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Representative Amy Sheldon  
House Committee on Environment and Energy  
Vermont State House  
115 State Street  
Montpelier VT 05633

RE: S.254 EPR Battery Bill

Madam Chair and members of the Committee,

Thank you for inviting me to speak to you about S.254. My name is Jen Holliday, and I am the Director of Public Policy and Communications for the Chittenden Solid Waste District. I am also a founding member and Chair of the Vermont Product Stewardship Council whose members include most of the Vermont Solid Waste Management Entities (SWMEs). The VTPSC was formed to work on Extended Producer Responsibility (EPR) legislation. The VTPSC initiated and was involved in the first in the nation EPR law for primary batteries that passed in Vermont in 2014 and has been involved in S.254 that will update this law. I am also a Board member and past president for the Product Stewardship Institute, a national organization that specializes in EPR policy including EPR battery legislation. CSWD, the members of the Vermont Product Stewardship Council representing local government in Vermont responsible for waste management and the Product Stewardship Institute all support S.254.

This bill will bring rechargeable batteries and batteries sold in products into the very successful existing EPR law for primary batteries. By doing so this legislation will:

1. Help prevent fires in solid waste facilities and vehicles as well as in businesses, institutions, and homes.
2. Provide sustainable funding, that comes from the manufacturers of batteries, for collecting additional battery types and compensate the municipalities to collect, sort and ship them to a recycler.
3. Save natural resources that are essential for making more lithium-ion batteries and will help keep batteries out of the landfill and from harming the environment.

**S.254 will help Prevent Fires**

Batteries have become one of the most common sources of fires at solid waste and recycling facilities in the U.S. and Canada, resulting in:

- injuries to both waste workers and emergency responders,
- causing millions of dollars in damages to vehicles, equipment, buildings, and materials, and
- causing costly service disruptions.

Fires mostly occur when consumers improperly dispose of their lithium-ion batteries in their trash or blue bin. If these batteries are crushed or physically damaged it can cause the battery to short circuit, become super-heated and start a fire in the solid waste vehicle or facility.

According to a 2021 report done by the U.S. EPA of all the solid waste infrastructure, material recycling facilities (MRFs) in particular face the [brunt of the negative impact from battery fires](#). The data shows more than a 3,000% growth in battery fires at waste facilities since 2013 with close to half of them occurring at MRFs. A more recent report from the National Waste & Recycling Association estimates that more than 5,000 fires occur annually at MRFs. This number is likely underestimated due to underreporting.

CSWD knows firsthand that battery fires in MRFs are all too common and are underreported from our own experience at our MRF in Williston. Casella Waste, who operates our MRF reports that fires are a weekly occurrence. Most are managed and put out by staff at the facility and never reported. But in 2018, we had a major fire that started on the tip floor shortly after the facility was closed and all the employees had left for the day. It destroyed a portion of the roof and side of the building before the fire department was able to extinguish it. Had an employee working at the transfer station next door not seen the smoke coming out of the building, the damage most certainly would have been worse and potentially resulted in a complete loss of the facility. This facility is a critical part of the solid waste infrastructure, processing over half the recyclables that are generated in Vermont. Without it, we would likely be shipping these recyclables out of state at a significantly higher cost that would be passed on to the generators, the businesses, institutions, and residents of the state.

We are about to break ground on a new \$30 million state-of-the-art MRF that will replace our current MRF with an opening date in the fall of 2025. We are considering installing infrared heat detection cameras for that facility that would aid in detecting fires. A better solution is to keep the source of these fires, lithium-ion batteries, out of the facility. Managing fires at the MRF is dangerous for the employees, causes shutdowns for the facility and renders any recyclables involved in a fire that are drenched by water, unrecyclable and landfill bound.

S.254 will help reduce the risk of fires at solid waste facilities by helping to keep rechargeable batteries out of the trash with the landfill ban in the bill and increased public education and awareness through the stewardship program about proper recycling of rechargeable batteries. S.254 will also help reduce fires in homes, businesses, and institutions by requiring producers to provide free and convenient drop-off locations for rechargeable batteries including the collection of damaged or defective lithium-ion batteries that are the biggest risk for starting fires and require special handling and packaging which the producers will support.

### **S.254 Provides Sustainable Funding and Compensates Municipalities for Collection**

CSWD is a municipality that serves all of Chittenden County and our mission is to help our members reduce waste and divert as much as possible from the landfill. This is why we started a battery recycling program in 1995, much earlier than the EPR program for primary batteries was established in 2014. We collect batteries at our hazardous waste collection facility and at five of our drop-off centers located throughout the county.

When customers drop off their batteries, our trained staff sorts the batteries by size and chemistry into two different 5-gallon reusable plastic pails. Before doing this, they must terminal protect each lithium-ion battery and batteries greater than 12 volts. Terminal protection requires individually bagging each battery in a plastic bag or individually taping the terminals of each battery with packing tape. All pouch cell lithium-ion batteries must be bubble bagged to protect them. This is done to prevent terminals from one battery contacting another battery which can start a fire. Sorting and terminal protecting the batteries is done manually, one battery at a time. Our maintenance staff collects the full pails from our drop-off centers and delivers them to our hazardous waste facility where the staff at that facility empties each pail and scans the contents to ensure they have been properly separated and terminal protected and then packs them into shipping containers that comply with the Department of Transportation Regulations to be transported to the recycler. In 2023 CSWD shipped close to 20 tons of batteries. We estimate this involved 1,500 – 2,000 hours of labor. There are also costs associated with supplies to prepare and ship batteries that are not paid for in the current program. This includes special containers necessary to ship damaged or defective lithium-ion batteries that can cost as much \$95 per container to ship a single damaged or defective battery.

Batteries contain valuable resources such as steel, manganese and zinc as well as cobalt, lithium and graphite. [According to the EPA](#), cobalt, lithium and graphite are considered critical minerals by the United States Geological Survey. Critical minerals are defined as raw materials that are economically and strategically important to the United States and have a high supply risk potential and for which there are no easy substitutes. The EPA states that every effort should be made to recycle and recover these materials to ensure they will be available for generations to come. Cobalt and lithium mining also uses energy-intensive processes that emit greenhouse gases. Lithium, and cobalt mining (combined), causes around 34 billion tons of carbon dioxide equivalent (CO<sub>2</sub>e) worldwide annually.<sup>1</sup> Recovering lithium and cobalt from recycled batteries will reduce the need to mine virgin material, thus reduce greenhouse gas emissions.

This is a quote from a 2023 U.S. Department of Energy Notice of Intent for funding (DOE grant application):

“With the demand for EVs and stationary storage projected to increase the size of the lithium battery market five- to ten-fold by the end of the decade, it is essential that the United States invests in projects that encourage consumers to recycle batteries and battery-containing devices, develop methods to reduce the cost of recycling batteries, and accelerate the establishment of new collection, reprocessing, and recycling programs in states, localities, and at retailers. The recycling of batteries and battery-containing devices is paramount for the establishment of a robust domestic critical material supply chain for electric vehicle batteries.”

Keeping our resources in circularity is just one environmental benefit of collecting and recycling batteries. Batteries also contain hazardous materials, including cadmium and lead. Collecting and recycling batteries keeps them out of the landfill and from contaminating the environment.

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<sup>1</sup> <https://www.recycletechnologies.com/why-cobalt-and-lithium-crucial-for-battery-recycling/>

S.254 mandates manufacturers to recover rechargeable batteries through the existing EPR program which will help recover more lithium-ion batteries to be recycled for use in new batteries. Without S.254, the rechargeable battery collection program is voluntary and less effective.

S.254 also bans primary and rechargeable batteries from landfill disposal which will help divert more batteries from the landfill and protect the environment.

### **Why weren't rechargeable batteries included in the initial legislation?**

In summary, in 2014 Vermont became the first in the nation to pass an EPR law for primary single-use batteries. This law has been highly successful. During its first year of implementation, Vermont increased collection of batteries by 180 percent. At the time the primary battery law was passed, there were relatively small amounts of rechargeable batteries in consumer products and there was a voluntary program to handle the small amounts of batteries. Today, thousands of products are powered by rechargeable batteries, and more are being developed every day. S.254 is simply an update in response to what is occurring in the marketplace. The need to sustainably fund and collect rechargeable batteries is even greater than the original need to collect primary batteries. Because unlike primary batteries, rechargeable batteries are a safety concern that threatens our solid waste infrastructure, and they contain critical minerals that have a high supply risk and are essential for supporting clean energy industries such as renewable energy and electric vehicles. California, Washington D.C., and Washington State have recently passed EPR laws that cover a broad scope of single-use and rechargeable batteries. S.254 will align our battery law with these more recently enacted laws.

Fact Sheets submitted to the Committee:

- The Association of Plastic Recyclers Q&A on Lithium Battery Fires at Material Recovery Facilities (MRFs) on MRF fires
- Vermont Solid Waste Management Entities (SWMEs) One Pager – Vote Yes for Senate Bill S.254

<https://www.energy.gov/mesc/battery-materials-processing-grants>

<https://www.energy.gov/articles/biden-harris-administration-announces-35-billion-strengthen-domestic-battery-manufacturing>