



Submission in response to

Stewardship for Consumer and Other Electrical and Electronic Products
Discussion Paper

Feb 2022

Lighting Council Australia submission in response to the *Stewardship for Consumer and Other Electrical and Electronic Products - Discussion Paper*

Lighting Council Australia welcomes the opportunity to comment on the *Stewardship for Consumer and Other Electrical and Electronic Products - Discussion Paper*.

As highlighted in the discussion paper, Lighting Council Australia has experience in establishing and running product stewardship schemes. Lighting Council Australia are currently in the process of expanding our existing schemes. Our responses on the issues relevant to lighting are contained below.

Responses to questions targeted at lighting

Q2.25: What needs to be in place to divert the 82 per cent of lighting from landfill? Why and would it be a short-, medium-, or long-term intervention?

Market Conditions

Over the last 20 years the lighting industry has experienced a transformation in technology that has greatly increased both the lifespan and energy efficiency of lighting products.

LED lights last five to ten times as long and use 90 per cent less energy compared to traditional technologies. LEDs are ubiquitous and continue to voluntarily improve in performance and lifespan.

In Australia, the manufacture of lamps ceased around 2005. The importation of incandescent lamps (i.e. globes) was banned by the Commonwealth Government in 2009. The lighting industry has agreed a further ban on the importation of the majority of halogen lamps (i.e. globes) should occur soon – We expect this ban will commence in mid-2023. These changes will increase the average lifetime of lighting products from around 1 year to around 10 years plus.

Australian Bureau of Statistics import data indicates annual lamp import volumes have declined by around 60 per cent between 2006 and 2021. This is further acknowledgement of the market's move to longer life products.

The European Commission will phase out fluorescent lamps by 2023 under two directives (Reduction of Hazardous Substances Directive; and Single Lighting Regulation Eco-Design Directive). That will cause a significant decline in the global market, increase the price of fluorescent lamp manufacture and drive a further decline in this market.

Also relevant, the fourth Conference of Parties to the Minamata Convention will meet in March 2022 to discuss four lighting proposals that aim to ban the manufacture, import and export of the majority of fluorescent lamps on the global market between 2023 and 2025 in countries that have ratified the convention. Australia ratified the Minamata Convention on 7 December 2021. Lighting Council Australia supports the phase out of fluorescent lamps in Australia and globally.

The Minamata Convention has strong global support so we expect the proposals mentioned above (or slightly amended versions) will likely be agreed. That means by the middle of this decade the following UNU import categories will likely no longer be relevant to lighting imports in Australia:

- 0502: Compact fluorescent lamps (incl. retrofit & non-retrofit)
- 0503: Straight tube fluorescent lamps
- 0504: Special lamps (e.g., professional mercury, high- & low-pressure sodium)

Lighting Council Australia expects that during the later half of this decade, long-lasting and highly efficient LED lighting will be the only viable lighting technology on the market. The benefits of this transition will continue to propagate through the supply chain at a rate that is greater than projected in the *evidence report*.

Industry Led Voluntary Product Stewardship

As identified in the *discussion paper*, Lighting Council Australia has been proactive in leading voluntarily product stewardship activity aimed at increasing the recycling rates of the most harmful chemicals used in the lighting industry. The following Lighting Council Australia product stewardship schemes exist:

- FLUOROCYCLE captures the mercury, glass and metals used in discharge lighting including fluorescent lamps; and
- EXITCYCLE captures the batteries used in emergency lighting and importantly removes cadmium from the waste stream (i.e. Nickel Cadmium batteries). Cadmium has the potential to cause significant environmental and human harm. Metals, plastics and glass are also re-cycled within this scheme.

FLUOROCYCLE and EXITCYCLE are successful examples of voluntary, industry-led product stewardship schemes that continue to increase the recycling rates of environmentally harmful chemicals. These schemes have strong governance and continue to grow year-on-year. Currently, FluoroCycle and Exitcycle have over 330 and 60 signatories respectively.

FLUOROCYCLE and EXITCYCLE signatories are either asset owners/users (i.e. Businesses or Government Departments that commit to recycling removed lamps and batteries) or recyclers/collectors (i.e. those that collect and recycle lamps and batteries). The programs' administration costs are funded by a levy imposed on Lighting Council Australia members.

Data supplied by CMA Ecocycle in 2017 highlighted a 450% increase in the volume of mercury recycled from lighting waste since the launch of the FluoroCycle scheme in 2010. FluoroCycle has increased the recycling rate of fluorescent lamps from below 3 per cent in 2010 to currently around 19 per cent - as disclosed in the *evidence report*.

Lighting Council Australia acknowledges there is still much work to be done to continue to improve the recycling rates for lighting products. However, we also recommend Government should recognise the significant voluntary work undertaken to date - The lighting industry and many businesses that use lighting assets have demonstrated responsibility regarding the harmful chemicals utilised and a willingness to recycle the waste generated by the lighting market.

Further to the established schemes mentioned above, a major Lighting Council Australia member has recently piloted a trial to capture and re-cycle all lamps (i.e. light bulbs) and is now proposing to expand that scheme to its national network of retail outlets.

Lighting Council Australia has held initial discussions with other major retailers and we are currently working on the development of a national LIGHTCYCLE scheme that aims to further facilitate and increase the recycling

rates of remaining lighting products. We are planning to hold ongoing discussions including dealing with free riders to our schemes and how to deal with the costs involved in recycling collected products.

Lighting Council Australia requests Government consider providing supplementary support (e.g. funding) to facilitate the expansion of Lighting Council Australia product stewardship schemes to cover all lighting products.

Lighting Council Australia indicates a strong preference for industry led voluntary product stewardship schemes over regulated and co-regulated schemes. Through leveraging our existing network of lighting industry, installation professional, wholesale, retail and asset owner contacts, we expect to continue to expand our waste management schemes and recycling rates within the lighting market. We recommend a continued voluntary approach as the most effective and efficient use of resources.

Standards developments

Between 2019 and 2020, CEN-CENELEC (the European standards making organisation) published a series of eight standards that provide the general principles to consider when addressing material efficiency in energy-related products. These standards are horizontal guidance documents that focus on durability, remanufacture, repair, recyclability, reused components, recycled content, critical raw materials and information.

Responsibility has now been handed to product technical committees to deal with the application of these horizontal guidance standards to specific products and product groups. The International Electrotechnical Commission (IEC) technical committee (TC) 34 *Lighting* is responsible for international lighting product standardisation. IEC TC34 established an advisory group (i.e. *AG20 Environmental Aspects*) in 2020 to provide advice and recommendations regarding how IEC TC34 should implement environmental aspects (including but not limited to the areas above) in lighting standards.

Lighting Council Australia participates in IEC TC34 standards committees including AG20 and we expect that international lighting standards that deal with the topics above will be published in the coming years. Australian lighting standards are adoptions of IEC standards.

The majority of the lighting products placed onto the market in Australia are manufactured overseas. So we expect that the development of international lighting standards that incorporate and accommodate the aspects mentioned above will lead to a further global transformation in the way that lighting products are manufactured, used, maintained and re-cycled including a further significant increase in the lifespan of an average lighting product and a significant increase in lighting market resource recovery.

Q2.26: Would an approach similar to container deposit schemes be a feasible option for safely reducing the volume and rate of lighting to e-waste? Why and would it be a short-, medium-, or long-term intervention?

Regarding the lighting products used in commercial/industrial buildings and parks/streets, we suggest a model that facilitates a relationship and commitments (e.g. including requirements within service contracts) between asset owners, recyclers, electrical contractors, and lighting suppliers – as modelled by our FLUOROCYCLE and EXITCYCLE schemes – would be the most efficient and appropriate way to deal with general commercial lighting waste.

Regarding consumer lighting products, Lighting Council Australia has held initial discussions with major retailers and we are currently working on the development of a national voluntary LIGHTCYCLE scheme that aims to facilitate and increase the recycling rates of consumer lighting products. We plan to hold ongoing discussions that include consideration and planning to deal with free riders to our schemes and the costs involved in recycling collected products.

Unlike batteries, lighting products do not present a significant safety hazard when stored in bulk. However, potential exposure to glass or sharp edges in a collection bin means the general public needs to be protected at collection sites.

A Lighting Council Australia member has already taken the lead in this area under a pilot trial across 7 stores that collected more than 10,000 lamps within a 19-month period from 2020 – 2021.

From the data collected during this trial period, it is evident there is an appetite from both industry and consumers to facilitate an increase in the recycling rate of lighting products.

Lamp (i.e. light globe) Recycling Program Overall

Store	LED Globes	Fluorescent Globes	Fluorescent Tubes	Halogen Globes	Batteries	Total
Total	1817	1745	855	6020	1012	11449

Following the success of this trial, the Lighting Council Australia member is proposing to increase the scale of this recycling program by expanding nationally and including more than 110 retail outlets.

Q2.27: Would providing households with an easily identifiable bag to place small appliances into before placing in kerbside bins be a feasible option for safely reducing the volume and rate of lighting to e-waste? Why and would it be a short-, medium-, or long-term intervention?

No. We suggest that a kerbside bag is not an appropriate solution to address recycling of lighting products.

The characteristics of the lighting industry are unique, very different to other electrical and electronic product markets in terms of channels to market (e.g. supermarkets, hardware suppliers, electrical wholesale, specialty lighting retail outlets), the retail cost of products (e.g. relatively low cost items - \$3 lamp), product physical characteristics (e.g. from small lamps to large fittings), long lifetimes (e.g. 15,000 h – 50,000 h) and so lighting should not be aggregated with other product stewardship programs.

Due to the wide variety of lamp options available to consumers (e.g. different cap types, globe shapes, colour temperatures, light output, etc.) and the likely possibility that consumers may purchase the wrong product for their application, consumers often take their old lighting products to a store to buy like-for-like replacement products. This combined with the very long lifetime of LED products means that a specific e-waste bag would likely not be utilised by homeowners for lighting products.

Furthermore, lighting is ubiquitous, existing in both commercial and consumer sectors. The proposed solution would not help to improve recycling rates for commercial lighting products.

We suggest that a more appropriate approach for increasing the rate of consumer products would be the voluntary establishment of lighting collection points within the existing lighting supply chains (e.g. at retail outlets, electrical wholesale outlets, etc.) as mentioned above.

Q2.28: What other feasible options for safely reducing the volume and rate of small appliances to e-waste are available? Would it be a short-, medium-, or long-term intervention?

The lighting industry has a strong preference for voluntary industry led product stewardship schemes. For more than 10 years our schemes have been funded by the asset owners who are paying for recycling and our membership who are funding the administration of our schemes. Lighting Council Australia members supply the majority of lighting products in Australia.

We suggest that the most efficient approach (i.e. least cost and highest outcome) to increase lighting recycling rates is to leverage Lighting Council Australia's existing networks, knowledge and infrastructure. Further, Government support (i.e. funding) would enable a faster expansion of the scope of our existing product stewardship schemes to encompass all lighting products and the national establishment of more collection points.

Other points

- **Lighting market characteristics are unique:** The characteristics of the lighting industry are unique and mean that it is very different to other e-waste and appliance markets in terms of channels to market (e.g. supermarkets, hardware suppliers, electrical wholesale, specialty lighting retail outlets), retail cost of products (e.g. relatively low cost items - \$3 lamp), product physical characteristics (e.g. from small lamps to large fittings), long lifetimes (e.g. 15,000 h – 50,000 h) and so should not be aggregated with other product stewardship programs.
- **Care is needed so markets are not damaged:** Careful development of any new schemes is needed due to the likely high cost (i.e. proportionally high recycling cost compared to low retail cost) to recycle lighting products and the high likelihood of driving consumers to purchase products directly from overseas web-based suppliers if consumer prices increase dramatically. For example, the cost to recycle consumer lamps is currently around 30% of the purchase price.

About Lighting Council Australia

Lighting Council Australia (LCA) is the peak body for the lighting industry in Australia, representing 100 of Australia's leading manufacturers and suppliers. The lighting industry represents approximately 5,000 manufacturing jobs across Australia, and many thousands more in related product development and research, engineering, distribution, sales, and installation