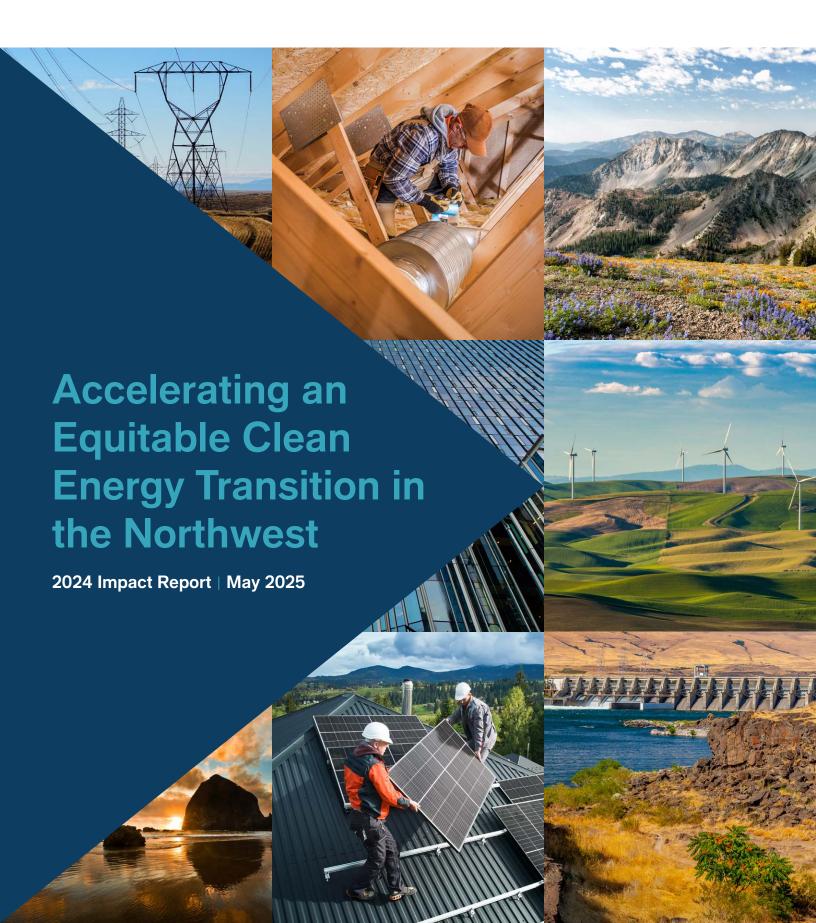
Clean Energy Transition Institute



Letter from the Executive Director

The Clean Energy Transition Institute raced across the finish line in 2024, having engaged in more mission-consistent projects in one year than we had in our combined prior six years. While there is no question that the Biden Administration's effort to catalyze an equitable clean energy



economy put wind in our sails, our full plate also reflected our track record since our founding in 2018.

In 2024, we hewed closely to our mission to accelerate an equitable clean energy transition in the Northwest with work-force-related projects; Washington and Oregon energy pathways modeling; continuing efforts to jumpstart a clean buildings industry; engagement in transmission planning and rural clean energy; and our demystifying decarbonization products.

An assault on the clean energy transition is in full swing with a new administration at the helm in Washington, DC. While it is tragic that we have to spend even one ounce of energy fighting backwards action given the existential climate crisis we aim to mitigate, we've been here before, and we are far from starting from scratch.

We know what we are doing and what it takes to decarbonize the Northwest. We have new team members and a clear understanding of the barriers to overcome to get on the path to a net-zero future. We are staying true to our north star, unwavering in our commitment to provide unbiased data and analytics to advance a swift and equitable low-carbon economy.

We are profoundly grateful for our loyal donors and funders, who make everything we do possible, and the partners we are fortunate enough to collaborate with. We pledge to work as hard as we can to not lose momentum accelerating an equitable clean energy transition in the Northwest.

Very truly yours,

Eileen V. QuigleyExecutive Director

Letter from the **Board President**

In these turbulent times, as many climate-oriented organizations suffer whiplash from changes to federal priorities, funding, and regulations, the Clean Energy Transition Institute's (CETI) work is strong, steady, and more important than ever.



CETI offers a unique value proposition to the Northwest because we are data-driven and nonpartisan, so we can help fill the voids left by recent changes in national climate policy. We provide unbiased analytics to a range of constituents that shed light on the opportunities, risks, and trade-offs of different strategies to decarbonize our region at the pace and scale required to avert climate change's worst impacts.

I am privileged to serve as CETI's Board President, and 2024 was a banner year for CETI. We published an analysis of how achieving net-zero will affect employment in each Northwest state. We engaged actively on regional transmission issues. We expanded our reach in Oregon, where we are helping to prepare the state's energy strategy. We're off to a running start in 2025 with top-notch additions to our staff and Board.

Some people who understand the gravity of climate crisis nevertheless look away in despair, feeling that there is nothing we can do, and that climate chaos is inevitable. This cynicism is misplaced and counterproductive. Although damage has been done and we can see severe and growing impacts, every tenth of a degree matters.

We have most of the solutions we need to stop polluting the atmosphere with carbon emissions and to slow, curb, and even reverse climate impacts. CETI is working hard to help identify equitable and cost-effective solutions that are tailored to our region. I hope you will read on to learn more and support CETI's work.

Sincerely,

Liz ThomasBoard President



Who We Are

The Clean Energy Transition Institute (CETI) is an independent, nonpartisan research and analysis nonprofit whose mission is to accelerate an equitable clean energy transition in the Northwest.

What We Do

We advance technical, economic, and equitable decarbonization solutions tailored to Idaho, Montana, Oregon, and Washington through:



Research & Analysis: Providing independent, unbiased research and analytics on deep decarbonization pathways.



Decarbonization Studies: Framing, translating, and demystifying complex decarbonization solutions and their impacts on emissions, community health, and workforce.



Convenings: Bringing together regional partners to debate the trade-offs and opportunities inherent in the clean energy transition.



Fact-Based Conversations: Using our unbiased analysis to encourage fact-based conversations that steer limited resources toward equitable policy solutions and strategies.

Why We Matter

We have a very small window within which to address the climate crisis. Governments, utilities, businesses, advocates, and policymakers in the Northwest must move swiftly to implement viable and equitable clean energy solutions. These decision-makers value our data-driven approach and unbiased expertise.

What We Mean by an Equitable Clean Energy Transition

An equitable clean energy transition in the Northwest would:



Recognize the systemic political and socioeconomic factors that historically and disproportionately harm marginalized Northwest communities.



Ensure that past harms are not perpetuated on historically marginalized communities as the clean energy transition unfolds.



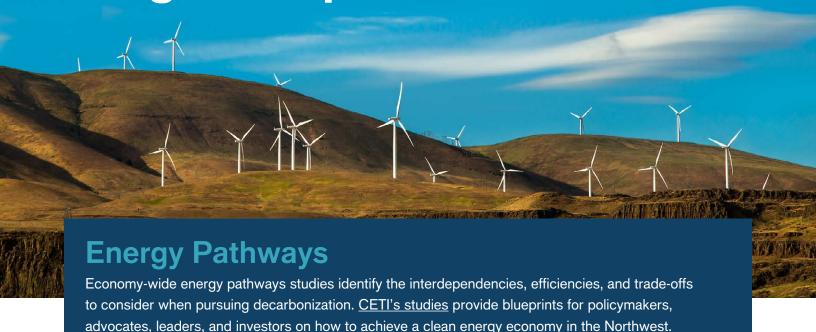
Enable energy-burdened and low-income communities access to reliable, affordable clean energy.



Distribute workforce development and job training investments equitably, prioritizing communities historically lacking access to affordable energy and workers whose livelihoods will be displaced by the clean energy transition.

Program Updates

In 2024, we produced or contributed to the following studies and reports:



Oregon Energy Strategy

Overview

The Oregon Department of Energy selected CETI in a competitive process to provide technical and economic analysis to inform the state's energy strategy. We are partnering with Evolved Energy Research, Sylvan Energy Analytics, Rockcress Consulting, and BW Research Partnership in this endeavor, which kicked off in April 2024 and continued into 2025.

Insights and Implications

The energy pathways modeling completed by January 2025 provides Oregonians with a rich set of results that reinforce the importance of energy efficiency and electrification and the risks of delaying both. Extensive engagement conducted during the summer and fall of 2024 with a wide range of constituents produced valuable guidance to tailor the modeling to Oregon's energy needs.

Washington Pathways Modeling

Overview

CETI and Evolved Energy Research began working with the Washington State Department of Commerce in April 2024 to develop economy-wide energy pathways scenarios that would achieve the state's emission reduction goals. The results form the basis for Washington's Comprehensive Climate Action Plan, which will meet the U.S. Environmental Protection Agency's Climate Pollution Reduction Grant requirements.

Insights and Implications

The project has modeled various energy pathways scenarios that explore the impact of different policies on the state's ability to meet emission reduction targets. Additional work will be done in 2025 to investigate the health benefits of reducing greenhouse gas emissions, workforce implications, and the impact on Washingtonians' pocketbooks.



Dive deeper into the Oregon Energy Strategy: cleanenergytransition.org/programs/deepdecarbonization-pathways/oregon-energy-strategy.



Dive deeper into Washington Emissions
Pathways Modeling: <u>cleanenergytransition.org/programs/deep-decarbonization-pathways/</u>
washington-emissions-pathways-modeling.



Achieving a clean energy transition at pace and with an equity focus will require strategies to build a skilled clean energy workforce and address fossil fuel job displacement with transition support. CETI took on several projects this year that grappled with this challenge.

Net-Zero Northwest Workforce-State Analysis

Overview

In April 2024, we released our <u>Net-Zero Northwest</u> state-specific workforce analyses that examine how achieving net-zero emissions would impact energy employment in each of the four Northwest states for the electricity, fuels, buildings, and transportation sectors.

Insights and Implications

On the path to net-zero emissions by 2050, all four Northwest states experience net energy job growth by 2030:

 Electricity and buildings sector employment increases in all four states.

- Jobs in the transportation sector reflect the complexity of the vehicle stock transition, decreasing slightly in Oregon and Montana while increasing slightly in Idaho and Washington.
- For the fuels sector, job growth in clean fuels subsectors outpaces losses in fossil fuel subsectors in every Northwest state except Oregon.



More detailed key findings from each state can be accessed at nznw.org/workforce/state-analysis.

Northwest Energy Employment, 2021–2030



Overall Northwest energy employment grows by 17% from 2021 to 2030, with all four states experiencing net job growth by 2030.

induced jobs, darker shades show direct and indirect jobs.

Lighter shades show

Electricity

Fuels

Building
Transportation

Sources: BW Research Partnership. CETI Net-Zero Northwest Workforce Analysis Regional and State Technical Reports, March 2024.

Washington State Residential Energy Workforce Gap Analysis

Overview

Starting in April 2024, CETI worked on a project with Kinetic West, BW Research Partnership, and Uncommon Bridges to conduct a residential energy workforce gap analysis for a contract with the Washington State Department of Commerce that concluded in August 2024 with the <u>Washington State</u> Residential Energy Workforce Gap Analysis report.

Insights and Implications

The study included a landscape analysis of current and projected energy workforce needs; mapping of existing workforce pathways, with a focus on outcomes for people historically underrepresented within these jobs; and meaningful engagement with people developing workforce strategies.

The report put forward the following key recommendations to support residential energy efficiency occupational growth and improvement:

- Scale existing training programs and reduce barriers to produce a skilled and stable residential energy efficiency workforce.
- Improve the quality of residential energy efficiency jobs.
- Align incentive programs with worker-centered standards.
- Grow a diverse workforce and center Women and Minority Business Enterprises (MWBE) employers.
- Support small business opportunities and engagement.

Washington State Refinery Economic Impact Study

Overview

CETI provided research support for Western Washington University's (WWU) Center for Economic and Business and Research on the *Washington State Refinery Economic Impact Study*. This effort for the Washington State Department of Commerce examined the economic impacts of oil refining in Washington state and how they might shift as the state works to achieve mandated decarbonization targets. The study was submitted to Commerce in Fall 2024.

Insights and Implications

Key findings related to workforce implications include:

- Washington's refineries are major local employers and provide high wages compared to other local industries in the communities where they are located.
- Washington's refineries may be able to produce a significant amount of renewable or alternative fuels, although they are unlikely to match the current employment or production levels of the state's five refineries.
- There are alternative industries that are well-aligned with many skillsets held by permanent refinery workers, although misalignment in timing, location, and demand may cause obstacles for workers.



Dive deeper into the Washington State Residential Energy Workforce Gap Analysis report: cleanenergytransition.org/files/washington-stateresidential-energy-workforce-gap-analysis.



Dive deeper into the Washington State Refinery Economic Impact Study: cleanenergytransition.org/files/washington-state-refinery-economic-impact-study.



Building Decarbonization

The building sector represents 14% of the Northwest's greenhouse gas emissions. This <u>program</u> focuses on strategies to scale clean buildings in the region at the pace needed to meet net-zero targets by 2050.

SCALE 2030

Overview

SCALE 2030 builds on CETI's *Operation 2030: Scaling Building Decarbonization in Washington State* in collaboration with 2050 Institute. This project aims to transition the state from an approach focused on incremental energy efficiency improvements to a strategy that will enable the rapid market transformation needed to decarbonize Washington's entire building stock in 25 years.

Insights and Implications

The SCALE 2030 framework proposes five strategies for decarbonizing buildings: a shift to focus on building performance, rapid market transformation, increased funding, coordinated planning across the state, and developing clean energy regions with which to implement a clean buildings transition.

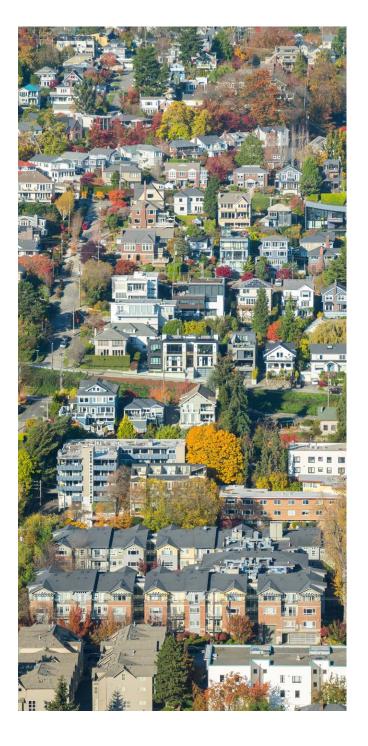
In 2024, we produced an assessment of Washington's current building ecosystem and a clean buildings transformation framework that will be released in 2025. Together these products lay the groundwork for developing a roadmap with building sector actors to put Washington on the path to scale the clean buildings transition in the timeframe necessary to meet the state's emission reduction targets.



Dive deeper into Operation 2030: cleanenergytransition.org/programs/building-decarbonization/operation-2030.



Dive deeper into SCALE 2030: cleanenergytransition.org/programs/building-decarbonization/scale-2030.





Rural Clean Energy Economics and Community Engagement Study and Report

Overview

Starting in December 2023, CETI worked with Ross Strategic and Industrial Economics, Inc. on a *Rural Clean Energy Economics and Community Engagement Study and Report* for the Washington State Department of Commerce. The study's purpose was to increase understanding among rural communities, representative interests, government agencies, and policymakers about the potential opportunities and impacts of renewable energy development in rural communities throughout Washington. The study included economic analysis and community engagement processes, and the final report was delivered to the Washington Legislature in December 2024.

Insights and Implications

The study findings were synthesized into eight recommendations for the Legislature to consider in future clean energy policies:

- Strengthen local involvement in clean energy siting and project development processes to ensure that rural communities are informed and have a meaningful role in the decision-making process.
- Ensure increased rural community benefits and mitigate potential harm from clean energy projects.
- Safeguard and enhance the quality of life in rural communities as clean energy projects are developed.



Solar panels on Winnie Farm in Washington. A&R Solar

- Improve transparency in the planning, development, and operation of clean energy projects.
- Explore an alternative taxation approach for large clean energy projects.
- Improve communication about sales taxes and clarify expectations about payback timelines for developer rebates.
- Increase transparency of economic and financial data reporting.
- Improve documentation of federal and state incentives.



Dive deeper into the Rural Clean Energy Economics and Community Engagement Study and Report: cleanenergytransition.org/files/rural-clean-energy-economics-and-community-engagement-study-and-report.

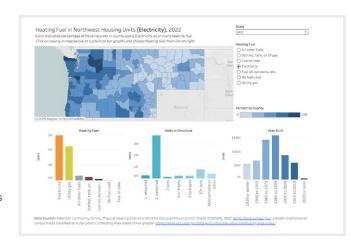
Northwest Clean Energy Atlas

The <u>Northwest Clean Energy Atlas</u> provides interactive tools to explore energy data relevant to deep decarbonization in Idaho, Montana, Oregon, and Washington.

In 2024, the CETI added several new visualizations to the Northwest Clean Energy Atlas and worked to update existing visualizations with more up-to-date datasets. We added nearly 5,000 new users to the Atlas this year, and both the total number of sessions and page views more than doubled, an indication of the increasing value the Atlas is providing to the Northwest's clean energy community.

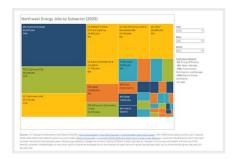
Northwest Heating Fuels

This <u>new visualization</u> explores the different fuels used to heat homes in the Northwest. It can be filtered by state, county, and heating fuel type and provides data on additional housing characteristics.



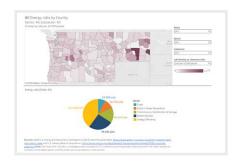
Northwest Energy Jobs

A <u>new Jobs section</u> on the Atlas includes three visualizations that present data from the 2024 U.S. Energy & Employment Report (USEER) to provide a snapshot of the current landscape of energy workers in the Northwest.



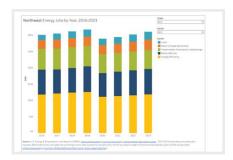
Energy Jobs by Subsector

This visualization shows energy jobs in the Northwest by subsector and can be filtered by year, state, and sector.



Energy Jobs by County

This visualization shows energy jobs in the Northwest by state and county. The map can show jobs per capita or absolute energy jobs and can be filtered by sector and subsector. It includes a pie chart that shows the distribution of energy jobs by sector in the selected state.



Energy Jobs by Year

This visualization shows energy jobs in the Northwest from 2016 through 2023 and can be filtered by state and sector.

Updated Northwest Emissions Visualizations

Several of the visualizations in the <u>Energy section</u> of the Atlas were updated with more recent data from the U.S. Energy Information Administration.



Dive deeper into the Northwest Clean Energy Atlas: nwceatlas.org.

Northwest Clean Energy Partners

The CETI team took part in several new initiatives with our Northwest clean energy transition partners in 2024.

Washington Clean Energy Technology Workforce Advisory Committee

CETI started participating in the Washington Clean Energy Technology Workforce Advisory Committee (CETWAC) meetings in 2024. The committee works with business, labor, education, training, and apprenticeship partners to anticipate energy workforce needs and provide current and new workers opportunities for living-wage careers.



Northwest Energy Efficiency Alliance

CETI works closely with the Northwest Energy Efficiency Alliance (NEEA), an alliance of more than 140 utilities and energy efficiency organizations working to catalyze energy efficiency for a thriving Northwest, sharing research and analysis on clean buildings and through Eileen's engagement as a Board member.



Renewable Northwest

CETI supports Renewable Northwest (RNW), which works to decarbonize the Northwest by accelerating the transition to renewable electricity, with energy pathways, workforce, and transmission research and analysis, as well as with Eileen serving on the Board.



Washington State Green Bank

Eileen was selected to serve on the inaugural Washington State Green Bank (WAGB) Board, which aims to become a significant source of capital to fund clean energy projects in the state's underserved communities.



Western Clean Energy Advocates

CETI joined the Western Clean Energy Advocates (WCEA) in 2024. This diverse coalition supports policies and investments in the clean energy and transmission needed to accelerate the transition away from fossil-based fuels.



Western Transmission Expansion Coalition

The Western Power Pool organized the Western Transmission Expansion Coalition (WestTEC), a west-wide effort to develop an actionable transmission study that will support the needs of the future regional grid. CETI serves on the Regional Engagement Committee (REC) as a public interest organization.





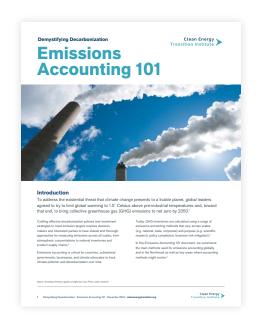
Demystifying the complexities of decarbonization for a broader audience was a major CETI focus in 2024, which we accomplished through a series of blogs, infographics, and the launch of our Decarbonization Forum series.

Decarbonization Forum: Emissions Accounting 101

Our Decarbonization Forum series is designed to illuminate, demystify, and debate the trade-offs of the most important and complex aspects of decarbonization in Northwest. The forums bring together experts, policymakers, industry representatives, civil society organizations, and interested citizens to learn about and discuss the challenges and opportunities of transitioning to a net-zero emissions economy.

We launched the series with an *Emissions Accounting 101* document and a <u>webinar</u> to demystify the patchwork of methods that measure, report, and verify greenhouse gas emissions and reductions across different sectors and activities. Future topics include:

- Data Center Energy Use and Impact on the Clean Energy Transition
- Carbon Dioxide Removal
- Sustainable Aviation Fuels
- Maritime Decarbonization





Dive deeper into Emissions Accounting 101: cleanenergytransition.org/files/ emissions-accounting-101.

Blogs and Infographics

- Demystifying the Five Pillars of Decarbonization
- Tackling Building Sector Emissions in Washington
- Oregon 2024 Legislative Clean Energy Policies Wrap-Up
- Washington 2024 Legislative Session Clean Energy Policies Wrap-Up
- No Transition Without Transmission
- New Infographics Demystify Electricity
- An Intro to Electricity Markets for the Northwest
- The Northwest's Path to a Day-Ahead Market



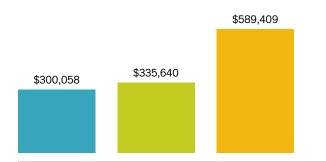
Dive deeper into Blogs and Infographics: cleanenergytransition.org/resources.



2024 Financials

CETI 2024 Income - \$1,225,107

- Individual Donors
- Foundations
- Program Service Revenue



CETI's income increased by \$185,337 from 2023 to 2024, going from \$1,039,770 to \$1,225,107. Individual donors contributed \$300,058; foundations grants totaled \$335,640; and programs service revenue totaled \$589,409.

Program service revenue was \$314,324 more than in 2023 and drove CETI's overall revenue increase, offsetting lower income from individual donations, corporate contributions, and foundation grants.

Individual donations were down \$9,467 and foundation grants were down \$44,520. CETI received no corporate donations in 2024.

While the cost of goods sold was \$38,203 more than in 2023, CETI did not pass through as much revenue to external consultants as it did last year and instead retained 62% of the service revenue compared to 21% in 2023.

CETI 2024 Expenses - \$1,022,421

- Compensation & Benefits
- Cost of Goods
- Professional Fees
- Operations



CETI spent a total of \$794,902 in operating expenses (not including the \$227,519 for cost of goods) in 2024, \$29,301 less than in 2023. Compensation increased to \$526,702, which was \$154,171 more than in 2023 reflecting the increased investment we made in full-time staff instead of external consultants. Consultant fees, which had been \$214,320 in 2023, were \$174,967 in 2024.

Our rent increased by \$9,625 to \$27,625, reflecting our move to a new building in downtown Seattle. Legal and financial costs were also higher in 2024 than in 2023, indicative of the increased cost of tracking more service contracts and handling payroll and quarterly reporting for a larger operation.

CETI ended the year with cash on hand of \$569,144, up \$123,158 from 2023.

2024 Donors

The Clean Energy Transition Institute gratefully acknowledges the funders whose financial support sustained our work this year:

Grant Support

Climate Solutions McKinstry Charitable Foundation Renewable Northwest The Russell Family Foundation Seattle Foundation Stolte Family Foundation Sustainable Path Foundation University of Washington Population Health Initiative

Corporate Matching Funds

A&R Solar Bill and Melinda Gates Foundation Google McKinstry Microsoft Nike, Inc. Salesforce

Individual Donors

\$25,000-\$50,000

Anonymous Brian Arbogast & Valerie Tarico Brian Jacobson Daniel Weise & Laura Yedwab

\$10,000-\$24,999

Anonymous Jabe Blumenthal & Julie Edsforth Lee & Karen Fairchild Bill Vandeventer

\$5,000-\$9,999 Anonymous Thomas Edward Anderson & Robin Briggs David & Leigh Bangs William Donnelly Kathleen Hebert Lynn Hubbard & David Zapolsky John McGarry Rosemary C. Quigley Jeff Strong Elizabeth Thomas & Ron Roseman

\$2,000-\$4,999

Madeleine & Fred Wolfe

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Eileen V. Quigley Eric & Heather Redman Xixi & Jonathan Shakes Steve & Liann Sundquist

\$1,000-\$1,999

Anonymous Eric Berman Paul & Leora Bloom Kathe & Greg Fowler K.D. & Amy Hallman Bonnie Frye Hemphill & Aaron Paul Thomas Smithson Amy Solas & Richard Klein Ellen Stearns Alan Vaughan Bill Way Rogers & Julie Weed Ramalee B. Wulf & Carlos Cristian Wulf \$300-\$999

Aiken/de Campos Family Fund David and Mona Chicks Giving Fund Deborah Driscoll Lars Johansson Carol Maglitta

Chuck & Carla Meyer Kathleen Pierce Mathis & Steven Powelson Linny Simkin & Barnaby Dow Elizabeth Willmott Fritz Wollett

<\$300 John Bartlett Celia Bowker Marc & Maud Daudon Curtis Dudschus Stephen Fife-Adams John Finnerty Elizabeth Ford **David Hastings** Lara Iglitzin Peter Kirby Douglas Margolis Dennis McLerran Michelle Mueggler Rhys Roth Mark Rvan Robert Soltess Evan Stoner & Laurel Taylor



2024 Institute Team

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Aster Li, Operations Assistant
Katie McNabb, Program and Development Assistant
Ruby Moore-Bloom, Research Analyst
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Poppy Storm, Building Decarbonization, 2050 Institute
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Mariah Caballero, Research Fellow, NW Clean Energy Atlas, Oregon Energy Strategy
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Jade Sauvé, Research Fellow, Demystifying Emissions Accounting
Haynes Stephens, Research Intern, NW Clean Energy Atlas,
Oregon Energy Strategy, Rural Clean Energy Report

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Nicole Hughes, Executive Director, Renewable Northwest
Michael Lazarus, Center Director, Stockholm Environmental Institute, U.S. Center

Angela Becker-Dippmann, Strategy Advisor, Pacific Northwest

National Laboratory's Energy and Environment Directorate

Chris Stolte, Co-Founder, Stolte Family Foundation

Front cover photo credits: High voltage electric transmission lines in eastern Oregon, Cam; HVAC technician performing air duct filter installation, Tomasz Zajda; Smokey Mountains in Idaho, James; Cityscape in Seattle, Washington, Mat Hayward; Wind turbines among wheat fields on the Palouse in Washington, Myk Crawford; Haystack Rock on the Oregon coast, Gleb Tarassenko; Workers building solar panel system on roof of house, anatoliy_gleb; Dam at The Dalles, Oregon, Scott Bufkin. Back cover photo credit: Mountain road in Idaho, Jason Yoder



