



February 2, 2023

Senate Committee on Energy and Environment
Oregon State Capitol
900 Court St. NE
Salem Oregon 97301

Re: SB 64 - Neutral

Dear Chair Sollman, Vice-Chair Findley, and Members of the Committee,

Climate Solutions is a regional non-profit working to accelerate clean energy solutions to the climate crisis. We appreciate the legislative dialogue sparked by SB 64 and offer the following perspectives.

With batteries taking on a larger role in the transition to our clean energy future, it is of great importance to ensure that sustainable second life and end of life strategies are understood and implemented. Powering our economy with 100% clean electricity from wind and solar is a key part of how we get off fossil fuels and cut climate and air pollution. Batteries provide the ability to store wind energy when the wind is blowing and solar energy when the sun is shining, and then deploy that renewable energy when there's no wind or the sun goes down. Rechargeable batteries for cars, trucks and buses similarly can be charged up and run on clean electricity instead of gasoline or diesel.

About 10% of the world's cobalt supply is currently being used for batteries to power EVs. In contrast, roughly 30% of all cobalt mined is used for consumer electronics like cell phones and laptops that use rechargeable lithium-ion batteries. With new federal and state investments pointing to the future of transportation being electric, EV production is ramping up. The EV battery supply chain needs improvements to ensure batteries are sustainably sourced to begin with and to ensure the end-of-life supply chain repurposes batteries for energy storage and recycles batteries to reuse raw materials.

On the front end of making more sustainable batteries, research is being done around the globe to figure out how to move past lithium-ion batteries to next generation batteries that don't require precious metals like cobalt and lithium. There are already some companies and projects starting to do so already. For instance, Xcel Energy [recently announced plans](#) to build a 10 MW battery storage system in Colorado using an iron-air technology that replaces the need for precious metals. Similarly, here in Oregon, [ESS Inc. in Wilsonville](#) makes long duration iron-flow batteries that use water and salt instead of rare earth metals. New technologies and research projects that will help accelerate the clean energy transition are underway, such as the research being conducted at [Oregon State University](#) to develop a new battery that reduces the need for rare earth metals like lithium. There are many exciting new opportunities like this on the horizon,



presenting another way that Oregon is leading and will benefit in the clean energy transition underway.

With a focus on sustainable second life, and end of life strategies for batteries, there have also been a variety of projects that benefit from the growing market for reuse of used lithium-ion batteries. When batteries need to be replaced in vehicles, they still hold a significant charge that can be repurposed for other forms of energy storage. We believe reuse should be prioritized over recycling as the first step for used batteries and suggest that **opportunities for reuse of used batteries should also be included in any study** of what to do with used lithium-ion batteries.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "V Paykar", written in a cursive style.

Victoria Paykar
Oregon Transportation Policy Manager