

**Report on the Status of Net Energy Metering  
In the State of Maryland**

**Prepared by  
The Public Service Commission of Maryland**

**Prepared for the General Assembly of Maryland  
Under Public Utilities Article § 7-306(h)**

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## Executive Summary

This report is prepared by the Public Service Commission of Maryland (“Commission”) in compliance with Public Utilities Article (“PUA”) §7-306(h), *Annotated Code of Maryland*. PUA § 7-306(h) requires the Commission to report on the status of the net metering program including the amount of capacity by type of energy resource from net-metered facilities in the State and recommend whether the cap on eligible capacity should be altered. This is the sixth report prepared by the Commission. The initial report was produced in 2008.

At this time, the Commission does not recommend changes to the eligibility cap for net metering. The current eligible limit of 1,500 megawatts (“MW”) far exceeds the level of installed capacity of approximately 100 MW. There has been an increase in the number of recent installations; however, it is unlikely that the current cap would be approached without several years of advance notice.

## Net Metering in Maryland

Net metering is a method of simplifying the measurement of energy produced by a renewable energy generator when it is connected to an electric utility distribution system. Net energy metering generally utilizes the existing meter for all calculations avoiding the expense of a second meter to separately measure incoming and outgoing energy. Net metering is permitted by law for solar, wind, biomass, micro combined heat and power, fuel cell and closed conduit hydro electric generators that are intended primarily to supply the customer’s annual energy usage. The term “net metering” refers to measurement of electricity on the basis that is net of energy used and produced by an eligible customer-generator during a single reading period, *e.g.*, one month. As discussed further below, the terms of utility tariffs typically require a customer to pay the monthly customer charge, regardless of the amount of energy produced. However, for energy billed, the customer pays only for energy that is used, netted against any generation produced by the customer. The practical effect of this policy is to allow customers to use the utility grid as if it were battery storage, so that excess energy produced at any given instant could be stored for later use. The law also provides for monetary payment for net excess generation when the customer terminates service or at the end of the net metering year.<sup>1</sup> The dollar value of net excess generation is equal to the generation or commodity portion of the rate that the eligible customer-generator would have been charged by the electric company averaged over the previous 12-month period multiplied by the number

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<sup>1</sup> PUA § 7-306(f)(6) states: (i) On or before 30 days after the billing cycle that is complete immediately prior to the end of April of each year, the electric company shall pay each eligible customer-generator for the dollar value of any accrued net excess generation remaining at the end of the previous 12-month period ending with the billing cycle that is complete immediately prior to the end of April; (ii) Within 15 days after the date the eligible customer-generator closes the eligible customer-generator’s account, the electric company shall pay the eligible customer-generator for the dollar value of any accrued net excess generation remaining at the time the eligible customer-generator closes the account. *See also* PUA § 7-306(f)(7) for certain provisions applicable to electric cooperatives.

of kilowatt hours of net excess generation. The following table summarizes the total amount of excess generation credit payouts by rate class for each of the utilities operating in Maryland.

### **Payout Summary of Net Excess Generation**

<b>Electric Utility</b>	<b>Residential</b>	<b>Commercial</b>	<b>Total</b>
<b>Baltimore Gas and Electric Company</b>	\$ 19,136.34	\$ 15,189.11	\$34,325.45
<b>Choptank Electric Cooperative</b>	\$ 42,097.99	\$ 94,215.47	\$136,313.46
<b>Delmarva Power and Light Company</b>	\$ 10,510.31	\$ 20,102.59	\$ 30,612.90
<b>Easton Utilities Commission</b>	\$ 20.68	\$ 1,079.64	\$ 1,100.32
<b>Hagerstown Municipal Electric Light Plant</b>	\$ -	\$ -	\$ -
<b>Thurmont Municipal Light Company</b>	\$ -	\$ -	\$ -
<b>Mayor and Council Berlin</b>	\$ -	\$ 214.20	\$ 214.20
<b>Potomac Electric Power Company</b>	\$ 11,931.28	\$ 3,013.78	\$ 14,945.06
<b>Potomac Edison Company</b>	\$ 5,251.46	\$ 3,450.71	\$ 8,702.17
<b>Williamsport Municipal Light Plant</b>	\$ -	\$ -	\$ -
<b>Southern Maryland Electric Cooperative</b>	\$ 1,986.62	\$ 1,526.82	\$ 3,513.44
<b>State Total</b>	<b>\$90,934.68</b>	<b>\$138,792.32</b>	<b>\$229,727.00</b>

Eligible customer-generators<sup>2</sup> also benefit by less expensive interconnection with the utility, *e.g.*, only a single standard meter and without additional switches. The ease of interconnection allows the customer to use the renewable generator in a grid-connected manner without significant additional installation or operating expense, thus improving the benefit of the renewable generator.

While the net energy metering law in PUA § 7-306 permits renewable net energy metering, utilities implement net energy metering operations through tariffs that are filed with the Commission. These tariffs place terms and conditions on the net energy metering operations and specify monthly customer charges. These tariffs also include requirements for eligibility which cap the maximum installed size as well as the State-wide limit. Any change to the Statute requires each utility to revise its tariff and file the revision with the Commission.

<sup>2</sup> “Eligible customer-generator” means a customer that owns and operates, leases and operates, or contracts with a third party that owns and operates a biomass, micro combined heat and power, solar, fuel cell, wind or closed conduit hydro electric generating facility that: (i) is located on the customer’s premises or contiguous property; (ii) is interconnected and operated in parallel with an electric company’s transmission and distribution facilities; and (iii) is intended primarily to offset all or part of the customer’s own electricity requirements. *See* PUA § 7-306(a) (4).

## Eligibility Cap

Electric companies are required to permit net metering for eligible customers. The current limit on eligible renewable generation capacity in the State is 1,500 MW. This limit represents about 10 percent of the peak demand, which is on the order of 15,000 MW in the State.<sup>3</sup> The generating capacity of an electric generating system used by an eligible customer-generator for net metering may not exceed 2 megawatts.

## Current Level of Renewable Deployment

Commission Staff surveyed Maryland electric companies for the number of net-metered facilities currently operating in each electric company distribution service territory. The total amount of generation has increased from approximately 364 kW in 2007 to 101,692 kW through the end of June 2013. The table below shows the results of the Commission Staff's survey of net-metered installations through June 30, 2013 as compared with net-metered installations from the previous reporting period in 2012.

2013						
Electric Utility	Solar	Wind	Biomass	Utility Total	% Change	kW Change
Kilowatts of Installed Capacity						
<b>Baltimore Gas and Electric Company</b>	36,915	113	0	37,027	65%	14,626
<b>Choptank Electric Cooperative</b>	4,916	61	0	4,977	147%	2,958
<b>Delmarva Power and Light Company</b>	21,560	930	0	22,490	61%	8,538
<b>Easton Utilities Commission</b>	155	0	0	155	33%	39
<b>Hagerstown Municipal Electric Light Plant</b>	35	0	0	35	0%	0
<b>Thurmont Municipal Light Company</b>	33	0	0	33	n/a	33
<b>Mayor and Council of Berlin</b>	66	0	0	66	85%	30
<b>Potomac Electric Power Company</b>	23,863	2	0	23,865	77%	10,349
<b>Potomac Edison Company</b>	7,373	161	0	7,534	124%	4,168
<b>Williamsport Municipal Light Plant</b>	0	0	0	0	n/a	0
<b>Southern Maryland Electric Cooperative</b>	5,147	42	320	5,510	79%	2,434
<b>State Total</b>	<b>100,062</b>	<b>1,310</b>	<b>320</b>	<b>101,692</b>	<b>74%</b>	<b>43,177</b>

<sup>3</sup> Ten-Year Plan (2012-2021) of Electric Companies in Maryland, April 2013, Appendix Table 4(a), page 52.

2012						
Electric Utility	Solar	Wind	Biomass	Utility Total	% Change	kW Change
	Kilowatts of Installed Capacity					
<b>Baltimore Gas and Electric Company</b>	22,294	107	0	22,401	50%	7,475
<b>Choptank Electric Cooperative</b>	1,946	73	0	2,019	75%	867
<b>Delmarva Power and Light Company</b>	11,965	926	1,060	13,952	227%	9,685
<b>Easton Utilities Commission</b>	116	0	0	116	260%	84
<b>Hagerstown Municipal Electric Light Plant</b>	35	0	0	35	0%	0
<b>Thurmont Municipal Light Company</b>	0	0	0	0	n/a	0
<b>Mayor and Council of Berlin</b>	36	0	0	36	n/a	36
<b>Potomac Electric Power Company</b>	13,513	2	0	13,516	110%	7,087
<b>Potomac Edison Company</b>	3,221	144	0	3,365	0%	-3
<b>Williamsport Municipal Light Plant</b>	0	0	0	0	n/a	0
<b>Southern Maryland Electric Cooperative</b>	2,729	26	320	3,075	101%	1,545
<b>State Total</b>	<b>55,856</b>	<b>1,278</b>	<b>1,380</b>	<b>58,515</b>	<b>84%</b>	<b>26,776</b>

## Recommendation on Eligibility Cap

As of June 2013, the level of installed capacity is 6.6 percent of the current limit. At this time, the Commission does not view the 1,500 MW limit as a barrier to installation of new renewable generation. The net-metering survey asked for information on the date of installation. This information indicates an increase in new renewable capacity in recent years. However, the rate of installation does not indicate that the cap would be approached in the near future.

## Net Metering Regulations COMAR 20.50.10

COMAR 20.50.10, which promotes the deployment of net-metered facilities and simplifies the requirements for customer interconnection, was adopted as final and became effective on September 1, 2011. The regulations address the allowed size for net metering eligibility as a multiple of customer load and establish aggregate net metering for agricultural, municipal, and non-profit customers.

**Eligible Customer Size.** Under the regulations, a customer may net meter using facilities that are sized to produce up to 200 percent of a customer's annual baseline kWh use.

**Aggregate Net Metering.** Aggregation of net-metered loads is the practice of combining meter readings from more than one utility service point. Utilities can provide this service by using physical interconnection of service points or by summing the total

usage from two or more meters (virtual aggregation). Only certain types of customers are permitted to use this service. Agricultural, municipal, and non-profit (*e.g.* churches or schools) entities are permitted to aggregate net-metered loads under the regulations. The practice of aggregation may provide increased incentives for system deployment by providing greater economies of scale for installations and allowing a customer to make the most efficient use of existing solar or wind resources. An example of an agricultural application of aggregate net metering would consist of combining the load on the farm's barn, outbuildings, and residence. A solar array may be installed on a barn which would normally have excellent sun exposure, although it would use little electric power. Joining the load of the residence (which may have less roof area or be in a shady location) and out buildings to the load of the barn would make the installation practical and cost-effective for the customer.

By acceptance of utility tariffs, the Commission has implemented a Net Metering Aggregation Pilot Program. Current net metering tariffs implement COMAR 20.50.10.07 and .08 by requiring utilities to provide aggregate net metering to more than one meter for certain types of customers. The net metering aggregation regulations are being implemented through utility-specific pilot programs with some temporary restrictions in order to allow for a smooth and cost-effective implementation. The Meter Aggregation Pilot Program with its temporary restrictions is scheduled to end on December 1, 2013, at which time the Meter Aggregation Program will be implemented and open to all eligible customers. The table below shows the number of applications and installed projects for the net metering aggregation pilot reported by utilities as of June 30, 2013.

**Applications/Projects for Net Metering Aggregation**

<b>Electric Utility</b>	<b>Applications Pending</b>	<b>Number of Projects</b>
<b>Baltimore Gas and Electric Company</b>	3	3
<b>Choptank Electric Cooperative</b>	0	5
<b>Delmarva Power and Light Company</b>	8	3
<b>Easton Utilities Commission</b>	0	0
<b>Hagerstown Municipal Electric Light Plant</b>	0	0
<b>Thurmont Municipal Light Company</b>	0	0
<b>Mayor and Council of Berlin</b>	0	0
<b>Potomac Electric Power Company</b>	1	1
<b>Potomac Edison Company</b>	0	7
<b>Williamsport Municipal Light Plant</b>	0	0
<b>Southern Maryland Electric Cooperative</b>	0	2
<b>State Total</b>	12	21

## **Net Metering Working Group**

The Commission's Technical Staff facilitates a stakeholder Net Metering Working Group ("NMWG") to aid utilities, installers, and customers in the implementation of the new regulations and to address any additional technical issues that may arise as each utility drafts and files revised net metering tariffs and administers its meter aggregation pilot program. Current activities of the group include development of documentation to assist customers with the application and operation procedures for net metering.

## **Other Issues**

At this time, the Commission has not identified other matters relating to the net-metering eligibility limit or other issues relating to net metering that require the action of the General Assembly.