

Department of Legislative Services
Maryland General Assembly
2019 Session

FISCAL AND POLICY NOTE
First Reader

House Bill 125
Economic Matters

Solar Photovoltaic Recycling

This bill establishes the Solar Photovoltaic Recycling Fund in the Maryland Department of the Environment (MDE) to provide funding for technologies and processes that assist with the recycling of solar photovoltaic (PV) systems. The bill establishes two primary revenue sources for the fund: (1) a fee of 10% of the cost of installation for new solar PV systems; and (2) a 20% charge on the first sale price of each renewable energy credit (REC) that is sold. Both the Comptroller and MDE are authorized to pay for administrative expenses from these revenues. The bill also prohibits a local government from imposing any tax, fee, or other charge on the installation of a solar electric generating facility.

Fiscal Summary

State Effect: Special fund revenues and expenditures increase by \$31.0 million in FY 2020 and by at least \$41.7 million annually thereafter. Separately, State expenditures (all funds) increase, potentially significantly, beginning in FY 2020 for related costs.

(\$ in millions)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
SF Revenue	\$31.0	\$41.7	\$42.4	\$43.1	\$44.0
SF Expenditure	\$31.0	\$41.7	\$42.4	\$43.1	\$44.0
GF/SF/FF Exp.	-	-	-	-	-
Net Effect	(-)	(-)	(-)	(-)	(-)

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

Local Effect: Local government revenues decrease beginning in FY 2020 to the extent that they are prohibited from assessing charges or fees that they otherwise would have. Local government expenditures increase beginning in FY 2020 for any locally owned solar PV projects that must pay the installation fee and higher electricity costs.

Small Business Effect: Meaningful.

Analysis

Bill Summary:

The Solar Photovoltaic Recycling Fund

The Solar Photovoltaic Recycling Fund is established in MDE to provide funding for technologies and processes that assist with the recycling of solar PV systems and to pay for MDE's administrative costs. Expenditures from the fund may be made only in accordance with the State budget. Money in the fund for the recycling of solar PV technologies is supplemental to and not intended to take the place of funding that would otherwise be appropriated for solar PV recycling.

The bill establishes two primary revenue sources for the fund: (1) a fee of 10% of the cost of installation for new solar PV systems; and (2) a 20% charge on the first sale price of each REC that is sold. Any interest earnings are credited to the fund.

Solar Installation Fee

Beginning October 1, 2019, a person installing a solar electric generating facility in the State must pay a solar PV recycling fee equal to 10% of the cost of the installation. The fees must be paid to the Comptroller, as specified, and timely payments allow a credit of 0.6% of the gross amount of the fees. If the fee is separately stated in the retail sale of a solar facility, it is not taxable.

The Comptroller must administer the fee and may adopt any necessary or appropriate regulations. At the end of each quarter, the Comptroller must forward all solar PV recycling fees, less the costs of administration, to the Solar Photovoltaic Recycling Fund.

REC Sale Charge

For each REC that is sold, 20% of the first sale price must be deposited into the Solar Photovoltaic Recycling Fund. The bill does not differentiate between in-state and out-of-state generated RECs or purchases.

Prohibition on Local Government Taxes, Fees, or Other Charges

A county, municipality, or an agency of a county or municipality may not impose any tax, fee, or other charge on the installation of a solar electric generating facility.

Current Law/Background: The bill's installation fees and REC sale charges are not part of existing costs for solar installations or REC transactions. Large solar projects typically

must provide for decommissioning costs as part of the project approval process. Small solar PV systems have no such requirement.

Maryland facilities generated about 4.3 million RECs in 2017, which are generally used for compliance with state renewable energy portfolio standards (RPS). Maryland-generated RECs are used in several other states; likewise, Maryland electricity suppliers use RECs from other states to meet Maryland's RPS. A REC represents the "generation attributes" of one megawatt-hour of renewable energy.

State Revenues: Special fund revenues increase by \$31.0 million in fiscal 2020 and by \$41.7 million to \$44.0 million annually from fiscal 2021 through 2024, as shown in **Exhibit 1**. Special fund revenues continue to increase by similar amounts thereafter. Assumptions for each revenue source are discussed separately below. Actual revenues may vary significantly from this estimate.

Exhibit 1
Solar Photovoltaic Recycling Fund Revenue, by Source
Fiscal 2020-2024
(\$ in Millions)

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Solar Installation Fee	\$26.1	\$34.8	\$34.8	\$34.8	\$34.8
REC Sale Charge	4.9	6.9	7.6	8.3	9.2
Total	\$31.0	\$41.7	\$42.4	\$43.1	\$44.0

REC: Renewable Energy Credit

Source: Department of Legislative Services

Solar Installation Fee

According to the Solar Energy Industries Association (SEIA), about 1,000 megawatts of solar PV capacity is expected to be built in the State over the next five years. A recent SEIA report also estimates a blended average of installed costs for solar PV at about \$1.75 per watt in 2018, an amount that has been largely stable since 2016 and follows several years of significant decreases.

Using the 2018 national blended average cost and evenly distributing projected Maryland capacity additions, adjusting for the 0.6% authorized credit, and accounting for the bill's

October 1, 2019 effective date, special fund revenues increase by \$26.1 million in fiscal 2020 and by about \$34.8 million annually thereafter from the solar installation fees. Actual revenues in any year may vary significantly from this estimate if installation costs or capacity additions change.

REC Sale Charge

Applying the 20% charge to an estimated weighted-average REC price of \$10, accounting for in-state growth in renewable energy production and the bill's October 1, 2019 effective date, special fund revenues increase by \$4.9 million in fiscal 2020, by \$6.9 million to \$9.2 million annually from fiscal 2021 through 2024, and by similar amounts thereafter.

This assumes that the 20% charge on the first sale of RECs can only be applied to an estimated 3.0 to 4.6 million RECs generated in-state each year, which is a fraction of the overall number of RECs used for compliance. If the charge is instead applied to all RECs used for compliance in a given year, special fund revenues increase by about three to four times the amounts discussed above. This estimate does not include any revenue from Maryland's former Tier 2 sources. Tier 2 terminated at the end of 2018.

Actual revenues in any year may vary significantly from this estimate if REC prices or quantities change from these assumptions.

State Expenditures:

Comptroller Administrative Costs

Special fund expenditures for the Comptroller increase by \$371,461 in fiscal 2020, which reflects the bill's October 1, 2019 effective date. This estimate reflects the cost of hiring one revenue field auditor and three revenue administrators to administer and collect the solar installation fee from thousands of installations each year. It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses. It also includes a one-time \$150,000 programming expense.

Positions	4
Salaries and Fringe Benefits	\$200,026
One-time Programming Expense	150,000
Other Operating Expenses	<u>21,435</u>
Total FY 2020 Comptroller Expenditures	\$371,461

Future year expenditures reflect full salaries with annual increases and employee turnover and ongoing operating expenses.

MDE Administrative Costs and Funding for Solar Recycling

MDE advises that one staff is sufficient to administer the program. The Department of Legislative Services disagrees. The program is responsible for tens of millions of dollars annually, even with conservative assumptions.

Special fund *administrative* expenditures for MDE increase by \$139,969 in fiscal 2020, which reflects the bill's October 1, 2019 effective date. This estimate reflects the cost of hiring two staff to administer the distribution of funds for technologies and processes that assist with the recycling of solar PV systems. It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses. The remaining available funds, which are net of all administrative costs, are assumed to be distributed for authorized solar PV recycling initiatives. Combined, *total* MDE expenditures are \$30.7 million in fiscal 2020.

Positions	2
Salaries and Fringe Benefits	\$116,951
Other Operating Expenses	23,018
Distributions for Solar PV Recycling Initiatives	<u>30,530,987</u>
Total FY 2020 MDE Expenditures	\$30,670,956

Future year *administrative* expenditures of approximately \$174,000 to \$190,000 annually reflect full salaries with annual increases and employee turnover and ongoing operating expenses.

Future year *total* MDE expenditures of \$41.4 million to \$43.7 million annually reflect ongoing administrative costs and continuing distributions for solar PV recycling initiatives.

Other Costs

State expenditures (all funds) increase, potentially significantly, beginning in fiscal 2020 for any State-owned solar PV projects that must pay the installation fee and for higher electricity costs due to increased solar PV and REC prices. The Department of General Services advises that it has in the past, and likely will in the future, install solar PV on its buildings. While the department does not have any current, definite plans for particular projects, that may change at any time.

The State uses about 1.5 million megawatt-hours of electricity per year, out of a statewide total of about 60 million megawatt-hours. While it is unknown how much the bill will ultimately raise electricity prices, for every \$60 million increase in total electric costs in the State (\$1 per megawatt-hour), State expenditures for electricity increase by about \$1.5 million.

Local Fiscal Effect: Local government revenues decrease beginning in fiscal 2020 to the extent that they are prohibited from assessing taxes, fees, or charges that they otherwise would have. Local government expenditures increase beginning in fiscal 2020 for any locally owned solar PV projects that must pay the installation fee and higher electricity costs.

Small Business Effect: Small solar installation businesses must pay the installation fee, which raises their costs and may reduce demand for their services. Small businesses are also affected by higher electricity costs.

Additional Information

Prior Introductions: HB 1242 of 2018, a substantively identical bill, received an unfavorable report from the House Economic Matters Committee.

Cross File: None.

Information Source(s): Comptroller's Office; Maryland Department of the Environment; Department of General Services; Office of People's Counsel; Maryland Municipal League; City of College Park; Solar Energy Industries Association; Department of Legislative Services

Fiscal Note History: First Reader - January 28, 2019
mm/lgc

Analysis by: Stephen M. Ross

Direct Inquiries to:
(410) 946-5510
(301) 970-5510