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Maryland General Assembly
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FISCAL AND POLICY NOTE
First Reader

House Bill 821
Economic Matters

(Delegate Korman, *et al.*)

Energy Storage Portfolio Standard (Storage Technology and Electric Power
(STEP) Act)

This bill requires each electricity supplier that sells electricity to retail customers in the State to have available energy storage devices on the supplier's system with an energy capacity rating of at least 1% of the annual average peak power demand that the supplier serves by January 1, 2021, and at least 2% by January 1, 2025, subject to specified conditions and penalties for noncompliance. Many of the conditions are similar to those established for compliance with the State's renewable energy portfolio standard (RPS) in current law. The bill applies to RPS compliance years beginning in 2017. The Public Service Commission (PSC) must adopt regulations to implement the bill.

Fiscal Summary

State Effect: PSC can handle the bill's requirements with existing budgeted resources. State expenditures (all funds) increase beginning as early as FY 2017 to the extent that the bill increases electricity prices. The amount cannot be reliably estimated at this time. Special fund revenues for the Strategic Energy Investment Fund (SEIF) increase, potentially significantly, beginning in FY 2021 from alternative compliance payments. SEIF special fund expenditures increase correspondingly to support the installation of new energy storage devices in the State, as required by the bill.

Local Effect: Local government expenditures increase beginning as early as FY 2017 to the extent that the bill increases electricity prices. The amount cannot be reliably estimated at this time.

Small Business Effect: Potential meaningful. Expenditures by small businesses for electricity increase beginning as early as FY 2017 to the extent that the bill increases electricity prices. The amount cannot be reliably estimated at this time.

Analysis

Bill Summary: “Energy storage credit” means a credit equal to the energy capacity rating of one kilowatt-hour of electricity or its equivalent stored on an energy storage device that is available to provide electricity for a continuous period of at least one hour and meets specified location requirements.

“Energy storage device” means a device used to store energy for use as electricity at a later time, or for use in a process that offsets electricity use at a peak time, and includes certain specified technologies, such as compressed air, a flywheel, or a capacitor. It does not include pumped hydropower. An energy storage device may be owned by an electricity supplier, a third party, or a customer, subject to specified conditions; however, it cannot have been in operation before January 1, 2017, to be eligible.

By January 1, 2021, each electricity supplier must have available energy storage devices on the supplier’s system with an energy capacity rating of at least 1% of the annual average peak power demand that the electricity supplier serves, as (1) measured over a one-hour period and (2) averaged over calendar 2017 through 2019. By January 1, 2025, the requirement is at least 2%, averaged over calendar 2021 through 2023.

An electricity supplier must meet the applicable energy storage portfolio standard by accumulating the equivalent amount of energy storage credits that equal the above percentages. Each electricity supplier must submit a report to PSC each year that demonstrates compliance with the energy storage portfolio standard or the power capacity by which the supplier failed to meet the standard.

Beginning in 2021, if an electricity supplier fails to comply with the energy storage portfolio standard for the applicable year, the electricity supplier must pay a compliance fee of \$300 for each kilowatt-hour of shortfall into SEIF. The compliance fees must be accounted for separately within the fund and may be used only to make loans and grants to support the installation of new energy storage devices in the State.

An aggregator or broker that assists an electric customer in purchasing electricity, but that does not supply the electricity or take title to or ownership of the electricity, may require the electricity supplier that supplies the electricity to demonstrate compliance with the bill.

PSC may grant a one-year waiver to an electricity supplier if PSC determines that achieving compliance by the applicable deadline would present undue hardship to the electricity supplier or the supplier's customers. PSC may grant additional one-year waivers.

Current Law/Background: No energy storage requirement exists in State law; however, several programs are designed to promote energy efficiency, such as EmPower Maryland. The Maryland Energy Administration (MEA) completed a [study](#) (available on MEA's website) in January 2016 that addressed various considerations for energy storage in Maryland, including background on the types of storage systems and a discussion of significant regulatory and market barriers and ways other states have addressed them. The report found that storage can provide a variety of functions in the electricity system, from supporting the efficient operation of the electric grid to providing backup power in emergency situations. The report also noted that, notwithstanding the benefits, "the historic high costs of energy storage systems have made it difficult for broad deployment."

California Assembly Bill 2514 of 2010 and Related Rulemaking

California Assembly Bill 2514 of 2010 required the California Public Utilities Commission (CPUC) to open a proceeding to determine appropriate targets, if any, for each load-serving entity (utility) to procure viable and cost-effective energy storage systems to be achieved by December 31, 2015, and December 31, 2020. CPUC was required to adopt the procurement targets, if determined to be appropriate, by October 1, 2013.

In October 2013, CPUC adopted an energy storage procurement framework and established a combined energy storage target of 1,325 megawatts of energy storage to be procured by Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company by 2020, with installations required no later than the end of 2024.

Additional Comments: Renewable energy credits (RECs) for the current RPS are in megawatt-hours. Under the current RPS, the Tier 1 nonsolar alternative compliance payment is \$40 per megawatt-hour. The "energy storage credits" in the bill are in kilowatt-hours. The compliance payment under the bill is \$300 per kilowatt-hour, or \$300,000 per megawatt-hour (if the units are converted to align with current RECs). The average residential household uses one megawatt-hour of electricity per month.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Maryland Energy Administration, Office of People's Counsel, Public Service Commission, California Public Utilities Commission, Department of Legislative Services

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