

## Comparison of Renewable Portfolio Standards (RPS) Programs in PJM States

	NJ	MD	DC	PA	DE
Regulation or Legislation	N.J.A.C 14:4-8 - NJ Renewable Portfolio Standards Rules (effective April 19, 2004)	HB 1308 / SB 869 (2004), SB 595 (2007) added solar requirement, HB 375 (2008) doubled Tier 1 requirement.	Bill 15-747 (effective 4/12/2005) Bill 17-0492 (effective 10/6/2008)	Senate Bill 1030 (Printer's No 1973), Act 213 HB 1203 (2007), Act 35	Senate Bill 74 (2005) and Senate Bill 19 (2007) Senate Bill 328 enacted 6/28/2008
RPS Legislation Status	In effect	In effect	In effect	Act 213 effective date is 2/28/2005	In effect
Geographic Eligibility	Energy shall be generated within or delivered into the PJM region. If the latter, the Energy must have been generated at a facility that commenced construction on or after January 1, 2003.	Source must be: (1) located in the PJM Region or in a state that is adjacent to the PJM Region; or (2) outside the area described in item (1) but in a control area that is adjacent to the PJM Region, if the electricity is delivered into the PJM Region.	Source must be: (1) located in the PJM Region or in a state that is adjacent to the PJM Region; or (2) outside the area described in item (1) but in a control area that is adjacent to the PJM Region, if the electricity is delivered into the PJM Region.	Sources located inside the geographical boundaries of this Commonwealth or within the service territory of any regional transmission organization that manages the transmission system in any part of this Commonwealth.	"Eligible Energy Resources" include energy resources located within or imported into the PJM region.
Reporting Period	June 1st through May 31st	January 1 <sup>st</sup> through December 31st	January 1 <sup>st</sup> through December 31st	June 1st through May 31st	June 1st through May 31st
Banking	The expiration date of a REC shall be the last day of the true-up period following the reporting year in which the Energy was generated.	On or after January 1, 2004 an Energy supplier can receive and accumulate RECs.  A Renewable Energy Credit shall exist for 3 years from the date created.	On or after January 1, 2006 an Energy supplier can receive and accumulate RECs.  A Renewable Energy Credit shall exist for 3 years from the date created.	Alternative Energy credits can be banked for compliance in either or both of the two subsequent reporting years (as of the effective date of this Act)	On or after June 1, 2006 credits can be created and accumulated.  An unused renewable energy credit shall exist for 3 years from the date created.
Credit Multipliers	No	For generating facilities placed in service after January 1, 2004: a. 120% credits for wind Energy before 12/31/2005 b. 110% credits for wind Energy between 1/1/2006 and 12/31/2008 c. 110% credits for Methane from landfill or sewage treatment until 12/31/2008	a). 120% credits for wind or solar Energy before 12/31/2006 b). 110% credits for wind or solar Energy between 1/1/2007 and 12/31/2009 c). 110% credits for Methane from landfill or sewage treatment until 12/31/2009	No	a). 300% credit for (1) in-state solar electric or (2) renewable fuel cells installed on or before 12/31/2014. b). 150% credit for wind energy installations sited in Delaware on or before 12/31/2012. c). 350% credit for wind energy installations sited off the DE coast on or before 5/31/2017.
Solar Requirement	Yes, separate from Class I	Yes, separate from Tier 1	Yes, separate from Tier 1	Yes, separate from Tier I	Yes, included in main target

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Class I or Tier I Renewable Energy Sources	<p>Class I renewable sources:</p> <ul style="list-style-type: none"> <li>• solar technologies</li> <li>• photovoltaic technologies</li> <li>• wind Energy</li> <li>• fuel cells powered by renewable fuels</li> <li>• geothermal technologies</li> <li>• wave or tidal action</li> <li>• methane gas from landfills or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner.</li> </ul>	<p>Tier 1 Renewable sources:</p> <ol style="list-style-type: none"> <li>(1) solar;</li> <li>(2) wind;</li> <li>(3) qualifying biomass;</li> <li>(4) methane from a landfill or wastewater treatment plant;</li> <li>(5) geothermal;</li> <li>(6) ocean;</li> <li>(7) a fuel cell powered by methane or biomass;</li> <li>(8) a small hydroelectric plant (less than 30 MW);</li> <li>(9) poultry litter incineration facilities in Maryland.</li> </ol>	<p>Tier 1 Renewable sources:</p> <ol style="list-style-type: none"> <li>(1) solar (including solar thermal);</li> <li>(2) wind;</li> <li>(3) qualifying biomass;</li> <li>(4) methane from a landfill or wastewater treatment plant;</li> <li>(5) geothermal;</li> <li>(6) ocean, including Energy from waves, tides, currents, and thermal differences; and</li> <li>(7) a fuel cell that produces electricity from a tier 1 renewable source under item (3) or (4) of this subsection.</li> </ol>	<p>Tier I alternative Energy sources:</p> <ol style="list-style-type: none"> <li>(1) Solar photovoltaic and solar thermal energy.</li> <li>(2) Wind power.</li> <li>(3) Low-impact hydropower.</li> <li>(4) Geothermal Energy.</li> <li>(5) Biologically derived methane gas.</li> <li>(6) Fuel cells.</li> <li>(7) Biomass Energy.</li> <li>(8) Coal mine methane.</li> </ol>	<p>Electricity derived from:</p> <ol style="list-style-type: none"> <li>a. solar;</li> <li>b. wind;</li> <li>c. ocean;</li> <li>d. geothermal;</li> <li>e. fuel cell powered by Renewable Fuels;</li> <li>f. combustion of gas from the anaerobic digestion of organic material;</li> <li>g. small hydroelectric facility (30 megawatts or less);</li> <li>h. sustainable biomass, excluding waste to energy;</li> <li>i. landfill methane gas;</li> </ol>
Class II or Tier II Sources	<p>Class II renewable sources:</p> <ul style="list-style-type: none"> <li>• resource recovery facility (subject to qualifications)</li> <li>• small hydro power facility (less than 30 MW)</li> </ul>	<p>Tier 2 Renewable sources:</p> <ol style="list-style-type: none"> <li>(1) hydroelectric power other than pump storage generation</li> <li>(2) thermal decomposition incineration of poultry litter</li> <li>(3) waste-to-Energy</li> </ol> <p>For (1) and (3), the facility must have existed and been operational as of January 1, 2004.</p>	<p>Tier 2 Renewable sources:</p> <ol style="list-style-type: none"> <li>(1) hydroelectric power other than pump storage generation</li> <li>(2) waste-to-Energy</li> </ol> <p>For Tier 2 sources, the facility must have existed and been operational as of January 1, 2004.</p> <p>The incineration of solid waste cannot be used to meet more than 20% of the standard for tier two renewable sources for a given year</p> <p>After December 31, 2012, the incineration of solid waste shall not be eligible to generate renewable Energy credits.</p>	<p>Tier II alternative Energy sources:</p> <ol style="list-style-type: none"> <li>(1) Waste coal.</li> <li>(2) Distributed generation systems.</li> <li>(3) Demand-side management.</li> <li>(4) Large-scale hydropower (including pumped storage).</li> <li>(5) Municipal solid waste.</li> <li>(6) Generation of electricity utilizing by-products of the pulping process and wood manufacturing process including bark, wood chips, sawdust and lignin in spent pulping liquors.</li> <li>(7) Integrated combined coal gasification technology.</li> </ol>	<p>“New Renewable Generation Resources” are those in commercial operation after 12/31/1997. No more than 1% of each year’s sales may come from resources that aren’t New.</p>
Alternative Compliance Payment (ACP)	<p>Class I &amp; II (ACP) - \$50/MWh Solar (SACP) – was \$300/MWh initially. For 2008/2009 it is \$711/MWh, declining over eight years to \$594 in 2015/16.</p>	<p>Tier 1 - \$40 / MWh Tier 2 - \$15 / MWh Solar - \$450 / MWh in 2008, \$400 / MWh in 2009, declining to \$50 / MWh in 2023</p>	<p>Tier 1 - \$50/MWh Tier 2 - \$10/MWh Solar - \$300/MWh in 2007 and 2008, \$500/MWh in 2009 thru 2018</p>	<p>Tier I (except solar) and Tier II - \$45 / MWh Solar – 200% of the average market value for solar RECs sold in the RTO.</p>	<p>\$25 for 1<sup>st</sup> deficient year. \$50 for 2<sup>nd</sup> deficient year. \$80 for subsequent years. Solar ACP is \$250, \$300, and \$350, respectively.</p>

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	NJ				MD			DC			PA			DE		
Beneficiary of ACP	Clean Energy Program, for renewable Energy projects.				MD Strategic Energy Investment Fund, to be used to support the creation of Tier 1 sources in the state.			DC Renewable Energy Development Fund, to be used to support the creation of new solar sources in the District.			PA's Sustainable Energy Funds, to fund projects that increase electric Energy generated from alternative Energy resources.			Delaware Green Energy Fund		
Solar Requirements	Solar REC Requirement: (see column below)  Solar ACP Schedule: 08/09 – \$711    12/13 – \$641 09/10 – \$693    13/14 – \$625 10/11 – \$675    14/15 – \$609 11/12 – \$658    15/16 – \$594				Solar REC Requirement: 2007 – 0.000%    2015 – 0.250% 2008 – 0.005%    2016 – 0.350% 2009 – 0.010%    2017 – 0.550% 2010 – 0.025%    2018 – 0.900% 2011 – 0.040%    2019 – 1.200% 2012 – 0.060%    2020 – 1.500% 2013 – 0.100%    2021 – 1.850% 2014 – 0.150%    2022 – 2.000%			Solar REC Requirement: 2007 – 0.005%    2015 – 0.170% 2008 – 0.011%    2016 – 0.210% 2009 – 0.019%    2017 – 0.250% 2010 – 0.028%    2018 – 0.300% 2011 – 0.040%    2019 – 0.350% 2012 – 0.070%    2020 – 0.400% 2013 – 0.100% 2014 – 0.130%			Solar requirement: 06/07 – .0013%    13/14 – .0840% 07/08 – .0030%    14/15 – .1440% 08/09 – .0063%    15/16 – .2500% 09/10 – .0120%    16/17 – .2933% 10/11 – .0203%    17/18 – .3400% 11/12 – .0325%    18/19 – .3900% 12/13 – .0510%    19/20 – .4433% 20/21 – .5000%			Solar requirement is included in Total requirement: 07/08 – 0.000%    14/15 – 0.354% 08/09 – 0.011%    15/16 – 0.559% 09/10 – 0.014%    16/17 – 0.803% 10/11 – 0.018%    17/18 – 1.112% 11/12 – 0.048%    18/19 – 1.547% 12/13 – 0.099%    19/20 – 2.005% 13/14 – 0.201%		
RPS Percentages	Solar	Class I	Class II	Total	Tier I (incl solar)	Tier 2	Total	Tier 1	Tier 2	Total (w/o solar)	Tier I	Tier II	Total (w/o solar)	n/a	n/a	Total (incl solar)
2004, or 04/05	0.010	0.740	2.5	3.25%												
2005, or 05/06	0.017	0.983	2.5	3.5%												
2006, or 06/07	0.0393	2.037	2.5	4.5763%	1.0%	2.5%	3.5%				1.5%	4.2%	5.7%			
2007, or 07/08	0.0817	2.924	2.5	5.5057%	1.0%	2.5%	3.5%	1.5%	2.5%	4.0%	1.5%	4.2%	5.7%			1.0%
2008, or 08/09	0.160	3.840	2.5	6.5%	2.005%	2.5%	4.505%	2.0%	2.5%	4.5%	2.0%	4.2%	6.2%			1.5%
2009, or 09/10	0.221	4.685	2.5	7.406%	2.01%	2.5%	4.51%	2.5%	2.5%	5.0%	2.5%	4.2%	6.7%			2.0%
2010, or 10/11	0.305	5.492	2.5	8.297%	3.025%	2.5%	7.525%	3.0%	2.5%	5.5%	3.0%	6.2%	9.2%			5.0%
2011, or 11/12	0.394	6.320	2.5	9.214%	5.0%	2.5%	7.5%	4.0%	2.5%	6.5%	3.5%	6.2%	9.7%			7.0%
2012, or 12/13	0.497	7.143	2.5	10.14%	6.5%	2.5%	9.0%	5.0%	2.5%	7.5%	4.0%	6.2%	10.2%			8.5%
2013, or 13/14	0.621	7.977	2.5	11.098%	8.2%	2.5%	10.7%	6.5%	2.5%	9.0%	4.5%	6.2%	10.7%			10.0%
2014, or 14/15	0.765	8.807	2.5	12.072%	10.3%	2.5%	12.8%	8.0%	2.5%	10.5%	5.0%	6.2%	11.2%			11.5%
2015, or 15/16	0.928	9.649	2.5	13.077%	10.5%	2.5%	13.0%	9.5%	2.5%	12.0%	5.5%	8.2%	13.7%			13.0%
2016, or 16/17	1.118	10.485	2.5	14.103%	12.7%	2.5%	15.2%	11.5%	2.0%	13.5%	6.0%	8.2%	14.2%			14.5%
2017, or 17/18	1.333	12.325	2.5	16.158%	13.1%	2.5%	15.6%	13.5%	1.5%	15.0%	6.5%	8.2%	14.7%			16.0%
2018, or 18/19	1.572	14.175	2.5	18.247%	15.8%	2.5%	18.3%	15.5%	1.0%	16.5%	7.0%	8.2%	15.2%			18.0%
2019, or 19/20	1.836	16.029	2.5	20.365%	17.4%	0.0%	17.4%	17.5%	0.5%	18.0%	7.5%	8.2%	15.7%			20.0%
2020, or 20/21	2.120	17.880	2.5	22.5%	18.0%	0.0%	18.0%	20.0%	0.0%	20.0%	8.0%	10.0%	18.0%			
2021, or 21/22					18.7%	0.0%	18.7%									
2022, or 22/23					20.0%	0.0%	20.0%									

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	IL	NC	VA	OH	MI
Regulation or Legislation	Public Act 095-0481, the Illinois Power Agency Act of August 2007	SB 3 (August 2007)	SB 1416 (4/2007) SB 718 (3/2008)	SB 221 (May 2008)	Public Act 295, (October 6, 2008)
RPS Legislation Status	In effect	Effective 1/1/2008		Effective date is 1/1/2009	
Geographic Eligibility	Eligible resources must be located in IL. If there are insufficient cost-effective in-state resources, resources can be procured from adjoining states, and if these are also not cost-effective, resources can be procured from other regions of the country.	Utilities may use unbundled RECs from out-of-state renewable energy facilities to meet up to 25% of the portfolio standard. Qualifying out-of-state facilities are (1) hydroelectric power facilities with a generation capacity up to 10 MW, or (2) renewable energy facilities placed into service on or after January 1, 2007.	Electricity must be generated or purchased in Virginia or in the interconnection region of the regional transmission entity.	At least 50% of the renewable energy requirement must be met by in-state facilities and the remaining 50% with resources that can be shown to be deliverable into the state.	Renewable energy credits used to satisfy the renewable energy standards shall be either 1) located anywhere in this state or 2) located outside of this state in the retail electric customer service territory of a utility recognized by the Michigan PSC.
Reporting Period	June 1st through May 31st	January 1 <sup>st</sup> through December 31st	January 1 <sup>st</sup> through December 31st	January 1 <sup>st</sup> through December 31st	January 1 <sup>st</sup> through December 31 <sup>st</sup>
Banking		On or after January 1, 2008 an Energy supplier can receive and accumulate RECs.  Excess REC's can be applied to the next year's compliance target.	Excess renewable energy certificates acquired during an RPS goal period can be applied to any future RPS goal.	RECs have a lifetime of five years following their purchase or acquisition	
Credit Multipliers	No	No	Wind and solar power receive a double credit toward RPS goals.	No	<ul style="list-style-type: none"> <li>• Solar receives an additional 2 credits per MWh</li> <li>• Lesser bonuses awarded for on-peak production, storage, and using in-state labor or equipment</li> </ul>
Technology - Specific Requirements (set asides)	At least 75% of renewable energy resources must come from wind generation	<ul style="list-style-type: none"> <li>• 0.2% solar by 2018</li> <li>• 0.2% energy recovery from swine waste by 2018</li> <li>• 900,000 MWh of electricity derived from poultry waste by 2014.</li> </ul>	None.	0.5% from solar energy resources by 12/31/2024.	None.

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Renewable Energy Sources	<p>Renewable energy resources:</p> <ul style="list-style-type: none"> <li>• wind,</li> <li>• solar thermal energy,</li> <li>• photovoltaic cells and panels,</li> <li>• biodiesel,</li> <li>• crops and untreated and unadulterated organic waste biomass,</li> <li>• trees and tree trimmings,</li> <li>• in-state landfill gas,</li> <li>• hydropower that does not involve new construction or significant expansion of hydropower dams, and</li> <li>• “other alternative sources of environmentally preferable energy.”</li> </ul>	<p>Renewable sources:</p> <ul style="list-style-type: none"> <li>• solar-electric (photovoltaics),</li> <li>• solar thermal,</li> <li>• wind,</li> <li>• hydropower up to 10 megawatts (MW),</li> <li>• ocean current or wave energy,</li> <li>• biomass,</li> <li>• landfill gas,</li> <li>• waste heat from renewables, and</li> <li>• hydrogen derived from renewables.</li> <li>• energy efficiency technologies (up to 25% of requirement), including combined heat-and-power (CHP) systems powered by non-renewable fuels.</li> </ul>	<p>Eligible energy resources:</p> <ul style="list-style-type: none"> <li>• solar,</li> <li>• wind,</li> <li>• geothermal,</li> <li>• hydropower,</li> <li>• wave,</li> <li>• tidal, and</li> <li>• biomass energy.</li> </ul> <p>Hydropower excludes pumped storage, and the amount of wood derived from trees that would be otherwise used by Virginia lumber and pulp manufacturers is capped at 1.5 million tons annually</p>	<p>Renewable Energy sources:</p> <ul style="list-style-type: none"> <li>• solar photovoltaics (PV),</li> <li>• solar thermal,</li> <li>• wind,</li> <li>• geothermal,</li> <li>• biomass,</li> <li>• biologically derived methane gas,</li> <li>• landfill gas,</li> <li>• certain non-treated waste biomass products,</li> <li>• fuel cells that generate electricity and</li> <li>• qualified hydroelectric facilities.</li> </ul>	<p>Eligible Renewables include:</p> <ul style="list-style-type: none"> <li>• biomass,</li> <li>• solar and solar thermal,</li> <li>• wind,</li> <li>• landfill gas,</li> <li>• water released through a dam,</li> <li>• waves, tides, or currents,</li> <li>• geothermal,</li> <li>• municipal solid waste</li> </ul> <p>Credits from Energy Optimization and Advanced Cleaner Energy Systems (defined below) can be used to satisfy up to 10% of the renewable energy requirement</p>
Class II or Tier II Sources	n/a	n/a	n/a	<p>Advanced Energy Resources are defined as any process or technology that increases the generation output of an electric generating facility without additional carbon dioxide emissions. Includes: clean coal; generation III advanced nuclear power; distributed combined heat and power (CHP); fuel cells that generate electricity; certain solid waste conversion technologies; and demand side management or efficiency improvements.</p>	<p>Energy Optimization may include: energy efficiency, load management, or energy conservation.</p> <p>Advanced Cleaner Energy System is any of the following:</p> <ul style="list-style-type: none"> <li>• Gasification,</li> <li>• industrial cogeneration, and</li> <li>• coal-fired facilities that capture and sequester (CCS) 85% of carbon dioxide emissions</li> </ul>

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Alternative Compliance Payment (ACP)	None. Resources must be “cost-effective.”			None. Recoverable costs are capped.			None. It is a voluntary goal.			REC - \$45/MWh Solar – \$450/MWh in 2009, \$400 2010 and 2011, reduced by \$50 every two years thereafter.			Not applicable for the Renewable Energy Requirement.		
Beneficiary of ACP	n/a			n/a			n/a			Ohio Advanced Energy Fund, which provides financial support to renewable energy and energy efficiency projects within the state.			n/a		
Solar Requirements	n/a			Solar Energy Requirement: 2010 - 0.02% 2012 - 0.07% 2015 - 0.14% 2018 - 0.20%			n/a			Solar requirement increases to 0.5% of the total electricity supply in 2024 and thereafter (see below).			n/a		
RPS Percentages			Total			Total			Total (% of 2007 sales)		Solar	Total			Total
2008, or 08/09			2.0%												
2009, or 09/10			4.0%								0.004%	0.25%			
2010, or 10/11			5.0%						4.0%		0.010%	0.50%			
2011, or 11/12			6.0%						4.0%		0.030%	1.0%			
2012, or 12/13			7.0%			3.0%			4.0%		0.060%	1.5%			2%
2013, or 13/14			8.0%			3.0%			4.0%		0.090%	2.0%			3.33%
2014, or 14/15			9.0%			3.0%			4.0%		0.12%	2.5%			5%
2015, or 15/16			10.0%			6.0%			4.0%		0.15%	3.5%			10%
2016, or 16/17			11.5%			6.0%			7.0%		0.18%	4.5%			
2017, or 17/18			13.0%			6.0%			7.0%		0.22%	5.5%			
2018, or 18/19			14.5%			10.0%			7.0%		0.26%	6.5%			
2019, or 19/20			16.0%			10.0%			7.0%		0.30%	7.5%			
2020, or 20/21			17.5%			10.0%			7.0%		0.34%	8.8%			
2021, or 21/22			19.0%			12.5%			7.0%		0.38%	9.5%			
2022, or 22/23			20.5%						12.0%		0.42%	10.5%			
2023, or 23/24			22.0%								0.46%	11.5%			
2024, or 24/25			23.5%								0.50%	12.5%			
2025, or 25/26			25.0%												