

## **OneCharge's Environmental Policy**

### **Recycling**

Global demand for lithium-ion batteries has more than doubled over the last 10 years. Many lithium recycling plants are coming online nationwide to meet the increased need. For example, the US government awarded \$9.5 million to a major US recycler to upgrade and increase the capacity of an Ohio recycling plant. Redwood Materials raised \$700 million to expand its operations to locations throughout North America. Therefore, the recycling landscape five years from now is expected to be noticeably different from today.

OneCharge actively consults and supports all potential partners for recycling of lithium batteries, as well as governmental and other non-profit organizations that promote electrification and wider use of zero-emission off-highway vehicles, such as the California Air Resource Board (CARB).

### **Re-use and Re-purpose**

A battery in which 20% of the cells are degraded is considered to have reached its end of useful life. When a lithium battery no longer holds enough charge, there are a number of options that help to considerably extend its useful life, such as:

- retrieving the remaining good cells and putting them into a refurbished battery pack;
- deploying cells for alternate second-life usages, such as grid energy storage or emergency power;
- refurbishing the steel case and electronics for use in a new battery, or recycling them.

### **Environmental Benefits of Industrial Lithium Batteries**

Workplace safety.

OneCharge strongly believes that switching to lithium is a much cleaner, more environmentally friendly solution than other available options. For example, it resolves the issues associated with lead-acid batteries, such as acid spills, corrosion, sulfation, and contamination.

Raw materials.

OneCharge recognizes that procuring any raw materials impacts the environment, but lithium is obtained almost exclusively from brine pools, meaning that extraction is safer and less damaging to local ecosystems than other forms of mining. Furthermore, OneCharge operations use lithium iron phosphate (LFP) cells, which provide the greatest number of cycles compared to other commercialized lithium cell chemistries, such as NMC and NCA. LFP cell production uses neither nickel nor cobalt, two metals known to be mined using unethical practices. LFP is also the safest technology, with a higher threshold for thermal runaway (cell ignition is less likely).

Carbon footprint and energy efficiency.

OneCharge lithium batteries last up to five times longer than traditional lead-acid batteries, meaning fewer batteries are manufactured and recycled, reducing the volume of industrial waste and minimizing our carbon footprint.

In addition, lithium batteries have higher energy conversion efficiency, which directly translates into a 30% lower use of electricity (compared to lead-acid batteries), further reducing the carbon footprint of operations.



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When OneCharge lift truck lithium solutions are used to electrify the forklift fleets of our customers who are switching from internal combustion engine lift trucks, the reduction in CO<sub>2</sub> emissions helps deliver on the following commitments:

- eliminating on-site CO<sub>2</sub>, CO and NO<sub>x</sub> emissions – on Day 1.
- stopping on-site exhaust fumes.
- eliminating the disposals of used oil, transmission fluid, and filters.
- improving workplace conditions with cleaner air and providing customers with cleaner products.
- preventing up to 12 tons of CO<sub>2</sub> from entering the atmosphere per truck per year.

#### Procurement.

We only work with reliable vendors with an international presence and a proven reputation. We continuously monitor and review our vendors of parts and components as part of our standard business practice.

