

**Appalachian Mountain Club • Brookfield Renewable Energy Group
Conservation Law Foundation Massachusetts • Low Impact Hydropower Institute
Mass Audubon • Massachusetts Rivers Alliance • The Nature Conservancy Massachusetts**

November 4, 2015

The Honorable Ben Downing
Chair, Joint Committee on Telecommunications, Utilities, and Energy
State House, Room 413F
Boston, MA 02133

The Honorable Thomas Golden
Chair, Joint Committee on Telecommunications, Utilities, and Energy
State House, Room 473B
Boston, MA 02133

Re: Joint Testimony on *An Act Relative to Promoting Energy Diversity (H. 2881)* and *An Act Relative to Renewable Energy Portfolio Standards (S. 1764)*

Dear Chairman Downing, Chairman Golden, and Members of the Joint Committee on Telecommunications, Utilities, and Energy:

We are writing to reiterate our strong opposition to efforts to repeal or weaken the environmental eligibility criteria for hydropower in the Renewable Energy Portfolio Standard (RPS), as we understand has been advocated by a certain contingent of hydropower interests, and is expressed in Sections 3 and 4 of H. 2881, “An Act to Promote Energy Diversity,” as well as S. 1764, “An Act Relative to Renewable Energy Portfolio Standards.”

We greatly appreciate that the Joint Committee on Telecommunications, Utilities and Energy has consistently retained the statutory eligibility requirements for hydropower in the Renewable Portfolio Standard (RPS) and we ask that you continue to support appropriate RPS eligibility requirements.

Background on Existing Hydropower RPS Eligibility Criteria

As organizations that are keenly aware of – and actively working to confront – the environmental impacts of climate change, we recognize the need for reducing greenhouse gas emissions, including policies supporting the environmentally responsible development of renewable energy sources.

Many have argued in the recent past that hydropower should not be eligible for incentives under the MA RPS at all, since it is a mature technology that has successfully competed with traditional fossil fuels for over a century, and because dams can have significant negative environmental impacts, especially with respect to river health. Hydroelectric dams interrupt natural river flows, create barriers for fish movement, raise water temperatures, harm water quality, and otherwise damage river ecology. Our Commonwealth has long recognized this, as

demonstrated by the past several administrations' commitment to removing dams, successfully restoring many miles of Massachusetts rivers to health.

Yet during the 2007-8 legislative session, The Nature Conservancy (TNC), Mass Audubon (MAS) and The Conservation Law Foundation (CLF) provided key support for low-impact hydropower to become eligible for incentives under the MA RPS, pursuant to the Green Communities Act (GCA), provided that the facilities meet certain environmental performance standards. The three conservation organizations carefully worked together with representatives of hydropower companies (most notably TransCanada) and came to consensus on compromise language regarding low-impact standards that were acceptable to all parties. The Legislature subsequently included the environmentally preferable eligibility requirements in the GCA.

The Department of Energy Resources (DOER) during its promulgation of the RPS regulations, recognized it did not have the in-house resources or expertise to conduct the due diligence necessary to determine eligibility. DOER therefore decided to rely on the external, independent certification process provided by the Low Impact Hydropower Institute (LIHI) to screen hydropower facilities for eligibility. The Nature Conservancy (TNC) and the Appalachian Mountain Club (AMC) both have representatives on the board of LIHI, and seven hydropower operators comprise LIHI's Hydropower Industry Advisory Panel. Being certified by LIHI means the hydropower facility must pass rigorous standards for river flows, water quality, fish passage and protection, watershed protection, threatened and endangered species protection, cultural resource protection, and recreation.

As of October 15, 2015, DOER has qualified 230 MW of RPS Class I and Class II hydropower generation. The owner and operators of these hydropower facilities have "played by the rules," successfully demonstrating compliance with the standards prior to becoming eligible for RPS incentives, and ensuring that they hold their facilities to the highest mitigation measures.

Our organizations likewise have supported Clean Energy Center investments in old hydropower facilities to bring them into compliance with the low-impact hydropower standards and secure eligibility under the RPS. The GCA explicitly provided authority for such investments. We firmly believe that this approach – investing in facilities to improve their environmental performance to deliver clean energy – is the best approach, and that it would be a serious mistake to weaken the standards.

During the two subsequent legislative sessions, the Massachusetts Rivers Alliance and other conservation organizations testified at TUE hearings, including the GCA oversight hearing in November 2011, in strong opposition to any efforts to repeal or weaken the environmentally preferable eligibility criteria for hydropower in the RPS. Each time the standards have been upheld.

Overview of proposed changes

Currently, MGL Ch. 25A 11F(c)(6) defines Class I hydropower as sources that:

- Are new facilities since 12/31/97 or create incremental new energy generation since 12/31/97
- Have up to 30 MW capacity

- Meet appropriate and site-specific environmental standards as determined by DOER in consultation with agencies with oversight and jurisdiction over hydro facilities
- Do not involve pumped storage or new dam or water diversions constructed after 1/1/98.

Currently, MGL Ch. 25A 11F(d)(6) define Class II hydropower as sources that :

- Existed before 12/31/97
- Have up to 7.5 MW capacity
- Meet appropriate and site-specific environmental standards as determined by DOER in consultation with agencies with oversight and jurisdiction over hydro facilities (same as Class I)
- Do not involved pumped storage facilities (same as Class I)

H. 2881 would change the eligibility for Class I hydro by:

- Making review and approval by the Federal Energy Regulatory Commission (FERC) after 1/1/2000 sufficient for increased capacity and/or efficiency at existing facilities to qualify
- Making review and approval by FERC after 1/1/2009 sufficient for new facilities to qualify
- Allowing new dam construction to qualify

S. 1764 would further change the eligibility for Class I hydro by:

- Making review and approval by FERC after 1/1/1992 for new facilities, or increased capacity or efficiency at existing facilities, sufficient to qualify

H. 2881 would change the eligibility for Class II hydro by:

- Making annual compliance with FERC operating conditions sufficient for ongoing eligibility (but does not change the initial requirements for eligibility).

S. 1764 would change the eligibility criteria for Class II hydro by:

- Making review and approval by FERC after 1/1/1992 for existing facilities, as well increased capacity or efficiency at existing facilities, sufficient to qualify. This both allows older facilities to qualify and makes FERC review and approval to suffice.
- Allows any existing FERC regulated hydro facility with a nameplate capacity of 1 MW or less to qualify, regardless of its age

Our greatest concern with these proposed changes is that they will allow FERC licensing to substitute for appropriate and site-specific Environmental Standards in consultation with relevant state and federal agencies. It is important to award RPS incentives only to hydropower that is least impactful to the state's and region's rivers. Such a change would undermine the consistent approach between low-carbon energy protection and the protection of other ecosystem values that has been carefully created and sustained by the current approach to the RPS standard. It would also undermine the efforts of RPS hydropower operators who have invested in low impact hydropower provided to Massachusetts.

Comparison of LIHI certification and FERC licensing

Under the current regulations, DOER may determine that a hydropower project meets the Environmental Standards for the RPS if it is LIHI certified or if the owner or operator specifies other reasons why the project should qualify. DOER must also consult with “Relevant Hydroelectric Agencies” by providing a 30-day opportunity for input. A “Relevant Hydroelectric Agency” is defined as a “federal, state or provincial agency with oversight over fish and wildlife, water quality, river flows, fish passage and protection, mitigation and enhancement opportunities, related to a hydroelectric facility located in the Impacted Watershed or that impacts downstream or upstream passage of fish and wildlife.”

The difference between LIHI certification and FERC licensing is based the different objectives of the two process. LIHI’s certification process is intended to protect multiple ecosystem values, including river flows, water quality, fish and wildlife, and other environmental indicators of a healthy ecosystem around hydropower facilities, as well as meeting recreation and cultural preservation needs. LIHI provides a consistent process, an objective set of criteria, and renews projects every five to eight years. For certification, LIHI requires that a project satisfies all eight of its criteria, from ecological flows to recreational and cultural resources. The Federal Power Act, on the other hand, simply requires FERC to issue licenses that balance, or trade off, the power and non-power uses of water. To do that, FERC actively encourages negotiated settlements as the basis for most of its licenses, making the actual outcome for environmental protections less predictable and dependent on the parties that intervene. FERC issues licenses for up to 50 years in length, meaning that some older projects were last reviewed in the 1980’s with licenses that do not reflect an understanding of current watershed conditions. FERC also permanently exempts many small projects from licensing, meaning that these projects receive even less scrutiny of environmental and other impacts. For example, approximately 40% of all hydropower projects in New England and New York are exempt from review.

It is also important to note that the size of a hydropower operation does not limit its ability to be certified as Low Impact. For example, the Fifteen Mile Falls hydropower project in Vermont (LIHI #39) has an authorized capacity of approximately 320 MW. Large projects can qualify as a low impact project, and small projects can damage rivers. Low Impact review and certification is based on criteria related to river health, not the size of a hydropower facility.

In summary, FERC does not treat all hydropower projects equally, FERC does not require all environmental concerns to be addressed, and is on a timeframe that cannot incorporate new information or industry best practices learned through experience. LIHI provides consistent and more complete treatment to inform electricity consumers about projects that produce the highest quality hydropower. The current process, which requires input from Relevant Hydropower Agencies and uses LIHI certification—with the opportunity for project owners and operators to appeal directly to DOER for certification—is therefore the more appropriate process to ensure that hydropower incentivized by the RPS is also supports river protection as intended throughout the Northeast.

Impacts of the proposed changes

Among the impacts of significantly lowering the standards and consistent review, including agency review, for hydropower projects to qualify under the RPS would be an inequitable

outcome for the hydropower operators who have worked hard and invested in projects that meet the current RPS standard and are operating certified low impact projects. These operators have often invested significant funds to ensure their projects meet the highest mitigation standards in order to comply with the Massachusetts RPS – and changing the RPS requirements to an easier standard creates economic and investment uncertainty.

Additionally, with a relatively low number of FERC-licensed projects that might apply under this change, the potential for increased low-emission hydropower is quite low compared to the potential impacts to rivers. In New England and New York, there are 314 outstanding FERC licenses and 195 FERC exemptions. However, only 18 of the FERC-licensed projects have received their new licenses since 2010, and only six more are scheduled to be relicensed before 2020.

Costs of Low Impact Certification

The cost of obtaining LIHI certification does not, by itself, present a barrier to participating in the RPS. The cost of applying for and maintaining a LIHI certificate is extremely low relative to the economic benefits derived from certification, particularly in New England for projects that become eligible for the MA RPS (see example below).

The LIHI the fee structure was recently revised and carefully designed, with extensive stakeholder outreach and acceptance, to cover program costs while staying reasonable to the applicant and responsive to regional green energy market values. However, it is important to note that the cost of a LIHI certificate is more than just the fees paid to LIHI.

There are several factors involved in the full cost to apply for, receive, and maintain LIHI certification. Some of these factors stem from the fees paid to LIHI, while others are associated with the choice of the applicant to incur consulting fees in the preparation of a LIHI application. A third factor stems from the possibility of costs associated with additional measures that may be necessary to implement before a project can qualify as LIHI certified, such as new water quality monitoring data or fishways. We believe this continues to be an appropriate approach to ensure that hydropower incentivized by the RPS is generated from those projects that best maintain the river functions that have been a focus of protection and restoration over many years.

Example of RPS eligibility costs and Renewable Energy Credit (REC) revenue:

In the example illustrated in the chart to the right, the total application fees, including the Intake Review Fee, are equivalent to the revenue the project stands to make in two weeks of (REC) sales as a Class II eligible facility in the current market. The ongoing annual fee of \$1,000 is less than the project will earn from three (3) days’ worth of REC sales at current market rates.

Project X		Year certified:	2014
State:	Massachusetts		
Installed Capacity:	1.14 MW		
Intake Review Fee:	\$950		
Application Fee:	\$4,000		
Consulting Costs:	Variable		
Annual Fee:	\$1000		
Conditions:	None		
RPS Eligible Tier:	MA Class II		
AAG:	5000 MWh		
Annual REC revenue:	\$125,000*		
* based on \$25 per REC x 5000 RECs per year			

Thank you for the opportunity to comment on these bills. Massachusetts and other New England states have made tremendous investments over the past several decades in restoring our region's rivers, including water quality and habitat, and flow regimes that support the ecological functions and associated economic benefits of healthy rivers. The current process by which hydropower projects are reviewed for site specific environmental standards with input from relevant agencies is an appropriate process to ensure that hydropower is incentivized by the RPS is consistent with the long-term direction, investment, and commitments in the Commonwealth for river protection and should be retained. While we are open to exploring ways to improve the process in a manner than continues to protect river health, we are opposed to undermining the objective, consistent method of review and certification that currently exists by simply replacing it with unpredictable and non-protective FERC approval. We look forward to providing any additional information that can be helpful.

Sincerely,

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Senator Pacheco, Chair, Senate Committee on Global Warming and Climate Change
Senator Eldridge, Vice Chair, Senate Committee on Global Warming and Climate Change
Representative Smizik, Chair, House Committee on Global Warming and Climate Change
Representative Decker, Vice Chair, House Committee on Global Warming and Climate Change
Senator Gobi Chair, Joint Committee on Environment, Natural Resources, and the Agriculture
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