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
In Compliance with §7-306(i) of the
Public Utility Companies Article,
Annotated Code of Maryland

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Executive Summary

This report is prepared by the Public Service Commission ("Commission") in compliance with §7-306(i) of the Public Utility Companies Article, *Annotated Code of Maryland* ("PUC Article"). This section requires the Commission to report on 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 second 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 2.45 (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 advanced 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 metering is permitted by the law for solar, wind, and biomass generators that are intended to supply no more than 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 a customer during a single reading period, e.g. one month. The terms of utility tariffs typically require a customer to pay the monthly customer charge, regardless of the net energy used. However, for energy billed, the customer only pays 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 battery storage, so that excess energy produced at any given instant can be captured for later use.

Customer-generators benefit also by less expensive interconnection with the utility (e.g. only a single standard meter, and without additional switches). In this manner electricity needs in excess of the renewable output can be obtained from the grid without having to disconnect or shutdown the renewable generator. The ease of interconnection allows the customer to use the renewable generator in a grid-connected manner without significant installation or operating expense, thus improving the benefit of the renewable generator.

While the net metering law in §7-306 of the PUC Article permits renewable net metering; utilities implement it through tariffs that are filed with the Commission. These tariffs place terms and conditions on the net-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. The result of any changes to the legislation would be to require each utility to revise its tariff and file the revision with the Commission.

Eligibility Cap

Electric Companies are required to permit net metering for eligible customers. The alternative would be either to prohibit interconnection of renewable generation to the utility grid or to require use of a more expensive metering/switching arrangement to meter the energy flow precisely in both directions. Both of these conditions would reduce the benefit of the customer-generator. The current limit on eligible renewable generation capacity is 1,500 MW. This limit would represent about 8% of the peak demand of about 20,000 MW in the State.

Current Level of Renewable Deployment

The Commission staff surveyed Maryland electric companies for the number of net-metered facilities currently operating in each of the electric company's distribution territories. The total amount of generation has increased from approximately 364 kW in 2007 to 2450 kW in 2008. The table below shows the results of the Commission's Staff survey of net-metered installations.

2008				
Electric Utility	**Solar**	**Wind**	**Biomass**	**Utility Total**
	Kilowatts of Installed Capacity			
A & N Electric Cooperative	No Response			0
Baltimore Gas and Electric Company	103.3	0	0	103.3
Choptank Electric Cooperative	16.2	0	0	16.2
Delmarva Power and Light Company	55.7	24.4	0	80.1
Easton Utilities	0	0	0	0
Hagerstown Municipal Light Company	1.0	0	0	1.0
Town of Thurmont	No Response			0
Town of Berlin	0	0	0	0
Potomac Electric Power Company	98.56	0	0	98.56
Potomac Edison Company	16.97	18		34.97
Williamsport Light	No Response			0
Southern Maryland Electric Cooperative	29.6	0	0	29.6
Somerset Electric Cooperative	No Response			0
State Total	**321.33**	**42.4**	**0**	**363.73**

2009					% Change	kW Change
Electric Utility	Solar	Wind	Biomass	Utility Total		
	Kilowatts of Installed Capacity					
A & N Electric Cooperative	None					
Baltimore Gas and Electric Company	302.8	0.8		303.6	194%	200.3
Choptank Electric Cooperative	21.2	37.2		58.4	260%	42.2
Delmarva Power and Light Company	85.4	27.7		113.1	41%	33
Easton Utilities	None			0		
Hagerstown Municipal Light Company	1.0			1	0%	0
Town of Thurmont	None			0		
Town of Berlin	None			0		
Potomac Electric Power Company	713.3			713.3	624%	614.74
Potomac Edison Company	1035.5	144.9		1180.4	3275%	1145.43
Williamsport Light	None			0		
Southern Maryland Electric Cooperative	83.2			83.2	181%	53.6
Somerset Electric Cooperative	None			0		
State Total	2242.4	210.6	0	2453	574%	2089.27

Recommendation on Eligibility Cap

As of January 2009, the level of installed capacity is less than 0.16% of the current limit.[1] At this time, the Commission does not view the 1,500 MW limit as a barrier to installation of new renewable sources. The data provided by 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.

Other Issues

The intent of the net metering legislation is to encourage private investment in renewable energy resources, stimulate in-state economic growth, and to enhance the continued diversification of the State's energy resource mix while reducing the costs of interconnection and administration. The Commission is aware of two ideas which have surfaced which could further these goals.

First, companies that desire to install large solar facilities on commercial rooftops would prefer to own and maintain these systems. However, property owners only qualify for net metering if they "own and operate or lease and operate" a renewable generating facility

[1] This year's 0.16% of the limit is an increase over the 2007 proportion of 0.024%.

located on their premises which is designed to primarily offset all or part of the customer's own electricity requirements. Removing the requirement that the property owner customer actually own and operate the renewable generating facility would facilitate large scale solar installations by allowing the solar facility owner to receive renewable energy credits and the customer property owner to net meter.

Second, net metering is limited to biomass, solar or wind electric generating facilities. Adding combined heat and power ("CHP") facilities to the definition of facilities that a customer could use to provide electricity to their property would meet most of the goals of the legislation. CHP, often called co-generation facilities, generally use the otherwise wasted heat from an electric generator or engine used as a prime mover. In some cases the generator or engine may use waste gases from a production process as its fuel. The resulting combined efficiency can produce less than half the emissions (including greenhouse gases) that would otherwise be produced to serve the customer's electrical or thermal needs. Because of its high efficiency and low emissions relative to generation supplying grid power, CHP could be considered as an eligible power source for net metering. Although the primary electric generator is usually fueled by natural gas, which is not a renewable source of generation, utilizing the waste heat reduces emissions, diversifies the State's energy resource mix and will stimulate in-state economic growth.