



SB 434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Position: Favorable with Amendments

Hearing Date: February 20, 2025

Form Energy respectfully requests a Favorable With Amendments (FWA) report from the Senate Education, Energy and Environment Committee on SB 434 Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act.

The ENERGIZE Maryland Act would set a clean energy portfolio standard including new generation using novel zero-emission technologies and a precedent in the state for including energy storage as a component of a statewide Clean Energy Business Development Advisory Committee. We appreciate the intent of this legislation and respectfully request consideration of the innovative and multifaceted nature of the energy storage industry.

Form Energy is a U.S. energy storage technology and manufacturing company that is commercializing a new class of multi-day energy storage system to enable a clean and reliable electric grid. Form Energy's first commercial product is an iron air battery system that can cost-effectively store and discharge energy for up to 100 hours at its rated capacity. Unlike lithium-ion batteries, which can only cost-effectively provide grid-scale energy for a few hours at a time, iron-air batteries can deliver energy for multiple days at a time. Made from some of the safest, cheapest, and most abundant materials on the planet – low-cost iron, water, and air – our battery system provides a sustainable and safe solution to meeting the growing demand for grid security and resiliency. Form Energy has more than 13 GWh of announced projects under contract and development throughout the U.S., the first expected to be deployed in 2025, all of which will be manufactured at Form Factory 1 in West Virginia.

Form Energy's batteries operate on the principle of reversibly rusting iron, which was first invented in the 1960s. Form Energy's batteries, while discharging, use air bubbles to convert iron metal to rust; while charging, the application of an electrical current converts the rust back to iron and the battery releases oxygen. Form Energy's battery system is composed of modules that are grouped together with auxiliary systems in weatherized, factory-assembled enclosures the size of shipping containers. Hundreds of these enclosures make up a modular, megawatt-scale power block that can be sited anywhere and used in a variety of applications including on either the transmission or distribution side of the grid. In December 2024, Form Energy announced that its iron-air battery technology achieved a key benchmark for safety by completing UL9540A safety testing, demonstrating no potential for thermal runaway and no fire risk under extreme abuse conditions, underscoring the safety of iron-air battery systems.

Form Energy's technology pairs well with a variety of energy resources and other types of short and long duration energy storage to optimize energy system configurations and does not need to be co-located for its benefits to be achieved. With rising energy demand, extreme weather, grid outages and other prolonged stressors, technology capable of storing energy for multiple days will be critical to ensure grid reliability and lower electric system costs. Duration and reliability should be a strong component of any energy storage procurement program designed to meet the needs of today and tomorrow.

Due to the nature of this technology and the multi-day storage resource class being fundamentally different from other existing battery storage devices common today, we wish to request amendments to ensure that the work of the advisory committee being designed now recognizes that the energy storage industry is not a monolith.

Additionally, we respectfully recommend that the Energize Act goes one step further in setting a procurement that would support the development of long-duration and multi-day energy storage devices that would meet a number of needs: enabling the transition to a clean grid with diversified energy resources; bolstering grid reliability and resilience; improving system capabilities to withstand shocks and stressors; and promoting economic development and job creation in Maryland communities.

Below is a brief summary of the changes proposed:

1. Adding definitions for long and multi-day energy storage
2. A second energy storage seat to the Clean Energy Business Development Advisory Committee
3. A procurement program that supports the development of long and multi-day duration storage and recognizes the reliability value in low cost per megawatt- hour of storage capacity

Form Energy stands ready to be of service to Maryland during its transition to clean energy. For these reasons we humbly request a favorable with amendments report from the Education, Energy, and the Environment Committee.

Sincerely,

Sarah Jackson
Senior Policy Manager
Form Energy, Inc.
sjackson@formenergy.com