

**Department of Legislative Services**  
 Maryland General Assembly  
 2017 Session

**FISCAL AND POLICY NOTE**  
**First Reader**

Senate Bill 1146

(Senator Middleton)

Finance

**Renewable Energy Portfolio Standard - Study**

This bill requires the Maryland Clean Energy Center (MCEC) and the University of Maryland Energy Research Center (UMERC) to jointly conduct a study of the Renewable Energy Portfolio Standard (RPS) and related issues. State and local units of government must cooperate with the centers in the conduct of the study, including sharing of information, data, and resources, subject to appropriate legal protections of commercially sensitive and other information. The centers must submit an interim report by December 1, 2018, and a final report by December 1, 2019, to the Governor and specified committees of the General Assembly.

The bill takes effect June 1, 2017, and terminates June 30, 2020.

**Fiscal Summary**

**State Effect:** Absent the bill or another appropriation from the State, MCEC operations are likely to cease at the end of FY 2017 due to a lack of available funds. Therefore, to provide sufficient funding for the centers to jointly complete the study, which includes funding for MCEC to continue operations and for UMEREC's costs, general fund expenditures increase by *at least* \$0.8 million in FY 2018, \$0.8 million FY 2019, and \$0.4 million in FY 2020. This is the funding required, absent any other legislation, for MCEC to fund its operations and to provide funding for UMEREC's costs so that the centers can complete the required study. State agencies are likely able to cooperate with the centers with existing resources; to the extent this is not the case, general and/or special fund expenditures increase. Separate Administration bills are also under consideration, which would affect this estimate, as discussed below. No effect in FY 2017.

(\$ in millions)	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	0.8	0.8	0.4	0	0
Net Effect	(\$0.8)	(\$0.8)	(\$0.4)	\$0.0	\$0.0

*Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease*

**Local Effect:** The bill does not materially affect local government finances or operations.

**Small Business Effect:** None.

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## **Analysis**

**Bill Summary:** The study conducted by the centers must be a comprehensive review of the history, implementation, and effectiveness of RPS in relation to the energy policies of the State, including:

- the availability of clean energy at reasonable and affordable rates;
- the economic and environmental impacts of the deployment of renewable energy sources in the State and in surrounding areas;
- the effectiveness of RPS in encouraging development and deployment of renewable energy sources;
- the impact of alterations that have been made in the components of each tier of RPS, the implementation of different specific goals for particular sources, and the effect of different percentages and alternative compliance payment (ACP) scales for energy in the tiers;
- an assessment of alternative models of regulation and market-based tools that may be available or advisable to promote the goals of RPS and the energy policies of the State; and
- the potential to alter or otherwise evolve RPS in order to increase and maintain its effectiveness in promoting the State's energy policies.

Particular subjects to be addressed in the study, among others, include (1) whether RPS is able to meet current and potential future targets without the inclusion of certain technologies; (2) whether the State is likely to meet its existing RPS goals and, if the State were to increase those goals, whether electricity suppliers should expect to find an adequate supply to meet the additional demand for renewable energy credits (RECs); and (3) whether and how energy storage technology and other flexibility resources should be addressed in support of State energy policy.

## **Current Law/Background:**

### *Renewable Energy Portfolio Standard*

Maryland's RPS was enacted in 2004 to facilitate a gradual transition to renewable sources of energy. It operates on a two-tiered system with carve-outs for solar energy and offshore wind energy and corresponding RECs for each tier. Electric companies (utilities) and other electricity suppliers must submit RECs equal to a percentage specified in statute each year or else pay an ACP equivalent to their shortfall. Over the past few years, the requirements have been met almost entirely through RECs, with negligible reliance on ACPs. The Maryland Energy Administration (MEA) must use ACPs to support new renewable energy sources.

Chapters 1 and 2 of 2017 increased the Tier 1 percentage requirements from 20% by 2022 to 25% by 2020. The solar carve-out, which is included in Tier 1, was likewise increased from 2.0% by 2022 to 2.5% by 2020. The Tier 2 requirement remains constant at 2.5% each year until ending after 2018. In 2017, the requirements are 13.1% for Tier 1 renewable sources, including at least 1.15% from solar energy, and 2.5% from Tier 2 renewable sources.

Tier 1 sources include wind (onshore and offshore); qualifying biomass; methane from anaerobic decomposition of organic materials in a landfill or wastewater treatment plant; geothermal; ocean, including energy from waves, tides, currents, and thermal differences; a fuel cell that produces electricity from specified Tier 1 renewable sources; a small hydroelectric plant of less than 30 megawatts; poultry litter-to-energy; waste-to-energy; refuse-derived fuel; and thermal energy from a thermal biomass system. Tier 1 solar sources include photovoltaic cells and residential solar water-heating systems commissioned in fiscal 2012 or later. Following the transfer of several sources to Tier 1, Tier 2 includes only large hydroelectric power plants.

### *University of Maryland Energy Research Center*

UMERC is an interdisciplinary initiative in the A. James Clark School of Engineering, which also involves faculty from the College of Computer, Mathematical, and Physical Sciences; the College of Agriculture and Natural Resources; and the School of Public Policy. It is one of several research centers at the University of Maryland, College Park (UMCP) campus. The mission of UMER is to (1) develop energy-efficient and environmentally sustainable technologies and practices; (2) educate the public about energy and environmental technologies; (3) inform the policy debate on issues of sustainable energy and the environment; and (4) improve energy security by developing indigenous and sustainable energy resources and promoting policies with a positive environmental impact. UMER has approximately 100 affiliated faculty.

## *Administration Legislation to Create the Maryland Energy Innovation Institute*

Senate Bill 313/House Bill 410 are Administration bills that, as introduced, would establish the Maryland Energy Innovation Institute in the A. James Clark School of Engineering at the UMCP campus. The general intent of the bills is to integrate MCEC and the energy research centers at UMCP (and more broadly, at other institutions of higher education across the State) under the general structure of the institute.

The proposed institute is intended to provide centralized services to the research centers, including assistance in seeking additional research funding and providing a dedicated energy policy resource. These centralized services would be funded through the Maryland Energy Innovation Fund (MEIF) created by the bills and also from assessments on participating research centers. The bills require \$1.5 million to be transferred annually to MEIF from the Strategic Energy Investment Fund (SEIF) from fiscal 2018 through 2022. The Governor's proposed fiscal 2018 budget includes a \$1.5 million transfer from SEIF to MEIF; however, the transfer of those special funds is *not* contingent upon the enactment of the Administration's bills.

Chapter 577 of 2016 established a task force to review a variety of issues related to MCEC. The task force did not formally take a position on the Administration bills, but task force members unanimously indicated support for the general concept.

### *Maryland Clean Energy Center Funding Sustainability*

MCEC was established as a nonbudgeted entity. Chapter 137 did not establish a funding mechanism for MCEC for either start-up costs or ongoing activities. MCEC has the ability to charge fees for the programs that it offers and receives revenue or could potentially receive revenue from several of its programs.

Due to limited activity and the new nature of some of these programs, revenue from these sources has been limited. MCEC has operated with an operating loss from fiscal 2013 through 2016 and, in three of those four years, had operating revenue of less than \$300,000.

The fiscal 2017 budget bill restricted \$3.3 million of funding from MEA's budget to be used as a grant to MCEC for operating support and assistance. This grant would have provided funding for both administrative activities and additional programmatic activities. These funds are not being released by the Governor. However, MEA has agreed to provide a smaller grant (totaling \$485,000) to MCEC to allow the entity to continue operations through the fiscal year, while future funding options are under discussion.

**State Expenditures:** Absent another appropriation from the State, MCEC operations are likely to cease at the end of fiscal 2017 due to a lack of available funds. As noted above,

MCEC is receiving \$485,000 in operating support from MEA in fiscal 2017. This provides the minimum amount of funding necessary for MCEC operations to continue through fiscal 2017.

Therefore, to provide sufficient funding for the centers to jointly complete the study, which includes funding for MCEC to continue operations and for UMERC's costs, general fund expenditures increase by *at least* \$0.8 million in fiscal 2018, *at least* \$0.8 million in fiscal 2019, and *at least* \$0.4 million in fiscal 2020. This is the funding required, absent any other legislation, for MCEC to fund its operations and to provide funding for UMERC's costs so that the centers can complete the study required by the bill.

This estimate assumes that at least \$500,000 in operating support is provided annually to MCEC in fiscal 2018 and 2019, and a prorated amount in fiscal 2020. It also assumes that \$300,000 is provided to UMERC in fiscal 2018 and in fiscal 2019, and \$100,000 is provided in fiscal 2020 to pay for UMERC's costs associated with the study. This estimate also assumes that there is no effect in fiscal 2017, despite the bill's June 1, 2017 effective date.

State agencies are likely able to cooperate with the centers with existing resources. To the extent this is not the case, general and/or special fund expenditures for State agencies increase. For example, the Power Plant Research Program at the Department of Natural Resources indicates that its special fund expenditures increase if the program were required to update recently published work, conduct new modeling/assessments, and draft and/or review sections of the report.

**Additional Comments:** As discussed above, if Senate Bill 313/House Bill 410 were to pass in roughly their current form, they would provide \$1.5 million annually to a new special fund, MEIF, from fiscal 2018 through 2022. While those bills also include a study and related reporting requirement, a portion of the funding would also be available for authorized uses by MCEC and the Maryland Energy Innovation Institute (which would include UMERC).

If MCEC receives sufficient funding to continue its operations through the passage of Senate Bill 313/House Bill 410, the centers are capable of conducting the joint study without the need for additional operating support for MCEC. Other costs associated with the study would remain and need to be funded for the centers to complete the study. If these costs were to be funded through MEIF, overall State expenditures would remain unchanged, but a substantial portion of available MEIF funds would be unavailable for other purposes.

The Department of Legislative Services notes that the bill is one of three bills that require studies by MCEC. If all three studies must be completed concurrently, the combined costs

may limit MCEC from engaging in revenue-generating activities with any funding received if Senate Bill 313/House Bill 410 were to pass.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** HB 1414 (Delegate Jameson) - Economic Matters.

**Information Source(s):** Maryland Clean Energy Center; University System of Maryland; Department of Natural Resources; Public Service Commission; Maryland Municipal League; Department of Legislative Services

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