

Department of Legislative Services
 Maryland General Assembly
 2004 Session

FISCAL AND POLICY NOTE
 Revised

Senate Bill 869

(Senator Middleton, *et al.*)

Finance

Economic Matters

Electricity Regulation - Renewable Energy Portfolio Standard and Credit
 Trading - Maryland Renewable Energy Fund

This bill requires the Public Service Commission (PSC) to establish a Renewable Energy Portfolio Standard that applies to retail electricity sales in the State beginning in 2006. It also directs PSC to establish a market-based renewable energy credit system and a Maryland Renewable Energy Fund. The bill repeals provisions of the State's electricity restructuring law on maintenance of effort in procuring electricity from renewable sources, effective January 1, 2006.

Fiscal Summary

State Effect: Special fund expenditures would increase by \$108,600 in FY 2005 for additional PSC staff to implement the portfolio standard program. Maryland Energy Administration (MEA) responsibilities could be handled with existing resources. Special fund revenues into the Renewable Energy Fund cannot be reliably estimated.

(in dollars)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
SF Revenue	\$108,600	\$108,400	\$114,700	\$121,600	\$128,900
SF Expenditure	108,600	108,400	114,700	121,600	128,900
Net Effect	\$0	\$0	\$0	\$0	\$0

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

Local Effect: Potential increase in expenditures for any local jurisdiction that becomes a retail electricity supplier. Potential increase in local revenues to the extent that a local jurisdiction becomes a generator of eligible energy.

Small Business Effect: Potential minimal.

Analysis

Bill Summary: The bill requires the implementation of a renewable energy portfolio standard, a Maryland Renewable Energy Fund, and a renewable energy credit trading system. The bill repeals requirements that an electric company must continue to purchase electricity under any contract in effect on January 1, 1999 with a renewable resource facility located in the State and that an investor-owned electric company continue to provide at least the same percentage of electricity from available renewable resources that was provided in 1998.

Renewable Energy Portfolio Standard

The bill requires any electricity supplier to include a specified amount of renewable energy as part of its portfolio of generating fuels for retail sales. The requirement does not apply to retail electricity sales to: (1) residential customers under a specified rate freeze or cap; (2) industrial process load exceeding 300 million kilowatt-hours for a single customer; or (3) a customer served by an electric cooperative under an agreement that existed on October 1, 2004. The standard is as follows:

<u>Year</u>	<u>Tier 1 Energy Resources</u>	<u>Tier 2 Energy Resources</u>	<u>Total</u>
2006	1%	2.5%	3.5%
2007	1%	2.5%	3.5%
2008	2%	2.5%	4.5%
2009	2%	2.5%	4.5%
2010	3%	2.5%	5.5%
2011	3%	2.5%	5.5%
2012	4%	2.5%	6.5%
2013	4%	2.5%	6.5%
2014	5%	2.5%	7.5%
2015	5%	2.5%	7.5%
2016	6%	2.5%	8.5%
2017	6%	2.5%	8.5%
2018	7%	2.5%	9.5%
2019 and later	7.5%	0%	7.5%

Tier 1 renewable energy sources include solar, wind, qualifying biomass, methane from the anaerobic decomposition of organic materials in a landfill or wastewater treatment plant, geothermal, ocean (including energy from waves, tides, currents, and thermal differences), and fuel cells powered by other Tier 1 sources. Energy is also eligible for inclusion in meeting the standard through 2018 if it is generated from a Tier 2 renewable source (1) at a facility that existed on January 1, 2004 for hydroelectric and waste-to-energy Tier 2 sources; and (2) at a facility that incinerates processed poultry litter

regardless of when the generating system was placed in service. Tier 2 renewable sources include hydroelectric power, the incineration of poultry litter, and waste-to-energy. Tier 1 energy can be counted for compliance with the Tier 2 standard, but not vice versa. Each electricity supplier must submit an annual report to PSC demonstrating compliance with the portfolio standard for the preceding year.

An electricity supplier receives double credit toward meeting the standard for energy derived from solar energy. For credits created in 2004 and 2005, wind receives 20% extra credit; for 2006 through 2008, wind receives 10% extra credit. Landfill gas methane receives 10% extra credit from 2004 through 2008. Credit may be given only for electricity derived from the biomass fraction of biomass that is co-fired with other fuels.

An industrial customer that is not on standard offer service may independently acquire credits to meet the Tier 1 and Tier 2 standards applicable to that customer's load. The bill also defines a renewable on-site generator as a person that generates electricity on-site from a Tier 1 or Tier 2 renewable source. Industrial customers will receive credit for renewable on-site generation from a Tier 1 or Tier 2 source that displaces the purchase of electricity by the industrial customer from the power grid. The customer may sell credits that exceed the amount needed to satisfy the standard for the customer's load.

Tier 1 and Tier 2 renewable sources must comply with all applicable environmental and administrative requirements. In addition, Tier 2 sources that incinerate solid waste must be receiving waste from jurisdictions that comply with the Maryland Recycling Act percentages, or achieve comparable recycling rates if out-of-state. An electricity supplier may count the credits for a noncomplying facility during the first year of noncompliance, but must cure the defect or find another credit source in the second and later years.

Energy Fund and Compliance Fees

The bill establishes a Maryland Renewable Energy Fund as a special, nonlapsing fund to encourage the development of generating resources for renewable energy. If retail electricity contains fewer kilowatt-hours from Tier 1 and Tier 2 renewable sources than are required to comply with the standard for that year, the supplier must pay a compliance fee in the following fiscal year at:

- 2 cents per kilowatt-hour of Tier 1 renewable source shortfall into the fund, and 1.5 cents per kilowatt-hour of Tier 2 shortfall; or
- for Tier 1 industrial process load only:
 - \$0.008 for fiscal 2006 – 2008;
 - \$0.005 for fiscal 2009 – 2010;
 - \$0.004 for fiscal 2011 – 2012;
 - \$0.003 for fiscal 2013 – 2014;

- \$0.0025 for fiscal 2015 – 2016;
- \$0.002 for fiscal 2017 and later; and
- nothing for any shortfall from required Tier 2 renewable sources for industrial load.

An electricity supplier may recover costs incurred in complying with the portfolio standard. A compliance fee can be recovered if: (1) payment of the fee would be cheaper for ratepayers than the purchase of eligible energy resources; (2) there are not sufficient eligible energy resources available to comply with the standard; or (3) a wholesale electric supplier defaults or otherwise fails to deliver electricity under a contract approved by PSC. Any cost recovery must be disclosed to the customer on applicable bills and may not include the costs for certain power purchase contracts. PSC may waive compliance fees for industrial and commercial customers, if after consulting with the Department of Business and Economic Development, PSC determines the suppliers are not permitted to assess the waived compliance fees against other customers. Suppliers are also not liable for the waived fees.

MEA administers the fund under the oversight of PSC. The fund may only be used to make loans and grants to assist in the creation of new Tier 1 renewable energy sources in the State. The fund consists primarily of compliance fees and loan repayments. MEA is responsible for accepting and reviewing applications for projects. Any administrative costs, not to exceed 10% of the fund's balance, for MEA to administer the fund are paid out of the fund.

Energy Credit Trading System

The bill requires PSC to establish a market-based renewable electricity trading system in which electricity suppliers can trade renewable energy credits (RECs) with each other to fulfill the energy portfolio standard.

The trading system should operate in conjunction with the generation attribute trading system (GATS) being developed by PJM, and may be operated by PJM or another entity. The system must include a registry of REC transactions among suppliers and maintain records of those transactions. The registry must provide current information on the status of RECs to owners and the public through the Internet and other means.

An REC is defined as a credit equal to one megawatt-hour of retail electricity in the State that is derived from Tier 1 or Tier 2 renewable sources. A credit expires after three years and can be diminished or extinguished before the expiration date by the supplier that received the credit or a nonaffiliated entity of the electricity supplier. The bill allows a credit to be initially sold or transferred by the owner of the facility from which it is derived.

Technical Advisory Group

The bill requires PSC to appoint a technical advisory group to study and make recommendations on the impact of wind-power facilities on avian and bat populations, including standards to avoid or minimize impacts from the construction and operation of facilities. The technical advisory group must report to PSC on or before June 1, 2005. PSC must adopt regulations on wind-power facility siting on or before July 1, 2006, taking into consideration the recommendations of the technical advisory group. The regulations may not apply to facilities for which an application for a certificate of public convenience and necessity has been submitted before their effective date. A related provision strongly urges wind-power facilities that are already in operation or under construction to study the impacts of their facilities on avian and bat populations and report the results to PSC.

Study Provisions and Performance Audits

The bill requires that on or before December 1, 2009 PSC provide a status report to the Governor and the General Assembly which includes a review of the implementation of this Act, the availability and development of each type of Tier 1 renewable energy source, the impact on the price of Tier 1 renewable energy sources, the amount of compliance fees paid by electricity suppliers each year for noncompliance with Tier 1 and Tier 2 renewable energy sources, and the use of these compliance fees to support the creation of new Tier 1 renewable energy sources.

The bill also requires that PSC, on or before January 1, 2016, review the implementation of the bill, the environmental and economic impacts of the renewable portfolio standard including the effect of the bill on Tier 2 renewable sources. The bill requires PSC to (1) consult with the appropriate scientific, economic, and environmental resources, and with affected communities of interest; and (2) develop recommendations concerning the continuation of the renewable portfolio standard for Tier 1 and Tier 2 renewable sources, including the classification of sources in distinct tiers, any recommended alteration to the tier system, whether the tiers should be continued, and at what percentages the tiers should be continued. PSC is required to report its recommendations to the Governor and the General Assembly on or before January 1, 2017.

The bill requires the Office of Legislative Audits (OLA) to conduct a performance audit of the Maryland Renewable Energy Fund which includes, for each year since the creation of the fund, an assessment of (1) the amount of funds received in the fund; (2) the use of the funds; (3) the administrative expenses related to the fund for project review and oversight. OLA is required to report its findings to the Governor and the General Assembly on or before December 1, 2009. The cost of the audit must be included in the administrative expenses of the fund.

Poultry Litter

The bill acknowledges that significant investments have been made in the utilization of poultry litter in alternative ways including as poultry litter pelletizing plans, before enactment of the bill. The bill states that it is the intent of the General Assembly that the private sector continue to find creative and innovative ways in which to utilize poultry litter that are consistent with and responsive to the purposes of this Act. The bill encourages partnerships that lead to environmentally friendly and economically advantageous initiatives. The bill further encourages MEA, in cooperation with the Maryland Department of Agriculture, to enhance the State's system of monitoring the production and volume of poultry litter in order to realize, to the extent possible, a balance between existing demands and anticipated demands for poultry litter to help ensure (1) that existing projects have sufficient quantities of poultry litter to meet reasonably projected demands and to be economically viable; and (2) that future projects, such as power generation, have sufficient quantities of poultry litter in order to become economically viable.

Current Law: State law does not require electricity suppliers to use renewable energy. An electric company must continue to purchase electricity under any contract in effect on January 1, 1999 with a renewable resource facility located in the State and an investor-owned electric company must provide at least the same percentage of electricity from available renewable resources that was provided in 1998. The Maryland Clean Energy Incentive Act, which went into effect on July 1, 2000, provides State sales tax exemptions or income tax credits for buying certain high efficiency Energy Star appliances, electric and hybrid-electric vehicles, and certain renewable resource energy systems.

Chapters 3 and 4 of 1999 restructured Maryland's electricity industry with the stated intent of establishing customer choice of electricity supply and supply services and creating competitive retail electricity supply markets. The law directed PSC to report to the Governor and the General Assembly on the feasibility of requiring a renewable portfolio standard and the estimated costs and benefits. It also required PSC to cap rates charged to retail customers for four years following the implementation of customer choice. As part of a settlement, PSC may approve a cap for a different time period. Furthermore, each electric company and supplier must provide information to their customers every six months about the fuel mix of the electricity being purchased and must specify categories such as coal, natural gas, biomass, wind, and other sources.

Background: At least 13 states, including Maine, New Jersey, Pennsylvania, Arizona, and Connecticut, now use a renewable portfolio standard (RPS), according to the Database of State Incentives for Renewable Energy. Pennsylvania, which established its RPS by settlement agreements, has different standards in each of its utilities' service territories. Two other states, Hawaii and Illinois, have a renewable portfolio goal. The main differences among various RPS proposals are the required renewable share, the

timing of the program, the definition of qualifying facilities, and whether or not there is a limit on the allowable price for renewable credits. States have enacted various penalties for failure to comply with renewable standards, including monetary fines, suspension or revocation of a supplier's license, and prohibitions on new customers.

Approximately 95% of electricity generated in Maryland comes from conventional energy sources such as coal or oil. The remaining 5% comes from renewable sources such as solar, biomass, or municipal waste. According to the U.S. Department of Energy, 46 renewable energy facilities operate in the State, including biomass (7), photovoltaic (31), wind (1), and hydroelectric (7).

PSC evaluated the use of an RPS following the passage of electricity restructuring legislation in 1999 and concluded that energy costs would increase in the short run as lower cost opportunities are exhausted, then eventually decline due to economies of scale. The report noted that an RPS would reduce emissions of compounds such as carbon dioxide and carbon monoxide and potentially increase employment and economic activity. PSC concluded that an RPS is feasible in Maryland but also indicated that other programs could be used to promote renewable energy production.

State Revenues: The Department of Legislative Services advises that reliable estimates of Tier 1 capacity, compliance by suppliers, and resulting special fund revenues from potential compliance fees are not possible at this time. PSC cannot reliably estimate the Tier 1 energy that would qualify for RPS because it has not promulgated regulations that define eligible resources from outside Maryland and the PJM region to provide for the 2006 required RPS. PSC advises that there would be additional verification costs for Tier 1 sources located outside of PJM. PSC has not provided estimates of compliance fees that account for existing Tier 1 sources in Maryland.

However, for illustrative purposes MEA estimates that RPS in 2006 could require approximately 1.1 million megawatt hours of power provided by Tier 1 sources and that available Tier 1 energy from permitted wind projects and the defined RPS region (which MEA defines as within and contiguous to the PJM region) could total 5.0 million megawatt hours. **Exhibit 1** shows MEA assumptions, including permitted wind projects, in available Tier 1 sourced energy through 2013. MEA notes that Maryland would likely not be able to use all of the available capacity from the region, as other states require RPS as well. Also, MEA advises that any additional capacity that comes online could mitigate compliance fees in the out-years.

Exhibit 1
Percent of Required Tier 1 Capacity Available

	Required Tier 1 Capacity*	Available Tier 1 Sources*	Percent of Tier 1 Available
2006	0.2	4.0	592%
2007	1.0	4.0	387%
2008	1.4	4.0	284%
2009	1.8	4.0	223%
2010	2.2	4.0	182%
2011	2.6	4.0	153%
2012	3.0	4.0	131%
2013	3.5	4.0	114%

*Millions of megawatt hours.
Source: Maryland Energy Administration

State Expenditures: Special fund expenditures could increase by an estimated \$108,567 in fiscal 2005, which accounts for the bill's July 1, 2004 effective date. This estimate reflects the cost of PSC hiring two regulatory economists to develop regulations, collect data from suppliers, examine the data, and monitor the clean energy portfolio of each supplier, including verification of compliance. It includes salaries, fringe benefits, and one-time start-up costs.

Salaries and Fringe Benefits	\$105,307
Additional Office Equipment	3,000
Operating Expenses	<u>260</u>
Total FY 2005 State Expenditures	\$108,567

Future year expenditures reflect: (1) full salaries with 4.6% annual increases and 3% employee turnover; and (2) 1% annual increases in ongoing operating expenses. PSC advises that additional staff requirements in the accounting and the staff counsel divisions could be absorbed within existing resources.

PSC assesses regulated public service companies to cover operating expenses. The cost of these positions would be added to the assessments in fiscal 2005 and future years.

MEA advises that one additional staff position would be required to manage the grant program for renewable energy source creation and promotion if the fund accrued any

compliance fees, but that it does not project any fees until 2013 for noncompliance in 2012. If compliance fees are collected prior to 2013, MEA would require, and would be able to fund, one additional position.

Local Fiscal Effect: If any local jurisdiction becomes a generator of eligible energy resources, the bill could result in an increase in local revenues to the extent that the local jurisdiction sells eligible energy to suppliers that need it to meet the proposed standards. The extent to which the bill will result in an increase in the demand for eligible energy resources cannot be estimated at this time. Presumably, a local generator could also become eligible for payments from the fund as provided by the bill.

Small Business Effect: To the extent that the bill increases the demand for eligible energy resources, any small business that generates eligible energy could benefit. A producer of clean energy could also benefit to the extent that it becomes eligible for payments from the fund as provided by the bill. According to PSC, retail electricity suppliers are generally larger businesses, so small businesses would not be subject to the bill's requirements relating to suppliers.

Additional Information

Prior Introductions: Similar bills were introduced as HB 752, HB 370, and SB 691 in the 2003 session, HB 1215 in the 2002 session, and SB 767 in the 2001 session. HB 752 and 370 were assigned to Economic Matters, which took no action. SB 691 was assigned to Finance, which also took no action. HB 1215 was assigned to Economic Matters, which took no action. SB 767 received an unfavorable report from the Finance Committee.

Cross File: HB 1308 (The Speaker, *et al.*) – Economic Matters.

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

Fiscal Note History: First Reader - March 5, 2004
ncs/hlb Revised - Senate Third Reader - April 12, 2004
Revised - Enrolled Bill - May 6, 2004
Revised - Updated Information - May 11, 2004

Analysis by: Daniel P. Tompkins

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