



PORTFOLIO STANDARDS AND THE PROMOTION OF COMBINED HEAT AND POWER

I. Introduction

Many states have developed portfolio standards to increase the adoption of renewable energy generation, energy efficiency, and other clean energy technologies. Portfolio standards require utilities and retail energy suppliers (mostly electricity and sometimes gas) to procure a certain minimum quantity of eligible energy (typically from renewable sources and other specified supply-side resources) or achieve a minimum amount of energy efficiency savings (typically from demand-side measures).

Portfolio standards can stimulate market and technology development to help renewable energy and clean energy sources become economically competitive with conventional forms of electric power. In this way, portfolio standards can help overcome barriers and create demand for such sources, enabling states to capture their energy-saving, environmental, and economic benefits.

Combined Heat and Power (CHP), a clean energy technology, is an efficient method of providing electric power and useful thermal energy (heating or cooling) using a single fuel source. As such, it can replace or supplement less efficient conventional separate heat and power. CHP provides environmental and energy benefits due to this higher efficiency and the coincident elimination of transmission losses in delivering electricity from the power plant to the user. With these benefits, CHP is uniquely qualified to contribute to a state's objectives of increasing clean energy mix, both as a supply-side resource and as a demand-side measure. CHP can help achieve multiple policy goals to address energy and environmental issues. CHP's potential to use renewable fuels and decrease environmental impact makes it a candidate for standards designed to encourage renewable and clean energy resources. CHP's energy-efficiency benefits make it a candidate for standards designed to encourage energy-saving measures in a utility's portfolio of services.

This paper discusses the different ways CHP is incorporated in portfolio standards. It presents the basic portfolio standard design approaches (Section II), identifies key CHP-related issues for policymakers to consider when revising or developing portfolio standards (Section II), and provides state-specific information on existing standards allowing for CHP (see Sections III and IV). Additional resources are listed in Section V.

Background

Portfolio standards have been in place since the late 1990s and early 2000s.¹ As of December 2012, some form of portfolio standards had been established in 42 states and the District of Columbia. Most states have portfolio standards to encourage renewable, clean energy resources and energy-efficiency savings. No two states have the same standards, and some states have several standards. The first few standards were renewable portfolio standards set in place to encourage renewable energy resources. Several states subsequently added provisions for clean energy or alternative energy sources.² Deregulation in the electricity market led to an increase in portfolio standards to encourage energy savings through Energy Efficiency Resource Standards.

The three main types of portfolio standards include:

- **Renewable Portfolio Standards (RPS)³ or Clean Energy Standards (CES)** are portfolio standards designed to increase the contribution of renewable energy and clean energy to the electric supply mix. They are focused on typical renewable energy sources such as wind, solar, hydro, geothermal, and biomass, and on clean energy technologies such as CHP. Some states maintain a broad RPS definition under which renewably fueled CHP systems qualify. There are states that maintain a CES in parallel to a RPS, and others that have a combined RPS that includes clean energy sources such as CHP in addition to renewable through separate tiers or targets for these sources. Examples of states with RPS include California and Connecticut. With all these standards, CHP is treated as a supply resource with prescribed targets and CHP users can engage either in the voluntary or compliance market.
- **Energy Efficiency Resource Standards (EERS)⁴** are designed to meet an energy-savings goal through energy efficiency. They are intended to encourage more efficient generation and transmission by electric and gas utilities. They are usually focused on end-use energy savings, but some include other efficiency measures, such as CHP or other high-efficiency distributed generation (DG) or distribution system improvements. Examples of states with EERS include Texas and Vermont.

¹ Some states have emissions performance standards (EPS) for greenhouse gases (GHGs) that establish minimum performance requirements similar to an energy-efficiency appliance standard. Qualifying facilities and compliance options vary by state. The standards have output-based limits (in lbs CO₂/MWh) and typically apply to electricity-generating plants or the supply portfolio of a load-serving entity (distribution or wires company). A utility can ensure compliance using various approaches, such as by balancing its supply portfolio, trading certificates that are created within the power market, and trading project-based emissions reductions (or carbon offsets) created in other sectors. For more information, refer to [RGGI](#) and [EPS in Selected States, RAP Research Brief, August 2010](#).

² Refer to Heeter and Bird, Including Alternative Energy Resources in State RPS: Current Design and Implementation Experience, November 2012.

³ Also referred to as Renewable Energy Standard (RES) or Renewable Resource Standard (RRS).

⁴ Also referred to as Electricity Reduction Goals (ERG), Energy Optimization Standard (EO), and Energy Portfolio Standard (EPS).

- **Alternative Energy Portfolio Standards (APS)**⁵ are hybrid standards developed to allow energy efficiency to qualify within a RPS or a CES, and they do so either through targets for a certain percentage of a supplier's capacity (MW) or generation (MWh) to come from sources such as CHP, coal with carbon capture and storage, or waste-to-energy projects using municipal solid waste. Examples of states with APS include Massachusetts, Ohio, and Pennsylvania.

As there is no consistent terminology in place to refer to each type of portfolio standard, this paper refers to each of the standards by the name assigned by the state.

The standards vary in their structure, administration, size, and eligible applications as well as the types of eligible energy sources. The structure and administration varies based on the state's electric and gas market and whether it is regulated or deregulated (or restructured). Typically, legislation creates the general architecture of the portfolio standard and delegates implementation authority to the state utility regulator (Public Utility Commission [PUC] or Public Service Commission [PSC]), which is responsible for detailed rulemaking; guidelines for implementation; and evaluation, measurement, and verification. In some cases, the PUC or PSC sets the numerical target rather than the state legislature. In some states, the responsibility for implementing the portfolio standard is shared with the state's energy department.

Depending on its objectives, a state sets targets as a percentage of retail sales, but some states set specific energy targets (energy saved [in kWh], energy output [in kWh] or energy capacity [in kW]). Some targets are set as a portion of expected load growth (e.g., as in Texas) or a percentage reduction in peak demand for electricity (e.g., as in Colorado). Depending on the type of standard, qualifying projects demonstrate compliance with energy credits that can be traded in the voluntary or compliance market, or achieve energy savings that are measured and verified. Portfolio standards policies that have binding targets can also include compliance requirements, fulfillment of which must be demonstrated periodically (typically annually).

The approaches used to incorporate resources including CHP into portfolio standards have varied significantly by state. States have used three primary approaches to include CHP and other resources in portfolio standards:

1. Include CHP as a generally eligible resource in a state's portfolio standard. Under this approach, CHP qualifies as one of several resources in the state's portfolio standards, and all qualified resources can meet the compliance target. Typically, all eligible resources are credited at the same value. Indiana is an example of a state that has enacted this type of standard (voluntary RPS goals).
2. Establish separate tiers for CHP within an existing portfolio standard. This approach creates separate targets, or tiers, for CHP, detailing specific targets and defining whether it is treated as a renewable, clean energy, or an energy

⁵ Also referred to as Alternative Energy Resource Standard (AERS), Alternative and Renewable Energy Portfolio Standard (AREPS), Alternative Energy Portfolio Standard (AEPS), Renewable Energy and Energy Efficiency Portfolio Standard (REPS), and Renewable, Recycled and Conserved Energy Objective.

efficiency measure. With this approach, the standard defines a target under which CHP qualifies and can also include hybrid standards where CHP targets are set in a separate tier based on CHP's energy savings potentials. For example, Connecticut has three separate tiers under its RPS. The third tier, known as "Class III," requires suppliers to obtain 4 percent of their retail load from customer-sited CHP and certain other resources.

3. Establish a separate portfolio standard with specific sub targets for CHP. With this approach, a state establishes a separate portfolio standard with subtargets for CHP (and other resources). For example, Massachusetts established an APS in 2009 that is separate from the state's RPS program but functions in the same general manner. The APS requires 5 percent of the state's electric load to be met with "alternative energy" resources by 2020. In 2009 and 2010, 99.1 percent of the APS requirement was met by CHP systems.

II. CHP Design Features and Key Policy Considerations

States have accounted for CHP in portfolio standards based on the overall program objectives, such as promote more efficient generation, reduce GHG emissions, or encourage supply diversity. CHP-related design features, therefore, vary among state portfolio standards:

1. **Voluntary or Mandatory Standards.** States have either mandatory or voluntary portfolio standards. Mandates have created a clear pathway to increase the use of resources such as CHP.⁶ Voluntary goals typically carry nonbinding targets with no penalties for failure to comply.
2. **CHP System Attributes in Portfolio Standards.** Some standards define CHP system characteristics, such as specific power-to-heat ratios, cost-effectiveness thresholds, and other eligibility requirements that systems be installed before or after specific dates. Most standards define the following CHP attributes:
 - a. **CHP System Type.** States have varying definitions concerning CHP eligibility in their portfolio standards. For example, in some states, all CHP types qualify as eligible technology, while in other states (e.g., Colorado, Nevada, North Dakota), only waste heat-to-power qualifies as an eligible CHP technology.
 - b. **Size Limits.** Some states have minimum and/or maximum system size limits under their portfolio standard programs. For example, New York allows only CHP systems of 50 kW or larger to qualify under its RPS.
 - c. **Efficiency Threshold.** Some states have incorporated various CHP efficiency metrics into their standards. A handful of states have minimum CHP operating efficiency requirements, such as the minimum level of 50

⁶ The Department of Energy's (DOE's) Lawrence Berkeley National Laboratory (LBNL) has issued reports reviewing existing portfolio standards and their values. For example, a 2008 report found that, assuming full compliance, current mandatory RPS programs will "require the addition of roughly 60 gigawatts (GW) of new renewable capacity by 2025, equivalent to 4.7 percent of projected 2025 electricity generation in the U.S., and 15 percent of projected electricity demand growth." Massachusetts' APS shows the clear increase in CHP, which reflects the state mandate.

percent set in the Connecticut RPS. In certain states, more efficient systems earn more credit per unit of output (e.g., Connecticut RPS,⁷ Massachusetts APS). Massachusetts' APS provides credit for CHP based on the efficiency of the system compared to that of grid-supplied electricity and an onsite boiler producing the same electric and thermal output as the CHP system.

- d. **Fuel Use.** In a number of states, CHP would qualify under a renewable portfolio standard irrespective of fuel type used. Some portfolio standards, however, only recognize certain fuel-type CHP systems, such as Arizona's Renewable Electricity Standard (RES), which allows only renewably fueled CHP to qualify.⁸

3. **Accounting for CHP's Benefits in Portfolio Standards.** A CHP system's benefits are accounted for based on its energy output, energy capacity, or energy savings. Some portfolio standards encourage eligible resources such as CHP by issuing tradable credits for the energy generated. These are commonly seen with RPS, where credits can be sold at market prices to utilities or other entities to demonstrate compliance with the portfolio targets. Typically, one MWh of eligible generation or energy savings may earn one credit. The value of credits differs based on the stringency of the portfolio standard targets, eligibility guidelines, and other factors. Other portfolio standards encourage eligible resources by providing financial incentives based on system performance or energy savings and are commonly seen in EERS. Measurement and verification is a critical component to CHP's inclusion in a portfolio standard. There are various ways to account for CHP:

- a. **Accounting for CHP Electrical and Thermal Output.** A CHP system provides electrical and thermal outputs that may be taken into account in assessing its benefits. Some states account for only the electric output from CHP systems (typically based on a metered output [e.g., MWh]) in determining credit for the portfolio standards. Other states account for both the electrical and thermal output (typically based on measured heat produced [Btu] converted to MWh or other equivalents).
- b. **Credit In Comparison to Other Resources.** CHP can receive full credit on par with other resources in the standard (e.g., Michigan, Pennsylvania) or partial credit (e.g., Massachusetts APS, Minnesota EERS). States that want to provide a significant incentive for CHP have applied a credit multiplier (1.5 or 2 credits) for each MWh of eligible CHP generation. If a state goal is to encourage diverse electricity supply, then that state may credit CHP systems on par with renewable sources of generation. If the objective is to encourage GHG emission reductions, then the state may credit the CHP system based on a measure that reflects actual reductions. How CHP is credited under portfolio standards can be a function of the overall program objectives.

⁷ Where the revenue from the renewable energy credits for qualifying facilities are divided between the customer and the state Conservation and Load Management Fund, depending on when the Class III systems are installed.

⁸ It is important to note that Arizona's EERS does allow fossil-fueled CHP to qualify.

- c. **Accounting for CHP's Efficiency.** A CHP system's efficiency plays a role in portfolio standards, either in defining a CHP system's eligibility (for instance, for a performance-based incentive) or in assessing energy savings (such as in an EERS). Various efficiency metrics exist for a CHP system that pertain to electricity generation and heat production (the electrical and thermal output), or an overall operating or system efficiency. The type of efficiency that is used will depend on the type of portfolio standard.

As these design features demonstrate, policymakers can promote CHP in their portfolio standards through several different approaches, based on the energy savings and environmental benefits CHP can provide in producing electricity and thermal energy.

States can benefit from a holistic approach as they develop portfolio standards that support CHP to ensure that they are taking optimal advantage of CHP's benefits and to address any conflicting requirements. As an example, an RPS or an APS can be structured to capture the value of the supply-side attributes of CHP—the electric and thermal outputs—while an EERS may be designed to recognize the demand-side benefits of CHP—the energy-efficiency savings (e.g., North Carolina combined RPS/EERS).

Recognizing the variability in state portfolio standards, a state can benefit from consistently attributing CHP in the portfolio standards by addressing the following key concepts:

1. **Define CHP Eligibility Explicitly.** Portfolio standards may not sufficiently promote CHP unless CHP is explicitly identified as an eligible resource (e.g., Massachusetts APS, Connecticut RPS). Lack of formal recognition of CHP under standards creates uncertainty, which may deter some projects due to concerns about the timing and cost of the approval process that determines eligibility. States with specific and distinct tiers and targets for CHP provide well-defined goals to encourage its use.
2. **Define CHP Eligibility Holistically.** Currently, there are varying state definitions of CHP eligibility. Some states allow for waste heat-to-power as an eligible technology within their portfolio standards, and others only qualify renewably fueled CHP. To secure the energy and environmental benefits from CHP, it is best to consider all types of CHP systems as eligible technologies. Assembling the right mix of efficiency requirements, size limits, eligible system types, vintages, and performance-based incentives for CHP systems will allow a state to achieve its economic, environmental, and energy supply objectives.
3. **Account for CHP's Benefits Appropriately.** As CHP systems vary based on prime mover technology, fuel, application, and efficiency (total system and electrical),⁹ their benefits have to be carefully evaluated so as to provide adequate incentive and safeguards. Important questions to consider include:
 - a. How would each of these benefits be accounted for in a portfolio standard? Would they be accounted for in the same portfolio standard?

⁹ www.epa.gov/chp/basic/methods.html.

- b. How would generation and energy savings be measured in the different standards that are adopted?
- c. How can CHP's electricity and thermal output be effectively credited in an RPS or APS?
- d. How can CHP's savings be effectively accounted for in an EERS? Are there complementary policies in place, such as public benefit funds, cost-recovery for energy-efficiency measures, or reducing or eliminating throughput incentives, that will make the EERS more effective?

At this time, the type and the manner in which CHP is integrated varies by state. Different approaches are in place to account for CHP electrical and thermal outputs as well as to calculate CHP efficiency savings.

III. National Overview and State Examples

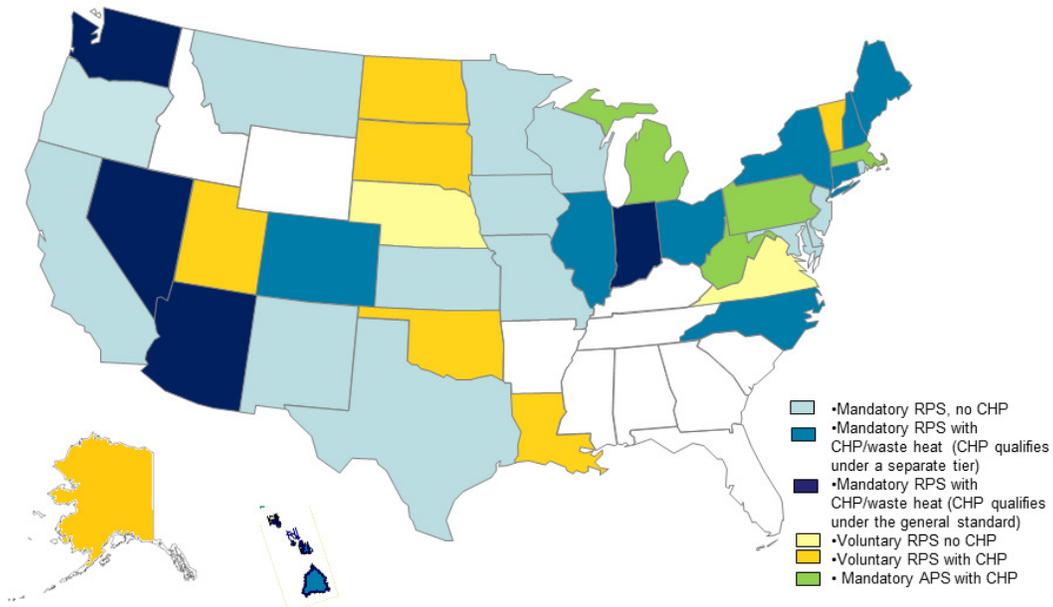
This section and the more detailed table that follows in Section IV present a national overview on how CHP is incorporated in state portfolio standards, a range of state examples, selected state case studies, and state-specific data. A list of additional resources is also provided.

States with RPS, CES, and APS Requirements for CHP

Currently, 40 states and the District of Columbia have some form of APS or RPS (either voluntary or mandatory), as shown in Figure 1. Of these states, 23—Arizona, Connecticut, Colorado, Hawaii, Illinois, Indiana, Louisiana, Maine, Massachusetts, Michigan, Nevada, New Hampshire, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Utah, Vermont, Washington and West Virginia—specifically call out CHP and/or waste heat-to-power (WHP) as eligible under their RPS or APS program guidelines.

The other 17 states and the District of Columbia do not explicitly mention CHP; however, they may allow these systems to qualify if they use an eligible fuel. For instance, if biomass is a qualifying fuel under an RPS, and a CHP system is biomass-fired, then that CHP system would potentially be eligible to receive credit under the portfolio standard.

Figure 1: States with RPS, CES, and APS Requirements for CHP



Source: ICF International, C2ES, and the DSIRE database.

States with EERS Requirements

Figure 2 shows the states with EERS programs and states that include energy-efficiency targets in their RPS programs (effectively functioning as EERS). Thirteen states—Arizona, Connecticut (administered as part of RPS),¹⁰ Delaware, Hawaii, Massachusetts, Minnesota, Nevada (administered as part of RPS), North Carolina (administered as part of AEPS), North Dakota (administered as part of RPS), Ohio, Rhode Island, South Dakota (administered as part of RPS), and Washington—specifically call out CHP or WHP as eligible in their EERS regulations.

¹⁰ Connecticut’s Class III requirement under their RPS is oftentimes referred to by organizations such as DSIRE as an EERS. However, this efficiency tier is implemented under the RPS structure.

3. Existing units that have been modified on or after January 1, 2006 may earn certificates only for the incremental output gains.
4. A CHP system must meet an overall efficiency level of at least 50 percent.
5. The sum of all useful electrical energy output must constitute at least 20 percent of the system's total usable energy output.
6. The sum of all thermal energy outputs must also constitute at least 20 percent of the technology's usable energy output.
7. Annual fuel-conversion efficiency and percentages of production are assessed quarterly for the first year after initial certification. Customers that install Class III resources on or after January 1, 2008, are entitled to Class III credits equal to at least 1 cent per kWh. The revenue from these credits must be divided between the customer and the state C&LM fund based on when the Class III resources are installed, whether the customer is residential or nonresidential, and whether the resources received state support or not.¹²

More information can be found at www.ct.gov/dpuc/cwp/view.asp?a=3354&q=415186.

Massachusetts has established an APS and an EERS, in addition to the state's RPS. CHP qualifies under both the APS and EERS (renewably fueled CHP can qualify under the RPS), and CHP projects are eligible to pursue credit under both programs. The state-passed Green Communities Act in 2008 called for an APS that includes CHP and an EERS that sets separate targets for demand-side resources, including behind-the-meter CHP systems.

Treatment of CHP under the APS

The APS establishes a target of 5 percent of retail electricity suppliers' sales being from alternative energy sources by December 31, 2020, and defines an alternative energy source as one that generates electricity using any of the following: CHP, gasification with capture and permanent sequestration of carbon dioxide, flywheel energy storage, paper-derived fuel sources, or energy-efficient steam technology. Under Massachusetts' APS regulations, CHP must have begun operation on or after January 1, 2008. Existing units can receive credit for their added incremental useful thermal energy or useful electrical energy. Only those additions made on or after January 1, 2008, qualify. A net CO₂ emissions rate of 890 lbs/MWh also applies.¹³

CHP and other eligible projects can receive one credit, referred to as the "APS Alternative Energy Certificates" (AEC) for one MWh of electrical energy output or for thermal output using a conversion factor of 3,412 thousand Btus = 1 MWh. The Alternative Energy Certificates (AECs) earned by a CHP unit represent the energy saved by operating the CHP unit compared to separately operating an on-site thermal plant while drawing electricity from the grid.¹⁴ AECs are granted for eligible CHP units equal to the result, if positive, of the following calculation:

¹² BGC Environmental Brokerage Services, www.bgcebs.com/Renewables/.

¹³ The term "net" refers to the sum of emission increases and decreases. For a generation unit, it includes carbon dioxide emissions related to combustion, gasification, fuel processing, and sequestration, whether or not such activities occur at the generation unit or another location; in the case of a CHP unit, it also includes emissions from thermal delivery.

¹⁴ Department of Energy Resources (DOERS). Massachusetts Renewables and Alternative Energy Portfolio Standards (RPS & APS) Annual Compliance Report for 2010. January 11, 2012. www.mass.gov/eea/docs/doer/rps/rps-aps-2010-annual-compliance-rpt-jan11-2012.pdf.

1. Take the sum of the following two:
 - a. The electrical energy generated divided by the overall efficiency of electrical energy delivered to the end-use from the electrical grid (0.33 for this purpose).
 - b. The useful thermal energy, expressed in MWh, divided by the overall efficiency of thermal energy delivered to the end-use from a standalone heating unit (0.80 for this purpose).
2. Then, subtract from this sum: The total of all fuel and any other energy consumed by the CHP unit in that quarter expressed in MWh and calculated using the energy content of the fuel based on its higher heating value.

Eligible CHP units must provide for the metering of electrical energy generated, useful thermal energy produced, and fuel consumed, and for calculating the net quantity of MWh for which AECs are awarded. Further details on this calculation can be accessed at www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/rps-aps/rps-and-aps-program-summaries.html.

At the end of 2010, 99.1 percent of the standard was met through CHP systems. The total APS target for 2010 was 626,902 MWh.¹⁵ Massachusetts AECs were priced at \$19.68/MWh in 2011.

More information can be found at www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/rps-aps/rps-and-aps-program-summaries.html.

Legislation passed in August 2012 requires that the state's executive office of energy and environmental affairs study adding technologies that generate "useful thermal energy" to the list of eligible technologies under this standard. That study was expected to be completed by the end of December 2012.

Treatment of CHP under the EERS

Massachusetts also has a program that effectively functions as an EERS, as it has energy savings targets. This program provides a rebate payment to help meet the energy-efficiency targets and does not provide a tradable credit system (i.e., it is not market-based). The program stipulates that the state meet at least 25 percent of electric load by 2020 with demand-side resources, including: "energy efficiency, load management, demand response, and generation that is located behind a customer's meter, including a combined heat and power system with an annual efficiency of 60 percent or greater, with the goal of 80 percent annual efficiency for combined heat and power systems by 2020." The EERS program, which started as a pilot in 2009, is known as the Mass Save Ratepayer-Funded Energy Efficiency program. CHP systems can qualify under either the APS or the EERS if they meet all necessary criteria under both programs.

Under the Mass Save Ratepayer-Funded Energy Efficiency program, CHP systems are eligible for the following incentives:

¹⁵ Department of Energy Resources (DOERS). Massachusetts Renewables and Alternative Energy Portfolio Standards (RPS & APS) Annual Compliance Report for 2010. January 11, 2012. www.mass.gov/eea/docs/doer/rps/rps-aps-2010-annual-compliance-rpt-jan11-2012.pdf.

- Payments for feasibility studies, procurement, and installation.
- For projects ≤ 150 kW, a payment of \$750/kWh capacity, up to a maximum incentive of \$112,000.
- For projects >150 kW, the payment amount is determined by the utility administrator, but it can be 50 percent of the installed cost for small to medium-sized projects.
- For systems greater than 2 MW, the incentive amount is determined by the funds available.¹⁶

To qualify, CHP systems must also have a minimum efficiency of 60 percent, with fuel input expressed on a higher heating value (HHV) basis, and must also pass a cost-effectiveness screening threshold established by the Massachusetts Department of Public Utilities (DPU), which results in a benefit to cost ratio ≥ 1.0 .¹⁷

New York is an example of a state portfolio standard program with a separate tier under which CHP is eligible (although only certain CHP technologies are eligible). The New York State PSC adopted an RPS in September 2004 and issued implementation guidelines in 2005. The RPS was originally set at 25 percent of state electricity sales by 2013 but was expanded in January 2010 to 30 percent by 2015. Two tiers are used to meet the RPS: 1) a main tier, and 2) a customer-sited tier (CST). The CST was revised when the overall RPS target was increased in 2010, and it now includes CHP systems of 50 kW or larger.

New York's RPS is managed differently than most other state programs and works through a central procurement model. Electric utilities collect a surcharge on electricity sold to consumers. These funds are turned over to the New York State Energy Research and Development Authority (NYSERDA), which purchases renewable energy credits (RECs) on behalf of all the regulated entities to fulfill the RPS.

In addition, there is a separate pool of funds designated for the CST, with specific funding allocations for different technologies. Funding for CHP systems will be provided for eligible technologies through a combination of capacity- and performance-based incentives. Eligible technologies include CHP systems fueled by anaerobic digestion biogas, systems fueled by renewable biogas (including systems co-fired with renewable biogas), and fuel cells fueled by any fuel. Incentives can be based on either capacity (kW) or output (kWh) and are awarded through competitive solicitations.¹⁸

¹⁶ Massachusetts Department of Energy Resources (DOER). "Use of an Alternative Energy Standard Portfolio Standard by Mass for the Support of CHP."

¹⁷ Mass Save: Savings through Energy Efficiency. "Combined Heat and Power ("CHP") Program: Guidebook for Submitting CHP Applications for an Energy Efficiency Incentive in Massachusetts." November 18, 2010. www.masssave.com/business/building-or-equipment-upgrades/find-incentives/~media/Files/Business/Applications%20and%20Rebate%20Forms/CHP%20Incentive%20Guidebook%20-%20dated%2011-18-10.ashx.

¹⁸ State of New York Public Service Commission (PSC). Case 03-E-0188 – Proceeding on Motion of the Commission Regarding Retail Renewable Portfolio Standard (RPS). Order Authorizing Customer-Sited Tier Program Through 2015 and Resolving Geographic Balance and Other Issues Pertaining to the RPS Program. April 2, 2010. <http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId=%7BC05CD0D6-8EA5-4CB9-A9FA-6ADD3AECB739%7D>.

More information can be found at

<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BC05CD0D6-8EA5-4CB9-A9FA-6ADD3AECB739%7D>.

North Carolina is an example of a state portfolio standard program with a separate target for energy efficiency under which CHP is eligible. In August 2007, North Carolina enacted a Renewable Energy and Energy Efficiency Portfolio Standard (REPS) requiring all investor-owned utilities to supply 12.5 percent of 2020 retail electricity sales from eligible energy resources by 2021. Municipal utilities and electric cooperatives must meet a target of 10 percent eligible energy resources by 2018. Up to 25 percent of the requirements may be met through energy-efficiency measures, including CHP. After 2018, up to 40 percent of the standard may be met through energy efficiency, including CHP.

Under the REPS, no minimum efficiency requirement exists for CHP. Energy from CHP is included to the extent that the system “uses waste heat to produce electricity or useful, measurable thermal or mechanical energy for the retail customers’ use and results in less energy used to perform the same function or provide the same level of service at the retail customer’s facility.” Thermal energy that is not used to generate electric power, and is measured accurately in Btus, earns equivalent RECs using a conversion factor of 3,412 Btu per kWh. Renewable energy and CHP must be installed after January 1, 2007, to be considered eligible.

Utilities may meet their obligations through actual generation of electricity with eligible fuels and technologies, through the purchase of RECs (each equivalent to 1 MWh) from in-state or out-of-state renewable energy facilities, or through the implementation of energy-efficiency measures.

The North Carolina Utilities Commission issued final REPS regulations under Order, Docket No. E-100, Sub 113, on February 28, 2009. This Order can be found at: <http://ncuc.commerce.state.nc.us/cgi-bin/webview/senddoc.pgm?dispfmt=&itype=Q&authorization=&parm2=SAAAAA06080B&parm3=000127195>.

IV. CHP's Eligibility in State Portfolio Standards

Table 1 provides a summary of CHP eligibility in state portfolio standards. For each state, the table indicates if there is an RPS, EERS, or APS in place, and the type of CHP eligible under the standard(s). As there is no consistent terminology in place to refer to each type of portfolio standard, the table refers to them by the name assigned by the state. In some states, fossil-fueled topping-cycle CHP (e.g., combustion turbine, steam turbine, reciprocating engine-based systems) and bottoming-cycle (i.e., WHP systems) are explicitly called out as eligible resources under the portfolio standard(s). Some states, however, include only waste heat to power systems as eligible. Other states do not explicitly identify CHP as an eligible resource, but CHP systems can qualify as long as they are powered with a qualifying renewable fuel/technology.

Note: Typical CHP in this table is defined as fossil-fueled topping-cycle CHP. Under this form of CHP, fuel is combusted in a prime mover, such as a gas turbine or reciprocating engine, to generate electricity. Energy normally lost in the prime mover's hot exhaust and cooling systems is instead recovered to provide useful thermal energy.

Table 1: Summary of CHP Eligibility						
Key: X – Mandatory Standard ▲ – Voluntary Standard or Goal						
State	Portfolio Standard			CHP Eligibility		
	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
Alaska	▲			RPS: • Not eligible.	RPS: • Eligible with qualifying fuel/technology.	RPS: • Not eligible.
Arizona	X	X		RPS: • Not eligible. EERS: • CHP installations not used to comply with the RPS may be counted as energy savings.	RPS: • Renewably fueled CHP specifically called out as an eligible resource. • CHP system must have an operation date on or after January 4, 1997, to qualify for credit under the portfolio standard. EERS: • CHP installations not used	RPS: • Not eligible. EERS: • CHP installations not used to comply with the RPS may be counted as energy savings.

Table 1: Summary of CHP Eligibility

Key:

X – Mandatory Standard

▲ – Voluntary Standard or Goal

State	Portfolio Standard			CHP Eligibility		
	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
					to comply with the RPS may be counted as energy savings.	
Arkansas		X		EERS: <ul style="list-style-type: none"> Unspecified technologies; CHP may qualify, subject to approval. 	EERS: <ul style="list-style-type: none"> Unspecified technologies; CHP may qualify, subject to approval. 	EERS: <ul style="list-style-type: none"> Unspecified technologies; CHP may qualify, subject to approval.
California	X	X		RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.
Colorado	X	X		RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Eligible (defined as “recycled energy”). Systems must have a nameplate capacity of 15 MW or less and convert the otherwise lost energy from the heat from exhaust stacks or pipes to electricity and not combust additional fossil fuel. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.

Table 1: Summary of CHP Eligibility

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State	Portfolio Standard			CHP Eligibility		
	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
Connecticut	X	X		RPS/EERS (combined standard): <ul style="list-style-type: none"> • Eligible under separate tier as a Class III Resource. • Must be installed on or after January 1, 2006, and have a minimum operating efficiency of 50 percent. • Electricity savings from conservation and load management programs that started on or after January 1, 2006. 	RPS/EERS (combined standard): <ul style="list-style-type: none"> • Eligible with qualifying fuel/technology, and eligible under separate tier as a Class III Resource. • Must be installed on or after January 1, 2006, and have a minimum operating efficiency of 50 percent. • Electricity savings from conservation and load management programs that started on or after January 1, 2006. 	RPS/EERS (combined standard): <ul style="list-style-type: none"> • Eligible under separate tier as a Class III Resource. • Must recover waste heat or pressure from commercial and industrial processes, and be installed on or after April 1, 2007. • Electricity savings from conservation and load management programs that started on or after January 1, 2006.
Delaware	X	X		RPS: <ul style="list-style-type: none"> • Not eligible. EERS: <ul style="list-style-type: none"> • Eligible. 	RPS: <ul style="list-style-type: none"> • Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> • Eligible. 	RPS: <ul style="list-style-type: none"> • Not eligible. EERS: <ul style="list-style-type: none"> • Eligible (defined as “recycled energy”). • Recycled energy must be from a modification of an industrial or commercial system that commenced operation before July 29, 2009.
District of Columbia	X			RPS: <ul style="list-style-type: none"> • Not eligible. 	RPS: <ul style="list-style-type: none"> • Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> • Not eligible.

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	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
Florida		▲		<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies; CHP may qualify, subject to approval. 	<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies; CHP may qualify, subject to approval. 	<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies; CHP may qualify, subject to approval.
Hawaii	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Eligible, excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies and central station power projects. Will fall under EERS on January 1, 2015. <p>EERS:</p> <ul style="list-style-type: none"> CHP will be eligible under the EERS starting in 2015. Until then, energy efficiency savings from CHP are included under the RPS. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible. <p>EERS:</p> <ul style="list-style-type: none"> CHP will be eligible under the EERS starting in 2015. Until then, energy efficiency savings from CHP are included under the RPS. 	<p>RPS:</p> <ul style="list-style-type: none"> Not explicitly included, but standard includes “use of rejected heat from co-generation and combined heat and power systems.” <p>EERS:</p> <ul style="list-style-type: none"> CHP will be eligible under the EERS starting in 2015. Until then, energy efficiency savings from CHP are included under the RPS.
Illinois	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>RPS:</p> <ul style="list-style-type: none"> Waste heat from industrial processes is specifically called out as eligible under the inclusion of “other such alternative sources of environmentally preferable energy.” <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology,

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	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
						subject to approval.
Indiana	▲	X		RPS: <ul style="list-style-type: none"> • Eligible. EERS: <ul style="list-style-type: none"> • CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> • Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> • CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> • Eligible. • Must be waste heat from industrial processes used for heating or for generating mechanical or electrical work. EERS: <ul style="list-style-type: none"> • CHP may qualify as custom/other technology, subject to approval.
Iowa	X	X		RPS: <ul style="list-style-type: none"> • Not eligible. EERS: <ul style="list-style-type: none"> • CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> • Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> • CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> • Not eligible. EERS: <ul style="list-style-type: none"> • CHP may qualify as custom/other technology, subject to approval.
Kansas	X			RPS: <ul style="list-style-type: none"> • Not eligible. 	RPS: <ul style="list-style-type: none"> • Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> • Not eligible.
Louisiana	▲			RPS: <ul style="list-style-type: none"> • Not eligible. 	RPS: <ul style="list-style-type: none"> • Biomass-only CHP is eligible. 	RPS: <ul style="list-style-type: none"> • Eligible.
Maine	X	X		RPS: <ul style="list-style-type: none"> • Eligible as a Class II resource. • Must have been 	RPS: <ul style="list-style-type: none"> • Eligible as a Class II resource. 	RPS: <ul style="list-style-type: none"> • Eligible. EERS:

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				<p>constructed prior to January 1, 1997, and have a minimum efficiency of 60 percent.</p> <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	<ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify).
Maryland	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify).
Massachusetts	X	X	X	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Eligible. CHP targets part of Green Communities Act. <p>APS:</p> <ul style="list-style-type: none"> Eligible. Must have a start date after January 1, 2008. Both electric and thermal energy qualify. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p> <ul style="list-style-type: none"> Eligible. CHP targets part of Green Communities Act. <p>APS:</p> <ul style="list-style-type: none"> Eligible. Must have a start date after January 1, 2008. 	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Eligible. CHP targets part of Green Communities Act. <p>APS:</p> <ul style="list-style-type: none"> Massachusetts is considering a rulemaking to provide credit for WHP

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				<ul style="list-style-type: none"> Net CO₂ emissions rate can't exceed 890 lbs/MWh. 		
Michigan	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Eligible. Advanced cleaner energy facilities and energy optimization schemes (which include CHP) qualify under the RPS/EERS. Must have a Vintage Eligibility of Oct 6, 2008, or later. For industrial CHP, both the thermal and electric energy qualify. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible. Advanced cleaner energy facilities and energy optimization schemes (which include CHP) qualify under the RPS/EERS. Must have a Vintage Eligibility of Oct 6, 2008, or later. For Industrial CHP, both the thermal and electric energy qualify. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible. Advanced cleaner energy facilities and energy optimization schemes (which include CHP) qualify under the RPS/EERS. Must have a Vintage Eligibility of Oct 6, 2008, or later. For Industrial CHP, both the thermal and electric energy qualify. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.
Minnesota	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Not eligible. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p> <ul style="list-style-type: none"> Not eligible 	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Eligible ("Waste heat recovery converted into electricity").
Missouri	X	▲		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p>	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are

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				are eligible (CHP may qualify).	<ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	eligible (CHP may qualify).
Montana	X			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Not eligible.
Nebraska	▲			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Not eligible.
Nevada	X	X		RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> Eligible. Energy-efficiency savings can meet up to a quarter of the RPS in any given year. Portfolio Energy Credits are used for compliance, and energy efficiency gets a credit multiplier of 1.05 (i.e., # of credits = number of kWh saved x 1.05). 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> Eligible. Energy-efficiency savings can meet up to a quarter of the RPS in any given year. Portfolio Energy Credits are used for compliance, and energy efficiency gets a credit multiplier of 1.05 (i.e., # of credits = number of kWh saved x 1.05). 	RPS: <ul style="list-style-type: none"> Eligible. Must have nameplate capacity of 15 MW or less and startup date on/after January 1, 2005. EERS: <ul style="list-style-type: none"> Eligible. Energy-efficiency savings can meet up to a quarter of the RPS in any given year. Portfolio Energy Credits are used for compliance, and energy efficiency gets a credit multiplier of 1.05 (i.e., # of credits = number of kWh saved x 1.05).
New Hampshire	X			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Not eligible.

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					<ul style="list-style-type: none"> Legislation enacted in 2012 now allows for “useful thermal energy,” defined as renewable energy delivered from an eligible renewable resource that can be metered and is delivered to an end-user in the form of direct heat, steam, hot water, or other thermal form and for which fuel or electricity would otherwise be consumed. 	
New Jersey	X			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Not eligible.
New Mexico	X	X		RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.
New York	X	X		RPS: <ul style="list-style-type: none"> Digester-gas-fired CHP and fuel cells using any fuel type are eligible under CST. Must be greater than 50 kW. 	RPS: <ul style="list-style-type: none"> Eligible under CST and with any qualifying fuel/technology. Must be greater than 50 kW. EERS:	RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify).

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				EERS: <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	<ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	
North Carolina	X	X		RPS/EERS (combined standard): <ul style="list-style-type: none"> Eligible. Up to 25 percent of the requirement may be met through energy-efficiency technologies, including CHP systems powered by nonrenewable fuels. Thermal energy that is not used to generate electric power earns equivalent RECs based on the end-use energy value of electricity of 3,412 Btu per kWh. 1 REC = 1 MWh. 1 MWh of electricity avoided through efficiency measure = 1 REC. Must be installed on/after January 1, 2008. 	RPS/EERS (combined standard): <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. Up to 25 percent of the requirement may be met through energy-efficiency technologies, including CHP. Thermal energy that is not used to generate electric power earns equivalent RECs based on the end-use energy value of electricity of 3,412 Btu per kWh. 1 REC = 1 MWh. 1 MWh of electricity avoided through efficiency measure = 1 REC. Must be installed on/after January 1, 2008. 	RPS/EERS (combined standard): <ul style="list-style-type: none"> Eligible. Waste heat must come from renewables. Must be installed on/after January 1, 2008.
North Dakota	▲			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Eligible under recycled energy definition.
Ohio		X	X	EERS: <ul style="list-style-type: none"> Eligible. 	EERS: <ul style="list-style-type: none"> Eligible. 	EERS: <ul style="list-style-type: none"> Eligible.

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				<ul style="list-style-type: none"> Must be installed or retrofitted on/after September 9, 2012. APS: <ul style="list-style-type: none"> Eligible. Must have efficiency of at least 60 percent. At least 20percent of system output must be in the form of useful thermal energy. 	<ul style="list-style-type: none"> Must be installed or retrofitted on/after September 9, 2012. APS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	<ul style="list-style-type: none"> Must be installed or retrofitted on/after September 9, 2012. APS: <ul style="list-style-type: none"> Eligible.
Oklahoma	▲			RPS <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Up to 25 percent of the renewable energy goal can be met with demand-side management (DSM) and energy efficiency. WHP qualifies as a DSM measure. DSM includes industrial byproduct technologies, consisting of using a byproduct from an industrial process, including reusing energy from exhaust gases or other manufacturing byproducts that are used in the direct production of electricity at the facility of a customer.
Oregon	X			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying 	RPS: <ul style="list-style-type: none"> Not eligible.

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Pennsylvania		X	X	<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). <p>APS:</p> <ul style="list-style-type: none"> Eligible. Tier II resources include new and existing DSM and DG systems, including CHP. 	<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). <p>APS:</p> <ul style="list-style-type: none"> Eligible. CHP with eligible fuel/technology counts as Tier I resource. 	<p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). <p>APS:</p> <ul style="list-style-type: none"> Eligible. Tier II resources include new and existing DSM and DG systems, including WHP.
Rhode Island	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Eligible. Utilities must establish energy-efficiency procurement plans that include target percentages for CHP. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p> <ul style="list-style-type: none"> Eligible. Utilities must establish energy-efficiency procurement plans that include target percentages for CHP. 	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Eligible. Utilities must establish energy-efficiency procurement plans that include target percentages for CHP.
South Dakota	▲			<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible (defined as “recycled energy”).
Texas	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p>	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> Unspecified technologies are

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State	Portfolio Standard			CHP Eligibility		
	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
				are eligible (CHP may qualify).	<ul style="list-style-type: none"> Unspecified technologies are eligible (CHP may qualify). 	eligible (CHP may qualify).
Utah	▲			RPS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. 	RPS: <ul style="list-style-type: none"> Eligible.
Vermont	▲	X		RPS: <ul style="list-style-type: none"> Eligible Must have design efficiency of >65 percent EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. Must have design system efficiency of at least 65 percent. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	RPS: <ul style="list-style-type: none"> Not specified. EERS: <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.
Virginia	▲	▲		RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. EERS: <ul style="list-style-type: none"> Not eligible. 	RPS: <ul style="list-style-type: none"> Not eligible. EERS: <ul style="list-style-type: none"> Not eligible.
Washington	X	X		RPS: <ul style="list-style-type: none"> Not eligible for renewable targets, but utilities also required to “pursue all available conservation that is cost-effective, reliable, and feasible.” High-efficiency cogeneration 	RPS: <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. DG with output of 5 MW or less may be counted as double the facility’s electrical output under certain conditions. 	RPS: <ul style="list-style-type: none"> Not eligible for renewable targets, but utilities also required to “pursue all available conservation that is cost-effective, reliable, and feasible.” High-efficiency cogeneration owned and

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State	Portfolio Standard			CHP Eligibility		
	RPS	EERS	APS	Typical CHP	Renewably Fueled	WHP
				<p>owned and used by a retail electric customer to meet its own needs qualifies.</p> <ul style="list-style-type: none"> Thermal output must be at least 33 percent of total energy output, and system must be in place on/after March 31, 1999. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>used by a retail electric customer to meet its own needs qualifies.</p> <ul style="list-style-type: none"> Thermal output must be at least 33 percent of total energy output, and system must be in place on/after March 31, 1999. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.
West Virginia			X	<p>APS:</p> <ul style="list-style-type: none"> Eligible. Some fossil fuels, including natural gas, are eligible as “alternative energy resources.” Alternative energy resource credit: 1 credit=1 MWh. 	<p>APS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. Renewable energy resource credit: 2 credits=1 MWh. 	<p>APS:</p> <ul style="list-style-type: none"> Eligible (defined as “recycled energy” and included as an eligible “renewable energy resource”). Renewable energy resource credit: 2 credits=1 MWh.
Wisconsin	X	X		<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>RPS:</p> <ul style="list-style-type: none"> Eligible with qualifying fuel/technology. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval. 	<p>RPS:</p> <ul style="list-style-type: none"> Not eligible. <p>EERS:</p> <ul style="list-style-type: none"> CHP may qualify as custom/other technology, subject to approval.

V. Additional Resources

1. American Council for an Energy-Efficient Economy (ACEEE). “Energy Efficiency Resource Standards (EERS).” www.aceee.org/topics/eers.
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