



NREL and Shell Global create 'partnership for partnerships' to support clean energy start-ups

National Renewable Energy Laboratory (NREL)

Clean energy start-up companies have raised more than \$50 million and made significant progress toward commercializing their technologies thanks to a "partnership for partnerships" program jointly created by Shell Global and the National Renewable Energy Laboratory (NREL).

The Shell GameChanger Accelerator Powered by NREL (GCxN) is a multimillion-dollar partnership managed under a Department of Energy Agreement for Commercializing Technology (ACT) that was executed in 2018.

GCxN's mission is to identify and mature the next generation of technologies with the potential to impact the future of energy. Specifically, GCxN looks for companies with a novel early-stage technology idea, a provable concept, and demonstratable value. GCxN aims to provide start-ups with the support—including access to financial resources, state-of-the-art facilities at NREL, and world-class technical experts—necessary to move from an idea on a chalk board to a commercial product deployed in the marketplace.

GCxN searches for innovations amenable to its yearly industry-focus areas, called Cohorts. Cohorts have included energy storage and grid integration, fast charging and grid integration, electrosynthesis for fuels and chemicals, and e-mobility and industrial electrification.

GCxN identifies promising startup companies through its Pipeline Partners, an extensive ecosystem of clean-tech business incubators, accelerators, and universities, with finalists selected by technology experts at both NREL and Shell. Over the course of 18 to 24 months, invited companies receive up to \$250,000 in non-dilutive funding in the form of technical experts and facilities to develop and demonstrate new energy technologies.

Participating companies execute an Intellectual Property Agreement (IPA) with NREL that provides an option to secure rights to any subject intellectual property that may be developed by NREL while providing technical assistance to each company. In fall of 2021, NREL will finalize a license with a GCxN



Above: Shell-NREL partnership GCxN advances start-ups at national laboratories.

company for commercial rights to a software tool developed by NREL during a technical assistance project. NREL anticipates much more licensing activity between NREL and the GCxN companies as ongoing technical assistance projects are completed.

The first two Cohorts of start-ups graduated in 2021. Aggregate program benefits include more than \$52 million raised by Cohort companies to date, which translates to approximately \$21 raised for every dollar of Shell funding. Additionally, at least 51 new startup hires have occurred.

And, as intended, the Shell-NREL partnership has led to more partnerships. Examples from 2020 include:

- Electric Grid Monitoring, developer of artificial intelligence-based energy analytics, partnered with the New York Power Authority.
- Hygge Power, developer of small energy storage devices, launched a pilot with Florida Power & Light.
- Jolt Energy Storage, which makes high-performance batteries from organic compounds, extended its partnership with Argonne National Laboratory.
- Microgrid Labs, provider of electric vehicle modeling and optimization software, partnered with Enel X and the Massachusetts Bay Transportation.
- Span, developer of a smart electric panel, launched a partnership with Panasonic.⌘