



BEST START

Partner Company Profile



SYNCRIS

MICROGRIDS SIMPLIFIED

It is estimated that 759 million people globally still lack access to electricity. In some remote areas, communities rely on microgrids, which provide power from renewable sources, like solar and wind. But deploying microgrid systems is complex, expensive, and requires customization. These challenges limit the mass adoption of microgrids when they could solve many infrastructure issues around the world.



An easily scaled microgrid system



SYNCRIS founder, Dr. Greg Mowry, witnessed these challenges first-hand while on humanitarian missions around the world. He and co-founder Zach Emond sought to solve these problems by developing technology to simplify, standardize, and ensure scalability in microgrids. The idea was a plug-and-play microgrid system that could be deployed anywhere, including on the battlefield.

A crucial component of a microgrid is the inverter, which converts the DC power generated by renewables into usable AC power and manages the power load across the grid. SYNCRIS' key technology is a single stackable inverter module. This makes systems like microgrids easy to install, expand, and even reconfigure so that as energy demands increase, additional microgrids can be connected and additional inverters "stacked" to support the overall system.

Stackable inverter module

Using a single stackable inverter module, any SYNCRIS microgrid is interchangeable, allowing seamless operation across systems. The flexible design supports various phase configurations and voltage levels, while Silicon Carbide construction ensures durability in extreme environments. With

stackable inverters, power can be easily scaled up or down, reducing failure points and enhancing system reliability. The technology mimics how natural systems share information and work together, like pacemaker cells in hearts that synchronize to keep a steady beat. It helps make microgrids easy to design, deploy,

and operate, even for warfighters with limited technical expertise.

SYNCRIS' inverter technology is a fundamentally new way to synchronize and coordinate complex distributed energy systems. Notably, SYNCRIS' solution relies on hardware, when most other solutions focus on software, which can present scalability and security concerns.



Resilient local power generation

SYNCRIS' technology supports 100% renewable energy, strengthens community resilience, increases energy capacity, and stabilizes the grid. It has helped the transportation, industry, and electronic sectors increase the speed at which they access sustainable energy resources and helped one commercial customer eliminate approximately \$200,000 of the costs they incurred due to power loss and low-quality power. SYNCRIS has also worked

with tribal nations, providing \$90 million in grants to install microgrid systems, and helping to create resilient local power generation. The company has also installed a microgrid system in a Minnesota manufacturing facility, demonstrating the commercial viability of the technology.

Microgrids and grid-forming inverters are key to expanding green energy and electrification

around the globe. SYNCRIS is actively working on additional hardware and software for advanced controls, tactical microgrid and tactical vehicle applications, and high-power markets. With plans to expand to high volume manufacturing later this year, the team is focused on delivering on existing system deployments while designing the next generation of inverters and power electronics.

About SYNCRIS

SYNCRIS' executive team is composed of individuals with decades of experience in industry, academia, research and development, technical innovation, manufacturing, engineering sales and consulting. SYNCRIS' executive team includes:

- **Dr. Greg Mowry:** Founder and CTO, with 25 years of tech industry experience as an inventor, research and development director, and engineer.
- **Scott Tracy:** Co-founder and CEO, with over 35 years of experience in business

management and development, and strategic planning in engineering consulting fields.

- **Jina Penn-Tracy:** Co-founder and Board Chair, bringing over 20 years of expertise in sustainable investing in opportunities that align with environmental stewardship.
- **Zach Emond:** Founder and COO, who has been instrumental in co-developing several fundamental patents critical to SYNCRIS' unique technology and fostering critical partnerships pivotal to SYNCRIS' growth.

About BEST START

BEST START provides the crucial support businesses need to bring their visionary technologies to life. Whether refining smart grid technologies, enhancing green energy applications, or creating efficient solutions for power generation, BEST START partners with Minnesota companies to move technology forward. BEST START is a collaboration of three organizations—DEVCOM Army Research Laboratory, the University of St. Thomas in Minnesota, and ETC, a nonprofit defense solutions provider.

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