

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

**FISCAL AND POLICY NOTE**  
**Revised**

House Bill 1054 (The Speaker, *et al.*) (By Request - Administration)  
 Economic Matters

**Maryland Offshore Wind Energy Act**

This Administration bill requires the Public Service Commission (PSC) to order the State’s four investor-owned electric companies to enter into a long-term power purchase agreement (PPA) with one or more “qualifying offshore wind generators.” PSC must issue a request for proposals (RFP) and approve contracts awarded to an offshore wind generator for between 400 and 600 megawatts (MW) of nameplate capacity for a period of at least 20 years. The bill specifies requirements for PSC to issue an RFP and the PPA selection criteria. PSC must establish a nonbypassable surcharge or other mechanism to ensure costs or savings associated with a PPA are shared equitably among all customers across all distribution territories, with some exceptions. PSC may hire experts and consultants and may impose a special assessment of up to \$3.0 million total from fiscal 2011 to 2013 for related expenses. The bill also makes changes to the requirement to obtain a certificate of public convenience and necessity (CPCN) for certain persons.

The bill takes effect June 1, 2011.

**Fiscal Summary**

**State Effect:** Special fund expenditures from the Public Utility Regulation Fund increase by \$3.0 million in FY 2012 for PSC consulting expenses. Special fund revenues increase correspondingly from the special assessment imposed on electric companies and electricity suppliers. Under one set of assumptions, State expenditures (all funds) increase by \$5.0 million in FY 2016 and thereafter reflecting increased electricity costs.

(in dollars)	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
SF Revenue	\$3,000,000	\$0	\$0	\$0	\$0
SF Expenditure	\$3,000,000	0	0	0	\$0
GF/SF/FF Exp.	-	0	0	0	\$5,042,000
Net Effect	\$0	\$0	\$0	\$0	(\$5,042,000)

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

**Local Effect:** Local government expenditures increase beginning in FY 2016 due to higher electricity prices. Revenues are not directly affected.

**Small Business Effect:** The Administration has determined that this bill has a meaningful impact on small business (attached). Legislative Services concurs with this assessment.

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## Analysis

### Bill Summary:

#### *Issuance of Request for Proposals*

PSC, by regulation or by order, must order the State's four investor-owned electric companies to enter into a long-term power purchase agreement with one or more "qualifying offshore wind generators." A "qualified offshore wind generator" is a wind energy generation facility that is located in the Atlantic Ocean; at least 10 nautical miles from the Maryland shoreline; or within the federal waters adjoining another state within the PJM region.

PSC is responsible for developing a process for drafting and issuing an RFP, and, through regulation or order, must issue a single RFP to qualifying offshore wind generators on behalf of the four investor-owned electric companies by January 31, 2012. Responses to the RFP are due by March 31, 2012.

Qualifying proposals must be contracts to sell (1) energy and associated capacity resulting from a total nameplate capacity of between 400 and 600 MW for a term of at least 20 years; (2) ancillary services, if applicable; (3) associated renewable energy credits (RECs); and (4) all associated environmental attributes, if applicable.

PSC may implement a special assessment of up to \$3.0 million total between fiscal 2011 and 2013 in order to employ consultants and experts to assist in developing the RFP, approving contracts, and implementing other requirements of the bill. The special assessment is to be imposed only on electric companies and electricity suppliers.

#### *Power Purchase Agreements – Contract Selection and Administration*

PSC must evaluate, select, and approve a PPA proposal by December 31, 2012, based on criteria specified in the bill. Among others, the criteria generally include: the lowest cost impact on ratepayers over the term of the PPA; price stability over the term of the PPA; the ability to help meet the Renewable Energy Portfolio Standard (RPS) goals; the impact

on reliability and other regional factors affecting the cost of electricity in the State; siting and project feasibility; and any other factors PSC deems appropriate. If PSC determines after reviewing the proposals received under the RFP that the proposals are not comparable to other offshore wind projects, PSC may not approve a proposal.

Once PSC approves a proposal or proposals for a PPA, PSC must order each investor-owned electric company in the State to file a substantially similar proposed contract with the selected awardee or awardees of the PPA to PSC for approval, with the only variable being the output each company is obligated to purchase. Contracts submitted by each investor-owned electric company are due by March 13, 2013, and must incorporate terms and conditions approved by PSC. As directed by PSC, each investor-owned electric company must sell into the available markets the following products purchased under the contract: (1) energy and associated capacity; (2) ancillary services, if applicable; (3) associated RECs; and (4) all associated environmental attributes.

Each investor-owned electric company's share of the output from the proposed contract is established at the time of signing of the contract and is proportional to that company's average megawatt-hour (MWh) load for the preceding calendar year divided by the average MWh load of all investor-owned utilities in the State. RECs or environmental attributes must first be offered to an electricity supplier or electric company that must apply them toward compliance with RPS.

PSC is authorized to designate a contract administrator for the purpose of administering contracts submitted by investor-owned electric companies or sales of products included in a contract.

#### *Cost Recovery through Nonbypassable Charge*

PSC must establish a nonbypassable charge or other mechanism to ensure that any costs or savings associated with the obligation to purchase energy or other products from a qualifying offshore wind generator and to sell the products are shared equitably among all customers and across all distribution territories; however, the surcharge does not apply to small rural electric cooperatives or to electricity sales at retail by any electricity supplier in excess of 75 million kilowatt-hours (kWh) of industrial process load to a single customer in a year.

#### *Certificate of Public Convenience and Necessity*

The bill specifies that a *person* (as opposed to an *electric company*, under current law) may not begin construction of an overhead transmission line designed to carry a voltage in excess of 69,000 volts or exercise a right of condemnation with the construction without obtaining a CPCN from PSC.

A CPCN is not required for an offshore wind generator except as necessary to construct a “qualified submerged renewable energy line.” A person intending to transmit energy from a qualifying offshore wind generator may not begin construction of or exercise a right of condemnation in connection with a qualifying submerged renewable energy line without obtaining a CPCN from PSC. A “qualified submerged renewable energy line” means a line (1) carrying electricity and connecting a qualifying offshore wind generator to the transmission system; and (2) in which the portions of the line crossing any submerged lands or any part of a Beach Erosion Control District are buried or submerged.

In addition, a person may not begin construction of a “qualified generator lead line” without receiving a CPCN from PSC. “Qualified generator lead line” is defined as an overhead transmission line that is designed to carry a voltage in excess of 69,000 volts and would allow an out-of-state Tier 1 or Tier 2 renewable source to interconnect with the electric system in Maryland.

The Maryland Energy Administration (MEA) is added to the list of State agencies that must be provided with notice, by PSC, upon receipt of an application for a CPCN.

#### *Atlantic Coastal Beaches and Environmental Review*

Qualified submerged renewable energy lines are exempt from the existing prohibition on building permanent structures within the Beach Erosion Control District as long as the project does not result in significant permanent environmental damage. An application for a CPCN to construct a submerged renewable energy line is subject to environmental review by the Department of Natural Resources (DNR) and the Maryland Department of the Environment (MDE).

#### **Current Law:**

##### *PSC Authority to Order Long-term Contracts or Construction of New Generation*

Prior to electric industry restructuring in 1999, PSC was responsible for integrated resource planning, including ordering construction of additional generating facilities. Since deregulation, development of generating facilities in the State is done privately. Generating stations are allowed to be constructed by private entities, for-profit, and are allowed to charge market-based rates (not regulated by PSC).

In order to meet the long-term anticipated demand in the State for standard offer service and other electricity supply, PSC may require or allow an investor-owned electric company to construct, acquire or lease, and operate its own generating facilities and transmission facilities necessary to interconnect the generating facilities with the electric grid, subject to appropriate cost recovery.

## *Renewable Energy Portfolio Standards*

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 RECs equal to the percentage mandated by statute each year, or pay an alternative compliance payment (ACP) equivalent to the supplier's shortfall. RECs are classified as Tier 1, Tier 2, or solar RECs. Examples of 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; a small hydroelectric plant of less than 30 megawatts; and poultry litter-to-energy. Examples of Tier 2 sources include hydroelectric and waste-to-energy.

## *CPCN Requirement*

State law specifies that an *electric company* must be granted a CPCN from PSC before beginning construction of an overhead transmission line that is designed to carry a voltage in excess of 69,000 volts or exercise a right of condemnation with the construction. A person that seeks to construct or modify a generating facility with at least 70 megawatts (MW) must also obtain a CPCN from PSC. Through case proceedings, PSC has determined that this means that it does not have the authority to issue a CPCN for a transmission line to a *nonelectric company*.

An application for CPCN is reviewed before a hearing examiner in a formal adjudicatory process that includes written and oral testimony, cross examination, and the opportunity for full public participation. The CPCN process constitutes permission to construct the facility and incorporates several required permits, including air quality and water appropriation. The CPCN licensing process provides an opportunity for the State to examine all the significant aspects and impacts of a proposed power facility or transmission line, including the interrelations between various impacts and cumulative effects.

After receiving an application for a CPCN, PSC must send notice to all interested persons, including DNR, MDE, the Maryland Department of Agriculture, the Department of Businesses and Economic Development, the Maryland Department of Transportation, and the Maryland Department of Planning.

## *Atlantic Coastal Beaches*

For the purposes of maintaining the Atlantic Coast beaches of the State and the Beach Erosion Control District, permanent structures within the Beach Erosion Control District are prohibited. Certain purposes, such as the placement of public utility pipelines

carrying treated sewage effluent, are exempt from this prohibition. The Beach Erosion Control District is the area of land bordered on the north by the boundary line between Maryland and Delaware; bordered on the east by the Atlantic Ocean; bordered on the south by the boundary line between Maryland and Virginia; and bordered on the west by a line which coincides, more or less, with the west crest of the existing natural dune on Assateague Island, and in Ocean City, by the State-Ocean City building limit line, as described in regulation.

## **Background:**

### *PSC – New Generation Planning*

In December 2010 PSC issued a draft RFP to solicit offers from persons seeking to construct new generating facilities in or around the State. In the draft RFP, respondents may offer energy from any generation capacity resources, not to exceed 1,800 MW on an installed capacity basis. PSC may award one or more contracts to one or more suppliers from new generation and may direct one or more electric companies to construct new generation up to 1,800 MW; however, PSC reserves the right to reject all submissions if proposals are not cost-effective. The draft RFP is the result of Case Number 9214, which was initiated in September 2009 for PSC to investigate whether it should exercise its authority to order electric companies to enter into long-term contracts to attract new generation or to construct, acquire, or lease and operate new generation facilities in the State. Persons seeking to install offshore wind generating facilities, as well as conventional generation, may submit a proposal under this RFP.

### *Offshore Wind Development*

Recent changes in federal regulations established the U.S. Department of the Interior's Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE) as the federal agency responsible for overseeing the safe and environmentally responsible development of energy and mineral resources on the Outer Continental Shelf (OCS). BOEMRE has relied on intergovernmental task forces in several states, including Maryland, to prepare for granting leases, easements, and rights-of-way for offshore renewable energy development activities, such as the siting and construction of wind generation facilities on OCS. MEA is the lead agency for Maryland's State/Federal Offshore Wind Task Force.

In response to the BOEMRE request for interest (RFI), in January 2011, nine indications of interest were received by eight parties wishing to obtain a commercial lease for wind energy projects in the Maryland portion of OCS. The area offshore Maryland is made up of 29 whole OCS blocks and 4 partial OCS blocks. The western edge is approximately 10 nautical miles from the Ocean City, Maryland coast, and the eastern edge is

approximately 27 nautical miles from the Ocean City, Maryland coast. The entire area is approximately 207 square nautical miles.

According to MEA, a 500-MW offshore wind project could, among other things:

- supply enough electricity to power 79% of all the homes on the Eastern Shore of Maryland or more than half the homes in Baltimore City;
- provide price stability;
- reduce emissions of carbon dioxide by 945,000 tons each year;
- generate enough clean energy to satisfy between 10% and 15% of Maryland's 2022 renewable energy goals; and
- have a significant economic impact.

### *The Economics of Offshore Wind*

Offshore wind generating facilities have a higher installation cost per unit of generating capacity than onshore wind facilities. Costs for offshore facilities are higher due to turbine upgrades needed for operation at sea; turbine foundations; and nonturbine components, including interconnection and installation. Operating and maintenance costs of offshore facilities are also higher. The resulting lifecycle costs of an offshore wind generator cause energy produced by such a generator to be more expensive than conventional power sources. The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) estimates current installed capital costs for offshore wind at \$4,250 per kilowatt (kW) based on energy market surveys. This equates to installed costs of roughly \$1.7 billion for a 400-MW facility and \$2.6 billion for a 600-MW facility.

The overall economics of offshore wind generator PPAs are immensely complicated. Comparisons between U.S. and European offshore wind installations are not easily made due to differences in government policies and support mechanisms that reduce the cost of capital and risk to private investors.

To date, three U.S. offshore wind generators have signed PPAs with utilities. **Exhibit 1** shows the prices and terms of these PPAs. Important factors to recognize are that the PPA price per kWh does not reflect the cost of production for these facilities, since the facilities receive subsidies from the federal government and from the sale of environmental attributes, such as RECs. For example, although the Delaware/Bluewater project has a PPA price of \$0.099 per kWh, the Delaware state legislature passed a separate measure which increased the value of RECs generated by the wind project by 350%. The effective price per kWh of the Delaware project is actually closer to \$0.14 per kWh in 2012.

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**Exhibit 1**  
**Announced PPA Prices for U.S. Projects under Development**

<b>Project Name</b>	<b>Developer Name</b>	<b>Power Purchaser</b>	<b>Capacity Contracted (MW)</b>	<b>PPA Price (¢ per kWh)</b>	<b>PPA Base Year</b>	<b>Escalator (%)</b>	<b>Term (Years)</b>
Cape Wind	Cape Wind Associates	National Grid	264	18.70	2013	3.5	15
Delaware Offshore Wind	NRG Bluewater Wind	Delmarva Power & Light	200	9.99	2007	2.5	25
Block Island Wind Farm	Deepwater Wind	National Grid	29	23.75	2007	3.5	20

Source: U.S. Department of Energy, National Renewable Energy Laboratory

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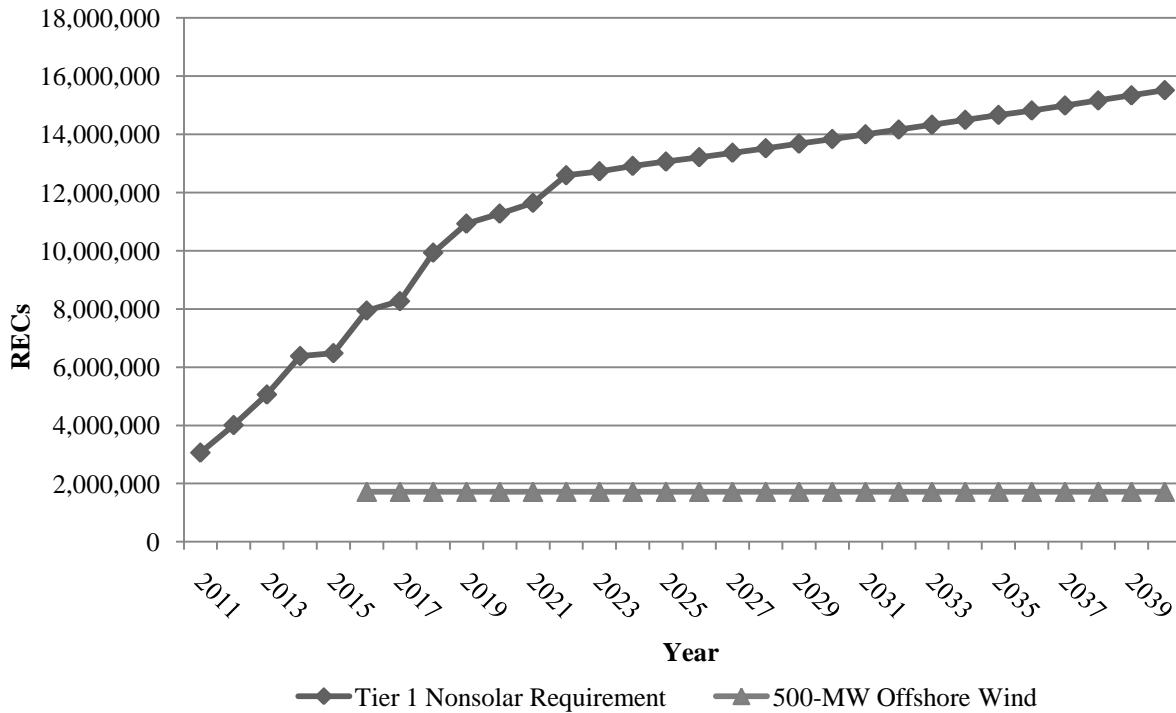
The overall cost implications of a long-term PPA with an offshore wind generator on electricity prices also varies greatly depending on the regional market for electricity. Since Maryland is a member of the PJM Interconnection, a long-term PPA will have an impact on market-based pricing signals, such as reliability pricing model (RPM) capacity markets and locational marginal pricing (LMP), as well as market clearing prices.

*Maryland Renewable Energy Portfolio Standard*

To date, electricity suppliers generally have been able to meet their nonsolar RPS obligations through the submission of RECs, with little reliance on ACPs. **Exhibit 2** shows the number of RECs required to meet the Tier 1 nonsolar RPS requirements. The exhibit also shows the amount of RECs available from a 500-MW capacity offshore wind generator.



**Exhibit 2**  
**Annual Tier 1 Nonsolar RPS Requirement Versus**  
**Annual RECs from 500-MW Offshore Wind Generator**



Source: Public Service Commission

**State Fiscal Effect:**

*Public Service Commission Administrative Costs and Special Assessment*

Special fund expenditures from the Public Utility Regulation Fund increase by \$3.0 million in fiscal 2012 for consulting expenses associated with developing the RFP, selecting bids, and awarding contracts. Although actual activities performed by consultants will also occur in fiscal 2013, this estimate assumes that consulting expenses are all procured in fiscal 2012. Thus, even though the bill takes effect June 1, 2011, State finances are not affected in fiscal 2011. Special fund revenues to the Public Utility Regulation Fund increase by \$3.0 million in fiscal 2012 from the special assessment authorized under the bill.

*State Electricity Expenditures*

The incremental cost associated with a PPA from an offshore wind generator will be absorbed by all electric customers and allocated to different rate classes by PSC. As an electric customer, State agencies and the University System of Maryland used

approximately 1.5 million MWh of electricity in fiscal 2010. Although the actual increase in expenditures will vary depending on the PPAs signed, based on a 500-MW wind generating facility, State expenditures (all funds) may increase by \$5.0 million in fiscal 2016. Future year expenditures increase by an amount proportionate to increases shown in **Exhibit 3**, with the actual amount depending on the structure of the PPA. The information and assumptions used in calculating the estimate are stated below:

- PSC approves a proposal for a 500-MW offshore wind generator and agrees to a 25-year PPA;
- an offshore wind generator begins to supply electricity to Maryland customers on July 1, 2015;
- State electricity consumption is reduced by 1% annually, beginning in fiscal 2011;
- the increased cost of offshore wind is based on data from the U.S. Energy Information Administration (EIA), as shown in Exhibit 3; and
- the increased cost of the PPA is allocated to all customers based on a per kWh basis.

State expenditures on electricity also increase minimally in fiscal 2012, as the \$3.0 million special assessment charged to electric companies and gas companies is passed on to electric customers, including the State.

**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 will increase significantly beginning in fiscal 2016. *For illustrative purposes*, based on fiscal 2010 electricity consumption, expenditures for Baltimore City alone increase by \$1.5 million in fiscal 2016.

### **Additional Comments:**

#### *Potential Cost Implications of Offshore Wind*

Depending on the underlying assumptions made, the total estimated costs, and therefore the impact on electricity costs in the State, vary widely. **Appendix A** summarizes some of the factors that influence estimates of the costs of long-term PPAs with an offshore wind generator. Exhibit 3 illustrates the potential increase in costs associated with a 500-MW offshore wind generator, based on EIA cost estimates. The total project cost assumes a 25-year PPA with a base generation rate of \$0.19 per kWh and includes an escalating operation and maintenance charge (effective rate of \$0.21 per kWh in 2016, increasing to \$0.23 per kWh in 2040). The total project cost also incorporates indirect costs, which include an energy value adjustment, since wind turbines tend to generate more electricity when electricity rates are lower, and the cost of capacity shortfall, since wind generation can be intermittent. Indirect costs assume the PPA is awarded to an

offshore wind generator off the Maryland, Delaware, or New Jersey coast. The total increased cost is the difference between the total project costs and costs identified in EIA’s long-term forecast for electricity rates, which are essentially flat. The annual cost decreases from \$229.2 million in the first year to \$160.7 million at the end of the 25-year period. Over the 25-year PPA, the additional cost totals \$4.6 billion. The increased cost per residential customer is the increase in costs to an average household, based on an average monthly electricity consumption of 1,026 kWh.

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**Exhibit 3**  
**Costs Associated with a 500-MW Offshore Wind Generator – EIA Model**

<u>Year</u>	<u>Total Project Cost (per MWh)</u>	<u>Total Increased Cost (\$ in Millions)</u>	<u>Increased Cost Per Residential Customer</u>
2016	\$228.4	\$229.2	\$43.35
2017	229.3	228.2	42.65
2018	230.3	227.2	41.95
2019	231.2	191.7	34.99
2020	232.2	190.6	34.34
2021	233.2	189.6	33.78
2022	234.2	188.5	33.16
2023	235.3	187.2	32.58
2024	236.4	185.9	31.90
2025	237.4	184.5	31.29
2026	238.5	183.1	30.71
2027	239.6	181.8	30.15
2028	240.7	180.4	29.56
2029	241.9	178.7	28.96
2030	243.0	177.6	28.44
2031	244.3	175.9	27.85
2032	245.6	174.1	27.24
2033	247.0	172.0	26.61
2034	248.4	169.6	25.94
2035	249.8	167.6	25.32
2036	251.1	167.5	25.06
2037	252.6	165.9	24.52
2038	254.0	164.2	24.00
2039	255.6	162.5	23.47
2040	257.1	160.7	22.95
<b>Total</b>		<b>\$4,584.3</b>	

Source: Public Service Commission, Department of Legislative Services

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**Exhibit 4** illustrates the potential impact of a 25-year PPA with a 500-MW offshore wind generator, based on another set of assumptions. This exhibit uses the Bluewater Wind PPA as a model and assumes that conventional electricity costs increase by 4% annually and that the kWh cost of wind under a PPA increases by 2.5% annually. In this exhibit, the total cost per MWh is lower than the EIA-based model due to different assumptions for the generation portion of the PPA. This estimate assumes a base generation rate of \$0.11 per kWh generation cost in 2016, which is considerably lower than the base generation rate under the EIA-based scenario in Exhibit 3. Exhibit 3 also incorporates indirect costs, making an effective cost of \$0.17 per kWh in 2016. Under the Bluewater model, the annual cost decreases from \$126.9 million in the first year to \$43.3 million at the end of the 25-year period. The additional cost over the 25-year PPA is \$2.5 billion.

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**Exhibit 4**  
**Costs Associated with a 500-MW Offshore Wind Generator – Bluewater Model**

<u>Year</u>	<u>Total Project Cost (per MWh)</u>	<u>Total Increased Cost (\$ in Millions)</u>	<u>Increased Cost Per Residential Customer</u>
2016	\$164.9	\$126.9	\$23.99
2017	169.0	121.9	22.77
2018	173.3	118.2	21.83
2019	177.6	116.2	21.20
2020	182.0	121.9	21.95
2021	186.5	119.1	21.21
2022	191.2	113.8	20.02
2023	196.0	114.2	19.87
2024	200.9	112.6	19.33
2025	205.9	114.1	19.36
2026	211.1	118.6	19.89
2027	216.4	118.1	19.58
2028	221.8	116.7	19.12
2029	227.2	113.8	18.44
2030	233.0	102.7	16.45
2031	238.9	101.9	16.13
2032	244.8	94.3	14.76
2033	250.8	88.5	13.70
2034	257.2	84.9	12.98
2035	263.6	78.1	11.80
2036	270.2	75.4	11.28
2037	276.9	68.3	10.11
2038	283.9	60.7	8.87
2039	291.0	52.3	7.56
2040	298.3	43.3	6.18
<b>Total</b>		<b>\$2,496.3</b>	

Source: Maryland Energy Administration, Department of Legislative Services

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Legislative Services advises that the above scenarios are provided as an example of how the underlying assumptions used to evaluate a PPA can significantly affect the estimated costs. Both estimates are based on data from existing PPAs; however, the EIA-based estimate in Exhibit 3 incorporates more recent data into the base generation rate. Thus, this is the data used to project increases in costs to the State and local governments in the estimates above. However, Legislative Services notes that, based on the experience of similar proposals (as shown in Exhibit 1), a wide range of costs may occur. Therefore, actual costs may vary significantly depending on the bids submitted and ultimately approved. Total costs will also be impacted by any additional federal or State subsidies made available to offshore wind developers.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** None.

**Information Source(s):** Department of Natural Resources, Maryland Energy Administration, Office of People's Counsel, Public Service Commission, U.S. Department of Energy, National Renewable Energy Laboratory, Energy Information Administration, Department of Legislative Services

**Fiscal Note History:** First Reader - March 2, 2011  
ncs/lgc Revised - Updated Information - April 5, 2011

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## **Appendix A**

### **Key Variables in the Cost of Offshore Wind Generation**

*Installed Project Costs* – The total project cost of a wind generating facility includes the cost of turbines and foundations. Offshore wind projects may also experience significant costs to integrate the facility into the electric grid. Total costs may be calculated based on estimates provided by the U.S. Department of Energy, which average the costs of existing facilities. These costs may also be estimated based on the experience of specific PPAs. Therefore, project costs may vary greatly depending on project size and characteristics.

*Discount Rate* – The discount rate reflects the cost of capital, comparable to the interest rate, for installing a major wind project. Many estimates use an 8% discount rate; however, in some analyses where projects are financed by equity investments, the true cost of capital and, therefore, the discount rate, may exceed 20%.

*Efficiency Rate* – A wind generating station does not generate electricity at 100% of its nameplate capacity. The expected generation from a wind turbine is calculated by applying an efficiency factor to the capacity (expected generation = nameplate capacity  $\times$  hours in a year  $\times$  capacity factor). Depending on wind conditions and facility siting, the efficiency of offshore wind facilities is estimated to be between 30% and 40%. Most U.S. estimates are close to 38%, although since no offshore facilities are operating on the Atlantic Coast, this assumption has not been tested.

*Other Market Factors* – Installing an offshore wind facility with a PPA is likely to have significant impact on RPM capacity markets, LMP, the value of existing RECs, and market clearing prices.

*Cost for Conventional Resources* – To calculate the increased cost of electricity purchased from an offshore wind generating facility, a baseline of projected electric costs from conventional resources must be calculated. The assumptions made to project the baseline costs have a significant impact on the calculation of increased costs. If an estimate assumes that the cost of conventional electricity increases over time, the incremental cost of an offshore wind generator is decreased. If an estimate assumes that the cost of conventional electricity does not increase over time, the incremental cost of an offshore wind generator is higher. Additionally, when considering options for new generation, costs may be compared between projects, instead of against a baseline.

EIA projects regional electricity prices through 2035. The current 25-year forecast predicts that the cost of conventional electricity will be relatively flat over the next 25 years (-0.24% annual growth rate). This estimate assumes increased use of renewable energy and moderate growth in consumption.

## ANALYSIS OF ECONOMIC IMPACT ON SMALL BUSINESSES

TITLE OF BILL: Maryland Offshore Wind Energy

BILL NUMBER: SB 861/HB 1054

PREPARED BY: MEA

### PART A. ECONOMIC IMPACT RATING

This agency estimates that the proposed bill:

WILL HAVE MINIMAL OR NO ECONOMIC IMPACT ON MARYLAND SMALL BUSINESS

OR

WILL HAVE MEANINGFUL ECONOMIC IMPACT ON MARYLAND SMALL BUSINESSES

### PART B. ECONOMIC IMPACT ANALYSIS

This bill will require a portion of electricity sales in Maryland to reflect long-term contracts of 25 years or more. This is likely to create greater price stability in energy rates, creating greater long-term investment certainty which may have a positive impact on creation of new small businesses. To the extent that electricity rates rise as a result of this bill, small businesses will be impacted.