VertueLab

2024 ANNUAL IMPACT REPORT

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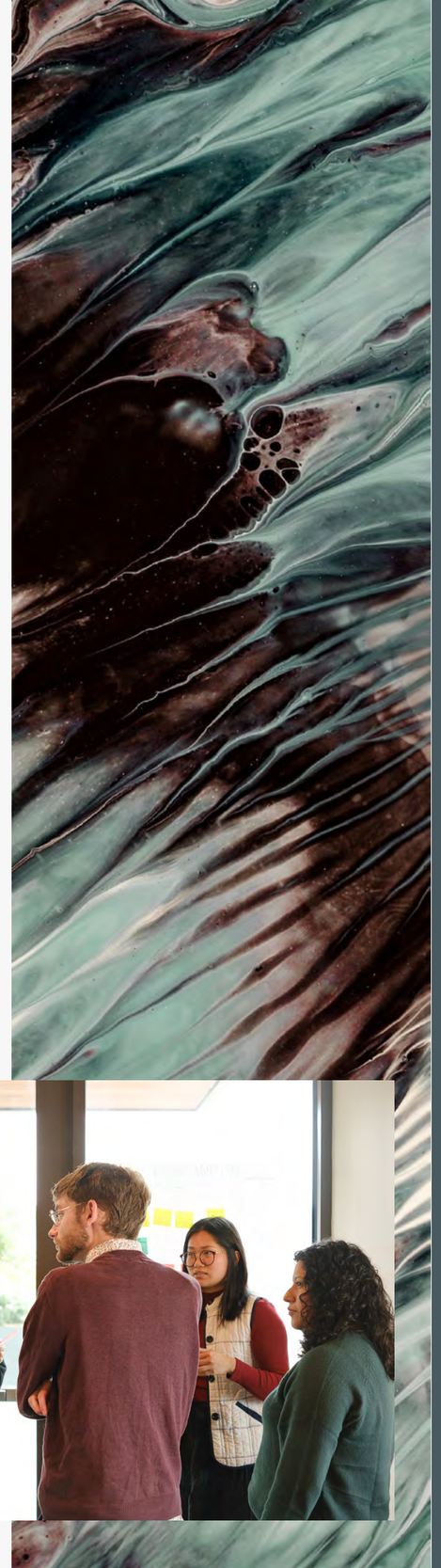


OUR VISION

We envision the Pacific Northwest as a global leader in justice and equity-centered, place-based climate innovation and technology. By providing technical assistance, flexible capital, championing supportive climate tech policies, and fostering critical connections, we are accelerating a just transition toward clean energy.

The VertueLab team

A Note From Aina

In 2024, the entire country benefited from an unprecedented boom of climate and clean energy funding, manufacturing and deployment by the previous federal administration. In the Pacific Northwest, we made a great deal of headway supporting early stage climate innovation through our venture capital fund, Climate Impact Fund I, as well as our entrepreneur programs 45Camp and the Cascadia Cleantech Accelerator at a time when the world needs many more solutions invented or scaled, than are readily available.

It was a year when the economic toll of devastating weather events climbed north of $500 billion dollars, and the human death toll was in the thousands. As we recognized the increasing vulnerability of our local communities, we broadened our view to focus on a technology transition that takes into account the spectrum of lived climate realities in our region. Although we were largely spared some of the worst recent disasters, we still saw marquee events that were harbingers of more to come, including reduced snowpack and Oregon school districts first ever 'heat days' – reminders of how much work is ahead, and what is at stake for human and ecological well being, which is at the core of why we do our work at VertueLab.

There has never been a moment more important for those of us who are clear on the assignment of creating a climate transition for all, and not just those who can afford to weather what may appear to be the 'inconveniences' that climate change presents. Key to our work are new and emerging partnerships and coalitions, including the newly launched Seattle Climate Innovation Hub – an exciting public-private collaborative opportunity to usher Seattle into a new era of climate leadership. Our collaboration with the city of Seattle, several University of Washington groups (Testbeds + CoMotion) as well as some private sector players is bringing to life a bold and aggressive ambition to consolidate and build on our talent and resources and VertueLab's emerging new Washington focused venture capital fund.

VertueLab's year-long series of research projects on climate entrepreneurs, investors, ecosystem partners and communities yielded a great deal of knowledge that we are pouring into our strategy going forward. We learned that working together in coalition and partnership across our region is the only way to effect a just transition. As we continue shaping the priorities for climate innovation and entrepreneurship in our region, we are taking those lessons forward. From there, the seeds of our new strategic plan for **climate resilience, economic resilience, and community resilience** were sown.

In 2024, we reaffirmed our commitment to the fight for an equitable transition to clean energy, marshaling our resources to ensure that we can build a solid place for us to weather this turmoil, taking strides toward making the Pacific Northwest a beacon of climate resilience and technological innovation in this country. This report is more than a look back—it's a celebration of the vast potential for innovation when we come together. Thank you for engaging with this work; together, we're building a more equitable, sustainable future for all.

Aina Abiodun
President & Executive Director
VertueLab

2024 Impact Stats

120
companies supported
across all programs

781
jobs created by
supported companies

$400K
invested by VertueLab

$300K
in follow-on investments

$2.4M
secured in federal funding

$17.5M
total revenue earned by
supported companies

$41.7M
in follow-on funding
for supported companies

A Year in Research

The Pacific Northwest, with its stunning landscapes and diverse communities, stands at a critical crossroads in addressing the impacts of the climate crisis. As we work together to make this region a leader in transitioning to an equitable climate tech economy, it's clear that inclusive and innovative solutions are essential. VertueLab's research this year has highlighted both the promise within the Pacific Northwest's climate tech ecosystem and the obstacles that must be overcome to unlock its full potential.

The learnings shared here capture essential insights from five foundational reports—three published for our communities and two developed to strengthen our team's internal knowledge—covering community-driven solutions, entrepreneurial challenges, and collaboration opportunities across rural, urban, and Tribal communities.

Our goal is to continue engaging current and potential partners in the work ahead, particularly those interested in supporting underrepresented founders, enabling community resilience, and amplifying climate-focused innovation. In the sections that follow, you'll find an in-depth look at some of the themes and findings that have emerged from VertueLab's 2024 research. From funding gaps and community-led initiatives to Tribal resilience and ecosystem building, these insights offer a roadmap for what's possible when resources and opportunity meet.

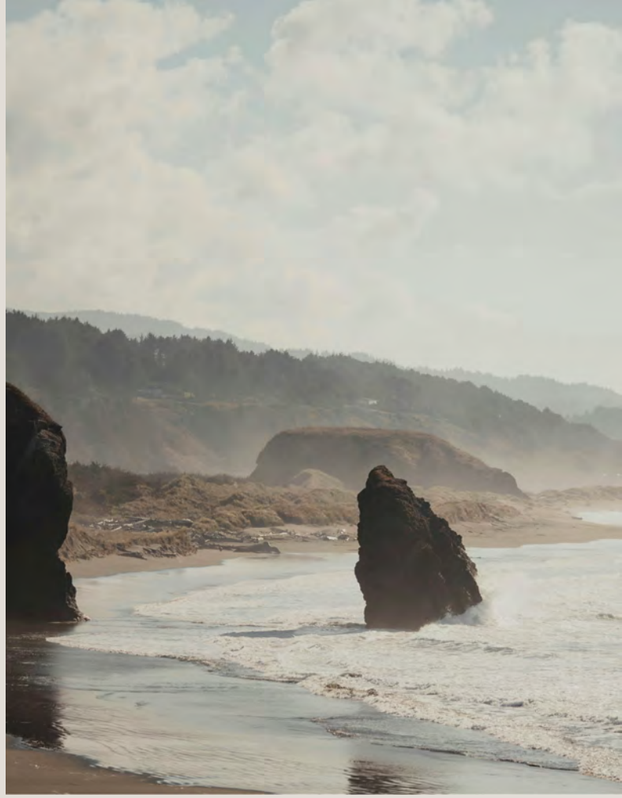
Funding and ecosystem gaps

CHALLENGES IN CAPITAL ACCESS AND ECOSYSTEM GAPS

The Pacific Northwest's climate tech sector has seen significant advancements, yet substantial funding gaps remain, particularly for women and BIPOC entrepreneurs. Research reveals that limited capital access, combined with a lack of climate-specific venture funds, tends to constrain growth opportunities for early-stage companies. While vibrant angel networks such as E8 Angels support local innovation, regional entrepreneurs often face challenges scaling their ideas due to investor hesitancy around high-risk hardware and deep tech. For VertueLab and its partners, addressing these funding gaps is essential to creating a robust, inclusive climate tech ecosystem.

STRATEGIC RECOMMENDATIONS FOR BUILDING RESILIENT FUNDING PIPELINES

Emerging opportunities to enhance funding support include expanding angel networks, increasing cross-sector collaborations, and developing alternative financing structures. This work emphasizes the role VertueLab plays in bridging systemic gaps and fostering sustainable solutions, particularly by advocating for more venture capital presence in the Pacific Northwest dedicated to climate innovation.



Community and entrepreneurship development

ADVANCING COMMUNITY-DRIVEN CLIMATE SOLUTIONS

Community-driven climate solutions represent an important pillar in the Pacific Northwest's climate transition. Across rural and BIPOC communities, stakeholders are tackling clean energy challenges by deploying projects aimed at resilience and job creation. However, they often lack the technical and planning resources to take full advantage of available funding and implement these projects. VertueLab's research shows that community climate projects, particularly those that engage local

residents in their design and execution, are more effective in achieving lasting impact and equitable benefits.

EMPOWERING LOCAL COMMUNITIES THROUGH PARTNERSHIPS AND SUPPORT

Our findings suggest that partnerships between community organizations, local governments, and nonprofits have been instrumental in making climate technology more accessible. Success stories, such as the Making Energy Work for Rural Oregon project led by Sustainable Northwest, exemplify the power of tailored clean energy systems to meet local needs and emphasize the critical role of capacity-building resources and pre-development support. VertueLab remains committed to working with these groups to empower community stakeholders, thus ensuring that the benefits of climate tech extend across the region.

PNW Tribal community needs and opportunities

ADDRESSING CLIMATE RESILIENCE AND ECONOMIC CHALLENGES

Tribal communities in the Pacific Northwest face distinct climate threats, including wildfire risks, rising sea levels, and economic impacts on traditional ways of life. VertueLab's research in this area, conducted in partnership with PICEA, a consulting group that empowers tribal communities and partners to navigate modern challenges while honoring Indigenous culture, highlights opportunities for innovative solutions that respect cultural values and strengthen resilience. Key focus areas include fire management, ocean acidification response, and renewable energy projects. Innovative technology, such as AI-driven fire detection or drones for reforestation, could offer valuable tools in supporting both climate adaptation and economic resilience in these areas.

BUILDING CAPACITY AND TRAINING FOR SUSTAINABLE GROWTH

To fully leverage these innovations, it is crucial to address gaps in capacity, funding accessibility, and technical training among Tribal communities. Through targeted workforce development programs, VertueLab aims to empower Tribal members to participate directly in the climate tech economy. Partnerships with Tribal organizations and culturally aware technological integration are key to respecting Tribal sovereignty and ensuring these solutions are sustainable for the long term.

Strategic initiatives and ecosystem recommendations

CREATING A THRIVING CLIMATE TECH ECOSYSTEM

The climate tech sector in the Pacific Northwest has tremendous potential, yet gaps in infrastructure, capital, and resources hinder early-stage entrepreneurs, especially those working on hardware solutions. Research emphasizes that regional startups often struggle to find investors who understand the timelines and unique needs of climate technology. Furthermore, expanding climate-specific incubators and accelerators to underserved areas, including rural and Tribal communities, would play a significant role in fostering local innovation.

LEVERAGING PUBLIC-PRIVATE PARTNERSHIPS AND COLLABORATION

Public-private partnerships and enhanced collaboration among business support organizations can bridge gaps in resources and foster equitable distribution of opportunities. By amplifying partnership efforts with accelerators, universities, and policy advocates, VertueLab aims to cultivate an ecosystem where climate tech startups can scale sustainably and inclusively.

Closing

This summary encapsulates a year of invaluable learning and progress, illustrating both the challenges and opportunities facing the Pacific Northwest in its journey to accelerate an equitable and just climate tech transition in pursuit of a more sustainable future.

We invite you to join us in taking these learnings forward, creating real-world solutions, and strengthening the resilience of our communities. Through partnership and collaboration, we're not only shaping the Pacific Northwest as a climate technology leader, but also as a model for equity-driven growth. Together, we can build a future that is resilient, inclusive, and impactful.

FUNDED BY WASHINGTON'S CLIMATE COMMITMENT ACT

These reports were supported with funding from Washington's Climate Commitment Act. The CCA supports Washington's climate action efforts by putting cap-and-invest dollars to work reducing climate pollution, creating jobs, and improving public health. Information about the CCA is available at www.climate.wa.gov.

45Camp mentors, entrepreneurs, and their loved ones at 45Camp Accelerator WA's celebration at Tabor 100's office in Tukwila, Washington

Accelerating Diverse Innovations with 45Camp

Built in collaboration with Tabor 100, Prosper Portland, and Washington Microenterprise Association, 45Camp is a climate tech startup accelerator for underrepresented entrepreneurs in the Pacific Northwest, with a curriculum specifically designed to help founders refine their ideas, validate their products and services, and become pitch ready. The program includes a three-day workshop, a ten-week pre-accelerator, and a ten-week accelerator, plus self-paced virtual learning available to anyone. Beyond structured curricula, collaboration, and other resources, entrepreneurs are also connected with experienced mentors who provided guidance and feedback throughout the program.

2024 45CAMP IMPACT

$210K
invested by VertueLab

290
total hours of education provided

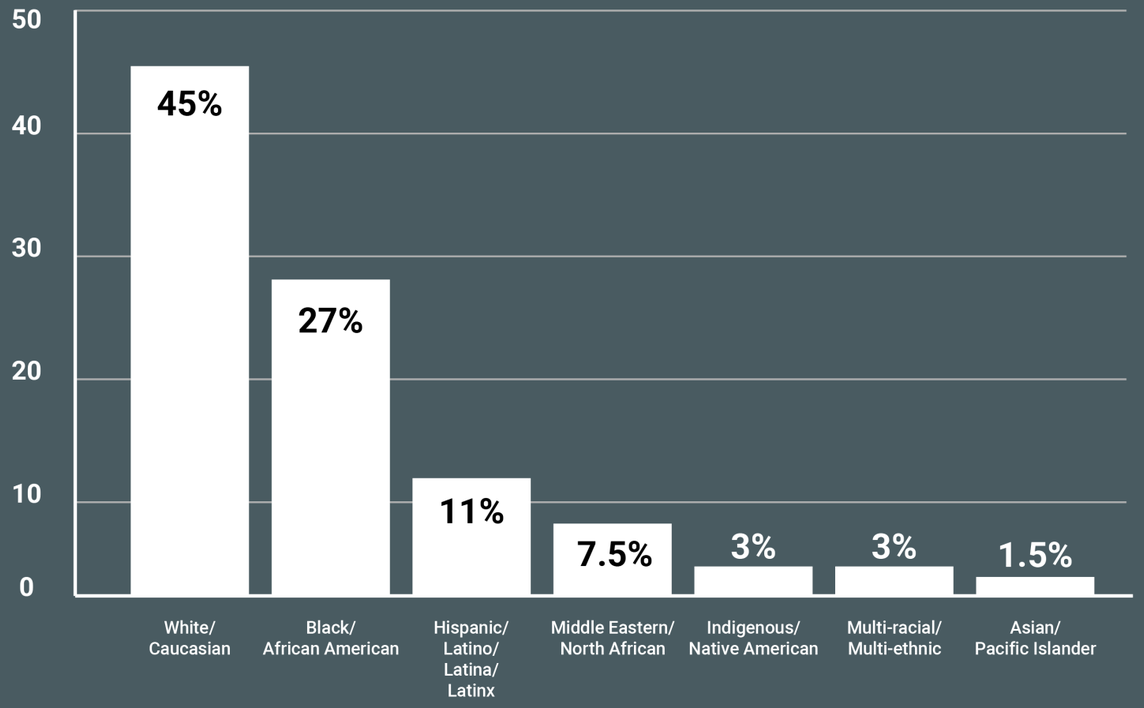
68
total entrepreneurs served

40
grants awarded

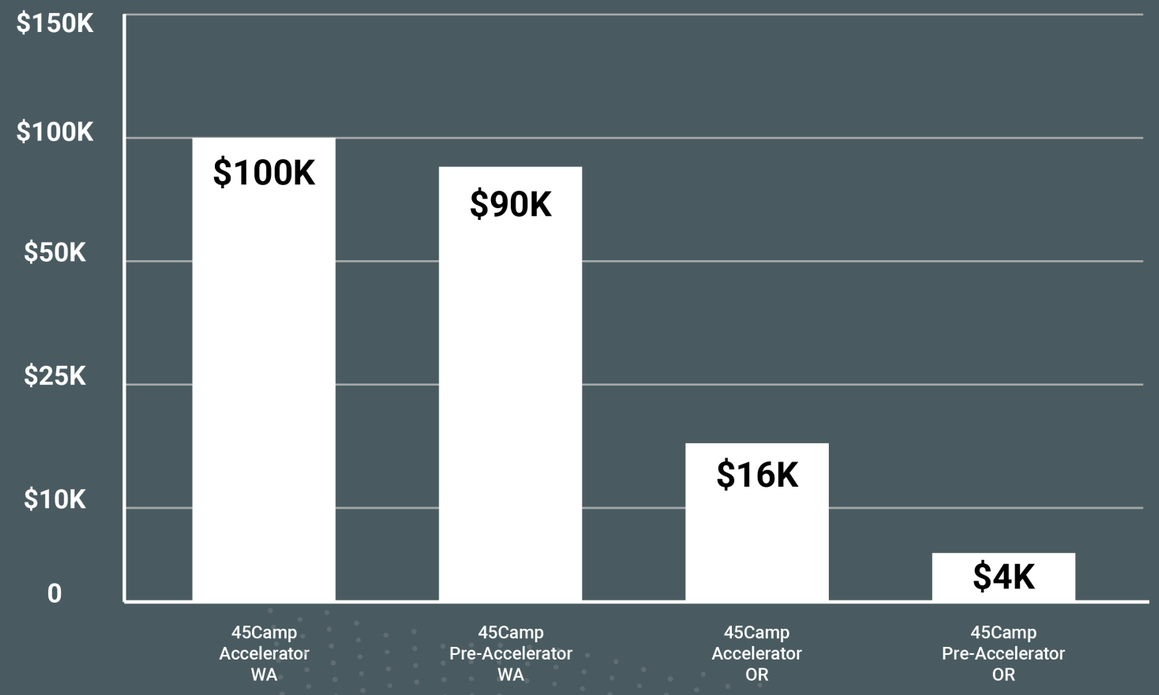
53%
entrepreneurs self-identified as BIPOC/non-white

31%
entrepreneurs self-identified as female/non-binary

Demographic breakdown of 45Camp participants



Grant dollars awarded by accelerator program



Minority and underrepresented groups are disproportionately impacted by the climate crisis, yet founders from these communities receive less than 3% of climate-focused investments. VertueLab's 45Camp wants to help to change that.

REFLECTIONS ON 45CAMP FROM A MENTOR

by AnnaMaria White

For Ashley Vaughn, EV range anxiety isn't just imagined, it's real. Last year, Vaughn's Tesla ran out of charge in a rural part of Washington State, after three different charging stations didn't have the right adapter for their car. Vaughn spent hundreds of dollars and lost an entire day getting their car charged again. Other people who have experienced similar frustrations might just accept the faulty system and move on. Not Vaughn. They immediately got to working, applying their professional expertise in business and program management to address this problem. Mere months later, Vaughn launched EVALV Solutions, offering compatible EV chargers for rent at charging stations.

AnnaMaria White, a mentor from the 45Camp program

Growing up without reliable access to electricity presented many challenges for Geb Mengistu and his family and neighbors. It made everyday activities harder and had significant impacts on the economic opportunities for Geb's community. After moving from Ethiopia to the United States and becoming an electrical engineer, Geb spent over ten years working on power systems, designing utility-scale energy storage systems, and in research and development. But he never forgot the experiences of his childhood. Then, in 2020, widespread power outages struck his area and Geb realized he could help. Drawing on his experience, Geb saw the untapped potential of combining energy harvesting and energy storage to offer better, more reliable power to customers. With the help of VertueLab, Geb founded WA-based Sustainable Power and Water Engineering Solutions LLC (SPWES) to bring his idea for low-cost home electricity solutions to market. Using lithium-ion and sodium-ion batteries, Geb's generators can replace fossil fuel powered generators in homes during power outages or in areas without reliable electricity.

Vaughn, Geb and thousands of founders around the world are pursuing unique and groundbreaking technology solutions to address emerging needs and respond to the growing climate crisis, based on their individual experiences. And they're not alone. The number of climate tech startups is increasing every year, and so is investment in such companies. According to a report by PwC and CB Insights, global investment in climate tech reached a record high of $113 billion in 2023, up from $38 billion in 2019. Yet, less than 3% of total investment dollars goes to Black and Latino founders, according to Crunchbase, even though Black, Indigenous, People of Color (BIPOC), women, and other underrepresented groups are disproportionately impacted by the climate

45Camp entrepreneur, Geb Mengistu during a product demo

crisis. This oversight isn't just a matter of equity; it's a missed opportunity for impactful solutions and robust returns.

Minority founders often have a deep understanding of underserved markets and communities that are most vulnerable to climate change. This knowledge can translate into products and services that not only address critical needs but also open up new market segments that mainstream companies may overlook.

Like Rafael Ellison, a certified electrician and school teacher. Rafael owns an electrical contracting company and trains new electricians how to install renewable energy products, like solar panels and EV chargers, in homes. He also has electrified his own home and drives an EV. Having touched every aspect of electrification, he saw first

hand the challenges facing home electrification. As a business owner, Rafael saw how widespread adoption of home electrification will help bring costs down and be better for the planet. He was also in a unique position to understand a major hurdle to that widespread adaptation: certified trusted installers and a place for them to connect with customers. Rafael founded Charge Pros to address this growing gap. His platform brings together everyone in the electrification ecosystem; it connects equipment suppliers, government agencies and customers to the certified installers who are making home electrification dreams possible.

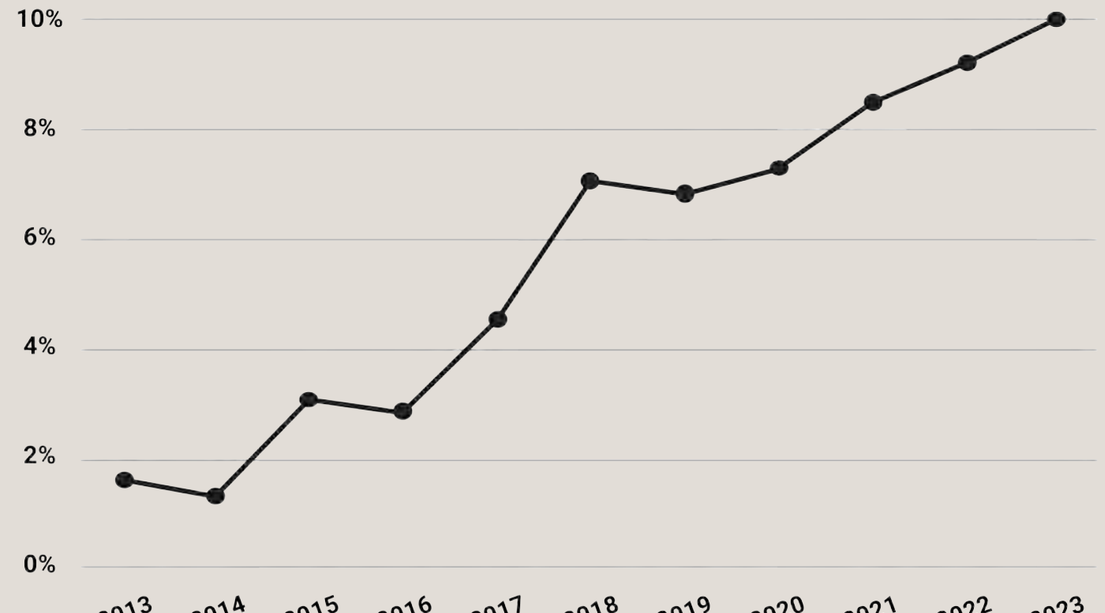
And Rafael is starting in historically underserved communities. According to the Selig Center for Economic Growth, he's onto something. In 2020, Selig estimated that the buying power of minority groups in the U.S. reached $4.9 trillion, or 28% of the total US personal consumption expenditures (PCE).

By partnering with entrepreneurs like Vaughn, Geb and Rafael, VertueLab, Tabor 100 and Prosper Portland are working to help level the playing field for minority founders and bring more impactful climate technology to market. "45Camp gave us access to the information we usually don't get access to. A lot of times, we know where we need to go, we have the will to do it, but don't have the knowledge on how to get from point A to point B," said Rafael, who was one of four founders to be awarded a grant from VertueLab and Tabor 100, as part of 45Camp.

Since their inception in 2007, VertueLab has invested $10M and thousands of mentorship and education hours into minority founders

Rafael Ellison pitches his start up Charge Pros during 45Camp's celebration.

Climate tech investment as a % of venture capital and private equity investment



*Data for 2023 is current through the third quarter of the year.
Source: Pitchbook, PwC analysis

in climate tech. Through their Climate Impact Fund, they have supported 14 companies, including startups like Photon Marine and Community Energy Lab. Their portfolio has raised $23.4 million in follow-on funding and has the potential to remove or abate 6.4gt of emissions. With 45Camp, VertueLab reached 142 founders, contributed over $100,000 and nearly 300 hours of education to help our founders move their ideas and companies forward.

"As part of 45Camp, we found partnership with each other. The program was a good place for us to collaborate, brainstorm and be idea partners." reflected Geb. "45Camp helped make the journey to entrepreneurship easier."

"As part of 45Camp, we found partnership with each other. "

- GEB MENGISTU, SPWES

Added Vaughn, "Access to capital has been a major challenge so far. Specifically, access to feedback from investors on how, as a founder, you can get to a yes. This is one of the most important pieces of feedback you can get and something I feel I was missing as an entrepreneur before 45Camp." Vaughn plans to use their 45Camp award to build out

Vaughn gives a product demo at the Washington 45Camp celebration

the EVALV Solutions platform and start testing in a few months. With the EV market expected to grow to $156.3 billion by 2029, Vaughn's EVALV Solutions has the potential to tap into a critical market.

45Camp helped create an ecosystem of collaboration and impact that is reaching beyond the founders who participated in the program. None of this would be possible without the support of incredible partners who share our focus - Tabor 100 and Prosper Portland - and the mentors and supporters who helped make this program possible.

The climate crisis demands unprecedented levels of innovation, collaboration, and investment. By directing more capital towards minority-founded climate tech startups, investors can unlock a wealth of untapped potential, drive more inclusive innovation, and accelerate our progress towards a sustainable future. It's not just the right thing to do; it's a smart investment in our collective future.

Judges and audience members at 45Camp's Jumpstart Weekend pitch competition in Portland.

NWCIN & Federal Funding Assistance

Early-stage clean tech and climate tech entrepreneurs can face significant challenges when attempting to bring their hardware or technology innovations to market. Unlike software, these hardware-based solutions often require substantial capital, longer development timelines, and access to specialized infrastructure. Major barriers to scale such as a lack of growth-oriented business knowledge, limited access to experienced mentorship and industry connections, confusing pathways to private and public funding, and difficulty in finding suitable facilities to build, test, and demonstrate their prototypes often stall promising innovations before they can make meaningful impact.

These barriers are even more pronounced for women, BIPOC, and other underrepresented entrepreneurs due to structural inequalities that further limit their access to opportunities.

To help overcome these barriers for clean tech/climate tech entrepreneurs in the Pacific Northwest, the **Northwest Cleantech Innovation Network (NWCIN)** was established in October 2021 with support from the Department of Energy. Launched as a consortium of three organizations, VertueLab, the Cleantech Alliance (CTA) and University of Washington Clean Energy Testbeds (WCET), the NWCIN successfully leveraged the strengths and expertise of each organization to deliver four assistance programs:

- **Cascadia Cleantech Accelerator (CCA)**
  An 18-week yearly cohort-based virtual program providing business and technical mentorship
- **Federal Funding Assistance (FFA)**
  Provides support to companies from all 4 states that are applying for SBIR/STTR and other federal grants
- **Cleantech Hardware Innovation Prototyping (CHIP)**
  Provides access to facilities and lab/office space at the Washington Clean Energy Testbeds for testing, prototyping clean energy hardware technologies
- **Lab2Launch (L2L)**
  Educates and connects entrepreneurs to regional Research Institution resources and technologies available to license

The overarching objective of these 4 assistance programs was to accelerate the development, success rate and commercialization of early-stage clean energy startups in Oregon, Washington, Idaho, and Alaska, with a focus on supporting startups founded by women or underrepresented entrepreneurs.

2024 FFA IMPACT

$2.4M
secured in federal grants

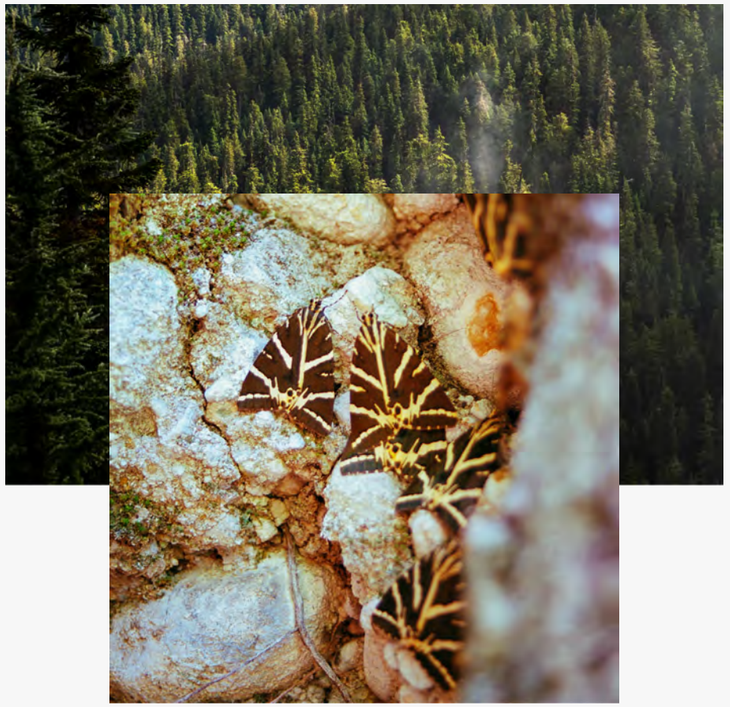
39
total companies supported

20
companies received financial support for grant writing

VertueLab's SBIR/STTR Assistance Program is funded in part by:

U.S. Small Business Administration

business oregon where business grows



Climate Impact Fund I

Our Climate Impact Fund focuses on the climate crisis and contributing to a just transition to a low-carbon economy through supporting and shaping the climate technology innovation and entrepreneurship ecosystem. The fund provides capital to companies whose products could have significant GHG impact at full potential commercial scale. These investments come at a critical time for these startups, helping them survive the valley of death where traditional investing fails.

SEE OUR PORTFOLIO

FY24 CLIMATE IMPACT FUND I STATS

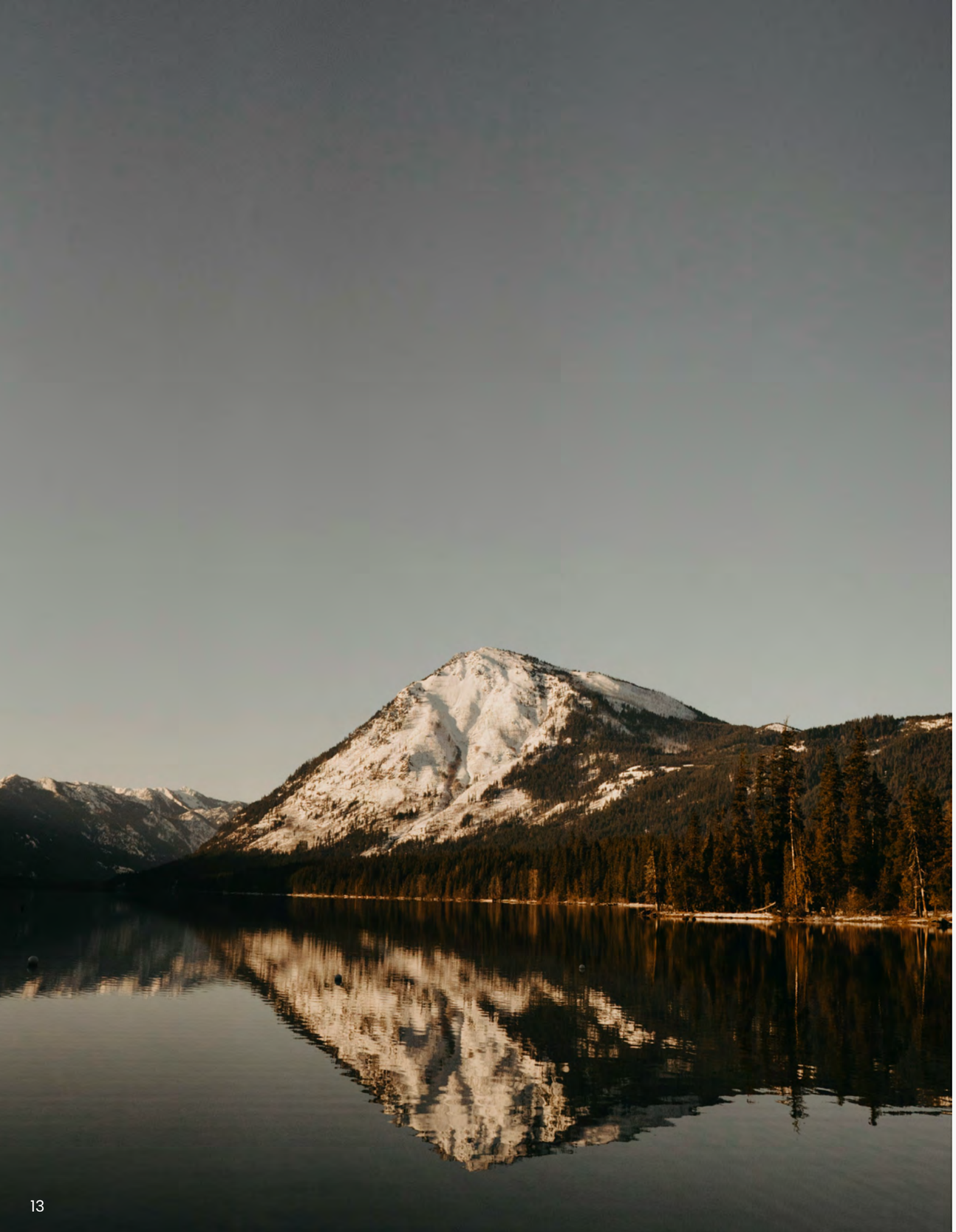
17.8Gt
emission reduction potential

$400K
invested by VertueLab in new portfolio companies

$300K
in follow-on funding to existing portfolio companies

90+
jobs created after CIF investment

67%
companies with BIPOC or women/non-binary leadership



FY24 CLIMATE IMPACT FUND INVESTMENTS

Meet the new companies we invested in during FY24

Sunspan Solar

Sunspan Solar aims to reshape the solar industry with a new form of solar PV arrays that can be deployed over parking lots, farms, canals, and grazing land. By opening new applications for renewable energy in underserved locations, they're expanding the solar market by opening up massive new use cases in urban and rural areas.

Cascadia Seaweed

Cascadia Seaweed is cultivating and processing seaweed for the production of nature-based solutions to food security and climate change. By transforming 100% naturally cultivated kelp with a chemical-free process into liquid solutions for large-scale crop farmers, they're able to help farmers increase yields while decreasing emissions.

The VertueLab Board

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Chair,
Board of Directors

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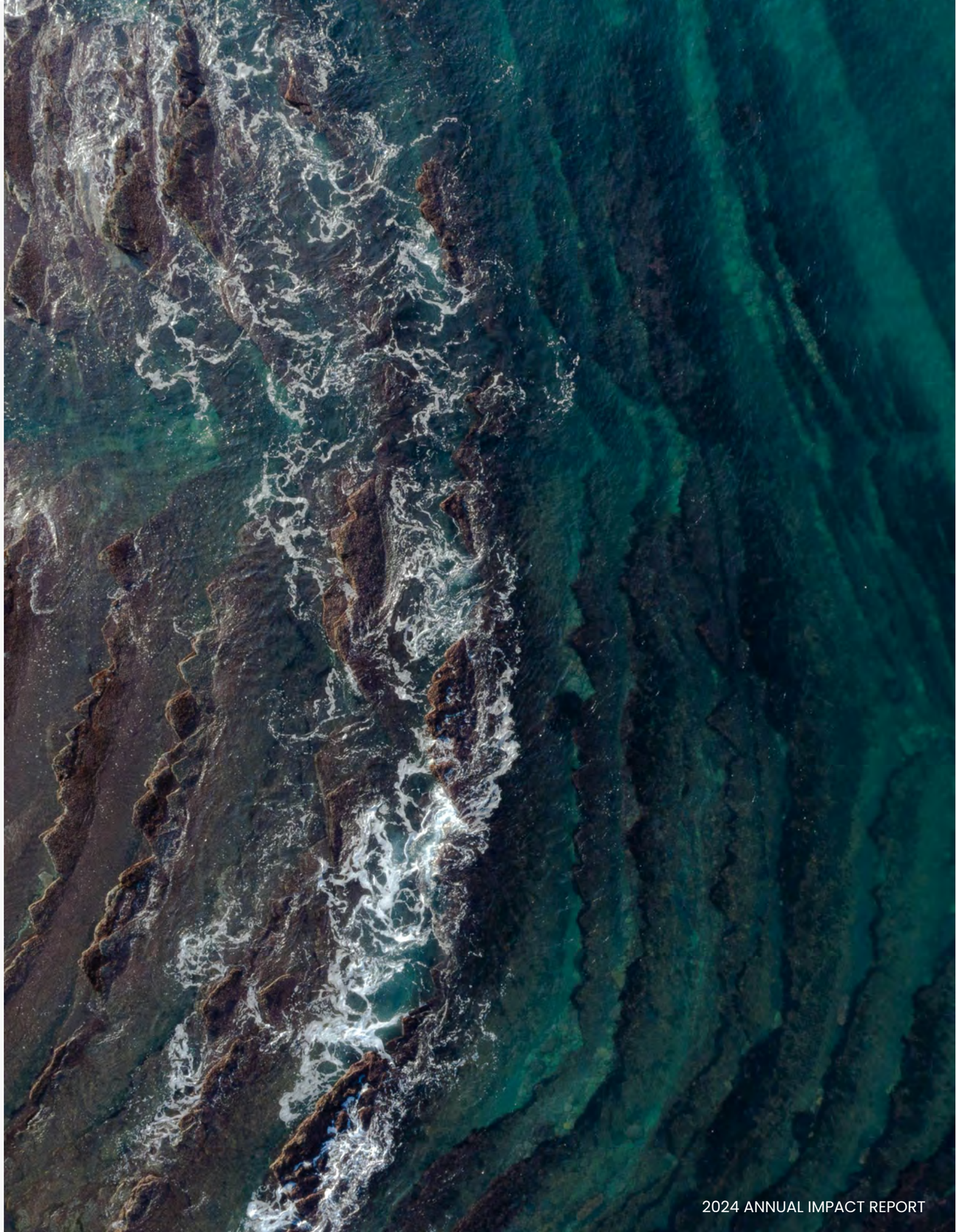
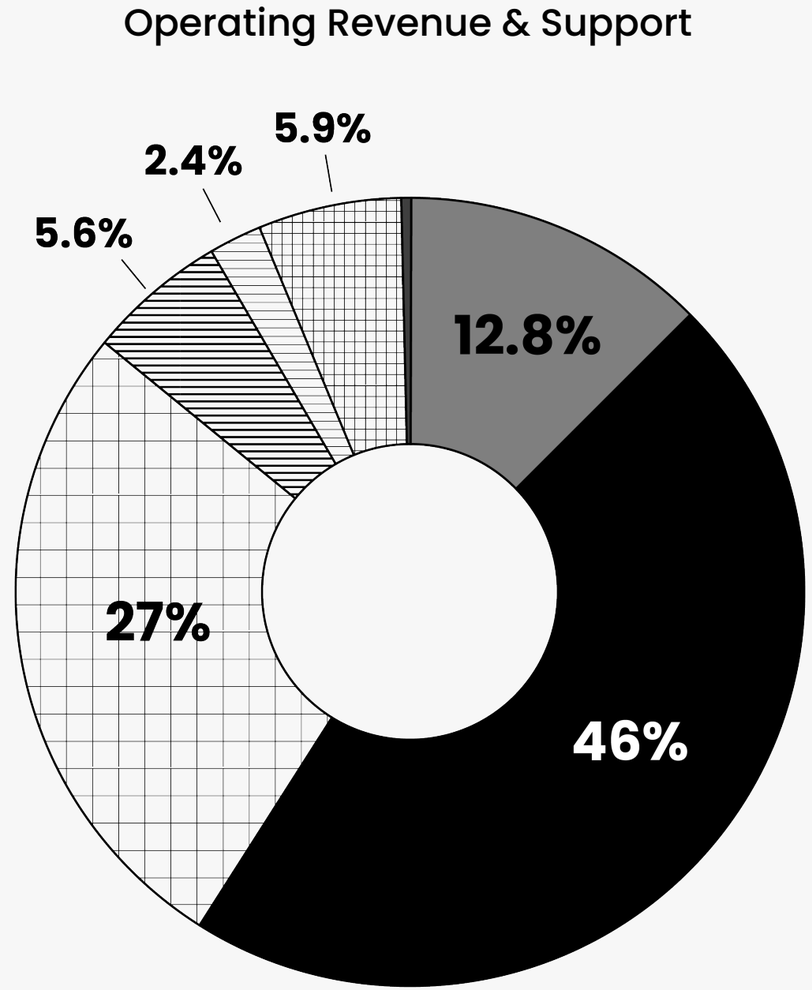


Organization Financials

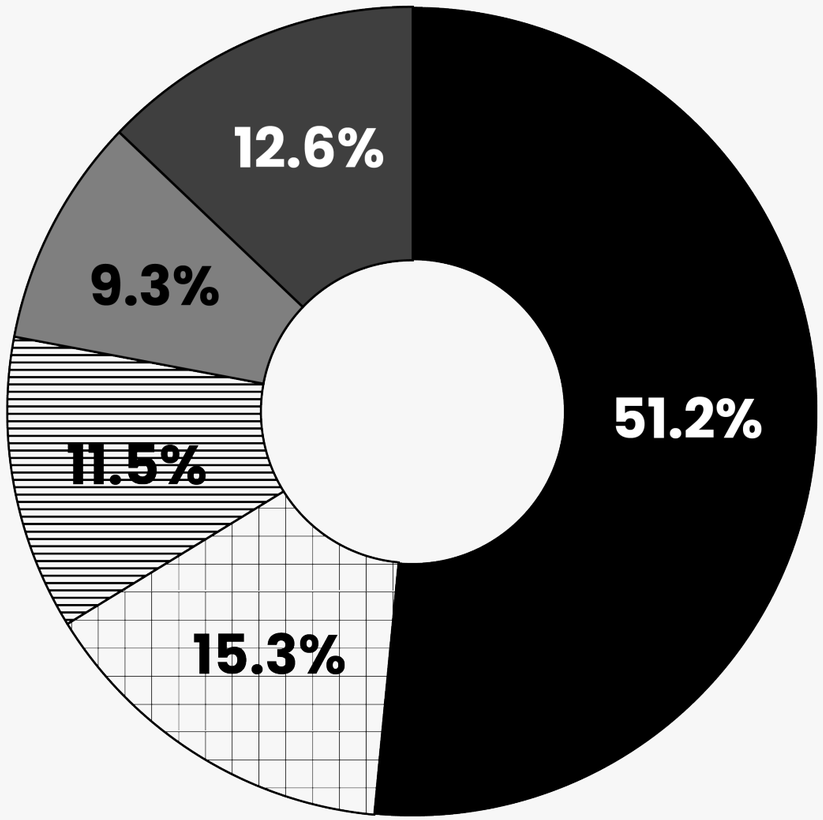


State Grants	$247,130	Corporate & Academia	$45,750
Federal Funding	$887,311	Other Fees	$114,520
Foundation Contributions	$521,700	In-Kind Contributions	$5,000
Individual Contributions	$108,214		

TOTAL OPERATING REVENUE & SUPPORT

$1,929,626

Expenses



●	Entrepreneur Support Program	$1,321,854
⊕	Just Future Climate Labs	$395,711
≡	Catalyze Capital	$296,772
●	Development	$240,780
●	Management & Admin	$325,335
TOTAL EXPENSES		**$2,580,452**

Thank You To Our Supporters

We're thankful to our community of supporters who are critical to our work in accelerating a just transition toward clean energy!

Alina Aliyar

Alison Shaw

Carol Dahl

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Erin Clements

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