STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on July 16, 2026

COMMISSIONERS PRESENT:

Rory M. Christian, Chair
James S. Alesi
David J. Valesky
John B. Maggiore
Uchenna S. Bright
Denise M. Sheehan
Radina R. Valova

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

ORDER MODIFYING HYDROELECTRIC FACILITY REPOWERING REQUIREMENTS

(Issued and Effective July 22, 2026)

BY THE COMMISSION:

INTRODUCTION

As part of the Clean Energy Standard (CES) Biennial Review Order, the Public Service Commission (Commission) directed Department of Public Service (DPS) staff to file a proposal to modify the repowering criteria that hydroelectric generating resources must satisfy in order to qualify their generation as eligible under CES Tier 1, to reflect the "significant costs and considerations necessary for repowering" such facilities.[1] On November 12, 2025, DPS staff filed a proposal to modify the CES Tier 1 repowering requirements for

[1] Case 15-E-0302, Order Adopting Clean Energy Standard Biennial Review as Final and Making Other Findings (issued May 15, 2025) (CES Biennial Review Order), p. 62.

hydroelectric resources by reducing the required increase in electricity production from 15 percent to three percent.[2] In this Order, the Commission approves the DPS Staff Proposal in order to reduce the barriers to repowering hydroelectric facilities.

BACKGROUND

In the Order Approving Phase 1 Implementation Plan, the Commission stated that a repowering option for older vintage generating facilities may be a reasonable solution for returning older facilities to service, especially when the generating components have met the end of useful life (EUL).[3] The Commission thus directed DPS staff to include repowering as a topic as part of its review of incentives to support baseline resources. In a subsequent report on baseline resources, DPS staff decided not to propose a repowering option for baseline resources, mainly due to concerns that allowing an existing facility to be compensated for the entire output of a repowered facility could circumvent the financial needs test required for maintenance support under Tier 2.[4] However, such facilities undertaking an upgrade could still receive support under the CES program, which allows the incremental portion of their generation to be eligible under CES Tier 1.

In the CES Phase 1 Implementation Plan, an upgrade is described as an available option for older renewable facilities

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[2] Case 15-E-0302, Department of Public Service Staff Proposal (filed November 12, 2025) (DPS Staff Proposal).

[3] Case 15-E-0302, Order Approving Phase 1 Implementation Plan (issued February 22, 2017) (approving the CES Phase 1 Implementation Plan).

[4] Case 15-E-0302, DPS Staff Report Regarding Retention of Existing Baseline Resources Under Tier 2 of the Renewable Energy Standard Program (filed October 19, 2017).

undertaken prior to the EUL, which is 50 years for hydroelectric facilities.[5] There are two options for upgrading hydroelectric facilities, specifically: (1) a material capital investment that results in a significant increase in the efficiency of its generation process (defined as annual megawatt-hour (MWh) generated), resulting in an increase in annual energy production of at least five percent under normal operating conditions and normal resource availability, relative to the weather-normalized, average, annual energy production prior to the upgrade; or (2) an increase to the generator's nameplate capacity of at least ten percent, also resulting in a minimum five percent increase in annual energy production under normal operating conditions and normal resource availability, relative to the weather-normalize, average, annual energy production prior to the upgrade. Under both upgrade options, the Tier 1 eligibility applies only to the incremental generation, which is the percentage increase in MWh energy production that is estimated by comparing annual average generation (of at least ten years) of the upgraded facility against the annual average generation (of at least ten years) of the facility if it is not upgraded. That percentage is applied to each yearly generation MWh production after the upgrade to arrive at the annual MWh eligibility for Tier 1. The New York State Energy Research and Development Authority's (NYSERDA) Eligibility Guidelines refer to these estimates as pre-and post-upgrade simulations, which

[5] Case 15-E-0302, Clean Energy Standard Phase 1 Implementation Plan (filed March 24, 2017) (Phase 1 Implementation Plan).

are used to determine the percentage of electrical output attributable to the upgrade in an average year.[6]

On June 18, 2020, DPS staff and NYSERDA filed a White Paper on Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act, where they proposed, among other things, that repowered facilities be allowed to claim their entire capacity as eligible for Tier 1, but only when they reach the EUL and if they meet certain eligibility criteria related to the size and nature of the repowering investment.[7] On October 15, 2020, the Commission issued the CES Modification Order that, among other things, adopted the proposed Tier 1 repowering requirements, with modifications.[8] There, the Commission determined that, in order for the full generation of the repowered facility to be considered Tier 1 eligible, the repowering must satisfy several criteria: (1) it must include replacement of each prime mover; (2) it must result in an overall increase of 15 percent or more in the production of the generation unit compared to its projected future output; and (3) capital expenditures for the repowering must be in excess of 80 percent of the net book value (NBV) of the facility (NBV Requirement). However, the Commission determined that the prime mover replacement criterion was inappropriate as applied to hydroelectric resources because

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[6] See NYSERDA New York State Clean Energy Standard RES Tier 1 Certification - Submission Instructions and Eligibility Guidelines (dated February 2026) (Eligibility Guidelines), available at: https://www.nyserda.ny.gov/All-Programs/Large-Scale-Renewables/RES-Tier-One-Eligibility/Certification.

[7] Case 15-E-0302, White Paper on Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act (filed June 18, 2020).

[8] Case 15-E-0302, Order Approving Modifications to the Clean Energy Standard (issued October 15, 2020) (CES Modification Order).

"hydropower repowerings can involve substantial required investment in physical plant other than the turbine or refurbishing rather than replacing the turbine."[9] Accordingly, the Commission directed that such resources only needed to satisfy criterion (2) and (3), in order for the repowered hydroelectric facility's generation to qualify for Tier 1 solicitations. In all cases, the repowered facility must be at the EUL to qualify its full generation as Tier 1 eligible (i.e., 50 years for hydroelectric facilities).

On May 15, 2025, the Commission issued the CES Biennial Review Order, which, among other things, directed DPS staff to revisit the repowering criteria for hydroelectric resources. In compliance with that directive, DPS staff filed the DPS Staff Proposal on November 12, 2025.

DPS STAFF PROPOSAL

The DPS Staff Proposal recognizes the physical, regulatory, and technological limitations of hydroelectric generators that limit the amount of generation increases that can be achieved through repowering. As DPS staff note, this is primarily 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 focused on eliciting a significant increase in electricity production but rather preserving the existing capacity and extending the useful life of such facilities. To achieve this outcome, DPS staff recommend reducing the amount that a hydroelectric facility must increase its generation from 15

[9] CES Modification Order, p. 107.

percent to three percent, in order for that generation to be eligible under CES Tier 1.

DPS staff indicates that the three percent level 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. According to DPS staff, 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.

Lastly, the DPS Staff Proposal notes that the third repowering requirement articulated in the CES Modification Order would also apply (i.e., the capital expenditures for the repowering must be in excess of 80% of the net book value of the hydroelectric facility). To provide additional clarity around this requirement, DPS staff proposes that, for hydroelectric facilities, capital expenditures should 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 life of more than one year, to the extent such expenditures are capitalized in accordance with generally accepted accounting principles. To illustrate, DPS staff provides an example where the rewinding of a turbine could be considered a capital expenditure to the extent that (1) the rewound equipment has a useful life of more than one year and (2) the expenditure on the rewinding is capitalized in accordance with generally accepted accounting principles.

NOTICE OF PROPOSED RULE MAKING

Pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rulemaking (Notice) was published in the State Register on December 3, 2025 [SAPA No. 15-E-0302SP73]. The time for submission of comments pursuant to the SAPA Notice expired on February 2, 2026. The comments received are discussed below and summarized in the Appendix.

LEGAL AUTHORITY

The Commission's authority derives from the New York State Public Service Law (PSL), through which numerous legislative powers are delegated to the Commission. Pursuant to PSL §5(1), the "jurisdiction, supervision, powers and duties" of the Commission extend to the "manufacture, conveying, transportation, sale or distribution of ... electricity." PSL §5(2) requires the Commission to "encourage all persons and corporations subject to its jurisdiction to formulate and carry out long-range programs, individually or cooperatively, for the performance of their public service responsibilities with economy, efficiency, and care for the public safety, the preservation of environmental values and the conservation of natural resources." PSL §66(2) provides that the Commission shall "examine or investigate the methods employed by [] persons, corporations and municipalities in manufacturing, distributing and supplying ... electricity ... and have power to order such reasonable improvements as well as promote the public interest, preserve the public health and protect those using such gas or electricity ...."

PSL §4(1) also expressly provides the Commission with "all powers necessary or proper to enable [the Commission] to carry out the purposes of [the PSL]" including, without limitation, a guarantee to the public of safe and adequate

service at just and reasonable rates,[10] environmental stewardship, and the conservation of resources.[11] Further, PSL §65 provides the Commission with authority to ensure that "every electric corporation and every municipality shall furnish and provide such service, instrumentalities and facilities as shall be safe and adequate and in all respects just and reasonable." The Commission also has authority to prescribe the "safe, efficient and adequate property, equipment and appliances thereafter to be used, maintained and operated for the security and accommodation of the public" whenever the Commission determines that the utility's existing equipment is "unsafe, inefficient or inadequate."[12] In addition to the PSL, the New York State Energy Law §6-104(5)(b) requires that "[a]ny energy-related action or decision of a state agency, board, commission or authority shall be reasonably consistent with the forecasts and the policies and long-range energy planning objectives and strategies contained in the plan, including its most recent update."

DISCUSSION

As stated in the CES Biennial Review Order, upgrading or repowering of baseline hydroelectric resources is a process that can result in generation that qualifies for CES Tier 1 solicitations. This Tier 1 eligibility can provide a revenue

[10] See International Ry. Co. v. Public Service Com., 264 A.D. 506, 510 (1942).

[11] PSL §5(2); see also Consolidated Edison Co. v. Public Service Commission, 47 N.Y.2d 94 (1979) (overturned on other grounds) (describing the broad delegation of authority to the Commission and the Legislature's unqualified recognition of the importance of environmental stewardship and resource conservation in amending the PSL to include §5).

[12] PSL §66(5).

stream to the facility in order to undertake the capital expenditures necessary to maintain and improve service, or to return a facility to service. As referenced above, the requirements to upgrade or repower hydroelectric resources have been modified and clarified over time. Currently, an upgrade results in only the incremental generation qualifying as CES Tier 1 eligible, but can be done at any time in the facility's lifecycle. On the other hand, a repowering that is performed after the facility's EUL results in CES Tier 1 eligibility for 100 percent of the facility's generation.

In response to the DPS Staff Proposal, several comments were received supporting DPS staff's recommendation to modify the repowering requirements. The majority of commenters agreed with DPS staff's position that, given the bespoke nature of hydroelectric facilities, the objective of repowering hydroelectric facilities should be focused on preserving the existing resources and extending their useful life, while achieving meaningful progress towards the State's clean energy goals. Under the DPS Staff Proposal, this would occur by establishing a modest increase in generation tailored to hydroelectric resources, rather than the significant increase of 15 percent that is better suited to the repowering of other technologies such as land-based wind.

Patriot Hydro, LLC (Patriot Hydro) supports the DPS Staff Proposal, and advocates that a required three percent increase in production appropriately reflects achievable engineering outcomes, while ensuring that CES Tier 1 eligibility is limited to substantive repowering projects. However, Brookfield Renewable Energy Group (Brookfield) comments that even the proposed three percent increase in generation is too onerous given the technical constraints of a hydroelectric generation facility and other limiting factors involved. In the

event the Commission approves the three percent increase requirement, Brookfield requests that the Commission clarify how the three percent increase would be applied.

While the Commission finds DPS staff's proposal reasonable to modify the CES Tier 1 repowering requirements for hydroelectric resources by reducing the required increase in electricity production from 15 percent to three percent, we seek to clarify the application of this modification approved herein. To this end, the Commission provides guidance on the three scenarios provided by Brookfield that it believes encapsulates the full range of real-world repowering scenarios that merit discussion.

In the first scenario, a hydroelectric generator experiences a sustained, demonstrable decline in generation of three percent or more over 20 years due to aging or obsolete equipment. Brookfield asks if the three percent test would be met if the generating facility is estimated to recapture the lost three percent generation through repowering. With regards to this first scenario, and in alignment with the Commission's direction in the CES Modification Order, a facility's degradation would be incorporated within the required independent engineer's report that is included with the repowering application and NYSERDA's review process. Therefore, if the generating facility is estimated to recapture its degraded generation of three percent, NYSERDA's calculation of the amount of increased generation resulting from an upgrade or repowering project (depending upon if the EUL has been reached) will reflect that recapture when demonstrating whether or not the projected generation of the facility after the upgrade or repowering will be greater than the projected generation of the facility absent any upgrade or repowering efforts.

In Brookfield's second scenario, a hydroelectric generation unit beyond its EUL has experienced a major equipment failure or forced outage that will result in partial or complete loss of generation until capital investments, which are assumed to meet the NBV Requirement, are made to restore it to operability. Brookfield argues that if a generator goes back into service before 48 months has elapsed, and recaptures the lost generation by restoring the project's generation profile to produce the same quantity of energy as its pre-failure production, then the entire generation should count as Tier 1 eligible because the projected generation absent repowering would be zero, so restoring prior output will automatically meet the three percent requirement. Brookfield also questions how the 48-month Return to Service rule in the CES Phase 1 Implementation Plan would impact this scenario.

The Commission notes that if the unit had been out of service for 48 consecutive months or more it would qualify under the Return to Service category and its entire generation would be categorized as eligible under CES Tier 1.[13] Additionally, the Return to Service program does not require meeting the NBV Requirement. As part of the initial discussions and deliberations in developing the CES in 2016, the Commission found that other states that have similar renewable energy goals used similar criteria to determine the eligibly of the "return-to-service" for Tier 1 participation. The conclusion was that 48 consecutive months was chosen to allow ample time to distinguish truly dormant facilities, rather than incentivizing facilities to briefly shut down and then qualify for the return-to-service program. The 48-month rule continues to be a reasonable approach considering the time and resources necessary

[13] CES Phase 1 Implementation Plan, pp. 4-5.

to restore a hydroelectric facility that has experienced a forced outage or severe equipment failure.

Regarding the upgrade and repowering options available when a hydroelectric unit has experienced a failure, as described in Brookfield's scenario two, there are viable pathways available to address the outage situation, depending on whether the EUL has been reached. Restoring generation from these hydroelectric assets through the upgrade or repowering process is an important goal in maintaining these baseline resources. If the failure/offline situation occurs prior to reaching the EUL, it could qualify as an upgrade and the requirements listed above would apply. If the failure/offline situation occurs after the unit has reached the EUL, as described in Brookfield's scenario number two, a hydroelectric facility that repowers and satisfies both the three percent incremental generation threshold and the NBV Requirement would have its entire generation post-repowering classified as Tier 1 eligible. The Commission confirms that, when calculating the percentage increase in generation for this scenario, the repowered facility's projected future generation post-repowering shall be compared to zero because, absent repowering, the offline facility would continue to have no generation. However, in this scenario where a hydroelectric facility is offline at the time of repowering due to a major outage, the repowering must restore the facility to at least the megawatt (MW) nameplate capacity level found in its currently approved Federal Energy Regulatory Commission (FERC) license. In addition to restoring capacity, the hydroelectric facility owner/developer must provide a report stamped by a Professional Engineer detailing the cause of the outage, listing equipment that failed causing the major outage, and also demonstrating that, without significant restoration of key operating components (i.e.,

turbine rewinding, penstock replacement/repair, spillway structural repairs, etc.), the asset would not be capable of resuming generation operations. This will avoid providing Tier 1 eligibility to only a partially repowered facility and will incent the developer to recapture the lost MW capacity through repowering, without also requiring an incremental increase in MWh energy generation.

In the third scenario, which Brookfield refers to as the "preventive repowering" scenario, it states that this is the most utilized repowering scenario, and relies upon a projected equipment failure and resulting degradation that would continue until there is a likelihood of catastrophic failure within the next five years. Brookfield utilizes a 20-year estimated future generation model after the repowering and compares that to the projected output of the hydroelectric facility without repowering with a likelihood that years five through 20 would have zero generation. It questions whether the three percent increase in generation would be met when comparing the two scenarios. Brookfield claims that this model should be supported because it encourages proactive re-investment in hydroelectric facilities and extends their useful life, among other benefits. The Commission agrees and finds that it would be reasonable for a hydroelectric generation facility to proactively repower, provided that an independent engineer certifies that the facility, which is already at or beyond its EUL, has a likelihood of a catastrophic failure within the forecasted 10 years of production. These conditions would qualify for the three percent requirement test for repowering, so long as the repowered facility has at least the same MW nameplate capacity level found in its currently approved FERC license.

However, the Commission emphasizes that, under all scenarios, the owners and operators of hydroelectric facilities should utilize good utility practice in undertaking routine maintenance actions to secure the continuation of baseline generation and to prevent catastrophic failures from occurring. These actions are normally identified during condition-based assessments undertaken periodically. It is important to recognize that the goal of the repowering program is to preserve baseline resources and extend their useful life where truly warranted, thereby minimizing the costs to ratepayers.

Brookfield also recommends moving from the current NBV Requirement referenced above to one consistent with the federal Inflation Reduction Act's Section 45Y Clean Electricity Production Tax Credit (PTC or 45Y)[14] and Section 48E Clean Electricity Investment Tax Credit (48E),[15] which govern qualification of repowered renewable generation assets for tax incentives and do not have a production-increase requirement. Under these statutes, a facility qualifies for new-project treatment if at least 80 percent of the facility's fair market value consists of new investment after the repowering. Contrarily, Brookfield believes that the federal Department of Energy (DOE) Hydroelectric Production Incentive and Hydroelectric Efficiency Improvement Incentive programs are not the relevant federal analogues for state-level treatment of hydroelectric repowering, because they are narrow programs targeted at incremental production gains for specific

[14] 26 U.S.C.A. §45Y.

[15] 26 U.S.C.A. §48E.

modernization activities.[16] Additionally, Patriot Hydro seeks to modify the NBV Requirement by stating that most hydroelectric facility owners and developers are already using the federal hydropower PTC repowering framework, which requires repowered facilities to satisfy the Internal Revenue Service 80 percent rule, whereby capital expenditures must equal at least 80 percent of the fair market value of the applicable hydropower unit. Patriot Hydro also recommends refining capital expenditure eligibility to include non-PTC eligible infrastructure such as fish ladders, dam modifications, and other related upgrades that are not captured through the PTC.

Regarding the NBV Requirement, the Commission sees no reason to discontinue the repowering requirement that capital expenditures must be in excess of 80 percent of the NBV of the facility. The methodology prescribed by 45Y/48E of measuring the capital expenditure against the fair market value, instead of the NBV, will expose the State to gaming opportunities where developers could include appreciation of assets among other capital expenditures that improve marketability. Further, the use of the NBV, which reflects changes due to depreciation, provides more stability, whereas use of the fair market value will increase volatility as it is dependent on current market supply and demand. The Commission also adopts the list of qualifying capital expenditures provided in the DPS Staff

[16] The Energy Policy Act of 2005, as amended by the Infrastructure Investment and Jobs Act of 2021, established the DOE Hydroelectice Efficiency Improvement Incentives Program which provides financial incentives to owners/operators of existing dams of capital improvement that increase energy efficiency by at least three percent. See, Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).

Proposal.[17] The Commission rejects Patriot Hydro's suggested inclusion of non-PTC eligible equipment components for use in the 80 percent test. Although these are important features of hydroelectric generation, they are not critical components related to the production of energy.

In its comments, Boralex supports the reduction in the required increase in generation to three percent, but states that, in order to ensure the three percent threshold does not become a de facto barrier, the Commission should adopt a "but-for" baseline methodology. Boralex recommends that the three percent increase should be measured against the projected performance of the facility "but-for" the repowering and that measuring against a historical peak ignores the natural degradation of a 90-year-old asset. Boralex adds that without this clarification, the CES framework inadvertently incentivizes "running to failure," risking the loss of carbon-free generation. The Commission clarifies that the comparison of future generation is not made against the historic peak generation at the facility. Consistent with the suggestion of Boralex, the projected future generation resulting from the repowering will be compared to the projected future generation absent repowering to determine the percentage increase in generation.

Northern Power and Light, Inc. (NPL) and Azure Mountain Power Company (AMP) agree with Brookfield that

[17] DPS staff proposed that 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 life of more than one year, to the extent such expenditures are capitalized in accordance with generally accepted accounting principles.

confirming the three percent increase is complex and unnecessary and will limit the program's impact. NPL and AMP have direct experience applying for DOE Hydroelectric Production Incentive and Hydroelectric Efficiency Improvement Incentive program funds and describe the complexity of engineering review in that program and the hydro-specific engineering talent required of DOE to evaluate applications and guide applicants. NPL and AMP point out that typical hydroelectric generation can vary by 20 percent from year to year due to hydrology alone. However, for the reasons stated above, the Commission maintains its existing baseline methodology adopted in the CES Modification Order developed using a forward-looking ten-year period without repowering to compare against estimates of future generation after repowering, which allows for hydroelectric facilities to more effectively demonstrate the normal operating conditions of the facility under projected normal resource availability.

There are many technical issues and factors surrounding hydroelectric facility operation and generation. To assist NYSERDA and DPS staff in the comprehension of developer submittals for repowering, NYSERDA should engage consulting/technical expertise centered around the smaller run-of-river hydroelectric generation environment to assist in explaining and verifying technology issues contained in engineering reports submitted by hydroelectric generator developers and owners.

CONCLUSION

The Commission approves DPS Staff's Proposal to reduce the incremental generation repowering requirement from 15 percent to three percent, which shall be confirmed by an independent engineer's report to qualify the generation for Tier 1 eligibility. Further, the Commission reaffirms the use of

engineers' estimates in establishing the three percent increase in generation, which is measured by comparing the projected future generation post repowering and the projected future generation absent repowering.

The Commission orders:

1. The proposal to modify the Clean Energy Standard Tier 1 eligibility requirements for repowered hydroelectric generating facilities, filed by Department of Public Service staff on November 12, 2025, is approved, as discussed in the body of this Order.

2. The New York State Energy Research and Development Authority shall file an updated Clean Energy Standard Tier 1 Implementation Plan, consistent with the discussion in the body of this Order, within 60 days of the issuance of this Order.

3. Submissions seeking a Clean Energy Standard Tier 1 award for a proposed repowering of a hydroelectric generating facility shall be accompanied by a certified independent engineer's report confirming an increase in electricity production of at least three percent, consistent with the discussion in the body of this Order.

4. This proceeding is continued.

By the Commission,

(SIGNED) MICHELLE L. PHILLIPS
Secretary

APPENDIX: SUMMARY OF COMMENTS

Alliance For Clean Energy New York (ACE NY)

ACE NY agrees with DPS staff's conclusion that the existing criteria requiring a 15 percent increase in production for hydroelectric repowering eligibility is not feasible for most facilities. ACE NY supports Brookfield's contention that the increase in electric production requirement should be eliminated for hydroelectric facility repowering, as any potential renewable megawatts (MW) gained from hydroelectric resources that can meet such a threshold are likely to be far exceeded by MW lost from those hydroelectric resources that cannot achieve the three percent criterion.

If the Commission accepts DPS staff's proposal, ACE NY conveys support for the approach and guidance that Brookfield describes in its comments, and asks that the Commission provide clarity on how the proposed three percent standard is applied in a manner that recognizes the full range of real-world hydroelectric repowering scenarios. ACE NY advocates that without such clarification, even the proposed reduced threshold will continue to act as a hindrance to hydroelectric repowering and will not achieve the State's stated policy objectives.

Boralex

Boralex concurs with the DPS staff's assessment that the existing 15 percent production increase threshold is technically and economically incompatible with the physics of hydroelectric generation. Boralex supports the DPS staff's proposal to reduce the threshold to three percent as it represents a material improvement by aligning regulations with the practicalities of modern upgrades and generator rewinds. Boralex echoes an argument by ACE NY and Brookfield that a three percent threshold is a high but achievable bar. Boralex explains, as hydroelectric facilities age, they increasingly

depend on specialized replacement components that are no longer widely manufactured. This scarcity drives up costs and adds logistical complexity when sourcing parts for critical repairs or upgrades.

Boralex views DPS staff's three percent proposal as a reasonable compromise that fulfills the intent of the State Energy Plan. Boralex suggests the Commission should adopt a "but-for" baseline methodology, in which the three percent increase is measured against the projected performance of the facility "but-for" the repowering. Boralex requests that the Commission adopt DPS Staff's Proposal to reduce the production increase threshold to three percent; affirm that the primary objective of hydroelectric repowering is life-extension and capacity preservation; and issue clear guidance allowing for "but-for" degradation baselines in calculating the three percent improvement.

Brookfield Renewable Energy Group (Brookfield)

Brookfield agrees that the principal objective of hydroelectric repowering should be preservation of existing capacity and extension of useful life. Brookfield supports DPS staff's recommendation to reduce the increase in production criterion for hydroelectric repowering eligibility, but argues that the increase in production requirement should be eliminated, rather than decreased from 15 percent to three percent. Should the Commission adopt DPS staff's increase in production recommendation, Brookfield requests that the Commission clarify how the proposed three percent is applied, in a manner that recognizes the full range of real-world hydroelectric repowering scenarios.

Brookfield asserts that hydroelectric resources are unique and warrant separate repowering criteria, noting two points. First, according to Brookfield, existing hydroelectric

facilities are significant contributors to the State's clean energy goals by producing the vast majority of the State's existing renewable energy baseline, but this contribution is at risk due to unit failures and/or the exporting of energy and renewable attributes. Second, Brookfield contends that hydroelectric facilities have distinct characteristics that distinguish them from other clean energy technologies in terms of facility locations, maturity of the technology, and operating characteristics/capabilities. Brookfield explains that those factors dictate both the nature of reinvestment in hydroelectric facilities as well as what is a reasonable outcome from such investment. Therefore, Brookfield believes that the rules for hydroelectric repowering should be focused on longevity as the primary aim and benefit, and not incremental power production.

Brookfield believes the U.S. Department of Energy's (DOE) Hydroelectric Production Incentive and Hydroelectric Efficiency Improvement Incentive programs are not relevant federal analogues for state-level treatment as the basis for establishing a fixed performance-improvement threshold. Moreover, Brookfield states that the appropriate federal reference point is the Inflation Reduction Act's Section 45Y Clean Electricity Production Tax Credit (45Y)[18] and Section 48E Clean Electricity Investment Tax Credit (48E),[19] which governs qualification of repowered renewable generation assets for tax incentives. Under sections 45Y and 48E, a facility qualifies for new-project treatment if at least 80 percent of the facility's fair market value consists of new investment after the repowering. However, Brookfield notes that there is no minimum efficiency or production-increase requirement and that

[18] 26 U.S.C.A. §45Y.

[19] 26 U.S.C.A. §48E.

federal policy explicitly avoids production-based gating criteria. Brookfield asserts that the DOE Hydroelectric Production Incentive and Hydroelectric Efficiency Improvement Incentive programs are not intended as a model for repowering qualification, and imposing a production-increase requirement would create an inconsistent and more burdensome standard for hydroelectric facilities relative to federal policy.

Brookfield cites Governor Hochul's recent directives for State agencies to coordinate and advance clean energy projects eligible for sunsetting federal tax incentives to "leverage federal incentives, reduce costs for ratepayers, and build a more resilient, sustainable and reliable energy grid."[20] Brookfield suggests that hydroelectric repowering should not be seen as a pathway for New York State to add renewable MW to its system, as a three percent incremental increase to production, even to Brookfield's entire New York hydroelectric fleet, would yield results that are de minimis compared to the amount of incremental renewable energy required to reach the State's CES goals.

Brookfield opposes the three percent increase in production requirements and mentions that approximately 500 MW of its New York State hydropower capacity is eligible to participate in renewable/clean energy programs in neighboring states, and if the three percent increase in production requirement is adopted and proves to be an impediment to hydroelectric repowering, then the State will likely lose hundreds of MW of existing renewable generation and associated environmental attributes to power exports, which would then have

[20] Governor Kathy Hochul, Governor Hochul Directs State Agencies to Accelerate Renewable Energy Development and Construction (September 25, 2025), available at: https://www.governor.ny.gov/news/governor-hochul-directs-state-agencies-accelerate-renewable-energy-development-and.

to be replaced by other renewable technologies with lower capacity factors, resulting in higher costs to ratepayers.

Brookfield urges the Commission to eliminate the production-increase requirement for hydroelectric repowering and to rely on substantial reinvestment and useful life extension criteria to determine Tier 1 eligibility. In the alternative, if the Commission decides to adopt a three percent standard, Brookfield requests that the Commission provide clear guidance confirming that the production-increase criterion is satisfied in the full range of real-world hydroelectric repowering scenarios. Brookfield provides three scenarios for which it seeks eligibility clarification, including restoring lost generation due to degradation of aging and/or obsolete equipment, restoration following a forced outage or major component failure, and proactive preventative repowering undertaken to avoid reasonably foreseeable failure over the Tier 1 contract term. Brookfield asserts that the Commission should expressly allow reliance on credible independent engineering projections and "but-for" baselines that reflect projected degradation or outage risk, so that the repowering framework does not inadvertently incent owners to defer prudent modernization until after performance declines or equipment fails. Brookfield concludes that clarifying this requirement is necessary to ensure the final CES repowering rules function as intended, facilitating reinvestment to preserve New York's existing renewable baseline, avoiding unnecessary loss or export of zero-emission generation and advancing the Commission's clean energy objectives in a manner that protects ratepayers.

Independent Power Producers of New York (IPPNY)

IPPNY supports the elimination of the 15 percent increase in production requirement for the repowering of hydroelectric facilities. IIPNY argues that the full set of

Tier 1 repowering eligibility criteria sets too high of a bar for most hydroelectric facilities to utilize. IPPNY maintains that even though the financial commitment is significant, it will rarely result in an increase in production that approaches the 15 percent threshold, if ever. Further IPPNY states that hydroelectric generation is a mature technology, and replacing critical components is done for useful life extension rather than efficiency gains. IPPNY adds that requiring an increase in production of even three percent would have unintended consequences. IPPNY notes that even a three percent increase would require FERC approval. IPPNY urges the Commission to eliminate the requirement for increased production for the repowering of hydroelectric facilities.

New England Hydropower Company (NEHC)

NEHC identifies repowering, from a rule perspective, simply as additions or repairs to a facility so that it operates on par with its historical generation. NEHC states that many hydroelectric generation facilities will see an increase in annual generation with automation, repairs on existing turbine units, or better management. NEHC distinguishes hydropower redevelopment from repowering, in that redevelopment occurs as hydroelectric sites fall into disrepair, or have surrendered their FERC license to operate, and require complete replacement of the turbine and generator systems. NEHC asserts that DPS Staff's Proposal generally does not consider the realities of redevelopment, and identifies three areas that may cause a decrease in annual generation, or a decrease in a system's nameplate capacity and their annual generation potential.

First, more stringent environmental regulations have caused larger conservation flows or dedicated fish pass requirements that limit the amount of water available for a turbine, such as a canal intake resulting in a long depleted

reach to the system. NEHC adds, even if a site has an existing license or exemption, major modifications to the turbines will trigger a system evaluation in the form of a license amendment, often leading to increased conservation flows. If a system is redeveloped and designed to spill more water over the dam or through a low-level outlet or fish ladder, the new system will never generate as much power as the former system. NEHC emphasizes that when a system is redeveloped, the turbines and equipment may be developed around new operational and environmental criteria resulting in a lower hydraulic capacity. NEHC advocates that these technical alterations are not changes in reservoir management, and it is unclear if the Commission or NYSERDA will weigh these changes within their model for calculating Tier-1 REC eligibility.

Second, NEHC asserts that climate change adaptation within the context of hydropower has not been considered in the repowering standards presented by the Commission. NEHC describes how recent years have experienced abnormally dry summers and falls, coupled with anthropogenic development in otherwise undeveloped geographic areas has decreased infiltration of watershed basins and increases run-off and related flooding during major rain events. Generally, these changes in seasonal and flood flows due to drought and severe rainstorms are considered when redeveloping a hydroelectric facility, and can result in smaller systems due to lower consistent available water flows.

Third, NEHC explains how current economics are different compared to when many of the State's hydroelectric fleet was brought online. During the 1980's, the Public Utility Regulatory Policy Act benefits and local response to the 1970's energy crisis gave way to systems entering into the wholesale market or fixed Power Purchase Agreements, that are now

outdated. NEHC highlights that many of these sites fail to qualify for any Tier-1 RECs and are missing out on much-needed revenue stream. NEHC believes 100 or even 50 years ago, it may have been economical to design a hydroelectric generator according to the site's streamflow and river discharge rates that occur 90 percent of the time, but that current economics may support a higher return on investment from catering the generator's design towards more common and less extreme river discharge rates, favoring quicker and tighter construction footprints, fewer turbines, and smaller generation with a higher capacity factor. This is particularly true in New York, where facilities sized under 5,000 kW can benefit economically through participation in the Value of Distributed Energy Resources (VDER) compensation or Community Distributed Generation (CDG) projects.

NEHC agrees with the Commission's suggestion to limit the requirement of increased generation from 15 percent to three percent but ultimately would suggest eliminating the increased generation requirement and focusing on capital expenditures to determine what is considered a repowered asset. NEHC notes that many existing hydropower facilities are failing before reaching the 50 year EUL, and recommends eliminating the useful life determination for full Tier-1 REC qualification. NEHC believes that qualifying only portions of the total generation creates risk and uncertainty in investments and will most likely result in stalling redevelopment on a system until it is closer to the EUL. In that time, a system could experience further degradation through penstock silting, dam negligence, and equipment concerns from mothballing. NEHC suggests that if development meets the capital expenditure criteria for repowered assets, total output of the system should qualify for Tier-1 RECs.

NEHC recommends investigating how altering the Tier-1 REC qualifications will aid or harm CDG projects in the state. NEHC states that the H-value acts as a substitute for RECs, and the former Community Credit that rewarded CDG projects but has since been eliminated. NEHC encourages the Commission to provide clarity, as it is unclear if systems will be forfeiting the higher value of Tier-1 REC when participating in CDG projects through VDER.

New York League of Conservation Voters, Natural Resources Defense Council, and Sierra Club Atlantic Chapter (Environmental Organizations)

The Environmental Organizations support DPS staff's characterization of the bespoke nature of hydroelectric projects. They explain that some hydroelectric projects in New York may be able to easily meet or exceed a three percent increase in power generation after a repowering, while others could only meet it at great difficulty and expense, and still others may struggle to meet the three percent target under any circumstances. The Environmental Organizations assert that repowering hydroelectric projects that are past their original intended life span but unable to meet a three percent increase in generation still carry value for grid reliability, ratepayers, and the climate.

The Environmental Organizations urge the Commission to remove any requirement that hydroelectric projects increase their production by a set amount during repowering in order to be eligible for Tier 1 RECs. While increasing production at repowered hydroelectric facilities should be a goal wherever feasible, a blanket instrument is too blunt a tool and would risk hydroelectric projects that provide real value either shutting down or repowering but then selling their power into a neighboring state, effectively removing renewable energy from

New York's grid when we are already falling behind in achieving the State's renewable energy goals.

New York State Laborers' Organizing Fund (NYSLOF)

NYSLOF supports the comments filed by Brookfield, as the issues before the Commission are not merely about incremental MWh increases, instead, they are about whether New York will preserve, reinvest in, and modernize its existing hydroelectric resources, or allow those resources to gradually fail, be retired, or be exported to other states. NYSLOF describes hydroelectric generation as the firm, zero-emission backbone of the State's renewable energy portfolio. NYSLOF states that policies which facilitate hydroelectric repowering directly translate into sustained employment opportunities for New York workers.

NYSLOF asserts that the primary goal of hydroelectric repowering should be longevity, not incremental output. NYSLOF believes that a policy that conditions repowering eligibility on achieving increases in production risks discouraging the types of proactive investments that keep facilities operating and workers employed. NYSLOF claims that waiting for equipment to degrade or fail before reinvesting is not sound public policy, and it is not how responsible infrastructure owners or skilled trades approach asset management. NYSLOF opines that the Commission should avoid policies that reduce the number of hydroelectric projects available for repowering. NYSLOF expresses concern that retaining any production-increase requirement could significantly reduce the number of hydroelectric facilities that qualify for repowering under the CES, and for workers, fewer qualifying repowering projects means fewer construction opportunities.

NYSLOF echoes Brookfield's observation that the federal Inflation Reduction Act focuses on the scale of capital

reinvestment, via the 80/20 standard, not on demonstrated production increases. NYSLOF believes that aligning New York's CES repowering criteria with this federal framework will leverage federal incentives and benefit workers by increasing the number of viable projects, while also reducing regulatory uncertainty that can delay or cancel construction work.

NYSLOF agrees with Brookfield that clear guidance is essential to ensure that real-world repowering scenarios qualify. From a labor perspective, preventative repowering is the most desirable outcome as it allows work to be planned, scheduled, and executed safely and efficiently, rather than rushed under emergency conditions after a failure. Policies that inadvertently encourage owners to delay investment until after degradation, or outage, adds unnecessary uncertainty to workers, communities, and the electric system. NYSLOF concludes that eliminating the production-increase requirement for hydroelectric repowering, or at minimum, clarifying its application to encompass the full range of real-world repowering scenarios, will ensure that New York retains as many hydroelectric facilities as possible.

New York Power Authority (NYPA)

NYPA states, in 2019 hydropower accounted for 78 percent of renewable generation in New York and 23 percent of the State's total electricity generation, which established hydroelectric facilities as a baseline resource for New York's clean energy goals. Furthermore, NYPA notes the beneficial attributes of hydroelectric facilities, such as the ability to support overall grid operations including dispatchability, resilient continuation of electricity production during extreme weather conditions, and black start capability.

Northern Power and Light (NPL) and Azure Mountain Power (AMP)

NPL and AMP support Brookfield's comments. NPL and AMP argue that the three percent production gain is unnecessary and will limit the program's impact. This requirement may exclude well-run facilities which may need new equipment but cannot increase output, according to NPL and AMP. Additionally, NPL and AMP stress that projects that increase project capacity are already supported as incremental production gains for Tier 1. NPL and AMP maintain that extending the life of a facility and increasing its production capacity are simply not the same goal. NPL and AMP argue that administering the three precent criteria will be complex and note that the federal program with the same criteria was aimed at supporting projects that would increase production regardless of vintage.

NPL and AMP question what is meant by a three percent increase in production and how it is to be measured and poses real problems which have not been adequately addressed. NPL and AMP argue that this uncertainty will defer participation in the program, and suggest that a separate program aimed at efficiency and production increases similar to the federal Section 243 be considered since its abrupt cancellation. NPL and AMP state that the Commission has stepped in to support other renewable programs cancelled at the federal level.

Patriot Hydro, LLC (Patriot Hydro)

Patriot Hydro supports DPS Staff's Proposal to reduce the required production increase for Tier 1 hydroelectric facilities seeking to repower from 15 percent to three percent, because these facilities are constrained by hydrology and site-specific conditions rather than nameplate capacity. Patriot Hydro recommends that the Commission should modify the eligibility requirements to clarify that the initial project commercial operation date (COD) is used to determine a

facility's useful life, or in the alternative, reduce the useful life from 50 to 40 years to align with federal hydropower relicensing cadences. In addition, Patriot Hydro recommends that the Commission should modify the capital expenditures requirements to align with the federal Production Tax Credit (PTC) requirements.

Patriot Hydro states that legacy hydropower provides reliable, emissions-free, baseload generation, and this diversified source of energy complements intermittent renewable generation, supporting grid stability during system peaks and contingencies. Patriot Hydro emphasizes that hydropower generates the most power during the winter and spring, precisely when other clean resources like solar generate the least, and notes that synergy will become ever more critical as New York trends towards a winter peaking system driven by heat pumps and increasing electrification. Patriot Hydo believes, despite their value to reliability and decarbonization, many of New York's legacy hydroelectric facilities face increasing economic strain. Patriot Hydro points out that operations and maintenance costs continue to rise, while compensation mechanisms have declined. For example, compensation in the voluntary market for RECs fell from approximately $25 per megawatt-hour (MWh) in 2023 to just $3 per MWh in 2025, undermining the economic viability of hydropower facilities. Patriot Hydro cautions that absent appropriate price signals, hydropower operators will be forced to curtail output, suspend operations, or export renewable generation to neighboring markets, a suite of outcomes that conflict with New York's clean energy goals and reliability needs.

Patriot Hydro appreciates that DPS staff correctly recognizes that hydropower repowering primarily yields benefits in the form of life extension, improved reliability, reduced

forced outages, and modest efficiency gains, rather than substantial increases in annual energy production. Patriot Hydro advocates that a three percent production threshold appropriately reflects achievable engineering outcomes while ensuring that Tier 1 eligibility is limited to substantive repowering projects. Importantly, Patriot Hydro believes this lower threshold will help ensure more facilities are eligible for the repowering program, helping to extend the lives of these resources that are needed for reliability and achieving the State's clean energy goals.

Notwithstanding, Patriot Hydro submits two recommendations intended to reduce administrative burdens, better align state and federal policies, and help expand opportunities for facilities to take advantage of this critical financial program. First, Patriot Hydro suggests the Commission should revise project useful life to reflect a facility's initial COD, or in the alternative, should reduce the useful life from 50 to 40 years. Patriot Hydro asserts that hydroelectric facilities in New York consist of dams and civil works constructed decades before uprates and equipment replacements, resulting in a misalignment between mechanical age and civil works age. The 50-year useful life threshold is tied to the mechanical age, which fails to reflect investment histories and mischaracterizes the true condition of repowered assets (i.e. that they are much older than their adjusted COD suggests). To that end, Patriot Hydro recommends the Commission recognize the initial COD of hydropower assets (instead of an adjusted date).

In the alternative, Patriot Hydro asks the Commission to consider revising the required useful life for full Tier 1 eligibility from 50 to 40 years. While recognizing the initial COD is preferable, lowering the threshold to a 40-year useful

life would be a marked improvement, as a 40-year useful life aligns with FERC hydropower licensing timelines which are often used by hydroelectric facility owners to time investments and financing.

Second, Patriot Hydro suggests the Commission should align the Tier 1 capital expenditure requirements with the Federal PTC requirements. Patriot Hydro contrasts the current Tier 1 repowering capital expenditure requirement, whereby capital expenditures must exceed 80 percent of the facility's net book value, with the Internal Revenue Service 80 percent rule which is utilized by the PTC, whereby capital expenditures must equal at least 80 percent of the fair market value of the applicable hydropower unit. Patriot Hydro argues that aligning the Tier 1 capital expenditure requirements with the PTC standards would significantly reduce administrative complexity and ensure only capital-intensive repowering projects qualify for the benefits. In conjunction, Patriot Hydo recommends the Commission should also refine capital expenditure eligibility to include non-PTC eligible infrastructure such as fish ladders, dam modifications, and other related upgrades that are not captured through the PTC, as each of these upgrades provides important public benefits that should be compensated.