

Matrix of State Renewable Portfolio Standard Programs (August 28, 2006)

Cautionary note: This information is always changing, and is difficult to reconcile among sources that frequently offer differing interpretations of complex information. Combining sources, as is done here, is also a likely source of conflicting information.

Disclaimer: This information is, in large part, taken verbatim (with editing and combining of text) from the following sources:

All Columns: Database for State Incentives for Renewable Energy (<http://www.dsireusa.org/>)

Columns 2, 8-10: *Regulator's Handbook on Renewable Energy Programs & Tariffs*, Center for Resource Solutions (March 2006)

All Columns: *An Overview of Renewable Energy Portfolio Standards in the West.*, Perkins Coie LLP (September 2005)

Columns 4-7 *State Renewable Portfolio Standards: A Review and Analysis*, National Conference of State Legislatures (June 2005)

Column 5: *Race to the Top: The Expanding Role of U.S. State Renewable Portfolio Standards*, Pew Center on Global Climate Change (June 2006)

All Columns: Ryan Wiser's two presentations to the Oregon Renewable Energy Working Group, Lawrence Berkeley National Laboratory (May 31, 2006)

Columns 6,10: *An Inventory of State Renewable Energy Standards*, Bob Eleff, MN House of Representatives Research Department (December 2005)

State	Standard	Eligible Sources for Compliance with RPS	Existing Renewables Included for Compliance?	Credit Trading Program Allowed?	Entities Covered by RPS Policy	Specific Resource Focus	Recovery of Costs	Cost Cap	Penalties
Arizona	15% by 2025 (note: proposal has not yet achieved final approval from PUC in Arizona)	Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Solar Air Conditioning	Installed on or after January 1997.	In-state trading only	Utilities regulated by Arizona Corporation Commission (Not Salt River Project)	4.5% from DG renewables by 2025, with ½ from residential applications. Multipliers of 1.5 for in-state solar generation installed pre-2005; 1.3 for renewables installed in 2001, 1.2 for 2002, 1.1 for 2003; in-state manufacturing and DG multipliers; proposed rule would eliminate multipliers for projects installed after 2005	Use Public Benefit Funds (PBF)	\$1.05/month for residential customers, \$39/month for non-residential customers, \$117/month for loads greater than 3MWh Limit on PBF sets effective cost cap as well.	Currently no set penalty. Commission has power to fine utilities if needed.

California	20% by 2017 currently (20% by 2010 33% by 2020)	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells (Renewable Fuels)	Eligible facilities placed in service after Sept. 1996 except where a power purchase agreement existed prior to that date for certain facilities.	No. However, CA is moving toward REC system when WREGIS comes on-line. Contracting requirement of 10+ years.	Investor-Owned Utility, Later: ESPs and CCAs. Munis implement themselves.	No specific carve-out or set-aside in RPS, but numerous programs for DG run by CEC and CPUC.	PBFs may be used for costs over the market reference price (they have not yet been required in CA)	Amount of PBF funds available	At PUC's Discretion
Colorado	10% by 2015	Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Anaerobic Digestion, Small Hydroelectric, Fuel Cells (Renewable Fuels)	Yes	Yes. Multiplier of 1.25 for in-state renewable resources. Contracting Requirement 20+ years.	All utilities with more than 40,000 customers. Municipal/co-op customers can vote to include or exempt their utilities.	4% from solar-electric generation; 1/2 of this 4% located on-site at customers' facilities. \$2.00/watt incentive for solar electric up to 100 kW.	Costs are not to exceed \$0.50/month for residential customers	1% of total annual electric bills, by customer class	No penalties yet
Connecticut	10% by 2010	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, Low E Renewables, Tidal Energy, Wave Energy, Ocean Thermal	No	Yes (NEPOOL-GIS)	Investor-Owned Utilities	Minimum % each year from Class I renewables (i.e., not trash-to-energy facilities, biomass facilities not included in Class I and certain hydropower facilities)	Costs recovered in rates		\$0.055 per kilowatt-hour (kWh)

DC	11% by 2022	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Cofiring, Tidal Energy, Wave Energy, Ocean Thermal	No	Yes	Electricity suppliers	0.386% from solar by 2022; 1.2 for wind and solar through 2006 and 1.1 from 2007 to 2009; 1.1 for methane gas through 2009	Cost is on the supplier, most always resulting in increased cost to consumer	Alternative Compliance Payment of \$25/MWh Tier 1; \$10/MWh for Tier 2; \$300/MWh for solar. Recoverable in rates if least cost or insufficient renewable resources are available to meet RPS.		
	Delaware	10% by 2019	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells (Renewable Fuels)	No more than 1% from sources in service on or before December 31, 1997	Yes, to be developed	All utilities but see ¹ below. Sales to industrial customers w/peak load > 1,500 kWh are exempt.	Multiplier of 3 for solar or fuel cells before 2014; 1.5 for wind sited in Delaware before end of 2012	Suppliers may recover actual dollar-for dollar costs of RPS compliance -- with a conditional exception of alternative-compliance payments -- through a non-bypassable surcharge on customer bills.	Alternative Compliance Payment of \$25/MWh; subsequent payments increase by \$10/MWh to a maximum of \$50/MWh. Recoverable in rates if least cost measure or insufficient renewable resources are available to meet RPS.	
									Hawaii	20% by 2020

¹ Municipal utilities, and rural electric cooperatives that have opted out of regulation by the PSC, may, on or before June 1, 2006, elect to be exempt from the RPS. All have done so as of this date.

Illinois	8% in 2013 (GOAL only, no mandate)	Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, CHP/ Cogeneration, "Other Such Alternative Sources of Environmentally Preferable Energy"	No	No, unless federal system is put in place.	All utilities, but voluntary	75% of the renewable energy generated to meet the state's goal should come from wind.	Costs recovered in rates	May not increase retail electricity rates by more than 0.5% in any one year, or by more than 2% cumulatively	May be considered for utilities which formally agree to goal, but then drop out
Iowa	2% by 1999 (105 MW)	Photovoltaics, Wind, Biomass, Hydroelectric, Municipal Solid Waste	No	No	IOUs only	No	Costs recovered in rates	No cap	No
Maine	30% (+ separate goal to reach 10% new renewables by 2017)	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, Municipal Solid Waste, Tidal Energy	Yes, although for separate goal must be in service after September 1, 2005	Yes (through NEPOOL GIS)	Competitive Electricity Provider ²	No	Costs recovered in customers' rates	No max cap	Fines & possible license revocation
Maryland	7.5% by 2019	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells (Renewable Fuels)	Limit placed on pre-existing renewables	Yes	All utilities. Sales above 300 million kWh to a single industrial process customer are exempt.	1.2 for wind through 2005 and 1.1 for wind from 2006 to 2008; 1.1 for landfill methane through 2008; 2.0 for solar	Costs recovered must be at or below penalty levels	Alternative Compliance Payment is \$20/MWh for Tier 1; \$15/MWh for Tier 2; \$8/MWh for Tier 1 industrial process load customers, steadily dropping to \$2/MWh by 2017 and thereafter, \$0/MWh for Tier 2. Recoverable in rates if least cost measure or insufficient renewable resources are available to meet RPS.	

² "Competitive electricity provider" means a marketer, broker, aggregator, standard offer provider or any other entity selling electricity to the public at retail in Maine.

Massachusetts	4% by 2009	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Tidal Energy, Wave Energy, Ocean Thermal, Fuel Cells (Renewable Fuels)	Waiver process to allow for pre-existing renewable to count.	Yes	Retail Electricity Suppliers (see ³ below)	No	Recovered in customers' rates	Alternative Compliance Payment (ACP) is announced yearly on the DOER web site and rises according to inflation. The adjusted rate for the 2006 ACP is \$55.13 per megawatt-hour (MWh). The ACP was \$53.19 per MWh in 2005 and \$51.41 per MWh in 2004.	
Minnesota	Goal of 1% in 2005, rising by 1% per year to 10% in 2015. Mandate on Xcel Energy: 1 125 MW wind and 125 MW biomass.	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Municipal Solid Waste, Hydrogen	Yes, but not for earlier Xcel mandates.	No	Xcel has mandate, other utilities must make "good faith effort" to achieve goals (including COUs)	For goal, at least 0.5% should be biomass by 2005 and 1% biomass by 2010. Mandate includes 100 MW of community wind purchases (2 MW or smaller).	Resource plan must be approved then costs passed on to consumers	No cap set in law	
Montana	15% by 2015	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Fuel Cells (Renewable Fuels)	No for out-of-state (must be Jan 2005 or newer). Yes for in-state generation.	Yes. Contracting Requirement of 10+ years.	Investor-Owned Utilities, COUs > 5,000 customers must meet "intent" of RPS	Utilities must buy 75 MW by 2015 from community renewable-energy projects (nameplate capacity of 5 megawatts or less).	Contracts must be pre-approved by PSC then costs passed on to consumers.	115% of avoided cost for non-restructured suppliers; 100% for restructured suppliers.	\$10/MWh

³ From 225 CMR 14.00: A Municipal Lighting Plant shall be considered a Retail Electricity Supplier; however, it shall be exempt from the obligations of a Retail Electricity Supplier under 225 CMR 14.00 so long as and insofar as it is exempt from the requirements to allow competitive choice of generation supply pursuant to M.G.L. c. 164 § 47A.

Nevada	20% by 2015	Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Municipal Solid Waste, Waste Tires (using microwave reduction), Solar Pool Heating, Anaerobic Digestion, Biodiesel	Yes	Yes. Contracting Requirement of 10+ years.	Investor-Owned Utilities	1% from solar by 2015. Multipliers of 1.15 for distributed renewable generation; 2.4 for PV (2.55 for DG PV); 0.7 for customer-sited reverse polymerization waste tire facilities.	Investor-owned utilities may collect revenues from electricity customers to pay for renewable energy separate from other wholesale power purchased by the utilities. The Independent TRED Trust receives the proceeds from the TRED Charge and remits payment to renewable energy projects that deliver renewable energy to purchasing electric utilities.		PUC may grant exemption if insufficient supply of electricity from renewables was available to utility.
New Jersey	22.5% by 2021	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Resource-Recovery Facilities approved by the DEP, Anaerobic Digestion, Tidal Energy, Wave Energy, Fuel Cells (Renewable Fuels)	If energy is generated outside of the PJM region, but was delivered into the PJM region, the energy may be used for the RPS only if the energy was generated at a facility that commenced construction on or after January 1, 2003.	Yes	Electricity supplier/provider ⁴	2.12% of retail electricity supply must be generated using solar by 2021 (approximately 1,500 MW solar)	Costs recovered in customers' rates	Alternative Compliance Payment of \$50/MWh; Solar ACP of \$300/MWh	Possible suspension of the supplier's license, financial penalties, disallowance of recovery of costs in rates, and/or prohibition on accepting new customers

⁴ From NJ statute: "Electric power supplier" means a person or entity that is duly licensed by the Board to offer and to assume the contractual and legal responsibility to provide electric generation service to retail customers. This term includes load serving entities, marketers and brokers that offer or provide electric generation service to retail customers. An electric power supplier may provide basic generation service, as defined herein. However, the term excludes an electric public utility that provides electric generation service only for the purpose of providing basic generation service, as defined herein.

New Mexico	10% by 2011	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Anaerobic Digestion, Fuel Cells (Renewable Fuels)	Yes, except for small hydroelectric which are limited to new facilities only.	Yes, but contract prices are capped at \$49/MWh for wind and hydro; \$62.54/MWh for biomass and geothermal; and \$150/MWh for solar <10 kW, \$100/MWh for solar >10 kW	Investor-Owned Utilities	One kWh of biomass, geothermal, landfill gas or a fuel cell is worth two kWh. One kWh of solar resources is worth three kWh.	Can recover everything at or less than cap.	1% in 2006, increasing 0.2%/yr, until 2% in 2011. Maximum cost \$49,000 for large customers with consumption over 10,000 MWh, rising \$10,000/year to \$99,000 in 2011.	
New York	24% by 2013 (+1% from voluntary mkt.)	Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Fuel Cells, CHP/ Cogeneration, Biogas, Liquid Biofuel, Anaerobic Digestion, Tidal Energy, Wave Energy, Ocean Thermal	Yes	No (but interested in moving toward certificate accounting system)	Investor-Owned Utilities	0.152% from customer-sited PV, fuel cells and wind by 2013	Volumetric charge on customers' bills	No cap, but central procurement by NYSERA prevents bids that are too costly. Limit on PBF funds is effectively a cap.	No penalty because central procurement is used instead of individual suppliers
Pennsylvania	8% by 2020	Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Fuel Cells, Municipal Solid Waste, -----→	Yes	Yes	Investor-Owned Utilities	Solar PV set-aside of 0.5% by 5/31/21	Costs recovered in customers' rates. Each utility has to prove legitimacy of claims	ACP of \$45/MWh; 200% of average REC price for solar	To be determined

Rhode Island	16% by 2019	Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Small Hydroelectric, Tidal Energy, Wave Energy, Ocean Thermal, Biodiesel, Fuel Cells (Renewable Fuels)	No more than 2 percent per year of pre-'98 resources can count.	Yes, New England Generation Information System certificates	Investor-Owned Utilities, Retail Suppliers	No	Cost recovered in rates	The Alternate Compliance Mechanism is \$50/MWh, adjusted for inflation	
Texas	2,280 MW by 1/1/2007, rising to 5,880 MW by 1/1/2015	Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Geothermal Heat Pumps, Tidal Energy, Wave Energy, Ocean Thermal	Yes, but only in cases with pre-existing supply agreements.	Yes	Retail electric providers and COUs that offer customer choice (see ⁵ below)	Target of at least 500 MW from renewables other than wind.	Costs recovered in customers' rates		\$50/MWh or 200% of average REC price
Vermont	A GOAL for total incremental energy growth between 2005-2012 to be met with new renewables (capped at 10% of sales)	Solar Water Heat, Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Anaerobic Digestion, Fuel Cells (Renewable Fuels)	May be eligible if placed into service after December 31, 2004.	Yes	GOAL only for retail suppliers, but if goal is not met a mandatory RPS will take effect in 2013.	No	Costs recovered in customers' rates	Goal only	Goal only

⁵ From section 39.904 of Texas Utilities Code; PUCT Substantive Rule 25.173 (c): A municipally-owned utility, generation and transmission cooperative (G&T), or distribution cooperative that offers customer choice in the restructured competitive electric power market in Texas.

Wisconsin	Mandate varies by utility with an overall goal of 10% by 12/31/15	Solar Thermal Electric, Photovoltaics, Landfill Gas, Wind, Biomass, Hydroelectric, Geothermal Electric, Tidal Energy, Wave Energy, Fuel Cells (Renewable Fuels)	Some amount of renewables mandated by previous legislation are eligible for RPS	Yes	Municipal Utility, Investor-Owned Utility, Rural Electric Cooperative, Retail Supplier	No	Cost recovered in rates to consumers. RPS does allow extra cost to be recovered through green pricing program.	No cap	\$5,000 to \$500,000
Washington	<p>-- Ballot measure, not yet in effect --</p> <p>15% by 2020</p> <p>-- Ballot measure, not yet in effect --</p>	Wind, Solar electric, Geothermal electric, Landfill gas, Wave, Ocean, Tidal, Sewage treatment gas, Biodiesel (not raised on land where old-growth/first-growth forests were cleared), Biomass (no MSW, no black pulping liquor, no old growth, no chemically treated wood products), Hydro efficiency upgrades, hydro projects utilizing irrigation pipes or canals	Commenced operation after March 31, 1999	Yes. Unbundled RECs from Pacific Northwest and Bundled RECs from anywhere.	All utilities -- public and private -- above 25,000 customers	Distributed generation (5 MW or less) counts double toward RPS compliance.	Cost recovered in rates	Proposed; 4% of retail revenue on incremental cost	\$50/MWh