



## NATIONAL CONFERENCE of STATE LEGISLATURES

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### Hydroelectric Facility Eligibility in Renewable Portfolio Standards and Goals in the United States and Canada

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#### **State Renewable Portfolio Standards and Goals**

Twenty-nine states, Washington, D.C., and three territories have adopted a [renewable portfolio standard](#) (RPS), while eight states and one territory have set renewable energy goals. All states that have established an RPS or a renewable energy goal, Washington, D.C. and three territories include hydroelectric facilities as eligible renewable resources under these policies and goals.

However, states vary in the eligibility criteria that they have established for hydroelectric facilities. For example, in Connecticut, only [run-of-the-river](#), or diversion, hydroelectric facilities—which channel a portion of a river through a canal or penstock—are classified as eligible renewable resources. Other states such as Arizona and Hawaii have established that all hydroelectric facilities are eligible for RPS compliance. In Maryland hydroelectric pumped storage facilities are excluded as eligible renewable energy source. Similarly, under Virginia’s Voluntary Renewable Energy Portfolio Goal all hydroelectric facilities except pumped storage projects are eligible technologies. Other states have limited the eligibility of hydroelectric facilities in RPS policies by facility capacity. Missouri, for example, only considers hydroelectric facilities with a capacity of 10 megawatts (MW) or less as eligible technologies. Minnesota and Oklahoma allow the electricity produced by hydroelectric facilities of 100 MW or less to count toward RPS compliance.

States have also established eligibility criteria based on the date that the facility became operational. For example, California established that hydroelectric facilities with a capacity of 30 MW or less that commenced commercial operation *on or before* December 31, 2005 are eligible renewable energy sources. In New Jersey eligible renewable energy technologies include hydroelectric facilities of 3 MW or less that are placed in service *after* July 2012.

Several states—including Massachusetts, Montana and North Dakota—allow new energy generation resulting from increased capacity or efficiency improvements at existing hydroelectric facilities to count toward RPS compliance. Finally, several states limit eligible hydroelectric facilities to those that meet certain certifications or comply with environmental protection measures. For example, in New

Hampshire, all hydroelectric facilities must comply with certain environmental protection criteria or with Federal Energy Regulatory Commission (FERC) fish-passage requirements to qualify as Class IV renewable resources. In New Jersey, to qualify as Class I renewable energy sources, hydroelectric facilities must be certified as low-impact by a nationally-recognized organization.

The table below provides an overview of the hydroelectric facilities that are eligible for RPS compliance in each state.

<b>State</b>	<b>Standard or Goal</b>	<b>Hydroelectric Eligibility</b>
<b>Arizona</b>	Standard	Eligible technologies include hydroelectric facilities.
<b>California</b>	Standard	Hydroelectric facilities with a capacity of 30 MW or less that commenced commercial operations on or before December 31, 2005, and those that commenced operations after this date that meet additional requirements, qualify as eligible RPS technologies. More information available on the <a href="#">California Energy Commission's website</a> .
<b>Colorado</b>	Standard	New hydroelectric facilities with a capacity of 10 MW or less and hydroelectric facilities that were in existence on or before January 1, 2005, with a capacity of 30 MW or less are eligible for RPS compliance.
<b>Connecticut</b>	Standard	Run-of-the-river hydroelectric facilities with a capacity of 30 MW or less are classified as renewable energy resources.
<b>Delaware</b>	Standard	Hydroelectric facilities with a capacity of 30 MW or less are eligible renewable energy technologies.
<b>Hawaii</b>	Standard	Eligible technologies include hydroelectric facilities.
<b>Illinois</b>	Standard	Eligible technologies include hydroelectric facilities that do not involve the construction of new dams or significant expansion of existing dams.
<b>Indiana</b>	Goal	Eligible technologies include hydroelectric facilities.
<b>Iowa</b>	Standard	Small hydroelectric facilities are eligible technologies.
<b>Kansas</b>	Goal	Existing hydroelectric facilities and new hydroelectric facilities with a capacity of 10 MW or less are eligible.
<b>Maine</b>	Standard	Eligible technologies include facilities with a capacity of up to 100 MW, including hydroelectric facilities.
<b>Maryland</b>	Standard	Eligible Tier 1 renewable energy resources include small hydroelectric facilities. Eligible Tier 2 renewable energy resources: hydroelectric facilities other than pump-storage generation.
<b>Massachusetts</b>	Standard	Eligible Class I resources include certain new hydroelectric facilities and certain incremental new energy from increased capacity or efficiency improvements at existing hydroelectric facilities. Eligible Class II resources include certain existing hydroelectric facilities with a capacity of up to 7.5 MW.
<b>Michigan</b>	Standard	Eligible technologies include existing hydroelectric and run-of-the-river hydroelectric resources.
<b>Minnesota</b>	Standard	Eligible technologies include hydroelectric facilities with a capacity of less than 100 MW.

<b>Missouri</b>	Standard	Eligible technologies include hydroelectric facilities with a capacity of 10 MW or less.
<b>Montana</b>	Standard	Eligible technologies include: existing hydroelectric projects with a capacity of 10 MW or less; new hydroelectric projects with a capacity of up to 15 MW that are installed at an existing reservoir or on an existing irrigation system; and expansions to existing hydroelectric projects that result in increased generation capacity.
<b>Nevada</b>	Standard	Eligible technologies include <a href="#">certain hydroelectric facilities</a> with capacity of 30 MW or less.
<b>New Hampshire</b>	Standard	<p>Class I renewable energy technologies include all hydroelectric generating facilities of any capacity.</p> <p>Class IV renewable energy technologies include existing small hydroelectric facilities (5MW or less), that began operating before January 1, 2006 and comply with certain environmental protection criteria, and hydroelectric facilities up to 1 MW in capacity that comply with FERC fish-passage requirements and are interconnected to the distribution grid in the state.</p> <p>New Hampshire has a 1.5 percent carve out for existing hydroelectric generation by 2015.</p>
<b>New Jersey</b>	Standard	Class I renewable energy sources include hydroelectric facilities of 3 MW or less that are: placed in service after July 23, 2012; located in the state and connected to the distribution system; and, certified as low-impact by a nationally-recognized organization. Class II renewable energy sources include hydroelectric facilities that are larger than 3 MW and less than 30 MW.
<b>New Mexico</b>	Standard	Eligible technologies include hydroelectric facilities that began operation after July 1, 2007.
<b>New York</b>	Standard	Eligible technologies include hydroelectric upgrades and low-impact run-of-the-river hydroelectric facilities that require no new storage impoundment.
<b>North Carolina</b>	Standard	Eligible technologies include hydroelectric facilities with a capacity of 10 MW or less.
<b>North Dakota</b>	Goal	All hydroelectric facilities are eligible for RPS compliance. New hydroelectric facilities must be operational on January 1, 2007, or later, or must qualify as new hydroelectric generation obtained from repowering or efficiency improvements to facilities existing on August 1, 2007.
<b>Ohio</b>	Standard	Eligible technologies include small hydroelectric facilities with a capacity of 6 MW or less, and run-of-the-river hydroelectric systems on the Ohio River exceeding 40 MW in capacity.
<b>Oklahoma</b>	Goal	Eligible technologies include hydroelectric facilities.
<b>Oregon</b>	Standard	Eligible technologies include hydroelectric facilities that have become operational on or after January 1, 1995. A limited amount of hydroelectricity from facilities operational before 1995 can qualify as an eligible resource under certain conditions: 50 MW of utility-owned, pre-1995, low-impact hydropower can be used for RPS

		compliance; and 40 average MW of non-utility owned, pre-1995, low-impact hydropower can be used for compliance.
<b>Pennsylvania</b>	Standard	Tier 1 renewable energy sources include low-impact hydroelectric facilities—facilities that have FERC licensed capacity of 21 MW or less. Tier II renewable energy sources include large-scale hydroelectric facilities.
<b>Rhode Island</b>	Standard	Eligible technologies include hydroelectric facilities up to 30 MW in capacity.
<b>South Carolina</b>	Goal	Eligible technologies include hydroelectric facilities.
<b>South Dakota</b>	Goal	Eligible technologies include hydroelectric facilities.
<b>Texas</b>	Standard	Eligible technologies include hydroelectric facilities.
<b>Utah</b>	Goal	Eligible technologies include hydroelectric facilities.
<b>Virginia</b>	Goal	Eligible technologies include all hydroelectric facilities <i>except</i> pumped storage.
<b>Vermont</b>	Standard	Eligible technologies include hydroelectric facilities.
<b>Washington</b>	Standard	Hydroelectric generation projects are eligible facilities if: the incremental electricity produced as a result of efficiency improvements completed after March 31, 1999, are made to hydroelectric projects owned by a utility subject to this standard and located in the Pacific Northwest where generation does not result in new water diversions or impoundments; or hydroelectric generation in irrigation pipes, irrigation canals, water pipes whose primary purpose is for the conveyance of water for municipal use and wastewater pipes located in Washington where the additional generation does not result in new water diversions or impoundments.
<b>Wisconsin</b>	Standard	Eligible technologies include small hydroelectric facilities (less than 60 MW) and large hydroelectric facilities (60 MW or greater). Large hydroelectric facilities can be counted toward the RPS requirement if the facility was placed in service on or after December 31, 2010.
<b>Washington, D.C.</b>	Standard	Eligible technologies include hydroelectric facilities other than pumped-storage.
<b>Northern Mariana Islands, Puerto Rico and Virgin Islands.</b>	Standard	Eligible technologies include hydroelectric facilities.

Source: Database of State Incentives for Renewables and Efficiency 2018

## Canadian Provinces and Territories

At least four Canadian provinces and territories—British Columbia, New Brunswick, Nova Scotia and Prince Edward Island—have legislatively established mandatory renewable energy requirements. Additionally, two provinces—Nova Scotia and Ontario—have established feed-in tariff programs to encourage renewable energy deployment, and at least two provinces and territories—Quebec and Yukon—have established energy strategies that include renewable energy goals. All but one of these policies, Quebec’s energy strategy, include hydroelectric facilities as eligible renewable energy resources. The table below provides more details on these programs and policies.

Province or Territory	Policy Type	Authority	Description	Hydroelectric Eligibility
British Columbia	Clean or Renewable Electricity Requirement	<a href="#">Clean Energy Act 2010</a>	Commits British Columbia to generating at least 93 percent of its electricity from clean or renewable sources.	Includes hydroelectricity as a clean or renewable resource.
New Brunswick	Renewable Portfolio Standard	<a href="#">2015 Electricity Act</a>	Requires 40 percent renewable energy by 2020.	Includes hydroelectricity as an eligible renewable energy source.
Nova Scotia	Renewable Electricity Standard	<a href="#">Electricity Act 2004</a> (amended August 14, 2018).	Requires 40 percent renewable energy by 2020.	Includes run-of-the-river hydroelectric energy generated after December 31, 2001 as an eligible technology.
	Feed-in Tariff Program	<a href="#">Electricity Act 2004</a> (amended August 14, 2018).	Establishes a feed-in tariff program for certain renewable energy generation facilities.	Eligible technologies include run-of-the-river hydroelectricity generation facilities.
Ontario	Feed-in Tariff	<a href="#">Green Energy Act 2009</a>	The program was introduced as part of the 2009 Green Energy and Economy Act and is open to projects of 10kW and 500 kW. Projects with a capacity of 10 kW or less may qualify under the microFIT program.	Includes hydroelectric generation facilities as eligible renewable energy sources.
Prince Edward Island	Renewable Portfolio Standard	<a href="#">Renewable Energy Act</a>	Requires at least 15 percent of electrical energy from renewable sources by 2010.	Includes hydroelectric generation facilities as eligible renewable energy resources.

Quebec	Energy Policy	Energy Policy 2030	Goal of 25 percent renewable energy by 2030.	Does not explicitly allow or disallow hydroelectric.
Yukon	Energy Strategy	<a href="#">Energy Strategy for Yukon 2009</a>	Sets a goal to increase renewable energy supply by 20 percent by 2020.	Includes hydroelectric generation facilities as eligible facilities.

Source: International Energy Agency, 2017

## **Resources**

- Database of State Incentives for Renewables and Efficiency (DSIRE): [Renewables Portfolio Standard Policy Portal](#)
- International Energy Agency (IEA): [Overview of Renewable Energy Policies in Canada](#)
- National Conference of State Legislatures (NCSL): [State Renewable Portfolio Standards and Goals](#)