

# GLOBAL IMPACT REPORT 2021



# TABLE OF CONTENTS



Letter from the Chief Energy Officer .....	1
2021 in numbers .....	2
Our global reach .....	3
Our strategy .....	4
Our theory of change .....	5
<b>Solution spotlight</b>	
New York .....	6
California / India.....	7
China .....	8
Uganda .....	9
India.....	10
Indonesia .....	11
Looking forward to 2022 .....	12
Our people.....	15
Thank you.....	16

# Letter from the Chief Energy Officer

## Danny Kennedy

In 2021 we made big strides towards our goal of supporting 100,000 diverse entrepreneurs by 2030. We are now working in 10 countries and ran 40 programs globally last year. 50,000 folk are regularly receiving our strategic communications. 25,000 attended a hundred events, online and offline - even in a pandemic year.

We worked with over 1,000 entrepreneurs in 2021, providing close support to 300 startups which alone employed 2,200 people! We provided US\$18 million in funds and leveraged hundreds of millions more from our ecosystem of aligned capital.

These are the vital stats of a solutions movement on the march.

### Our program

We got serious about electric mobility in 2021. We invested and innovated around the world in critical EV infrastructure. We supported dozens of battery startups. Our Board Chair even sold his bus charging business, Amply Power, to an oil major - a sign of the transition in progress!

We experimented further in the field of climate fintech, which we documented in our report in 2020. A global partnership with F10 and our Payments & Credit Challenge in the USA got us applying our skills in this key area. Our micro-financing in Uganda, combined with our model of partnering with community-based organizations, won us the Ashden Award for Energy Access Innovation at CoP26 in Glasgow.

### Our people

What I am most impressed by is the productivity of our team. We are only a little over 100 NEXers around the globe, delivering all this value and impact. This team works hard!

Most exciting in our review of 2021 is our funding and capacity growth to keep bringing our support to startups in a growing number of Geos. We added a team member a week and worked hard at honing our craft of entrepreneur support.



We provided US\$18 million in funds and leveraged hundreds of millions more from our ecosystem of aligned capital.



We have global reach and as a mission-dedicated nonprofit we are unique on the world stage. Our role as we go through this disruptive decade is critical.

Our commitment to gender, class and racial justice shines through our programming but we are still on our own justice, equity, diversity and inclusion (JEDI) journey. We came up short on our goals for some of this, especially entrepreneurship by women in nearly all markets. This is work we must double down on in the years ahead.

We hired a Global Impact Manager to help us measure what works and what doesn't in this regard - along with other critical metrics. With her help and a new COO, continuous improvement and program excellence including JEDI outcomes will be a focus for this year.

### What's NEX?

In 2022, watch this space for more nodes in our Nexus. As well, we'll be innovating on the materials flows for the clean energy transition, such as Lithium supply chains. More capital flows into our founders' hands to speed up their success and a more supportive platform for our team are also on the cards.

Thank you to all who make this work possible. Together we can turn the climate crises around into an historic human renewal.

Shine on!

# 2021 IN NUMBERS



**10**  
COUNTRIES WE  
OPERATE IN



**40**  
PROGRAMS



**299**  
STARTUPS  
SUPPORTED  
646 SINCE 2016



**1,372**  
ENTREPRENEURS  
SUPPORTED  
3,163 since 2016



**US\$1.5B**  
LEVERAGED IN INVESTMENT  
(SINCE 2004) IN US \$



**26,868**  
EVENT PARTICIPANTS



**2,237**  
JOBS CREATED  
BY STARTUPS



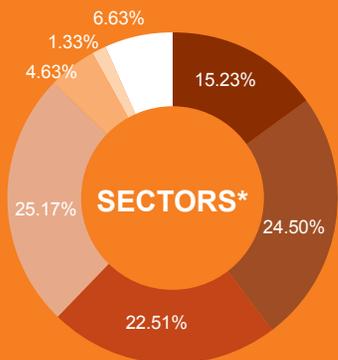
**US\$17,847,682**  
TOTAL IN NEX GRANTS/INVESTMENTS



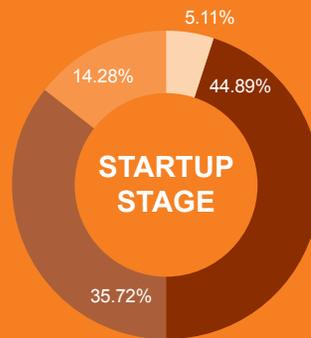
**30.73%**  
AVERAGE % OF FEMALE  
ENTREPRENEURS IN INCUBATOR  
& ACCELERATOR PROGRAMS



**331**  
STRATEGIC  
PARTNERS



- ENERGY EFFICIENCY
- STORAGE
- GENERATION
- DISTRIBUTION
- FINANCIAL PRODUCTS
- SERVICE PROVIDER
- OTHER



- CONCEPT
- STARTUP
- GROWTH
- SCALE



**4,300**  
NEW ENERGY  
NETWORK SLACK  
COMMUNITY  
MEMBERS



**92**  
PIPELINE  
EVENTS HOSTED



**+50,000**  
PEOPLE REACHED ON  
OUR COMMUNICATION  
CHANNELS

\*Missing data from India, Philippines and New York & does not include global programs.

# OUR GLOBAL REACH

New Energy Nexus is the world's leading ecosystem of funds and accelerators supporting diverse clean energy entrepreneurs. The regions and sectors we operate and partner in are strategically selected based on a number of factors, including: our potential and unique impact, current and projected energy use, rates of energy access, and the opportunity for us to grow an inclusive and diverse clean energy startup ecosystem.



## Global partnerships and programs

### Climate Fintech

This global program accelerates digital financial solutions that decarbonize investments, and support clean energy finance and sustainable consumer habits. In 2021, we ran the Cards & Payment Challenge - the first-ever competition to nurture climate fintech with partners: Barclays US Consumer Bank; Rise, created by Barclays; Mastercard; Doconomy; and Patch.

### EV Open Innovation Challenge

A program powered by New Energy Nexus to source startups of commercial-ready EV charging products and services to enter into pilot projects with Hyundai and Kia Motors. This program is a launchpad to rapidly scale the product offering in North America and resulted in seven startup finalists.

### Student Energy

New Energy Nexus is partnering with Student Energy to structure, resource and scale Student Energy Ventures into a globally impactful youth program. We signed an MoU in September 2021 to jointly fundraise and deploy capital directly to youth in order to break down traditional barriers to clean energy entrepreneurship and project development.

### Third Derivative

Founded by RMI and New Energy Nexus in December 2020, Third Derivative (D3) rapidly finds, funds, and scales climate tech globally, through an inclusive ecosystem approach. It supported 62 startups in 2021, of which 42% were women entrepreneurs. D3 awarded US\$4 million in awards and grants, while startups in its portfolio attracted US\$282,208,975 in follow-on funding.

# OUR STRATEGY

## The problem we're solving

**Climate crisis:** We must urgently quit fossil fuels if we are to avoid the worst impacts of climate change. And there are currently not enough diverse and thriving clean energy entrepreneurs to match the scale of the clean energy transition.

**Energy access:** 759 million people – 1 out of 10 – still do not have access to electricity to light their homes, refrigerate their food, or keep cool in rising temperatures.

**Inequity:** Many innovators across the world face significant hurdles to scale their ideas, often compounded by entrenched inequalities, discrimination and biases.

**Innovation ecosystems:** Ecosystems that foster innovation are often fragmented or even non-existent in some geographies. This means climate solutions might fail to take off for a variety of reasons, ranging from weak government support, through to access to pilot opportunities.

## Our solution

To rapidly decarbonize the global economy, we need more renewable energy, and we need to electrify everything from cars, cooking equipment, heat pumps in buildings, through to furnaces for steel production. To achieve this, the world needs more entrepreneurs to find ways to scale both emerging tech, as well as the deployment and adoption of existing clean energy solutions.

That's where we come in. We believe diverse entrepreneurs are an essential ingredient in the clean energy transition due to their ability to innovate quickly, disrupt industries, and launch and scale rapidly. Combining our deep understanding of the clean energy sector with an expertise in investing in and growing startups, we equip entrepreneurs with the right resources at the right time, and connect them with our strong network of people and institutions who share our vision.

“Structural impediments to gender equality translate into barriers to access investment capital. Most financial institutions require assets for one to access credit, yet in the past women were denied property ownership rights to their father’s assets which limits their access to credit.”

**Mackline Banaga**

**Program Analyst at New Energy Nexus Uganda**

A 100% clean economy for the 100% is not possible if we don't build a more inclusive startup ecosystem. We believe that traditionally excluded people - such as women, rural communities, lower socio-economic groups, BIPOC, and LGBTIAQ+ people - must be able to fully participate in clean energy innovation and benefit from its development. That's why justice, equity, diversity and inclusion are crucial elements of our theory of change.

# OUR THEORY OF CHANGE



“New Energy Nexus has a wealth of experience in investing in global commercial and industrial rooftop companies, as well as many promising Indonesian solar construction companies...

Through this funding, we plan to continue expanding our solar rooftop pipeline to accelerate solar energy in Indonesia.”

**Eka Himawan,**  
Managing Director  
at Xurya Daya  
Indonesia

## VISION

An abundant world with 100% clean energy for 100% of the population in the shortest time possible

## MISSION

To support diverse entrepreneurs drive innovation and build equity into the global clean energy economy

  
Strengthen clean energy entrepreneurs

  
Strengthen clean energy entrepreneurship ecosystems

## INTENDED OUTCOMES

  
More people are inspired to start clean energy businesses

  
Clean energy entrepreneurs have business acumen, skills and collaborative mindsets

  
Clean energy entrepreneurs have the right capital resources at the right time throughout development

  
Clean energy entrepreneurs are connected to people and institutions with relevant knowledge and resources

  
The clean energy startup ecosystem is more diverse, equitable and globally distributed

  
The clean energy startup ecosystem is more interconnected and provides abundant resources for entrepreneurs

## APPROACH

  
**LAUNCH**

Inspire new business ideas and form new startup teams

- Bootcamps and hackathons
- University programs

  
**ACCELERATE**

We train startup teams and connect them to the right partners

- Growth-stage incubation & acceleration programs
- Investor intros
- Network access

  
**FUND**

We provide funding for innovative early stage startups

- Cleantech VCs
- Impact funds
- Grants, equity, debt

  
**SCALE UP**

We support startups to test, pilot and scale their technologies, products, and services

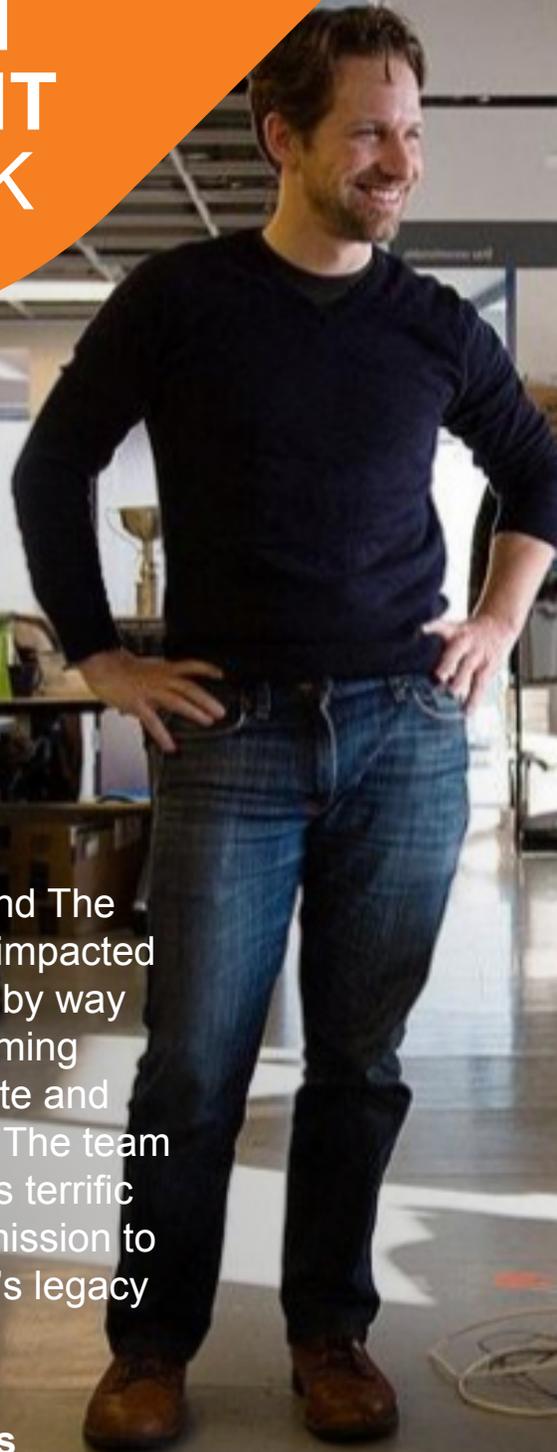
  
**COLLABORATE**

Our global platform supports startups and ecosystem players to collaborate and scale internationally

  
**ENGAGE**

We connect ecosystem players and help remove barriers for entrepreneurs

# SOLUTION SPOTLIGHT NEW YORK



“New Energy Nexus and The Clean Fight positively impacted Radiator Labs’ growth by way of supportive programming and high-level corporate and investor introductions. The team at The Clean Fight was terrific to partner with in the mission to decarbonize the world’s legacy buildings.”

**Marshall Cox,**  
CEO of Radiator Labs

## RADIATOR LABS

### Reducing emissions from New York’s radiator-heated buildings

Around 75% of New York’s buildings are radiator-heated. Radiator Labs’ “Cozy” is a smart, internet-connected cover for radiators that enables occupants to control room temperatures in radiator-heated buildings. Their radiator enclosures capture, disperse and regulate heat, preventing excess energy usage, costs and discomfort from the overheating of buildings.

### Impact

In combination with in-window heat pumps, Radiator Labs is providing a cost-effective path to electrification, with 80% of the greenhouse gas emission reduction at 20% of the cost. Buildings outfitted with Radiator Labs’ “Cozy’s” can save up to 45% on heating costs and their installations are 100% financeable through subsequent energy savings.

In 2021 Radiator Labs completed 15 projects installing approximately 3,500 units, mitigating approximately 1,800 tons of carbon annually.

### Support from New Energy Nexus

Radiator Labs leveraged their \$150,000 financing grant from The Clean Fight to expand their team with the addition of 3 full time employees in New York City.

Additionally, Radiator Labs utilized a \$97,000 pilot grant from The Clean Fight to support a hybrid electrification demonstration in New York City, and a \$150,000 pilot grant to support an energy efficiency project at a housing cooperative in the Bronx co-funded with ConEd rebates.

The Clean Fight award also supported the development of Radiator Labs zero-cost upfront service offering designed to make the system accessible to low-income and disadvantaged communities.

# SOLUTION SPOTLIGHT CALIFORNIA/ INDIA



“If scaled widely, the Takachar technology can enable rural communities to create significantly more value from their unmerchantable crop and forest residues, thereby reducing the risks of wildfires, air pollution, and carbon footprint. The CalTestBed program has drastically cut down the costs of laboratory testing of some of our mission-critical samples and enabled us to go a lot further.”

**Kevin Kung, Founder and CTO\***

Photo is of Vidyut Mohan, CEO and co-founder of Takachar.

## TAKACHAR

### Reducing emissions from agricultural waste

Around \$120 billion of agricultural waste is generated every year. The burning of agricultural waste causes air pollution impacting human health and the global atmosphere. Most crop and forest residues (biomass) are loose, wet, and bulky, making them difficult to collect and centralize.

Takachar’s small scale, low-cost, portable system can be latched on to the back of tractors and pick-up trucks to deploy to rural farms and hard-to-access logging landings. These systems process the waste into higher-value, densified bio-products before transportation.

### Impact

If scaled, Takachar’s technology could reduce smoke emissions from agricultural waste by up to 98% which will help improve the air quality. It could cut a billion tons of carbon dioxide a year.

Takachar was awarded a prestigious Earthshot Prize in 2021, and garnered more than \$2 million in follow-on funding.

### Support from New Energy Nexus

Takachar has been granted \$600,000 in non-dilutive funding from CalSEED and a voucher of ~\$260,000 through CalTestBed to conduct prototype testing at UC Santa Barbara’s Renewable Natural Gas Development Laboratory.

# SOLUTION SPOTLIGHT CHINA



“When questioning myself about why I am here, I find the answer in promoting social progress and making the world a better place are aligned with New Energy Nexus’ mission.”

**Felix Wu,**  
CEO and Founder of  
Seniverse



## SENIVERSE

**Using big data to make clean energy consumption more efficient**

Seniverse is a world leading big data company, leveraging satellite data, artificial intelligence, machine learning and IoT to deliver asset-level physical risk predictions on a computing platform. These data help predict power generation in order to increase the efficiency of solar and wind farms and guide utilities with electricity load forecasting.

### Impact

Seniverse’s technology predicts average power consumption with 3.02% greater accuracy, which both lowers the cost, and increases generation, of solar and wind power. Seniverse works with the State Grid Corporation of China, Gold Wind, Nio and Starbucks in China.

### Support from New Energy Nexus

Seniverse is a member of New Energy Nexus’ second EXCEL Accelerator cohort. During the program, we provided the startup with deep-dive workshops with leading corporations and one-on-one interviews with business units. In addition to business development, we also connect startups with investors and recommend them for various international awards.

# SOLUTION SPOTLIGHT UGANDA

“Clean energy products reduce stress on environmental resources. I hope that our work can help the community appreciate the importance of the cookstoves, briquettes and solar lanterns so they can become self-appointed ambassadors and users.”

**Deacon Rwemigio Raphael,**  
Founder and Director  
of Children’s Hope  
International Ministry



## CHILDREN’S HOPE INTERNATIONAL MINISTRY

### Supplying clean energy products to refugee communities

Kiryandongo Refugee Settlement is an off-grid community hosting over 65,000 people from countries bordering Uganda. The majority of the households rely on firewood for cooking, kerosene for lighting and drink unsafe water. Children’s Hope International Ministry is a community-based organization extending psychosocial support to children and women and increasing energy access by distributing and selling clean energy products in the settlement and its host community, with a particular focus on women.

### Impact

Children’s Hope International Ministry has reached over 100 households and hopes to expand and create awareness of clean energy products, especially cookstoves and solar lanterns. It has also earned revenue from the profits to run more activities.

### Support from New Energy Nexus

We introduced the CBO to the clean energy business model, provided training to increase sales and run a business. We also offered stock capital to start the business as the CBO had no funds or collateral to present to banks to access financial assistance.

# SOLUTION SPOTLIGHT INDIA



“I have been in the renewable sector for six years. But the amount of knowledge or confidence I am getting after being associated with [this program] is something beyond my expectations. The most amazing part is that all the mentors try their best to associate us with various opportunities that comes along the way. Thanks.. for giving [me] this opportunity to grow...”

**Saikrishna Mohanty,  
Founder & Managing  
Partner, Solar Infra**



## SOLAR INFRA

### Accelerating adoption of solar energy systems

Solar Infra specializes in solar installation, project works, assembling, and supplying solar products. Their products include solar power plants, and solar powered street lights, water heaters, home lighting systems, fencing systems, insect trappers, irrigation systems, and drinking water systems.

### Impact

Solar Infra has installed more than 2.5MW of solar products. Their household products use brushless DC motors which lower electricity consumption. Through all the solar products installed and sold, Solar Infra has reduced ~1.8 tons of GHG emissions.

Their solar products such as solar sewing machine, incense machine, solar-operated drip irrigation for farmers, and rope making machines have provided livelihood opportunities for more than 700 households

### Support from New Energy Nexus

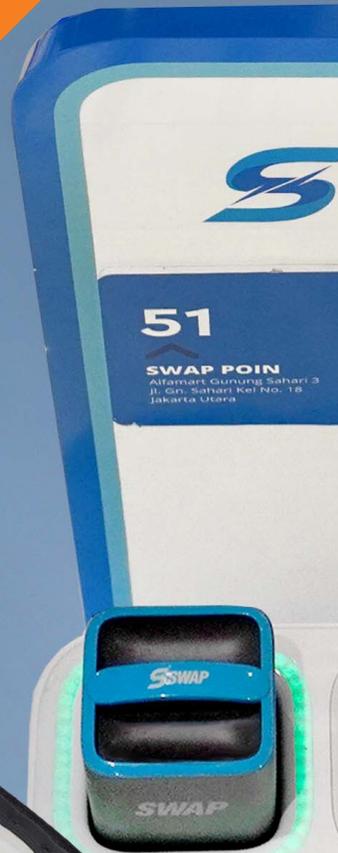
Solar Infra is a part of our [Climate Ready for Women in Energy](#) program, which has provided business literacy skills, support on their pitch deck for investors and mentorship support to launch new livelihood products.

# SOLUTION SPOTLIGHT INDONESIA



“Nexus has motivated SWAP to focus on the single thing that mattered – build something impactful for the new era of energy.”

**Kevin Phang,**  
Co-founder of  
Swap Energi  
Indonesia



## SWAP ENERGI INDONESIA

### Pioneering swappable battery infrastructure and e-mobility

The two biggest problems with e-motorcycles, a potentially massive mode of transport in Indonesia, are perceptions about their range and the longer time it takes to charge. Swap Energi Indonesia (SWAP) provides a battery-swapping network infrastructure to address these concerns.

SWAP develops swappable battery technology and systems so that e-motorcycle riders can exchange used batteries with fully-charged ones in just a few seconds. SWAP is creating a scalable battery-swapping infrastructure to accelerate the adoption of electric vehicles across Indonesia.

### Impact

SWAP has 350+ units of e-motorcycles on the road, 250+ battery swapping stations deployed, 440,000+ cumulative kilometers driven, 37 tons of total CO<sub>2</sub>e reduced, and four cities charging station network coverage.

### Support from New Energy Nexus

We introduced SWAP to several potential investors, supported the SWAP team to prepare funding documents and how to calculate their GHG reduction. We also introduced the SWAP team to people in the sustainable energy business area and offered mentoring services to help them develop their business management skills.

# LOOKING FORWARD TO 2022



Our goal is to support 100,000 entrepreneurs to succeed by 2030

We have ambitious plans in 2022 to expand our footprint and deepen our impact where it matters most. Through a networked organization we will build a solutions movement of entrepreneurs with programs in new geographies. **This means that in 2022, we will support over 1000 startups globally - up from our goal of 500 in 2021.**

A critical part of this will be our focus on justice, equity, diversity and inclusion (JEDI). We will continue to address the historical inequalities in the energy industry by uplifting those left behind in the fossil fueled economy and those traditionally excluded from the startup ecosystem. This includes reaching more diverse partners and participants in our programs, and embedding JEDI across our organization.

Here are some of the programs and partnerships we are looking forward to in 2022:

## Expanding online training

We are piloting two programs to support more entrepreneurs in developing markets through online training:

**Online Startup School:** a digital self-paced energy startup course that supports new innovators, students and individuals to understand different energy business models and the first steps they need to take to launch an energy startup.

**New Energy Academy:** an online-offline training platform for electricians and technical professionals who are looking to build their solar installation and design skills to enter the solar sector as an entrepreneur or a professional.

These programs are currently being supported by IKEA Foundation, Bold Solutions, Climate Collective, GSES, Open Solar, and ACME Foundation.

# LOOKING FORWARD TO 2022



## Lithium battery development in the USA

**Lithium Valley:** In collaboration with local partners, we are helping to seed a circular economy centered on a fully integrated advanced battery and electric vehicle (EV) manufacturing supply chain in Inland Southern California with public purpose and value at its core. Our goal is to help build a strong public-private-community partnership that includes community and environmental organizations, tribal nations, industry, labor, policymakers and government agencies and to support local entrepreneurs and innovation in the Salton Sea region.

**Li-Bridge:** In collaboration with NAATBatt and NY BEST, we are engaging industry, national labs, and government agencies to make recommendations on implementing the National Blueprint for Lithium Batteries which was released by the Federal Consortium on Advanced Batteries (FCAB) in June 2021. Our goal is to help build a mission oriented innovation ecosystem that supports the build out of a domestic advanced battery manufacturing supply chain from raw materials to recycling.

## Expanding into West Africa

A new partnership between New Energy Nexus and Clean Tech Hub will launch in March 2022 to accelerate diverse clean energy entrepreneurs across Nigeria and West Africa. Located in Nigeria, **Clean Tech Hub** is a pioneering hub for the research, development, and incubation of clean technologies. Nigeria will be a crucial country for the expansion of clean energy - it is projected to have the 14th largest economy by GDP in the world by 2050 and over 30% of Nigerian residents are new entrepreneurs. The initial focus of this partnership will be a climate fintech program.

# THE PEOPLE THAT MAKE IT ALL POSSIBLE



Horst Simon



Ian Rogoff



Janet Dalziell



Jon Foster



Julie Blunden



Fran Pavley



Michel Gelobter



P. Kevin Smith



Sherri Pittman Howard



Tom Soto



Vic Shao



Mark Hartney



Aneri Pradhan



Bernie Kotlier



Chia-Lin Simmons



Our 2021 Board Members

Our staff



Thank you to all our funders and donors who made this work possible. You're helping build a global climate solutions movement!

## Get involved!



**Fund:** Reach out to us to invest in diverse clean energy startups.



**Network:** Join our Slack community or newsletter



**Donate:** Make a donation to support climate solutions



**Partner:** Email us to shape future clean energy entrepreneurs.



**Innovate:** Get support along your journey from our local and global programs



For more information about New Energy Nexus, please contact us by email:

[hello@newenergynexus.com](mailto:hello@newenergynexus.com)



**NEW ENERGY  
NEXUS**

