

Clean Energy Ventures 2024 Impact Report



CLEAN ENERGY
VENTURES

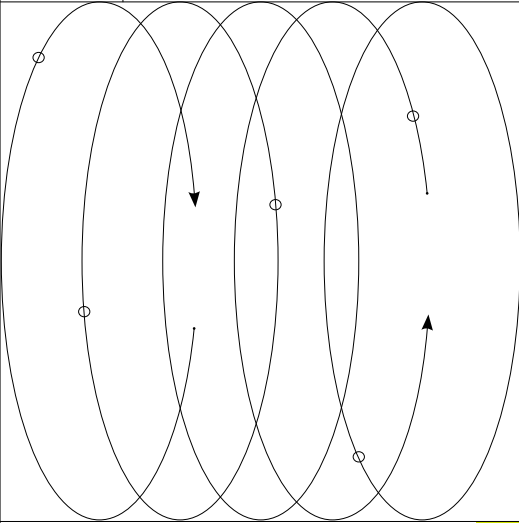


“To address climate change, the global economy needs to decarbonize. We are using all the resources at our disposal, including our second fund and deep tech expertise, to find, fund, and support the companies that will make the greatest impact.”

David Miller

Co-Founder & Managing Partner





Dear Readers, Welcome to the Clean Energy Ventures 2024 Impact Report

THIS PAST YEAR BROUGHT MANY EXCITING DEVELOPMENTS FOR CLEAN ENERGY VENTURES

With the launch of Fund II, Clean Energy Ventures (CEV) expanded our team, our presence around the globe, and our engagement in the climate tech ecosystem. Over the previous year, we invested in eight early-stage companies working on technologies from hydrogen transport and storage to decarbonized materials, fuels, and more.

As we continue to inch closer to 2050, the need for cutting-edge climate solutions is becoming all the more apparent with an increase in adverse weather events around the world. Changes in the geopolitical atmosphere are bringing uncertainty to the future of clean energy and climate policy. Now more than ever, we feel the responsibility is in the hands of innovative thinkers to decarbonize the economy and revolutionize our use of the world's natural resources.

With our second fund, we will continue seeking out the most promising founders, teams, and technologies to achieve a net-zero future. And, as we broaden our reach to new cities and countries, our commitment to a just transition is at the forefront of our minds. In addition to highlighting some achievements and progress through 2024, this report also dives into the social and governance practices and outcomes both at CEV and within our portfolio companies. As responsible investors, we prioritize supporting our companies in their sustainable growth journeys with an emphasis on honest and transparent reporting to our investors and the public.

Please enjoy our 2024 Impact Report. We look forward to a year of growth and impact ahead.



Daniel Goldman
Co-Founder & Managing Partner




David Miller, Ph.D.
Co-Founder & Managing Partner



Temple Fennell
Co-Founder & Managing Partner



2024 Impact Report

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About Clean Energy Ventures

Founded in 2017 with a mission to advance disruptive global climate solutions, Clean Energy Ventures invests in exceptional teams and game-changing technologies as they transform into market leaders capable of mitigating gigatons of greenhouse gas emissions and providing top decile venture capital financial returns.

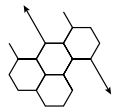


Hertha Metals Founder and CEO Lauren Merouch, Ph.D. speaks at our 2024 Annual General Meeting.



Our Sectors of Interest

Clean Energy Ventures invests across nine key sectors from energy supply, demand, and optimization to the decarbonization of critical materials such as steel and cement. Investing across these sectors allows us to support the multi-faceted goals of the energy transition while creating a diversified and innovative portfolio.



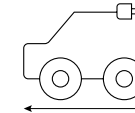
Advanced Materials

Next-generation materials reducing weight, increasing resilience, and improving system efficiency



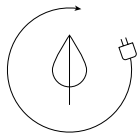
Carbon-to-Value

Utilizing CO₂ as a value-added feedstock for downstream products



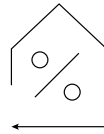
Clean Mobility

Meeting the mobility needs of a growing population with solutions that protect the planet



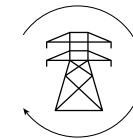
Clean Energy Production

Generating clean electrons to reduce reliance on those generated with fossil resources



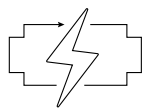
Energy Efficiency

Reducing the energy needed for critical processes across the residential, commercial, and industrial sectors



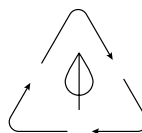
Energy Management

Optimizing resource use to increase efficiency, reduce cost, and minimize environmental impact



Energy Storage

Storing energy in usable forms to increase the availability of renewable resources



Recycling & Re-Use

Extending the life of existing goods, investing in circular solutions, and reducing the need for virgin materials



Water/Ag Energy Nexus

Redefining energy use in the water and agriculture industries



Sector Focus: Recycling & Re-Use

BREAKING DOWN THE PLASTIC PROBLEM

Polymer materials such as plastics, coatings, and adhesives are everywhere around us. Not only are millions of consumer products made from or with these materials, but microplastics are now endemic and can be found even inside the human brain.⁵ Since the early 1900s, the world has produced *billions* of tons of plastic, almost exclusively sourced from fossil fuels.⁶ In 2019, the production of these materials generated over two gigatons of CO₂e, making up 3-5% of global emissions.⁷ Plastic production is only expected to increase in the coming decades, potentially doubling by 2050 under conservative estimates.⁸

Synthetic polymers like plastics began to catch on in the mid-20th century. At the time, the industry advocated for mechanical recycling, a process where post-consumer plastic is shredded, melted, and turned into a new product. However, this method can only be applied to a limited number of materials and results in lower-quality material with each cycle.⁹

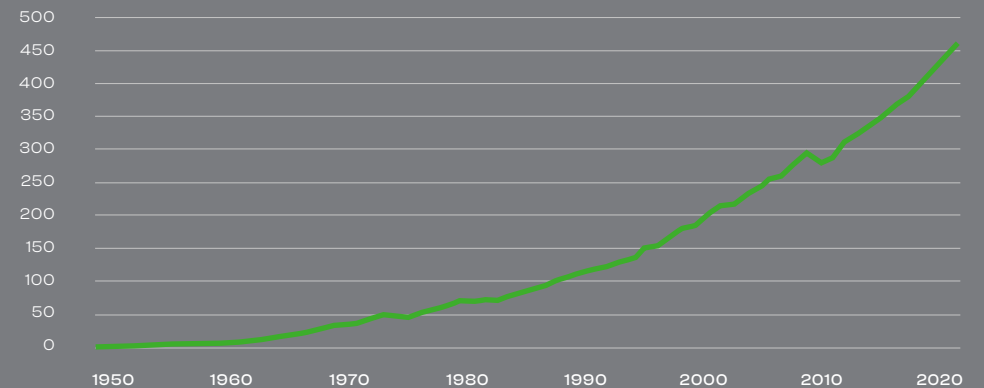
To do something about materials like polystyrene and plastic bags, the industry developed chemical recycling methods such as pyrolysis. In this process, plastic waste is

heated to high temperatures without oxygen present, breaking chemical bonds in the polymer chains. This turns mixed plastic waste into an oily product that can be used as fuel, reducing the amount of plastic waste that ends up in the environment. However, high energy requirements and the resulting GHG emissions have limited the growth of such technologies.¹⁰ The challenges of post-consumer collection, sorting, and cleaning remain barriers to any recycling method. Plus, the different molecular structures of plastic materials require unique solutions.

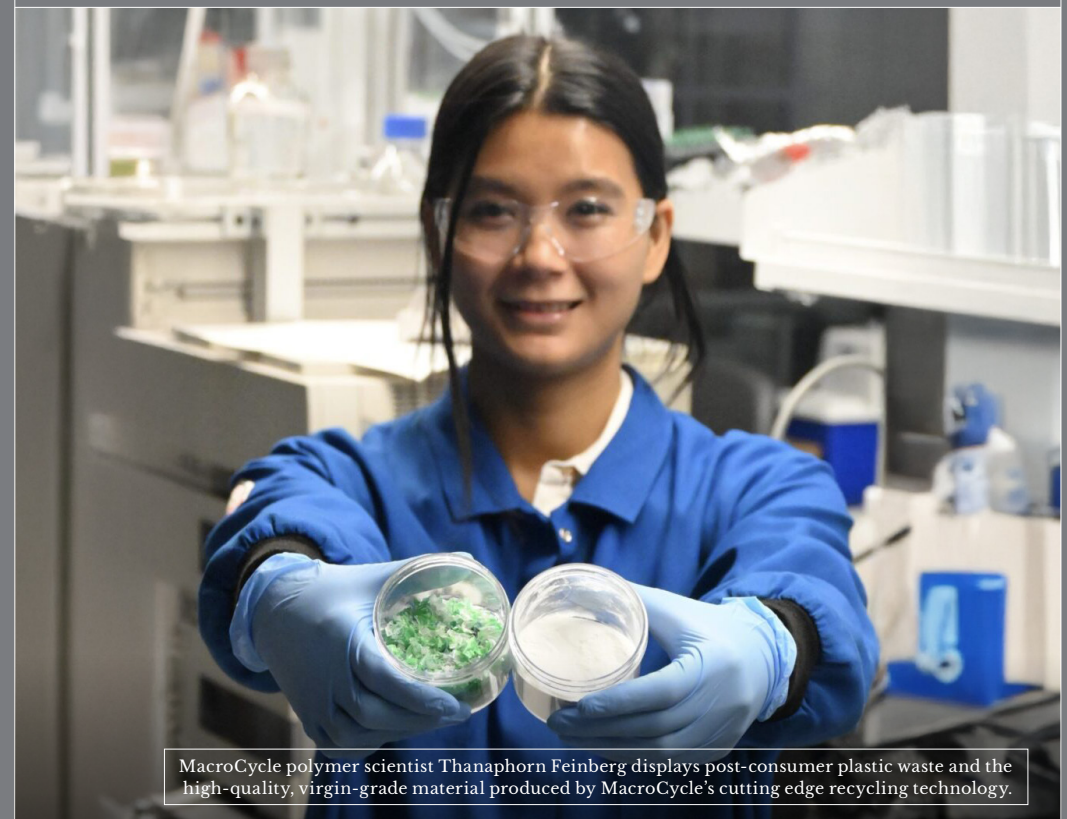
In 2025, Clean Energy Ventures invested in MacroCycle, a company commercializing a groundbreaking chemical recycling technology capable of transforming a wide range of feedstocks into virgin quality PET with a fraction of the energy requirements of current recycling techniques. MacroCycle's process enables true upcycling of low-quality feedstocks into high-quality extended polymer chains by connecting them into cyclic oligomers called *macrocycles*.

MACROCYCLE
CIRCULAR PLASTICS. ZERO CARBON

Global Plastic Production (million tonnes)



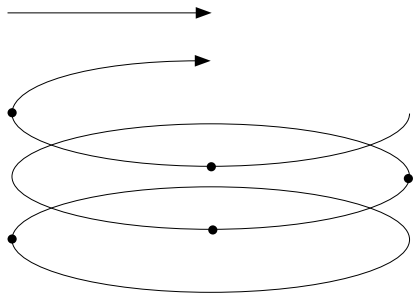
Source: Our World in Data



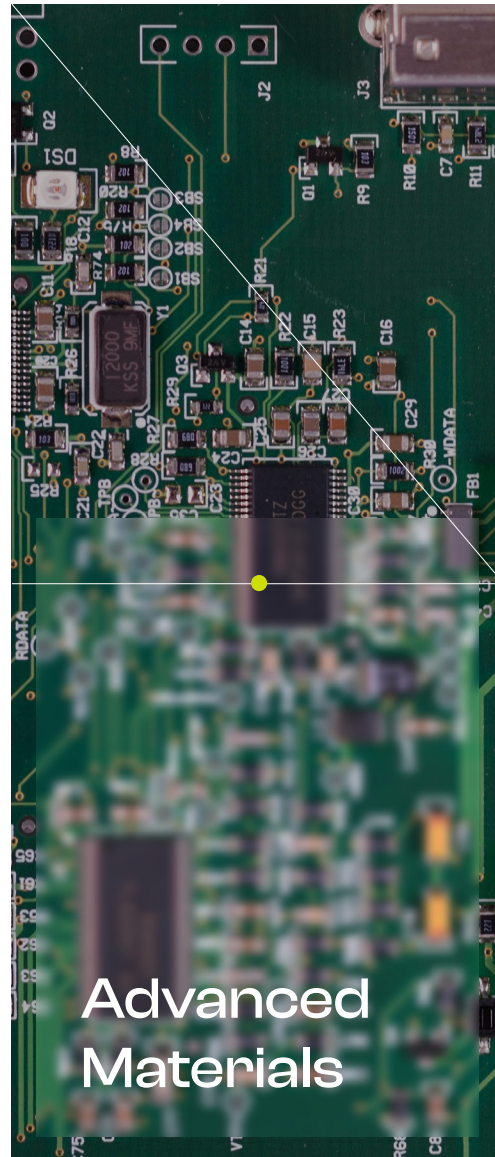
MacroCycle polymer scientist Thanaphorn Feinberg displays post-consumer plastic waste and the high-quality, virgin-grade material produced by MacroCycle's cutting edge recycling technology.



Our Portfolio



Our portfolio companies are at the forefront of the climate tech revolution, tackling climate change with industry-disrupting solutions capable of achieving multi-gigaton GHG emissions reduction. Together, our portfolio represents not just a bet on climate tech—it's a blueprint for a more sustainable, resilient, and economically vibrant future.



BOSTON MATERIALS

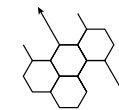
BOSTON MATERIALS produces materials that combine the best properties of metal and composites to dramatically increase strength, thermal and electrical conductivity, and durability while reducing weight for vehicles, and other applications.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 5.0

SECTOR

Advanced Materials



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



11. Sustainable Cities & Communities



12. Responsible Production & Consumption

HERTHA METALS

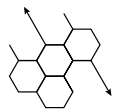
HERTHA METALS is decarbonizing steel with a new production process that expands feedstocks, reduces costs, and can lower emissions by 98% compared to traditional methods.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.9

SECTOR

Advanced Materials



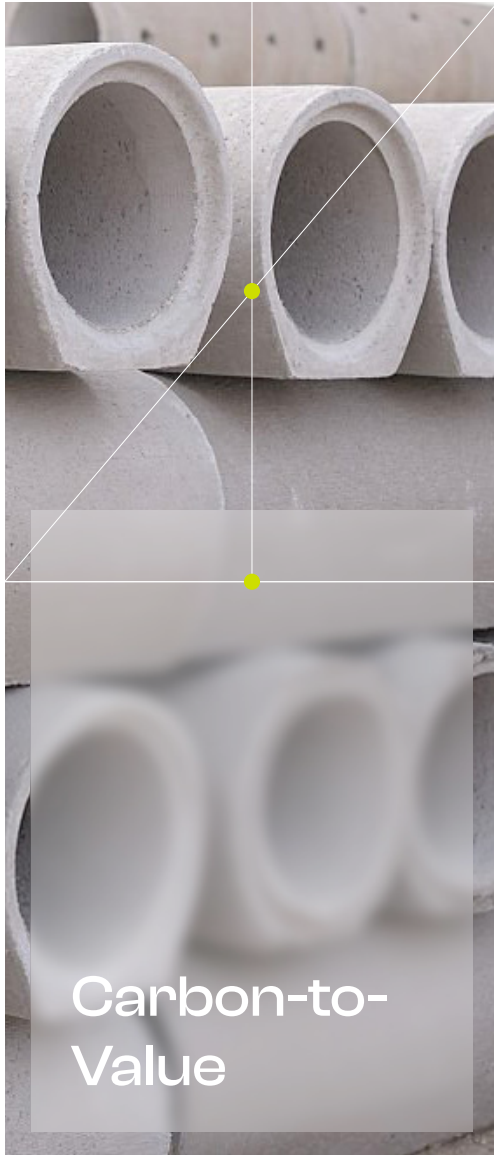
SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



CARBON UPCYCLING uses captured CO₂ and low-grade feedstocks to enhance cement performance while reducing emissions.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **6.4**

SECTOR

Carbon-to-Value



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



11. Sustainable Cities & Communities



12. Responsible Production & Consumption



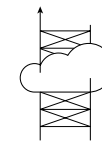
TRAVERTINE's technology captures and mineralizes CO₂ while creating usable, low-cost inputs to fertilizers by leveraging its innovative electro-chemical process.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **2.2**

SECTOR

Carbon-to-Value



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



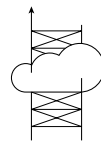
QUEENS CARBON has developed an energy-efficient process to produce cost-competitive carbon-neutral supplementary cement materials.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **4.1**

SECTOR

Carbon-to-Value



SUSTAINABLE DEVELOPMENT GOALS



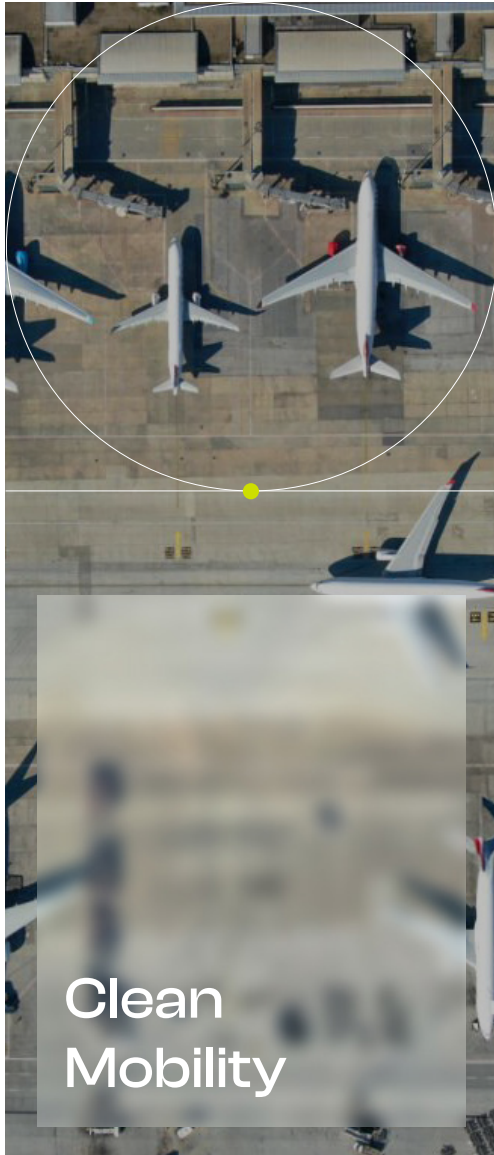
7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



OXCCU

OXCCU (pronounced OX-C.C.U.) creates sustainable aviation fuel and other high-value fuels and chemicals in a single step from CO₂ and hydrogen.

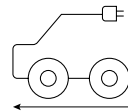
CEV FUND

Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **6.1**

SECTOR

Clean
Mobility



SUSTAINABLE DEVELOPMENT GOALS



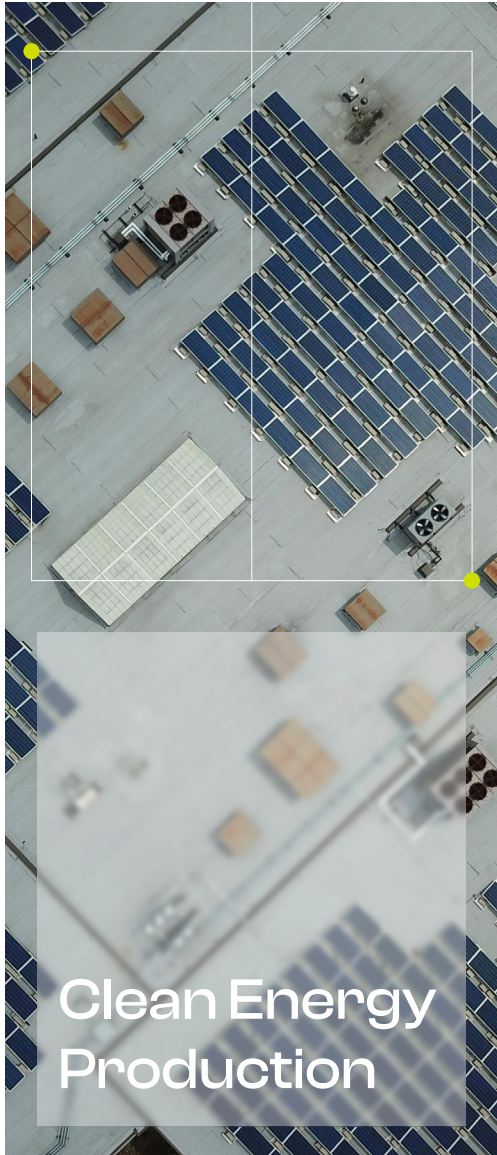
9. Industry, Innovation & Infrastructure



11. Sustainable Cities & Communities



OXCCU's founding team (from left to right) Dr. Tiancun Xiao, Dr. Naomi Wise, Andrew Symes, and Dr. Jane Jin.



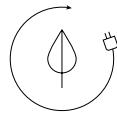
ADVANCED IONICS's water vapor electrolyzer enables industrial green hydrogen production that is cost-competitive with today's gray hydrogen.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.2

SECTOR

Clean Energy Production



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



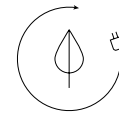
AYRTON ENERGY's liquid organic hydrogen carrier technology enables the safe, efficient, and scalable storage and transportation of hydrogen.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 4.4

SECTOR

Clean Energy Production



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



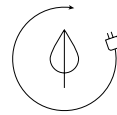
SUNDENSITY's technology improves solar panel efficiency and reduces manufacturing costs using a high efficiency, high stability perovskite layer atop traditional PV.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.4

SECTOR

Clean Energy Production



SUSTAINABLE DEVELOPMENT GOALS



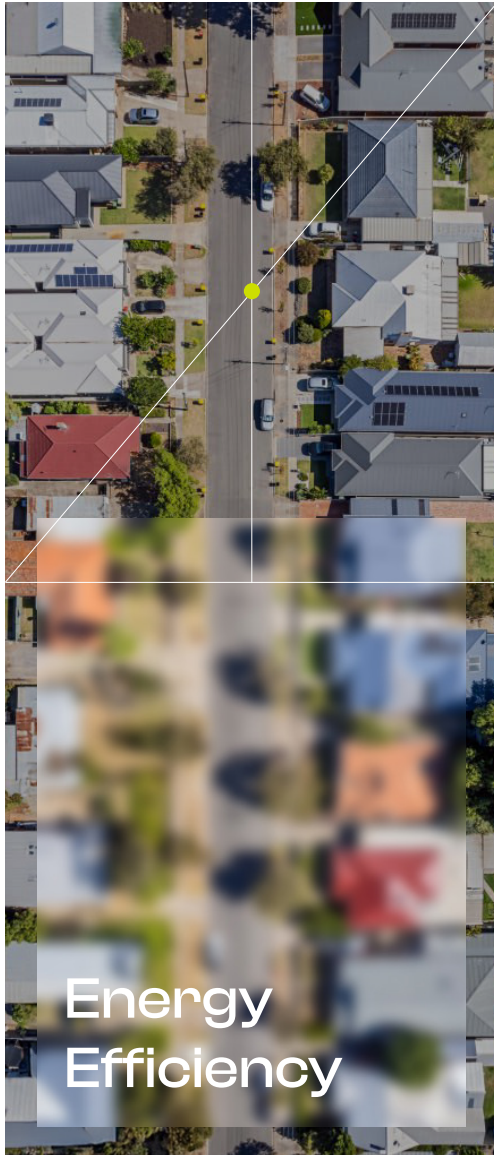
7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



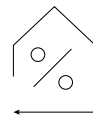
EVARI is commercializing a mass-market turbocompressor that will dramatically improve the performance of electric heating and cooling.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.0

SECTOR

Energy Efficiency



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



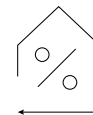
NDUSTRIAL's technology improves energy efficiency and optimizes manufacturing processes in the cold chain and industrial facilities.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.9

SECTOR

Energy Efficiency



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



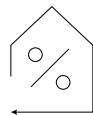
PEARL provides third-party certification of high-performing homes across the nation: homes that are healthy, comfortable, resilient, and energy efficient.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.9

SECTOR

Energy Efficiency



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



11. Sustainable Cities & Communities



12. Responsible Production & Consumption



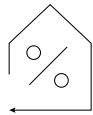
REBOUND has created a new thermodynamic cycle that improves the effectiveness of cooling systems for cold storage, data centers, and a broad range of facilities and applications.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.7

SECTOR

Energy Efficiency



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



12. Responsible Production & Consumption



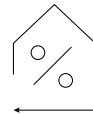
TRANSAERA's novel cooling and dehumidification technology enables a 40% reduction in AC energy consumption, while nearly doubling system efficiencies.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.2

SECTOR

Energy Efficiency



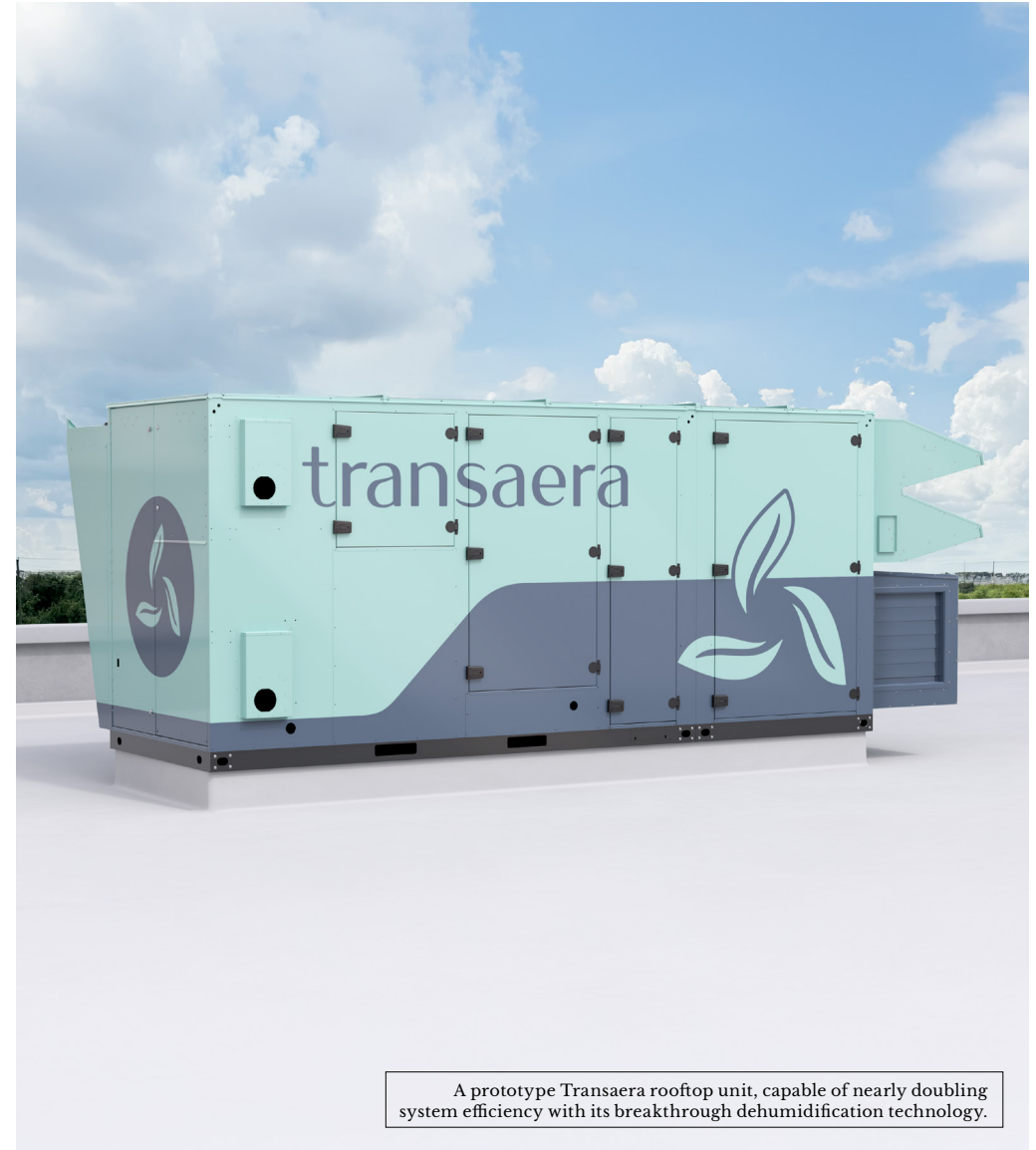
SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



A prototype Transaera rooftop unit, capable of nearly doubling system efficiency with its breakthrough dehumidification technology.



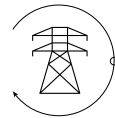
BODHI's patented software helps solar installers improve referrals and quality of service by managing the residential customer experience.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.0

SECTOR

Energy Management



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



11. Sustainable Cities & Communities



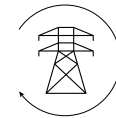
CLEARTRACE's climate accounting platform allows companies to stand behind their claims of carbon reductions, sustainability, and renewable energy.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.7

SECTOR

Energy Management



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



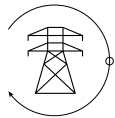
CONNECTDER expands the adoption of residential solar and storage assets by turning the meter socket into the utility's all-in-one integration point for distributed energy resources.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 4.9

SECTOR

Energy Management



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



11. Sustainable Cities & Communities



12. Responsible Production & Consumption



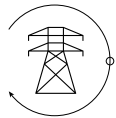
SPARKMETER is enabling utilities in emerging and U.S. markets to digitalize their distribution networks. Their grid management solution improves reliability, reduces cost, and lowers CO₂ emissions.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 1.5

SECTOR

Energy Management



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



11. Sustainable Cities & Communities



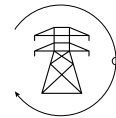
LINEVISION's grid enhancing technology helps utilities expand the capacity of existing transmission lines by up to 60%, allowing more power onto the grid.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.0

SECTOR

Energy Management



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



LineVision's LineAware device provides real-time transmission line monitoring for reduced risk and increased reliability of critical assets.



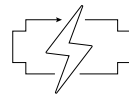
ELECTRIFIED THERMAL converts renewable power into high temperature (1,800°C) thermal energy using proprietary, low-cost thermally conductive bricks to reduce emissions from hard-to-decarbonize industries.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **3.1**

SUBSECTOR

Energy Storage



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



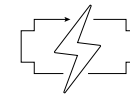
NOON ENERGY has created a new kind of battery that is more energy dense than lithium-ion and can store energy for days at extremely low cost without critical minerals.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **4.2**

SECTOR

Energy Storage



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



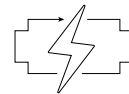
VOLEXION's graphene coating for lithium-ion battery cathodes dramatically improves power density, cycle life, and safety. Their technology is truly 'drop-in.'

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) **3.3**

SECTOR

Energy Storage



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



9. Industry, Innovation & Infrastructure



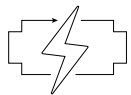
LITHIOS's Advanced Lithium Extraction technology enables the extraction of more than 85% of untapped lithium sources with a 10x reduction in energy requirements.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.1

SECTOR

Energy Storage



SUSTAINABLE DEVELOPMENT GOALS



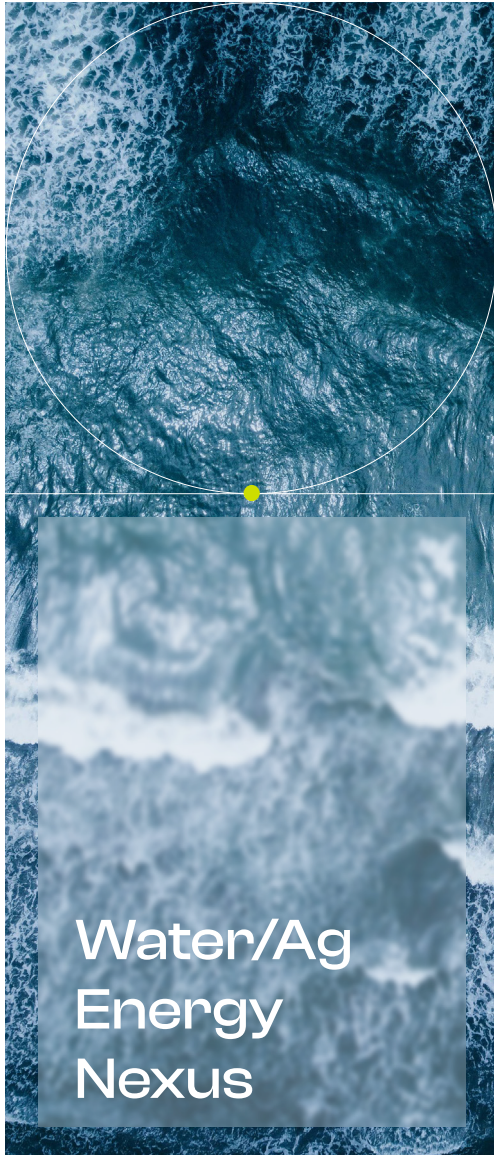
9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



CEV Investor Wynston Reed and Managing Partner Dan Goldman with Lithios Co-Founder and CEO Mo A. Alkhadra, Ph.D. at the company's Medford, MA, U.S. headquarters.



AQUA MEMBRANES has created a 3D-printed reverse osmosis water filtration technology that can dramatically reduce the energy requirements for the world's purified water supply.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.7

SECTOR

Water/Ag
Energy Nexus



SUSTAINABLE DEVELOPMENT GOALS



6. Clean Water & Sanitation



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



NITROFIX has developed a catalyst enabling zero-emissions, low-cost ammonia production from just air and water.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 1.9

SECTOR

Water/Ag
Energy Nexus



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



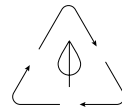
AEPNUS's electrolysis technology enables the electrification and decarbonization of the chemical manufacturing industry.

CEV FUND Fund II

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 3.5

SECTOR

Recycling & Re-use



SUSTAINABLE DEVELOPMENT GOALS



9. Industry, Innovation & Infrastructure



12. Responsible Production & Consumption



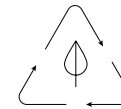
NTH CYCLE's low-cost electro-extraction technology is the clean, next generation processing solution for critical mineral refining and lithium-ion battery recycling.

CEV FUND Fund I

POTENTIAL GHG IMPACT THROUGH 2050 (Gt) 2.9

SECTOR

Recycling & Re-use



SUSTAINABLE DEVELOPMENT GOALS



7. Affordable & Clean Energy



11. Sustainable Cities & Communities



12. Responsible Production & Consumption



Nth Cycle: Leading the Domestic Minerals Supply Chain

When **Clean Energy Ventures** first invested in **Nth Cycle** in 2021, Co-Founder and CEO Megan O'Connor was in the beginning stages of building a game-changing company. Three years later, Nth Cycle has made history by becoming the first company in the United States to produce a domestic supply of premium nickel cobalt MHP. At their Commercial Production Site in Ohio, U.S., the company installed their breakthrough refining unit—aptly named The Oyster—to convert black mass into the critical precursor material for lithium-ion batteries.¹¹



Nth Cycle's Oyster system installed in the company's Fairfield, OH, U.S. facility.

Fueled by rising demand from clean energy applications, demand for nickel and cobalt rose in 2024 and is projected to more than double by the end of the decade. A stable domestic supply of these critical minerals is pivotal for supply chains supporting electric vehicles, battery electric storage systems, wind turbines, and more.

Across the globe, this boom led to a 10% growth in critical mineral mining investments in 2023 alone, and exploration spending grew even more.¹² Yet still, the International Energy Association (IEA) reports that the current mineral supply and investment plans are not sufficient to meet our future needs and could be a bottleneck in the energy transition.^{13, 14}

Recycling critical minerals offers a promising solution to this challenge. However, current technology severely limits recovery rates—less than 5% of today's nickel and cobalt supply is recycled, and only 1% of the global nickel supply is sourced from end-of-life batteries and scrap metal. These low rates stem from the energy-intensive

nature of recycling processes, their heavy reliance on fossil fuels, and the inherent complexity of extraction methods.^{15, 16, 17}

Nth Cycle's breakthrough electro-extraction system recovers and converts the valuable metals from these materials with a 90% reduction in greenhouse gas emissions compared to mining and a 40% reduction in emissions compared to current recycling methods.¹⁸

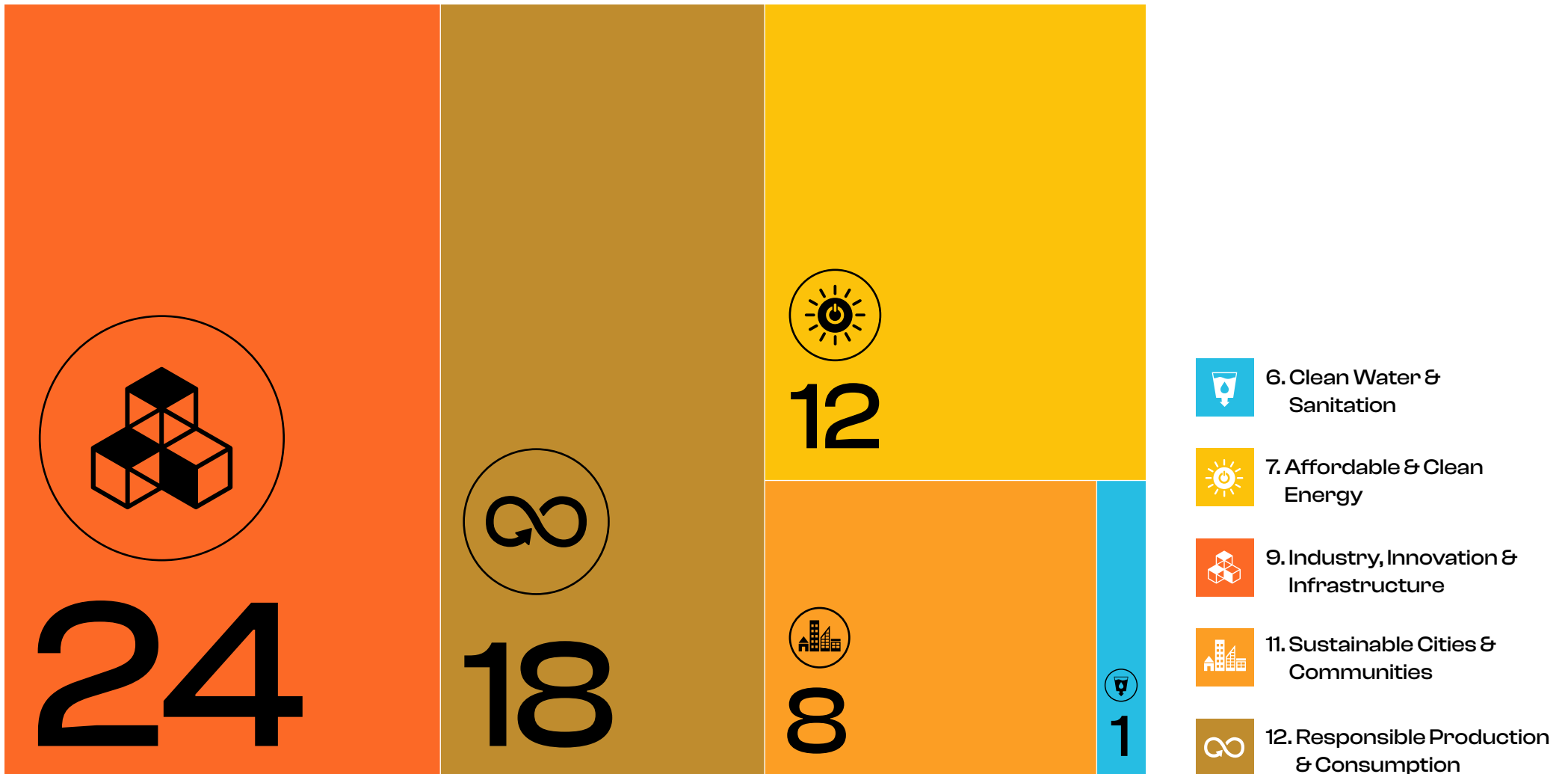
Because China dominates critical metal refining, 80% of the U.S. supply of critical minerals is imported, presenting a serious challenge to U.S. energy independence. Nth Cycle's U.S.-based commercial operations underscore the importance of reducing our reliance on foreign nations—a growing public and private sector priority given today's heightened geopolitical uncertainty—making Nth Cycle's commercialized solution more relevant than ever before.

A first of many milestones for Nth Cycle, the opening of the Ohio facility was a key point of growth for the company on its journey to setting a “new standard for modular, sustainable, high-purity critical metals production.”



Our Portfolio Alignment with the UN Sustainable Development Goals

(number of SDG-aligned portfolio companies)





Climate Impact

As clean energy technologies permeate all industries, the innovation paradigm is evolving as well. Propelled by support from public and private actors, these technologies continue to mature. With this progress, industry- and application-specific innovations are becoming increasingly important to accelerate adoption. Recognizing that each innovation is unique, we at CEV continue to look for methods to improve the way we evaluate the potential impacts of decarbonization solutions.

In 2024, we developed a novel internal framework to classify technologies by the way in which they create impact with the aim of reflecting the complex set of forces that drive uptake of new innovations.

The Climate Innovation Taxonomy™ is a classification system that categorizes solutions by their impact mechanism. With three categories—Direct Reduction, Advanced Components, and Intelligent Systems—the framework considers whether a technology facilitates decarbonization by reducing, removing, or replacing GHG-intensive materials or processes; by increasing the efficiency or reducing the resource requirements of existing devices or processes; or by enabling greater commercial adoption of decarbonization technologies through better performance or lower cost.

Direct Reduction

Technologies that have a direct impact on GHG emissions by reducing, removing, or replacing emission-intensive materials and processes with those that are less so, often in hard-to-abate sectors such as transportation and construction.

Advanced Components

Technologies that have a GHG impact as part of larger systems. These could be hardware or process improvements which increase efficiency, reduce or repurpose waste, or meaningfully extend asset life. For example, devices that increase the capacity of existing transmission infrastructure.

Intelligent Systems

Devices and software that enable GHG impact by creating meaningful cost reduction, performance improvements, or scalability, such as electric vehicle drivetrains.





Direct Reduction

Advanced Components

Intelligent Systems



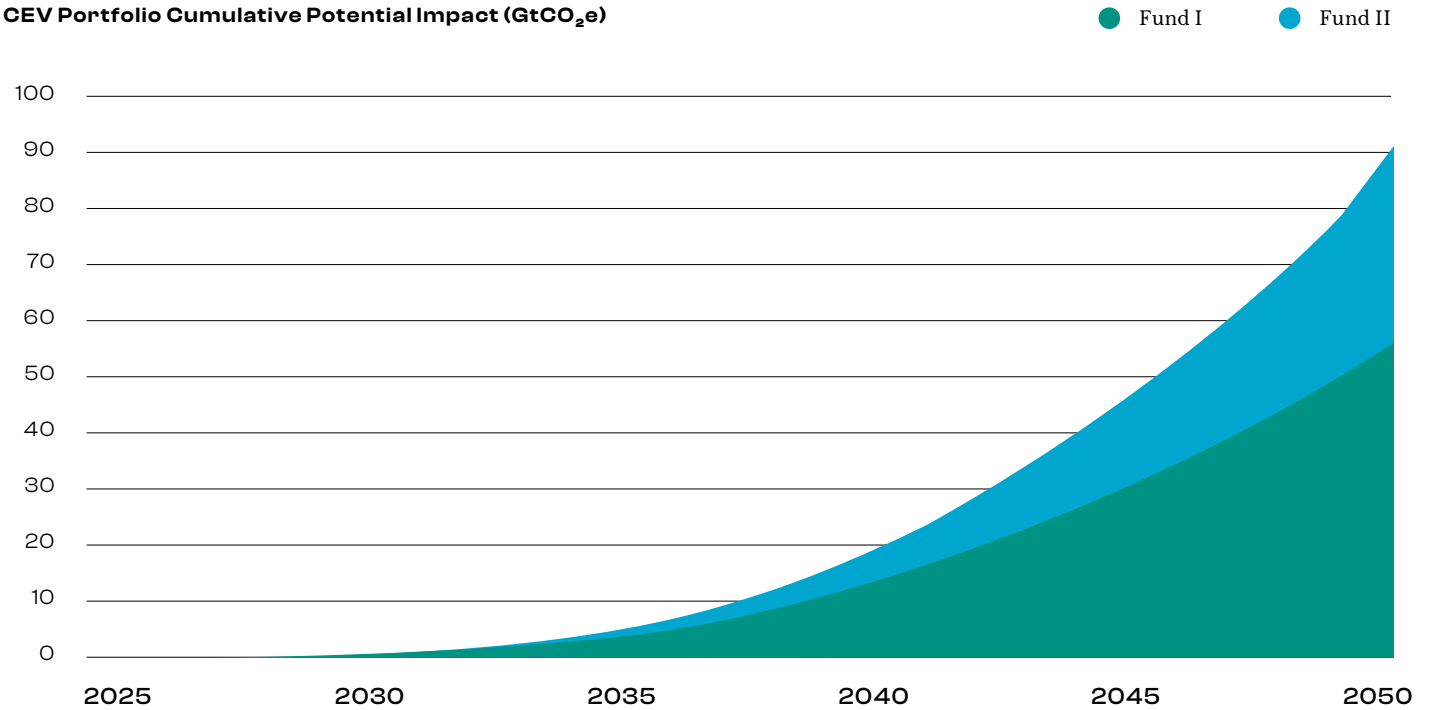


PORTFOLIO GREENHOUSE GAS IMPACT

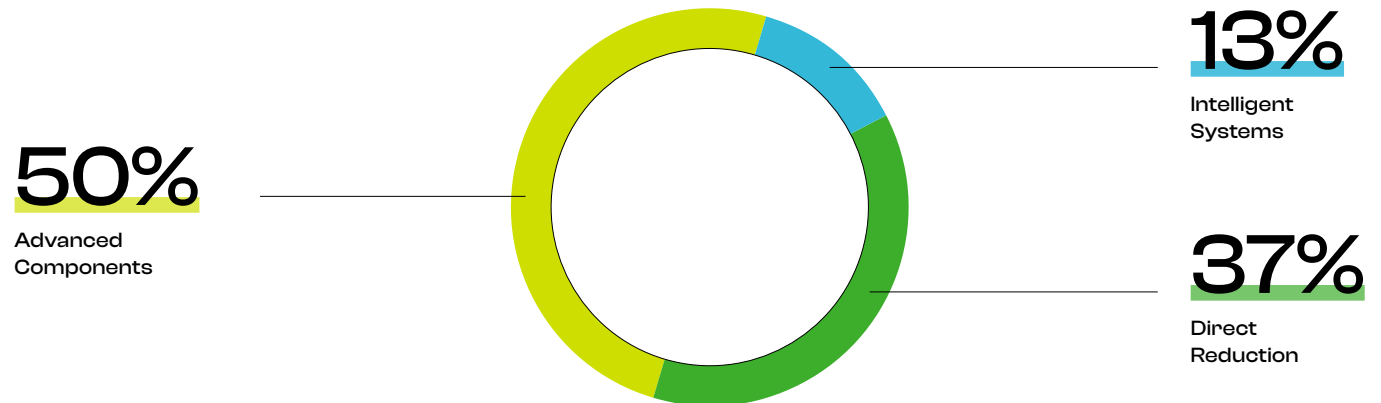
We evaluate investment opportunities through a single lens in which both financial and impact returns scale in tandem. The associated indicator for the latter is mitigated greenhouse gas emissions. Given the early stage at which we invest, our portfolio was largely pre-commercial in 2024. To reflect the positive climate outcomes we hope to see from the technologies we support, we report forward-looking avoided emissions aligned with the Potential Impact guidance in the Project Frame Methodology for evaluating greenhouse gas impact for early-stage investments.¹⁹

With the launch of Fund II, CEV set a goal to invest in emerging technologies with the potential to mitigate 75 Gt of cumulative GHG emissions through 2050. At the end of 2024, the technologies in our portfolio have the potential to mitigate over 91 GtCO₂e cumulatively through the next 25 years. CEV portfolio companies are creating change today that will continue to make an impact well into the future.

CEV Portfolio Cumulative Potential Impact (GtCO₂e)



Potential Impact by Primary Taxonomy Category





Aëpnus Co-Founders Lukas Hackl, Ph.D. and Bilen Akuzum, Ph.D. in the company's Oakland, CA, U.S. lab.



Environmental, Social & Governance (ESG)

We promote strong ESG practices within our portfolio. Extensive research has shown the positive effects of these practices on business and financial outcomes, including reduced costs and increased valuation,²⁰ talent attraction and retention,²¹ and improved financial performance.²² We know a company with diverse thinkers, top-tier talent, and strong governance is better positioned to maximize financial returns and impact.





ESG IN THE INVESTMENT PROCESS

ESG risks and opportunities are evaluated throughout the investment process using a combination of negative screening and extensive ESG due diligence.

Clean Energy Ventures takes an active approach to ensure our founders have the expertise and resources to create companies that leave a positive mark on the world for years to come. Our approach allows us to mitigate risks by proactively recommending measures to build a company culture emphasizing the importance of all stakeholders, including the planet.

We are committed to ensuring Good Governance²³ within our portfolio companies. We do this through the following process:

01 | Due Diligence

Our ESG due diligence process assesses the presence of policies and operational procedures that align with the pillars of Good Governance: financial controls and tax compliance, employee relations, staff remuneration, and sound management structures.

In addition to investigating any material concerns for each investment, CEV has three key areas of evaluation for all companies: Human Capital; Environment & Climate Change; and Governance, Business Ethics & Transparency.

By conducting materiality and gap analyses we reduce ESG risk in our portfolio while also establishing priority areas of engagement where CEV can add value.

02 | Management Alignment

With each new investment, we cultivate a relationship with company management to align sustainability-related goals and define objectives to build impact capacity and a strong organizational culture.

We create ESG capacity in our portfolio by mapping post-investment development milestones and providing guidance on their implementation.

03 | Collaboration

Our portfolio management approach allows us to identify and monitor our portfolio companies' progress and ensure that key issues are addressed in a timely manner. Evaluating ESG risk and opportunity at the general partner level is not enough. When company leadership is engaged in thoughtfully mitigating these risks and making the most of these opportunities, everyone is aligned on creating the best business outcomes.

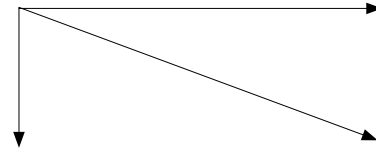
04 | Ongoing Evaluation

We track development at both the entity and portfolio levels to build our intelligence and support capacity. Through our annual questionnaire, we monitor our portfolio's progress in building strong ESG foundations.

In most early-stage climate investments, reliable data on ESG performance is limited. We leverage the diversity of size, stage, industry, and geography in our portfolio to internally benchmark company development and unlock insights that allow us to share learnings across the portfolio.



DIVERSITY, EQUITY & INCLUSION IN OUR PORTFOLIO²⁴



CEV believes that diverse teams are better equipped to overcome the challenges that come with building successful businesses. With a portfolio that spans four countries and 14 U.S. states, we value the different perspectives brought by individuals from all walks of life.

Years of research have shown that diversity and inclusion lead to better outcomes²⁵:

COMPANIES IN THE TOP QUARTILE FOR ETHNIC AND CULTURAL DIVERSITY WERE

36%

MORE PROFITABLE THAN THOSE IN THE BOTTOM QUARTILE

FEELING A SENSE OF BELONGING AT WORK LEADS TO A

56%

INCREASE IN JOB PERFORMANCE

In 2024, CEV portfolio companies:

CREATED OVER

70

new jobs

EMPLOYED OVER

500

workers

INCLUSIVE TEAMS MAKE BETTER BUSINESS DECISIONS UP TO

87%

OF THE TIME

COMPANIES WITH HIGHER DIVERSITY LEVELS SEE

19%

HIGHER INNOVATION REVENUES

Minority founders continue to be at a disproportionate disadvantage across the venture landscape, with McKinsey reporting that Black and Latino founders received only 1% and 1.5% respectively of VC funding across the U.S. in 2022. Similarly, women-founded teams received 1.9% of VC funding, and only 0.1% went to Black and Latino women founders.²⁶

At CEV, our technically-focused investment approach and emphasis on strong team assessment provides greater opportunity for founders from all backgrounds.

In 2024,

16%

of our portfolio executives came from underrepresented backgrounds, and

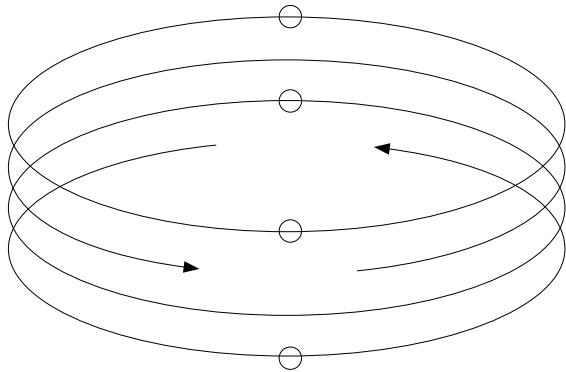
24%

of our portfolio executives were women.



TACKLING HARD PROBLEMS: Female Founders Shaping the Future of Energy

Startups founded by women receive less than half the funding compared to male-led startups. Despite this gulf, startups with a female founder have proven to be more financially successful over time, generating more revenue than all-male teams by 10%.²⁷ **With women making up 24% of our portfolio executives**, it's clear that the future of clean energy depends on creating opportunities for outstanding women leaders. Clean Energy Ventures is proud to back these extraordinary women as they lead the charge to decarbonize our economy.



“I am extremely grateful to be able to be a mother of three young boys, a scientist, and a CEO. *I have my dream job. I hope the clean energy industry will keep the door open for the Marie Curies of the future to step through.*”

Dr. Laura Lammers

Co-Founder & Chief Executive Officer at Travertine



“There’s still work to do in ensuring diversity at the leadership level, particularly in technical and commercial roles. *Representation matters, not just for visibility, but for better creativity and stronger outcomes.*”

Dr. Jane Jin

Co-Founder & Chief Operating Officer at OXCCU



“I think diversity in clean energy is important because *together we are solving hard problems*, and we need diversity in thought to be successful in solving these challenges.”

Natasha Kostenuk, P.Eng

Co-Founder & Chief Executive Officer at Ayrton Energy



“I’ve witnessed significant strides; *more women and individuals from diverse backgrounds are contributing to the industry*. However, despite this progress, women and minorities remain underrepresented, especially in leadership positions.”

Cynthia Adams

Co-Founder & Chief Executive Officer at Pearl



“*I’ve seen that when diverse voices are heard, innovation thrives*. I hope to see the industry continue expanding opportunities for women and underrepresented groups—not only by creating more entry points, but by fostering environments where these individuals can lead, influence, and shape the future of energy.”

Dr. Ophira Melamed

Co-Founder & Chief Executive Officer at NitroFix



Our Greenhouse Gas Footprint

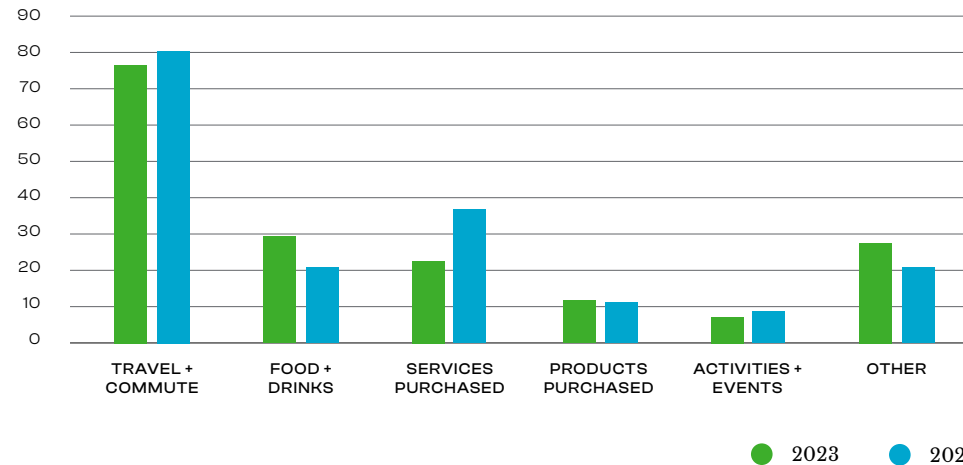
At Clean Energy Ventures, we believe that each individual action can make a difference. We keep this attitude in mind when it comes to our own operations, too.

OUR FOOTPRINT

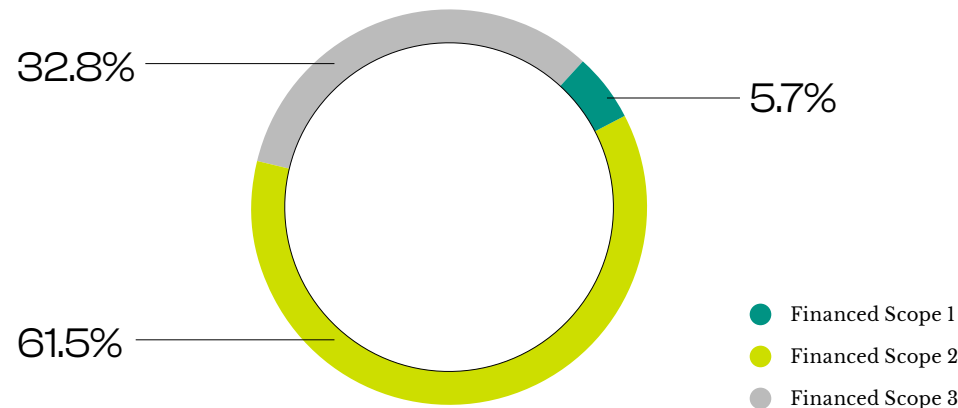
We began measuring our firm’s emissions in 2023 to understand the sources of our operational footprint and take steps to decrease it. In 2024, we expanded both our team and our global presence significantly. Despite this growth, our operational emissions were 180 tCO₂e—only 5 tCO₂e higher than in 2023. Our environmental impact remains low, with emissions per full-time employee decreasing by 24%, underscoring our commitment to sustainable growth.

While CEV maintains headquarters in Boston located in a LEED Silver Certified building,²⁸ we have been a remote-first organization since 2021. We also make an effort to limit emissions by monitoring our travel for events and investment-related activities.

CEV Greenhouse Gas Emissions (tCO₂e)



CEV Financed Emissions



FINANCED EMISSIONS

Investing in companies at the forefront of the energy transition often requires balancing the effects of present-day greenhouse gas emissions with avoided emissions from the deployment of climate technologies in the near future. In order to develop vital decarbonization technologies, we need to build successful companies starting today. That comes with a carbon footprint. This year, we calculated the Scope 1, 2, and partial Scope 3²⁹ emissions of our portfolio companies. In 2024, based on our ownership, CEV’s share of our portfolio company emissions totaled 637 tCO₂e.³⁰



CEV Principal Shanbor Gupta speaks on a panel at the Start Up Energy Transition Festival in Berlin.

MOVING THE INDUSTRY FORWARD

Klimate

As we look to the coming years, we are keeping in mind our own sustainable growth. That is why in 2024, CEV's management company committed to a carbon removal purchase agreement, removing all management company operational emissions³¹ from 2023 through 2028. Together with our carbon removal partner Klimate, we look forward to building an additional avenue through which CEV can continue to catalyze climate innovation and action, apart from our direct investment activity. As carbon removal technologies mature, there is a need to indicate demand and create a market for projects and infrastructure to receive the necessary support. Through our offtake agreement, we have committed to the purchase

of high-quality removal credits for years to come. Read more about CEV's commitment to carbon removal in our recent [press release](#).

Klimate is a Copenhagen-based company providing access to high-quality, innovative, and verifiable carbon removal solutions. Founded in 2021, Klimate's core purpose is to scale and accelerate the development of carbon removal methods and technologies needed to achieve global climate mitigation targets. CEV's partnership with Klimate allows our mission to permeate all areas of our operations. We catalyze climate innovation and decarbonization technologies with our investment capital, and now with our organizational budget as well.

OUR COMMITMENT TO SUSTAINABILITY

We believe that to create an environment of belonging and success, each member of our team should feel comfortable and empowered in their work. As our team grew in 2024, so did our commitment to maintaining these high standards.

Since our founding, we've also held high standards when it comes to stewardship. Using our platform to push the

progression of climate investment is a responsibility we take seriously. Through our engagement with the organizations below, we are proud to have a positive influence in many areas of the climate tech sector. In addition to these groups, CEV is a member of Ceres and Net Zero Asset Managers (NZAM) and a signatory of the United Nations Principles for Responsible Investment (UN PRI).



Formerly the Northeast Clean Energy Council, The Alliance for Climate Transition (ACT) is the largest nonprofit trade organization dedicated exclusively to building and maintaining the climate economy by helping companies, nonprofits, and municipalities grow and scale their business and sustainable operations. As Chair of the Board of Directors, CEV's Daniel Goldman helps guide ACT in its mission to scale clean energy sources.³²



Impact Capital Managers is an organization dedicated to scaling impact investing with integrity and authenticity. As part of the Talent & Diversity Working Group, we help ensure diversity and inclusion are represented in the goals and commitments of Impact Capital Managers. And, as supporters of the Mosaic Fellowship program for the last three years, CEV has had the privilege to grow the field of impact investing by providing mentorship and experience to first-year graduate students.³³

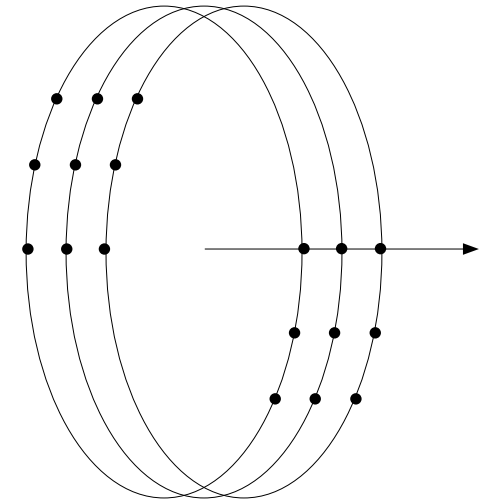


Browning the Green Space (BGS) is a non-profit organization aimed at advancing diversity in clean energy and climate tech by enabling systems change at the intersection of social, environmental, and economic justice. Co-founded by CEV Managing Partner Daniel Goldman, BGS is on a mission to enable a just and equitable transition through workforce, business, and community development.³⁴



CEV Co-Founder and Managing Partner Temple Fennell addresses investors at our 2024 Annual General Meeting.

Our Mark on Impact



INDUSTRY LEADERSHIP

As climate investment continues to grow, it is increasingly important for investors to align with one another and find common frameworks for evaluating the impact outcomes from their investments. Clean Energy Ventures is a proud member of Project Frame, a nonprofit program by Prime Coalition dedicated to organizing investors around best practices in Impact Measurement and Management (IMM) for climate. Reaching over 1,300 members from over 400 investment firms, Project Frame is best-in-class for early-stage emissions impact measurement and reporting around the world. As a member of the Steering Committee, CEV is committed to supporting the development of standards that prioritize transparency.

CEV is also a proud member of Venture Climate Alliance (VCA), an initiative built by and for venture capitalists to ensure leadership by example in driving decarbonization. With a commitment to achieve a net-zero aligned portfolio by 2050, we at CEV are providing our portfolio companies with the tools and guidance they need to measure and manage their emissions from the earliest stages of operation.





COMMUNITY ENGAGEMENT

2024 was a busy year for community events and networking. The CEV team attended more than 30 events around the world. We carefully consider the impact of our travel and events to minimize unnecessary emissions. As the field of climate investment continues to mature, sharing our insights with and learning from others in the ecosystem help build a culture of transparency and create shared accountability for our common goals. Additionally, we had the pleasure of speaking at conferences and hosting many events including lunches, networking events, happy hours, and more.



CEV Co-Founder and Managing Partner Dan Goldman addresses the crowd at The Alliance for Climate Transition's Green Future Gala.



CEV Chief Operating Officer Ted Dillon participates in a working group at the ICM 2024 Spring Convening.



CEV's 2024 Climate Tech Summer Happy Hour hosted in Boston, MA, U.S. gathering founders, investors, and ecosystem leaders.



CEV Investment Partner YiJean Chow speaks on a panel at our 2024 Annual General Meeting.



A Vision for 2025

As we reflect on 2024, we're grateful for the meaningful growth we witnessed—both within our team at CEV and in the global conversation around climate change. This past year made it clearer than ever that we cannot rely solely on political and regulatory initiatives to ensure the energy transition progresses swiftly enough to align with our climate ambitions. Yet the venture community's response has been remarkable: according to Silicon Valley Bank, in 2024, \$7.6 billion in venture financing was invested in energy and power in the U.S. alone, even amid economic uncertainty.³⁵ These investments represent the type of urgent, sustained commitment required to decarbonize our world.

Entering 2025, our appreciation for the incredible teams we have the privilege to invest in and the limited partners who place their trust in us remains profound. The support and trust of our ecosystem collaborators continue to fuel our mission, and we eagerly anticipate another year of collaborative learning, leadership, and meaningful progress.





Acknowledgements

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Most, of all, thank you to all our portfolio companies for their unwavering commitment to creating positive impact.

Authored by Saurabh Kumar with support from Dr. Ariel Hyre, Ted Dillon, Cheryl Hallet, Shanbor Gupta, Elizabeth Pacelle, and Gabe Place.

Please contact skumar@cleanenergyventures.com with any comments.





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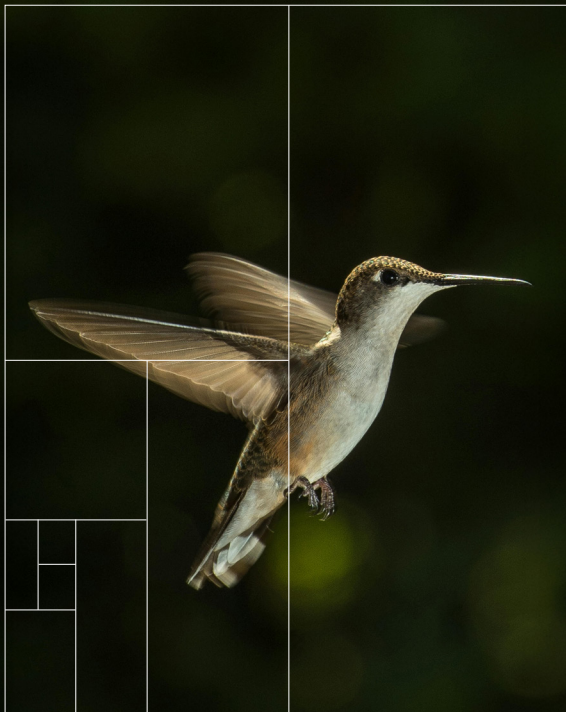
This Report may include forward-looking statements. Such statements may be indicated by the use of words such as “will,” “would,” “should,” “can,” “may,” “plans,” “intends,” “believes,” “seeks,” “anticipates,” “estimates,” “expects,” or other similar terms and/or their negatives. Forward-looking statements are inherently subject to risk

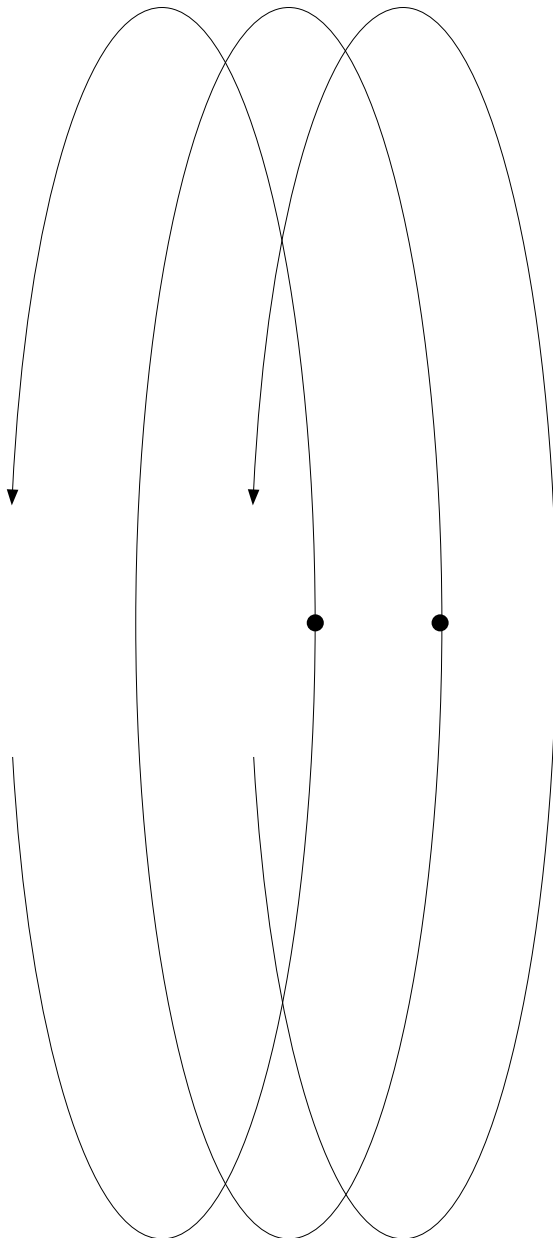
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In recent years, anti-ESG sentiment has gained momentum across the U.S., with several states and Congress having proposed or enacted “anti-ESG” policies, legislation or initiatives or issued related legal opinions. Further, the Supreme Court’s recent ruling striking down race-based affirmative action in higher education admissions has increased scrutiny of corporate diversity, equity and inclusion (“**DEI**”) practices. Anti-ESG and anti-**DEI**-related policies, legislation, initiatives, legal opinions, and scrutiny could result in the Firm facing additional compliance obligations, and the Firm cannot guarantee that its current approach will meet future regulatory requirements, reporting frameworks or best practices.

The case studies contained in this Report represent select examples of investments made by the Firm to highlight relevant sustainability-related accomplishments or themes and are not selected based on financial performance metrics. **Past results and information contained herein are not a reliable indicator and no guarantee of future financial performance.** A full list of current CEVM investments can be found at www.cleanenergyventures.com/portfolio.





- 1 <https://www.iea.org/data-and-statistics/data-tools/greenhouse-gas-emissions-from-energy-data-explorer>
- 2 <https://ourworldindata.org/co2-and-greenhouse-gas-emissions>
- 3 <https://ourworldindata.org/grapher/carbon-intensity-electricity>
- 4 <https://www.climatepolicyinitiative.org/publication/top-down-climate-finance-needs/>
- 5 <https://www.smithsonianmag.com/smart-news/the-human-brain-may-contain-as-much-as-a-spoons-worth-of-microplastics-new-research-suggests-180985995/>
- 6 <https://www.acs.org/education/whatischemistry/landmarks/bakelite.html>
- 7 <https://escholarship.org/uc/item/6cclg99q>
- 8 Ibid.
- 9 <https://www.rsc.org/policy-and-campaigning/environmental-sustainability/science-to-enable-sustainable-plastics>
- 10 <https://ourworldindata.org/plastic-pollution>
- 11 <https://www.recyclingtoday.com/news/nth-cycle-starts-up-commercial-operations/>
- 12 <https://www.iea.org/topics/critical-minerals>
- 13 Ibid.
- 14 <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary>
- 15 <https://www.iea.org/reports/recycling-of-critical-minerals/executive-summary>
- 16 <https://www.theregreview.org/2025/01/25/seminar-shoring-up-the-critical-mineral-supply/>
- 17 <https://www.iea.org/reports/nickel>
- 18 <https://nthcycle.com/technology/>
- 19 <https://projectframe.how/methodology>
- 20 <https://hbr.org/2020/09/social-impact-efforts-that-create-real-value>
- 21 <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/five-ways-that-esg-creates-value>
- 22 https://www.stern.nyu.edu/sites/default/files/assets/documents/NYU-RAM_ESG-Paper_2021%20Rev_0.pdf
- 23 As set out in (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability related disclosures in the financial services sector (SFDR)
- 24 All statistics in this section are based on self-reported data from our portfolio companies. In 2024, 90% of our portfolio companies (24 of 27 companies included in our 2024 Impact Report) reported on internal diversity
- 25 <https://www.sap.com/sea/insights/workplace-diversity-statistics.html>
- 26 <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/underestimated-start-up-founders-the-untapped-opportunity>
- 27 <https://www.bcg.com/publications/2018/why-women-owned-startups-are-better-bet>
- 28 <https://www.usgbc.org/projects/50-milk-street>
- 29 Partial Scope 3 emissions includes business travel, employee commute, and the usage of digital cloud services
- 30 <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>
- 31 “Operational emissions” and “operational footprint” are defined as Scope 1-3 emissions, excluding Scope 3 Category 15 (Investments) as described in Greenhouse Gas Protocol’s Technical Guidance for Calculating Scope 3 Emissions
- 32 <https://www.joinact.org/about-us>
- 33 <https://www.impactcapitalmanagers.com/talent-diversity>
- 34 <https://www.browningthegreenspace.org/about>
- 35 <https://www.svb.com/trends-insights/reports/future-of-climate-tech/>



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