

Table C-1. State Minimum Renewable Electricity Requirements (as of April 2006)

State	Requirement	Status	Technology Eligibility	Comments
Arizona	0.2% in 2001 + 0.2%/yr 1% by 2005 + 0.05%/yr to 1.1% in 2007, through 2012	1998 – Arizona Corporate Commission (ACC) Decision and Amended Rules On Electric Competition 2/01 and 3/01 – ACC issues orders adopting final EPS rules, Decision nos. 63364 and 63486 (Docket No. RE-00000C-00-0377) 6/03 – ACC completes comprehensive review of EPS policy 2/06 – ACC staff issue Draft EPS rules and report on proposed rule amendments 3/06 – ACC order issues Proposed Renewable Energy Standard and Tariff Rules (Docket RE-00000C-05-0030, Decision No. 68566)	60% solar PV and solar thermal electric by 2004 40% solar hot water and in-state landfill gas, wind and biomass by 2004	<ul style="list-style-type: none"> • Applies to all IOUs and Coops. ESPs included beginning in 2004. • Extra credits for in-state development or content, manufacturing, distributed solar, early installation, and green pricing programs. • Can use Environmental Portfolio Surcharge funds for compliance. • Utility distribution companies may request waiver under “extreme circumstances”. • Based on results of 6/03 policy review, the ACC voted in 2/04 to allow the RES to continue increasing to 1.1% in 2007-2011, per the original ruling. • In 1/05, ACC staff issued a report on proposed changes to the EPS rules including recommendations to increase the total requirement and extend the term to 15% by 2025, and making other modifications to the EPS program. In 4/05 the ACC issued a draft rule based on these recommendations, and in 8/05, the ACC voted to make changes to the draft rule. In 2/06, ACC staff released new draft EPS rules along with a report on the proposed amendments. In 3/06, the ACC voted to issue a Notice of Proposed Rulemaking for the new draft rules. A public hearing is scheduled for 5/06, and a final decision is expected later this summer.
California	Utilities increase total renewable energy sales by minimum 1% annually until they reach 20%. Must be at 20% by 2017.	9/02 – SB 1078 signed 3/03 – CEC order (Docket # 03-RPS-1078) on RPS proceeding and CPUC collaborative guidelines 6/03 – CPUC Decision 03-06-071 initiating the implementation of the RPS 4/04 – CPUC order instituting new RPS Rulemaking 04-04-026 proceeding 5/04 – CEC adopts new guidebooks for RPS eligibility and criteria for subsidy awards for above-market costs 6/04 and 7/04 – CPUC issues	Solar PV, solar thermal, wind, biomass, landfill gas, digester gas, geothermal, and ocean.	<ul style="list-style-type: none"> • Applies to 3 largest IOUs. Direct access service providers included beginning in 2006. • Authorizes CEC to use funds from the CA systems benefit charge to buy down above-market costs of renewables. Exempts utilities from requirement if sufficient funds are unavailable. • Legislation permits CPUC to issue penalties for non-compliance through their general authority. • Small hydro (< 30 MW), geothermal in operation prior to 9/26/96, and MSW (w/restrictions) can be used to determine utility's baseline level. • Minimum 10-year contracts required. • 4/04 CPUC order sets baseline levels of RE generation for each utility, sets their 2004 Annual Procurement Target (APT), identifies outstanding issues to be resolved, and process for RES implementation completion. • 6/04 and 7/04 CPUC decisions (1) adopt standard contract terms and conditions, ordering utilities to file renewable procurement plans, and clarifying 2004 APT; (2) adopt methodology to determine long-term market price of electricity; and (3) adopt criteria for ranking “least cost and best fit” resources in utility RES

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
		<p>three implementation decisions Decision 04-06-014, Decision 04-06-015, Decision 04-07-029</p> <p>5/05 – CPUC Decision 05-05-011 on distributed generation participation in RES</p> <p>7/05 and 10/05 – CPUC Decision 05-07-039 approving utility renewables plans and solicitation protocols</p> <p>11/05 – CPUC Decision 05-11-025 establishing RPS rules for competitive electricity suppliers</p> <p>12/05 – CPUC implementation Decision 05-12-042</p>		<p>solicitations.</p> <ul style="list-style-type: none"> Renewable distributed generation (DG) can participate in the RPS, subject to future ruling by the CPUC on issues relating to subsidies and measurement of electrical output. DG facility owners retain ownership of associated RECs. 11/05 CPUC decision (1) orders electric service providers (ESPs), small regulated utilities, and “Community Choice Aggregators” (CCAs) to file historic and projected retail sales data for purposes of establishing their RES obligations; and (2) states intent to further explore the use of short-term contracts, third-party purchasing entities, and RECs toward RPS compliance. 12/05 CPUC decision revises the methodology and inputs used to calculate the Market Price Referent, which establishes the long-term market price for electricity by which above-market costs are determined.
Colorado	<p>3% in 2007-2010 6% in 2011-2014 10% in 2015 and each year thereafter</p> <p>4% of total required generation must come from solar technologies (half of the 4% must come from customer-sited resources)</p>	<p>11/04 – Colorado Ballot Initiative (Amendment) 37 – Renewable Energy Standard (passed by 53% to 47% vote); amends Article 2 of title 40, Colorado Revised Statutes</p> <p>4/05 – SB 05-143 signed</p> <p>12/05 – PUC issues order (Docket #05R-112E) adopting RES rules</p>	Solar, wind, geothermal, biomass (includes co-firing, landfill gas, wastewater by-products, and animal wastes), hydro (new <=10 MW or existing <= 30 MW), fuel cells using eligible renewable resources	<ul style="list-style-type: none"> Applies to all retail ESPs with more than 40,000 customers. Establishes RECs trading system for compliance. RECs are eligible to meet requirements in the preceding compliance year, the current compliance year, or banked for up to five years. RECs can be borrowed forward for up to 2 years through 2010. New and existing renewable energy facilities are eligible. No in-state deliverability of renewable generation is required, but a REC multiplier of 1.25 is awarded for each kWh of renewable energy that is generated in-state. 1 percent/month-rate cap for the avg. res. customer, as determined by the net of new non-renewable alternatives. RES cost cap applies to all customer classes. Requires competitive solicitations for supply and REC contracts, minimum 20-year contracts, allows for full utility recovery of prudently incurred costs. Annual compliance plans must be submitted to the PUC for approval. Eligibility of resources used in green power programs shall be granted by the PUC on a case by case basis. Munis and coops can opt-out by developing a similar RES, or by affirmative vote from a utility’s customers. United Power and Intermountain Rural Electric Association opted out of the RES by vote in 2005. Establishes a solar rebate program of \$2/watt (up to 100 kW per installation), and net metering. Utilities must submit an annual compliance report to PUC. Establishes penalties for non-compliance.

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
				<ul style="list-style-type: none"> SB 05-143 modified several sections of Amendment 37 including definition of eligible renewables, and the maximum cost cap.
Connecticut	<p>Class I technologies 1% in 2004 +0.5%/yr to 2% by 2006 +1.5%/yr to 5% by 2008 +1%/yr to 7% in 2010 and thereafter</p> <p>Class I or II technologies 3% in 2004 and thereafter</p>	<p>4/98 – H. 5005, Restructuring law signed (Public Act 98-28)</p> <p>12/98 – DPUC order issues licensing regulations involving RPS. (Docket # 98-06-15)</p> <p>6/99 – H. 6621 signed (Public Act 99-225), revises 1998 RPS law</p> <p>6/03 – Sub. S. 733 (Public Act 03-135) signed, revises RPS</p> <p>7/03 – H. 6428 (Public Act 03-221) signed, makes further minor modifications to RPS</p> <p>6/04 – DPUC order adopts new RPS regulations, Docket #03-10-19 (previously Docket #02-04-14), and issues a decision for Docket #04-01-12</p> <p>9/04 – DPUC issues a decision for Docket #04-02-07</p> <p>6/05 – DPUC issues a decision for Docket #05-04-16</p> <p>7/05 – H. 7501 signed (Public Act 05-01)</p> <p>11/05 – DPUC issues a decision for Docket #04-01-13</p>	<p>Class I: solar, wind, landfill gas, new (post 7/1/03) run of river hydro (<= 5 MW), fuel cells, ocean thermal, wave or tidal, low-e RE conversion tech., low NOx emitting, sustainable biomass (Biomass facilities with quarterly avg. NOx emission rate <= 0.075 lbs. per MMBTU. Existing (pre 7/1/03) biomass facilities <= 500 kW are exempt from NOx emission requirement.)</p> <p>Class II: MSW, existing (prior to 7/1/03) run of river hydro (<= 5 MW), other biomass (facilities must have quarterly avg. NOx emission rate <= 0.2 lbs. per MMBTU)</p>	<ul style="list-style-type: none"> 6/03 revision to RPS (Public Act 03-135) closes standard offer (non-switching) customers exemption loophole, adjusts targets, and adds new technologies to Class I. Applies to investor owned utilities only. Renewable generation from NEPOOL region, Northern Maine, and NY, PA, NJ, MD, and DE can be used to meet the requirements. Credit trading program implemented using New England Generator Information System (GIS). 5.5 cents per kilowatt-hour penalty for non-compliance. By 2007, utilities must file with DPUC long-term (not less than 10 yrs.) contracts totaling at least 100 MW of Class 1 technologies that receive money from the state Renewable Energy Investment Fund. DPUC regulates the program through the use of new dockets. In 6/04, DPUC Docket #04-01-12 determined that renewable generation from northern Maine (NMISA), which is outside the NEPOOL region, is eligible to meet the RPS. In 9/04 DPUC Docket #04-02-07 clarifies the definition of Class I and II run of river hydro. In 6/05 DPUC Docket #05-04-16 determined that existing biomass facilities in ME and NH retrofitted to meet NOx emission requirements qualify as Class I resources, which has flooded the REC market with inexpensive RECs and resulted in a significant drop in REC prices. In 11/05, DPUC Public Act 05-01 makes minor revisions to the existing RPS, but also creates a separate Class III requirement for combined heat and power and energy efficiency, of 1% of total output by 2007, increasing to 4% by 2010 and thereafter.
Delaware	<p>1% in 2007, increasing 0.5% annually to 2% in 2009; then increasing 0.75% annually to 8% in 2017; then increasing 1% annually to 10% in 2019</p> <p>The requirement in 2020 and there after to be established by DE Public Service Commission, but</p>	<p>7/05 – Senate Bill 74, signed</p> <p>12/05 – DE PSC issues draft RPS rules and regulations (Docket #56 - Order 6793). Final rules are required by 7/06.</p>	<p>Solar electric, wind, ocean, geothermal, biomass, landfill gas, co-firing, hydro (<30 MW), and fuel cells powered by renewable fuels.</p>	<ul style="list-style-type: none"> Applies to the total retail sales from all competitive electric suppliers. Munis and RECs can exempt themselves from the requirements provided they offer a voluntary green power program and participate in a Green Energy Fund. Total retail sales excludes sales to large industrial customers (peak load > 1,500 kW) No more than 1% of each year's requirement can be met with existing (pre-1998) renewable resources. Beginning in 2020, existing resources are not RPS eligible. In-state customer-sited renewable generation after 5/31/06 may be used toward RPS compliance.

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
	can be no less than 10%.			<ul style="list-style-type: none"> • Deliverability into the PJM region is required for renewable generation to meet the RPS. • Establishes REC trading system using the PJM Generation Attributes Tracking System to track compliance. • Credit multipliers include 300% for solar and fuel cells installed through 2014, and 150% for in-state wind through 2012. RECs can be banked for three years. • Establishes an Alternative Compliance Payment system, with the ACP set at \$25/MWh for the first year, increasing to \$35/MWh, \$45/MWh, and then \$50/MWh for ACPs made in subsequent years. ACPs go into DE Green Energy Fund. • Rate recovery of all prudent incremental costs is permitted. Recovery of ACP is permitted only if the ACP is the least cost measure, or if insufficient resources are available. • Retail electric suppliers must submit annual compliance reports. • Beginning in 2010, the PSC may review the annual requirements and make recommendations to the General Assembly to alter the schedule. Beginning in 2014, the PSC may alter the schedule under certain conditions.
Hawaii	7% in 2003 8% in 2005-2009 10% in 2010-2014 15% in 2015-2019, and 20% in 2020.	6/04 – Senate Bill 2474 S.D. 3 H.D.2 , signed Requires the PUC to develop and to adopt rules and implement a ratemaking structure for meeting the RES by 12/31/06, and to report on its impacts. Second concept paper on RPS regulations issued 7/05	Wind, solar, hydro, landfill gas, MSW, geothermal, ocean, biomass, hydrogen fuels, fuel cells Also eligible: electrical savings from SWH energy conservation measures, co-gen and CHP	<ul style="list-style-type: none"> • Applies to the net electricity sales by all utilities in the state. • Electric utilities and their electric utility affiliates may aggregate their renewable portfolios in order to achieve the RES. • Allow PUC to relieve responsibility of utilities to meet the requirements if they cannot be met in a cost-effective manner (i.e. “at or below avoided costs”). • New and existing renewables can count toward targets. • Requires the PUC to evaluate and recommend changes to the RES in 2009, and every five years thereafter.
Iowa	105 average MW ~ 2% of 1999 sales	1983 – Alternate Energy Production Law, revised (1991)	Solar, wind, methane recovery, biomass	<ul style="list-style-type: none"> • Applies to investor owned utilities only. • ~850 MW of mostly wind installed. • 2003 revision to law allows IOUs to own the generation required to meet the standard.
Maine	30% of sales in 2000 (start of competition) and thereafter as a condition of licensing.	1997 – Restructuring law LD1804 and Public Law Chapter 316 5/99 – PUC issues final RPS regulations (Docket #97-584) 6/03 – PUC amends RPS regulations (Docket 2002-494, Ch. 311)	Fuel cells, tidal power, solar, wind, geothermal, hydro, biomass, and MSW (under 100 MW) High efficiency cogen. systems of unlimited size	<ul style="list-style-type: none"> • Eligible renewables = over 50% of sales in 1998. • ME PUC makes recommendations for changes to legislature no later than 5 years after beginning of retail competition. • Penalty for non-compliance. • RES to be met on a product basis. • Regulations amended by the PUC in 6/03 require that electricity providers in the ISO-NE control area meet the targets by acquiring GIS certificates. Electricity providers with contractual rights to

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
		Regulations amended 10/04, Docket 2004-505		<p>certificates from PURPA QFs can use the contractual entitlements to demonstrate compliance in the event that the QF does not provide them with the associated GIS certificates. This new rule creates the potential for double counting, wherever the certificates are traded in the New England Power Pool.</p> <ul style="list-style-type: none"> Regulations amended by the PUC in 10/04 to exempt electric sales of certain businesses in the Pine Tree Development Zone from having to meet the RES.
Maryland	<p>Tier 1 Renewables: 1% in 2006, increasing 1% biannually to 7% in 2018, increasing to 7.5% in 2019, and thereafter</p> <p>Tier 1 or 2 Renewables: 2.5% 2006-2018, 0% in 2019 and thereafter</p>	<p>5/04 – House Bill 1308, signed (Code of Maryland § 7-701 et seq.)</p> <p>10/05 – PSC order issues final RES implementation rules (PSC COMAR 20-61)</p>	<p>Tier 1: solar, wind, biomass, landfill gas, geothermal, ocean, fuel cells (renewable sources only), and small hydro (< 30 MW)</p> <p>Tier 2: hydro, MSW, and incineration of poultry litter</p>	<ul style="list-style-type: none"> Applies to all retail electricity sales, except annual sales in excess of 300 mil kWh of industrial process load to a single customer. Sales to rate-capped res. customers and coops with pre-10/04 power purchase contracts are also exempt until those agreements expire. New and existing renewable facilities are eligible. Generation must be delivered into PJM control area or come from a state that shares a border with PJM or which PJM partially overlaps. PSC rule establishes REC-based compliance program using PJM Generator Attributes Tracking System (GATS). Double credits are given to solar, and extra credits (ranging 10-20%) are given to early (pre-2009) development of wind and LFG facilities. RECs can be banked for 3 yrs. Establishes alternate compliance mechanism (ACM). Credits prices are capped at 2¢/kWh for Tier 1 renewables and 1.5¢/kWh for Tier 2. For all industrial process load sales, ACM credits for Tier 1 are capped at 0.8¢/kWh in 2006 and gradually decline to 0.2¢/kWh in 2017 and later. Tier 2 renewables have a ACM credits price of 0. A renewable energy fund supports Tier 1 resources using the fees collected through the ACM. Each electric supplier must submit annual report to PSC. Legislation instructs a tech. advisory group to recommend regulations to the PSC for the siting of wind facilities, which must be established by 7/1/06.
Massachusetts	<p>1% of sales from new renewables by 2003 +0.5%/yr. to 4% in 2009 +1% per year thereafter until date determined by Division of Energy Resources.</p> <p>Preliminary proposal does not include standard for existing renewables (~7%).</p>	<p>11/97 – Restructuring law (Chapter 164 of the Acts of 1997) signed</p> <p>4/02 – MA Division of Energy Resources adopts final regulations (225 CMR 14.00)</p> <p>10/05 – MA DOER issues "Policy Statement on the RPS Eligibility of Retooled Biomass Plants"</p>	<p>Solar, wind, ocean thermal, wave, tidal, landfill gas, and low-emission advanced biomass beginning commercial operation or representing increase in capacity at existing facility after 12/31/97. Hydro and MSW qualify as existing.</p>	<ul style="list-style-type: none"> Applies to investor owned utilities only. +1% new renewables requirement may start one year after any renewable within 10% of avg. spot market price. Legislation does not explicitly require support for existing level of renewables. MA DOER will consider a standard for existing renewables if significant attrition occurs. Using the New England GIS to track REC trading and RES compliance. Utilities can apply RECs to subsequent years, but not for more than 30% of that year's requirement. Alternative compliance mechanism allows utilities to pay 5¢/kWh into the state Renewable Energy Trust Fund to meet its requirements.

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
				<ul style="list-style-type: none"> Monies from the state trust fund are being used to stimulate RES-eligible renewables by offering guaranteed contracts for RECs to various developers. 10/05 DOER policy statement reverses initial decision to allow existing biomass facilities re-tooled to have lower air emissions to be eligible for MA RES compliance. Forthcoming revisions to RES regulations will clarify that only generation in excess of historic output will be eligible.
Minnesota	<p>425 MW of wind and 125 MW of biomass by 2002</p> <p>400 MW more wind by 2006</p> <p>10% by 2015 above existing requirements. 0.5% of this total must come from biomass in 2005, increasing to 1% in 2010.</p> <p>~19% of Xcel's 2015 sales</p>	<p>1994 – Radioactive Waste Management Facility Authorization Law (Minn. Stat. 216B.2423)</p> <p>MN PUC order Docket E-002/RP-98-32</p> <p>5/03 – Radioactive Waste Management Facility Authorization Law amended (HF9, 2003 1st Special Session, Chapter 11).</p>	<p>Original requirement: wind and biomass, with preference for in-state projects</p> <p>10% requirement: solar, wind, small hydro (< 60 MW), biomass, MSW, landfill gas, and hydrogen (from renewable sources only after 2010)</p>	<ul style="list-style-type: none"> Xcel allowed to build temporary dry cask storage of nuclear waste at Prairie Island nuclear plant in exchange for renewable energy development. The 1999 PUC order determined 400 more MW of wind by 2012 was in the public interest, and the 2003 PUC order moved 400 MW additional wind requirement up to 2006 from 2012. Law amended in May 2003 making Xcel's 10% by 2015 renewable energy objective mandatory, and doubling its contribution to the renewable energy fund. The 10% requirement is in addition to Xcel's existing renewable energy obligations. 10% requirement is subject to least cost planning criteria. If implementation affects reliability or is not economic, then the requirement may be temporarily waived.
Montana	<p>5% of electricity sales to retail customers in 2008 and 2009, 10% from 2010-2014, and 15% in 2015, and each year thereafter</p> <p>For years 2010-2014, at least 50 MW must come from community renewable energy projects, and from 2015 onward at least 75 MW must come from community-based projects</p>	<p>4/05 – “Montana Renewable Power Production and Rural Economic Development Act” (SB 415) signed</p> <p>8/05 – PSC issues notice of scoping document (N2005.8.124) for RES regulations. PSC required to issue final regulations by 6/06.</p>	<p>Wind, solar, geothermal, landfill gas, hydro (< 10 MW), farm-based methane, wastewater treatment gas, biomass, fuel cells from renewable sources, and co-firing.</p>	<ul style="list-style-type: none"> Applies to all IOUs (munis and rural coops with > 5,000 customers must implement their own RES based on the intent of SB 415) Only new renewable energy facilities (installed after 1/1/05) are eligible to meet the RES, and electricity must be generated in—or delivered into—Montana. Establishes REC trading system for compliance verification. RECs can be banked for up to 3 years from the date of generation. A three-month “true-up period” follows each compliance year. RECs generated as part of a voluntary green power program cannot be used to meet the RES. RECs prices are capped at or below the avoided costs for other electricity supplies in a competitive bidding process under the same contract terms. Establishes contract standards: minimum 10 yrs, preference for MT-based employment, and wages for heavy construction. Establishes non-compliance penalty of \$10/MWh, which is non-recoverable in electricity rates and must be placed into a low-income energy assistance program. Short-term compliance waivers can be granted to public utilities by the PUC under certain circumstances. Public utilities must submit procurement plans to the PUC, which has implementation and enforcement authority.

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
Nevada	<p>6% of electricity sales to retail customers in 2005 and 2006, growing to 9% in 2007 and 2008, 12% in 2009 and 2010, 15% in 2013 and 2014, and 20% in 2015, and thereafter.</p> <p>Minimum 5% of total renewables sold each year must come from solar.</p> <p>Energy efficiency measures are limited to meeting 25% of annual requirements, and at least 50% of all EE measures must be installed at service locations of residential customers, unless otherwise stated by the PUC.</p>	<p>6/01 – SB372 signed. SB 372 codified as Nevada Revised Statutes 704.7801 – 704.7828</p> <p>5/02 – PUC issues final order implementing RES regulations, codified as NAC 704.8831 – 704.8893</p> <p>5/03 – RES amended by AB 296</p> <p>6/03 – RES amended by AB 429</p> <p>4/04 – PUC issues regulations for REC trading program, codified as NAC 704.8901 – 704.8939</p> <p>6/05 – RES amended by AB 3</p> <p>1/06 – PUC amends RES regulations NV PUC Docket # 05-7050</p>	<p>Wind, solar (PV, thermal, SWH), hydro (<30MW), geothermal, and biomass (includes agricultural, wood, animal waste, MSW, and aquatic plants), energy recovery facilities (<15 MW), and energy efficiency measures</p>	<ul style="list-style-type: none"> • SB 372 repeals previous RES of 1% by 2009 from 1997 restructuring law (NRS 704.989). • Applies to all retail electricity suppliers, but not coops, munis or general improvement districts. • Final renewable credit trading program is in place, RECs began accruing 1/1/03, and can be banked for up to 4 years. • AB 296 gives 2.4 times RECs for customer-sited solar PV, 1.15 times RECs for other onsite renewables generation, and 0.7 times RECs for waste tire facilities using “reverse polymerization” technology. • Minimum 10-year contracts required. • NV PUC may impose financial penalties for non-compliance. • AB 429 adds hydro (<30MW) and qualified energy recovery processes to eligible resources list. • A 9/04 PUC order established a Temporary Renewable Energy Development Program. TRED places a surcharge on electricity customers to generate funds which are then used to guarantee revenues for renewable energy developers who were having difficulty securing long-term contracts from un-creditworthy utilities. • AB 3 delays the RES schedule by 2 years, increases the percentage requirements, adds energy efficiency measures to the list of eligible resources, and codifies the PUC’s TRED program. To be RES eligible, energy efficiency measures must be installed on or after 1/1/05. • PUC amendment of RES regulations (1/06) incorporates changes mad by the legislature with AB 3, including addressing the energy efficiency requirement.
New Jersey	<p>Class I or II Technologies: 2.5% by 2004-2008.</p> <p>Class I technologies: 0.74% in 2004; 0.983% in 2005; 2.037% in 2006; 2.924% in 2007; and 3.84% in 2008.</p> <p>Solar Electric: 0.01% in 2004; 0.017% in 2005; 0.0393% in 2006; 0.0817% in 2007; and 0.16% in 2008.</p> <p>NJBPU sets requirements for 2009 and after, but must</p>	<p>2/99 – Restructuring law (The Electric Discount And Energy Competition Act) signed.</p> <p>6/01 – NJBPU issues interim RES regulations (Subchapter 8, N.J.A.C. 14:4-8)</p> <p>4/03 – Renewable Energy Task Force Report released.</p> <p>6/04 – NJBPU adopts final RES regulations (N.J.A.C. 14:4-8)</p> <p>3/05 – NJBPU makes minor changes to RES regulations (N.J.A.C. 14:4-8)</p>	<p>Class I: solar, wind, geothermal, wave, tidal energy, landfill gas, fuel cells, sustainable biomass</p> <p>Class II: MSW or hydro (<30 MW) that meets high environmental standards</p>	<ul style="list-style-type: none"> • Applies to retail and basic generation suppliers. • NJBPU issues final regulations in March 2004 that accelerates the Class 1 requirement by 4 years to 4% in 2008, and creates a solar electric tier, which could stimulate as much as 90 MW of new solar PV by 2008. • Establishes a system of tradable RECs for RES compliance. RECs will be tracked by a regional tracking system, once it is finalized and approved by the NJBPU. • Establishes an alternative compliance mechanism for Class I, II, and solar requirements. Through 2007, the ACP and SACP prices are set at \$50/MWh and \$300/MWh respectively. Prices shall be reviewed annually, and adjusted as necessary. ACP monies will support renewable energy through the NJ Clean Energy Program (CEP), with SACP monies strictly for solar energy projects. • Penalties for non-compliance. • Electricity generated through renewable energy projects funded by

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
	be at or above 2008 levels (see comments regarding proposed RES requirements through 2020.	10/05 – NJBPU issues Proposed New Rules: N.J.A.C. 14:8		<p>the NJ Societal Benefits Charge or the CEP is eligible to meet RES requirements.</p> <ul style="list-style-type: none"> In 12/05, NJ BPU voted in favor of adopting proposed new rules to extend and increase RES to 22.5% by 2020. Final approval of increase is expected in April 2006.
New Mexico	5% of retail sales in 2006 + 1%/yr. to 10% in 2011, and thereafter.	<p>12/02 – PRC issues final RES rule (17.9.573 NMAC)</p> <p>3/04 – SB 43 signed</p> <p>12/04 – PRC issues revised rule based on SB 43 (17.9.572 NMAC)</p>	Wind, solar, biomass, geothermal, hydro (5 MW or less), landfill gas, fuel cells	<ul style="list-style-type: none"> 12/02 PRC RES ruling repeals RES rule from October 2000 (NMPRC Rule 591, 17 NMAC 9.591), which established 5% of standard offer service RPS by 2002. Applies to all retail electricity suppliers under PRC jurisdiction (not coops or munis). Texas-New Mexico Power Company is exempt until their all-requirements contract expires or is renegotiated. Establishes credit-trading program with 1 REC/kWh for wind & hydro, 3 RECs for solar, and 2 RECs for all other renewables. Preference given to in-state resources, requires minimum 10-year procurement contracts. Requires PRC to undergo a biannual (starting in 2005) review to examine utility progress & impact on customers. SB 43 places the 12/02 PRC ruling in statute and establishes additional requirements, including: Caps RES costs for large-scale customers (> 10 million kWh) at \$49,000 in 2006, rising \$10,000 annually to \$99,000 in 2011. RECs must represent generation delivered into NM and can be banked for 4 years. RECs generated by PURPA QFs are the property of the purchasing utility. On 12/3/04, the PRC established a reasonable cost threshold (Case No. 04-00253-UT), above which a public utility will be exempt from meeting its requirement. It is set at an overall customer rate increase of no more than 1% in 2006, and no more than an additional 0.2% per year until capped at 2% for each year beginning in 2011 and beyond. There is also a cap on the price of resources by type: \$.049/kWh for wind and hydro resources; \$.06254/kWh for biomass and geothermal resources; and \$.15/kWh for solar projects sized at ≤ 10 kW, and \$.10/kWh for solar projects > 10 kW. The PRC will revisit the appropriateness of the reasonable cost threshold in 2007.
New York	<p>New renewable energy requirement: 0.8% in 2006, increasing ~0.8%/yr to 6.56% in 2013.</p> <p>Customer-sited tier is 2% of total annual RES targets.</p> <p>With existing baseline</p>	<p>9/04 – PSC issues final rule (Case 03-E-0188)</p> <p>4/05 – PSC order approves RES implementation plan</p> <p>10/05 – PSC order approves minor changes to the maintenance resource category</p>	<p>Main Tier: wind, solar, ocean, biomass, biogas, fuel cells, incremental hydro, and low-impact run-of-river hydro > 30 MW</p> <p>Customer Tier: solar,</p>	<ul style="list-style-type: none"> RES applies to IOUs only; NYPA and LIPA are encouraged to participate. RES is administered by NYSEERDA using a central procurement model. A RES surcharge is collected from customers by utilities and passed on to NYSEERDA who will distribute funds in a competitively neutral manner to secure enough renewable generation to meet annual RES targets. Facilities commencing operation after 1/1/03 are eligible for the RES. "Maintenance resource" exceptions for existing small hydro

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
	renewable energy, and generation expected from state purchase requirement, renewable energy increases from 19.45% in 2003 to 24% in 2013 (an additional 1% is expected to come from voluntary green pricing programs).	11/05 – PSC order approves methane digester systems as eligible under customer tier 1/06 – PSC order authorizes additional main tier solicitations and modifies RES program (see comments)	wind (>300kW), fuel cells, and methane digesters	(>5MW), wind, and biomass facilities will be granted based on a case-by case demonstrated need to receive RES support. <ul style="list-style-type: none"> Renewable energy must be delivered into the New York control area to count toward RES. Facilities that count toward the RES must forego funds from the NY systems benefits funds. A full review of the RES program is required in 2009. The RES surcharge commenced on 10/1/05, and the RES began on 1/1/06. 1/05 - First round “fast track” procurement solicitation was completed, resulting in contracts with seven projects. 1/06 PSC order authorized a second round of main tier procurement solicitations for 2006 and 2007, and modifies the RES program in the following ways: requires 10-year contracts; establishes methodologies for determining eligible biomass technologies; requires RES-funded projects to make 5% of generation available for green pricing programs; allows bilateral contracts; allows for unbundling of environmental attributes from power supply; and authorizes the development of a certificate-based tracking system.
Pennsylvania	<p>Tier I technologies: 1.5% by 2007; 2% by 2008; increasing by 0.5% annually to 8% by 2020, remaining at 8% each year thereafter.</p> <p>Tier II technologies: 4.2% from 2007-2009; 6.2% from 2010-2014; 8.2% from 2015-2019; 10% in 2020; remaining at 10% each year thereafter.</p> <p>Solar PV set-aside: 0.0013% in 2007-2009; 0.0203% in 2010-2014; 0.25% in 2015-2019; 0.5% in 2020; remaining at 0.5% each year thereafter.</p>	<p>12/04 – Act 213, Alternative Energy Portfolio Standards (SB 1030) signed</p> <p>3/05 – PUC issues AEPS Implementation Order (Docket No. M-00051865)</p> <p>7/05 – PUC issues AEPS Implementation Order II (Docket No. M-00051865), amending original 3/05 order</p> <p>10/05 – PUC issues order implementing AEPS standards for the participation of EE/DSM resources (Docket No. M-00051865)</p> <p>11/05 – PUC issues proposed rules for AEPS customer generators on net metering (Dockets No. L-00050174 & No. M-00051865) and interconnection standards (Dockets No. L-00050175 &</p>	<p>Tier 1: Solar PV, solar thermal, wind, low-impact hydro, geothermal, LFG, biomass, fuel cells, and coal mine methane</p> <p>Tier 2: Waste coal, distributed generation systems, demand-side management, large-scale hydro/pumped storage, MSW, wood manufacturing and pulping process by-products, and IGCC technologies</p>	<ul style="list-style-type: none"> SB 1030 replaces renewable energy requirements on several utilities established as a result of settlement cases in 1998 following a utility restructuring law in 1996. Applies to IOUs only. Rural coops are exempt, but must offer energy efficiency programs to customers. Electric distribution companies (Discos) and sales from electric generation suppliers within Disco territory are exempt from the AEPS until they reach the end of their cost-recovery period established during restructuring. Renewable energy generation from new or existing facilities counts toward AEPS, except MSW (existing only). Establishes alternative energy credit trading program to track AEPS compliance. Credits can be banked for up to two years. An alternative compliance payment (ACP) of \$45/MWh (or 200% of avg. market value for solar credits) can also be made to meet AEPS requirements. ACP monies are placed in a newly established Sustainable Energy Fund, to be used for increasing alternative energy resources. Includes force majeure language allows PUC to modify a utility’s requirement if resources are not reasonably available in the market. The PUC is considering the development of rules for a force majeure mechanism. Allows for full utility cost recovery of prudently incurred expenses. However, the 7/05 PUC order found that ACPs are not recoverable

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
		No. M-00051865) 1/06 – PUC issues final order on designation of credits registry for AEPS ; and tentative order on standards for alternative energy system qualification and credit certification (Docket No. M-00051865)		from ratepayers. <ul style="list-style-type: none"> Requires PUC to conduct a comprehensive review of AEPS in 6 years, with recommendations for adjusting targets beyond 2020. AEPS is effective starting February 2005. 1/06 PUC order establishes PJM GATS as the credits registry for AEPS compliance.
Rhode Island	3% by 2007, increasing 0.5%/yr. to 4.5% in 2010, then increasing by 1%/yr. to 8.5% in 2014, then increasing by 1.5%/yr. to 16% in 2019. Requirement remains at 16% in 2020 and thereafter unless the PUC determines it is no longer necessary.	7/04 – Renewable Energy Standard law (H 7375) signed, and codified as RI Gen. Laws § 39-26-1 et seq. 9/05 – PUC issues proposed draft RES implementation rules 11/05 – PUC adopts order (Docket # 3659) implementing final RES implementation rules 12/05 – PUC issues final report (Order No. 18485) on comments received on proposed RES rules	Solar, wind, ocean, geothermal, biomass, co-firing, hydro (< 30 MW), fuel cells using renewable resources	<ul style="list-style-type: none"> Applies to all utilities except Block Island Power Company and the Pascoag Utility District. RES to be met on a product basis and voluntary green power purchases by end-use customers cannot be applied to a utility's requirement. Projects supported by the RI SBC can be used to meet the RES. No more than 2% of each year's requirement can be met with existing (pre-1998) renewable resources. Deliverability into the NEPOOL region is required for renewable generation to meet the RES. Establishes REC trading system using the New England Generator Information System to track compliance. RECs can be banked for up to two years (with a 30% cap). Establishes an Alternative Compliance Payment system. The price of the ACP is set at \$50/MWh (adjusted by inflation), with the money going into a newly created renewable energy development fund, administered by the RI Economic Development Corporation. Rate recovery of all prudent incremental costs is permitted. HB 7375 also establishes energy source disclosure requirements for RI utilities. The PUC must conduct a review of the RES in 2010 and 2014.
Texas	1280 MW by 2003 1730 MW by 2005 2280 MW by 2007 3272 MW by 2009 4264 MW by 2011 5256 MW by 2013 5880 MW by 2015 (existing = 880 MW) ~4.2% of 2015 sales After 9/1/05, at least 500 MW of new renewables must come from non-wind	6/99 – Restructuring law (SB 7) 12/99 – PUC issues order implementing final RES rule (§25.173) 2/03 – PUC issues order amending RES rule (Project No. 26848) 1/04 – PUC issues order amending RES rule (Project No. 24708) 8/05 – RES amended by SB 20	Solar, wind, hydro, geothermal, wave, tidal, biomass, biomass-based waste products, including landfill gas	<ul style="list-style-type: none"> Rule establishes credit trading program, administered by ERCOT ISO. RECs have a compliance life of 3 years. Munis and co-ops subject to requirement if they opt in to retail competition. PUC rule translates capacity targets into energy-based standard. Conversion factor set at 35% for 2002-2005, and can be readjusted every two years. Out of state generation is not eligible unless there is a dedicated transmission line into the state. Penalty for non-compliance is set at \$50/MWh. 2/03 PUC order amends the banking deficit allowance for 2002-2003 from 5% to 10%, and extended the 2002 compliance period by three months.

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
	resources. Establishes non-binding renewable energy target of 10,000 MW by 2025.			<ul style="list-style-type: none"> 1/04 PUC order amends the formula for calculating RECs, and other minor changes to the REC trading system. SB 20 increases the renewable energy requirements from 2880 by 2009 to 5,880 by 20215, and includes provisions to increase transmission and create competitive renewable energy zones. City of Austin, TX adopted a 20% by 2020 RES.
Washington, D.C.	<p>Tier 1 Renewables: 1.5% in 2007, increasing 0.5% per year to 7.5% in 2019, increasing to 8.5% in 2020, 9.5% in 2021, and 11% in 2022 and thereafter</p> <p>Tier 1 or 2 Renewables: 2.5% 2007-2015, decreasing by 0.5% per year to 0% in 2020 and thereafter</p> <p>Solar PV set-aside: 0.005% in 2007; increasing gradually to 0.028% in 2010; 0.128% in 2015; 0.329% in 2020; 0.386% in 2022 and thereafter.</p>	<p>1/05 – Renewable Energy Portfolio Standard Act of 2004 (B15-747) signed</p> <p>9/05 – PSC issues Order No. 13766 (FC 945)</p> <p>11/05 – PSC issues Order No. 13804 (FC 945)</p> <p>12/05 – PSC issues Order No. 13840 (FC 945), interim rules for the RES</p> <p>1/06 – PSC issues Order No. 13860 (FC 945)</p>	<p>Tier 1: solar, wind, qualifying biomass (including co-firing), landfill gas, geothermal, ocean, and fuel cells (from Tier 1 sources only)</p> <p>Tier 2: hydro and MSW. MSW can not be used to meet more than 20% of the annual requirements, and is ineligible after 2012.</p>	<ul style="list-style-type: none"> Applies to all retail electricity sales. New and existing renewables count toward Tier 1 requirements, Tier 2 requirements are for existing (pre-2004) resources only. Tier 1 resources can also be used to meet Tier 2 requirements. Deliverability into the PJM region from a facility in PJM, or in a state or control area adjacent to PJM, is required for renewable generation to meet the RES. PSC instructed to establish a REC trading program, using the PJM generation attributes tracking system. Extra credit (ranging 10-20%) are given to early (pre-2009) development of wind, solar and LFG facilities. RECs can be banked for 3 years. Establishes alternate compliance payment mechanism (ACM). Credits prices are capped at 2.5¢/kWh for Tier 1 renewables, 1¢/kWh for Tier 2, and 30¢/kWh for solar. Establishes a renewable energy development fund to support new solar resources in D.C. using the fees collected through the ACM. Allows for full utility cost recovery of prudently incurred expenses. 9/05 PSC order creates a public working group to discuss various implementation issues, and provide recommendations to the PSC. 11/05 PSC order established method for certifying eligible RE facilities, and denied the use of retroactive RECs for compliance. 12/05 PSC order established interim RES rules. 1/06 PSC order established a streamlined process for eligible out of district facility certification.
Wisconsin	<p>2% above 2004 renewable energy percentage levels by 2010; and 6% above 2004 levels by 2015.</p> <p>The average renewable energy percentage for all electric providers must be at least 10% by 2015.</p>	<p>4/98 – 1998 Reliability Act (1997 Wisconsin Act 204) signed</p> <p>10/99 – Reliability 2000 (1999 Wisconsin Act 9) signed, encoded as Wis. Stat. § 196.378</p> <p>4/01 – PSC order issues rules for credit trading program (Admin. code, Ch.118)</p> <p>3/06 – 2005 SB 459 signed.</p>	<p>Wind, solar, biomass, geothermal, tidal, a fuel cell that uses a renewable fuel, hydro under 60 MW</p>	<ul style="list-style-type: none"> 50 MW new renewables by 2000 included in 1998 Reliability Act is eligible for RES. IOUs, munis and co-ops subject to requirement. Xcel Energy already meets requirement. First state to adopt RES without retail competition. Credits awarded to electric providers only for eligible generation in excess of minimum requirement. Credits can be traded to other providers. Credits generated to meet the 1999 RES cannot be used after 2011. Credits generated under SB 459 are can be banked for up to four years. Fines up to \$500,000 for non-compliance. SB 459 amends Wis. Stat. § 196.378 by increasing the RES

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.

State	Requirement	Status	Technology Eligibility	Comments
				requirements from 2.2% by 2011 to 10% by 2015; lifting the restrictions on the amount of hydro permitted to meet the requirements; and instructing the PSC to make changes to the renewable resource credit program. SB 459 also establishes a goal for state agencies to achieve 20% renewable energy use by 2011.

Table C-1A. State Minimum Renewable Electricity Goals (as of April 2006)

State	Goal*	Status	Technology Eligibility	Comments
Iowa	1,000 MW by 2010	Governor Vilsack "Condition of the State" address January 2003	Solar, wind, biomass	<ul style="list-style-type: none"> Voluntary renewable energy goal to be funded in part by the \$500 million Iowa Values Fund, a public/private partnership. More than 900 MW of renewable energy capacity installed through 2005.
Illinois	<p>2% in 2007, increasing 1% annually until reaching 8% in 2013, and staying at 8% each year thereafter</p> <p>75% of the annual targets should be met with wind power (subject to future re-examination by the ICC)</p>	<p>Illinois Commerce Commission Resolution 05-0437, Response to Governor's Sustainable Energy Plan, 7/19/05</p> <p>ICC Staff Report, Illinois Sustainable Energy Initiative, 7/7/05</p>	<p>Wind, solar PV, solar thermal, energy crops, organic waste biomass, landfill gas, existing and incremental hydro, and "other such alternative sources of environmentally preferable energy"</p> <p>Does not include incineration, heating, burning of waste wood, tires, garbage, household, commercial, landscape wastes, or construction or demolition debris</p>	<ul style="list-style-type: none"> Goals apply to the bundled retail load of IOUs and certified alternative retail electric providers (ARES). New and existing resources are eligible, and the power should be generated in Illinois or in an adjacent serious or severe NAAQS non-attainment area. Does not preclude utilities from recovering prudently incurred cost, and caps the maximum rate increase for meeting the requirement across all ICC-regulated utilities at 0.5% in per year (for new contracts) and 2% cumulatively. Requires that renewable energy be acquired by utilities through a competitive procurement process managed by independent third parties. Sustainable energy plan also establishes an energy efficiency standard set at 10% reduction in load growth in 2007-2008, gradually increasing to 25% reduction in load growth in 2015 and thereafter. Requires the ICC to review the RES each year to assess progress toward meeting the goals. Requires the ICC to appoint an IL Sustainable Energy Advisory Council, Utilities and ARES agree to file an implementation plan within 30 days of adoption.
Minnesota	<p>1% of consumer sales by 2005 rising 1% annually to 10% in 2015%</p> <p>(of this total 0.5% must come from biomass in 2005 and 1% in 2010)</p>	<p>MSL Chapter 212-S.F.No. 722 SF 0722 signed by Governor 5/01</p> <p>Radioactive Waste Management Facility Authorization Law amended in May 2003 (HF9, 2003 1st Special Session).</p> <p>MN PUC Order Docket # E-999/CI-03-869 issued on 6/1/04</p>	Includes wind, solar, geothermal, hydro (< 60 MW), trees or other vegetation, hydrogen fuel cells or landfill gas	<ul style="list-style-type: none"> Each utility must make a "good faith effort" to meet the renewable energy goal through generation or procurement. Law amended in June 2003 requiring utilities to report to the PUC every two years on their plans and activities toward meeting the goal. 6/04 PUC order details criteria and standards for measuring electric utilities' good faith efforts in meeting the goal. 6/04 order also states the PUC's intention to develop a renewable energy tracking system to certify and verify compliance. Renewable energy procured for green power programs can be used to meet a utility's goal, as long as consumers are notified.

Source: Updated from *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, January 1999, available on-line at www.ucsusa.org/clean_energy (tables updated April 2006). Contact: Jeff Deyette at (617) 547-5552 or jdeyette@ucsusa.org.