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Maryland General Assembly  
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FISCAL AND POLICY NOTE

Senate Bill 974  
Finance

(Senator Pipkin)

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**Renewable Energy Portfolio Standard - Repeal of Solar Energy Requirement**

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This bill repeals the Tier 1 Solar requirement from the State's Renewable Energy Portfolio Standard (RPS) and associated alternative compliance payments (ACPs) for failure to meet the annual Tier 1 Solar requirement.

The bill takes effect January 1, 2014.

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**Fiscal Summary**

**State Effect:** State expenditures for electricity decrease beginning in FY 2014; however, the amount cannot be reliably estimated at this time. The decrease in special fund revenues (and corresponding expenditures) for the Strategic Energy Investment Fund (SEIF) cannot be reliably estimated at this time, but could exceed \$900,000 annually.

**Local Effect:** Local government expenditures for electricity decrease beginning in FY 2014; however, the amount cannot be reliably estimated at this time.

**Small Business Effect:** Small businesses in the solar industry are negatively impacted to the extent that solar installations decrease under the bill. Small business expenditures for electricity decrease beginning in FY 2014; however, the amount cannot be reliably estimated at this time.

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## Analysis

### Current Law:

#### *Maryland's RPS*

Maryland's RPS requires that renewable sources generate specified percentages of the State's electricity supply each year, increasing to 20%, including 2% from solar sources, by 2022. Electric companies and other electricity suppliers must submit renewable energy credits (RECs) equal to the required percentage each year or pay an ACP equivalent to their shortfall. For more information on Maryland's RPS, see the **Appendix – Maryland's Renewable Energy Portfolio Standard**.

As part of the overall requirement, the amount of energy in the State that must be supplied from Tier 1 Solar sources grows between 2013 and 2021 as shown in **Exhibit 1**. In 2022 and beyond, the solar portion of RPS remains at 2%.

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### Exhibit 1 Solar RPS Requirement and ACP

<u>Calendar Year</u>	<u>Tier 1 Solar Requirement</u>	<u>ACP Per Megawatt-Hour</u>
2013	0.25%	\$400
2014	0.35%	400
2015	0.50%	350
2016	0.70%	350
2017	0.95%	200
2018	1.40%	200
2019	1.75%	150
2020	2.00%	150
2021	2.00%	100

Source: Department of Legislative Services

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#### *Strategic Energy Investment Fund*

Chapters 127 and 128 of 2008 (SB 268/HB 368) created the Maryland Strategic Energy Investment Program, and the implementing SEIF, to decrease energy demand and increase energy supply to promote affordable, reliable, and clean energy. The fund is administered by the Maryland Energy Administration (MEA). Currently, the fund's

primary source of revenue is proceeds from the sale of carbon dioxide (CO<sub>2</sub>) allowances under the Regional Greenhouse Gas Initiative. Money received by SEIF from the CO<sub>2</sub> auctions is required by statute to be allocated across various energy programs, including those that support energy efficiency and conservation, electricity assistance for low-income individuals, and renewable and clean energy. The fund may also receive money as appropriated in the State budget and from ACPs paid under the State RPS, among others. Revenues from ACPs are accounted for separately and are used to make loans and grants to support the creation of new Tier 1 or Tier 1 Solar renewable sources (depending on the ACP source) in the State.

**Background:** Chapter 120 of 2007 (HB 1016) modified Maryland's RPS to include a solar carve-out, requiring that at least 0.005% of electricity in 2008 be from solar generation, increasing to at least 2.0% in 2022. Chapter 494 of 2010 (SB 277) increased the solar requirement for each year between 2011 and 2016. Chapter 583 of 2012 (SB 791) again increased the solar requirement for each year between 2013 and 2021.

The solar carve-out works to encourage the development of solar generation capacity through the use of ACPs and solar renewable energy credits (SRECs). Owners of solar facilities sell credits associated with their energy production to offset a portion of the installation costs. The price of an SREC is effectively capped by the applicable ACP – what a supplier pays for a solar shortfall. MEA advises that the State currently has approximately 120 megawatts of installed solar capacity.

**State Fiscal Effect:** The fiscal impact of the bill depends on future SREC prices, which cannot be reliably predicted and are subject to frequent fluctuation. SREC prices averaged approximately 80% of ACP from 2008 through 2011. For example, the average SREC price in 2010 was \$328 according to PSC, which was 82% of that year's ACP. However, the price of an SREC has fallen to \$120 as of March 2013, which is 30% of the \$400 ACP.

In comparison, *nonsolar* RECs are approximately \$4 as of March 2013. Due to this large difference in price, regardless of the recent decline in SREC prices, substituting RECs for SRECs is likely to significantly reduce the compliance cost of the RPS in any year; however, the effect on State expenditures for electricity cannot be reliably estimated at this time.

The 2014 compliance year requires approximately 220,000 SRECs. *For illustrative purposes only*, assuming an SREC price of \$120 and a REC price of \$4, the bill reduces the RPS compliance cost by \$25.5 million in 2014 – a reduction which would be applied across all residential, commercial, and industrial customers, including both State and local governments.

The decrease in SEIF revenue from foregone ACPs paid by electricity suppliers for compliance with the Tier 1 Solar requirement also cannot be reliably estimated at this time. *For illustrative purposes only*, assuming 220,000 SRECs are required for compliance in fiscal 2014, and 1% of the SREC requirement in fiscal 2014 is met with ACPs, the bill decreases SEIF revenue by \$900,000. Expenditures from SEIF for loans and grants to support the creation of new solar energy sources in the State, as required under current law, decrease correspondingly.

**Small Business Effect:** MEA advises that the solar carve-out has been instrumental in establishing the solar industry in Maryland; an increase from less than 300 kilowatts of solar capacity in 2006 to more than 120 megawatts as of March 2013 would not have happened absent the solar carve-out and the SREC revenue that it generates. MEA indicates that more than 1,000 megawatts of solar capacity is required to meet the full 2% solar carve-out repealed by the bill. To that extent, the bill negatively impacts all small businesses in the solar industry by eliminating a significant source of project revenue – the SREC.

Small business expenditures for electricity decrease beginning in fiscal 2014, but the amount cannot be reliably estimated at this time.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** None.

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

**Fiscal Note History:** First Reader - March 15, 2013  
mlm/lgc

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## Appendix – Maryland’s Renewable Energy Portfolio Standard

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Maryland’s Renewable Energy Portfolio Standard (RPS) was enacted in 2004 to facilitate a gradual transition to renewable sources of energy. It requires that renewable sources generate specified percentages of the State’s electricity supply each year, increasing to 20%, including 2% from solar sources, by 2022. Electric companies (utilities) and other electricity suppliers must submit renewable energy credits (RECs) equal to the percentage specified in statute each year, or pay an alternative compliance payment (ACP) equivalent to their shortfall. Any ACPs are used by the Maryland Energy Administration to support new renewable energy sources.

A REC is a tradable commodity equal to one megawatt-hour of electricity generated or obtained from a renewable energy generation resource. In other words, a REC represents the “generation attributes” of renewable energy – the lack of carbon emissions, its renewable nature, etc. A REC has a three-year life during which it may be transferred, sold, or redeemed. RECs are classified as Tier 1, Tier 1 Solar, or Tier 2, depending on the energy source. REC generators and electricity suppliers are allowed to trade RECs using a Public Service Commission-approved system known as the Generation Attributes Tracking System, which is a trading platform designed and operated by PJM Environmental Information Services, Inc, which tracks the ownership and trading of the RECs.

Examples of Tier 1 sources include wind; 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 a Tier 1 renewable source; a small hydroelectric plant of less than 30 megawatts; poultry litter-to-energy; and waste-to-energy. Tier 1 Solar sources include photovoltaic cells and residential solar water heating systems commissioned in fiscal 2012 or later.

### *RPS Compliance*

In 2012, the standard required that 9.0% of retail electric sales come from renewable sources, including 0.1% from solar. In general, electricity suppliers have been able to meet all of their Tier 1 nonsolar and Tier 2 REC requirements, and therefore the predominant source of ACPs is from the Tier 1 solar requirement. For the 2010 compliance year (the most recent year for which data is available), electricity suppliers retired 3.6 million RECs. According to the compliance reports filed with the Public Service Commission, the cost of RECs retired totaled \$7.6 million for the 2010 compliance year. The total cost of compliance with the 2010 RPS was slightly less than \$8 million, with ACPs accounting for \$217,620 of this total.