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May 10th, 2021

Sen. Lew Frederick, Co-Chair

Rep. Susan McLain, Co-Chair

Dear Co-Chairs Frederick and McLain,

My name is Dr. Mason Terry and I have served as the Director of the Oregon Renewable Energy Center (OREC) for the past four years. I am writing to you today in support of continued funding for OREC, a state program founded in 2001 at Oregon Institute of Technology (Oregon Tech) as an applied research center that promotes energy conservation and renewable energy use in Oregon and throughout the Northwest.

OREC's mission is to enhance development and promote availability of renewable energy through, energy systems engineering, applied research, technical assistance and information dissemination, academic degree programs and industrial training and development.

Over the last three years, I have collaborated with outside organizations to organize and host nine public events, six tours, and two workshops on- and off-campus. Those have included:

- The Energy Trust of Oregon annual board meeting, hosted at the Klamath Falls campus and the first board meeting in 19 years held outside the Portland-Metro area.
- Solar Pints, a public event to meet solar experts and sustainability professionals.
- 2019 Symposium Making Energy Work for Rural Oregon, an event to bring renewable energy and sustainability experts together for a half-day tour of sites and a full day conference.
- Oregon Institute of Technology 2019 Energy Summit, hosted at the Portland-Metro campus with over 150 people in attendance.

In addition to increasing collaborations with industry partners, OREC has been successful in securing external funding for research projects including the U.S. Department of Agriculture Rural Energy for American Program Energy Audit (\$100,000), Energy Trust of Oregon off-grid solar powered irrigation study, and Lake County Resource Initiative offsetting abiotic carbon emissions quantification. The research contract with Lake County Resource Initiative Carbon Study is a 9-month contract (\$25,000) that will utilize the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories methodology to quantify carbon emissions in Lake County. This study is the first in what I hope will be many covering other rural counties in Oregon. OREC also supports various student capstone and applied research projects some of which have competed and won in state competitions including

Catalyze Klamath and InventOr. To list 2 of 12: The Reclaimers, converting waste plastics into crude oil through pyrolysis and a zeolite catalyst; Helios Hive, designed to eradicate the varroa mite, one of the major causes of honeybee hive collapse, from the hive via resistive heating powered by a small solar + storage system.

One project that has recently gotten the national attention of Senator Jeff Merkley (D-OR), is the floating solar aeration project which is a collaboration project with the Klamath Tribes to address the inadequate levels of oxygen in the lake, one factor contributing to the mortality of endangered local fish. Press coverage of this project has been local, national on NPR and Jefferson Public Radio, other outlets and Senator Merkley's media page which has generated several requests for collaboration from research groups across the US and raised the profile of OREC and Oregon Tech nationally. This project has inspired the creation of a \$1.5 million federal grant advocated for by Senator Merkley to expand these systems and a DoE SBIR research grant funding targeting floating solar aeration. In the first two years of the project, \$32,000 of OREC funds were used to build eight systems and I look forward to expanding this critical project.

Two additional applied research projects are planned for starting this summer and fall: Off-Grid Solar + Storage Irrigation, Algae Biodigestion for Green Hydrogen, and a third, Solar Pivot Irrigation, is in the early planning stage. Each of these projects are targeted towards solutions for rural Oregonians; be that reduced energy use in agriculture to using a toxic algae to replace natural gas with hydrogen.

I strongly encourage you to support continued funding for the University State Programs for the 2021-2023 biennium at \$48.8 million, a 7.42 percent base funding increase, which for OREC amounts to \$566,634 that funds student workers and the ability to support applied undergraduate, graduate, and faculty research projects, and increase OREC's ability to leverage state and federal research investments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matt Tracy", is written over a light blue horizontal line.

Director, Oregon Renewable Energy Center