



This is the BEST START Monthly 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.

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Partners

ETC is working with its partners below to help them prepare for their technology demonstrations later this year/early next year. Stay tuned for updates on the companies' technologies.

Maxwell Labs Awarded \$500,000 Through the BEST START Program to Help Meet U.S. Army Energy Technology Needs

Press Release, June 24, 2025

Excerpt: "We are thrilled to strategically collaborate with the University of St. Thomas, the DEVCOM Army Research Laboratory,

Company

[Maxwell Labs Inc.](#)

[SYNCRIS](#)

[BWR Innovations, LLC](#)

[Ascentek, LLC](#)

[Aza Power Systems](#)

[LEMA, Inc.](#)

[Exergi Predictive, LLC](#)

Project

Photonic Cooling

Microgrid Inverter with Model Predictive Control

Hydrogen Fuel Cell

Sodium Ion Battery

Ammonia Power Combustion

Dual-axis high-efficiency Solar Power System

AI-Based Energy Control for Tactical Microgrids

and ETC and leverage the resources and expertise available through the BEST START program," said Mike Karpe, Co-Founder & Chief Growth Officer, Maxwell Labs. "This contract and collaboration will be instrumental in accelerating the development and

real-world validation of our laser cooling system, bringing us closer to offering commercialization at scale of Maxwell's Gen1 Laser Cooling Technology."

General News

Clean Energy VC and Financing Trends

Pitchbook, "Clean Energy VC Trends," May 21, 2025

Pitchbook opines that regulatory uncertainty and market volatility have made investors increasingly cautious. The medium- and long-term outlook

for many clean energy technologies is highly dependent on the regulatory and policy environment and will be impacted by amendments to tariffs, especially those targeting solar and wind supply chains. Overall, VC clean energy funding remained stable for 2024, but falling 13.2% in Q1 2025

from Q4 2024. North America led the market across the clean energy space with 3/4 of global quarterly deal value. The dispatchable energy sources segment (especially nuclear energy) emerged as a bright spot. Looking at trends, the intermittent renewable energy and grid infrastructure

General News cont. on Page 2

segments had the highest overall deal values from 2017-2024, except for clean fuels and grid infrastructure in 2019.

The total Q1 2025 deal value for dispatchable energy had by far the highest deal value at \$2.4B, followed by grid infrastructure (\$617.3 million), intermittent renewable energy (\$607 million), and clean fuels (\$452.4 million). The very high deal value for dispatchable energy was driven by investments in nuclear technologies creating a nuclear powered industrial microgrid. Grid infrastructure actually had the highest median deal value of all segments for early-stage deals at \$10.8 million, followed by clean fuels at \$5.4 million. For late-stage VC deals, this was reversed, with grid infrastructure at \$8.4 million having the lowest median deal value and dispatchable energy the highest at \$20.8 million.

Wilson Sonsini has also produced a [Q1 2025 financing trends report](#). On page 3 of The Entrepreneurs Report, Private Company Financing Trends, Q1 2025, the outlook for clean energy and climate tech is presented.

[Building Military Power: Deploying EaaS Microgrids Using Private Capital at Military Installations](#)

Larry Watkins, AlphaStruxure, March 28, 2024

Alphastruxture, a Carlyle and

Schneider Electric Company, has deployed microgrids at military bases around the world. This article discusses the vehicles that can be used to build microgrids on installations with 3d party financing at the DoD's 350 global bases around the world. DoD guidance mandates energy resilience at every installation by 2035 and some of the services have set earlier timelines to achieve this. The DoD uses Expanded Use Leases (EULs) and Power Purchase Agreements (PPAs) for green energy and microgrid projects and the Energy as a Service (EaaS) vehicle can be used under these authorities by combining the two without the drawbacks of each. EaaS can bring in 3d party financing for microgrid projects in the form of private equity firms, limited partnership funds, debt from commercial banks, bank syndicates or institutional investors such as asset managers according to the article.

[How Predictive Microgrid Maintenance Drives Energy Resilience for Microgrids and On-Site Power](#)

Mateusz Zajac, Valeria Cornelli and Alberto Carini, EnergyTech, June 17, 2025

Excerpt: "Proactive strategies like condition-based maintenance that can unlock predictive analytics contribute to reliable power and resiliency and enhance safety. By identifying

potential equipment failures ahead of time, a proactive approach minimizes the risk of accidents and injuries. In dynamic microgrid environments, monitoring, alarm, and analytic systems have to be equally dynamic."

Solar Energy Trends

[According to a February 2025 article in Power Engineering](#), the US Energy Information Administration (EIA) forecasts that solar generating capacity will nonetheless eclipse that of coal thru next year and blow by wind power by the end of 2026. By then, solar is projected at 8% of US electricity, up from 5% in 2024 and a projected 7% in 2025.

However, the Wall Street Journal, June 2, 2025, Technology Section, Ryan Dezenber, "South Rethinks Swapping Pines for Solar," reports that solar developers are encountering obstacles to solar farms that were lauded as good rural economic development. Local opposition over tax abatements, aesthetics, erosion and future clean-up obligations have emerged. Additionally, the One Big Beautiful Bill ends incentives for residential solar and phases out large arrays by 2028. As a result, some solar companies, including Sunnova and Solar Mosaic, [have filed for Chapter 11 bankruptcy](#), citing political uncertainty around the future of solar tax credits as the motivati

Legislative Updates

The One Big Beautiful Bill Tax Impacts for General Businesses and the Energy and Climate Sector

The Wilson Sonsini law firm has analyzed the tax provisions of "One Big Beautiful Bill" that narrowly passed the House of Representatives and now awaits Senate action. The firm reports that the bill repeals the current expense capitalization for domestic R&D expenses provisions and would enable taxpayers to

deduct all R&D expenses paid or incurred in tax years beginning on or after January 1, 2025, and before Jan 1, 2030, in full in the year incurred. Existing law only allows the amortization of R&D expenses over a 5-year period, although the bill also retains that as an option. Some sentiment exists in the Senate to make the R&D provisions permanent.

The bill also reinstates "bonus depreciation" for qualified property

placed in service on or after Jan 20, 2025, and before January 1, 2030, allowing the immediate deduction of 100% of the cost of qualified property for the year it is placed into service. Other provisions deal with qualified "production" property acquired after January 1, 2025 and placed into service before January 1, 2033, if used in manufacturing, agriculture, and chemical production or refinement of tangible personal property. For further

Legislative News cont. on Page 3

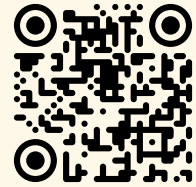
information on R&D and depreciation see [“The One Big Beautiful Bill: Tax Provisions Impacting Domestic and Multinational Businesses”](#).

Besides these general business provisions, the bill has significant impacts specifically for the energy and climate sector. It accelerates or eliminates several renewable energy credits that were contained in the Inflation Reduction Act. See the report [“The One Big Beautiful Bill: Tax Provisions Impacting the Energy and Climate Sector”](#) for a table that lists each tax credit, the current and proposed termination dates, and transferability termination options from the Inflation Reduction Act as well as a discussion of each credit.

[DoE to Launch 3 Small Nuclear Reactors by 2026](#)

Weslan Hansen, MeriTalk,
June 18, 2025

MeriTalk reports that the Energy Secretary Wright in testimony to Congress revealed that DOE has launched an initiative to have 3 small nuclear reactors operational by July 2026. The reactors will be located within the DOE’s containment facility at the Idaho National Laboratory. Wright cited an Executive Order from President Trump last month that allows DOE to bypass the independent NRC in approving advanced reactor designs and projects. The Secretary also explained that industry players requesting to build AI data centers or reactors on DOE-owned property may not sell electricity from this infrastructure.



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

Solicitations

[Topics for SBIR/STTR Solicitations](#)

12 new topics are released on the first Wednesday of each month. SBIR 25.4/STTR 25.D, Release 10, will be pre-released on July 2, 2025. Pre-release and open and closing dates for DoD SBIR/STTR topics can be

found on the Defense SBIR/STTR Innovation Portal, linked above.

[Grid Catalyst 2026 Demonstration Cohort](#)

Applications for the 2026 Demonstration Cohort are now open

and will close by July 25, 2025. Grid Catalyst maintains that \$21 million in follow-up funding has been obtained by Cohort alumni in the last 3 years. It also makes connections for Cohort members with utility companies and networks.

UPCOMING EVENTS

Date	Event	Organizer	Location
July 9–10, 2025	<u>DoD Energy & Power Summit</u>	Defense Strategies Institute (DSI)	Washington, D.C.
July 16, 2025	<u>Workshop: Exploring Cleantech Entrepreneurship</u>	Grid Catalyst	Virtual
July 22, 2025	<u>Summer Unwind 2025</u>	Clean Energy Economy MN	Minneapolis, MN
August 6, 2025	<u>Workshop: Customer-Driven Innovation</u>	Grid Catalyst	Virtual
Sept 8–11, 2025	<u>RE+ 25 Renewing What’s Possible</u>	RE+	Las Vegas, NV
Oct 7–8, 2025	<u>2025 Gateway to Solar Conference</u>	Minnesota Solar Energy Industries Association (MnSEIA)	Minneapolis, MN
Oct 13, 2025	<u>Minnesota Energy Innovation Summit</u>	Various	Minneapolis, MN