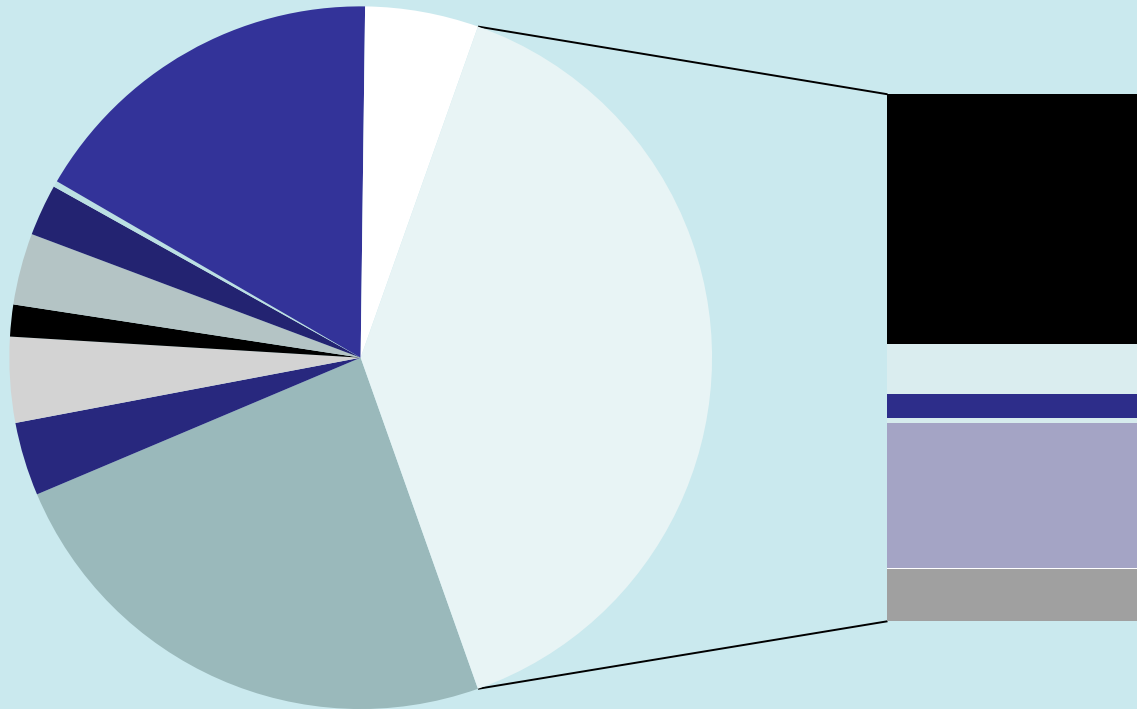
- The Equipment Energy Efficiency Program (E₃) is a collection of coordinated programs that deliver economic and environmental benefits to the community.
- The E₃ program, which is co-funded by the Australian Government, state and territory governments and New Zealand Government, focuses on initiatives that require a nationally consistent framework to improve energy efficiency and reduce greenhouse emissions from household appliances and equipment, and commercial and industrial equipment.
- E₃ covers the technical, legal, and administrative aspects of national appliance and equipment energy efficiency.



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Australia's Projected Emissions Reductions by 2020 = 109 Mt



- Large-scale Renewable Energy Target (LRET)
- Small-scale Renewable Energy Scheme (SRES)
- Queensland Gas Scheme
- Victorian Energy Efficiency Target and Energy Saver Incentive Scheme
- Greenhouse Gas Abatement Program (GGAP)
- Greenhouse Challenge Plus
- NSW Biofuel Act
- NSW and Qld Land clearing legislation
- Other measures
- Equipment Energy Efficiency (E3) Program
- Phase-out of inefficient water heaters
- Phase-out of incandescent lighting
- Cool Efficiency Program
- Energy efficiency requirements: Building codes
- Mandatory disclosure requirements: Buildings
- Energy Efficiency Opportunities Program



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Labelling - 1986

- Refrigerators & Freezers
- Clothes Washers
- Clothes Dryers
- Dishwashers
- Air Conditioners - non ducted single phase

Labelling - 2009

- Televisions

Voluntary Labelling – 2010

- Swimming Pool Pumps

MEPS - 1999

- Electric Storage Water Heaters
- Refrigerators & Freezers

MEPS - 2001

- Three-Phase Electric Motors
- Three Phase Air Conditioners

MEPS - 2003

- Fluorescent Lamp Ballasts

MEPS - 2004

- Distribution Transformers
- Single Phase A/Cs
- Commercial Refrigeration
- Linear Fluorescent Lamps

MEPS - 2005

- Electric Storage Water Heaters
- Refrigerators & Freezers

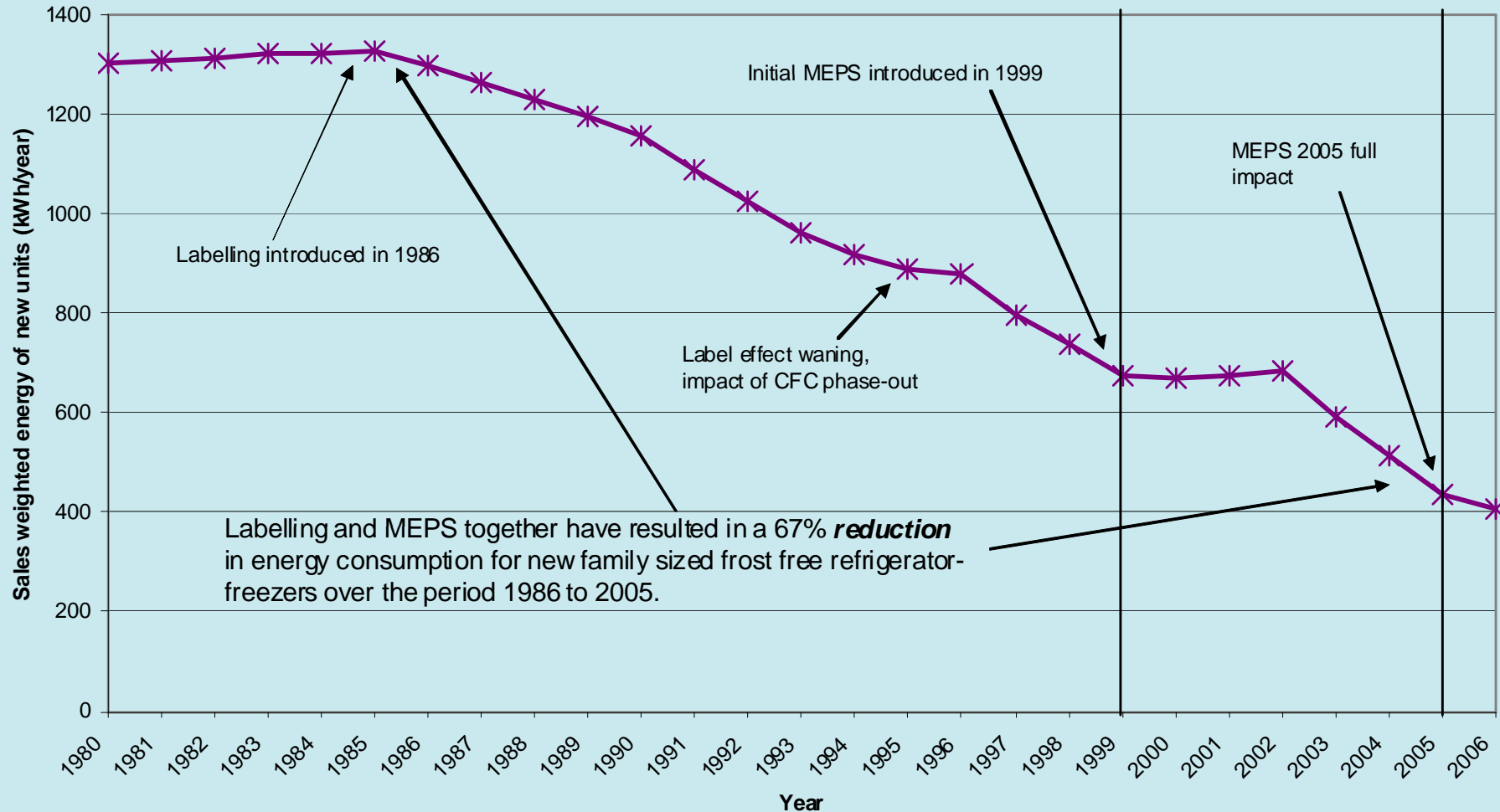
MEPS – 2009

- Incandescent GLS lamps
- Compact Fluorescent lamps
- External Power supplies
- Chillers (Commercial A/C)
- Televisions

MEPS – 2010

- Incandescent GLS lamps
- Compact Fluorescent lamps
- Refrigerators & Freezers
- Air Conditioners

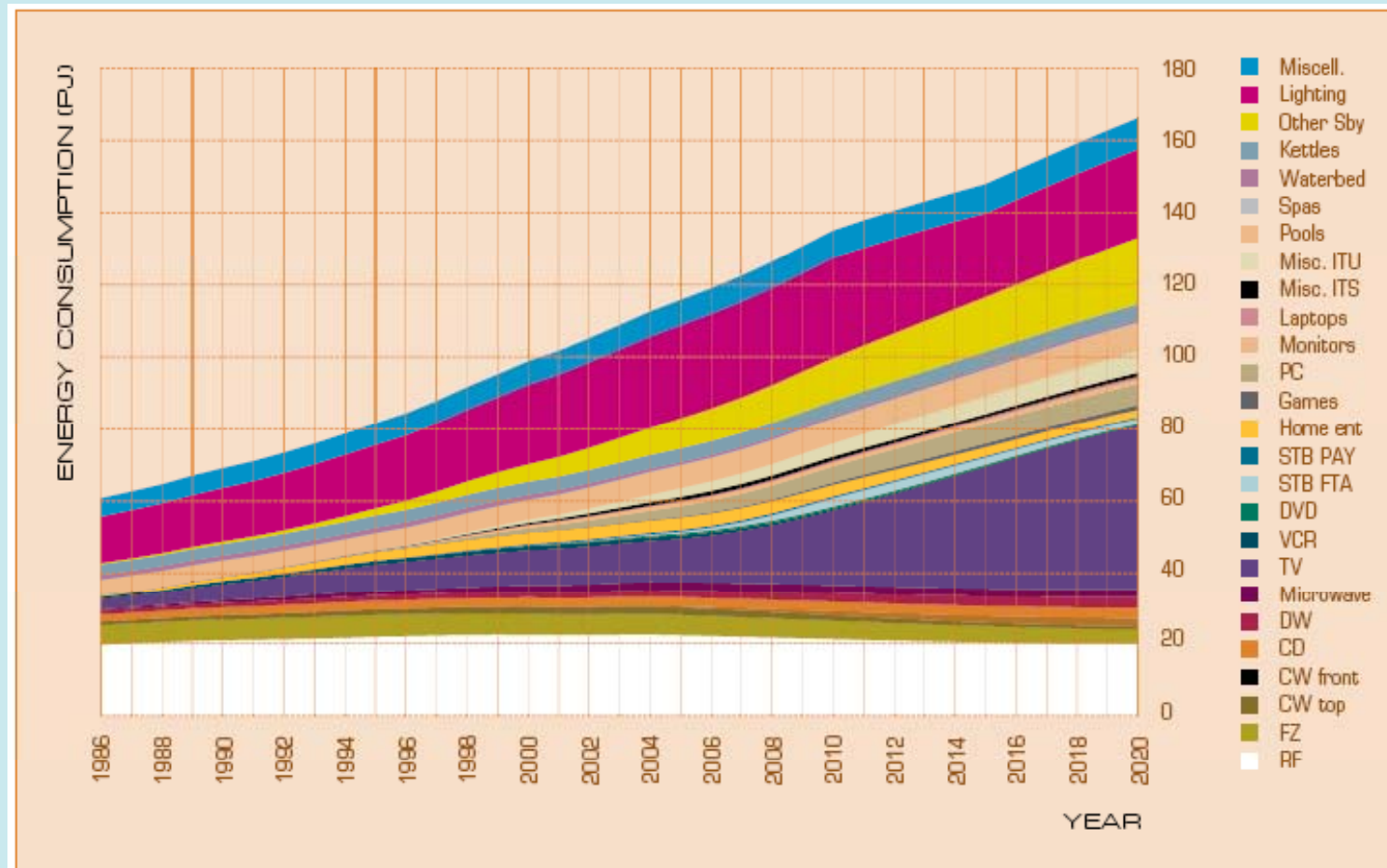
A Success Story – Reducing Energy Consumption of New Frost Free Refrigerators & Freezers, 1986 to 2006



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Trends in Electrical Appliance Energy Use



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E3 Program Achievements

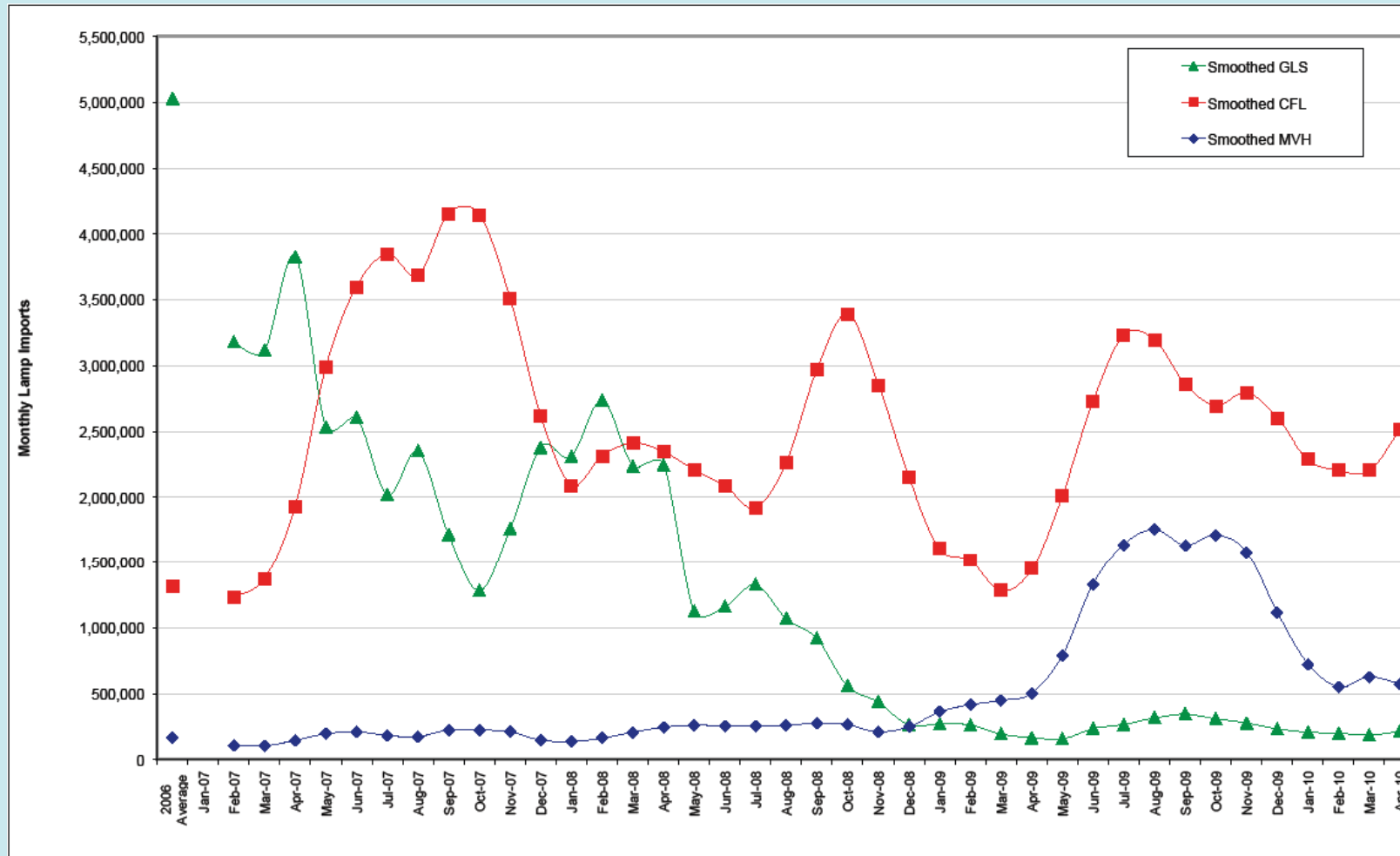
- Projected savings from the E3 Program
 - In the residential sector about 22,000 GWh per annum by 2020
 - In the non-residential sector about 10,300 GWh per annum by 2020
- Projected emissions avoided by the E3 Program over the period 2000-2020 are estimated to be 250.2 Mt



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Results – Lighting Import data



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Results – Lighting Import data

- From 2007 to June 2010, around 75 million GLS lamps have been substituted with lower wattage halogen (17 million) and CFL (58 million) lamps
- A total saving of 3.5 million tonnes of GHG is estimated to result from this substitution over the lifetime of the lamps



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What Next?

- Maintenance of existing products
- Completion of projects in train
- New projects – existing products
- New projects – new products



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Maintenance of Existing Product Regulations

Estimated Emissions Reduction by 2020-10.8 Mt CO₂e

- Compliance
 - Registration database
 - Check testing
 - Store surveys
- Minor changes to product standards to keep pace with technology developments
- Communications
 - Website
 - Newsletter
 - Achievements Report
 - Education Materials



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Completion of Projects in Train

Estimated Emissions Reduction by 2020-12.1 Mt CO₂e

New Products

- Portable Coolers
- Refrigerated Vending Machines
- Ice Makers
- Data Centres
- Games Machines
- Battery Chargers
- Other Home Entertainment
- Pumps
- Fans
- Swimming Pool Pumps
- Electric Storage Water Heaters
- Heat Pump Water Heaters

New Products (continued)

- Gas Ducted Heaters
- Gas Space and Decorative Heaters
- Demand Response
- Standby Power

Existing Products – more stringent Standards

- Distribution Transformers
- Refrigerators and Freezers



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New Projects

Estimated Emissions Reduction by 2020-3.4 Mt CO₂e

New Products

- Air Conditioner Ducting
- Gas Boilers
- Commercial Catering
- LED Lighting

Existing Products

- Refrigerators & Freezers
- Televisions



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Introduction to the Residential Monitoring Program (REMP)

- The development of effective energy policy relies on a sound understanding of energy consumption
- REMP is a program that measures energy use at the individual points of consumption in domestic households
- E3 has been running a pilot program for 12 months that continuously measures all electricity, gas and water consumption in 5 households



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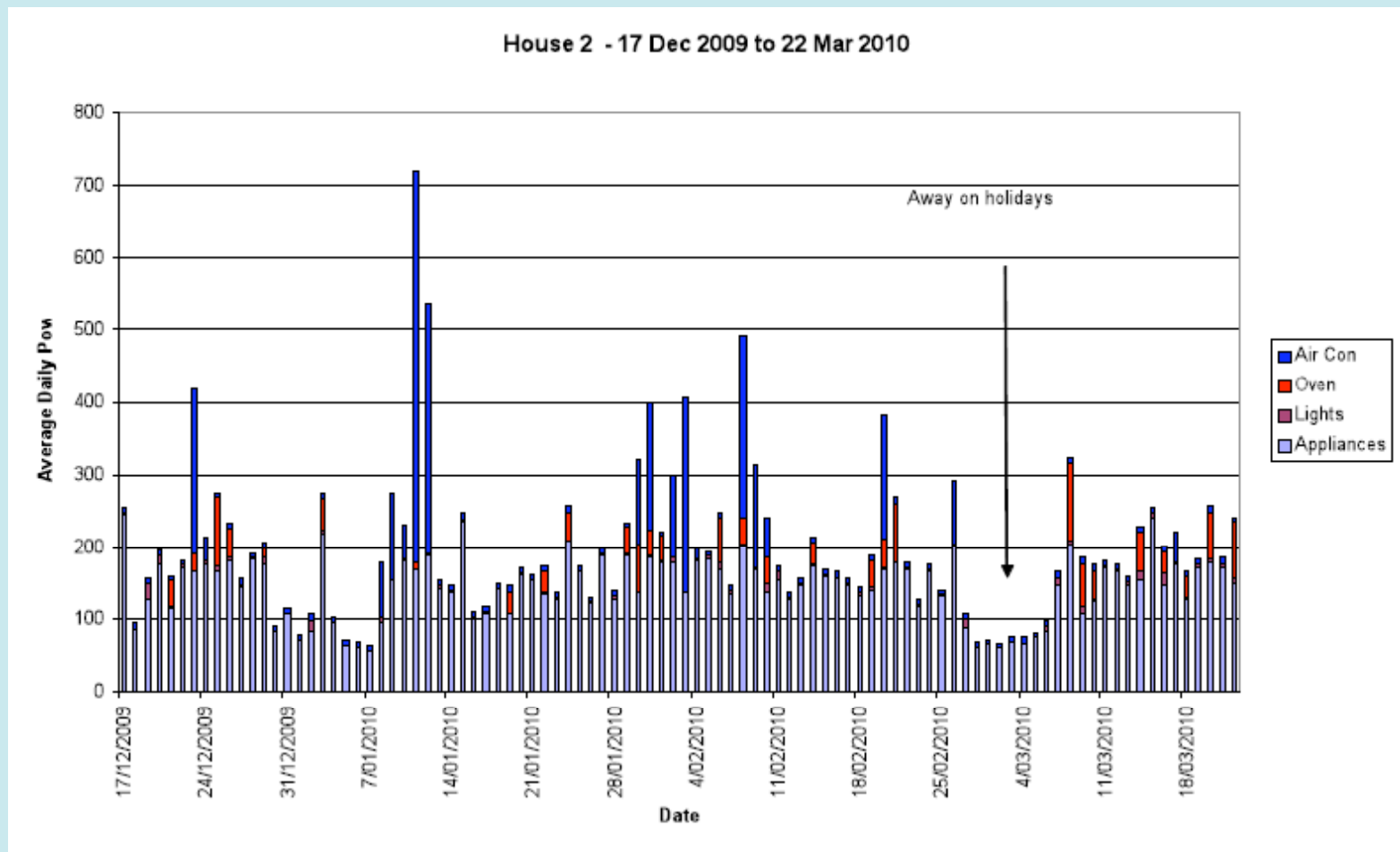
The results from the pilot program
show how you can...



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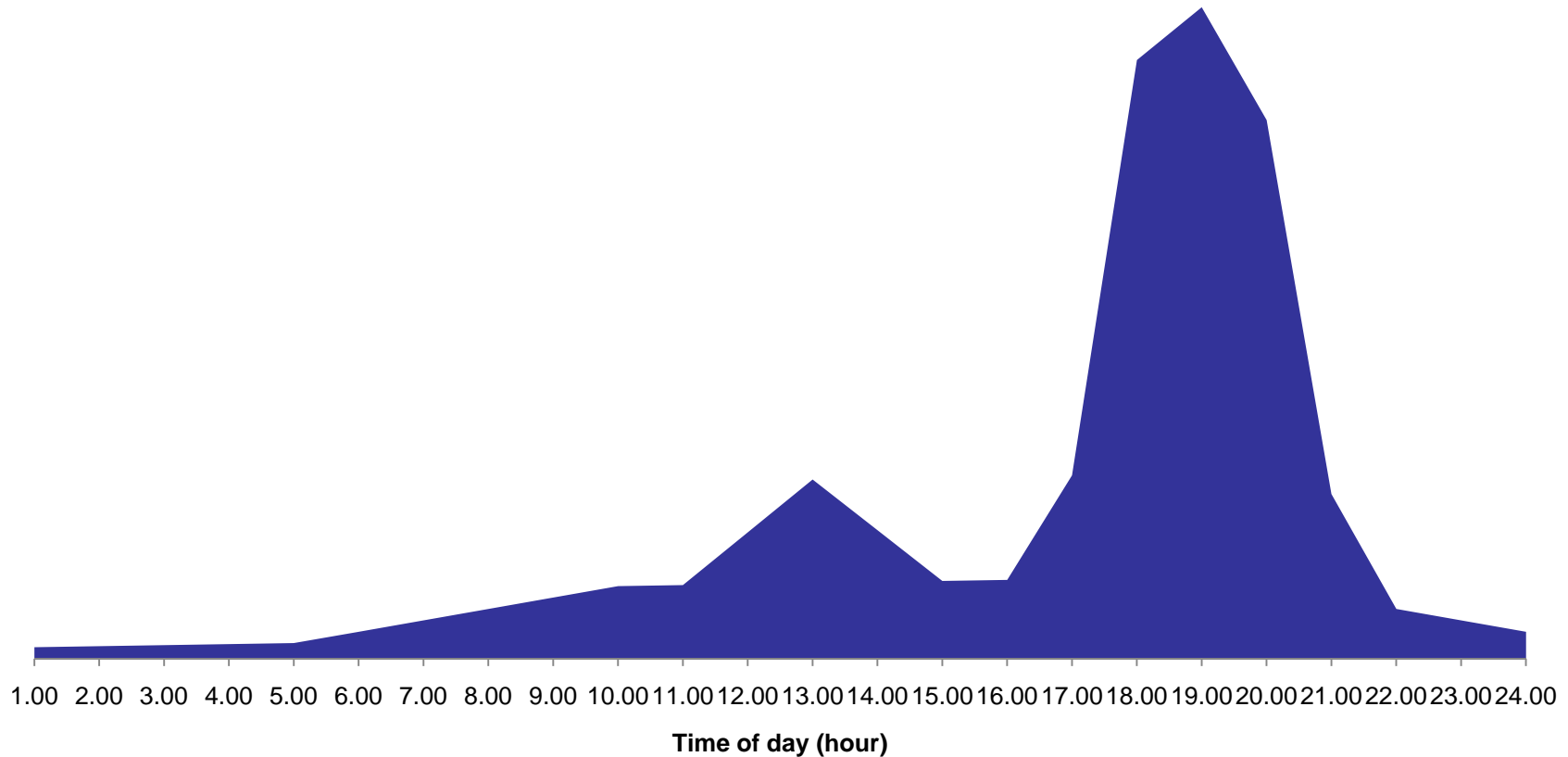
Find the days of peak demand...



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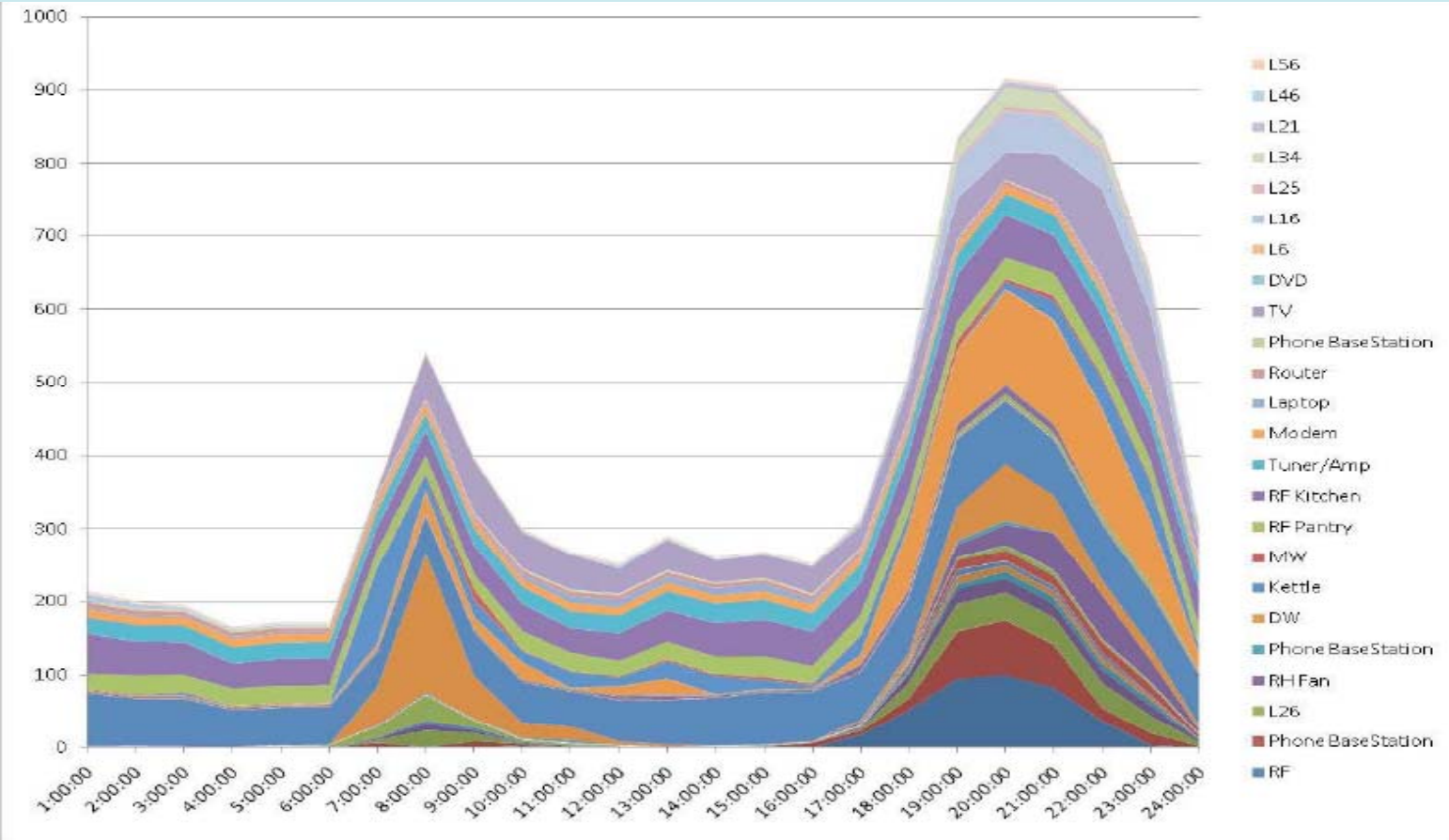
Take a look at the demand profile for a specific day...



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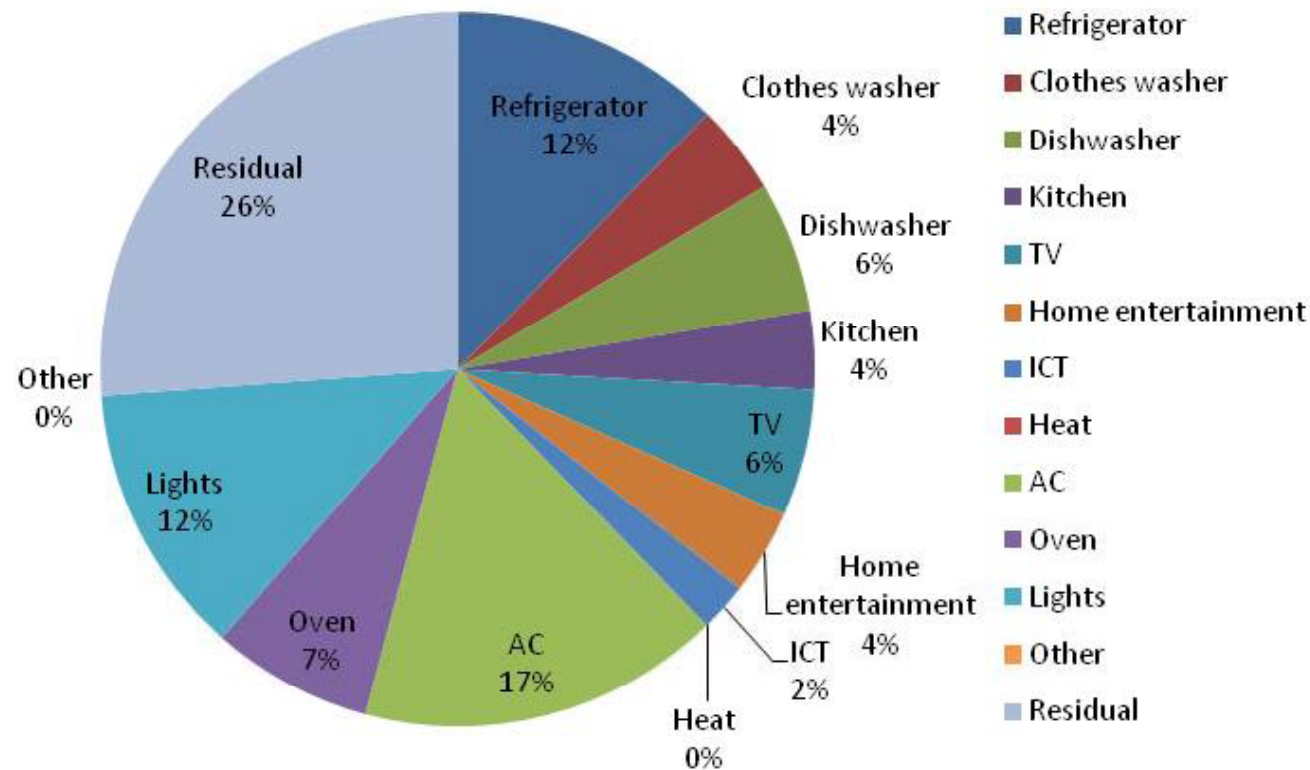
See how the various components combine to make up the demand...



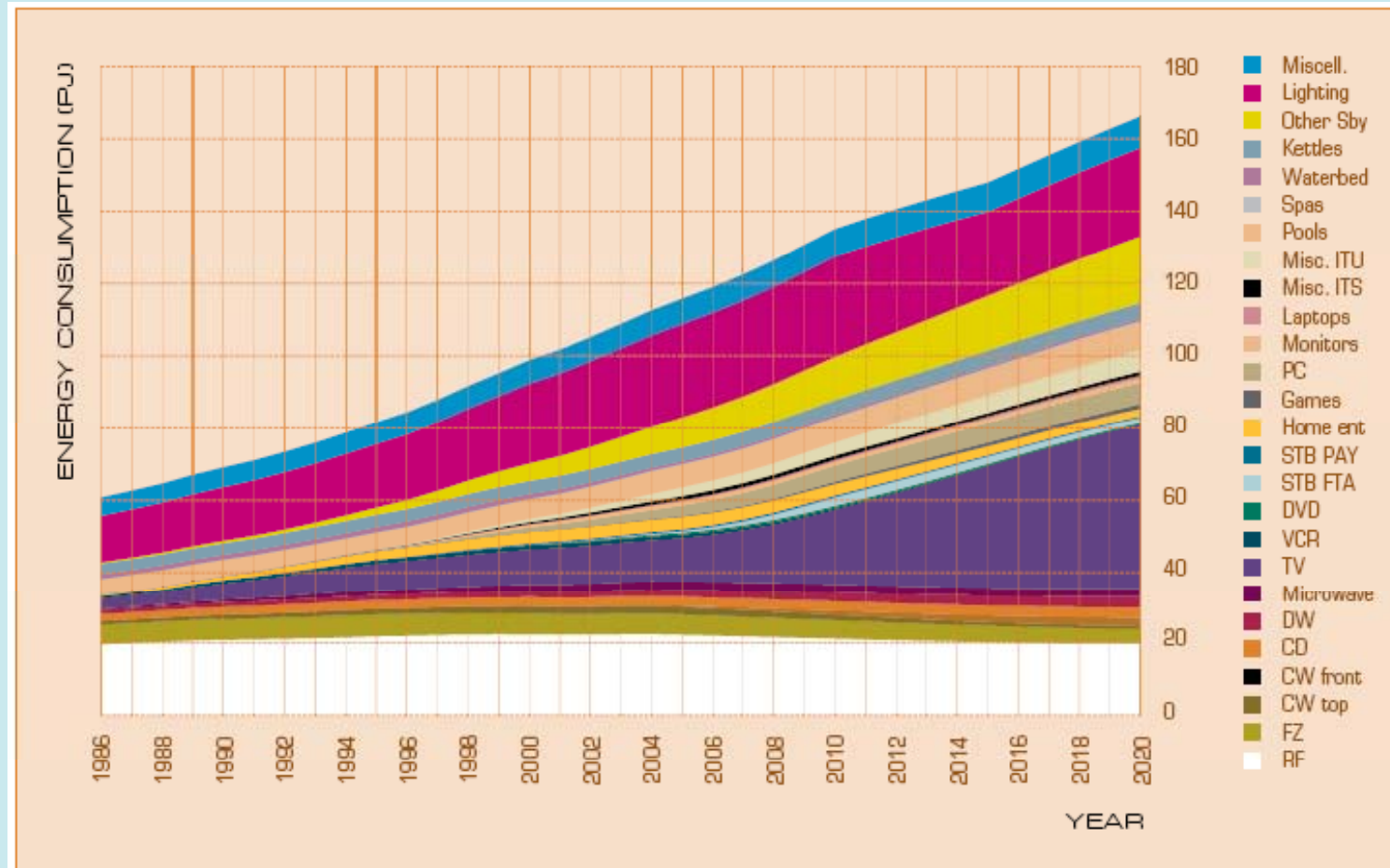
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Identify exactly which are the most demanding products in the peak...



Trends in Electrical Appliance Energy Use



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Example with recent MEPS for residential air Conditioners...

Air Conditioning MEPS

- new MEPS levels were introduced in April 2011
- included standby power consumption for the first time
- agreed through a Decision RIS and published in an Australian Standard in 2009
- COAG Communique July 2009 – "introducing in 2010 new standards for the energy performance of air conditioners and increasing the standard by a further 10% from 1 October 2011"



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History

- Consultation RIS on the costs and benefits of increasing MEPS of air conditioners was prepared for stakeholder consultation on 25 July 2010
- Decision RIS was prepared which recommended (broadly) a 10% increase in the stringency of the MEPS, effective from October 2011
- MCE endorsed the Decision RIS on 10 December 2010 both the Consultation and Decision RIS stated that post April 2011 national MEPS levels will be determined on annual efficiency including standby and crankcase operation

Present

- standard development process commenced almost immediately
- since the 10 December 2010 MCE decision industry reps have raised a number of conflicting concerns with regard to the commencement of the new standards.
- Meeting of EL15/16 Standards Committee in Sydney 28 February 2011
- 1 April 2011 meeting with air conditioner suppliers, broad industry agreement was obtained to a compromise position



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Present (cont.)

- pending approval by OBPR the MCE has agreed to:
- deferring the October 2011 MEPS level requirement of 3.1 AEER for the 10-19kW ducted product range until 1 April 2012 – the current MEPS level 2.75 AEER would stay in place
- implementing new MEPS for multi-split systems one year after the publication of a suitable international standard
- permitting simulation for products <30kW where less than 10 units are sold per year and sales data is provided for all models in that category.



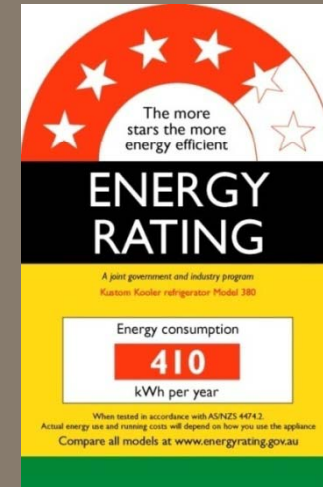
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Questions?



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