Pilot Flight Manual

Net Zero Accelerator™

Opportunities to partner with growth-stage companies solving for net zero energy, carbon, water, and waste.

2023 Edition
Guiding, Piloting & Promoting Solutions for a Net Positive Future

Ø CARBON
Ø ENERGY
Ø WATER
Ø WASTE
NOT YOUR TYPICAL ACCELERATOR

We’re speeding adoption of vital solutions in the built environment.

With a focus on piloting projects in real world, trackable implementations, the Net Zero Accelerator™ aims to rapidly drive measurable adoption of net zero solutions, today.

**WE BRIDGE THE GAP** between net zero building policy and current technology in use for both commercial and affordable housing sectors.

**WE BUILD AWARENESS** of viable solutions and market-ready innovations through marketing, media, events and curated networking.

**WE GET TECH TO MARKET** through onsite pilots with committed green building leaders.

We achieve this by pairing our cohort members with expert advisors, promoting their solutions to high value prospects, and placing pilot projects to help these growing companies better prepare for scaled adoption.

All to make net zero carbon, energy, water, and waste a reality for LA and beyond.

**Join us and be a net positive part of our net zero future.**
This 9-month program, which brings thought leadership and broad awareness to high-potential pilot projects, is the only one of its kind focused on the built environment.

With our focus on solutions for net zero carbon, energy, water and waste, we also advance building decarbonization, occupant wellness, sustainable infrastructure, and clean construction.

- 15 Pilot- and Market-Ready Members
- 40+ Expert Partners & Advisors
- 20+ Committed Pilot Partners / Sites
- May to January Demo Day
- Launches with USGBC-LA’s Signature Event MyGBCE
- Featured at The Net Zero Conference (Hosted by Verdical Group)
- 100K+ Relevant Media Impressions
- Company / Product Target Alignment
- Pilot Development & Formation (Matchmaking)
- Promotion at Events Including Custom Showcases

NetZeroAccelerator.org
Green building experts counsel and coach our pilot-ready companies on strategy, fit and viability. Cohort members receive low-cost, focused acceleration to streamline and de-risk adoption with a curriculum that is customized to their needs and best leverages the expertise of 40+ Advisors.

**Program & Curriculum**

**Fundamentals**
Performing mini-audit and gap identification (structure, financials, legal, planning, etc.) to ensure the company is ready to move forward in our market.

**Brand + Story**
Helping the company know and communicate who they are, what they stand for, and how to deliver a compelling and actionable narrative that aligns with targets.

**Pilot Readiness**
Ensuring the company is ready, across multiple operational and logistical aspects, to pilot their technology with a potential high value customer.

**Sales + Business Development**
Guiding how to most effectively build and manage a pipeline, use best practices in business development, engage prospects, close the deal, and ultimately benefit stakeholders.

**Project Finance**
Assessing financial strategies and options to ensure economically viable and attractive projects and mitigate negative impact on growth-critical cash flow.

**Sustainability ROI**
Creating a strategic framework for successful development and sustainable growth aligned with long term financial, environmental, and social impact goals.
Ampd Energy exists to electrify construction in pursuit of its vision of an emission-free future for construction.

Ampd Energy pioneered the use of energy storage systems with its core product—the Enertainer—which reduces the carbon footprint of and air pollution from powering construction by up to 85%, reduces noise levels by 30x, eliminates diesel fire and ground pollution hazards in construction, and is a fully automated, self-managing system.

No diesel. No fire hazards. No emissions. No hassle.

We’ve deployed 130+ Enertainers in Hong Kong, Singapore, Australia, and UK with some of the largest and most innovative construction companies.

Ampd Energy is expanding internationally and is looking for partners for its US business, particularly in the Greater Los Angeles market.

www.Ampd.energy
AquiPor Technologies engineers, procures, and manages the construction of green infrastructure projects. Our flagship product is a new type of permeable concrete technology that can take the place of traditional pavement in certain areas to manage stormwater right where it falls and mitigate urban flooding.

The material features sub-micron porosity which makes it resistant to clogging. Our permeable concrete tech also utilizes a very low-carbon non-portland cement technology that is showing potential for net zero CO2 concrete.

This solution not only manages stormwater naturally, but also utilizes an inherently low-carbon cement that requires a fraction of the energy and emits a fraction of the CO2 than that of traditional concrete.

These are the kind of solutions that AquiPor is developing to not only address climate change and make our communities more resilient, but also bring better economics to our physical infrastructure systems.

www.Aquipor.com
BamCore's Prime Wall™ is a negative embodied carbon framing system for commercial and residential low-rise construction. This means that the materials in the framing panel have captured and stored more atmospheric carbon than is released in the harvesting, manufacturing, and construction process. In addition, the Prime Wall™ is extremely thermally efficient, drastically reducing operating energy and costs. In short, the BamCore Prime Wall™ has a beyond-zero carbon footprint.

The climate crisis is not the only challenge the built environment faces today. A shortage of skilled labor is plaguing the system. With BamCore's next-generation disruptive technology and industrialized construction techniques, you can build in half the time with half the crew. And you needn’t worry about quality. The Prime Wall™ is built to last many generations. It is so durable it can stop a small caliber bullet.

BamCore's secret ingredient to high-performance framing systems is proprietary knowledge of species and locations of the strongest timber bamboo for load-bearing construction and nearly a decade of research in fiber optimization. Not to mention a developed global supply chain.

www.BamCore.com
**Carbon Upcycling Technologies** is a waste and carbon utilization company unlocking a new frontier of circular materials. We’re tackling the biggest problems on the planet—like climate change and industrial waste. With our patented technology platform, we help the hard-to-decarbonize industry transform local industrial byproducts and natural materials into superior additives.

Our first massive market is cement and concrete, the source of eight percent of global CO₂ emissions and growing. Our technology sequesters industrial CO₂, reduces the carbon footprint of cement, and improves concrete performance. We do this by opening up a new class of locally available, carbon-sequestering cement replacements.

With Carbon Upcycling, cement and concrete producers can now create a superior product using local industrial byproducts and natural materials and save the planet at the same time. Waste today, product tomorrow.

**www.CarbonUpcycling.com**
**ElectricFish**

**FOCUS:** Net Zero Energy, EV Charging, Sustainable Infrastructure

**ElectricFish** is accelerating energy equity for extreme-fast charging and backup power. We are a climate tech company building distributed energy storage powered by software. Our patented, turnkey energy storage solutions bring unprecedented convenience to the EV charging experience while also supporting energy resilience in local communities, all with 100% renewable energy.

We are experienced battery researchers, hardware engineers, energy scientists, creatives, and serial entrepreneurs with deep domain expertise and execution experience from leading organizations such as BMW, Oak Ridge National Lab, NASA, and Stanford. Our team has been recognized by a number of institutions, including *Forbes 30 Under 30*.

While our diverse team stems from different walks of life, we are uncompromisingly united in our mission to enabling a decarbonized, resilient, and equitable energy future all communities. Our humble yet mighty team is based in Fremont, CA.

[www.ElectricFish.co](http://www.ElectricFish.co)
Enersion offers a Solar Tri-Generation unit that produces cooling, heating & electricity with more than 70% energy savings and zero GHG emissions. The core technology is a patented cooling system that uses nano-porous material to directly convert low-grade heat into cooling without electricity.

This is integrated with hybrid solar thermal-electrical panels. Unlike traditional photovoltaic panels, the thermal-electrical hybrid panels produce electricity, and capture the otherwise wasted thermal solar energy which our cooling system converts into cooling.

Enersion’s Tri-Generation is a zero-emission grid asset that produces clean electricity on-site through solar panels and is able to utilize the waste heat for cooling in the summer and domestic heating in the winter, further reducing the facility's energy consumption and carbon footprint. By producing cooling, heating and electricity from a single source (Solar Energy) Enersion can increase efficiencies to 90%, and reduce the payback period by more than half, relative to alternative systems.

www.Enersion.com
Feedback Solutions is a ClimateTech / PropTech company in the building decarbonization/indoor air quality space with a de-risked technology that has successfully sold to top tier Universities, Commercial Landlords and Municipalities.

This “here and now” asset light solution is immediately deployable and has demonstrated a reduction in the HVAC related energy spends and related GHG emissions in buildings by up to 40%. The patented approach to the optimization of ventilation based on real time occupant counts is based on a proprietary methodology and intelligent algorithms. Feedback Solutions communicates actionable, zoned data via BACnet to the Building Management System or direct to DDC controllers and is available via cloud server or on-premises as required.

The heightened focus on indoor air quality (IAQ), particularly with commercial office owners, creates opportunities to partner with top IAQ monitoring platforms delivering to customers an integrated solution that makes IAQ and occupancy data actionable at the premises level – providing occupants and owners assurance on the IAQ front while proactively addressing ESG mandates.

www.FeedbackSolutions.ca
Smarter Homes Have Cooler Glass
NZA Pilot Opportunity delivering the residential window market's coolest and most energy efficient glass

**Dynamic Glass:**
- Next generation dimmable glass that tints and untints upon application of an electric charge
- The same customer value proposition as residential solar, up to 20% energy savings, and is independent of utility networks
- Fundamentally new and advanced user experience

**Proposed Pilot:**
- Front entryway dynamic glass installation for a residential home front entryway door, sidelight, and transom windows
- Targeting a disadvantaged community

**Indicative Cost:**
- $30k ($15k after 50% investment tax credit)

**Dynamic Glass Benefits**
- The same customer value proposition as residential solar for:
  1. 10x less cost
  2. 45x greater adoption precedent
  3. Grid interactivity
     - Flexes grid to conserve afternoon peak energy
     - Supports EV adoption

Glass Dynamics is solving the economic hurdles impeding residential solar mass adoption: systems cost $30k on average, which is 40% of average U.S. national income; which results in 20-30 year system paybacks vs. 8-year average U.S. home ownership periods; and customers are 100% exposed to subsidy or utility rate structure changes (i.e., net metering, taxes, filed charges, etc. changes).

Consequently, the residential solar market has achieved 1% cumulative market penetration outside of California and Hawaii and is forecasted by the SEIA to grow at 0% annually from 2022 through 2026. This altogether manifests itself in the stigma - 'solar for rich people' - that is the injustice that those who can afford solar pay less in monthly electricity bills while those that can't afford it are left with paying the fixed costs to maintain the grid.

Glass Dynamics vision is to solve this problem by providing a dynamic glass product with the same customer value proposition (and more) as rooftop solar for a third of the cost with no utility rate structure risk exposure.

[www.Dyenamics.com](http://www.Dyenamics.com)
HEMPITECTURE
FOCUS: Net Zero Waste, Building Decarbonization, Building Systems

Hempitecture uses plant fiber to manufacture the most innovative materials in the world. As a Public Benefit Corporation, our focus is on building materials that benefit both people and the planet. Our innovative materials are derived from carbon capturing, agricultural industrial hemp, a non-toxic renewable feedstock.

Our primary product is HempWool® insulation, a natural fiber batt insulation product. We intend to be continually innovative, and therefore, are always considering developing new products, new ideas, and new partnerships.

We believe our homes should contribute to our health, not take away from it. They should help us live happier lives, while also doing no harm to our planet.

Hempitecture is on a mission to create healthy, energy-efficient materials that positively impact both people and the planet by capturing carbon dioxide and replenishing farmland.

www.Hempitecture.com
**HydroFlux Technology** uses lab-tested, field-tested environmentally safe magnetic technology that installs in less than a day — without requiring disruption of your currently operating system.

Supported by data from ASHRAE and the Federal Department of Energy (DOE) HydroFlux provides powerful microbe growth control and an environmentally sound solution that doesn’t heavily rely on hazardous chemicals or on routine labor. In fact, all it requires is an attractive bracelet.

By fitting snugly around nearly any pipe and exerting 1 Tesla of magnetic force on water flow, our eco-friendly attachment rapidly crystalizes calcium carbonate (CaCO3) into its aragonite form, preventing scale development and dramatically reducing water waste.

Simultaneously, this same bracelet battles bacteria and breaks down scale that may already have formed — allowing unwanted elements to be swept away without substantial chemical treatment. And it’s all backed by a $2 million insurance coverage for Legionnaire’s disease, viruses, and mold that you'll find nowhere else.

**www.HydroFlux.com**
INOVUES developed a non-intrusive retrofit solution that offers the same benefits of full window replacement at a fraction of the cost and without disruption, providing up to a 10x faster payback period.

INOVUES’ non-invasive insulating glass retrofits (IGRs) transform inefficient single/double-pane windows and glass curtain walls into high-performing multi-pane systems, enabling them to incorporate the latest energy-saving and smart glass innovations without replacement.

INOVUES’ IGRs increase window performance by up to 10x and reduce energy consumption and peak heating and cooling loads by up to 40%. Once installed, externally (or internally), INOVUES’ IGRs create a hermetically-sealed, desiccated thermal cavity between the original and newly-added glass, like factory-made insulating glass units (IGUs), unlike any other window retrofit.

www.Inovues.com
LeapFrog Design addresses accelerating water scarcity with residential onsite water reuse systems that simultaneously help builders meet new legislative regulations, increase water efficiency, and increase home value and homeowner comfort.

Water scarcity is on the rise, with reservoirs drying up in the US and around the world. Regulations are pushing homebuilders toward more water-efficient homebuilding, but unfortunately existing solutions — such as reduced landscaping and low-flow shower heads — reduce homeowner satisfaction, making water-efficient homes less appealing for homebuyers.

LeapFrog designs, develops, and commercializes cost-effective, superior-performance residential greywater, rainwater, and wastewater recycling systems for homebuilders and building owners. LeapFrog is pioneering decentralized green infrastructure, specializing in modular and scalable ecological treatment solutions that use technology inspired by nature to provide natural water abundance for high performance homes.

www.LeapFrog.Design
MeterLeader is an online platform that gamifies saving energy at home by leveraging real-time utility data and behavior science principles. We’re like a Fitbit Challenge, but instead of steps we measure kWh, therm, and CO2 reductions. Our platform helps companies engage with their employees to reduce carbon emissions at home.

1. Sync Data: Sync your electricity and natural gas meter data automatically from your online utility account.

2. Join Challenge: Engage in fun social experiences to see who is the biggest at-home energy saver.

3. Save Energy: Energy tips help achieve measurable savings you can actually see via the real-time usage graph.

4. Win Prizes: Households that save the most, win the most. Challenge winners qualify for cool prizes.

www.MeterLeader.com
Miravel targets the problem of “fresh” produce, which on average in the U.S. is grown over 1,000 miles away using lots of land, water, and chemicals.

The large-scale agriculture system exists all over the world and is one of the leading industries contributing to climate change. But it’s not just hurting our environment, it’s also hurting people. Pesticides are a major health risk and while food is sitting on a truck or on a shelf, it’s losing nutritional value, not to mention its taste and aroma.

There’s truly nothing better than growing food locally. While people and businesses are becoming increasingly focused on health and sustainability, and trying to incorporate nature into their everyday environments, they keep running into the same problems—it takes up too much space, is too messy, and takes too much time.

Thus, Miravel developed the Wall Garden to make it easy to grow your own food and connect with the beautiful life around you. Their ultimate purpose is to help people and businesses be more healthy, happy, and sustainable.

www.Miravel.com
Moduly is the first all-in-one solution that can act as a nanogrid solution to bring resiliency, cost-savings, and clean energy to the electricity user and at the same time become a virtual power plant for a utility, where it can manage peak load, reduce GHG emissions, and increase profitability.

Protection from power outages: Moduly accumulates and stores energy to act as a generator in case of power loss.

Environmentally responsible and sustainable: Moduly reduces the use of electricity from fossil resources, favoring that from renewable sources.

Cost Savings: Moduly stores energy when the electricity rate is low and reuses it to meet your needs during high rate hours.

Designed for all types of environments: house, apartment, cabin, or small business.

www.Moduly.io
NZA ALUMNI COMPANIES
SoCal CleanTech Express Companies

Together with the Canadian Consulate General of Canada in Los Angeles, we run a six-month program that’s like our annual NZA program but with a focus on helping Canadian companies enter and expand in the LA market.

We’re pleased to note that three of the seven companies in our first two SoCal CleanTech Express (SCCE) cohorts have continued with us in NZA cohorts.

Oh, Canada ... we’re so grateful and honored to work with you and welcome your remarkably innovative (and, yes, friendly!) entrepreneurs to LA.
PILOT CASE STUDIES

The NZA is the only program of its kind focused on developing and guiding pilot projects in the built environment. Below are some highlights of just a few pilot project success stories from NZA alumni available on our website.

Komfort IQ

Komfort IQ was engaged by the Los Angeles Department of Water and Power (LADWP) to lower the HVAC energy use load and improve the comfort, health, and well-being of their occupants at the La Kretz Innovation Campus, where USGBC-LA and our colleagues at LACI have offices.

ONYX

ONYX’s team deployed four of their Rhino mobile clean power systems to California State University Northridge (CSUN) to be used to power equipment for outdoor events per CSUN requirements, which include safe, clean energy with little to no noise.

TBM Designs

TBM worked with the leadership team at California State University Long Beach (CSULB) to uniquely install the InVert™ self-shading window system to greatly reduce energy demand and associated costs as well create an iconic structure on the CSULB campus.

These and many more to come at: NetZeroAccelerator.org/pilot-projects
THANK YOU FLIGHT MANUAL SPONSORS

SOUTHERN CALIFORNIA EDISON
Energy for What’s Ahead
www.SCE.com

FIRST REPUBLIC BANK
www.FirstRepublic.com

MOMENTUM
www.BuildMomentum.io

SoCalGas
www.SoCalGas.com
THANK YOU ADVISORS AND SPEAKERS

USGBC-LA is about people. And this could not be more evident in the support the NZA and its member companies receive from our trusted advisors. We absolutely could not do this work without all the thought leaders in our community who freely give their time, guidance, connections, and more.

We’re actively looking for advisors as well as pilot partners for our 2023 program. This includes roles as a technology provider, potential host site, or project advisor so you can share and learn through the process: NetZeroAccelerator.org/advisors
THANK YOU COMMUNITY PARTNERS

By sponsoring, partnering, and hosting events for and with the Net Zero Accelerator at USGBC-LA you have contributed to the development and commercialization of sustainable innovations for the building industry in Southern California and beyond.

Active & Completed Pilots

Pilot Partners and Custom Showcase Hosts Wanted!
Become a net positive part of our net zero future today.

The Net Zero Accelerator™ is a Corporate Sustainability & Innovation program of USGBC-LA, a Registered 501(c)3 Nonprofit Organization.