

June 7, 2019

John Wassam, Renewable Energy Program
Massachusetts Department of Energy Resources
100 Cambridge Street
Suite 1020
Boston, MA 02114

**RE: Comments Concerning 225 CMR 14.00:
Proposed Amendments to Renewable Energy Portfolio Standard – Class I and Class II**

Dear Mr. Wassam:

On behalf of the New England Hydropower Company, LLC (“NEHC”) we are pleased to be able to participate and provide comments concerning the proposed changes to 225 CMR 14.00: Renewable Energy Portfolio Standard Regulations published by the Department of Energy Resources (“DOER”) on April 19, 2019.

NEHC, based in Beverly, MA with locations in Connecticut, New York, and Maine, is engaged in the development, construction, and operation of small, zero-emission, renewable energy distributed generation facilities utilizing an innovative run-of-river technology, the Archimedes Screw Generator, at existing, non-powered dams. As a relatively new company providing a new and innovative approach to balancing the benefits of hydropower with associated effects to stakeholders, including the human and built environment, NEHC appreciates the importance of the proposed amendments.

NEHC, throughout its commencement and expansion as a developer of small, low impact hydropower facilities, has encountered the market challenges¹ that face any new approach to hydropower technology; investor confidence, project economics, proof of concepts, stakeholder agendas, and federal and state energy policy. Throughout, NEHC has maintained as its primary mission the redevelopment and restoration of low-impact hydropower in a collaborative, practicable and sustainable manner.

The concept of sustainability permeates every aspect of the Massachusetts Clean Energy and Climate Change Policy. It is axiomatic that DOER should similarly incorporate and expand the substantive meaning of sustainability into the proposed RPS regulations. According to the United Nations World Commission on Environment and Development (the Brundtland Commission),

¹ In addition to market challenges, the introduction of the Archimedes Screw Turbine required extensive education and outreach efforts to the Federal Energy Regulatory Commission and the federal and state natural resource agencies. In order to acquaint the agencies and the public with the potential of this low-impact, fish-friendly technology, NEHC spent several years reviewing, analyzing and sharing technical and biological data with the Federal Energy Regulatory Commission, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service as to the safety and efficacy of the Archimedes Screw Turbine.

“sustainable development” means “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Clearly, what is contemplated by this definition is the implementation of wise and thoughtful policies that maintain the present but also protect the future. It is for this reason that NEHC has chosen to comment on the need to maintain LIHI certification through the entire life cycle of a generating facility.

“Sustainability” in the hydropower lexicon has a different meaning than for other renewable energy technologies. For example, the NEHC Archimedes Screw Turbine was developed based on the 2,500-year-old technology discovered by Archimedes of Syracuse. On the other end of the timeline, the Federal Energy Regulatory Commission (“Commission”) recently revised its own regulations to authorize hydropower licenses for a standard 50-year term with anticipated re-licensing beyond that.² Commission exemptions from licensing are issued in perpetuity. As is obvious, the hydropower “horizon” is completely distinct from other renewable technologies.

NEHC’s comments concern the proposed amendment to 225 CMR 14.05(1)(a)6. h. and its corollary, proposed amendment at 225 CMR 15.05(1)(a)6. h., which provide as follows:

A Generation Unit that has received a certification from LIHI and a Statement of Qualification from the Department shall not be required to obtain a recertification from LIHI to retain its Statement of Qualification.

NEHC believes that it would be a serious error for DOER to add this amendment, given the sustainability of hydropower over decades.

I. The development of new and expanded hydropower in Massachusetts requires a balance between the benefits and the effects to the Massachusetts human and built environment.

The concept of an independent, non-profit entity supplementing the efforts and continued vigilance of the federal and state agencies charged with the safe, effective development of renewable hydropower has existed since the original development of the Massachusetts RPS. In an early and pragmatic acknowledgement of the need for the rapid development of emission-free renewable energy resources and the significant lack of public agency resources available to continually monitor that development, DOER wisely adopted the LIHI certification process as an essential element to qualify for the RPS. During development of the RPS from 1997 to 2003, changes in energy markets, the hydropower industry, and the profound effects of Climate Change, DOER was prescient on its insistence on an independent certification requirement.

² See: Federal Energy Regulatory Commission Order No. 858, Docket Number RM19-6-000, April 18, 2019.

Since that time, Congress, the U.S. Department of Energy, and the Commission have enacted a series of changes and amendments to the Federal Power Act and its implementing regulations to ease the regulatory burden on hydropower development. Unlike solar, hydropower may take years from project concept to witness testing, but it also operates for decades.³

In the long term, removing the LIHI recertification process as a structural RPS requirement will undercut the success of Massachusetts' refinement of its energy policies, and the ongoing development of advanced hydropower technologies and practices as a public,⁴ collaborative effort to provide secure, clean renewable energy for electricity generation and storage. Step one in ensuring that maximum generation efficiency is not undercut by negatively affecting the environment upon which hydropower relies; healthy aquatic habitats, recognition of competing uses made of waters of the Commonwealth, and sustainable, expanded development; begins with initial qualification for the RPS, with LIHI certification.

This first step, while laudable, is insufficient to ensure sustainable practices, given the lifespan of hydroelectric generation facilities and pumped storage facilities. Recertification over time is essential to ensure that the very gains made through the use of a non-profit certification agency are not squandered over time.

It is not realistic to believe that the work to ensure that hydropower remains safe, sustainable, and acceptable to all stakeholders will simply be picked up by state agencies.⁵ That burden is already too great. Eliminating recertification simply means that, at a minimum, $\frac{3}{4}$ or more of the operational life of a facility and its impacts upstream and downstream simply will not be monitored beyond facility self-

³ The development and issuance of a federal hydropower license can take between 2 – 7 years. Renewal typically takes up to 3 years. Unlike most federal licenses that typically must be renewed after 5 years, decades will pass before a hydropower facility must renew its license. The interim period between license renewal and re-issuance is also time consuming, and without LIHI recertification, the public is limited to participation during the re-licensing process, without the benefit of input from an independent standards entity.

⁴ The importance of continued public involvement over the lifetime of a 50-plus year project is well known to DOER. Shortly following the 1997 Restructuring Act, DOER was charged with the development of a series of basic electrical services and educating the public concerning its electricity choices. Educating the public has been a continuing mission for DOER, reflecting the changes in the energy industry. That includes keeping the public aware of how its electricity is generated and the associated costs and impacts to Massachusetts consumers. DOER will be constrained in its mandate to effectively engage in public education without the certitude of LIHI recertification throughout facility operations.

⁵ Similarly, the federal agencies are not equipped to oversee ongoing operations. The Commission is itself charged with so many priorities, including dam safety and market monitoring, that it is not realistic to conclude that any gaps in oversight will be addressed by the Commission or other federal agencies.

certification. Institutional history with energy and environmental self-certification is evidence itself that self-certification alone is insufficient.⁶

As another example of the need for ongoing oversight, the standards of the Massachusetts Energy Facility Siting Board, in approving a petition to construct an energy generation facility, provide that development is supportable where the development will provide to the residents of the Commonwealth a reliable energy supply with a minimum impact on the environment at the least possible cost.⁷ That standard must be protected over the life of any energy generation facility.

In order to continue to maintain the purpose and success of the Massachusetts RPS, DOER must consider the value of that initial qualification statement over the course of 50-plus years of potential hydropower operations.

II. The Minor Cost Reductions Achieved by Eliminating LIHI Recertification Cannot Outweigh the Long-Term Benefits Over the Life Cycle of an Operating Facility.

The August 30, 2016 report prepared by GZA for DOER: *Report on Permitting Small and Low Impact Hydropower Projects in Massachusetts* (File No. 172618.00) ("Report") recommends that DOER eliminate the requirement to recertify with LIHI every five years to maintain RPS qualification. The basis for the recommendation states that this would:

... reduce the financial burden on low impacts projects by eliminating the LIHI annual fees and eliminating re-certification fees and expenses... [T]his recommendation also decreases the burden on existing, Class II facilities that are incentivized with a lower REC value. It may be within DOER and other state agency capacity to ensure operational compliance by other means.

There are three statements here that bear additional scrutiny:

Reduction of the Financial Burden. This statement, while being true, fails to provide the necessary context over the life of an operating facility. Compared to the costs mandated by the Commission, as well as the ongoing reporting and compliance requirements that may be incorporated into a license by the state water quality certification and the terms and conditions established by the federal natural resource agencies, LIHI costs are *de minimis*. This is particularly true in the case of license renewals, when the Commission, the natural resource agencies, and the public have an opportunity to review, comment, and propose new terms and conditions. LIHI certification, as evidenced in the Report, can support facility cost controls over time in terms of maintaining best practices and securing the continuing trust of the host community and affected stakeholders.

⁶ One needs only to look at the energy market chaos resulting from Enron self-certifications of compliance. A more recent environmental impact example is that of Volkswagen self-certifying for years while being out of compliance with air quality regulations.

⁷ M.G.L. c. 165 § 69H.

Capital investments to achieve low environmental impact will likely be completed during the first LIHI certification process. This general statement does not apply to the specific technologies, site locations, aquatic environment, distance to load, etc., that the development of hydroelectric generation encounters. Most of the studies, demonstrations, consultations, and field tests necessary to license a project also support the LIHI certification process. The expense-forcing issue is not LIHI during this period of project development. The federal and state licensing requirements usually present the greatest financial challenge for a project, not LIHI.

Further, the balance between the ongoing investments necessary to generate electricity, repair and upgrade a facility, and maintain human and environmental sustainability over the life of a facility is facilitated by the LIHI process.

Low environmental impact practices require monitoring over time, alterations of approach, adaptive management, and changes in federal and state laws and regulations. Certification to qualify for RPS once cannot possibly reflect the changes continually moving the energy market. For example, a change in the federal tax incentives for renewable energy will incent changing facilities to optimize power generation through expansion of existing generation and the development of new, innovative generation. Expansion and new development bring with them new and possibly significant impacts. The Commission oversees license compliance and license amendments. It cannot possibly anticipate or react to changes over time on a state-by-state basis that can materially affect hydropower operations and environmental impacts. If the purpose of initial certification is to complete RPS eligibility to qualify for Class I or Class II, the RPS purpose should not be said aside for short-term expediencies.

It may be within DOER and other state agency capacity to ensure operational compliance by other means. This statement simply cannot pass the straight-face test. It is not realistic for DOER and another “state agency” to ensure operational compliance without the resources to do so. Resources at Massachusetts state agencies have been very limited for years, without any prospect that their budgets and statutory mandates will change over time. This situation is also true for the majority of New England States.

The problems with this statement are twofold. Setting aside the rather altruistic notion that somehow state agencies will receive the additional resources necessary to create a new operational compliance program, state RPS programs vary from state to state. LIHI certification levels the playing field, as it applies independent standards without regard to varying government performance standards. For developers, having a level playing field translates into reduced transactional time and costs, as well as a diminution in overall study and compliance costs.

For the purposes of public education and public trust, LIHI certification also plays a role not unlike many other non-profit certification entities, such as NERC. These external standards entities have the benefit of greater public trust than either private development or, in some instances, governmental entities. Cutting out what the public perceives as “an honest broker” does a disservice to development, to DOER, and to the public.

III. Conclusion

DOER should not revert to the adoption of short-term actions that undercut the long-term purposes of the MA RPS. If the reality of Climate Change teaches anything, it teaches that sustainability requires holistic and long-term regard for the impacts associated with the generation of energy.

NEHC thanks you for your consideration of these comments.

Respectfully submitted,

Carol Wasserman
New England Hydropower Company, LLC