

January 10, 2017

VIA ELECTRONIC MAIL

The Honorable Kathleen H. Burgess
Secretary to the Commission
New York Public Service Commission
Empire State Plaza
Albany, NY 12223-1350

RE: Case 15-E-0302 – Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard – Phase I Implementation Plan

Dear Secretary Burgess:

Please accept the attached comments of Brookfield Renewable on the Clean Energy Standard Phase I Implementation Plan Proposal submitted by the staffs of the New York State Energy Research and Development Authority and Public Service Commission on October 31, 2016 in the above-referenced proceeding.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Norman", with a long horizontal flourish extending to the right.

Jon Norman
Vice President, Government Affairs & Policy
Brookfield Renewable

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

RESPONSE OF BROOKFIELD RENEWABLE
REGARDING THE CLEAN ENERGY STANDARD
PHASE I IMPLEMENTATION PLAN PROPOSAL

¹ Case 15-E-0302, Notice Soliciting Comments on Clean Energy Standard Phase 1 Implementation Plan (November 1, 2016)

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Commission’s proposed approach to a Maintenance Tier as described in the Implementation Plan will not meet the objectives and targets of the CES – achieving sustained greenhouse gas reductions and increasing non-emitting generation in the electricity sector – in the most cost-effective way possible.

Brookfield Renewable limits its comments to i) most importantly, the proposed Tier 2 Maintenance Resource program – which the Commission established to provide support to legacy renewable assets deemed “at risk” via administrative determination; ii) proposed limitations on Tier 1 resource upgrades; and iii) incremental contracting provisions to help foster a more robust compliance market. Specifically, Brookfield Renewable recommends that the Commission:

- Reconsider implementation of the Tier 2 program as proposed in the Implementation Plan given i) its administrative complexity; ii) the lack of up-front clarity to ensure continued investment in and upgrade of existing renewable assets; and iii) the likelihood that an administratively-determined cost-of-service approach inconsistent with broader regional attempts to value non-emitting generation will ultimately result in many zero-emission resources exporting to serve load in other regions. A loss of flexible zero-emission resources may not only jeopardize local system reliability, it will also compromise the potential to achieve the 2030 renewable generation and emission reduction goals in a cost-effective manner. Addressing this issue is critical to the overall success of the program, as well as retaining the crucial base of existing non-emitting generation in New York.

- Remove efficiency limitations associated with Tier 1 resource upgrade eligibility in order to maximize available supply to meet compliance goals and ensure greater equity in the treatment of eligible resources. We further recommend greater flexibility in the historic generation baseline measurement process.
- Re-establish availability of an opt-out clause under the Clean Energy Standard, which allows a resource the option to opt-out of a NYSERDA contract if the resource can make a showing that an opportunity with an in-state buyer exists. This provision will help improve market liquidity and drive lower compliance cost outcomes.

I. THE TIER 2 MAINTENANCE RESOURCE PROGRAM SHOULD BE REVISITED, AND THE CES SHOULD INCLUDE A TIER 2 PROGRAM THAT RECOGNIZES VALUE OF ENVIRONMENTAL ATTRIBUTES FOR EXISTING RENEWABLE RESOURCES.

As explained in the Clean Energy Standard Order, “...each facility seeking funds under this Tier 2 will be required to demonstrate that but for the maintenance contracts, the facility will cease operations and no longer produce positive emission attributes. Maintenance Contracts will be provided on a case by-case basis and relief will be tailored to the situation presented.”³ The Order sets forth what is essentially a cost-of-service requirement for facilities deemed eligible for relief. However, when considering that non-state owned hydropower generation alone accounts for 150 facilities totaling 1,200 MW – many of which fall under the 5 MW threshold – the number of facilities that could require a cost-of-service review on an annual basis is a potentially daunting, resource intensive task for the Commission that will result in broader program delays.

³ Case 15-E-0302, Order Adopting a Clean Energy Standard, p. 117 (August 1, 2016)

In addition – from the perspective of the generator – many owner/operators pursue a portfolio approach, whereby the bookkeeping is done on an aggregate basis across many facilities, rather than on an individual facility basis. This means it will be difficult or commercially impractical for many resources to make a showing as required, despite the very real possibility that the resources are, as the Commission would define, “at risk”. Furthermore, the administrative burden of requiring such an extensive annual review may disincentivize certain resource owners from participating in the Tier 2 program, resulting in premature resource retirement in some cases, and exports of existing zero-emission generation to neighboring regions in others.⁴ In either case, the result is a reduction in existing baseline supply to meet the 2030 goals and a need to pursue more costly incremental resources as replacement. What’s more, by not providing up-front clarity on the value of the non-emitting generation from these Tier 2 assets, the state significantly hinders the ability to provide a compelling commercial case for significant reinvestment and upgrade of these assets over the long-term.⁵

The primary concern with the cost-of-service design of the Tier 2 program is its potential to yield results that are counter to the intent of the Tier 2 program and the overarching goals of the Clean Energy Standard, including and especially its long-term cost-effectiveness. An analogy to capacity markets is informative. When capacity markets were being designed it was explicitly

⁴ This issue is described fully on pgs. 13-17 of Brookfield Renewable’s Petition. Case 15-E-0302, Brookfield Renewable’s Petition for Reconsideration, or in the Alternate, Limited Rehearing (August 31, 2016)

⁵ By not providing up-front clarity on the value of the non-emitting generation from these Tier 2 assets, the state significantly hinders the ability to provide a compelling commercial case for significant reinvestment and upgrade of these assets over the long-term, as well as innovative solutions including micro-grids and serious consideration of optimizing these assets under the voluntary market. On the latter point, since there is no actual recognition of the carbon-free value of this generation toward the state-level objectives, there is no official incentive for load-serving entities and sophisticated commercial and institutional entities to value this generation. Where voluntary renewable markets have succeeded it is typically because the state has provided an implicit value on carbon and/or the value of the renewable generation in question. Market players then come up with innovative ways of optimizing these attributes to the benefit of their customers.

decided by regulators to ensure that existing and new resources received the same clearing price for their capacity service. This was because otherwise the consumers would pay more in the long-run because of misplaced incentives to cycle capital into new resources, rather than maintaining and upgrading existing resources. An analogous situation exists for non-emitting value within the CES – it is quite simply inefficient to consumers over the long-run to not value the contribution of new and existing resources equally. This will result in the retirement of certain resources, export of other resources to markets that do value the environmental attribute, and lack of long-term investment signal into upgrading the assets; all to the detriment of New York ratepayers who would then need to pay higher costs related to deferred maintenance or closure and new replacement resources in order to meet the goals of the CES. At the same time it does not provide appropriate incentives to optimize existing resources to the benefit of New Yorkers. Nowhere in the documentation provided by the Commission during the proceedings to-date has this issue been fully addressed. We look forward to an opportunity to work with the Commission to better understand this issue and ensure that existing renewable resources can continue to benefit New Yorkers and that the goals of the CES are achieved in the most cost-effective way possible, including consideration of longer-term outcomes.

Additionally, and glaringly, the Tier 2 program arbitrarily restricts eligibility to existing hydropower 5MW or less. Doing so leaves hundreds of MWs of privately-owned hydropower no lifeline for relief or recognition of their environmental attributes, despite offering the very same zero-emitting, carbon-free attributes as smaller-scale resources. As all existing non-nuclear zero-emission resources are currently excluded from qualifying for the Zero-Emissions Credit, the further exclusion of hydropower above 5 MW is exceedingly discriminatory and arbitrary.

Most importantly, reliance on a cost-of-service model like the one contemplated for the Tier 2 program will not solve the problem of resource retention, and may prove inefficient even in cases where it does prevent resource retirement due to the continued potential for export. For example, determining compensation on a facility-specific basis may result in instances where certain resources deemed to be “at-risk” are paid above-market compensation in order to ensure their retention and continued economic viability (in addition to the administrative cost). Alternatively, a cost-of-service model could also produce pricing outcomes that are either insufficient to justify continued operation or not enough to meet or exceed the opportunity cost of exporting zero-emission generation to neighboring jurisdictions, including export opportunities available today to meet RPS targets in PJM and New England, and the forthcoming procurement in Massachusetts that will provide a long-term contract opportunity for up to 9.45 TWh of hydropower. In either circumstance, ratepayers are burdened with higher than necessary cost outcomes, either because of above-market payments or the high replacement costs for procuring new renewable generation to fill the gaps associated with early retirements or exports. Finally, the cost-of-service approach also diminishes the opportunity for existing resources to upgrade, expand and modernize – all of which is necessary to ensure existing resources may be optimized to meet evolving system and policy needs.

To avoid the pitfalls described, the most transparent, administratively-straightforward, equitable and cost-effective approach is to extend eligibility of Zero-Emissions Credits (ZECs) to all existing zero-emission resources, which is a useful starting point for the state to value carbon-free generation, by utilizing the social cost of carbon consistent with nearby jurisdictions. Doing so will afford all “at risk” facilities the same opportunity for support by essentially establishing a uniform price of avoided emissions per MWh associated with all existing generation, and will

better mitigate untimely loss of generation and unintended costs associated with achieving 2030 policy goals. Alternatively, the state could implement a Tier 2 renewable energy credit (REC) program for existing renewable resources that is generally aligned with the value ascribed to these resources in nearby jurisdictions. Either way, the Tier 2 program needs to recognize the opportunity cost to the existing resource and the fundamental economic value of the environmental attribute, or it will result in higher-cost outcomes for New York customers over the long-run. To the extent ZECs or Tier 2 RECs are insufficient for meeting cost-of-service requirements, the Commission can retain elements of the Maintenance Resource program to serve as a limited backstop on a case-by-case basis, if it feels it is important to retain these resources. Such cases are expected to be unique and isolated and are therefore more appropriate for an administratively-determined cost-of-service approach, which will also be more logically consistent with the need to justify an above-market payment for non-emitting generation (i.e., once a viable market value is set for all existing non-emitting generation in New York).

II. THE EFFICIENCY THRESHOLD AND PROPOSED HISTORIC BASELINE GENERATION MEASUREMENT FOR UPGRADE ELIGIBILITY SHOULD BE REMOVED

Brookfield reiterates its strong belief that an important pre-condition to invest in upgraded facilities is a viable up-front market value for non-emitting generation as described above. In addition, since the Commission has elected to value new, incremental renewable generation separately under the Tier 1 program, any incremental renewable generation must readily qualify for the Tier 1 program. Failure to meet both of these conditions will simply result in the outcomes described above: a lack of commercial reinvestment into these assets and/or the potential for the generation to be exported out of the state, which would pragmatically encompass both the existing and incremental generation from the facility.

Specifically, the Commission currently proposes requiring Vintage Generating Facilities (VGFs) to demonstrate that facility upgrades have resulted in an increase in annual energy production of at least five percent in order to qualify under Tier 1.⁶ Brookfield Renewable disagrees with this proposed limitation as it will unnecessarily remove the incentive for VGFs to pursue viable facility upgrade options which exist today. For example, in the case of hydropower resources, runner replacement upgrades have previously increased production values for existing resources and played an important role in meeting the current Renewable Portfolio Standard Main Tier goals. With the newly proposed threshold, however, this same upgrade would be unlikely to meet Tier 1 eligibility. Removing Tier 1 eligibility for an upgrade like the one described, among others, removes entirely the rationale for resource owners to pursue costly upgrades and reduces potential available incremental supply.).

Interestingly, the efficiency threshold limitation has been proposed concurrent with the Commission removing the former 30 MW size limitation on low-impact run-of-river hydroelectric eligibility.⁷ Brookfield Renewable agrees with removal of the size limitation; however, we question the merits of the efficiency upgrade limitation. If the Commission has rightly identified the value of and need for hydro resources greater than 30 MW in meeting the 50% by 2030 goal, then all levels of incremental generation must be valued on the same premise. In other words, the Commission recognizes that meeting the Clean Energy Standard goal will necessitate that the State rely upon all available zero-emission resources, including both small and large-scale hydro resources. Therefore, as program success will require as much supply optionality as possible, the Commission should not at the same time arbitrarily limit the incentive for VGFs to achieve greater efficiencies of all sizes. Thus, incremental generation, whether

⁶ Case 15-E-0302, Clean Energy Standard Phase 1 Implementation Plan Proposal, pg. 2 (October 31, 2016)

⁷ Case 15-E-0302, Order Adopting a Clean Energy Standard, p. 30 (August 1, 2016)

increasing annual production by .5%, 5% or 50%, should be encouraged and valued equitably as the outcome is the same regardless of efficiency gains – i.e., incremental zero-emission generation available to displace fossil generation and help drive more efficient cost outcomes.

Furthermore, Brookfield Renewable encourages the Commission to revisit the proposed change to reduce the measurement of a VGF's historic generation baseline from a minimum of ten years of data to three calendar years prior to the Threshold Eligibility Date.⁸ Certain resources, such as hydropower, can have production availability that differs considerably from one year to the next, depending on the water year. This variance can be considerable on a single year by year analysis, meaning the baseline can be greatly skewed if not analyzed through an appropriate timeframe. Because production trends are more accurately understood and reflected over a period of time longer than the three year window proposed, we recommend retention of the current ten year minimum. Alternatively, we urge the Commission to consider a framework that provides an option for some resources to be measured based upon either a three year or ten year baseline, in recognition that the measurement process may not be a one size fits all.

Such changes to Tier 1 will be important to ensure that upgrades to existing renewable facilities will be viable to the benefit of the State (by including potentially cost-effective alternative supply sources); however we reiterate that a necessary pre-condition to these upgrades is that the existing renewable baseline from the facility be eligible for appropriate market value of all non-emitting generation, both new and existing, as described earlier – otherwise, the overall economics of an upgrade may not be compelling (it is not always possible to draw a clear line between the upgrade value to the existing facility and just the incremental

⁸ Case 15-E-0302, Clean Energy Standard Phase 1 Implementation Plan Proposal, pg. 2 (October 31, 2016)

generation, and/or the overall generation from the facility will simply be exported elsewhere (including the upgraded portion of this generation)).

III. THE COMMISSION SHOULD ESTABLISH AN OPT-OUT CLAUSE UNDER THE CLEAN ENERGY STANDARD

As a secondary consideration to our above comments on the critical nature of changes to the Tier 2 program, we note that under the existing Renewable Portfolio Standard, prior solicitations included an opt-out provision, enabling suppliers to “...suspend deliveries to NYSERDA in order to make sales to the New York voluntary green market.”⁹ A similar provision for the compliance market which enables suppliers under contract with NYSERDA to re-offer Renewable Electricity Credits to new in-state load serving entities should be considered as the Commission implements the Clean Energy Standard. Doing so will foster more supply liquidity for load serving entities, and may encourage additional competitive and sophisticated buyers to enter the fray. This will ultimately drive more efficient and cost-competitive outcomes for ratepayers, but only if the underlying existing non-emitting generation is appropriately valued by the state – i.e., attributed value relevant to the state’s greenhouse gas reduction targets. We reiterate that in jurisdictions where voluntary markets have thrived, they have generally done so where the state has ascribed a value to the underlying renewable or non-emitting attributes. This has then enabled voluntary market participants and LSEs to optimize resources through innovative products, like bundled renewable products that better match renewable generation to load requirements, or solutions, like local microgrid systems where regional needs are met with a dispatchable baseline of local existing renewable generation resources.

⁹ New York State Renewable Portfolio Standard Annual Performance Report, pg.5 (March 2016)

IV. CONCLUSION

Brookfield Renewable encourages the Commission to revise its treatment of existing zero-emission resources under the Clean Energy Standard through the implementation of a more equitable and administratively-streamlined framework than the currently-proposed Tier 2 program. In particular, we urge the inclusion of all existing zero-emission resources, regardless of technology or size, to be eligible to receive ZECs or, alternatively, that a Tier 2 REC program be established for existing renewable resources that is generally competitive with the value ascribed by nearby jurisdictions (i.e., recognition of the opportunity cost of these resources and fundamental value of the environmental attribute).

As a secondary consideration, we also urge the Commission to revisit newly proposed eligibility limits and changes to the historic baseline measurement process for Vintage Generating Facilities pursuing Tier 1-eligible upgrades. Lastly, Brookfield Renewable suggests establishing as part of the Clean Energy Standard contract flexibility previously available to suppliers under the Renewable Portfolio Standard.

We believe each of these recommendations, and most importantly the ascribing of appropriate market value to existing renewable and non-emitting generation under Tier 2, will drive more supply choices and competition in the pathway to 2030. We thank the Commission for the opportunity to comment and look forward to continuing dialogue on these important issues.

Dated: January 10, 2017

A handwritten signature in blue ink, appearing to read "J. Norman", with a long horizontal flourish extending to the right.

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