



National Electrical Manufacturers Association

Representing Electrical and Medical  
Imaging Equipment Manufacturers  
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**Comments of the  
National Electrical Manufacturers Association (NEMA)  
to U.S. Environmental Protection Agency (EPA)  
Bipartisan Infrastructure Law (BIL): Request for Information  
Development of Best Practices for Collection of Batteries to be Recycled and Voluntary  
Battery Labeling Guidelines**

**Docket ID No. EPA-HQ-OLEM-2022-0340**

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Please feel free to contact NEMA's primary point of contact for this response to the RFI:

**Todd Sims  
Director, Government Relations  
National Electrical Manufacturers Association (NEMA)  
1300 N. 17<sup>th</sup> St  
Suite 900  
Rosslyn, VA 22209  
[Todd.Sims@nema.org](mailto:Todd.Sims@nema.org)  
703.841.3221**



## **Comments**

### **Background on NEMA**

The National Electrical Manufacturers Association (NEMA) is the leading U.S. trade group representing electrical equipment and medical imaging manufacturers, which are at the forefront of efficiency, sustainability, and resiliency. Our nearly 325 Member companies provide a range of products, including those that make high-performance buildings, electric vehicles, and reliable energy distribution possible. Collectively, our membership provides some 370,000 American manufacturing jobs in more than 6,100 facilities, with worldwide industry sales exceeding \$130 billion. The electroindustry has a robust domestic manufacturing base and supports the fundamental goal of creating good-paying American jobs, shoring up our domestic supply chains, and improving the country's built environment.

The Biden-Harris Administration has taken quick action to implement the historic Infrastructure Investment and Jobs Act (IIJA). The IIJA represents a major milestone in the transformation of U.S. infrastructure systems toward accessible, electrified transportation systems, modernized buildings and lighting, a more resilient grid, and increased efficiency of expanded U.S. manufacturing. The legislation also includes important Build America, Buy America (BABA) provisions that in the long term will allow for more resilient and equitable domestic supply chains and support the creation of high-paying American jobs. The ambitious timelines outlined in law combined with the difficulties faced by U.S. manufacturers in obtaining raw materials and supplies used to support infrastructure projects in our current global geopolitical environment underscore the need for a nimble and strategic approach to implementation.

### **Portable Battery Materials**

Our members produce primary and rechargeable portable batteries. The chemistries of our primary batteries are alkaline, lithium iron disulfide, zinc air, and carbon zinc. Lithium iron disulfide primary batteries differ from the lithium-ion batteries of cell phones, computers, and electric vehicles in that the latter contain a different cathode material and are rechargeable. The primary chemistry of portable rechargeable batteries are nickel-metal hydride, nickel cadmium, and lithium iron phosphate. The materials available for recycling include steel, zinc, manganese, nickel, cobalt, lithium, and some nickel-metal hydride batteries contain trace amounts of rare earth materials. These materials are most efficiently reused in construction materials such as highway lane dividers, tools, and bricks. With respect to where the recycled materials return into the circular economy, NEMA strongly supports an open-loop recycling system to ensure the highest percentage of materials can be reused in the most carbon-efficient manner possible.

### **Structure of Collection & Recycling Program**

#### **A. Infrastructure and Capacity**



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Before considering the design of a program, the initial issue of the recycling infrastructure and capacity should be considered. There is little purpose in collection and recycling if the recycling infrastructure cannot handle the volume, leading to collected batteries being thrown into landfills. NEMA strongly supports the Department of Energy and the EPA's continued efforts to expand the system's capacity. The scope of any model program guidelines should take into account the recycling system's infrastructure and ensure that any proposed program operate within the parameters of what can be achieved.

#### B. Elements of Program; Transparency

Transparency is vital for the operation of a successful collection and recycling program. If a consumer can see that they are paying for recycling when the battery is purchased, they are more likely to recycle the battery. That is why an Environmental Handling Fee (or "EHF") is an important aspect of any recycling program. In addition to encouraging recycling, it also provides vital transparency to the recycling system and allows all to understand the true cost of recycling. If the recycling system is not efficient and the EHF increases, consumers will respond and demand that the system operate in a more economically prudent manner. An EHF also keeps prices down for consumers because, instead of being built into the price of the products and increased at each stage of distribution network, the cost is set and more easily collected.

In many instances, the purchaser of the battery and the individual that must make the decision to recycling the battery at end of life are not the same. Often, the battery is included in a piece of equipment that is purchased to perform a primary function while a contractor or maintenance individual servicing the equipment will replace the battery that must then be recycled. This second event (when the battery is recycled) must be as user-friendly and convenient as possible to encourage participation. Having the fee incorporated transparently in the purchasing process will both contribute to the simplification of the collection. Further, to support the alignment of the battery technology with the recycling needs, minimal information should be included on the battery itself.

#### C. Purpose

NEMA believes the goal of labeling should be to advise consumers of the possibility of recycling and seek to avoid throwing batteries into the general waste stream if there are recycling options. To best inform consumers of what they should do with a used battery, NEMA recommends reviewing the ANSI C18 Battery Committee's battery environmental reference standard, ANSI C18.4-2017. This reference standard reviews the global breadth of battery environmental programs, including indicators to assist consumers. The information in this standard, combined with the widespread adoption of QR codes, can enhance consumers' knowledge and improve their experience can enhance consumers' willingness and knowledge of how to recycle batteries.

The globally utilized symbol to advise consumers not to throw away batteries the crossed-out waste bin:



This symbol clearly indicates to the consumer that they should avoid throwing the battery away if there is an alternative. If guidelines are created regarding battery labeling and the established goal is advising consumers to recycle, we believe this should be the method to inform consumers.

With respect to where such a reminder should be placed, we believe packaging is the best location for the icon with further information available on a website accessible via a QR code. QR codes can be utilized to provide information regarding recycling options, identify the materials, and highlight what happens to the battery material after the consumer sorts it for collection. In its forthcoming Battery Regulation, the EU is relying upon QR codes to relay important environmental information to consumers.

#### D. Response to Feedback Sessions

The feedback sessions relating to this Request have included discussion of several collection possibilities, including a deposit system akin to glass bottle systems in place in certain areas. This is not a viable solution for batteries. The EU Joint Research Center examined this possibility on behalf of the European Commission as they formulated their version of the new European Battery Regulation. They quickly discarded it as a potential solution for several logistical and economic reasons.<sup>1</sup> First, primary batteries are not single use products. A portable battery, primary or rechargeable, can have a useful life of several years with several thousand “uses.” For example, a primary battery in a television remote control can power the device tens of thousands of times to change a channel, adjust the volume, etc. A “single use” product is one that is used once and then discarded. Second, portable batteries have shelf lives of a decade or longer, and thus are often not used immediately after purchase like a beverage bottle would be. Turnover in the material would not match, and maintaining reserves to cover deposits would be incredibly burdensome. Third, a deposit system would essentially set retailers as the only collection site, which would harm the effectiveness of the recycling system. In some EU nations, retailers account for only 20% of the batteries collected for recycling. Finally, several other results of a deposit system, such as deposit tourism, label fraud, tracking of online sales, and other issues strongly indicate that a deposit system is not appropriate for portable batteries.

An additional critical factor in creating an active recycling open loop is the enablement of the recycling supply chain beyond collection. Everyone has had the disappointing experience in

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<sup>1</sup> European Commission (2020). *IMPACT ASSESSMENT REPORT Accompanying the document Proposal for a Regulation of the European Parliament and of the Council concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) 2019/1020*, 3 of 3, p. 180.



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consumer plastics from the inability to efficiently identify and process a variety of compositions. The same circumstances could arise in the battery space without consistent definitions, identification, and financial support from the government to the multiple process steps that are needed in the recycling open loop. As part of this effort, there should be a thorough analysis on the environmental life-cycle through the recycling process for each chemistry. For some chemistries, it may be determined to be a larger negative environmental impact through recycling than in disposal, then it would be more appropriate to not include those types and focus energies where the positive benefits are more strongly demonstrated.

### **Voluntary Labeling**

NEMA supports the ongoing efforts by the EPA to improve messaging and outreach to consumers on the benefits of safely recycling portable batteries as part of the Guidelines. NEMA encourages the EPA to work closely with NEMA, manufacturers, and other industry organizations to develop safety messages for consumers and businesses on battery use, storage, and end-of-life treatment. The EPA should also utilize further technological advances and encourage QR codes as the primary means of relaying important information to a consumer such as disposal locations and specific chemistry considerations.

With regards to battery labeling, generally, NEMA believes labeling guidelines that are consistent with other national and international standards and regulations, such as the European Union's forthcoming amended Batteries Regulation, to support the goal of successful recycling networks. The EPA must also keep in mind that the surface space on labels for such information is limited, so more extensive information can be included in product support documentation.

Additionally, since the program is voluntary, it should be designed in a manner to encourage manufacturer participation. Labels changes are difficult and complicated to implement for manufacturers. If the voluntary labeling suggestions are minimal and aligned with international standards and regulations, manufacturers are much more likely to participate.

### **Conclusion**

NEMA and its members are proud to support the Administration and Agency's goals of improving the efficiency and sustainability through efficiency, electrification, and improving circularity. As the voice for the electroindustry, we look forward to assisting the Agency in enhancing the ability to recycle batteries and ensuring there is equitable access to the programs across the country.