

STATE OF NEW YORK  
DEPARTMENT OF PUBLIC SERVICE

CASE 15-E-0302 - Proceeding on Motion of the Commission to  
Implement a Large-Scale Renewable Program and  
a Clean Energy Standard.

DEPARTMENT OF PUBLIC SERVICE STAFF PROPOSAL

On May 15, 2025, the Public Service Commission (Commission) issued its Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings in the above-captioned proceeding (Biennial Review Order).<sup>1</sup> Among other things, the Biennial Review Order directed Department of Public Service (DPS) Staff to file a proposal to modify the repowering requirements that hydroelectric resources must satisfy in order to qualify their generation as Tier 1 eligible under the Clean Energy Standard (CES). As described herein, DPS Staff recommends modifications to the Tier 1 repowering requirements to accommodate the unique circumstances surrounding hydroelectric resources.

The Commission adopted the current repowering requirements as part of its Order Adopting Modifications to the Clean Energy Standard (CES Modification Order).<sup>2</sup> There, the Commission adopted three requirements for a repowered facility to claim its entire capacity as eligible for Tier 1 solicitations: (1) replacement of the prime mover; (2) a 15% increase in production; and (3) capital expenditures for the repowering must be in excess of 80% of the net book value of the facility. However, the Commission determined that the prime mover replacement criterion was inappropriate as applied

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<sup>1</sup> Case 15-E-0302, Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings (issued May 15, 2025).

<sup>2</sup> Case 15-E-0302, Order Adopting Modifications to the Clean Energy Standard (issued October 15, 2020).

to hydroelectric resources and thus directed that such resources need only satisfy criterion (2) and (3) in order for the repowered hydroelectric facility to qualify for Tier 1 solicitations. In all cases, the repowered facility must be at the end of its useful life to qualify its full generation as Tier 1 eligible, which is 50 years for hydroelectric facilities.

As part of the 2024 CES Biennial Review process, DPS Staff and the New York State Energy Research and Development Authority filed the Draft Clean Energy Standard Biennial Review on July 1, 2024 (Draft Biennial Review). The Draft Biennial Review proposed several options to provide support to baseline resources, including hydroelectric resources, in order to secure these resources' continued operation and deliverability into New York at the least cost to ratepayers. While the Draft Biennial Review did not propose any changes to the Tier 1 repowering requirements, several commenters recommended that the Commission modify those repowering requirements to allow hydroelectric resources to repower and claim their entire capacity as Tier 1 eligible.

Among those commenters was Brookfield Renewable Energy Group (Brookfield), which stated that long-term revenue certainty through repowering is one of the best approaches for supporting existing hydroelectric generators. Brookfield supports the removal of the 15% energy production increase requirement currently existing because it is not feasible given small hydroelectric station configurations and physical limits. The New York Association of Public Power also commented that hydroelectric generators should not be required to increase generation by 15% due to technological limitations of the facilities that make it virtually impossible for most facilities to achieve that increase in generation.

In additional meetings with DPS Staff, Brookfield and other hydroelectric developers explained further that the major benefit of repowering is not the increase in capacity,

but instead increasing reliability, reducing the likelihood of downtime, and increasing future generation projections due to life extension of equipment. According to Brookfield, some of the hydroelectric station components that could be involved in a repowering include the generator excitation system, generator stator, generator rotor, operating mechanism (wicket gates), turbine speed governor, turbine runner, turbine generator bearing, and hydroelectric turbines (excluding the runner).

In its comments to DPS Staff, Ampersand Hydro LLC (Ampersand) provided its own list of components that could be involved in a repowering, which include the turbine with associated seals, turbine shaft, pinion gears, gearboxes and components, hydraulic pump unit, wicket gates, and turbine runner. Ampersand further stated that a generator rewinding that involves replacing old, damaged coil wires in the generator stator or rotor can restore its original electrical performance and efficiency. Additionally, the installation of a Programmable Logic Control, which allows for minimal losses when water levels rise, could further improve generation according to Ampersand. Lastly, Ampersand asserted that automation is used primarily to increase production by maximizing the hydraulic capacity of the turbines, but is also used to allow for remote monitoring and operation, and Ampersand contends that automation is important in allowing constant monitoring of plant conditions and effectuates key processes such as preventive shutdown, fault clearing, and restart.

Northern Power and Light (NPL) explained that many current smaller hydroelectric operations under consideration perform repairs and maintenance only when absolutely necessary and that maintenance measures undertaken should be incentivized. NPL added that turbine technology alone will typically not result in material increases in production and that even if an owner installs more or larger turbines and

generators, an increase in capacity does not always translate into a meaningful increase in production because of the limiting amount of water flow. NPL went on to state that adding capacity to a hydroelectric generating station is subject to the law of diminishing returns and really depends on the nature of the particular stream. The hydroelectric stations for which it does make sense to increase capacity will be motivated to do so anyway, according to NPL.

The Biennial Review Order did not adopt changes to the Tier 1 repowering requirements, and instead directed DPS Staff to develop separate criteria for hydroelectric resources that capture the significant costs and considerations necessary for repowering. The Commission highlighted the removal of the 15 percent increase in production for hydroelectric facilities as a specific modification that should be considered.

DPS Staff hereby proposes to modify the Tier 1 repowering requirements to accommodate the unique circumstances of hydroelectric resources. Specifically, DPS Staff proposes to modify the requirement that a repowered hydroelectric facility increase its electricity production output by 15%. As pointed out by commenters, given the technical limitations of hydroelectric facilities, increasing production to that extent is infeasible. This is mostly due to the initial design of a hydroelectric facility being precisely sized for its operation site. Given the bespoke nature of these facilities, DPS Staff proposes that the objective of repowering hydroelectric facilities should not be significant increases to electricity production, but rather focus on preserving the existing capacity and extending the useful life of hydroelectric facilities. To achieve this goal, DPS Staff recommends reducing the amount that a hydroelectric facility must increase its generation for that generation to be eligible for Tier 1 treatment from 15% to 3%. This 3% is based on the legacy U.S. Department of Energy (DOE)

Hydroelectric Efficiency Improvement Incentives Program, which required such an increase in efficiency of hydroelectric facilities in order to qualify for federal incentives.<sup>3</sup> This modest increase in production should incentivize hydroelectric facilities that are considering repowering to improve efficiency, but does not set the threshold at a level that is unattainable for such facilities. As discussed above, informal discussions with stakeholders have indicated that modest efficiency gains can be attained as part of repowering hydroelectric facilities.

As a result of this proposed change, any hydroelectric resource seeking to repower and have its full generation be Tier 1 eligible once the useful life of the pre-repowering project has been reached<sup>4</sup> would need to satisfy the requirements to increase production by 3%, as well as the third repowering requirement articulated in the CES Modification Order, i.e., the capital expenditures for the repowering must be in excess of 80% of the net book value of the hydroelectric facility. In order to provide additional clarity around this requirement, DPS Staff proposes that for hydroelectric facilities, capital expenditures would mean the construction, addition, improvement, modification, replacement, rearrangement, reinstallation, renovation, or alteration of tangible assets, such as real property, buildings, equipment, and intellectual property (including software) used in hydroelectric operations that have a useful

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<sup>3</sup> See, Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).

<sup>4</sup> The proposed change described herein would apply to any hydroelectric resource that repowers either prior to or after the end of their useful life. As is already the case under existing rules, only the incremental generation resulting from a repowering carried out prior to the end of the facility's useful life will be Tier 1 eligible, and the entire generation of the repowered project will be Tier 1 eligible once the useful life of the pre-repowering project has been met.

life of more than one year, to the extent such expenditures are capitalized in accordance with generally accepted accounting principles.<sup>5</sup>

DPS Staff believes that these modifications would allow more hydroelectric resources to satisfy the repowering requirements and would provide such resources with the ability to participate in Tier 1 solicitations and potentially receive the long-term revenue certainty that comes with a Tier 1 contract. This would advance the State's goals of preserving baseline renewable generators and support achievement of the State's clean energy targets.

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<sup>5</sup> For example, a rewinding of a turbine can be considered a capital expenditure to the extent that (i) the rewind equipment has a useful life of more than one year and (ii) the expenditure on the rewinding is capitalized in accordance with generally accepted accounting principles.