



TOTAL ENVIRONMENT CENTRE

Submission by

Alternative Technology Association

and

Total Environment Centre

on the

**Regulatory Impact Statement (RIS) on the
Proposal to Phase-Out Inefficient Incandescent
Light Bulbs**

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By Email to: energyrating@environment.gov.au

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Introduction

The Alternative Technology Association (ATA) and the Total Environment Centre (TEC) welcomes the opportunity to provide comment on the *Regulatory Impact Statement* (RIS) on the proposal to *Phase-Out of Inefficient Incandescent Lightbulbs* prepared by Syneca Consulting on behalf of the Department for Environment, Water, Heritage and the Arts (DEWHA).

ATA is a not-for-profit organisation established in 1980 to empower our community to develop and share sustainable solutions for the way we live and to promote the uptake of sustainable technologies in order to protect our environment. The organisation provides service to over 4,500 members, who are actively promoting sustainability in their own homes by using good building design and implementing water conservation and renewable energy technologies.

TEC has been campaigning for environment protection in the city and country, changing government policy, advising the community and challenging business - since 1972. For over 30 years, we have been working to protect this country's natural and urban environment, flagging the issues, driving debate, supporting community activism and pushing for better environmental policy and practice.

MEPS Threshold

In line with previous submissions, ATA and TEC would like to offer strong support for the proposal to create efficiency standards for lighting and to commence a move away from incandescent lighting options. However, as expressed previously, we remain concerned that the proposal, as set out in the RIS and previous documentation, does not set the bar high enough with respect to efficiency goals and therefore, will not achieve the desired level of energy efficiency and corresponding greenhouse gas abatement.

In our previous submission, we advocated an increase in the MEPS threshold by at least 5 lumens per watt (that is, the initial MEPS curve increased to: Initial efficacy $\geq 2.8 \times \ln$ (initial lumens) + 1.0). We further advocated that there should be a commitment increase in the standard to an average of 30 lumens per watt (or + 11.0) in the near future as more efficient incandescent globes become available.

In Table 6.1 of the RIS document (*Responses to Comments on the Draft Technical Report*), the consultants respond to criticisms regarding the low MEPS level:

"It is difficult to set a higher MEPS level, as currently the only dimmable lamps are incandescent. The best available mains voltage incandescent lamps are around 15 lm/w, which has been set as the MEPS level."

However, further on the consultants suggest that dimmable CFL's are in fact available but not yet cost effective:

"Whilst this policy has been in its design phase dimmable CFLs have become more widely available but they are 3 to 4 times more expensive than a non-dimmable product."

This finding is disputed, particularly as it appears to be one of the main arguments used by the consultants against raising the level of the MEPS. Currently dimmable CFL's are available in Australia at around \$20 per globe with price showing a consistent downward trend over the past few years. This price reduction is set to continue and would achieve significant reduction in a much shorter timeframe by a complete eradication of dimmable incandescent alternatives.

Further, we do not accept the assertion by the consultants that Australia has no ability to influence international market development as purported in the RIS paper:

"Australia represents around 1% of the global lamp market, thus it is difficult for Australia to influence global lamp development. Using MEPS as a tool to achieve this could result in the situation where no lamps become available to meet MEPS."

In announcing the phase out proposal, Australia has taken the lead internationally in attempting to raise lighting efficiency standards. Following Australia's proposal has been commitments to incandescent lamp phase out schemes by the United States, Canada and China – the latter of whom manufactures 70% of the world's lightbulbs.

With these major manufacturers and consumers in incandescent lightbulbs committed to greater lighting efficiencies, it would make more sense for the Australian Government to work with these countries to ensure early and complete eradication of incandescent lighting, including the less efficient halogen lamps currently sitting above the proposed MEPS threshold, from the commencement of the scheme.

On this basis, ATA and TEC strongly recommend that the current proposal for a MEPS standard for lighting proceed as planned, however with an increase in the threshold by at least 5 lumens per watt. That is, the initial MEPS curve should be increased to: Initial efficacy $\geq 2.8 \times \ln(\text{initial lumens}) + 1.0$ with a commitment to an increase to 30 lumens per watt (or + 11.0) in the near future, as more efficient incandescent globes become available.

Waste Management - Mercury Content of CFLs

Any phase out scheme must be accompanied by a comprehensive plan for the collection and recycling of used CFLs to ensure that the dangerous legacy of mercury waste is not increased.

Unlike incandescent lamps, there is an elemental mercury content present in fluorescent lamps. The average content is generally reported as 30mg^1 per tube and is currently restricted to no more than 5mg for CFLs. Innovation within the electronics sector has produced examples of CFLs with a total mercury content of only 1mg; and this should become the case with all producers in order to reduce the total amounts of mercury heading to landfill.

The primary 'end of life' risk associated with this mercury content includes the release of the toxic methyl mercury, primarily into the atmosphere from and in landfill sites. The proposed phase out of incandescent lamps and the associated lamps and the associated increase in CFL use is expected to lead to an even greater increase in the numbers of lamps, and consequently mercury, being disposed in landfill.

¹ New South Wales 2005-2006 Extended Producer Responsibility Priority Statement page 23.

The biological conditions found in landfill lead to conversion of the elemental mercury present in lamps to the highly and volatile toxic methyl mercury. Released as vapor, this form of mercury is dispersed via the wind causing water, land and air pollution. 1 gram of Mercury is enough to contaminate up to 4 billion litres of water above the internationally acceptable safe level of 1ng/litre².

This distribution of methyl mercury could feasibly impact on human food chains and the environment more generally. The potential for human exposure to this vapor is much broader than landfill workers alone, as implied in section 4 'Disposal of CFLs' of the Regulatory Impact Statement (RIS) 'Disposal of CFLs'.

Problems with the Current Disposal Practices

With a lack of disposal alternatives and no incentive for recycling or recycling infrastructure the overwhelming majority of the approximately 70 million fluorescent tubes currently in use in the commercial sector nationally will finish life in landfill³. Currently up to 17.5 million compact fluorescent lamps are sent to landfill annually and less than 5% of lamps are recycled.

In addition, around 23 million CFLs have been distributed as a result of NSW's Greenhouse Gas Abatement Scheme. The current situation is, in itself, a major problem that needs urgent attention. Over the next few years the problem will only get worse adding to the toxic legacy that will negatively impact on current and future generations.

Absence of a viable plan for end-of-life CFLs in the RIS

The current disposal pathways are outlined in the RIS appendix 'Fact Sheet: Mercury in Compact Fluorescent Lamps and other mercury bearing lamps'. These, however, are severely limited and are in no way significant enough to accommodate current end-of-life CFLs, let alone the increased disposal volumes that will become apparent once the phase-out is underway. With less than sufficient disposal sites, a limited domestic collection service and an assertion that general practices is for CFLs to be disposed of via landfill present the RIS recommended disposal pathway is not significant enough to avoid a toxic mercury legacy being associated with this phase out.

The only reference in the RIS to a responsible disposal scheme is to work previously undertaken by the Environment Protection and Heritage Council (EPHC)⁴. Despite consultation and research having been undertaken by the Department of Environment Water Heritage and the Arts (DEWHA) on the issue for around 2 years, the EPHC has failed to release any reports on the issue. This is completely unacceptable, particularly in light of the imminent phase out.

As the Ministerial Council on Energy (MCE) has deferred any further action on the issue until the outcome of the EPHC report is made public, we call for the immediate release of this report and all DEWHA's work up to date on the issue. Further, it is inappropriate for the MCE to wash its hands of the issue merely because a problem created by one of its policies happens to fall under another department's jurisdiction.

² The Hon. Greg Hunt MP, Parliamentary Secretary for the Department of Environment and Heritage, Mercury Contamination of Australia's Landfill and Trade Waste Water.

³ New South Wales 2005-2006 Extended Producer Responsibility Priority Statement page 23.

⁴ Environment Protection and Heritage Council, Communiqué 02 June 2007

Extended Producer Responsibility

There is a need for an immediate and comprehensive policy response to this problem and it is likely that a market based instrument such as extended producer responsibility (EPR) could be an appropriate tool. The introduction of an EPR scheme is viable solution to disposal of CFLs as it circumvents the breakage and contamination issues associated with curb-side recycling programs, it will also in turn provide and incentive for increased recycling infrastructure development. Currently there is only one florescent products recycler operating within Australia.

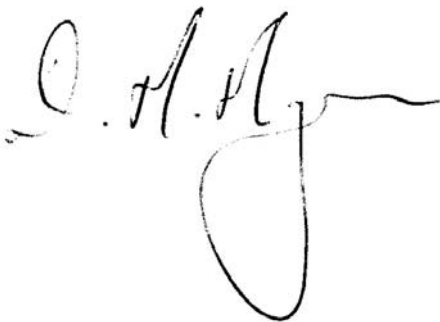
ATA and TEC call for the Ministerial Council for Energy, as part of this phase-out, to work with the Environment Protection and Heritage Council on the introduction of an extended producer responsibility scheme aimed at compact fluorescent lamps that places the physical and/or financial responsibility for collection and recycling on producers.

In addition to this, the minimum mercury content of CFLs should be restricted to no more than 1mg each in order to see the widespread adoption of up to date technology and a reduction in toxic mercury contamination of landfill.

Further Contact

Feel free to contact ATA or TEC should you have any questions regarding the content of this submission. We are available directly at the following details.

Yours sincerely,



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