

**Department of Legislative Services**  
Maryland General Assembly  
2011 Session

**FISCAL AND POLICY NOTE**

Senate Bill 648  
Finance

(Senators Ramirez and Montgomery)

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**Renewable Energy Surcharge - Retail Electric Customers**

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This bill establishes a renewable energy surcharge on electricity consumption by a retail electric customer of any rate class that exceeds the average by 25% in a given month by members of the same rate class with specified exceptions. The Public Service Commission (PSC) must, by regulation, establish the amount of the surcharge, and electric companies must add the full amount of the surcharge to customers' bills. Customers that purchase electricity from a Tier 1 renewable source receive a rebate in an amount determined by PSC. Revenues from the surcharge are deposited into the Maryland Strategic Energy Investment Fund (SEIF) and accounted for separately in the fund. The bill specifies how proceeds from the surcharge are to be allocated.

The bill terminates September 30, 2021.

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**Fiscal Summary**

**State Effect:** Special fund revenues to SEIF increase, perhaps significantly, depending on the rate of the renewable energy surcharge determined by PSC. Special fund expenditures by the Maryland Energy Administration (MEA) increase correspondingly for specified programs and administrative costs. State expenditures (all funds) increase to pay the renewable energy surcharge.

**Local Effect:** County and municipal expenditures for electricity increase, depending on the rate of the renewable energy surcharge established by PSC. Local revenues may increase from any grants received under the bill.

**Small Business Effect:** Potential meaningful.

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## Analysis

**Bill Summary:** This bill establishes a renewable energy surcharge on each additional kilowatt-hour (kWh) electricity consumption by a retail electric customer of any rate class that exceeds the average by 25% in a given month by members of the same rate class. Customers who receive low-income government assistance or unemployment benefits are not subject to the surcharge.

By regulation, PSC must establish the amount of the surcharge and the rebate and may establish a different surcharge for different ratepayer classes to ensure that the surcharge effectively promotes energy conservation and on-site generation. PSC must authorize electric companies to add the full amount of the surcharge to the bills of customers subject to the surcharge. Each electric company must collect the surcharge and provide a rebate in an amount determined by PSC to customers subject to the surcharge who elect to purchase electricity generated from a Tier 1 renewable source.

Revenues from the surcharge are collected from electric companies by the Comptroller, deposited into SEIF, accounted for separately in the fund, and allocated as follows:

- at least 50% must be credited to programs offering incentives for the installation on residential and commercial properties of technology and equipment for energy conservation and on-site generation of electricity from Tier 1 renewable sources;
- at least 25% must be credited to programs offering low-interest loans to install Tier 1 reusable sources;
- at least 10% must be credited to programs offering incentives to support in-state manufacturing of Tier 1 renewable sources;
- at least 8% must be credited to energy-related public education and outreach;
- up to 5% may be credited to an administrative expense account for costs related to the administration of SEIF; and
- up to 2% may be credited to an administrative expense account for costs related to monitoring and evaluating the use of the surcharge revenue.

Revenue from the renewable energy surcharge may not be used for energy assistance or rate relief.

### **Current Law:**

#### *State Funding for Renewable Energy – Strategic Energy Investment Fund*

State funding for renewable energy and efficiency projects is primarily funded through SEIF. SEIF revenues are comprised of proceeds from the sale of carbon dioxide (CO<sub>2</sub>)

allowances under the Regional Greenhouse Gas Initiative (RGGI) and alternative compliance payments (ACPs) made by electricity suppliers who fail to meet the Renewable Energy Portfolio Standards (RPS).

RPS requires that renewable sources generate specified percentages of Maryland's electricity supply each year, increasing to 20%, including 2% from solar power, by 2022. Electricity suppliers must submit renewable energy credits (RECs) equal to the percentage mandated by statute each year, or pay the ACP equivalent to the supplier's shortfall. RECs are classified as Tier 1, Tier 2, or solar RECs (SRECs). Tier 1 sources include solar; 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; and a small hydroelectric plant of less than 30 megawatts and poultry litter-to-energy. Tier 2 sources include hydroelectric and waste-to-energy.

ACPs made by electricity suppliers to SEIF must be accounted for separately in the fund and are used only to make loans and grants to support the creation of Tier 1 renewable resources.

Money received by SEIF from CO<sub>2</sub> auctions were originally required by statute to be distributed to energy efficiency and conservation programs (at least 46%), electricity rate relief (23%), energy assistance programs (17%), renewable and clean energy education and outreach (up to 10.5%), and administrative expenses (up to 3.5%, not exceeding \$4.0 million). The Budget Reconciliation and Financing Act of 2010 (Chapter 484) increased the allocation to energy assistance programs (up to 50%), increased the allocation to energy efficiency programs (at least 17.5%), and decreased the allocation to renewable and clean energy projects (at least 6.5%) through fiscal 2012, among other things.

### *Surcharges on Electric Bills*

In addition to supply, distribution, and customer charges imposed by each utility, residential electric customers are subject to various surcharges on electricity consumed. Customers pay a surcharge, which varies for each service territory, to support energy efficiency and demand response programs under the EmPOWER Maryland Energy Efficiency Act of 2008 (Chapter 131). Customers also pay a surcharge to the Environmental Trust Fund (ETF) within the Department of Natural Resources to study the siting of power plants and other environmental and land use considerations. Additionally, customers pay a monthly charge to support the Electric Universal Service Program in the Department of Human Resources, which provides bill payment and arrearage assistance for certain electric customers.

### *Maryland Clean Energy Center*

The Maryland Clean Energy Center (MCEC) (Chapter 137 of 2008; launched in January 2009) was established to generally promote and assist the development of the clean energy industry in the State; promote the deployment of clean energy technology in the State; and collect, analyze, and disseminate industry data. MCEC is authorized to make grants to or provide equity investment financing for clean energy technology-based businesses. MCEC may accept grants, loans, and donations.

### *Maryland Energy Administration Clean Energy Programs*

MEA is currently charged under State law with administering a number of programs aimed at encouraging energy efficiency and renewable energy projects in the State. Programs currently administered by MEA include:

- the Jane E. Lawton Conservation Loan Program – provides low-interest loans to nonprofit organizations, local jurisdictions, and eligible businesses for projects, in order to promote energy conservation, reduce consumption of fossil fuels, improve energy efficiency, and enhance energy-related economic development and stability in business, commercial, and industrial sectors;
- the Maryland Strategic Energy Investment Program – established to decrease energy demand and increase energy supply to promote affordable, reliable, and clean energy, as described above;
- the Solar Energy Grant Program – provides grants to individuals, local governments, and businesses for a portion of the costs of acquiring and installing photovoltaic (electricity generating) and solar water heating property;
- the Geothermal Heat Pump Grant Program – provides grants to individuals for a portion of the cost of acquiring and installing a geothermal heat pump; and
- the Windswept Grant Program – provides grants to offset the installation cost of small wind generation projects. (This program is not established under State law.)

### *EmPOWER Maryland*

The EmPOWER Maryland Energy Efficiency Act of 2008 (Chapter 131) requires electric companies to procure and provide customers with energy conservation and energy efficiency programs and services that are designed to achieve targeted electricity savings and demand reductions for specified years through 2015. Electric company plans must include program descriptions, anticipated costs, projected electricity savings, and other information PSC requests. PSC has approved customer surcharges for each of the participating utilities.

### *Environmental Trust Fund*

The Environmental Trust Fund (ETF) was established by Chapter 31 of 1971 to fund electric power plant site evaluation and acquisition and research on environmental and land use consideration associated with power plants. ETF's revenue is generated from an environmental surcharge per kWh of electric energy distributed in the State, which is paid by electric companies. The amount of the surcharge for each account for each retail electric customer may not exceed the lesser of 0.15 mill per kWh or \$1,000 per month, and the surcharge may not continue beyond June 30, 2015, unless legislation is enacted to extend it beyond that date. The customer surcharge rate is currently at the statutorily capped level.

### **Background:**

#### *Strategic Energy Investment Fund*

Recent budget reconciliation measures have reduced the amount of revenue generated from the RGGI auctions that is allocated to MEA and its clean energy programs. Pursuant to statute, the RGGI auction revenue is deposited in SEIF and distributed among low-income electricity assistance programs, rate relief for residential electricity customers, climate change programs, clean energy programs, and MEA administrative costs. In order to reduce general fund expenditures for electricity assistance, budget reconciliation legislation passed in the 2009 session adjusted the statutory allocation established when SEIF was created in 2008, reducing the amount of funding allocated to MEA and its programs and increasing the amount allocated to electricity assistance programs. Budget reconciliation legislation passed in the 2010 session extended that adjusted allocation through fiscal 2012. The proposed Budget Reconciliation and Financing Act of 2011 (SB 87/HB 72) proposes to increase the allocation for renewable and clean energy projects to at least 20% of auction proceeds for fiscal 2012 through 2014, after which the allocation would return to the original statutory allocation of up to 10.5%

The impact on MEA of the recent changes in the allocation of the SEIF funding has been compounded by the fact that the price CO<sub>2</sub> emissions allowances sold at RGGI auctions has declined from a high of \$3.51 per allowance in the March 2009 auction to a low of \$1.86 per allowance in the December 2010 auction. In the most recent March 2011 auction each allowance was sold at \$1.89 (the new minimum price). Through the most recent auction, RGGI auctions have generated \$162.5 million in revenue for SEIF (\$14.9 million from the most recent auction). Also, in fiscal 2012, MEA is expected to face a significant reduction in federal funding, as funds received under the American Recovery and Reinvestment Act of 2009 (ARRA) expire; ARRA funding accounted for a

significant portion of the agency's budget in fiscal 2010 and 2011 (27% and 59%, respectively).

Although revenues from RGGI auctions are expected to decrease in future years, ACPs from RPS are expected to increase significantly. To date, electricity suppliers generally have been able to meet their RPS obligations through the submission of RECs, with little reliance on ACPs. By contrast, initial compliance with the solar RPS obligation has broadly been met with ACP payments, generating \$1.2 million in 2008 and \$1.1 million in 2009. This appears to be due, in part, to the timing of electricity supply contracts preventing some utilities from initially complying with the solar RPS obligation with solar RECs and, in part, to the limited availability of SRECs. Legislation enacted in 2010 (Chapter 494) increased the solar RPS percentages and the ACP payment amounts for the solar RPS from 2011 through 2016, accelerating the ramp up of the solar RPS obligation and increasing the incentive for the installation of solar capacity. To meet the 2% solar obligation in 2022 with SRECs, the installed solar capacity in the State will need to increase from roughly 5 megawatts or less at the end of 2009 to an estimated 1,300 megawatts in 2022.

### *Residential Electricity Consumption*

The amount of electricity consumed by a household each month depends on a multitude of factors including: (1) size and efficiency of the dwelling; (2) fuel source used for heating, hot water, and other equipment; (3) number of people in the household; (4) household behavior; and (5) weather. Based on these factors, the average monthly electric consumption varies for each Maryland service territory, as shown in **Exhibit 1**.

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#### **Exhibit 1** **June 1, 2010 – May 31, 2011 Residential Bills**

<b><u>Distribution Utility</u></b>	<b><u>Number of Customers</u></b>	<b><u>Average kWh Per Month</u></b>	<b><u>Estimated Annual Bill</u></b>
Allegheny	220,369	1,300	\$1,442
BGE	1,114,743	1,000	1,826
Delmarva	173,752	1,100	1,703
Pepco	487,076	950	1,765

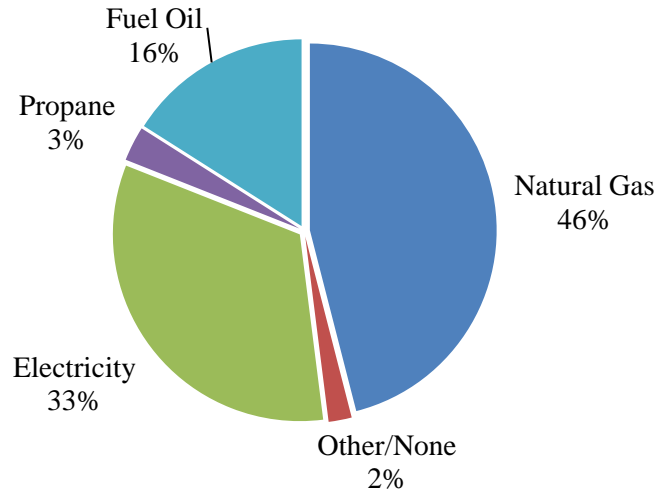
Source: Public Service Commission

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As shown in **Exhibit 2**, natural gas is the most common heating source in the State. In areas of the State where homes do not have natural gas pipelines nearby, other sources, such as electricity, heating oil, propane, and wood, are the primary fuel sources for heating.

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**Exhibit 2**  
**Sources of Heating for Maryland Homes**

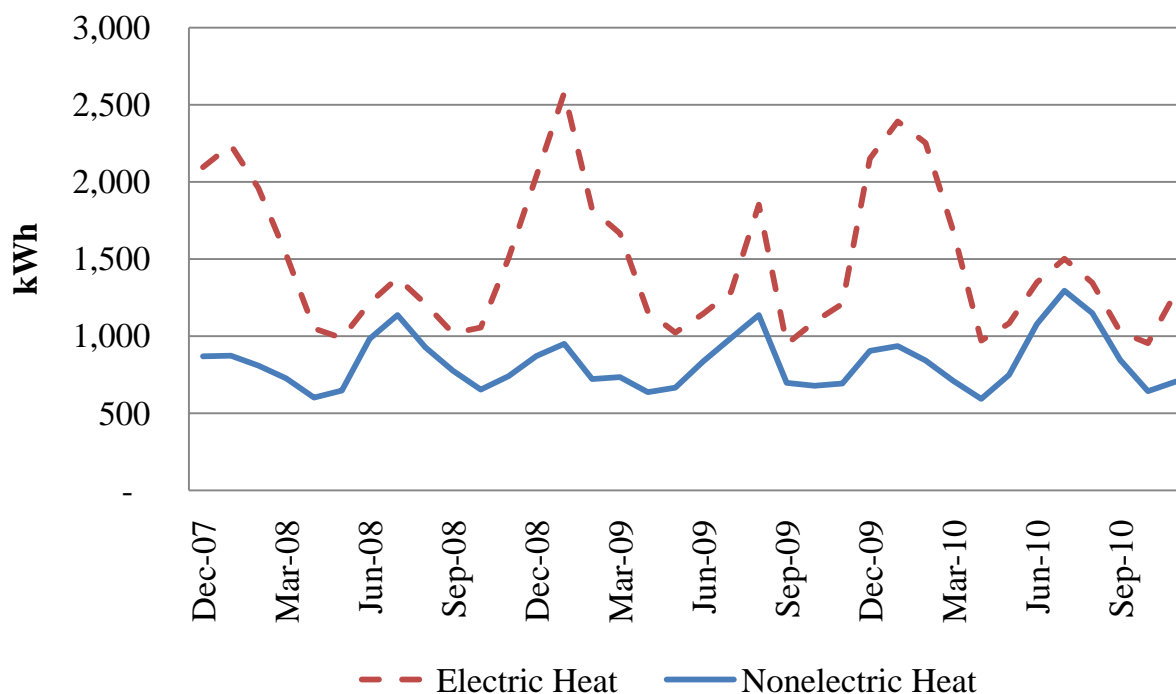


Source: 2000 U.S. Census

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Depending on the source of fuel, annual electricity usage is considerably higher for certain households, specifically for electric heating. *For illustrative purposes*, **Exhibit 3** shows the average historical monthly electric load for a typical residential BGE customer. As shown in the exhibit, electric heat customers use considerably more electricity during winter months. Over the three-year period shown in the exhibit, average monthly consumption was 817 kWh for a nonelectric heat customer and 1,507 kWh for an electric heat customer.

**Exhibit 3  
Residential Electric Load Profile**



Note: This exhibit excludes time-of-use metered customers.  
Source: BGE Historical Residential Load Data

*Price of Electricity from Tier 1 Renewable Sources*

All electricity suppliers in the State are required to purchase a portion of electricity from eligible Tier 1 and solar renewable sources by acquiring RECs equal to a portion of energy they supply. In addition to the percentage required by RPS, competitive suppliers in most major service territories offer customers the option of purchasing electricity produced from 100% wind, traditional sources, or a blend of the two. Depending on the supplier, purchasing 100% wind energy costs \$0.01-\$0.025 per kWh higher than traditional sources.

**State Fiscal Effect:** Special fund revenues to SEIF increase, perhaps significantly, depending on the amount of the surcharge established by PSC. Legislative Services cannot reliably estimate the amount of the surcharge that would effectively promote energy conservation and on-site generation at this time.



Special fund expenditures from SEIF increase correspondingly, since surcharge revenues are credited to specified energy conservation and renewable energy programs and administrative costs.

Depending on the number of additional grants processed, MEA may need to hire additional staff. However, since the bill specifies a percentage of revenues that are dedicated to administrative expenditures, it is assumed any increase in MEA's administrative costs are covered by the surcharge revenues.

State expenditures for electricity increase, depending on the amount of the surcharge established by PSC. As an electric customer, State agencies and the University System of Maryland spent \$146.5 million on electricity in fiscal 2010. For each 1% increase in the cost of electricity, State expenditures increase by \$1.5 million.

**Local Fiscal Effect:** Counties and municipalities use electricity for street lighting, wastewater treatment plants, office facilities, and recreational facilities. Local school systems are also large consumers of electricity. Thus, local government expenditures for electricity increase, based on the amount of the renewable energy surcharge established by PSC. Local revenues increase to the extent any local jurisdictions receive grants or loans for renewable and clean energy projects.

**Small Business Effect:** Electricity costs for small businesses increase, depending on the amount of the renewable energy surcharge established by PSC. From a practical standpoint, applying a surcharge against the average usage of all customers within each rate class will disproportionately affect different types of electric customers. Although rate classifications differ for each territory, *for illustrative purposes*, in some service territories, offices, restaurants, laundromats, coffee shops, and tanning salons may all be required to pay the renewable energy surcharge based on the same monthly average usage rate.

Revenues from the surcharge will be used by MEA to, among other things, support grants and loans for the installation of renewable and clean energy projects. These grants reduce costs incurred by the owner to complete projects and are likely to result in an increased number of solar, small wind, geothermal heat pump, and other clean energy installations in the State. As a result, small businesses involved with the manufacturing, distribution, and installation of solar, wind, and other renewable energy sources stand to benefit.

**Additional Comments:** Imposition of a renewable energy surcharge will increase the cost of electricity for a significant number of residential customers in the State. The

extent to which electricity costs are increased for these customers depends on the rate of the surcharge established by PSC.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** HB 662 (Delegate Summers, *et al.*) - Economic Matters.

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

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