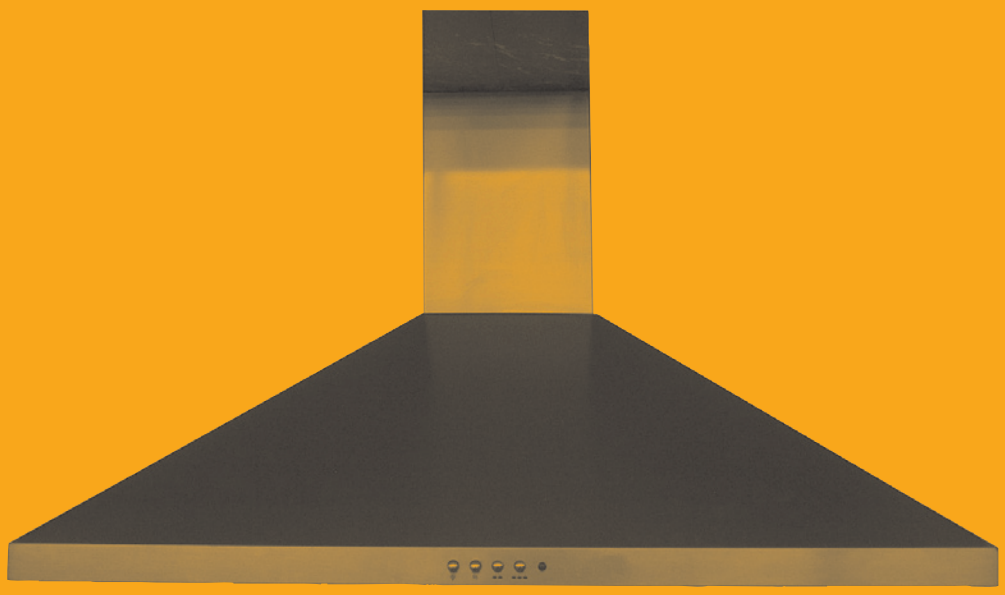
STANDBY PRODUCT PROFILE 2004/13

NOVEMBER 2004

PRODUCT PROFILE



RANGEHOODS

AUSTRALIA'S STANDBY POWER STRATEGY 2002 - 2012

AN INITIATIVE OF THE MINISTERIAL
COUNCIL ON ENERGY FORMING
PART OF THE NATIONAL
GREENHOUSE STRATEGY

The National Appliance and Equipment Energy Efficiency Committee seeks comment on this proposal from any interested person or organisation.

Please email comments to:

energy.rating@deh.gov.au

Alternatively, hard copy comments can be mailed to:

Equipment & Appliances Team
Australian Greenhouse Office
Department of Environment and Heritage
GPO Box 787
CANBERRA ACT 2601

Comments received by 28 February 2005 will assist in determining the final form of the policy proposals taken to government.

An electronic version of this Standby Product Profile and other Profiles released for public discussion can be obtained from www.energyrating.gov.au

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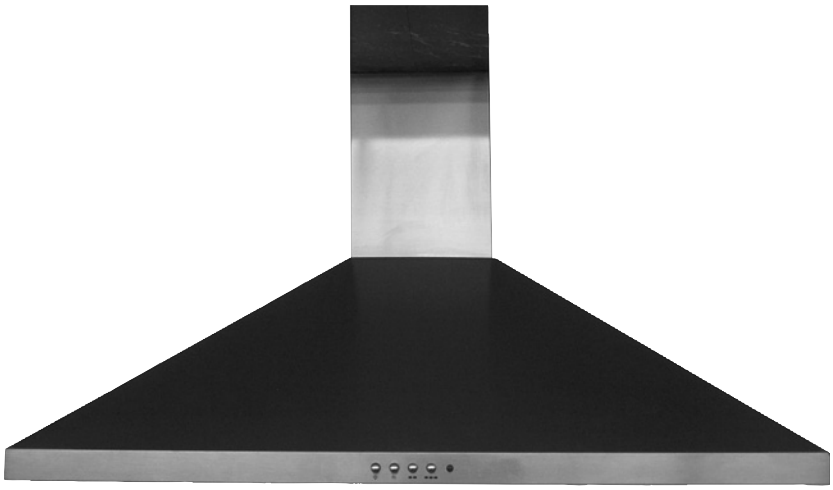


PRODUCT DESCRIPTION

A rangehood is also known as a kitchen exhaust or venting system or exhaust fan. It has some type of hood or cover that extends over a cook top/stove to extract heat/moisture and/or odours into the ceiling cavity or outside the home. The more common systems have the fan and fan motor in the exhaust hood, however, some systems use an in-line fan, in the duct. They come in a variety of styles from large decorative hoods to discreet 'hide away' models. Rangehoods can be operated by buttons (manual or electronic) or will automatically start when the hood is opened. Rangehoods vary in price from around $100 to several thousand dollars. Models differentiate from other units with features such as the type of lighting available, auto off switch, multiple speed functions, electronic or manual controls, independent control of fan and light function, noise rating etc.

CURRENT OWNERSHIP AND TRENDS

The data on the current ownership and sales trends for rangehoods is restricted to the results of the 2001 NAEEEC intrusive survey report. This study found that over fifty percent of homes visited had a rangehood installed and that none of the homes visited had more than one of these appliances.

Sales of rangehoods are estimated to be approximately 120,000 per year based on data from GFK Marketing Services.

RELEVANT MODES FOR THE 'ONE WATT' POWER PLAN

Rangehoods available in Australia usually have two operational modes: on mode, and off mode. The on mode is not generally relevant for the standby power plan, although the on mode power consumption and the hours of use are critical in determining total energy consumption of rangehoods.

Off Mode which is sometimes a 'hard' off, in theory disconnects the mains from most electrical circuits in an appliance. Most rangehoods have an off mode; however, not all have zero power consumption when in this mode.

KNOWN STANDBY DATA FOR NEW PRODUCTS

The NAEEEC store surveys measured rangehoods for the first time in 2003/04. Thirty-one rangehoods were measured in off mode, ten being models which automatically turned on when the hood was pulled out. The rangehoods average consumption in off mode was 0.5W, with a maximum of 7.5W. The three models with higher consumption did not turn on automatically. Around 90% of rangehoods had zero consumption. Results for rangehoods are summarised in Table 1.

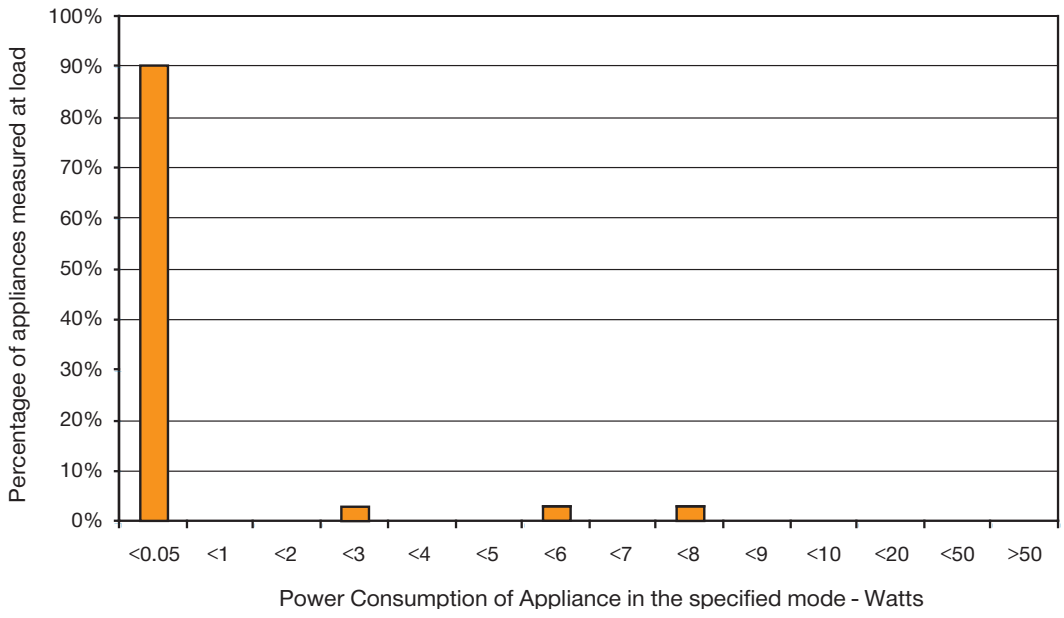
TABLE 1: SUMMARY OF RESULTS FOR 2003/04 NAEEEC STORE SURVEYS

	2003/04 (n=31)
Average Off Mode	0.5
Minimum Off Mode	0.0
Maximum Off Mode	7.5

Note: n is total sample size in survey

Whilst most rangehoods have no consumption in off mode three units (nearly 10%) consumed more than two watts in this mode. Figure 1 indicates that these models should be able to decrease the off mode consumption.

FIGURE 1: POWER MEASUREMENTS FOR RANGEHOODS: OFF MODE (N=31)



KNOWN STANDBY DATA FOR INSTALLED STOCK

The NAEEEC intrusive survey conducted in 2000 found around half (36) of the 64 homes had rangehoods. The average age of these models was 11 years old with the newest having been installed only two years ago and the oldest model being purchased 33 years ago. None of these models were found to have consumption in off mode.

GREENHOUSE EMISSIONS

The data collected so far for rangehoods suggests that the standby consumption is not likely to be of a concern. For the purposes of estimating greenhouse emissions, it has been assumed that rangehoods sales grow 1% annually, in line with the projected population.

The greenhouse emissions reduction potential for the proposed off mode target of 0.3W by 2012 is shown in Figure 2. This indicates potential reductions of 200 t CO_2-e pa by 2012 and building to over 1.8 kt CO_2-e pa by 2020. Note that Figure 2 shows the cumulative effect of the savings over time.

The projected effect on total annual energy consumption by rangehoods based on the implementation of these targets in Australia is also shown in Figure 3.

FIGURE 2: BAU VS POLICY TARGET – CUMULATIVE ANNUAL GREENHOUSE EMISSIONS FOR RANGEHOODS

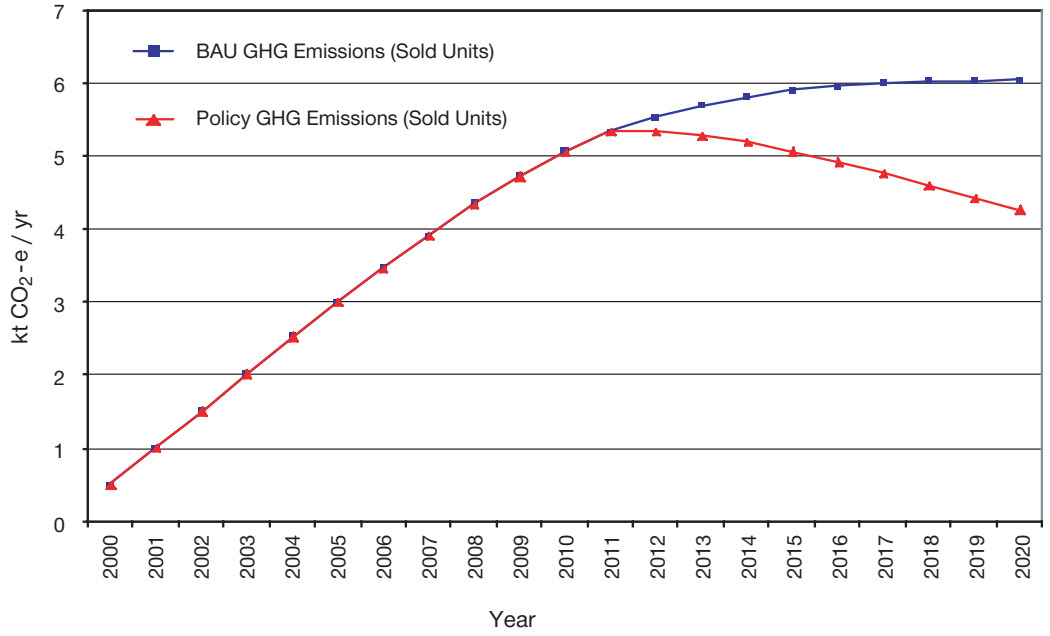
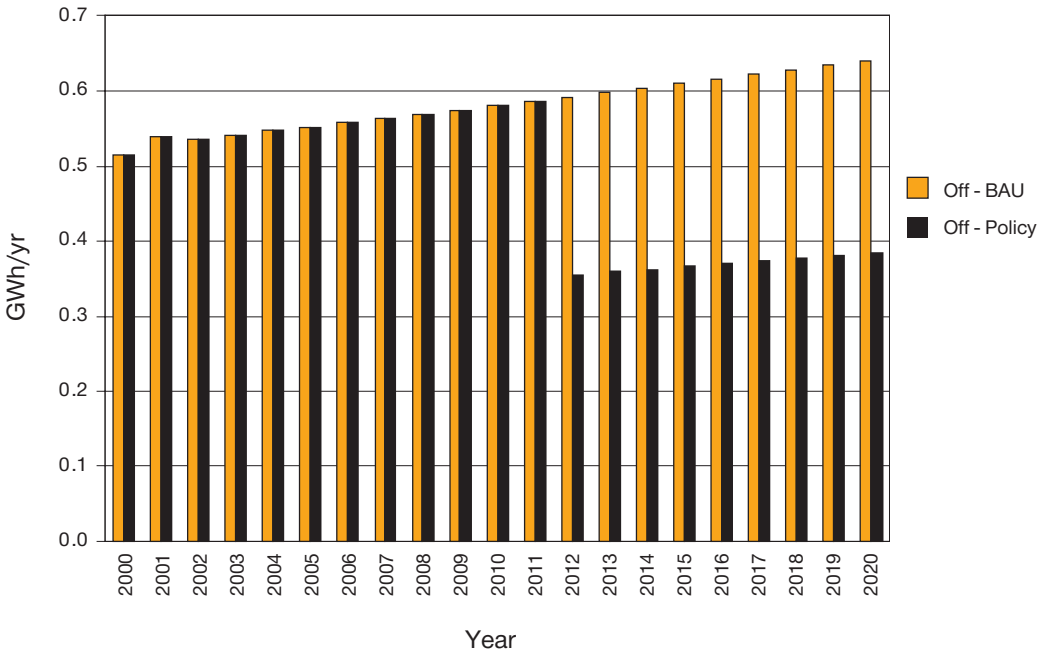


FIGURE 3: ANNUAL EFFECT ON ENERGY CONSUMPTION OF POLICY TARGETS VS. BAU FOR RANGEHOODS



CURRENT OVERSEAS POLICIES AND TRENDS

The USA currently offers an ENERGY STAR label to manufacturers with rangehoods that extract air at less than 500 cfm and have a sound level at or below 2.0 sones. Manufacturers of rangehoods with incandescent light fittings must recommend consumers use an ENERGY STAR CFL or a bulb less than 50W. Additionally there is a minimum efficacy level of 2.8 cfm/Watt and a warranty of at least 1 year must be provided. These levels have applied since October 2003.

From 1 January 2005 to qualify for ENERGY STAR rangehoods will also have to meet criteria for the light output and any rangehood that provides the option to use incandescent lighting will be excluded from the ENERGY STAR program. There is no requirement for off power consumption.

GOVERNMENT TARGET

In accordance with the National Standby Strategy, NAEEEC intends to recommend to the Ministerial Council on Energy an off mode target.

1. INTERIM TARGET - 2008

Off mode (W)
Less than 0.5 Watt

This target applies to all relevant rangehoods sold in Australia that year. NAEEEC proposes to monitor the sale of rangehoods in that year and to move toward regulation should that target not be met by a significant number of products.

2. NATIONAL STANDBY STRATEGY TARGET – 2012

Off mode (W)
Less than 0.3

The National Standby Strategy sets out the target of 0.3W, to be achieved by 2012. This target should apply to all rangehoods.

GOVERNMENT PROPOSALS TO ACHIEVE THIS TARGET

Government agencies intend to take the following actions to assist industry meet the standby targets for rangehoods:

Voluntary Tool Available	Action / Rationale	Date
Government procurement list	• MCE are considering a policy of preferencing the purchase of low standby rangehoods where available and fit for purpose. Qualifying products to be included on the government Energy Allstars procurement database.	2005/6
Australian Standard	• To communicate government expectations in the relevant Australian Standard, likely to be related to or a sub-part of AS/NZS 62301 for standby.	2005
Annual survey	• To collect data on new rangehoods and analyse trends. This data will be published annually.	Ongoing

Government will announce whether this product should be targeted for stage two intervention under the National Standby Power Strategy (involving possible regulatory intervention) or whether the abovementioned actions together with industry intervention have been successful in meeting the target at the NAEEEC Forum in the year:

2009

REFERENCES

EnergyConsult 2004, *Appliance Standby Energy Consumption: Store Report 2003/04*, report for the National Appliance and Equipment Energy Efficiency Committee prepared by Energy Efficient Strategies & EnergyConsult, August 2004, Canberra.

Harrington, L & Kleverlaan P. 2001, *Quantification Of Residential Standby Power Consumption In Australia: Results Of Recent Survey Work*, report for the National Appliance and Equipment Energy Efficiency Committee, Canberra

MCE 2002, *Australia's Standby Power Strategy 2002-2012 - "Money Isn't All Your Saving"*. Final report of long-term strategy to achieve Australia's One-Watt Goal 2002 to 2012, Ministerial Council on Energy. NAEEEC Report 2002/12. www.energyrating.gov.au