

Nuclear and Hydroelectric Power Generation in Renewable Portfolio Standard Laws

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Issue

How many states include nuclear and hydroelectric facilities as eligible power generators in their renewable portfolio standard laws?

Summary

According to information available from the [Database of State Incentives for Renewables & Efficiency](#) (DSIRE), 36 states, including Connecticut, have some form of renewable portfolio standard (RPS) law that generally requires or encourages electric companies to obtain a specified percentage of their power from certain types of renewable or clean energy. Connecticut, Indiana, and Massachusetts allow for nuclear energy to meet RPS requirements, subject to certain limitations (e.g. when the facility was built). All 36 RPS states recognize hydropower as an eligible resource, although most of them limit it to facilities that meet certain criteria (e.g., those that have less than a specific megawatt (MW) generating capacity, meet certain environmental criteria, and became operational after a certain date).

Nuclear

Connecticut, Indiana, and Massachusetts recognize nuclear energy as a generation resource that can be used to meet their RPS requirements, subject to certain criteria and limitations.

In Connecticut, the nuclear energy must come from a facility built after October 1, 2023 ([CGS § 16-1](#), as amended by [PA 23-102](#), § 36, and [PA 23-204](#), § 185).

In Indiana, electric companies may meet up to 30% of the RPS goal (the program is voluntary) with energy from nuclear energy, “clean coal” technology, combined heat and power systems, natural gas that displaces electricity from coal, and net-metered distributed generation facilities ([Ind. Code § 8-1-37-12\(g\)](#)).

Massachusetts’ Clean Energy Standard includes a separate requirement for “[clean existing generation](#)” that is limited to nuclear and hydroelectric facilities that (1) are located in either Massachusetts, New Hampshire, Connecticut, or Eastern Canada; (2) began commercial operations before January 1, 2011; and (3) have at least a 30 MW generating capacity ([310 Mass. Regs. Code § 7.75](#)). (Additional information about how other states have created separate programs to help subsidize nuclear energy is available [here](#).)

Hydroelectric

All 36 states with an RPS allow for hydropower to meet their RPS requirements; however, most of the states set certain limitations and criteria that hydroelectric facilities must meet to be eligible to participate. The table below shows brief summaries of the eligibility criteria in the states.

Table 1: Eligible Hydroelectric Facilities in State RPS Laws

State	Eligible Hydropower
Arizona	<p>Generation in existence before 1997, subject to certain limitations on eligible output</p> <p>Generation installed after 1/1/06, limited to systems that are 10 MW or less and are either run-of-the river systems or added to existing dams without a need to requiring a new dam, diversion structures, or a change in water flow that will adversely impact fish, wildlife, or water quality (Ariz. Admin. Code § R14-2-1802)</p>
California	<p>Generators that are 30 MW or less, began operating after 2005, and do not cause an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow</p> <p>Conduit hydroelectric facilities that are 30 MW or less and began operating before 2006</p> <p>Conduit hydroelectric facilities that are 30 MW or less, began operating after 2005, and do not cause an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow (CA Pub. Util. Code § 399.12)</p>
Colorado	<p>New hydroelectricity of 10 MW or less</p> <p>Hydroelectricity in existence on 1/1/05 with a nameplate rating of 30 MW or less and that does not require the construction of any new dams or reservoirs (Colo. Rev. Stat. § 40-2-124)</p>

Table 1 (continued)

State	Eligible Hydropower
Connecticut	Run-of-the-river hydropower facilities that (1) began operating after 7/1/03 and have a generating capacity 60 MW or less or (2) received a new license after 1/1/18, under certain Federal Energy Regulatory Commission's (FERC) rules. Eligible facilities must also meet certain environmental requirements and not be based on a new dam or a dam identified as a candidate for removal (CGS § 16-1 , as amended by PA 23-102 , § 36, and PA 23-204 , § 185)
Delaware	Electricity generated by a hydroelectric facility that has a maximum design capacity of 30 MW or less from all generating units combined that meet certain environmental standards (De. Code 26 § 352)
Hawaii	Energy generated or produced using falling water (Haw. Rev. Stat. § 269-91)
Illinois	Hydropower that does not involve new construction or significant expansion of hydropower dams (20 Ill. Comp. Stat. 3855/1-10)
Indiana	No limitations specified (Ind. Code § 8-1-37-4)
Iowa	Small hydro facilities (hydroelectric facilities at a dam and their associated land and infrastructure) (Iowa Code § 476.42)
Kansas	No limitations specified (Kan. Stat. § 66-1257)
Maine	<p>Class I: new (in-service after 9/1/05) hydroelectric generators under 100 MW (subject to certain aggregate MW hour caps) that meet all applicable state and federal fish passage requirements</p> <p>Class II: existing hydroelectric generators under 100 MW that meet all applicable state and federal fish passage requirements (ME Rev. Stat. tit. 35-A, § 3210)</p>
Maryland	<p>Tier 1: small hydroelectric power plants under 30 MW</p> <p>Tier 2: hydroelectric power other than pump storage generation (MD Code, Public Utilities § 7-701)</p>
Massachusetts	<p>Class I: energy generated at new hydroelectric facilities of up to 30 MW, or incremental new energy from increased capacity or efficiency improvements that increase capacity or efficiency by up to 30 MW at existing hydroelectric facilities, that (1) meets certain site-specific standards for adequate and healthy river flows, water quality standards, fish passage and protection measures, and mitigation and enhancement opportunities in the impacted watershed and (2) does not involve pumped water storage or building any new dam or water diversion structure after 1/1/98</p> <p>Class II: energy generated by existing hydroelectric facilities of up to 7.5 MW that (1) meet certain site-specific standards for adequate and healthy river flows, water quality standards, fish passage and protection measures, and mitigation and enhancement opportunities, and (2) do not involve pumped storage of water or building a new dam or water diversion structure after 1/1/98 (Mass. Gen. Laws ch. 25A § 11F)</p>

Table 1 (continued)

State	Eligible Hydropower
	<p>“Clean existing generation” limited to hydroelectric facilities that (1) are located in either Massachusetts, New Hampshire, Connecticut, or Eastern Canada; (2) began commercial operations before 1/1/11; and (3) have at least a 30 MW generating capacity (310 Mass. Regs. Code § 7.75).</p>
<p>Michigan</p>	<p>Facilities that use the kinetic energy of moving water, but not hydroelectric facilities that use a dam built after 10/6/08 or hydroelectric pumped storage facilities (Mich. Comp. Laws § 460.1011)</p>
<p>Minnesota</p>	<p>Hydroelectric with less than 100 MW capacity (Minn. Stat. § 216B.1691)</p>
<p>Missouri</p>	<p>Hydropower (excluding pumped storage) with a capacity of 10 MW or less that does not require a new diversion or impoundment of water (MO. Rev. Stat. § 393.1025)</p>
<p>Nevada</p>	<p>Power derived from standing, running, or falling water used to generate electricity, including power derived from water that has been pumped from a lower to a higher elevation if the generating capacity is 30 MW or less and the facility was operating before 1/1/19. Does not include power that (1) requires a new or increased appropriation or diversion of water; (2) requires using fossil fuels, unless their primary purpose is not creating the power; or (3) was produced before 4/22/19, from a renewable energy system with over a 30 MW capacity placed into operation before 7/1/97 (Nev. Rev. Stat. § 704.7811)</p>
<p>New Hampshire</p>	<p>Class I: incremental new production of any hydroelectric generating facility licensed or exempted by FERC over its historical generation baseline (the facility must also meet certain investment criteria related to efficiency improvements, capacity additions, or increased renewable energy output)</p> <p>Class IV: hydroelectric facilities that (1) began operating before 1/1/06; (2) meet applicable state water quality certifications; and (3) either have a capacity of (a) 5 MW or less and have installed both upstream and downstream diadromous fish passages and such installations approved FERC or (b) 1 MW or less, comply with FERC fish passage restoration requirements, and are interconnected with an electric distribution system located in the state (N.H. Rev. Stat § 362-F:4)</p>
<p>New Jersey</p>	<p>Class I: small-scale hydropower facilities with a capacity of 3 MW or less and put into service after 7/ 23/12</p> <p>Class II: hydropower facilities with a capacity between 3 MW and 30 MW that is located where retail competition is permitted and meets the highest environmental standards and minimizes any impacts to the environment and local communities (N.J. Admin. Code tit. 14, § 14:8-1.2)</p>
<p>New Mexico</p>	<p>Hydropower facilities brought in service on or after 7/1/07 (N.M. Stat. § 62-16-3)</p>

Table 1 (continued)

State	Eligible Hydropower
New York	<p>Tier 1: new (began operating after 1/1/15) low-impact, run-of-river hydroelectric or incremental upgrades (see Tier 1 eligibility guidelines available here, p. 13)</p> <p>Tier 2: run-of-the-river hydroelectric of 10 MW or less that (1) entered commercial operation before 1/1/15, (2) were originally included in the state’s baseline of renewable resources as of 1/1/15, and (3) demonstrate that their renewable energy attributes are at financial risk (see here)</p>
North Carolina	Hydroelectric power facilities of 10 MW or less (N.C. Gen. Stat. § 62-133.8)
North Dakota	Hydroelectric facilities with an in-service date of 1/1/07 or later, or new hydroelectric generation from repowering or efficiency improvements to hydroelectric facilities existing on 8/1/07 (N.D. Cent. Code § 49-02-26)
Ohio	<p>Hydroelectric facilities placed in service on or after 1/1/98 on a dam that meet certain environmental criteria</p> <p>Run-of-the-river hydroelectric facilities with an in-service date on or after 1/1/80</p> <p>Small hydroelectric facilities (under 6 MW) (Ohio Rev. Code §§ 4928.64 & 4928.01)</p>
Oklahoma	No limitations specified (Okla. Stat. tit. 17, § 801.4)
Oregon	<p>(1) Facilities located outside any protected area designated by the Pacific Northwest Electric Power and Conservation Planning Council as of 7/23/99, or any area protected under the federal Wild and Scenic Rivers Act or (2) (for facilities operating before 1995) electricity attributable to efficiency upgrades made on or after January 1, 1995</p> <p>Up to 50 average MW per year from certified low-impact hydroelectric facilities owned by an electric utility</p> <p>Up to 40 average MW per year generated by certified low-impact hydroelectric facilities not owned by an electric utility and located in Oregon (Or. Rev. Stat. §§ 469A.020 & 469A.025)</p>
Pennsylvania	<p>Tier I: low-impact hydropower (generally, a (a) 21 MW or less facility held by a municipality or electric cooperative or (b) new incremental development that meets certain environmental standards)</p> <p>Tier II: large-scale hydropower (generally, hydropower, including pumped storage, that is not low-impact hydropower) (52 PA Code § 75.1)</p>
Rhode Island	Small hydro facilities (generally, 30 MW or less) (R.I. Gen Laws §§ 39-26-2 & 39-26-5)
South Carolina	Low-impact hydroelectric resources (S.C. Code § 58-39-120)
South Dakota	No limitations specified (S.D. Codified Laws §§ 49-34A-94 & 49-34A-102)
Texas	No limitations specified (Tex. Utilities Code § 39.904)

Table 1 (continued)

State	Eligible Hydropower
Utah	<p>Efficiency upgrades to a hydroelectric facility on or after 1/1/95</p> <p>(1) Up to 50 average MW per year per electric company from a certified low-impact hydroelectric facility, regardless of when the facility began operating, or (2) hydroelectric energy if located within the state, regardless of when the facility becomes operational</p> <p>A hydroelectric facility with the quantity of renewable energy certificates to which the user is entitled determined by the total production of the facility (Utah Code § 54-17-601)</p>
Vermont	<p>Tier I: no limitations specified</p> <p>Tier II: 5 MW or less capacity, came into service after 6/30/15, and has a water quality certification from the Vermont Agency of Natural Resources after 1/1/87, or from the Low Impact Hydropower Institute (VT Public Service Utility Commission, Renewable Energy Standard Rule 4.406)</p>
Virginia	<p>Falling water resources located in the state or PJM region that were in operation as of 1/1/20, are owned by a Phase I or Phase II Utility, or for which a Phase I or Phase II Utility has entered into before 1/1/20, to buy the energy, capacity, and renewable attributes</p> <p>Non-utility-owned falling water resources in the state or PJM region that (a) are under 65 MW, (b) began commercial operation after 12/31/79, or (c) added incremental generation representing more than 50% of the original nameplate capacity after 12/31/79 (VA Code § 56-585.5)</p>
Washington	<p>Incremental electricity due to efficiency improvements completed after 3/31/99, where the additional generation does not result in new water diversions or impoundments</p> <p>Hydroelectric generation from a project completed after 3/31/99, where the generation facility is located in irrigation pipes, irrigation canals, water pipes whose primary purpose is to convey water for municipal use, and wastewater pipes in the state where the generation does not result in new water diversions or impoundments (Wash. Rev. Code § 19.285.030)</p>
Wisconsin	<p>Small hydropower (under 60 MW, with utility credit calculated with a specific formula)</p> <p>Large hydropower (60 MW or more) if the facility was placed in service on or after 12/31/10, is located in Manitoba, Canada, and meets certain Canadian licensing and notice requirements (Wis. Stat. § 196.378)</p>

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