June 21, 2019

Ontario Ministry of the Environment, Conservation and Parks
Resource Recovery Policy Branch
40 St. Clair Avenue West, 8th Floor
Toronto, ON M4V 1M2

RE: Lighting Industry Comments on the Draft Regulations for Electrical and Electronic Equipment and Batteries under the Resource Recovery and Circular Economy Act, 2019

Ontario Ministry of the Environment, Resource Recovery Policy Branch:

The Electro-Federation Canada (EFC), representing manufacturers of lighting products, is pleased to provide comments on the Ministry's recent proposal for resource recovery regulations governing collection and recycling of lighting products.

EFC is a national, not-for-profit industry association, representing over 225 companies that manufacture, distribute, and service electrical products in Canada; contributing over $10B to the Canadian economy and employing over 40,000 workers in more than 1,200 facilities across the country. EFC members produce and sell a wide range of electrical products, including distribution equipment, industrial controls, lighting, motors and generators, transformers, wire and cable, wiring supplies and electric heating.

Recycling is a responsible method of disposal of lighting products, and the lighting industry supports the Ministry's goals of improving the environment of the Province. To accomplish this goal, the industry offers several recommendations to improve the effectiveness of this proposal.

The lighting industry has several concerns regarding the proposed regulations for recycling lighting products under regulations that appear to have been primarily developed for electronic equipment and battery recycling. Lighting products are unique in many aspects and need special considerations when considering recycling programs.

The Ministry should also be aware that the lighting industry is and has been rapidly changing over the past 10 years. The older lighting technologies with incandescent, halogen, and fluorescent light sources are all being replaced with very long- lasting LED light sources. Specifically, standard incandescent light bulbs have already been eliminated by existing regulations. Standard halogen light bulbs are scheduled to be eliminated in 2020 by the Province's energy efficiency regulations. Screw-based compact fluorescent lamps are rapidly being replaced by screw-based LED lamps which now represent most lamps sold to homeowners. Linear fluorescent lamps are also being replaced by linear LED tubes.

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Because of the long life of LEDs, in the future, fewer and fewer light sources will need to be collected and recycled.

Fortunately, residential consumer lighting products are already being successfully collected and recycled by programs operating in British Columbia, Quebec, Manitoba and PEI. The third-party organization administrator, Product Care, has deep experience running unique lighting recycling programs across Canada, and in Ontario specifically, where it has managed the voluntary lamps recycling program for a year. Product Care, with the support of EFC and its members, supported a Voluntary Lamp Recycling program from June 2015 to May 2016. Total cost to fund this initiative was $1 million which was fully covered by PCA. This further demonstrates the commitment EFC members have in providing and supporting an effective lamp recycling program in the Province of Ontario.

Our primary concerns with the existing proposal for Electrical Equipment are as follows:

1. **THERE ARE TOO MANY NEW AND CHANGING BRAND OWNERS SELLING LIGHT BULBS FOR THE ONTARIO PROPOSAL TO WORK AS PROPOSED.**
    a. Unlike electronic products, such as computers, televisions, and DVD players, lighting products are purchased and disposed at a much higher rate. Since the number of products sold is large, the number of companies selling lighting products is also extremely large compared with consumer electronic products. The ENERGY STAR program for light bulbs currently lists 198 brand owners selling over 10,000 different ENERGY STAR LED lighting products. This does not even include additional manufacturers selling halogen lamps, compact fluorescent lamps and linear fluorescent lamps, and manufacturers selling non-ENERGY STAR LED products. This also does not include manufacturers of lighting fixtures. Adding to the complexity, just a few years ago the ENERGY STAR list was filled with over 100 manufacturers selling compact fluorescent lamps. Many of these CFL brand owners are now out of business, but their products will still be failing over the next couple of years in large numbers and will need to be recycled.
    b. Due to the vast array of products available, most homeowners will have multiple brands of lighting products installed in their home at any one time. Most retailers sell multiple brands of lighting products, some changing the supplier each year or every couple of years.
    c. Due to the large and shifting complexity of the light bulb market, it would be completely unworkable to require every brand owner to create their own lamp recycling program, or even have retailers collect only the lamp brands they are selling at that moment. Consumers are recycling failed light bulbs they purchased years ago, from retailers that may not exist anymore, or brands that may no longer exist. This is certainly true of dozens of CFL brands whose sales have now decreased rapidly. Many CFL manufacturers are no longer in business. Many manufacturers of today's 200 LED brands will no longer be in business in just a few years.

d. While the concept of each light bulb brand owner being responsible for recycling only their brand might work for electronic products or batteries, it will not work for the constantly shifting and multi-international lighting market.
e. There are light bulb recycling solutions that will work, just not the solution that was proposed. The most efficient solution is to have at least one PSO run an industry-wide recycling program in the Province that will accept all light bulbs, regardless of whether or not the manufacturer is still in business, regardless of the manufacturer's size, and regardless of when, where, and how the light bulb was sold.

2. **<u>THE PROPOSED SOLUTION WILL HAVE A LARGE NEGATIVE IMPACT ON COMPETITION:</u>**
   a. The proposed solution will create enormous marketplace imbalances due to exemptions given to small producers. Based on our experience in other Provinces, in order to cover all costs, the recycling fee can be anywhere from $ 0.25 to $1.00 or more per lamp. Considering the rapidly decreasing price of LED lamps to $1.00-$2.00 in some cases, adding a $1.00 recycling fee on a lamp, while exempting small producers, will shift the entire light bulb market to favor small manufacturers, while putting large manufacturers out-of-business. In addition, the proposal seeks to place the exemption level at 5 tonnes which is considered to be a "small producer" under the regulation. However, since lighting products are very light weight, 5 tonnes of lighting product could be equivalent to 30,000 to 50,000 lamps per year in a single Province, per a single brand owner. As there are over 200 light bulb companies that are trying to sell products in North America, and many of these already sell fewer than 50,000 lamps a year in Ontario, the market will quickly shift exclusively to multiple smaller brands selling fewer than 50,000 lamps a year and will result in zero manufacturers funding or running a lighting products recycling program.
   b. The solution to overcome this problem is to assure that all lighting product sold to consumers in Ontario participate in the recycling program by adding a Resource Recovery Fee to the product at the time of sale. This fee needs to be added at retail, like a tax, regardless of the light bulb brand and regardless whether it is sold online or at retail. This is the only way to keep a level playing field for all competitors for both manufacturers and retailers and provide recycling funding. This is critical if the recycling fee is to increase the price of the purchase by 50% to 100%. While the percentage increase sounds high, the absolute cost (~$0.50) is still very low per purchase. It is critical to maintain the fee on all products at the same level for all manufacturers, to prevent retailers from shifting to the lower cost products sold by exempted manufacturers.

3. **REPORTING SALES AND PROVIDING 3rd PARTY AUDITS IS VERY PROBLEMATIC.**

a. Industry understands the Province needs to make sure each manufacturer is participating in a lamp recycling program. Industry also understands the companies should be allowed to participate in one (or more) “industry recycling program” options or run their own program. The Province will want to know which retailers are selling a manufacturer’s products, or, if they are being sold online. The Province will also want a contact name for a manufacturer in case they have questions about their recycling activity participation in the Province and perhaps a few other items of information.
b. However, individual company sales data is highly proprietary and can do great competitive harm if released. Under an alternative solution, with a PSO or PSOs running industry-wide recycling programs, the Province should not require proprietary data from individual manufacturers. The alternative solution that has worked well in other Provinces requires reporting to the Producer Responsibility Organization (PSO) of products sold in the market for the purposes of assessing recycling fees. This consolidated information can be provided by the PSO to the Province to calculate recycling rates. As all manufacturers, both those inside and outside the trade association, must join some PSO program (or run their own) the Province will have a complete picture of sales in the Province for rate calculations.
c. Third party audits are expensive and can be avoided with a third-party audit, once every three years, of each PSO. It would be much more reasonable for all. Because the number of manufacturers selling lighting products is quite large, it would be difficult for the Ontario Ministry to deal with auditing 200 to 300 brand owners, especially with constantly changing retail supply chains and online-only sales, Adding to the complication, many of these brand owners are in foreign countries. A third-party audit is also not necessary if data is obtained from the PSO based on each product sold.

4. MOVING TO A THIRD-PARTY PSO SYSTEM ELIMINATES THE NEED FOR A CALCULATION OF MANAGEMENT.

a. After the PSO recycling program is running, the Province can obtain yearly sales data from the PSO program and can estimate recycling rates as shown in section 14, or the Province can easily change the calculation if a new method is determined to be more accurate.
b. Historical data for the total Ontario lighting market for 2016, 2017 and 2018 can be provided by Electrofederation based on previously reported industry data by member companies who have reported into the industry statistical program under agreed-upon terms of use.

5. BRAND OWNERS AND THE PSO CAN ONLY CONTROL THE NUMBER OF FREE COLLECTION SITES AVAILABLE TO THE CITIZENS OF ONTARIO.

a. The proposal seeks to require that brand owners/a PSO operate a minimum number of permanent collection sites based on population, or run collection events. Such a proposal seems reasonable and is controllable by the PSO.
b. Brand owners and the PSO can calculate the recycling rate, but they have no ability to control user behavior. What we have learned in other areas around the world is that a certain percentage of the population will recycle their lamps, while another percentage will not. While the PSO can calculate this percentage for the Province of Ontario, the program has little control over the final recycling rate.
c. Brand owners recognize that the 30%, 40% and 50% rates are worthy, aspirational goals, but they have little control over the actual recycling rate achieved. Brand owners' ability to affect this rate is in collecting fees and offering convenient and free recycling in the Province using a PSO.

6. LIGHT BULB AND FIXTURES RECYCLING RATES ARE BASED ON UNITS AND NOT WEIGHT.

a. Any lighting program recycling rate should be based on units and not weight. Lamps are very light and are recycled whole to better contain materials like mercury in fluorescent lamps. Weight appears to be a metric that is more commonly used for consumer electronics.
b. The 5 tonnes and 500 tonnes metrics proposed for lighting products represent an enormous quantity of lamps and fixtures. This metric should be eliminated. As stated earlier, all lamps sold in the Province should contain a recycling fee, making these arbitrary distinctions based on weight unnecessary.
c. Accordingly, recycling rates should also be based on the number of products collected divided by the number of products sold.
d. The collection site operation should be set at a maximum of 15 units per person per date range (e.g. per month). Setting the limit at 150 kg would represent an enormous number of light bulbs; that would be equivalent to recycling every lamp, in every house, on a street at one time. Again, weight is more applicable to electronics.
e. The municipality or Reserve should **only** be able to contact a **PSO** with a year's worth of collected products. Asking a single manufacturer to take all lighting products would be highly costly and anti-competitive for the random manufacturer that was contacted.

7. REDUCTION OF MANAGEMENT REQUIREMENT

a. Light Bulbs are mostly glass. Glass coming out of light bulb recycling centers cannot be used in making new light bulbs. New light bulb glass must be very pure to meet energy efficiency requirements. Recovered light bulb glass is often best used as an aggregate. Since glass may be 90% of the weight of a light bulb, and most light bulb glass is used as aggregate, it is not reasonable to

propose that this may only represent 5% of the material management requirement for recyclers.

b. We note that all "Reduction of Management Requirements" are designed for consumer electronics, and it continues to appear that lighting was simply added without full analysis of the differences between the two types of products. As detailed in these comments, an electronic recycling program will not work for lighting products, and a new proposal should be created specifically for lighting products based on existing, successful models.

8. WEBSITE INFORMATION

a. Websites like www.lightrecycle.org run by Product Care in Washington State in US; www.productcare.org run by Product Care in four Provinces in Canada and www.lamprecycle.org run by NEMA in USA, have been created to communicate recycling information of the industry. Ontario Ministry of the Environment, Resource Recovery Policy Branch could evaluate the merits of these organizations to support the Recycling program for Ontario and allow brand owners to direct their customers to anyone of these websites.

9. SCOPE OF PRODUCTS COVERED

a. Based on the discussion in the proposal, we believe the proposed "free" recycling program is only targeted to consumers who are recycling residential lighting products from their homes. We recognize that consumers are unlikely to recycle light bulbs unless the recycling program is free and convenient. However, commercial businesses have been recycling lamps directly using third-party recyclers for many years. Third-party commercial recycling is an established, efficient industry that cannot be replicated by manufacturers. Recyclers handle liability, insurance, and accountability for the lamp recycling process at the large-scale level, something manufacturers are not equipped to undertake.

b. **LIGHT BULBS.** The light bulb portion of the lighting products recycling program should NOT include incandescent and halogen bulbs which contain no hazardous materials. Most of these products have been or are going to be regulated out of the market. It makes no sense to spend time and energy setting up these products in a recycling system. They also have very short lives, typically a year of less, so once eliminated by regulations or market forces, they will be gone from the market quickly. The recycling program should only include fluorescent and LED bulbs. The entire market is moving to LED technology, but fluorescent lamps have very long lives, so they will need to be recovered and recycled in the future.

c. **LIGHT FIXTURES.** Few lighting fixtures come out of residences, and even fewer are returned for recycling. In British Columbia, the only other Province to include lighting fixtures, very few light fixtures are returned to the recycling program. Most of these metal light fixtures end up with scrap metal dealers.

We don't recommend including them in the recycling program. It is adding complexity for minimal return.

d. **OTHER.** Similarly, very few light strings, spotlights and flashlights are returned to recycling programs, and for the same reason we do not recommend including them in the program.

10. **Ministry Question: Is the definition of large-scale fixed installations appropriate?**
    a. The concept of excluding large scale, professionally installed, fixed installations is appropriate. The industry agrees with excluding street lighting and any permanent commercial, institutional, industrial, or other commercial lighting systems installed by professional contractors. Businesses installing such systems are professionally run, and they manage their own waste streams.

Our primary concerns with the existing proposal for Batteries are as follows:

1. **ADD AN EXCLUSION FOR BATTERIES UTILIZED AS PART OF EMERGENCY LIGHTING SYSTEMS**
   Batteries used as part of systems for emergency lighting are often required by building codes. The batteries are just one part of these complex systems which are designed to provide a specific outcome in the most critical situations. The replacement process of the system at end-of-life is not the same as replacing a battery in a consumer electronic device and therefore does not fit into the spirit of this regulation.
2. **BATTERY REGULATION SHOULD ALSO TARGET RESIDENTIAL-ONLY CONSUMER RECYCLING**
   As described above, this type of program is best matched with residential consumers for products designed for easy battery replacement.

SUMMARY

Electro-Federation Canada (EFC) recommends creating an industry-wide, residential-only consumer recycling program for fluorescent lamps and LED lamps operated by a third party PSO.

- All brand owners selling these types of light bulbs should be included in the program.
- The program should collect all light bulb types included in the program at all sites, up to 15 lamps per person per month, regardless of brand owner, or whether the brand-owner is still in business.
- Many of the collection sites should be at convenient retail locations.
- Manufacturers should continue to support www.lamprecycle.org and place Ontario recycling information on this site.

- Manufactures can provide registration data to Ontario, and can agree to what information is necessary, but should not be required to provide propriety sales data (which will be provided by the PSO, or the trade association for earlier data).
    - This program can provide yearly sales data and calculate recycling rates based on units sold and units recycled.

- As no proprietary data will be provided, there is no need to audit the data of hundreds of manufacturers, which would be extremely costly and time consuming for both brand owners and the Ontario Ministry.
    - A PSO audit every three years is reasonable.
- Add an exclusion from the Battery Regulation proposal for batteries that are utilized as part of Emergency Lighting Solutions.

Thank you for the serious consideration of our comments.

We look forward to receiving a favorable response.

Kind Regards,

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