



Global Energy Alliance
for people and planet

Nurturing India's clean tech innovators



The Energy Transitions
Innovation Challenge
supports clean energy
startups and the utilities
accelerating India's
clean energy transition



600+
applications



30+
investors engaged



\$200,000
in catalytic
capital



\$5 million
in investments
unlocked





At a glance

- **Project:** Energy Transitions Innovation Challenge (ENTICE)
- **Location:** India
- **Duration:** May 2023-ongoing

Objective

To accelerate India's progress towards its sustainability goals by supporting startups working on targeted climate and clean energy solutions.

Outcome and pathway to scale

The ENTICE program connects early-stage clean tech innovators with funding, utilities, investors and technical experts, helping them move from early concepts toward real-world deployment. Now in its third year, the program has issued \$200,000 in catalytic funding, engaged more than 600 startups and unlocked \$5 million in equity investments to accelerate India's clean energy ambitions and the buildout of modern electricity grids. As the program evolves, ENTICE's focus has sharpened to enabling commercialization and widespread adoption - connecting innovators directly with practical grid needs and scaling investments in India and beyond.

Front cover: ENTICE 1.0 winner, AmpereHour, celebrates the commissioning of Kilokari BESS in New Delhi, India, April 2025
Photo: AmpereHour

In late August 2025, a group of entrepreneurs gathered in New Delhi, India's capital, to present their cutting-edge technological innovations aimed at strengthening the country's power grid.

Over three days, 12 clean tech innovators pitched their plans for AI-driven tools to advance India's grid sustainability and optimize clean energy. Working with mentors, industry experts and potential investors, they discussed lessons learned and explored strategies to scale their solutions to achieve commercial viability.

The event was ENTICE 2.0, the second edition of Global Energy Alliance for People and Planet's Energy Transitions Innovation Challenge, an innovation program launched in 2023 to identify, support and scale India's most promising clean tech innovators. Now in its third edition, the program provides the platform tech startups need to test, refine and successfully launch their products to market.

"Many promising innovations stall before reaching commercial feasibility," says Vaishali Mishra, who leads ENTICE at Global Energy Alliance. "ENTICE provides technical support to early-stage innovators, connects them to investors and utilities and lays the groundwork for market adoption."

The program aims to accelerate technologies capable of supercharging India's clean energy transition.

After winning ENTICE 1.0 in 2023, energy storage provider AmpereHour Energy partnered with power utility BSES Rajdhani Power Limited (BRPL) to deploy one of India's **first commercially approved, utility-scale battery energy storage systems (BESS) in New Delhi**, the largest in South Asia.

The project, which now provides cleaner, more reliable power to more than 100,000 people in the capital, proved that large-scale BESS is technically and commercially viable.

The work, supported by Global Energy Alliance, is a prime example of our theory of change. We back credible demonstration projects that help spark a pipeline of similar projects. Today, India boasts a 55GWh pipeline of utility-scale battery projects, attracting an anticipated \$5-6 billion in private and public investments.



Propelling India's energy transition

India is undergoing an ambitious clean energy transition. The country aims to source **50 percent of its energy mix from renewable sources by 2030** and reach net-zero carbon emissions by 2070. To achieve these goals, India is rapidly expanding its solar, wind and battery storage capacities.

Progress has been swift. India achieved a historic milestone in July 2026 when clean **energy generation briefly reached 50 percent of electricity demand**.

But momentum brings challenges. India's vast, complex electricity grid must urgently modernize to unlock the country's burgeoning clean energy capacity and help it leapfrog from fossil fuel dependency and power economic growth with a profitable, modern, clean energy system. As of August 2025, **some 50 GW of renewable energy capacity was stranded** due to unfinished transmission lines and legal and regulatory delays.

A growing band of young entrepreneurs stands ready to support India's progress. **According to Tracxn**, a Bengaluru-based firm that tracks private companies, startups and emerging technology sectors, the country sees more than 300 energy startups each year. Today, India is home to an estimated 12,900 energy startups.



Electric mobility company, Trillelectric, receives their ENTICE 2.0 award from Global Energy Alliance CEO, Woochong Um



But moving beyond the pilot stage is challenging. Founders need to prove the feasibility of their solutions, grow their businesses and gain access to utilities that are often critical partners for testing and deploying their technologies.

According to the International Energy Agency's **Net Zero by 2050** roadmap, published in 2021, almost half of the global carbon dioxide emissions reductions required by 2050 must come from technologies that are currently at the demonstration or prototype stage. In 2026, **the IEA reported** that globally, more than 320 new energy startups raised their first funding in 2025. But, innovators still depend on predictable funding and policy frameworks to reach deployment.

"The whole journey of sustainability and entrepreneurship is very difficult," says Avishek Kumar, co-founder of VFlowTech, an ENTICE 1.0 challenge winner that builds long-duration energy storage systems. "There is no set pattern. You have to find your way."



ENTICE gave us the platform we were looking for. A great opportunity to demonstrate our solutions in real-world settings."

– Ankur Sharma, co-founder, Flock Energy, ENTICE 2.0 winner



Ankur Sharma, co-founder of Flock Energy, at the ENTICE 2.0 bootcamp. Photo: Global Energy Alliance



Helping a new generation of clean energy businesses

ENTICE helps entrepreneurs navigate these challenges. Founded in 2023 with a strict focus on real-world deployment, the program has evolved since launch to give winners the opportunity to test their technologies directly in the live operating environments of partnering power utilities.

"Solutions exist but stall because business ecosystems are fragmented," says Ms. Mishra. "By connecting entrepreneurs with forward-thinking utilities, India can achieve a smoother, faster transition to net-zero emissions."

Finalists and winners of ENTICE 2.0 secured a share of \$100,000 in technical assistance grants, plus tailored mentorship and opportunities to pitch to a network of investors, including venture capitalists, philanthropies and impact investors. Under ENTICE 3.0, which launched in 2026, a total of up to \$100,000 in catalytic funding via a convertible instrument will be awarded to the winners.

"Any initiative in the climate sector needs a lot of [patient] capital. That's the one thing I see as the biggest challenge," said Rahul Awati, co-founder of Voltreum, an energy metering software company that joined the ENTICE 2.0 program.

Since ENTICE's launch, each challenge has evolved based on learnings from the last, and been tailored to address a distinct challenge of India's rapidly changing energy sector.

ENTICE 1.0 focused on developing low-cost, scalable solutions for battery storage, building a scalable technical platform for aggregating geographically adjacent distributed renewable energy, improving the affordability of distributed renewable energy and employing AI to improve the efficiency of household appliances.

The challenge surfaced impressive results but subsequent analysis demonstrated that more needed to be done to ensure that solutions were able to reach the markets.

"We found that discovery and market signaling alone does not guarantee adoption within regulated utility systems," Ms Mishra said. "So for ENTICE 2.0, we shifted focus toward co-designing and piloting challenges specific to the grid with the utilities."

The ENTICE ecosystem

- 1 Identify & validate**
Find and assess clean-tech innovators tackling system-critical challenges.
- 2 Underwrite & pilot**
Test solutions in real-world environments, to prove commercial and technical viability and make innovations market-ready.
- 3 Mobilize capital & forge partnerships**
Connect startups with utilities, enterprises, government and investors who can support and scale solutions.
- 4 Commercialize & institutionalize**
Ensure solutions achieve commercial viability in collaboration with government, utilities and industry partners.





Meet the winners

ENTICE 1.0

Cancrie

Turning agri-waste nanocarbons into a material to extend battery life (see *Cleaning up power with coconuts* on page 6)

AmpereHour Energy

Developing utility-scale battery energy storage systems to improve grid reliability and integrate renewable energy

VFlowTech

Developing advanced energy storage technologies to support renewable energy integration and grid stability

REConnect Energy

Providing data and analytics platforms to support renewable energy forecasting, scheduling and grid integration

ENTICE 2.0

Enlog

AI-based technology to optimize power consumption and improve efficiency

Faclon Labs

An AI-driven energy management suite providing real-time diagnostics, forecasting and anomaly detection for thousands of digitized meters

Flock Energy

Technologies to optimize distributed energy resources and improve how they connect to and operate within the grid

Trillelectric

Developing electric mobility and energy solutions to support cleaner, more efficient power systems

“

This recognition is not the finish line, but a starting point.”

– Jharna Saha, founder, Enlog, ENTICE 2.0 winner

Working with one of the utilities in the northwestern Indian state of Rajasthan, Jaipur Vidyut Vitran Nigam Limited (JVVNL), **ENTICE 2.0** sought AI-driven solutions capable of analyzing energy consumption patterns of residential and commercial customers to unlock system-wide efficiencies for the utility. This addressed a critical bottleneck in the ability of India's grid to support the country's growing clean energy capacity.

ENTICE 3.0, currently underway, focuses on energy storage and grid digitization. Participating startups have been asked to tackle two challenges: (i) develop and demonstrate non-lithium battery solutions and (ii) develop a hyperlocal, AI-driven platform that enables India's distribution companies (DISCOMs) to accurately forecast grid demand.

The ENTICE 2.0 cohort with jury and Global Energy Alliance Chair Ravi Venkatesan (standing, center).
Photo: Global Energy Alliance





"India's aging power grids are undergoing a massive overhaul to support clean energy investments and integrate renewables," says Nirmal Shaju, a manager of Global Energy Alliance's [Grids of the Future](#) initiative. "AI tools such as those discovered through ENTICE 3.0 can boost grid efficiency through predictive forecasting, local grid flexibility, loss reduction and overall grid optimization."

Grids of the Future helps countries reimagine their energy systems, allowing them to leapfrog fossil fuel dependence and power economic growth with clean, modern and digitally enabled electricity networks.

ENTICE is supported by a broad consortium of partners including public entities, investors and power utilities. From a pool of applicants totalling more than 600 across all three challenges, an expert panel selects around a dozen finalists each challenge.

The challenge culminates in an intensive bootcamp where finalists refine their business models, optimize their technological solutions, connect with industry experts and assess commercial scalability.

Judges and mentors are drawn from utilities, industry, public bodies and investment and research institutions. Together, they provide local and international technical expertise and real-world deployment insights needed to evaluate each solution.

"ENTICE is committed to accelerating innovation and climate infrastructure," said Ashish Khanna, director general of International Solar Alliance and a juror for ENTICE 2.0. "In collaboration with Global Energy Alliance, our goal is to support breakthrough solutions that drive the global energy transition, and help in effective integration of renewable energy while creating jobs for future generations."



Engaging directly with utilities to showcase how our solutions can help them meet their goals was a game changer for us."

– Arshi Chaddha, co-founder, Trillectric, ENTICE 2.0 winner

Cleaning up power with coconuts

When they applied to take part in ENTICE 1.0 in 2023, childhood friends Akshay Jain and Mahi Singh were in a tough spot.

Their startup, Cancrie, which uses the nanocarbons from coconut shells to make batteries more efficient and sustainable, was receiving interest from prospective customers. But at just three years old, the Jaipur-based company lacked the capital to ramp up production.

"It was a chicken-and-egg situation. We were stuck," says Ms Singh. "We went to the ENTICE bootcamp thinking that we would just get some knowledge because all of the startups were together."

But the session provided a lot more. It offered collaboration with fellow entrepreneurs, introductions to investors and practical tips on how early-stage startups can raise external funds to build a viable product.

Cancrie is in a very different position today. Just months after being named one of four ENTICE winners, the company secured \$1.2 million in seed funding. The award provided the startup with the validation that its batteries work and, more importantly, outperform ordinary batteries. According to the Automotive Research Association of India (ARAI) and other third parties, Cancrie's innovative storage technology makes batteries charge around 20 percent faster and last 50 percent longer, reducing carbon emissions in the process.

The capital injection allowed Ms Singh and Mr Jain to rapidly expand their business. They hired 17 employees, and moved to a new 25,000 square foot manufacturing plant.



Addressing real world challenges

On the last day of ENTICE 2.0, founders pitched their business ideas to a panel of experts, including Ashish Khanna, director general of the International Solar Alliance, Alok Kumar, director general of the All India DISCOMS Association, and other leading investors and sectoral partners. Global Energy Alliance awarded four winning companies \$25,000 each in technical assistance grants and connected them to a consortium of investors, including AWE Funds, Spectrum Impact, Ankur capital and ZeCa Capital for further funding opportunities.

The winners then partnered with the state utility, JVVNL, to test and deploy their solutions in live grid environments. This hands-on collaboration provided the startups with the opportunity to validate and showcase their technologies under real-world operating conditions.

“Many solutions don’t fail because the technology doesn’t work. They fail because they never get the chance to be tested and deployed in the real world,” said Ms. Mishra. “By providing opportunities to work directly with utilities, the program ensures these innovations are grounded in real-world needs and can scale.”

One of the ENTICE 2.0 winners was Mumbai-based Faclon Labs, whose AI-driven platform helps utilities monitor energy use in real time and identify inefficiencies to improve overall system performance.

“ENTICE has been an incredible journey filled with learning, collaboration and bold ideas,” said Parag Patil, chief of strategic alliances & partnerships, at Faclon Labs celebrating its win. “We’re ready to carry this momentum forward, for the journey has just begun!”

Three more winners were recognized for building AI-driven solutions to optimize India’s energy grid and promote demand flexibility: Trilletric, a startup that develops advanced electric mobility and energy solutions; Flock Energy, a firm that focuses on optimizing distributed energy resources and grid integration; and Enlog, which develops AI-based technology to optimize power consumption and improve efficiency.

“Innovation begins inside ENTICE 1.0 winner Cancrie’s laboratories where advanced nanocarbon materials are developed, tested and refined. Photo: Cancrie

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We have one planet. So let’s make it a healthier and better planet for generations to come.”

– Akshay Jain, co-founder and CEO Cancrie, ENTICE 1.0 winner

The funding also allowed Cancrie to invest heavily in research and development, and ramp up production fivefold to 50,000 battery units a month.

Today, Cancrie collaborates with industry leaders, including Mercedes-Benz Research and Development India, to boost the quality of high-performance EV batteries by using its nanocarbon additives. Recent field trials show a massive 25 percent improvement in battery efficiency. The company is also working to integrate its materials into grid-scale battery energy storage solutions for electricity networks, and pursuing opportunities in the U.S. and Brazil.

Looking ahead, Mr Jain and Ms Singh are focused on developing new applications for their eco-friendly substitute for petroleum-based carbons.



Beyond ENTICE

For many ENTICE innovators, the process helped them to sharpen their value propositions for future success. Many applicants, shortlisted participants and winners, are now finding business success across the world.

After being shortlisted for ENTICE 1.0, Godi India sold a 31 percent stake for INR500 million (\$6.0 million) to Graphite India, a leading manufacturer of graphite products. Cancrie, an ENTICE 1.0 winner (see *Cleaning up power with coconuts* on page 6), was recognized nationally, receiving the 2023 National Energy Efficiency Innovation Award from India's Bureau of Energy Efficiency. In an unexpected outcome of ENTICE 1.0, one participant, LEONITE Labs, went on to work with AmpereHour, an ENTICE 1.0 winner, to work on second-life battery applications.

Following its win of ENTICE 1.0, AmpereHour secured a \$5 million Series A funding round led by Avaana Capital and expanded its deployments internationally. The startup also undertook a pilot project with utility BSES Rajdhani Power Limited (BRPL), which was facilitated through the program.

ENTICE 2.0 yielded more stories of success.

“

ENTICE has given us the platform to prove ourselves and to demonstrate what we have built”

– Rahul Shelke, co-founder and managing director, AmpereHour, ENTICE 1.0 winner

According to company-reported figures, Faclon Labs has put its smart technology to industrial uses with more than 150 clients and 300 completed projects. Trillectric continues its mission to eliminate the “blindness” of the modern electrical grid by providing real-time visibility for solar assets, winning the Climate ReDesign Award 2026, a program for climate tech startups. And in the green energy data space, Flock Energy has established an early-stage partnership with Octopus Energy, Britain's largest electricity supplier.

Enlog also raised follow-on funding and grants, earning national industry recognition, and collaborating with the Rajasthan Renewable Energy Corporation Limited on energy monitoring and optimization solutions.

ENTICE 1.0 winner, the battery storage company, AmpereHour.
Photo: AmpereHour





The path forward: Larger-scale deployment, global expansion

In April 2026, ENTICE 3.0 launched with a call for applications from innovators focused on energy storage and grid digitization, including non-lithium battery solutions and innovations capable of rapidly digitizing grid assets such as substations, transformers and meters.

“These solutions support faster grid planning, operations and renewable energy integration, while helping utilities better understand and manage their systems,” Ms. Mishra says.

In August 2026, the ENTICE 3.0 bootcamp once again offered participants the opportunity to deploy their solutions in the real world, this time working with both BRPL and JVVNL. This gives the utility exposure to early-stage technologies and allows utilities to expand their innovation-sourcing beyond standard vendor and tender channels.

Looking ahead, ENTICE offers a model that is replicable in countries with similar institutional and regulatory constraints. Plans are underway to expand the program to Africa as part of Global Energy Alliance’s [Powering Opportunity initiative](#) focused on harnessing clean energy to create jobs and drive economic growth in countries which face the twin challenges of energy poverty and a rapidly growing young population.

“

ENTICE has been an incredible journey filled with learning, collaboration, and bold ideas. We’re ready to take the momentum forward head on, for the journey has just begun!”

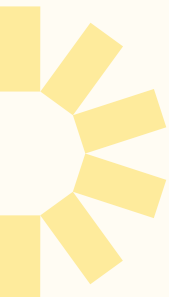
– Rishi Sharma, CEO, Faclon Labs,
ENTICE 2.0 winner

“As ENTICE evolves, we will continue to tighten coordination with other parts of the energy transition ecosystem so that innovation works in lockstep with programs that address other bottlenecks such as procurement rules, regulatory approval timelines and deployment finance,” Ms Mishra said. “This is how Global Energy Alliance’s catalytic capital, technical expertise and deep partnerships work together to break down barriers and advance the clean energy transition.”

ENTICE 2.0 finalists present their solutions during the final pitch showcase in New Delhi. Photo: Global Energy Alliance



Project partners



Utilities

Jaipur Vidyut Vitran Nigam Limited (JVVNL)

Public sector

Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India, Office of the Principal Scientific Advisor to the Government of India, Rajasthan Renewable Energy Corporation Limited (RRECL)

Investors

Ankur Capital, Avaana Capital, AWE Funds, Green Marble, Spectrum Impact, Synapses, Theia Ventures, Transition VC, ZeCa Capital

Other partners

Climate Collective, Honest Create, iCreate, IIT Delhi, Impact Investors' Council, International Solar Alliance, Pune Knowledge Cluster, Rocky Mountain Institute, Third Derivative, t-Hub

About Global Energy Alliance for People and Planet

Global Energy Alliance for People and Planet is a global nonprofit that builds public, private and philanthropic partnerships to accelerate clean energy and economic opportunity. Founded in 2021 by The Rockefeller Foundation, IKEA Foundation and Bezos Earth Fund, we build the technical, financial and institutional foundations that make clean energy investable and scalable across emerging economies.

Our work is anchored in two mutually reinforcing global pillars. **Grids of the Future** strengthens energy supply through AI-enabled, renewables-ready power grids. **Powering Opportunity** builds demand, helping people harness clean energy to power businesses, create jobs and drive economic growth. Through these pillars we work toward our vision: a world where everyone has clean electricity and the means to use it to improve their lives.



Entrepreneurs share learnings at the multi-day boot camp at the end of ENTICE 2.0.
Photo: Global Energy Alliance

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