

September 7, 2018

Karen Cramton, Sustainable Energy Division Director
New Hampshire Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429
karen.cramton@puc.nh.gov

Re: 2018 Renewable Portfolio Standard Review

Brookfield Renewable Energy Partners L.P. (“Brookfield Renewable”) appreciates the opportunity to submit comments in response to the New Hampshire Public Utilities Commission’s request for written comments pursuant to the 2018 RPS review, as required under RSA 362-F:5. Brookfield Renewable is a global developer, owner and operator of hydro, wind and solar energy projects. Brookfield Renewable has a strong presence in New Hampshire, including 8 hydropower stations and a wind energy project, representing 143 MW of installed capacity – enough to power close to 72,000 New Hampshire homes. Brookfield Renewable invests millions on capital projects annually, including \$55 million in planned investments on New Hampshire facilities over the next 20 years. Brookfield Renewable pays more than \$3.7 million in property taxes annually and often represents the largest taxpayer in local communities.

Brookfield Renewable strongly supports enhancements to the current RPS program to expand participation of valuable small-scale hydropower facilities located in New Hampshire. Specifically, we recommend the following changes to the Class IV program¹:

¹ New Hampshire’s RPS requires that 25.2% of retail electricity sales be supplied from renewable sources by 2025 and thereafter. Of this amount, 1.5% of retail electricity sales must be supplied from Class IV facilities, which are existing small hydroelectric facilities. Class IV facilities must:

- 1) Have begun operation prior to January 1, 2006;
- 2) When required, have a documented applicable state water quality certification under Section 401 of the Clean Water Act; and,
- 3) Either:
 - a. Have a nameplate capacity of 5MW or less and have installed both upstream and downstream diadromous fish passages, which have been approved by FERC; or,
 - b. Have a nameplate capacity of 1MW or less, comply with applicable FERC fish passage requirements, and be interconnected to the New Hampshire distribution system.

1. Increase the project size cap for eligible Class IV hydropower facilities from 5 MW to 10 MW for in-state hydropower facilities; and,
2. Extend the fish passage exemption to all Class IV hydropower facilities located in-state where not required by the Federal Energy Regulatory Commission (FERC).

However, we also recognize that the Commission's review of the RPS program is wide ranging and stakeholders have presented diverse options for reforming the RPS, including consolidating the RPS classes or expanding eligibility to non-renewable technologies such as nuclear. While our comments focus on the two specific recommendations above, we have also included recommendations should the Commission proceed to consider more dramatic changes to the RPS.

I. Class IV Hydropower Eligibility Criteria

Expanding the participation of the in-state small-scale hydropower fleet in the Class IV RPS program responds to several of the directives of the review statute, including the assurance that there is adequate supply to competitively meet the requirements of Class IV². In addition, by including a broader mix of in-state hydropower assets as Class IV-eligible, these changes will promote additional Class IV competition to the benefit of ratepayers and help ensure energy dollars remain in New Hampshire, among other benefits consistent with the intent of the RPS statute.³ Finally, these benefits can be realized with modest changes to the existing program.

a. Size Cap on Class IV Hydropower Facilities

Brookfield Renewable strongly encourages New Hampshire to consider increasing the size cap on Class IV resources from 5 MW to 10 MW for in-state hydropower facilities. Together with

² RSA 362-F:5 states "The commission shall review, in light of the purposes of this chapter and with due consideration of the importance of stable long-term policies:

I. The adequacy or potential adequacy of sources to meet the class requirements of RSA 362-F:3;
II. The class requirements of all sources in light of existing and expected market conditions;"

³ The stated purpose of the RPS Statute is to provide fuel diversity to lower state and regional dependence on fossil fuels, reduce and stabilize future energy costs, keep energy investment dollars in the state and stimulate investment in low-emission technologies.

exempting in-state Class IV facilities from mandatory fish passage installation where not required by FERC (discussed further below), this simple change will help New Hampshire achieve its renewable energy objectives and drive down ratepayers costs by increasing the participation of additional existing hydropower resources within the RPS. These resources provide essential grid reliability and resiliency, are long-lived, renewable, contribute to fuel diversity and reduce reliance on fossil fuels. Their arbitrary exclusion from New Hampshire's RPS increases ratepayer costs and is inconsistent with other regional RPS programs.

b. Fish Passage Requirements for Class IV Hydropower Facilities

In 2012, the New Hampshire Legislature enacted amendments to the definition of Class IV hydropower resources to exempt facilities with a capacity of 1MW or less that are interconnected to the New Hampshire electric distribution system from a requirement to install upstream and downstream fish passages when not mandated by FERC. Brookfield Renewable supports this policy and recommends that New Hampshire extend this fish passage exemption to all in-state Class IV facilities when not required by FERC.

Class IV facilities that do not qualify under the current exemption must install both upstream and downstream diadromous fish passages and these installations must be approved by FERC, even if FERC has not mandated their installation. This mandatory "one-size-fits-all" approach fails to take into account facility-specific circumstances, such as whether fish passage is warranted, or whether other measures are in place (or could cost-effectively be implemented) to mitigate impacts on fish. Moreover, all hydropower facilities undergo a rigorous licensing process administered by FERC – with robust state participation – during which a host of potential environmental impacts, including fish passage, must be studied and mitigated. Where needed, fish passage conditions are imposed as part of the licensing process. Therefore, there is no compelling reason for New Hampshire to impose

additional fish passage requirements on Class IV hydropower facilities beyond those required by FERC.

The current fish passage requirements unnecessarily and arbitrarily limit the supply of hydropower resources available to New Hampshire to meet its RPS requirements, driving up ratepayer costs. Notably, while there is almost 300MW of small (under 5MW) hydropower within ISO-NE that began commercial operation prior to 2006, less than 50MW is currently certified to participate in New Hampshire's Class IV program. Within New Hampshire, less than half of the hydropower facilities under 5MW are certified to participate in the Class IV program.⁴

The lack of supply of Class IV resources is adding costs to the electricity bills of New Hampshire homeowners and businesses. Over half of Class IV compliance in 2015 and 2016 was achieved through Alternative Compliance Payments (ACP)⁵ and Renewable Energy Certificates (RECs) are regularly trading at close to 90% of the ACP due to artificially constrained supply. Under current market conditions, Brookfield Renewable estimates that compliance costs for the Class IV program alone could reach over \$5.6 million in 2025 (or almost 20% of total RPS compliance costs in 2016) despite the fact that the Class IV program represents only 1.5% of total demand. Extending the exemption from installing fish passages, where not required by FERC, to all in-state Class IV facilities represents a straight-forward way for New Hampshire to value and access existing in-state hydropower resources that are already required to comply with stringent state and federal environmental and fish passage standards.

⁴ Information on small-scale hydropower capacity is taken from the ISO-NE 2017 Capacity, Energy, Loads and Transmission (CELT) Report. Information on Class IV certified facilities is taken from NEPOOL GIS.

⁵ New Hampshire Public Utilities Commission, New Hampshire Renewable Energy Fund, Annual Report, October 1, 2017.

II. Broader Potential Reforms to the RPS

Should this review ultimately consider consolidation of the RPS tiers, or expanding eligibility of large-scale resources not currently eligible for the RPS, such considerations must only be made in the context of an aggressive increase to the current RPS program targets. Implementing dramatic policy changes, including proposals that drastically increase supply, without a robust increase in aggregate demand requirements will have significant impacts on the ability of the program to promote new investment and retain valuable existing renewable resources – particularly those indigenous to New Hampshire, and would be at odds with the stated intent of the RPS program. In addition, although a single tier program is most efficient and effective when it is open to all renewable technologies, regardless of vintage, the RPS should remain limited to renewable energy resources to preserve the integrity and intent of the program.

Lastly, as the PUC considers policy changes enabling large-scale hydropower to participate in the current program, such changes – absent program target changes – should be limited to new or existing hydropower resources up to 100 MW utilized solely for “backstopping” annual RPS program requirements in any year when the PUC determines inadequate supply is available to meet any of the Class I-IV annual requirements. This provision, contingent on actual supply and demand dynamics in a given year, would ensure that sufficient renewable energy supply is delivered to New Hampshire ratepayers annually and cost impacts are minimized. In addition, a defined limitation of 100 MW will ensure that hydropower resources indigenous to New Hampshire and the region are prioritized and able to participate. .

Thank you for the opportunity to provide comments and please do not hesitate to contact us should you have any questions.