STATE OF NEW YORK

PUBLIC SERVICE COMMISSION

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

BROOKFIELD RENEWABLE COMMENTS REGARDING THE CLEAN ENERGY STANDARD STAFF REPORT

Brookfield Renewable ("Brookfield Renewable") respectfully submits the following comments on the Department of Public Service Staff ("DPS Staff") Report Regarding the Retention of Existing Baseline Resources Under Tier 2 of the Renewable Energy Standard Program[1] ("Staff Report"). Brookfield Renewable has been an active participant in the Clean Energy Standard ("CES") proceeding since its inception following the Public Service Commission's ("Commission") June 1, 2015 Order, including participation in roundtable discussions and other stakeholder efforts that lead to the creation of the Staff Report.

BROOKFIELD RENEWABLE ASSETS IN NEW YORK

Brookfield Renewable's presence in New York includes:

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

- More than $2 billion in assets under management
- 74 hydroelectric facilities on 15 river systems, 41 of which are LIHI certified[2]
- 711 MW of installed capacity
- Enough clean energy to power more than 428,000 New York homes
- 730,000 tons of avoided carbon emissions annually
- 190 employees and over 240 indirect jobs across the state
- More than $23 million in annual property tax payments
- Over $16 million of local investment in 2016 and planned investments of $263 million over the next 20 years on capital projects
- Supporting more than 800 local vendors across the state
- Providing access to more than 50 recreational areas
- Regional offices in Queensbury, Watertown, Fulton and Potsdam

Brookfield Renewable has played a key role in New York's clean energy past and hopes to significantly contribute to its future. Our fleet of hydropower facilities provides substantial value-added benefits to the state, including resource diversity, reliable performance during critical demand periods such as the polar vortex, critical system resiliency and flexibility, and VAR support to maintain grid voltage and power factors even with the increased deployment of intermittent resources.

Besides providing clean, renewable energy that avoids a substantial quantity of CO2 emissions, hydropower facilities like those owned and operated by Brookfield Renewable also offer other environmental and societal benefits. Hydropower facilities play a critical role in dam maintenance and repair on certain New York waterways and canals systems, functions that would otherwise be the responsibility and financial burden of the state. Hydro

[2] "LIHI certified" refers to the certification of hydropower projects that have avoided or reduced their environmental impacts pursuant to the Low Impact Hydropower Institute's criteria (https://lowimpacthydro.org/).

facility owners also make significant investments to promote environmental stewardship, water quality, and recreational opportunities.

COMMENTS ON THE STAFF PAPER

Brookfield Renewable continues to be a strong supporter of Governor Cuomo's commitment to obtain 50% of New York's power from renewable energy sources by 2030 (the "50 by 30 goal"), as well as a broad non-discriminatory CES to meet that goal. However, we believe the current CES maintenance tier construct, as well as the new recommendations contained in the Staff Report, will lead to inefficient program outcomes and increased costs to ratepayers. Issues identified by Brookfield Renewable include the following:

- Despite a broader directive from the Commission, the Staff Report recommendations are unnecessarily and incorrectly limited to the maintenance of resources that have demonstrated a financial need, whereas retention of all existing non-emitting resources will enable New York to achieve its CES goals with the greatest efficiency and ratepayer value.
- The Staff Report does not examine the benefits of expanding Tier 2 to all existing non-emitting resources that contribute to the CES baseline but that are not qualified for additional compensation under the current construct.
- The Staff Report does not recognize the benefit of extending Tier 1 eligibility to the repowering of existing resources that have met certain thresholds, such as those proposed by the New York State Energy Research and Development Authority ("NYSERDA").

A. The Staff Report recommendations are unnecessarily and incorrectly limited to maintenance of resources that have demonstrated a financial need, whereas retention of all types of existing non-emitting resources will enable New York to achieve its CES goals with the greatest efficiency and ratepayer value.

The introduction of the Staff Report outlines three foundational principles for developing the report. The first states that "the Commission has directed that financial need is a mandatory component of any facility's Tier 2 request."[3] While it is true that the order adopting the CES limited Tier 2 to an extension of the pre-existing maintenance tier of the renewable portfolio standard, Staff actually had a considerably wider remit in developing the report.[4] The Commission ordered DPS Staff to "prepare, for Commission review, recommendations for consideration of eligibility changes for Tier 2, in consultation with stakeholders, without waiting for the first triennial review." [5] Most important is the reasoning behind the Commission's directive for Staff to compile the report:

> …it is in the best interests of electric consumers to retain existing renewable resources, provided that the cost of retention is less than the cost to replace them with new facilities under the Tier 1 REC program. For that reason the Commission finds that it is necessary to begin immediately to **further develop the eligibility criteria for Tier 2 to ensure that cost effective retention of baseline resources is achieved to the extent practicable**.[6] *[emphasis added]*

Moreover, the order also noted:

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[3] Staff Report at p. 2.

[4] Case 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard at p. 17 (August 1, 2016)

[5] Case 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order on Petitions for Rehearing at p. 15 (December 15, 2016)

[6] Order on Petitions for Rehearing at p. 14

> Factors to consider will include: the cost to consumers; changes in eligibility criteria; a showing of financial hardship; facility locational considerations; and program options.[7]

Considering the urgency and weight that the Commission put upon the importance of retaining existing baseline resources, the phrase "showing of financial hardship" should be read as but one of several factors for DPS Staff to evaluate in determining what is in the best interests of consumers in pursuit of the CES goals. A plain reading of the order clearly indicates that financial hardship was never intended to be a foundational or immutable "formative principle." To the contrary, Staff was explicitly instructed to reconsider parties' comments on the Phase 1 Implementation Plan urging the Commission to establish a Tier 2 for existing resources that *does not* require a showing of financial hardship:

> The comments expressed above [to establish a Tier 2 REC market not tied to financial need] are nearly identical to points raised in other venues in this proceeding and already considered by the Commission in the CES Rehearing Order, noted above. Staff **will be considering these comments and other factors** in its report to the Commission within 180 days of the issuance of this order.[8] *[emphasis added]*

By unnecessarily and incorrectly limiting its recommendations to maintenance of existing resources that have demonstrated a financial need, DPS Staff has failed to conduct the review envisioned by the Commission.

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[7] Order on Rehearing at p. 15

[8] Case 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard. Order Approving Phase 1 Implementation Plan at p. 19 (February 22, 2017)

B. The Staff Report does not examine the benefits of expanding Tier 2 to all existing non-emitting resources that contribute to the CES baseline but that are not qualified for additional compensation under the current construct.

Synapse Energy Economics, Inc. has conducted an analysis[9] ("Synapse Report") that is precisely the type of analysis that the Commission requested when it tasked DPS Staff with re-evaluating Tier 2 issues, especially as it relates to consumer costs. Brookfield Renewable contends that consideration of a Tier 2 program to retain existing resources that is not tied to financial need should have been a key component of the DPS Report, yet such an evaluation is conspicuously absent in the Staff Report.

By contrast, the Synapse Report demonstrates that the retention of baseline resources is in the clear economic interests of New York ratepayers. In fact, in the absence of a functioning Tier 2 REC market, the Synapse Report clearly demonstrates the erosion of resources that currently count towards the existing CES baseline and the subsequent need to backfill with more expensive Tier 1 resources before the state can even begin to make incremental gains towards its 2030 targets.[10] The Commission order clearly stated that "it is in the best interests of electric consumers to retain existing renewable resources provided that the cost of retention is less than the cost to replace them with new facilities under the Tier 1 REC program".[11] The Synapse Report clearly bears this scenario out, bolstering the case made by numerous parties throughout this proceeding. Importantly, the risk of baseline erosion is not limited to those resources that are financially distressed and at risk of closure, but also includes resources seeking to maximize the value of their non-emitting MW, often outside of New York. By 2019 alone, the Synapse Report estimates that 2.1TWh of indigenous, non-emitting New York resources will be exported

[9] Policies to Cost-Effectively Retain Existing Renewables in New York (December 22, 2017)

[10] Synapse Report at p. 10-11

[11] Order on Petitions for Rehearing at p. 14

to New England, requiring more than 725MW of new resources to fill this gap.[12] By 2023, the Synapse Report finds that ratepayers could be saddled with $706 million in additional costs (in present value terms) if New York takes no further policy action to support existing resources.[13]

In other words, the report finds that the state's 50 by 30 policy goals will be more quickly and cost-effectively achieved by preserving the resources that already count towards the CES baseline. In the absence of such policy support, the baseline will inevitably atrophy and the state will be forced to replace those resources with more expensive new Tier 1 resources. Indeed, DPS Staff recognized this in its original Staff White Paper on the Clean Energy Standard when they initially proposed the creation of a Tier 2 that was distinct and separate from the pre-existing maintenance tier:

> Staff proposes the establishment of Tier 2 to support the substantial fleet of non-State owned or contracted renewable energy generators already in operation and available to meet New York's CES targets from within New York or adjacent control areas. To support continued contribution of these resources toward meeting the CES targets, Tier 2 is proposed as an existing renewables tier, with overall targets that are stable over time, and designed to support continued contribution of operating resources. [14]

Beyond simply identifying the policy and economic risks to New York, the Synapse Report also identifies and delineates five alternative policy options that mitigate, if not wholly resolve, these resource retention and ratepayer risks. Four of these options clearly demonstrate

[12] Synapse Report at p. 11
[13] Synapse Report at p. ii
[14] Staff White Paper on Clean Energy Standard Case 15-E-0302 at p. 22 (January 25, 2016)

the cost savings to consumers from compensating existing resources, ranging from $135 million to $377 million between 2019 and 2023 in present value terms. While the fifth option is more costly, it procures more TWh of existing resources, allowing the state to make progress beyond the baseline towards its clean energy goals.[15]

We strongly urge the PSC Staff and Commissioners to thoroughly review the Synapse Report, incorporate its findings into future Commission deliberations and recommendations, and support the creation of a competitive Tier 2 REC marketplace for all existing non-emitting resources.

C. The Staff Report does not recognize the benefit of extending Tier 1 eligibility to the repowering of existing resources that have met certain thresholds, such as those proposed by NYSERDA.

The Staff Report is lacking any analysis regarding the merits of repowering existing resources that have met certain thresholds, such as those recommended by NYSERDA. Instead, the report merely notes that allowing all MWs of a repowered facility to qualify as Tier 1 appears to be a circumvention of the financial needs component of the maintenance tier. This conclusion is not germane to the discussion because qualification for the maintenance tier is not the question at hand. Instead the central question is whether Tier 1 qualification of all repowered MWs is more economically efficient to incentivize investment in newer and more efficient technology.

The case has been made persistently within this proceeding that owners of resources will seek out the most economically viable options for their resources. Over a lifetime, resource owners are consistently evaluating the performance of their equipment and deciding when it

[15] Synapse Report at p. 17-18

makes the most economic sense to repair/maintain existing equipment or make an even more significant investment in a newer and better technology.

For Brookfield Renewable, significant investments are regularly made in the operation and maintenance of our facilities, as evidenced by the fact that many of our New York assets are well over 50 years old. However, the replacement of equipment comes at a much higher cost than maintenance and, as a result, the return on investment calculus is dramatically altered. One important pre-condition to invest is a viable up-front Tier 1 market value for all non-emitting generation, not simply the incremental MWs under the current paradigm. The financial return on the incremental MWs simply does not justify the additional expense to replace the prime mover to produce incremental MWs. Additionally, in the case of Brookfield Renewable's hydro assets, the addition of incremental generation may trigger the need to alter a facility's FERC license, a potentially lengthy and expensive process. The value associated with the Tier 1 qualification of incremental MWs is insufficient to justify this process, whereas full Tier 1 REC valuation of all MWs could positively alter the financial calculus.

Should the Commission decide that full output from a repowered facility be eligible for Tier 1, Brookfield Renewable recommends that the repowering proposal posited by NYSERDA in its Phase 1 Implementation Plan[16] be adopted. However, Brookfield Renewable disagrees with the proposed requirement in the NYSERDA proposal that the replacement of the prime mover result in a 15% increase in the efficiency of the unit's production. As stated by Brookfield during the DPS Staff roundtable discussion on repowering, even though many of the hydro assets were constructed decades ago, they nonetheless operate very efficiently. As a result, it is unlikely that replacing the prime mover would result in an efficiency increase of sufficient magnitude to

[16] Case 15-E-0302 - Clean Energy Standard Phase I Implementation Plan Proposal (Oct. 31, 2016).

qualify under the NYSERDA proposal. This proposed limitation unnecessarily removes the incentive for existing hydro assets to pursue viable facility investment options. Yet the Commission acknowledges that meeting the CES goal will require the maintenance and optimization of all available zero-emission resources, including both small and large-scale hydro resources. Therefore, the Commission should preserve as much supply optionality as possible and not arbitrarily limit the incentive to achieve greater efficiencies of all sizes and across all non-emitting resources. Brookfield Renewable recommends that all repowered generation available to displace fossil generation and drive more efficient cost outcomes, regardless of the size of the incremental MWs produced or the associated efficiency gain, be encouraged by the Commission and valued equitably.

CONCLUSION

Brookfield Renewable reiterates its support for the state's laudable carbon reduction goals and the implementation of broad and non-discriminatory CES to help efficiently and cost-effectively achieve those goals. Significant investment in new resources to make incremental carbon reduction gains is clearly fundamental to program success. However, ratepayer-funded investment may dramatically and unnecessarily increase if the state does not take meaningful steps to maintain its existing baseline of renewable resources. Therefore, Brookfield Renewable strongly recommends that PSC staff abandon their singular focus on maintenance tier modifications and a showing of financial need. This approach not only ignores other existing and future threats to the preservation of the baseline, it also contravenes the instructions of Commissioners to evaluate a broad array of factors and criteria to ensure that the cost effective retention of baseline resources is achieved. Brookfield Renewable strongly encourages the Commission to establish a competitive Tier 2 REC marketplace that explicitly includes and values all non-emitting resources.