

Renewable Portfolio Standard Environmental And Economic Impacts Report

Pursuant to
SB 869/Ch. 487(9), 2004 and HB 1308/Ch.
488(9), 2004

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William Donald Schaefer Tower
6 St. Paul Street
Baltimore, Maryland 21202-6806
www.psc.maryland.gov

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Executive Summary

The Renewable Portfolio Standard (“RPS”) was established in 2004 by Senate Bill 869/ House Bill 1308. The RPS is intended to support a market for renewable energy generation and reduce greenhouse gas emissions from the State’s electric grid. The State’s RPS Program does this by recognizing the environmental and consumer benefits associated with renewable energy. The RPS Program requires electricity suppliers to supply a prescribed minimum portion of their retail electricity sales with various renewable energy resources which have been classified within the RPS statute as Tier 1 and Tier 2 renewable resources. The program is implemented through the creation, sale, and transfer of Renewable Energy Credits (“RECs”). The development of renewable energy resources is further promoted by requiring electricity suppliers to provide an Alternative Compliance Payment (“ACP”) for failing to acquire sufficient RECs to satisfy the RPS as set forth in PUA §7-703. Compliance fees are deposited into the Maryland Strategic Energy Investment Fund (“SEIF”) as dedicated funds to provide for loans and grants that spur the creation of new Tier 1 renewable energy resources in the State that are owned by or directly benefit low-to moderate-income communities or overburdened or underserved communities.

This report was required by the original RPS bill to be filed in 2017. The Commission has published an annual report that describes much of the information required by the 2017 report.¹ To meet the intent of the original report, the Commission submits this summary.

Statutory History

The RPS statute has been updated numerous times throughout its history. A summary of the changes is included in the table below.

Year	Change
2007	Established solar carve-out.
2008	Increased the Tier 1 requirements. Changed eligibility of certain resources.
2010	Increased solar carve-out.
2011	Changed eligibility of certain resources.
2012	Accelerated solar carveout. Changed eligibility of certain resources.
2013	Established offshore wind carve-out.
2017	Increased the Tier 1 requirements.
2019	Increased the Tier 1 requirements. Established Round 2 OREC proceedings.
2021	Established geothermal carve-out. Changed eligibility of certain resources.
2022	Changed the responsible parties for paying for ORECs.
2024	Established Revised Round 2 OREC process. Made several other eligibility and program changes.
2025	Changed eligibility of certain resources.

¹ <https://psc.maryland.gov/about/reports/>.

Environmental and Economic Impacts

Based on the information from the Commission’s annual RPS reports, the tables below summarize the environmental and economic impacts of the program from 2008 to 2024. The program has cost approximately \$3 billion since 2008. It has produced approximately 87 million metric tons of avoided greenhouse gas emissions.

		Tier 1 REC Costs	Solar REC Costs	Geothermal REC Costs	LMI Geothermal REC Costs	Tier 2 REC Costs	ACPs	Total Costs
2008	Costs	\$1,110,551	\$78,418	\$0	\$0	\$834,394	\$1,235,934	\$3,259,297
2009		\$1,320,979	\$1,125,598	\$0	\$0	\$605,724	\$1,148,265	\$4,200,566
2010		\$1,925,055	\$5,076,720	\$0	\$0	\$618,310	\$217,620	\$7,837,705
2011		\$6,241,710	\$7,769,279	\$0	\$0	\$645,332	\$98,520	\$14,754,841
2012		\$12,453,493	\$11,346,967	\$0	\$0	\$664,220	\$5,450	\$24,470,130
2013		\$32,664,171	\$21,417,989	\$0	\$0	\$2,751,643	\$2,440	\$56,836,243
2014		\$70,630,620	\$29,372,737	\$0	\$0	\$3,987,557	\$65,965	\$104,056,879
2015		\$85,054,001	\$39,055,714	\$0	\$0	\$2,617,917	\$24,515	\$126,752,147
2016		\$88,200,121	\$45,556,987	\$0	\$0	\$1,441,416	\$33,933	\$135,232,457
2017		\$50,045,621	\$21,275,664	\$0	\$0	\$687,785	\$55,032	\$72,064,102
2018		\$56,406,247	\$27,351,388	\$0	\$0	\$1,049,293	\$67,796	\$84,874,724
2019		\$79,320,505	\$55,166,116	\$0	\$0	\$58,899	\$7,730,223	\$142,275,743
2020		\$99,836,127	\$122,943,987	\$0	\$0	\$386,590	\$52,240	\$223,218,944
2021		\$187,346,301	\$144,411,601	\$0	\$0	\$959,225	\$77,129,013	\$409,846,140
2022		\$246,480,883	\$101,384,663	\$0	\$0	\$4,382,570	\$86,584,883	\$438,832,999
2023		\$124,932,208	\$109,553,864	\$104,295	\$0	\$9,254,616	\$320,363,538	\$564,208,521
2024		\$90,057,757	\$150,381,920	\$2,176,739	\$24,375	\$11,973,971	\$365,034,107	\$619,648,869
Total		\$1,234,026,350	\$893,269,612	\$2,281,034	\$24,375	\$42,919,462	\$859,849,474	\$3,032,370,307

		Tier 1 RECs Retired	Solar RECs Retired	Geothermal RECs Retired	LMI Geothermal RECs Retired	Tier 2 RECs Retired	Total RECs Retired		Estimated GHG Reductions
2008	RECs Retired	1,184,174	227	0	0	1,500,414	2,684,815	Estimated GHG Reductions	1,641,275
2009		1,280,946	3,260	0	0	1,509,270	2,793,476		1,707,701
2010		1,931,367	15,451	0	0	1,622,751	3,569,569		2,182,141
2011		3,083,141	27,972	0	0	1,565,945	4,677,058		2,859,168
2012		3,902,221	56,194	0	0	1,522,297	5,480,712		3,350,456
2013		4,871,586	134,124	0	0	1,526,789	6,532,499		3,993,432
2014		6,062,135	203,884	0	0	1,521,022	7,787,041		4,760,356
2015		6,134,653	299,525	0	0	1,531,279	7,965,457		4,869,425
2016		7,216,439	411,787	0	0	1,501,587	9,129,813		5,581,217
2017		7,006,113	557,224	0	0	1,448,567	9,011,904		5,509,137
2018		8,627,737	857,232	0	0	1,599,819	11,084,788		6,776,327
2019		10,210,275	1,167,329	0	0	55,879	11,433,483		6,989,491
2020		12,117,585	1,859,976	0	0	366,260	14,343,821		8,768,632
2021		13,045,432	1,989,505	0	0	148,702	15,183,639		9,282,028
2022		13,849,611	1,753,987	0	0	590,330	16,193,928		9,899,635
2023		5,075,872	1,933,280	1,032	0	878,304	7,888,488		4,822,373
2024		3,324,606	2,568,159	22,874	276	1,073,328	6,989,243		4,272,648
Total		108,923,893	13,839,116	23,906	276	19,962,543	142,749,734		87,265,443

Recommendations

While the Commission does not have any specific recommendations at this time, the agency is happy to be a resource for the General Assembly if it decides to make any changes to the RPS in the future. There are numerous states with RPS programs or similar programs such as clean energy standards or alternative market-based programs. Depending on the targets set and the resources included in the program, a state can achieve different goals. After operating the program for over 20 years, it may be worthwhile to assess what resources and programs can best assist the state in reaching the State's ambitious energy and climate goals while keeping energy affordable.

Conclusion

The Commission appreciates the opportunity to provide this information to the General Assembly. The agency will continue to implement and monitor the program and is available to answer questions or assist in the development of future legislation as needed.