

American Energy Innovation Act Would Elevate Energy Storage to a Top RD&D Priority

March 2020

The American Energy Innovation Act of 2020 (S.2657)

Status: Under consideration in the U.S. Senate

Section 1301 of the [legislation](#) would authorize \$1.4 billion over 5 years for a wide range of cross-cutting energy storage research, development, and demonstration (RD&D) programs primarily at the U.S. Department of Energy (DOE). Key provisions include:

1. Cross-DOE Energy Storage RD&D Program (\$100 MM/year)
2. Energy Storage Demonstration Grant Program (\$100 MM/year)
3. Joint DOE-Defense Long Duration Demonstration Initiative (\$50 MM/year)
4. Technical and Planning Assistance and Grant Program (\$20 MM/year)
5. Energy Storage Materials Recycling Prize Competition (\$10 MM/year)
6. Direction to FERC on Storage-as-Transmission and Flexibility Market Services

[The American Energy Innovation Act, Senate Bill 2657](#), was introduced on February 27, 2020 by Senators Lisa Murkowski (R-Alaska) and Joe Manchin (D-West Virginia). The bill contains numerous energy bills from 2019, including the content of the Better Energy Storage Technologies Act or “BEST Act” of 2019 (S. 1602).

The American Energy Innovation Act contains hundreds of millions of dollars in funding over the coming years to spur research and development for energy storage as well as solar, wind, electric vehicles, and other clean energy technologies. **A total of \$1.4 billion is proposed for energy storage technologies** across five programs, between 2020 and 2025, in Section 1301 of the bill:

1. Cross-DOE Energy Storage RD&D Program (\$100 MM/year)
2. Energy Storage Demonstration Grant Program (\$100 MM/year)
3. Joint DOE-Defense Long Duration Demonstration Initiative (\$50 MM/year)
4. Technical and Planning Assistance and Grant Program (\$20 MM/year)
5. Energy Storage Materials Recycling Prize Competition (\$10 MM/year)

S. 2657, the American Energy Innovation Act of 2020, was sent to the Senate floor for consideration on March 10, 2020. A motion to proceed has failed on arguments over amendments, but a motion could be brought up again on the Senate floor at any time. This legislation includes an array of provisions that will elevate energy storage to one of the top priorities of U.S. energy technology research, development, and demonstration (RD&D). The bill defines “energy storage system” widely to include mechanical, electrochemical, thermal, power-to-gas, and other processes to convert and store energy.

The RD&D program would entail the development of a 10-year strategic plan by DOE with cost and performance targets for development of grid energy storage technologies. The program would focus on

energy storage for a variety of durations (6-10 hours, 10-100 hours, and “seasonal”) and a variety of applications, including building-grid integration and vehicle-grid integration. Additionally, the program would undertake work on systems and methods for recycling and reuse of storage materials; advanced controls for storage systems; pumped hydroelectric energy storage; modeling of storage across a variety of applications; and testing and validation of storage technology performance. Significantly, the RD&D program would be cross-cutting across several DOE program offices, with a lead office to be identified by the Secretary of Energy. The bill authorizes \$100MM annually over fiscal years 2021-2025 for this program.

A competitive grant program would be available to states, utilities, and private companies to undertake grid energy storage demonstration projects for a variety of purposes. DOE would also be directed to initiate separate agreements to carry out **at least 5 energy storage system demonstration projects** focused on longer-duration technologies by October 2023. The bill authorizes \$100MM annually over fiscal years 2021-2025 for the competitive grant program and demonstration projects.

A long-duration demonstration initiative would be established as a joint program between the Department of Defense (DOD) and DOE to demonstrate longer-duration energy storage technologies across technology types and geographic regions, as well as at all levels of the electric system. The bill authorizes \$50MM annually over fiscal years 2021-2025 for the joint DOD-DOE program.

A technical assistance and grant program would be made available to support utilities, public power organizations, and electric cooperatives on a variety of planning, analysis, procurement, and other business functions around grid energy storage deployment. Significantly, grants would be available on a competitive basis at least annually and subject to a 50% cost-share for eligible entities to seek outside expertise. The bill authorizes \$20MM annually over fiscal years 2021-2025 for the technical assistance and grant program.

A recycling prize competition would be established to incentivize the recycling of critical energy storage materials, such as lithium, cobalt, nickel, and graphite. DOE would conduct competitions at least annually, with cash prizes of varying amounts awarded to process and technology innovations that present the greatest potential for large-scale commercial deployment. The bill authorizes \$10MM annually over fiscal years 2020-2024 for the recycling prize competition.

Directives to FERC require:

- (1) That the Commission issue a new rule for the eligibility and process for electric storage to serve as transmission subject to cost recovery through FERC-regulated rates, as well as for such storage-as-transmission to also receive compensation for generator services under certain conditions; and
- (2) That the Commission hold a technical conference to identify opportunities for electric storage to further improve operations of the electric system, including examination of additional market products, designs, or rules that would enable and compensate storage to do so.

ESA supports the bill and expects its passage would raise energy storage technology development and commercialization to a top DOE priority, as well as provide a variety of funding opportunities for ESA member companies to pursue.

Further Information

The full text of the legislation is available [here](#).

For more information contact ESA at info@energystorage.org

Link to Current S. Bill: [S. 2657](#)

Links to September Bill: [S. 1602](#)