

This is the BEST START Digest, an energy sciences newsletter published by the Energetics Technology Center (ETC) Inc. BEST START provides the crucial support businesses need to bring their visionary technologies to the warfighter. Whether refining smart grid technologies, enhancing renewable energy applications, or creating resilient solutions for power generation, BEST START partners with Minnesota companies to move technology forward. This newsletter aids in this mission.

## CONTENTS

Partner Update.....	1
General News.....	1-2
Solicitations & Opportunities.....	2
Upcoming Events.....	2



## Partner Update

COMPANY	PROJECT
<a href="#">Maxwell Labs Inc.</a>	Photonic Cooling
<a href="#">SYNCRIS</a>	Microgrid Inverter with Model Predictive Control
<a href="#">BWR Innovations, LLC</a>	Hydrogen Fuel Cell
<a href="#">Ascentek, LLC</a>	Sodium Ion Battery
<a href="#">Aza Power Systems</a>	Ammonia Power Combustion
<a href="#">LEMA, Inc.</a>	Dual-axis high-efficiency Solar Power System
<a href="#">Exergi Predictive, LLC</a>	AI-Based Energy Control for Tactical Microgrids

**LEMA** has completed in-lab testing and is ready to bring equipment out to the field to do on-site testing. Part of their development is a data dashboard, which will enable the team to remotely monitor sensor data readings while the equipment is in continuous operation outdoors.

**Aza Power Systems** has completed their engine conversion from diesel to ammonia by swapping out the diesel cylinder heads with new, patented cylinder heads designed in-house to burn ammonia. They are currently in the process of finishing the fuel system before they can turn over the engine for the first time using ammonia fuel.

## General News

### [University of St. Thomas Microgrid Center Director: Why Microgrids Matter in the AI Era](#)

Mahmoud Kablan of UST's Center for Microgrid Research comments on the value proposition that microgrids offer in powering the high energy needs of AI. The university's center provides its students with a hands-on, real-world experience of these microgrids as it prepares engineers for what our energy consumption needs are going to look like now and in the future.

### [H2 Power Generation: Duke Energy Florida Testing Green Hydrogen Mix](#)

Using two solar powered electrolyzers, Duke Energy Florida's DeBary Hydrogen Production Storage System splits water into hydrogen and oxygen without the carbon emissions often associated with this production. The green hydrogen is then transferred to safe storage and can be used on-demand in "an existing combustion turbine that has been upgraded, using GE Vernova technology, to operate on a blend of natural gas and hydrogen or up to 100 percent hydrogen." This supports their expansion of renewable energy and further diversifies Duke Energy Florida's energy fleet.

### [U.S. Army Corps of Engineers Awards \\$54.3 Million Contract for Fort Stewart Airfield Microgrid](#)

David Boland, Inc. was awarded a \$54.3M firm-fixed price contract to set up a power plant and microgrid, including a 10-MW natural gas power station, and coordinate "the new power plant as well as existing natural gas generation assets and the Fort's approximately 10 MW solar array." This project will allow for the integration of future solar capacity and battery energy storage systems and comes in an effort to improve energy security at the Army's installations across the globe.

General News cont. on Page 2

## [DOE seeks batteries with four times the juice](#)

“The department’s Advanced Research Projects Agency-Energy office is giving six teams up to \$15 million to produce prototypes of manufacturable next-generation energy storage within two years.” The DOE wants to develop a system that has “four times the energy density of lithium ion batteries that we have today.” These new energy systems will be used in drones, robots, and/or aircraft.

## [Cleantech’s Rough Year Ends On An Up Note](#)

Although this year achieved the lowest annual investment in Cleantech in the last five years, each quarter since Q1 trended upward so it’s not all bad news. Nuclear energy was a popular tech for investments this year as well as some sizable deals in geothermal power, energy storage, and electric aircraft.

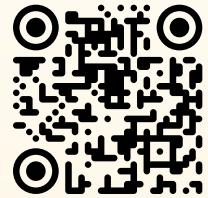
## [Minnesota Commerce Awards \\$5.3 Million to Strengthen Local Electric Grid Resilience Across the State](#)

28 applicants were funded up to \$250,000 per project by the Minnesota Department of Commerce for “municipal and cooperative electric utilities to strengthen their local distribution systems, increase capacity and reduce power outages.” Projects include undergrounding power lines, replacing aging infrastructure, increasing power capacity for development, and improving local grid operations.

## [Smart EV Charging That Works for Homeowners and the Grid](#)

Using Grid Catalyst’s Demonstration Cohort program, NeoCharge partnered with UST’s Center for Microgrid Research tested their smart EV charging software, resulting in a demonstration suggesting that “optimized EV charging could be one

of the most cost-effective ways to future proof the grid, reducing peak energy demand by up to 45% while lowering home energy bills up to 17% for homes without solar and up to 26% for homes with solar under time-of-use pricing.” At grid-scale, this could improve grid stability, support renewable integration with more efficient solar use, and incentivize higher EV adoption rates by reducing electricity bills.



Scan QR or visit <https://www.beststart.io> for more information.

## **Opportunities and Solicitations**

### [Topics for SBIR/STTR Solicitations](#)

12 new topics are released on the first Wednesday of each month. Pre-release and open and closing dates for DoD SBIR/STTR topics can be found on the [Defense SBIR/STTR Innovation Portal](#).

### **UPCOMING EVENTS**

Date	Event	Organizer	Location
Feb. 18–20	<a href="#"><u>Intersolar &amp; Energy Storage</u></a>	Intersolar	San Diego, CA
March 24–26	<a href="#"><u>AUSA Global Force Symposium</u></a>	AUSA	Huntsville, AL
April 7–9	<a href="#"><u>ARPA-E Energy Innovation Summit</u></a>	ARPA-E	Chula Vista, CA
April 19–22	<a href="#"><u>Navy League Sea-Air-Space</u></a>	Navy League	National Harbor, MD
April 21–22	<a href="#"><u>BNEF Summit</u></a>	Bloomberg	New York, NY
April 21–24	<a href="#"><u>CxEnergy2026</u></a>	CxEnergy	Chicago, IL
May 4–6	<a href="#"><u>Microgrid Knowledge Conference 2026</u></a>	Microgrid Knowledge	Orlando, FL
June 2–4	<a href="#"><u>EEI 2026</u></a>	Edison Electric Institute	Las Vegas, NV
Aug. 4–6	<a href="#"><u>Data Center Frontier Trends Summit</u></a>	Data Center Frontier	Reston, VA
Sept 23–25	<a href="#"><u>T&amp;D World Live</u></a>	APS	Phoenix, AZ
Sept 28–30	<a href="#"><u>Yotta 2026</u></a>	DatacenterDynamics	Las Vegas, NV
Sept 28–30	<a href="#"><u>Experience POWER 2026</u></a>	Access Intelligence	Washington, DC
Nov 16–19	<a href="#"><u>RE+ 26</u></a>	RE+ Events	Las Vegas, NV