GCxN

Shell + NREL:
A Global Energy GameChanger

Year in Review **2024**

Founded by:

Shell + NREL

From the Program Managers

In 2024, we ushered in a new phase of the Shell GameChanger Accelerator™ Powered by NREL (GCxN) program, made possible through an expanded agreement between Shell and the National Renewable Energy Laboratory (NREL). This new agreement enables the program to serve more startups than ever before and elevate its communications efforts, and adds two new program features: strategic awards and a network of entrepreneurial support organizations stretching across the globe. We are proud to provide updates on all of these new enhancements.

GCxN continues to propel promising startups with game-changing technologies closer to the market and commercialization, leveraging joint expertise and NREL facilities and equipment. With the addition of four companies in Cohort 6, our portfolio now totals 23 companies including 17 graduates, two of whom successfully graduated just this year: Induction Food Systems and Resonant Link. We are in the downselection process for the next cohort of up to 10 companies (our largest ever), which will further bolster our numbers. Cohort 7 is the first of up to six cohorts we will launch during our new 5-year agreement period, potentially encompassing up to 30 startups.

For the first time, GCxN is offering strategic awards for competitively selected Channel Partners to undertake initiatives that advance shared priorities. In 2024, we released a request for proposals with two topics: partnerships to bolster energy innovation in communities and tailored programmatic support for entrepreneurs. We received a strong set of proposals and will soon announce awards selected for $300,000 in funding this year.

The second new program feature is a global network of entrepreneurial support organizations to help promising startups—regardless of location—obtain funding, connections, and market access necessary to encourage their success. In 2024, we began discovery calls with key stakeholders to understand the optimal role and design of such a network, as well as to identify potential participants. This landscape research work is insightful and ongoing, and we will soon host the inaugural convening of the core group to build momentum for this budding network.

Looking back on 2024, we're proud to have successfully balanced executing program fundamentals while simultaneously creating added value through novel efforts. This blended approach positions us to maintain our important and unique niche in the energy innovation ecosystem while growing our reach within it. We look forward to continuing with you—our valued partners—in this ambitious and critical work.

Yesim Jonsson
Shell GCxN Program Manager

Johanna Jamison
NREL GCxN Program Manager

Rachelle Ihly, Ph.D.
NREL GCxN Technical Project Manager

Contents

$942M+

RAISED BY COHORT COMPANIES TO DATE

486

NEW STARTUP HIRES SINCE JOINING GCxN

(260% growth since 2022)

$164:$1

LEVERAGE RATIO FOR SHELL PROJECT FUNDING

6.5

AVERAGE TECHNOLOGY READINESS LEVEL (TRL) AS OF DECEMBER 2024

3.9 AVERAGE TRL UPON JOINING GCXN

About GCxN

GCxN is a multimillion-dollar, multiyear program focused on discovering and advancing emerging and innovative technologies with the potential to dramatically improve the future energy landscape. GCxN identifies promising startup companies through its Channel Partners, an extensive ecosystem of business incubators, accelerators, and universities. Invited companies receive access to up to $250,000 in nondilutive funding in the form of technical experts and facilities to develop and demonstrate new energy technologies.

GCxN seeks companies operating in the new energy space, with rotating technology focus areas that span the energy continuum from generation to transmission and distribution. GCxN's goal is to help early-stage companies with technology at TRLs 2–5 meet critical milestones to advance to the next stage of development, accelerating their time to market while minimizing the risks associated with commercializing next-generation technology. Over the course of 18–24 months, participating GCxN companies gain access to NREL's world-class facilities and top-tier researchers from both Shell and NREL, who help develop, validate, and incubate companies' technologies.

About Shell

Shell's purpose is to power progress together with more and cleaner energy solutions. We believe that rising standards of living for a growing global population are likely to continue to drive demand for energy for years to come. Shell's technological capacity, customer mindset, operational experience, and market knowledge mean we are at the forefront of innovative and collaborative approaches to help build a sustainable energy future.

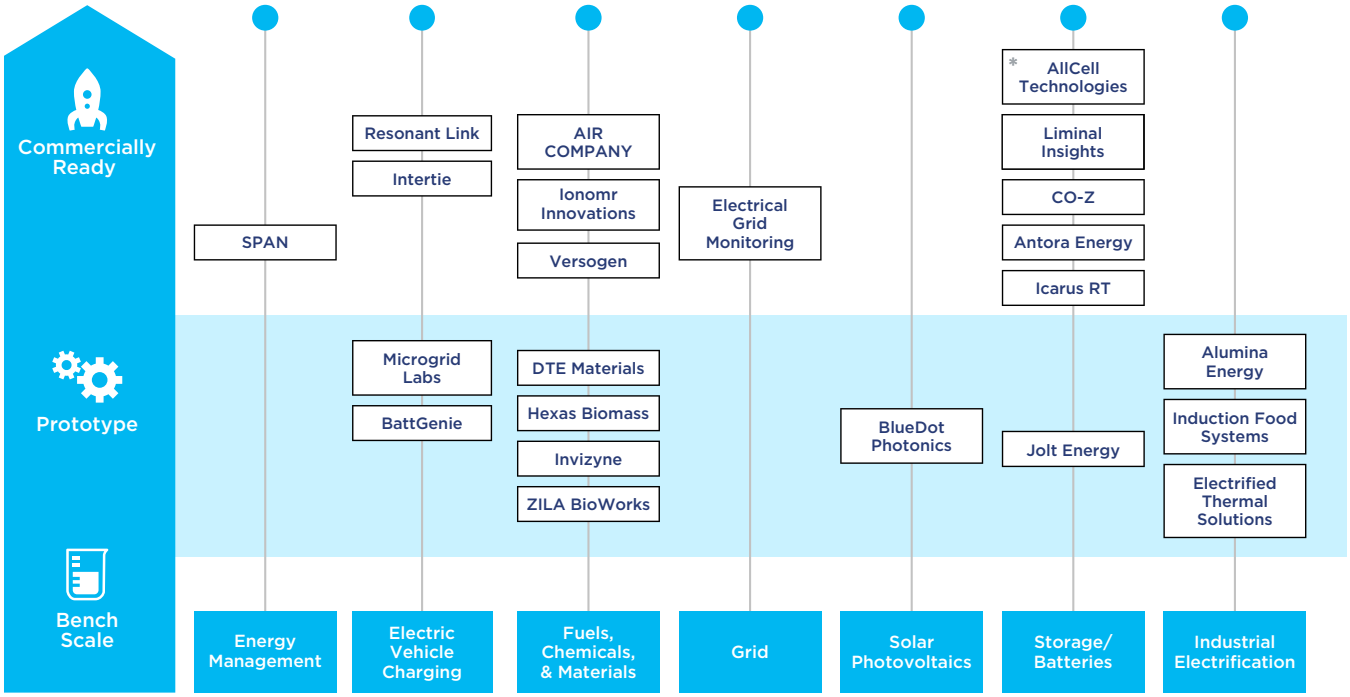
In addition to GCxN, which harnesses the power of Shell's collaboration with NREL for greater and faster innovations, Shell GameChanger works with startups and businesses on unproven early-stage ideas that have the potential to impact the future of energy. The program's team provides support, expertise, and seed funding, while the startups keep the independence to make their own decisions. Founded in 1996, Shell GameChanger has worked with more than 5,000 innovators from around the world and turned more than 150 ideas related to advanced energy, digital transformation, and a broad spectrum of energy technologies into productive reality.

About NREL

NREL is one of 17 U.S. Department of Energy (DOE) national laboratories. NREL's more than 4,000 employees focus on research, development, and deployment of next-generation energy technologies.

With its internationally renowned scientists and world-class facilities, NREL is a perfect partner for Shell GameChanger in supporting passionate, innovative energy entrepreneurs. NREL provides GCxN with unbiased third-party technology development, validation, and demonstration capabilities to advance and de-risk early-stage technologies.

23 GCxN Companies Across Technology Sector and Stage



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GCxN Portfolio Companies

Transforming Power Generation and Grid Technology

Alumina Energy

Alumina Energy's Heat Exchanger and Thermal Energy Storage (HEATER) product is a cogeneration solution for industrial customers that is economical, flexible, and reliable. In 2024, Alumina Energy's founder and CEO participated in a long-duration energy storage consortium, and the company pursued relevant funding opportunities both independently and in collaboration with NREL. Alumina Energy's project under the GCxN program pivoted to focus primarily on modeling and is now nearing completion and graduation.

Antora Energy

Antora Energy creates groundbreaking, low-cost thermal batteries for grid-scale, long-duration energy storage. Current technology, such as lithium-ion batteries, can store a few hours of power, while Antora Energy's technology can store multiple days' worth of energy. In 2024, Antora Energy raised $150 million and secured a $14.5 million Seeding Critical Advances for Leading Energy technologies with Untapped Potential (SCALEUP) grant from DOE's Advanced Research Projects Agency-Energy (ARPA-E). They were also named a "Best Workplace for Innovators" by *Fast Company*, and *MIT Technology Review* named CEO and co-founder Andrew Ponec a 2024 Climate Innovator Under 35.

BlueDot Photonics

BlueDot Photonics works to develop the next generation of solar panels made of perovskite materials, with the goal of increasing output by at least 10%. In 2024, the company was referenced in a Canary Media story about leading companies attempting to commercialize alternative materials, like perovskites, for enhanced efficiency of solar panels.

CO-Z

CO-Z by Hygge Power offers reliable energy through its in-home network of small storage devices. They enable users to manage their power through outage, price, and carbon alerts on a smartphone application. CO-Z provides custom information using real-time inputs to create unique outage risk profiles for homes, apartments, and businesses. In 2024, CO-Z focused on refining its energy storage system to better address the needs and wants of power customers, while still offering a valuable distributed energy resource to utilities and businesses.

Electrical Grid Monitoring (EGM)

EGM aims to digitize the grid and integrate distributed energy resources. EGM mitigates major grid challenges by delivering effective integration of distributed energy to the grid, enhancing grid reliability, improving security levels, and reducing the cost of ownership. In 2024, EGM and their leadership authored pieces on visibility for accurate load management and reliable data for renewable capacity featured in *Utility Dive* and *Smart Energy International*.

> "GCxN was the first major win for Icarus. The well-known program spurred investment activity immediately but also led to major technical analysis and innovation and a long-term working relationship with Shell and NREL."
>
> - Icarus RT

Electrified Thermal Solutions

Electrified Thermal Solutions focuses on developing the Joule Hive: a new energy storage technology that converts surplus electricity generation into heat. In 2024, Electrified Thermal Solutions raised $19 million and was heavily covered by the media, including in publications such as *MIT Technology Review*, *The Boston Globe*, *Fast Company*, *CleanTechnica*, and *TechCrunch*. Their thermal battery reached the important milestone of TRL 6, and *Popular Science* recognized the battery as one the 50 greatest inventions of the year.

Icarus RT

Icarus' product, Quartet, extracts, collects, and stores waste heat from solar panels to increase power output and lower system cost per kilowatt. Quartet then converts the stored heat to hot water and/or power on demand. In 2024, the Uptake Alliance selected Icarus into its inaugural cohort of just 15 emerging tech startups, and Icarus enjoyed a featured spot alongside Shell's general manager of commercial innovation partnerships on a panel at the NREL Innovation and Entrepreneurship Center's Innovation Showcase.

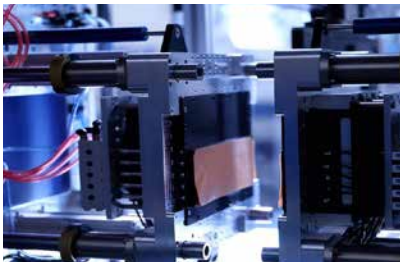
Induction Food Systems (IFS)

IFS heats flowing fluids from the middle out instead of the outside in. This breaks fluid heating bottlenecks for industry, improving productivity and optimizing operations. In 2024, a local CBS outlet featured IFS's technology as having the potential to help preserve food on the moon for future missions exploring inhabitation possibilities.

Jolt Energy

Using organic compounds, Jolt Energy makes organic redox flow batteries with the same large-scale storage capabilities as lithium-ion batteries, but are safer, more efficient, and less expensive. Jolt Energy's multi-electron, higher-voltage capabilities enable utilities to capture energy from intermittent energy sources, such as solar panels, and reliably deliver energy on demand. Jolt Energy closed out 2024 by successfully raising a $4 million Series A round to scale up their low-cost, long-duration battery storage technology. The company also made several key research hires to build its team's technical capabilities, and Michigan Public (a local affiliate of National Public Radio) featured the company in a story.

Liminal Insights (Formerly Feasible Inc.)



Liminal Insights pioneered a battery intelligence platform that combines ultrasound and data analytics to deliver unique insights across the value chain. Liminal Insights' technology, known as EchoStat, uses ultrasound to probe the physical condition of batteries in ways not currently possible at commercial scale. This patented technology enables customers to build dependable, safe batteries and deliver premier performance at a lower cost. Liminal Insights was named to the prestigious 2024 Global Cleantech 100 list. Later in the year, it secured a $10 million strategic investment from LG Technology Ventures to expand and accelerate commercial developments.

SPAN

SPAN aims to dramatically accelerate advanced energy adoption with its smart electric panel that provides data insights to allow homeowners to control their home energy via a smartphone application. SPAN also automatically adjusts power levels to ensure the energy in a home is properly balanced, based on specific preferences. In 2024, SPAN partnered with Tesla Energy on a home battery storage bundle, integrated with Mitsubishi Electric Trane HVAC US variable-speed heat pumps, and struck a collaboration with Jabil for volume manufacturing.

SPAN was featured in several media outlets such as *The Washington Post* and *Canary Media*, and as one of *Time*'s 250 GreenTech Companies of 2024.

Advancing Transportation Technologies

AllCell Technologies

AllCell Technologies introduced revolutionary lithium-ion battery packs that incorporate its patented phase-change composite passive thermal management technology. Phase-change composite keeps the cells at optimal temperatures during operation, enabling a cost-effective energy storage solution with an improved cycle life, advanced performance, and enhanced safety. Autonomous shuttles, electric planes, robotics, lightweight electric vehicles (EVs), and commercial drones can use AllCell Technologies' batteries. In 2024, AllCell's acquirer, Beam Global, announced record revenues for the prior year. The company also acknowledged that a leader in solar-powered transport refrigeration units selected its Beam AllCell energy storage solutions.

BattGenie

BattGenie provides software solutions for battery management systems to enable faster charging and longer battery cycle life for EVs and grid storage battery applications. In 2024, BattGenie signed three new licensing contracts, including with an EV original equipment manufacturer, a battery management system integrated circuit company, and a battery pack manufacturer that supplies mobility and stationary storage applications.

Intertie

Intertie developed a battery-boosted charging station known as the EV ChargePod. The EV ChargePod uses a DC microgrid and battery buried underground with a charging station aboveground that promotes a low-cost, user-friendly experience. Intertie's technology combines fast charging capabilities, intelligent storage, and integrated solar power.

Microgrid Labs (MGL)

MGL is a consulting and software company dedicated to supporting the electrification of fleet vehicles. The technology determines optimal sizing of batteries and chargers through its modeling, simulation, and optimization tools. MGL also offers fleet electrification and microgrid planning services. 2024 was a year of partnership announcements for MGL. It formed a strategic partnership with Landis+Gyr, a provider of utility meters and related solutions; expanded, in partnership with CALSTART, the Mass Fleet Advisor program, which assists private, nonprofit, and municipal fleets with EVs; and partnered with School Bus Logistics to offer the same assistance to school districts.

Resonant Link

Resonant Link powers EV fleets while they work by charging wirelessly during short stops that already exist during operation. In 2024, Resonant Link earned a DOE Vehicle Technologies Office Small Business Research and Development Grant. It was also a part of a Vermont "Tech Hub" seeking major federal investment to support regional technology leadership and innovation.

New Ways To Make Fuels, Chemicals, and Materials

AIR COMPANY

AIR COMPANY patented a process that mimics photosynthesis in a way that is more efficient and faster at purifying air. This technology transforms carbon dioxide (CO_2) captured from the air into impurity-free alcohols that can be used in spirits, fragrances, sanitizers, and a variety of consumer industries. In 2024, AIR COMPANY raised a $69 million Series B round and was granted funds from NASA, DOE's Office of Technology Transitions, and through a joint DOE/Environmental Protection Agency grant. It was also featured in well-known media outlets such as *Bloomberg*, *The New Yorker*, *Forbes*, *Fast Company*, and American Public Media's *Marketplace*. Finally, the company earned a spot as one of Time's 250 GreenTech Companies of 2024.

DTE Materials

DTE Materials developed a technology that converts agricultural and forest waste into advanced construction materials. GCxN will assist DTE Materials with a thorough life cycle analysis considering procurement, conversion of biomass, manufacturing, implementation, and disposal. NREL's steam explosion reactor will be used to produce bioaggregates using DTE's feedstock materials. In 2024, DTE raised venture capital and secured a DOE/ENERGYWERX grant voucher. The company also secured a feedstock agreement and installed its first pilot on a university campus.

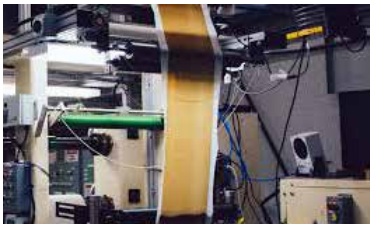
Hexas Biomass

Hexas Biomass created a nature-based alternative for feedstocks based on wood, food crops, and fossil fuels for biofuel production. GCxN will support Hexas Biomass with feedstock treatment and conversion to sugars and lipids leveraging NREL's Integrated Biorefinery Research Facility and fermentation systems. In 2024, Hexas completed research and development work under a Phase II Small Business Innovation Research grant focused on optimizing the company's XanoFiber for synthetic aviation fuel (SAF) production. It also partnered with Haffner Energy to offer an integrated solution for creating renewable energy from biomass and was featured by the bioeconomy publication *The Digest*.

Invizyne

Invizyne is a cell-free enzyme platform that enhances biomass conversions, vastly improving the economics of bio-based chemical production. GCxN will enable researchers to evaluate various separations approaches to enhance product throughput, as well as conduct techno-economic and life cycle analysis modeling of Invizyne's production process. In 2024, Invizyne successfully completed an initial public offering and began trading on Nasdaq. It also secured funding through the BioMADE program aimed at domestic bioindustrial manufacturing and workforce development and expanded its leadership team.

Ionomr Innovations



Ionomr Innovations develops ion-exchange membranes for fuel cell systems, hydrogen production and carbon capture, and utilization for fuels. Its membranes and polymers come from a hydrocarbon base, making them fully recyclable, recoverable, and bioaccumulative. In 2024, Ionomr Innovations earned a spot on the Global Cleantech 100 list for the third time and received a Governor General's Innovation Award from Simon Fraser University (one of their co-founder's alma mater). The company opened a development and manufacturing center in Boston, and *Hydrogen Central* covered the company's release of a new membrane.

Versogen

Versogen develops a breakthrough electrolyzer technology that uses water and advanced energy to produce green hydrogen at scale in a reliable and affordable way.

Versogen's systems are built around its patented anion-exchange membranes and earth-abundant materials. In 2024, Versogen's CEO Yushan Yan was recognized as a "Most Impactful Leader" by the *Delaware Business Times*. The publication also wrote a story about the company's technology, which was mentioned in a National Public Radio story on green hydrogen.

ZILA BioWorks

ZILA BioWorks developed a bio-epoxy resin from hemp seed oil. GCxN will help ZILA BioWorks determine the suitability of formulations for thicker and larger sections of wind turbine blades and perform mechanical load-frame testing to characterize the strength of ZILA BioWorks' bioresin relative to existing industry resins.

In 2024, ZILA earned a spot on the Rally IN-Prize Pitch Competition, making the company eligible for up to $1 million. ZILA's technology was also featured in a story in the trade publication *CHEManager International*. JEC recognized the company as a winner of the Startup Booster 2024 for Products and Materials and interviewed CEO and co-founder Jason Puracal for an article in its magazine.

> "Participation in GCxN raised Hexas' profile in the biofuels and bioeconomy industries. The recognition by GCxN puts Hexas in a category of emerging companies with technologies worthy of commercial development. Through our work with NREL via GCxN, we have learned so much about how our plant-based feedstock can be effective and efficient."
>
> - Hexas

The NREL Perspective: **Myles Steiner**

Myles Steiner is a senior scientist at NREL with decades of experience working on III-V multijunction solar cells with applications in photovoltaics and thermophotovoltaics. At NREL, his research spans 18 years, making his role as the Antora project principal investigator a natural one given the company's needs in designing and scaling thermophotovoltaic cells that convert light and heat into useable electricity.

Steiner enjoys working in this space because of the opportunity to do high-quality applied science focused on device physics and materials science with the ultimate aim of energy transformation for societal impact. Through the GCxN project with Antora, Steiner was able to leverage his years of experience and high-level expertise in solar cell device design, fabrication, characterization, and analysis of high-efficiency devices. Through strong collaboration with Antora technical staff, the team demonstrated record device efficiency, validated the idea of reflecting unabsorbed photons back to the heat source, and maintained high efficiency over a reasonably large device area with an eye toward technology commercialization.

Along with Steiner's wealth of domain expertise, Antora leveraged NREL's two metalorganic vapor-phase epitaxy reactors for deposition of semiconductor layers. At the time of the GCxN project, Antora did not have these capabilities in house but used NREL's custom, multimillion-dollar reactors that handle up to 2-inch substrate wafers to grow gallium arsenide devices on gallium arsenide substrates and gallium indium arsenide devices on indium phosphide substrates. Additionally, Antora leveraged NREL's clean room facilities and the III-V group's characterization equipment and facilities and evaluated the thermophotovoltaic performance of these devices under a range of operating conditions.

The project concluded in 2020, but Antora continues to blaze many trails. It earned a spot in ARPA-E's SCALEUP program to accelerate the launch of Antora's combined heat and power thermal battery product. The company also enjoys a great deal of interest from investors, with multiple fundraises totaling more than $200 million.[1,2]

1 Rosie Bradbury. 2024. "Meet the startups bringing green thermal batteries to market." ***PitchBook***, Nov. 27, 2024. pitchbook.com/news/articles/top-startups-green-thermal-batteries-vc-deals.

2 Antora Energy. 2024. "Antora Energy Selected by ARPA-E for $14.5 Million Award to Accelerate Launch of Heat & Power Product." June 25, 2024. www.antora.com/insights/scaleup.

The Shell Perspective: **Robert Headrick**

When asked why he does what he does, Shell research engineer Robert Headrick quotes Mahatma Gandhi.

"'Be the change you want to see in the world' really resonates with me," he said. "I put my heart and my effort into helping bring clean energy to the world. It is my passion."

Headrick works for Shell on several different incubator or accelerator programs, including GCxN. The program provides promising technology startups with access to financial resources, state-of-the-art facilities, and world-class technical experts at NREL.

"When I was doing my Ph.D., I had a very different perspective on how the world worked," Headrick said. "I'd invent something in the lab and think, 'OK, let's commercialize it.' That was before I understood the scale of the energy system and the amount of effort it takes to bring reliable and affordable products to the market."

Many people have similar misconceptions about the scale and complexity of the energy system. Headrick told a story about preparing for a recent freeze in Houston, when he and his wife compared the power available in their 5-pound battery pack with the demand for a space heater. Despite its size, the battery pack was not capable of powering a space heater, but would be capable of running the furnace fan, highlighting the large difference in energy densities of today's electrification options. The challenge of delivering practical, affordable energy at the scale required is a primary focus for Shell, and Headrick helps the company determine how to make technologies more applicable to the market and consumers' actual needs.

"Shell understands what it takes to deliver products to people in a reasonable way that is financially sustainable," he said. "New products need to get to market in a way that's useful, and that infrastructure is not built overnight."

Headrick's job is to look at emerging technologies and help determine if they align with Shell's core strengths to identify opportunities.

"The evaluation process is continuous," he said. "As I learn from startups about their technology, they fall into buckets in terms of their understanding of why they would talk to Shell—what they need help with and how they can help us. The most enjoyable conversations I have are when I can ask people questions about their company and it's clear they have a solid understanding of how Shell's strengths can positively impact their progress."

The emerging technology landscape is also growing rapidly, and that is why NREL scientists play such a key role in helping Shell sort through the noise.

"Having the NREL scientists involved really helps de-risk and evaluate the technologies coming from the startups participating in GCxN," Headrick said. "It goes a step further. Having NREL review the technologies puts a lot of weight in the feedback we get. It helps us believe what we're being told by the startups. You get the security that a reliable scientist is looking at it and you can trust what's coming out of it."

Headrick worked with several of the companies in Cohort 6 for GCxN in the Carbon-Negative Materials theme and is eager to work with some of them in the upcoming Cohort 7.

The GCxN program can make a huge difference for any startup that is selected to participate.

"If a startup needs equipment and infrastructure, this is a really good way to get access to equipment," Headrick said. "They also get the support of excellent scientists who will work on their behalf. It's a lot easier for them to get a foot in the door with other companies or investors when they can share that NREL is involved. It adds a lot of veracity to their claims."

Portfolio Company Highlight: Hexas Biomass

GCxN Company's Feedstock Poised To Be More Economical and Versatile

Biotech entrepreneur and Hexas Biomass founder and CEO Wendy Owens has brought her groundbreaking (pun intended) crop to GCxN after admiring the program from afar for several years.

"It was simply a goal for me," Owens said. "I was trying to advance us to a point technologically where we would qualify, and it happened to be the right fit starting last year. The level of prestige of the program and the ability to continue to work with the National Renewable Energy Laboratory were key."

Hexas already had a relationship with NREL through a previous grant, and the GCxN program offers early-stage companies the resources and expertise available at NREL plus the support of Shell to accelerate new technologies to market.

"We produce a plant-based raw material, called XanoFiber, that can substitute as feedstock instead of wood, food crops for fuel, and other raw materials," Owens said.

XanoGrass is the source for XanoFiber. XanoGrass is a sterile crop bred from a tall grass that has traits of corn and bamboo. It is a perennial, which means even if you cut it, it will grow back.

"We can grow where it's snowy and cold, and we can grow in extremely hot weather as well," Owens said. "I don't want just to replace food crops but to replace some of the 15 billion trees that are cut down each year."

Hexas is installing a 200-acre site in Hawaii and has more pilot sites in Europe, Arkansas, California, and Washington state.

"If you can reduce the cost of feedstock, then you're heading in the right direction," Dowe said. "XanoFiber is even cheaper than what we are forecasting in our techno-economics for corn stover. In our models, we're trying to get down below $80 per ton to $70 to $75. If you can cut that significantly, possibly by half, with a different feedstock, you are really affecting the economics of the process."

Corn stover is often turned into ethanol as precursor fuel to producing SAF. NREL senior researcher Xiaowen Chen and Dowe are hoping XanoFiber can replace corn stover for SAF and to see it used to produce biolubricants as well.

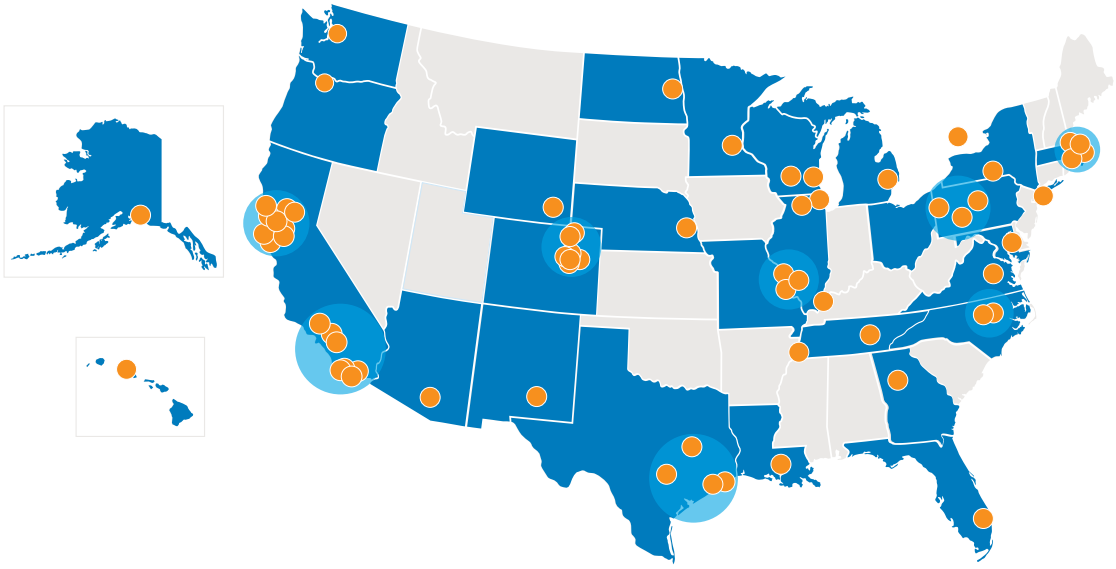
"All the SAF producers or fuel producers are looking for alternative feedstocks," Chen said. "Corn stover is seasonal, and you have to store it, which can degrade over time. That increases its cost. With an alternative feedstock like the XanoGrass, you can harvest it at any time."

Hexas can grow XanoGrass where farmers cannot grow food, called marginal lands, or on land that was used up and is typically unfarmable now. In a place like Hawaii, that largely means abandoned sugar cane fields.

"Sugar cane is extremely hard on the soil because it sucks the nutrients out," Owens said. "It's hard to grow other crops in soil after sugar cane was produced there, but XanoGrass is hardy and creates a symbiotic relationship with soil bacteria and fungi, and it can grow in most environments."

Our Ecosystem

During each call for companies, an ecosystem of business incubators, accelerators, funds, and universities, known as Channel Partners, refer GCxN applicants to the program. These partners represent the leading edge in academia, research, and industry, each providing unique insights into advanced energy technologies. This map shows the geographic distribution of the Channel Partners.



Alaska
Launch Alaska

Arizona
University of Arizona - Center for Innovation

California
Activate
AgStart
California Institute of Technology - Rocket Fund
Cleantech Group
Cleantech Open
Cleantech San Diego
Coachella Valley Economic Partnership
Imagine H_2O
Larta Institute
Los Angeles Cleantech Incubator
New Energy Nexus
Powerhouse
Prospect Silicon Valley
Stanford University - TomKat Center for Sustainable Energy
University of California Davis - Energy and Efficiency Institute

Canada
MaRS Discovery District

Colorado
Colorado Cleantech Industries Association
Colorado School of Mines Beck Venture Center
Colorado State University - Energy Institute
Innosphere Ventures
Innovation Corridor
University of Colorado Boulder - Venture Partners

Florida
HBCU Clean Energy Initiative

Georgia
Georgia Institute of Technology - ScaleUp Lab

Hawaii
Elemental Impact

Illinois
Evergreen Climate Innovations
mHUB

Louisiana
Louisiana State University

Maryland
F3 Tech Accelerator

Massachusetts
Browning the Green Space
FORGE
Greentown Labs
MassChallenge
Alliance for Climate Transition

Michigan
Lawrence Technological University - Centreoplis Accelerator

Minnesota
Grid Catalyst

Missouri
BioGenerator
The Yield Lab

Nebraska
University of Nebraska - Daugherty Water for Food Global Institute

New Mexico
New Mexico State University - Arrowhead Center

North Carolina
North Carolina Biotechnology Center
University of North Carolina - Institute for the Environment

North Dakota
Grand Farm (Emerging Prairie)

New York
Koffman Southern Tier Incubator
New York University - Urban Future Lab
Syracuse University - Syracuse Center of Excellence

Ohio
BRITE Energy Innovators

Oregon
VertueLab

Pennsylvania
Carnegie Mellon University - Wilton E. Scott Institute for Energy Innovation
Penn State University

Tennessee
AgLaunch
Spark Innovation Center

Texas
Energy Tech Nexus
Rice University - Rice Alliance for Technology and Entrepreneurship
Texas A&M University - Engineering Experiment Station, Clean Energy Incubator
University of Texas Austin - Austin Technology Incubator
University of Texas Austin - Texas Venture Labs

Virginia
Dominion Energy Innovation Center

Washington
University of Washington - Buerk Center for Entrepreneurship

Wisconsin
The Water Council
University of Wisconsin Madison - Wisconsin Energy Institute

Wyoming
University of Wyoming - Impact 307

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Year in Review
2024

GCxN

Shell + NREL:
A Global Energy GameChanger

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