

PUBLIC SERVICE COMMISSION OF MARYLAND

RENEWABLE ENERGY PORTFOLIO STANDARD REPORT OF 2008

Analysis associated with Compliance Year 2006

In compliance with Section 7-712 of
the Public Utility Companies Article,
Annotated Code of Maryland

Prepared for the
General Assembly of Maryland

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I. Introduction and Summary

A. Report Contents

This document constitutes the 2008 annual report of the Public Service Commission of Maryland (“Commission”) regarding the Maryland Renewable Energy Portfolio Standard (“RPS”). The Report is submitted in compliance with Section 7-712 of the Public Utility Companies Article, *Annotated Code of Maryland* (“PUC Article”). PUC Article § 7-712 requires that, on or before February 1 of each year, the Commission shall report to the General Assembly on the status of the implementation of the RPS. The electric suppliers are not required to file a RPS compliance report with the Commission for the prior calendar year until April 1 of the current year. Consequently, the Report covers events associated with the Maryland RPS and focuses upon developments that have occurred in 2007, including highlighting data from the compliance reports filed in 2007 which covered the compliance year 2006.¹

In compliance with PUC Article § 7-712, topics addressed in the report include the availability of Tier 1 and Tier 2 renewable sources, projects supported by the Maryland Renewable Energy Fund, and other pertinent information. The report also provides information associated with the history of the program, accomplishments made over the past year, and more recent actions including forthcoming milestones.

B. Objectives of the Program

The objective of PUC Article §7-701 *et seq.* (“RPS Legislation”) is to recognize and develop the benefits associated with a diversity of renewable energy supplies to serve Maryland. The Commission’s RPS Program does this by recognizing the environmental and consumer benefits associated with renewable energy and requiring that a set proportion be included in all retail electricity sales. This recognition is demonstrated through the creation, sale and transfer of renewable energy credits (“RECs”). The development of renewable energy sources is further promoted by requiring electricity suppliers to pay a financial penalty for failing to acquire sufficient RECs to satisfy the RPS as set forth in PUC Article §7-703. The penalty is used to support the creation of Tier 1 sources in the State.

C. Overview of the Maryland RPS Program

Under the RPS Legislation, electricity suppliers are required to meet a renewable energy portfolio standard. One requirement of the legislation is that the Commission establish an RPS Program. A system must also be in place to implement the RPS and facilitate the trading of Renewable Energy Credits that represent the attributes associated with the generation of electricity using Tier 1 and Tier 2 resources.²

¹ RPS Compliance Year 2006 was the first compliance year and the deadline for the reports occurred in 2007. The compliance year information that is emphasized and reviewed within this report reflects RPS results from Compliance Year 2006. These results are highlighted in Table 3.

² See PUC Article §7-708.

A REC is equal to the renewable attributes associated with one megawatt-hour of energy generated using specified renewable sources. Each supplier must present, on an annual basis, RECs equal to the percentage specified by the RPS Legislation. Generators and suppliers are allowed to trade RECs using a Commission-sanctioned or established REC registry and trading system. The registry currently authorized is provided by PJM's Environmental Information Services ("PJM-EIS") affiliate. A REC has a three-year life during which it may be transferred, sold, or otherwise redeemed.³ The RPS Legislation at PUC Article § 7-704 allows an electricity supplier to receive and accumulate RECs created on or after January 1, 2004.

Suppliers that do not meet the annual RPS are required to pay a compliance fee, as prescribed in the RPS Legislation. Compliance fees are a source of funding for the Maryland Renewable Energy Fund ("Fund"). The Fund is designed to promote the development of renewable energy sources in Maryland. The Commission is responsible for creating and administering the overall RPS Program. Responsibility for developing renewable energy sources has been vested with the Maryland Energy Administration ("MEA"). Additional information regarding the Fund can be found in the Annual Report that is filed by MEA to the Commission regarding the status of the Fund.⁴ According to the most recent report the uncommitted balance of the Fund is currently \$38,209.45 and, at the time of this writing, no projects have been supported by the Fund.

Within the RPS Program various processes are occurring on a continual basis. This includes the certification of the renewable energy facilities as well as utilizing a REC tracking system that catalogs facilities and credits them with RECs associated with the generation of electricity from a renewable fuel source. Monitoring the supply of RECs available and maintaining an infrastructure to account for and trade RECs is necessary to operate an RPS Program effectively.

Registration of Renewable Energy Facilities

Certifying a Renewable Energy Facility ("REF") requires due diligence in determining whether each facility meets the standards set forth by the Maryland RPS Program. Potential applicants are initially directed to the application for renewable energy facility certification on the Commission's RPS website. Once there, applicants can determine their geographical eligibility. Applicants must also meet the fuel source requirements associated with Tier 1 and Tier 2 REC creation. Verification of the fuel source in question is usually completed with the aid of the Energy Information Administration Form 860 (EIA-860). This form, required of all facilities with a rated capacity that is greater than 1 megawatt ("MW"), aids in validating each facility's rated name plate capacity, fuel source(s), location, and commercial operation start date.

Other pieces of documentation are required to verify that the owner of the facility is applying for and authorizing the issuance of RECs through a Generation Attributes Tracking System ("GATS") account administered by PJM-EIS. The GATS account will be established with the State facility certification identification number issued by the Commission upon approval of the application. Facilities that co-fire their REC-eligible renewable fuel with non-

³ See PUC Article §7-701.

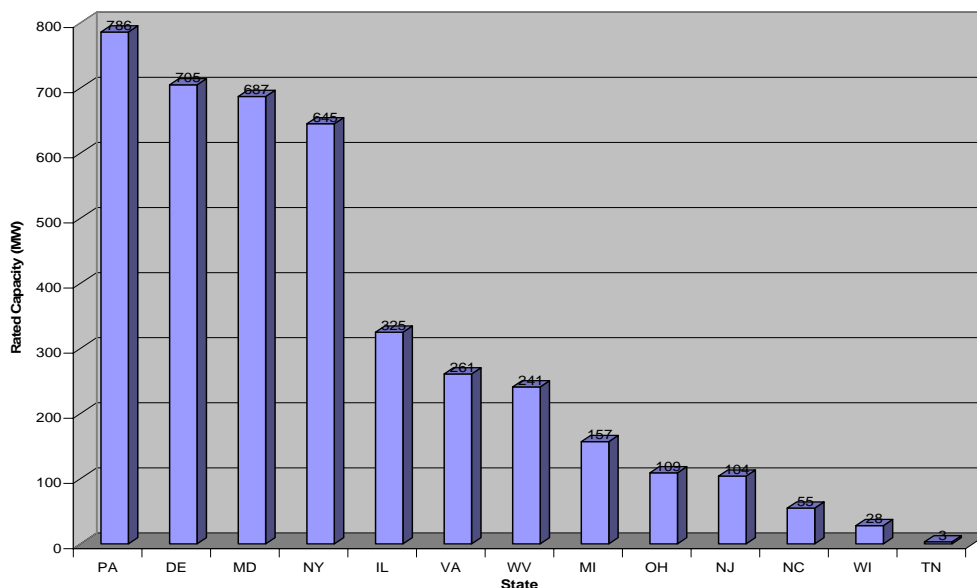
⁴ See COMAR 20.61.05.

eligible fuel sources must submit to GATS a formula or method for accounting for the proportion of total electricity generation that will be credited with RECs.

Facilities eligible for the Maryland RPS must operate in PJM or PJM adjacent states. Included are the states of Maryland, Pennsylvania, New Jersey, Delaware, Virginia, West Virginia, New York, North Carolina, Tennessee, Kentucky, Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, and the District of Columbia. Eligible fuel sources for Tier 1⁵ RECs and Tier 2 RECs are listed in PUC Article § 7-701 (l) and PUC Article § 7-701 (m), respectively. A comprehensive listing of RECs currently certified with the Maryland RPS Program can be found in Appendix A⁶ of this document.

The chart below shows the amount of rated capacity that is currently registered with the Maryland RPS Program and the geographical allocation of the RECs that are being created. The majority of the facilities currently registered are found in the Mid-Atlantic region. Based upon the renewable energy facilities that have been certified by the Commission, Delaware, Maryland, Pennsylvania, and New York are the largest sources of RECs.

Chart 1: MD RPS Certified Rated Capacity by State (as of 11/2/2007)



Due to the statutory changes⁷ made to the RPS Legislation in April 2007, the certification process may change slightly. Proposed regulations addressing this matter were adopted for

⁵ Tier 1 renewable fuel sources include electricity derived from solar power, wind power, qualifying biomass, methane from the anaerobic decomposition of organic material in a landfill or wastewater treatment plant, geothermal power, ocean power, a fuel cell utilizing a Tier 1 renewable energy resource, and hydroelectric power with a rated capacity that is less than 30 megawatts.

⁶ The rated capacity figures for the renewable energy facilities is for the facility as a whole and does not partition out the amount attributable to renewable fuel sources only. An estimate for the Edge Moor facilities located in Delaware is 10% of the rated capacity figure given, as being attributable to a renewable fuel source.

⁷ See Chapters 119 and 120, Acts 2007.

publication in December 2007. If adopted as final regulations, these regulations would implement a process to facilitate the certification of renewable energy facilities that use solar power as a fuel source and are 10 kW or less in rated capacity. The certification process will use a Solar System Specifications form that will provide necessary information unique to solar systems with this rated capacity. Renewable energy facilities that do not fall into this category will continue to follow the process established for standard REF certification.

Successful Operation of PJM GATS

GATS is an integral part of the RPS Program. This is in keeping with PUC Article § 7-708 which requires the Commission to use, to the extent practicable, a trading system that is consistent with and operates in conjunction with a trading system developed by PJM Interconnection, LLC. GATS is a system designed and operated by PJM-EIS that is used to create, record, and track RECs. GATS monitors the generation of participating units and creates monthly RECs based upon actual renewable output. A GATS certificate from a Commission-certified renewable energy facility is identified as a Maryland eligible Tier 1 or Tier 2 REC.

Through the GATS system, PJM-EIS collects generation data for facilities certified for RPS programs in various states. Upon issuance of a Maryland RPS Certification Number, a facility may open a GATS account for use with the Maryland RPS Program. Facilities often are eligible for participation in numerous state RPS programs, and, as a result, they will be certified with multiple states and be issued multiple state certification numbers. A facility that is interconnected with PJM will have its electricity generation data automatically uploaded.

GATS creates RECs at the end of each month. The number of RECs created is based upon electricity generation from renewable sources. RECs are time stamped on a monthly basis, and this time stamp serves to ensure that the REC expiration date, which may vary by state, is clear. Facilities that utilize more than one fuel source to generate electricity will have a formula on file with GATS to determine the percentage of electricity that comes from each renewable fuel source. A generating unit that has registered as a multi-fuel generator is required to split its generation prior to certificates being created. Certificates, that have unique identification numbers and can be associated with the fuel types registered, are awarded by each renewable fuel type. If a generating unit fails to split its fuel, then RECs are not awarded to its GATS account. The formula used to determine the proportion of electricity coming from each fuel source is reviewed during the REF certification process. Only electricity coming from an eligible Tier 1 or Tier 2 fuel source will be credited with Tier 1 or Tier 2 REC creation.

A GATS account is a requirement for a REF's generation to result in Maryland RECs under the Maryland RPS Program.⁸ However, GATS accounts may be created by facilities that are not interconnected with PJM. Load serving entities are charged an annual fee of \$2000 for the maintenance of the GATS account. A volumetric fee of \$ 0.008 per MWh is also charged to load serving entities in the state(s) that use GATS. Suppliers participating in the trading of RECs through GATS are charged an annual \$1000 subscription fee as well as \$0.25 per MWh transaction fee for transfers of certificates to reserve sub-accounts. All transactions that occur between a generator or supplier with a GATS account and a party without a GATS account will

⁸ See COMAR 20.61.02.

result in the retirement of the REC that is sold outside of GATS. Bilateral transactions are not tracked by the GATS system. Each REC tracked in GATS has a unique serial number that aids in ensuring against the double counting of RECs and helps distinguish between RECs that are created by a certain facility in a given month. Renewable energy facilities that are not interconnected with PJM submit their generation figures to PJM-GATS on a monthly basis.

PJM-EIS does not charge facilities to participate if they have a rated capacity of 10 MW or less. Other services exist to aid in the creation, tracking and trading of RECs and provide additional services that may be beneficial for certain types of RECs. Solar RECs are unique in that the quantity of RECs and amount of electricity generation can be relatively small in comparison to the scope of REC operations that GATS deals with on a regular basis. As the solar portion of the RPS grows in significance, it may be necessary to review additional and supplemental REC tracking system options that can effectively manage an evolving RPS.

Other Facets of the Maryland RPS

Forms that target other aspects of the Maryland RPS program are available on the Commission's RPS website. An application to be certified for Industrial Process Load is posted. The compliance fee of a Commission designated Industrial Process Load customer is reduced in the event of a REC shortfall. Furthermore a load serving entity that serves Industrial Process Load may exempt from their RPS compliance obligation all of the electricity sales to a single customer in excess of 300,000,000 Kilowatt-Hours (kWh) per year if it is a certified Industrial Process Load.⁹ As of December 31, 2007, two facilities had been designated as an Industrial Process Load within the Maryland RPS.

Under COMAR 20.61.01.05 the compliance fee on a sale to an industrial or nonretail commercial customer may be waived upon a Commission finding of extreme economic hardship. For an application to be eligible for this designation the applicant must have met one or more of the following conditions.

- An applicant filing for an extreme economic hardship may have recently initiated or have been involved with a bankruptcy proceeding under 11 U.S.C § 101.
- Another situation that would warrant an extreme economic hardship is a firm with a credit rating of C (or equivalent designation) or lower by a nationally recognized credit rating agency.
- The Commission may also find an extreme economic hardship based upon a similar designation by a federal or other state program.
- An applicant seeking extreme economic hardship status may also present other documentation in order to make its case.

As of December 31, 2007, no facilities have applied for or received this designation from the Commission.

⁹ See PUC Article §7-703.

II. History of the Program

A. 2004 and 2005

Implementation of the Maryland Renewable Energy Portfolio Standard Program began in 2004. In Case No. 9019, the Commission considered certain threshold policy and administrative issues. At the close of formal proceedings, the Commission issued direction to Staff in a letter dated December 21, 2004. With Case No. 9019 as a foundation, Staff convened the RPS Working Group composed of representatives from electric utilities, electricity suppliers, renewable energy providers, REC traders, industry specialists, environmentalists, the Office of People's Counsel, and other interested parties. Beginning with a proposed set of regulations drafted to comply with the RPS Legislation and the Commission's direction regarding the issues in Case No. 9019, the RPS Working Group offered comments and alternative language on successive drafts of proposed regulations through April 2005.

On April 13, 2005, Staff filed recommended proposed RPS regulations, and the Commission opened Rulemaking 12. The Commission received comments and reply comments on the proposed regulations. The Commission held three Open Meetings on the RPS Regulations for the purpose of addressing outstanding issues raised by the parties. On May 25, 2005, the Commission voted to publish proposed RPS Regulations as Section 20.61 of the Code of Maryland Regulations (COMAR). The proposed regulations were published August 3, 2005 in the Maryland Register. The Proposed Regulations were adopted as published on a temporary emergency basis effective July 1, 2005. After additional comments and an Open Meeting, COMAR 20.61 was adopted as final and became effective November 24, 2005.

With regulations in place, the full implementation of the RPS Program began. Staff created the forms and processing mechanisms necessary to begin program administration. The Commission also established a website¹⁰ dedicated to the RPS program. Program forms, reference documents, RPS related links and a "Frequently Asked Questions" page are all found at this website. Applications for 2004 and 2005 retroactive RECs were obtainable at this website until the filing deadline of May 29, 2006. Applicants responded by requesting designation as certified Renewable Energy Facilities, authorization of retroactive RECs, and receipt of Industrial Process Load status. The Commission has issued numerous decisions on the aforementioned applications for participation in the Maryland RPS Program.

B. 2006

The first RPS compliance year began on January 1, 2006, concluded on December 31, 2006 and was based on RPS compliance results available in 2007. In addition to initiating the Tier 1 and Tier 2 REC requirements for retail electricity sales, the issuance of retroactive RECs concluded during the year and changes were made to the RPS regulations through Rulemaking 25.

¹⁰ Link to the MD PSC RPS website: <http://www.psc.state.md.us/psc/electric/rps/home.htm>.

Registration of Retroactive Renewable Energy Credits

RECs created on or after January 1, 2004 and before final regulations were adopted on November 24, 2005 are known as “retroactive RECs.” Under COMAR 20.61.03.02C, except in cases where good cause is shown, a retroactive REC application was required to be filed within the six-month period immediately after the effective date of final adoption of RPS implementation regulations. These retroactive RECs were partitioned into two categories, one category to account for generation that occurred during calendar year 2004¹¹ and the second category to cover the period spanning January 1, 2005 through November 24, 2005¹² (the date COMAR 20.61 became final and effective).

The deadline for filing applications requesting credit for 2004 and 2005 retroactive RECs passed on May 29, 2006. Renewable attributes associated with electricity generated over the course of calendar year 2004 were eligible for 2004 retroactive REC status, and renewable attributes associated with electricity generated from January 1, 2005 to November 24, 2005 were eligible for 2005 retroactive REC status. Retroactive RECs are identical to RECs in every way except that they are given a generation date of December 31 of the year they were generated as opposed to a generation date consisting of the month and year that the renewable electricity was created. Like all RECs, retroactive RECs can be banked for a period of three years.

Significant response to the availability of 2004 and 2005 retroactive RECs occurred over the course of 2006. On March 8, 2006, the Commission approved issuance of the first retroactive RECs. The last retroactive RECs were approved on September 13, 2006. The Commission approved 2,768,537 Tier 1 RECs and 3,972,563 Tier 2 RECs that were generated during the year 2004. The figures for 2005 retroactive RECs certified by the Commission were 762,520 Tier 1 RECs, and 339,627 Tier 2 RECs from certified facilities.

Rulemaking 25

Proposed revisions to COMAR 20.61 were filed on June 22, 2006 and, after publication, were adopted as final on December 6, 2006.¹³ Through these revisions, regulations addressing the Fund and its uses were adopted. Eligible criteria for projects that will be supported by the Fund were established and deadlines associated with the Supplier Annual Reports to the Commission were revised through Rulemaking 25.¹⁴ The due date for supplier annual compliance forms was brought forward from June 1, 2007 to April 1, 2007 and to April 1 for all subsequent years.

Also addressed was the addition of an alternative procedure to be used by generators or suppliers seeking RECs, which otherwise would not be able to secure certification of generation from their Regional Transmission Organization (RTO). The policy regarding the retroactive REC issuance found in COMAR 20.61.03.02 was changed to allow for certification methods that fell outside the bounds of verification from the facilities’ RTO. Those unable to obtain RTO

¹¹ These are known as 2004 retroactive RECs.

¹² These are known as 2005 retroactive RECs.

¹³ See Rulemaking 25.

¹⁴ See COMAR 20.61.05.

authentication included facilities that operated behind the meter, delivered electricity directly to an interconnecting utility, or operated in a RTO that could not verify electricity generation over a given time period. A third amendment addressed disclosures of information on the sale of renewable products.

III. Year 2007 Accomplishments

The first compliance year concluded on December 31, 2006, and the second compliance year began on January 1, 2007. With the conclusion of the first compliance year, the annual reports for Compliance Year 2006 were due from electricity suppliers and load serving entities on April 1, 2007. Other notable events for year 2007 include legislative changes that were made to the Public Utility Companies Article that created a solar carve out for Maryland and the adoption for publication of proposed regulations addressing the implementation of the revised solar RPS.

A. Statutory Changes

In April 2007, the RPS Legislation was amended to add a solar carve out¹⁵ to the Maryland RPS. As revised the RPS Legislation¹⁶ mandates a specified additional percentage of the RPS obligation from attributes associated with electricity generation that is derived from a solar source. This requirement is a supplement to the previous Tier 1 requirement and was made effective on January 1, 2008.

Under the RPS Legislation, as revised, double credit for RECs derived from solar sources is no longer allowed. Solar RECs purchased by an electricity supplier directly from a solar on-site generator must be done through a contract with a term of no less than 15 years.¹⁷ The price level of the solar RECs may be variable throughout the life of the 15-year contract. For a solar on-site generator that is 10 kW or less, RECs must be purchased through a single initial payment representing the full estimated production of the system for the life of the contract. The Commission is required to develop a method for estimating annual production and allocating RECs consistent with the duration of the contract and determining the rate to be paid to a solar generator with a rated capacity of 10 kW or less. The Commission has proposed a rate to implement this provision.

The RPS Legislation, as amended, requires that all solar RECs be sourced from solar renewable energy facilities that are interconnected with the electricity distribution grid serving Maryland effective January 1, 2012.¹⁸ On or before December 31, 2011, solar RECs from out-of-state resources may be used for compliance only if sufficient offers for the sale of solar RECs from Maryland sources have not been made to the electricity supplier by solar REFs. RECs eligible for the Maryland RPS must be generated by a Commission-certified REF. An out-of-state solar REF must be approved by the Commission for the creation of Tier 1 solar RECs that

¹⁵ SB 595 was passed by the General Assembly on April 9, 2007 and signed by Governor O'Malley on April 24, 2007.

¹⁶ See Chapters 119 and 120, Maryland Acts 2007.

¹⁷ See PUC Article §7-709.

¹⁸ See PUC Article §7-704.

may be eligible for compliance with the solar portion of Maryland’s RPS. Another provision within the amended RPS Legislation requires a solar REF located within Maryland to first offer to sell its Tier 1 solar RECs to an electricity company or electricity supplier that would retire the RECs for the purpose of Maryland RPS compliance.¹⁹ If said offer is not accepted by an electricity company or electricity supplier, then the Tier 1 solar RECs may be sold for a purpose other than for compliance with the Maryland solar RPS.

Table 1 displays the statutory updates made to the RPS compliance fee schedule and identifies the increased compliance fees related to the solar obligation. While technically subject to a Tier 1 solar obligation, electricity suppliers for a designated Industrial Process Load are not likely to apply Tier 1 solar RPS RECs towards RPS compliance. As reflected in Table 1, the entire Tier 1 Industrial Process Load obligation, including the solar portion, is subject to the Tier 1 Industrial compliance fee rate of \$8 per MWh that is associated with a designated Industrial Process Load.

Table 1: Compliance Fee Schedule (\$/MWh)

Year	Previous RPS				New RPS				
			Industrial Process Load					Industrial Process Load	
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 1 solar	Tier 2	Tier 1	Tier 2
2006	\$20	\$15	\$8	\$0					
2007	\$20	\$15	\$8	\$0					
2008	\$20	\$15	\$8	\$0	\$20	\$450	\$15	\$8	\$0
2009	\$20	\$15	\$5	\$0	\$20	\$400	\$15	\$5	\$0
2010	\$20	\$15	\$5	\$0	\$20	\$400	\$15	\$5	\$0
2011	\$20	\$15	\$4	\$0	\$20	\$350	\$15	\$4	\$0
2012	\$20	\$15	\$4	\$0	\$20	\$350	\$15	\$4	\$0
2013	\$20	\$15	\$3	\$0	\$20	\$300	\$15	\$3	\$0
2014	\$20	\$15	\$3	\$0	\$20	\$300	\$15	\$3	\$0
2015	\$20	\$15	\$2.50	\$0	\$20	\$250	\$15	\$2.50	\$0
2016	\$20	\$15	\$2.50	\$0	\$20	\$250	\$15	\$2.50	\$0
2017	\$20	\$15	\$2	\$0	\$20	\$200	\$15	\$2	\$0
2018	\$20	\$15	\$2	\$0	\$20	\$200	\$15	\$2	\$0
2019	\$20	\$15	\$2	\$0	\$20	\$150	\$15	\$2	\$0
2020	\$20	\$15	\$2	\$0	\$20	\$150	\$15	\$2	\$0
2021	\$20	\$15	\$2	\$0	\$20	\$100	\$15	\$2	\$0
2022	\$20	\$15	\$2	\$0	\$20	\$100	\$15	\$2	\$0
2023 +	\$20	\$15	\$2	\$0	\$20	\$50	\$15	\$2	\$0

¹⁹ See PUC Article §7-704(a)(2).

Table 2 displays the updated percentage requirements of retail electricity sales that are subject to an RPS obligation. Tier 2 requirements remain unchanged while the Tier 1 is increased by the Tier 1 solar requirement. Essentially, the Tier 1 REC requirements are unchanged except by the addition of the solar requirement.

Table 2: RPS Tier Requirements

Year	Previous RPS		New RPS		
	Tier 1	Tier 2	Tier 1 *	Tier 1 solar	Tier 2
2006	1%	2.50%			
2007	1%	2.50%			
2008	2%	2.50%	2.005%	0.005%	2.50%
2009	2%	2.50%	2.010%	0.010%	2.50%
2010	3%	2.50%	3.025%	0.025%	2.50%
2011	3%	2.50%	3.040%	0.040%	2.50%
2012	4%	2.50%	4.060%	0.060%	2.50%
2013	4%	2.50%	4.100%	0.100%	2.50%
2014	5%	2.50%	5.150%	0.150%	2.50%
2015	5%	2.50%	5.250%	0.250%	2.50%
2016	6%	2.50%	6.350%	0.350%	2.50%
2017	6%	2.50%	6.550%	0.550%	2.50%
2018	7%	2.50%	7.900%	0.900%	2.50%
2019	7.50%	0%	8.700%	1.200%	0%
2020	7.50%	0%	9.000%	1.500%	0%
2021	7.50%	0%	9.350%	1.850%	0%
2022 +	7.50%	0%	9.500%	2.000%	0%

* Includes the mandatory Tier 1 Solar Requirement. Tier 1 Solar RECs are a sub-set of Tier 1 RECs

B. Regulation Changes

On October 19, 2007, a Solar Technical Conference was held at the Commission. The purpose of this conference was to convene a number of solar energy market participants to share information and ideas regarding a number of issues that may relate to the solar RPS. Topics discussed during the Solar Technical Conference included an overall background on the solar market, previous experiences within other state's solar RPS programs, available REC trading platforms, and methods for metering and verifying renewable solar energy generation.

An Open Meeting was held by the Commission in Rulemaking 32 on December 12, 2007. At this meeting, the Commission approved for publication in the *Maryland Register*, a set of proposed regulations addressing issues created by the aforementioned statutory changes.

C. Supplier Annual Reports filed for Compliance Year 2006

Calendar Year 2006 marked the first compliance year for Maryland's Renewable Energy Portfolio Standard Program. Annual reports required under COMAR 20.61.04.02 were filed and, as of December 18, 2007, the Commission received reports from 67 electric entities. Of the

67 reviewed reports from electric entities, 12 were from utilities, 35 were from licensed suppliers, and 20 were from electricity brokers. Based upon information received from the reports, 552,874 Tier 1 RECs were used to meet Tier 1 RPS obligations and 1,322,069 Tier 1 and Tier 2 RECs were used to meet Tier 2 obligations for all licensed electricity suppliers, brokers and utilities. The total for all compliance fees paid was \$38,209.45. The compliance fees were paid directly to Comptroller for the account of the Fund, which is managed by the MEA to fund renewable energy projects in the State of Maryland.

Table 3: 2006 RPS Supplier Annual Report Results

Electricity Broker/Supplier/Utility	RPS Obligation		RPS Compliance Method Submitted		
	Tier 1	Tier 2	Tier 1 RECs	Tier 2 RECs	Compliance Fee
Overall Total for Compliance Year 2006	520,073	1,300,201	552,874	1,322,069	\$38,209.45

Chart 2: 2006 Compliance RECs by Fuel Source

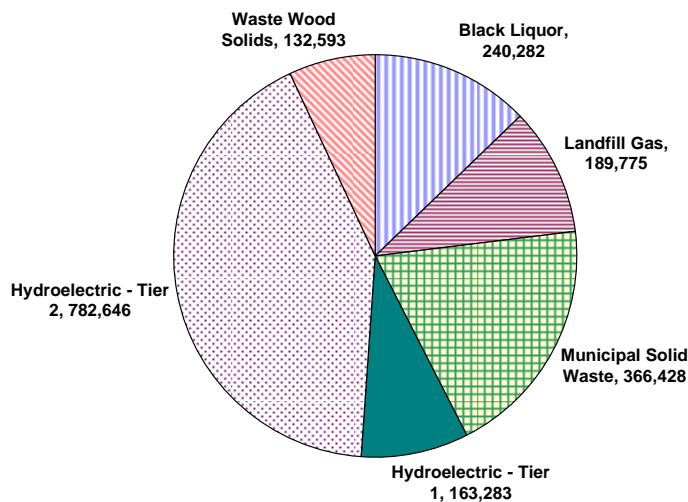


Chart 2 shows the number of RECs used for Compliance Year 2006 by fuel source. The fuel codes listed are identical to the codes found on the Department of Energy EIA-860 form.²⁰ Approximately 50% of the overall obligation is being met by hydroelectric power with about 8% coming from Tier 1 hydroelectric and 42% from Tier 2²¹ hydroelectric resources. About 20% of the RECs came from municipal solid waste facilities. These facilities also use a Tier 2 fuel source. Black liquor and landfill gas are fuel sources that comprise about 13% and 10% of the overall²² number of RECs utilized for compliance in 2006, respectively.

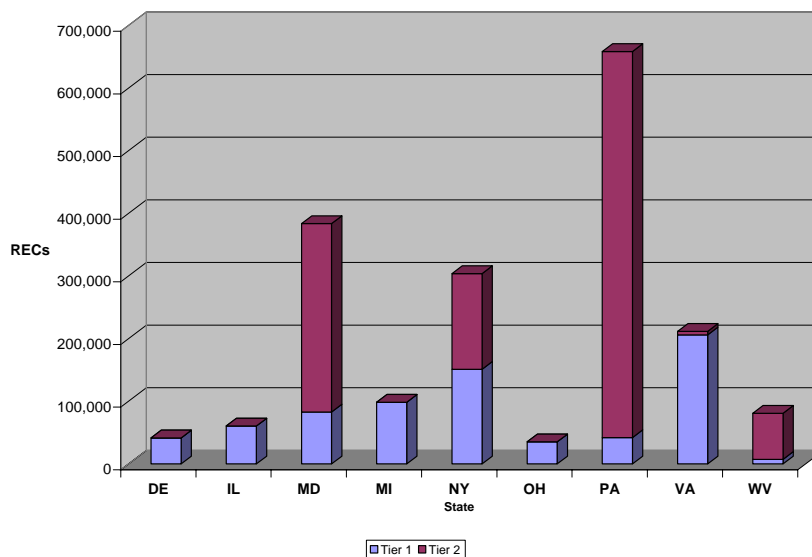
²⁰ According to the DOE website: <http://www.eia.doe.gov/cneaf/electricity/page/eia860.html>, The EIA-860 is a generator level data file that includes specific information such as, initial date of commercial operation, prime movers, generating capacity, energy sources, status of existing and proposed generators, proposed changes to existing generators, county and State location, ownership, and FERC qualifying facility status about generators at electric power plants owned and operated by electric utilities and non-utilities.

²¹ Tier 2 hydroelectric resources are sourced from facilities that are greater than 30 MW in rated capacity.

²² Tier 1 and Tier 2.

Chart 3 below displays the proportion of RECs, by state of generation, which were utilized by electric companies and suppliers towards Maryland’s RPS compliance in 2006. Pennsylvania comprised about 54% of the Tier 2 REC supply and around 35% of the overall²³ REC supply. The most Tier 1 RECs came from Virginia, as Virginia accounted for approximately 28% of the 2006 Tier 1 RECs used for compliance. Maryland was the source for about 20% of the overall RECs used for compliance in 2006. Specified by Tier, Maryland accounted for about 11% of the Tier 1 and 26% of the Tier 2 RECs used for compliance by electric companies and suppliers in 2006. Overall, RECs derived from hydroelectric resources located in Pennsylvania accounted for about 28% of all RECs and 45% of all Tier 2 RECs used for compliance in 2006.

Chart 3: 2006 Compliance RECs by Facility Location



The total Maryland energy sales for 2006 were approximately 65 million MWhs. PUC Article §7-703 provides for RPS exclusion for excess Industrial Process Load, sales under rate cap, and sales by cooperatives with supply contracts prior to October 1, 2004. Based on the above estimate, Maryland retail sales requiring RPS compliance would have been approximately 53 million MWhs and would have required approximately 1,855,000 RECs.²⁴ As noted above, suppliers filed 1,874,943 RECs for compliance.

IV. Upcoming Milestones

After the conclusion of the second compliance year, there are significant milestones that will be met in 2008. The Annual Compliance Report Forms required by COMAR 20.61.04.02 are due from electricity suppliers on April 1, 2008. These annual reports will provide another

²³ Tier 1 and Tier 2.

²⁴ This figure is based upon the 1% Tier 1 obligation and the 2.5% Tier 2 obligation. 53,000,000 MWhs X 3.5% = 1,855,000 MWhs = 1,855,000 RECs.

year's worth of data showing the amount of RECs needed for the supplier's RPS Tier 1 and Tier 2 compliance and the fees that are associated with any RPS obligation shortfalls.

As stated in COMAR 20.61.04.02, electricity suppliers must submit Annual Reports to the Commission by April 1, 2008. Renewable energy facilities are registering with the Maryland RPS on a continual basis. Compliance fee payments collected for compliance year 2007 will be contributed to the Fund. The annual report filed for Compliance Year 2007 will be very much like the report filed for 2006 as the Tier 1 and Tier 2 compliance fee and alternative compliance payment schedules do not change from 2006 to 2007. As RPS program results are received and reviewed, further refinements to the program may be made to ensure that the objective of the Maryland RPS Legislation is met. The solar RPS requirement will not be applicable until compliance year 2008.

The solar portion of Maryland's RPS was effective January 1, 2008. Applications for certification of solar facilities will be addressed by the Commission and solar generation will provide a source of RECs that will be utilized towards the solar requirement of the RPS in Maryland. Additional forms associated with the solar RPS will be posted on the Commission's website, and, in accordance with statutory requirements, compliance fees paid will be placed into the Fund to aid in the development of renewable energy projects within the State of Maryland. As the required RPS percentages increase in future years, supplier compliance may result in additional compliance payments used to support the development of renewable energy projects.

V. Conclusions and Observations

All suppliers reporting for 2006 have met their RPS obligations either through submission of the appropriate level of Tier 1 and Tier 2 RECs or alternative compliance payments. Maryland provided approximately 20% of the total RPS requirement, surpassed only by Pennsylvania with a large portion of hydroelectric RECs.

With the beginning of 2008, the RPS compliance requirement includes a solar generation requirement. Given the established compliance payment alternatives, it is anticipated that the market value of the Tier 1 solar RECs will be significantly higher than the value of standard RPS Tier 1 and Tier 2 RECs and should lead to the development of increased solar generation.

Larger commercial solar installations are expected to have an advantage in terms of solar REC production over their smaller commercial and residential counterparts. Economies of scale will probably be exhibited for the larger projects as they may be more affordable on a per kW basis. In addition, the RECs may be more attractive for sale as electric companies and suppliers will be more apt to purchase larger blocks of RECs from a single seller. An aggregator of solar RECs may aid smaller installations in meeting this REC sourcing preference.

Solar RECs that are less than 10 kW in rated capacity may be hindered by the provision that the Tier 1 solar RECs will have to be purchased by a 15-year lump sum up front payment. Projections made 15 years into the future regarding the price of Tier 1 solar RECs can be difficult to make and the reliability of these figures may be scrutinized. Any solar REC (including those greater than 10 kW) requires a 15-year contract term when sales are made

directly to an electricity supplier.²⁵ This requirement does not apply to sales made to REC brokers or some other financial intermediary. Tier 1 solar RECs coming from a greater than 10 kW system may be easier to sell to electricity suppliers and companies looking to utilize the Tier 1 solar RECs towards a Maryland RPS obligation as the up-front lump sum payment is not required and the 15-year contract term is not applicable to a REC broker or another intermediary.

The Maryland Renewable Energy Portfolio Standard is progressing forward. The conclusion of 2007 brought about a significant response from electricity generating units and suppliers. A number of generating units were certified with the Commission as renewable energy facilities and became an additional source of RECs. A comprehensive listing of current RECs certified can be found in Appendix A of this report. With a shift in the types of facilities looking for REC certification and REC trading, notably solar, the mechanisms used to administer the RPS program may need to adapt to reflect the changing characteristics of the RPS.

With the beginning of 2008 there are no forthcoming problems anticipated with the implementation of the RPS program. The PJM GATS system has been effective at creating a REC market and facilitating trades among various suppliers and generators. A supplemental system used in conjunction with PJM GATS may be reviewed and applied in the future if the need for such a database presents itself. The Commission looks forward to receiving 2007 compliance reports from electricity suppliers on or before April 1, 2008. When these reports become available, the Commission will have additional data to gauge the success of the program, in encouraging the development of additional renewable energy sources.

²⁵ See PUC Article §7-709(c).

Appendix A: Maryland Certified Renewable Energy Facilities (as of 1/3/2008)

Certification Date	MD REF Number	Facility Name	Location State	Rated Capacity
11/23/2005	MD-30010-BLQ-01	MeadWestVaco	VA	27.6
11/23/2005	MD-30011-BLQ-01	Luke Paper Company	MD	65.0
11/23/2005	MD-40018-LFG-01	Mallard Lake Electric	IL	25.0
11/23/2005	MD-40019-LFG-01	Rockford Electric	IL	2.0
11/23/2005	MD-40020-LFG-01	South Barrington Electric	IL	1.6
11/23/2005	MD-40021-LFG-01	Richmond Electric	VA	3.0
11/23/2005	MD-40022-LFG-01	Quad Cities	IL	2.0
11/23/2005	MD-40023-LFG-01	Arbor Hills	MI	25.0
11/23/2005	MD-40024-LFG-01	Charlotte Motor Speedway	NC	5.3
11/23/2005	MD-40025-LFG-01	C&C Electric	MI	3.0
11/23/2005	MD-40026-LFG-01	Lyon Development	MI	5.0
11/23/2005	MD-30010-WDS-01	MeadWestVaco	VA	4.2
12/14/2005	MD-30012-WDS-01	Primary Power International	MI	18.0
1/4/2006	MD-30013-WDS-01	Cadillac Renewable Energy	MI	39.6
1/25/2006	MD-80001-MSW-02	Northeast Maryland Waste Disposal Authority	MD	10.0
1/25/2006	MD-80001-MSW-02	Northeast Maryland Waste Disposal Authority	MD	68.0
3/8/2006	MD-30100-BLQ-01	Escanaba	MI	39.1
3/8/2006	MD-40100-LFG-01	Chestnut Ridge Gas Recovery Facility	TN	3.2
3/8/2006	MD-40101-LFG-01	Lake Gas Recovery Facility	IL	9.3
3/8/2006	MD-45100-LFG-01	Middlesex Generating Company, LLC	NJ	22.3
3/8/2006	MD-45100-LFG-01	Middlesex Generating Company, LLC	NJ	22.3
3/8/2006	MD-80002-MSW-02	Wheelabrator Falls, Inc.	PA	52.6
3/8/2006	MD-80003-MSW-02	Wheelabrator Gloucester Co., Inc.	NJ	14.0
3/8/2006	MD-80101-MSW-02	Wheelabrator Balt LP Gen Facility	MD	60.2
3/8/2006	MD-90100-WAT-02	Safe Harbor Water Corp Facility	PA	352.1
3/8/2006	MD-90101-WAT-02	Lake Lynn Power Station	WV	51.2
3/8/2006	MD-90102-WAT-01	PE Hydro (AP Misc Hydro H-1)	WV	6.0

Appendix A: Renewable Energy Facilities Certified with the Maryland RPS (continued)

Certification Date	MD REF Number	Facility Name	Location State	Rated Capacity
3/8/2006	MD-30100-WDS-01	Escanaba	MI	23.7
3/15/2006	MD-40102-LFG-01	Greene Valley Gas Recovery Facility	IL	9.3
3/15/2006	MD-40103-LFG-01	Edge Moor Unit 3	DE	75.0
3/15/2006	MD-40104-LFG-01	Edge Moor Unit 4	DE	177.0
3/15/2006	MD-40105-LFG-01	Edge Moor Unit 5	DE	446.0
3/15/2006	MD-40106-LFG-01	Fairless Hills Facility	PA	60.0
3/15/2006	MD-80100-MSW-02	Montenay Montgomery LP Facility	PA	32.1
3/29/2006	MD-90103-WAT-01	Piney	PA	9.6
3/29/2006	MD-90104-WAT-01	Deep Creek	MD	9.6
3/29/2006	MD-90105-WAT-01	Allens Falls	NY	3.9
3/29/2006	MD-90106-WAT-01	Baldwinsville	NY	0.6
3/29/2006	MD-90107-WAT-01	Beardslee	NY	16.9
3/29/2006	MD-90108-WAT-01	Beebee Island	NY	8.8
3/29/2006	MD-90109-WAT-01	Belfort	NY	2.1
3/29/2006	MD-90110-WAT-01	Bennetts Bridge	NY	28.9
3/29/2006	MD-90111-WAT-01	Black River	NY	6.8
3/29/2006	MD-90112-WAT-01	Blake	NY	14.4
3/29/2006	MD-90113-WAT-01	Browns Falls	NY	15.8
3/29/2006	MD-90114-WAT-01	Chasm Falls	NY	3.8
3/29/2006	MD-90115-WAT-01	Colton	NY	29.1
3/29/2006	MD-90116-WAT-01	Deferiet	NY	10.6
3/29/2006	MD-90117-WAT-01	E.J. West	NY	20.6
3/29/2006	MD-90118-WAT-01	Eagle	NY	5.5
3/29/2006	MD-90119-WAT-01	East Norfolk	NY	3.6
3/29/2006	MD-90120-WAT-01	Eel Weir	NY	1.9
3/29/2006	MD-90121-WAT-01	Effley	NY	2.9
3/29/2006	MD-90122-WAT-01	Elmer	NY	1.8

Appendix A: Renewable Energy Facilities Certified with the Maryland RPS (continued)

Certification Date	MD REF Number	Facility Name	Location State	Rated Capacity
3/29/2006	MD-90123-WAT-01	Ephratah	NY	1.2
3/29/2006	MD-90124-WAT-01	Feeder Dam	NY	24.6
3/29/2006	MD-90125-WAT-01	Five Falls	NY	22.9
3/29/2006	MD-90126-WAT-01	Flat Rock	NY	5.3
3/29/2006	MD-90127-WAT-01	Franklin Falls	NY	2.1
3/29/2006	MD-90128-WAT-01	Fulton	NY	1.0
3/29/2006	MD-90129-WAT-01	Glenwood	NY	1.0
3/29/2006	MD-90130-WAT-01	Granby	NY	9.9
3/29/2006	MD-90131-WAT-01	Hannawa	NY	7.5
3/29/2006	MD-90132-WAT-01	Herrings	NY	4.6
3/29/2006	MD-90133-WAT-01	Heuvelton	NY	0.9
3/29/2006	MD-90134-WAT-01	High Falls	NY	5.6
3/29/2006	MD-90135-WAT-01	Higley	NY	6.3
3/29/2006	MD-90136-WAT-01	Hogansburg	NY	0.3
3/29/2006	MD-90137-WAT-01	Hydraulic Race	NY	2.8
3/29/2006	MD-90138-WAT-01	Inghams	NY	6.3
3/29/2006	MD-90139-WAT-01	Johnsonville	NY	2.5
3/29/2006	MD-90140-WAT-01	Kamargo	NY	5.3
3/29/2006	MD-90141-WAT-01	Lighthouse Hill	NY	8.2
3/29/2006	MD-90142-WAT-01	Macomb	NY	0.9
3/29/2006	MD-90143-WAT-01	Minetto	NY	6.0
3/29/2006	MD-90144-WAT-01	Moshier	NY	8.2
3/29/2006	MD-90145-WAT-01	Newton Falls	NY	2.0
3/29/2006	MD-90146-WAT-01	Norfolk	NY	4.3
3/29/2006	MD-90147-WAT-01	Norwood	NY	2.2
3/29/2006	MD-90148-WAT-01	Oak Orchard	NY	0.3
3/29/2006	MD-90149-WAT-01	Oswegatchie	NY	1.8

Appendix A: Renewable Energy Facilities Certified with the Maryland RPS (continued)

Certification Date	MD REF Number	Facility Name	Location State	Rated Capacity
3/29/2006	MD-90150-WAT-01	Oswego Falls East	NY	4.1
3/29/2006	MD-90151-WAT-01	Oswego Falls West	NY	1.7
3/29/2006	MD-90152-WAT-01	Parishville	NY	2.3
3/29/2006	MD-90153-WAT-01	Piercefield	NY	2.9
3/29/2006	MD-90154-WAT-01	Prospect	NY	18.1
3/29/2006	MD-90155-WAT-01	Rainbow	NY	23.7
3/29/2006	MD-90156-WAT-01	Raymondville	NY	2.1
3/29/2006	MD-90157-WAT-01	Schaghticoke	NY	12.5
3/29/2006	MD-90158-WAT-01	Schuylerville	NY	1.6
3/29/2006	MD-90159-WAT-01	Sewalls	NY	2.3
3/29/2006	MD-90160-WAT-01	Soft Maple	NY	10.9
3/29/2006	MD-90161-WAT-01	South Colton	NY	19.8
3/29/2006	MD-90162-WAT-01	South Edwards	NY	3.2
3/29/2006	MD-90163-WAT-01	Stark	NY	24.2
3/29/2006	MD-90164-WAT-01	Sugar Island	NY	4.1
3/29/2006	MD-90165-WAT-01	Talcville	NY	0.4
3/29/2006	MD-90166-WAT-01	Taylorville	NY	4.3
3/29/2006	MD-90167-WAT-01	Trenton	NY	18.9
3/29/2006	MD-90168-WAT-01	Varick	NY	5.7
3/29/2006	MD-90169-WAT-01	Waterport	NY	2.0
3/29/2006	MD-90170-WAT-01	West Delaware	NY	7.6
3/29/2006	MD-90171-WAT-01	Yaleville	NY	0.6
3/29/2006	MD-90172-WAT-02	School Street	NY	34.8
3/29/2006	MD-90173-WAT-02	Sherman Island	NY	30.8
3/29/2006	MD-90174-WAT-02	Spiers falls	NY	54.0
3/29/2006	MD-90175-WAT-02	Stewarts Bridge	NY	31.3
4/12/2006	MD-40107-LFG-01	I-95 Landfill Phase II Units 1-4 facility	VA	3.2

Appendix A: Renewable Energy Facilities Certified with the Maryland RPS (continued)

Certification Date	MD REF Number	Facility Name	Location State	Rated Capacity
4/12/2006	MD-40108-LFG-01	I-95 Landfill Phase I Units 1-4 facility	VA	3.2
4/12/2006	MD-90176-WAT-02	Conowingo facility	MD	474.0
4/12/2006	MD-90177-WAT-01	Fries Hydroelectric Project	VA	5.4
4/12/2006	MD-90178-WAT-02	Gualey River Power Partners LP	WV	80.0
4/12/2006	MD-30104-WDS-01	Viking Energy of Northumberland	PA	16.2
4/19/2006	MD-90179-WAT-02	Hannibal Hydroelectric facility	WV	37.6
4/26/2006	MD-30101-BLQ-01	Hopewell Mill	VA	25.9
4/26/2006	MD-30101-WDS-01	Hopewell Mill	VA	7.7
4/26/2006	MD-30103-WDS-01	Coshocton Mill	OH	16.5
5/10/2006	MD-30106-BLQ-01	Franklin Mill Facility	VA	36.1
6/7/2006	MD-90180-WAT-01	Allegheny No. 5	PA	9.5
6/7/2006	MD-90181-WAT-01	Allegheny No. 6	PA	8.6
6/7/2006	MD-20100-WND-01	Mendota Hills	IL	50.4
6/28/2006	MD-30102-BLQ-01	Chillecothe Paper Mill	OH	92.8
7/26/2006	MD-40111-LFG-01	Peoples Generating Station	MI	2.4
7/26/2006	MD-40112-LFG-01	Venice Park Generating Facility	MI	0.8
8/9/2006	MD-40109-LFG-01	Westchester	IL	3.5
8/9/2006	MD-40110-LFG-01	Des Plaines	IL	3.5
9/6/2006	MD-90183-WAT-01	Big Shoals Hydro	VA	0.5
9/6/2006	MD-90184-WAT-01	Coleman Falls Hydro	VA	0.5
9/6/2006	MD-90185-WAT-01	Holcomb Rock Hydro	VA	0.6
9/6/2006	MD-90186-WAT-01	Snowden Falls Hydro Site	VA	0.5
9/13/2006	MD-90182-WAT-01	Conemaugh Hydro	PA	15.0
10/18/2006	MD-40113-LFG-01	DSWA Central Solid Waste Management Center Facility	DE	3.0
10/18/2006	MD-40114-LFG-01	DSWA Southern Solid Waste Management Center Facility	DE	4.0
10/25/2006	MD-20101-WND-01	Somerset Windpower LLC	PA	9.0
10/25/2006	MD-20102-WND-01	Backbone Mountain Windpower LLC Facility	WV	66.0

Appendix A: Renewable Energy Facilities Certified with the Maryland RPS (continued)

Certification Date	MD REF Number	Facility Name	Location State	Rated Capacity
10/25/2006	MD-20103-WND-01	Mill Run Windpower LLC Facility	PA	15.0
10/25/2006	MD-20104-WND-01	Waymart Wind Farm LP	PA	64.5
11/1/2006	MD-80102-MSW-2	SPSA Waste to Energy Facility	VA	60.0
11/22/2006	MD-30105-WDS-01	Craven County Wood Energy LP	NC	50.0
11/22/2006	MD-30107-WDS-01	Pittsylvania Power Station	VA	83.0
2/21/2007	MD-20105-WND-01	Meyersdale Windpower, LLC	PA	30.0
3/28/2007	MD-80103-MSW-02	Union County Resource Recovery	NJ	45.0
4/11/2007	MD-40115-LFG-01	Archbold Power Station REF Cert	PA	20.0
4/25/2007	MD-40116-LFG-01	CID Gas Recovery	IL	6.0
4/25/2007	MD-40117-LFG-01	Kankakee Gas Recovery	IL	1.6
4/25/2007	MD-40118-LFG-01	Milam Gas Recovery	IL	2.4
4/25/2007	MD-40119-LFG-01	Settlers Hill Gas Recovery	IL	6.0
4/25/2007	MD-40120-LFG-01	Tazewell Gas Recovery	IL	2.4
4/25/2007	MD-40121-LFG-01	Woodland Gas Recovery, LLC	IL	1.6
4/25/2007	MD-40122-LFG-01	Metro Gas Recovery	WI	9.6
4/25/2007	MD-40123-LFG-01	Pheasant Run Gas Recovery	WI	8.8
4/25/2007	MD-40124-LFG-01	Stowe Power Production Plant	PA	6.0
4/25/2007	MD-40125-LFG-01	Lake View Gas Recovery	PA	6.0
4/25/2007	MD-40126-LFG-01	Omega Hills Gas Recovery	WI	9.3
8/15/2007	MD-20106-WND-01	Allegheny Ridge Wind Farm, LLC	PA	80.0
8/29/2007	MD-20107-WND-01	High Trail Wind, LLC	IL	198.0
12/5/2007	MD-40127-LFG-01	Seneca Energy II, LLC - Ontario	NY	5.6
12/5/2007	MD-40129-LFG-01	Model City Energy, LLC	NY	5.6
12/12/2007	MD-40131-LFG-01	Innovative Energy Systems, Inc.	NY	4.8
1/2/2008	MD-40130-LFG-01	Modern Innovative Energy, LLC	NY	6.4

Key for MD Renewable Energy Facility Number:

MD-11111-FUE-01 – denotes the state for which the RPS certification applies.

MD-11111-FUE-01 – is the facility ID issued used for identification by the MD PSC.

MD-11111-FUE-01 – is the three-digit fuel code. These are codes that appear on the Form EIA-860.

MD-11111-FUE-01 – states whether the facility is eligible for Tier 1 or Tier 2 REC creation.

Key for the fuel sources listed within the MD REF Number:

BLQ – Black Liquor

LFG – Landfill Gas

MSW – Municipal Solid Waste

WAT – Hydroelectric

WDS – Wood/Wood Waste Solids

WND – Wind