

Peter Drown
Cleantech Analytics
6717 Cub Run Court
Centreville, VA 20121

Wednesday, January 18, 2017

Dr. Michael J. Sale
Executive Director
Low Impact Hydropower Institute

Subject: Recertification Recommendation for the Martinsville Hydroelectric Facility (FERC #7373, LIHI #85)

Dr. Sale:

This letter contains my recommendation for Recertification of the Martinsville Hydroelectric Facility (the "Facility").

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Drown", with a stylized flourish at the end.

Peter Drown, President
Cleantech Analytics LLC

I. Background:

The 250 KW Facility is located on Lull Brook in the Village of Hartland Three Corners in Hartland, Vermont. The project's boundaries include a narrow 3 acre property alongside Vermont Route 5 and the facility and this stretch of Lull Brook exists in a steep, rocky gorge. The facility was originally constructed for mill power, and includes a 15 foot high concrete gravity dam. Water is diverted from an Olympic pool-sized reservoir through a 500 foot-long penstock to a small powerhouse where power is generated via 2 crossflow turbines rated at 125 KW each. The Facility operates under an original FERC License issued 04/27/1985, supplemented by an amended FERC License issued on April 25, 1995 to reconcile as-built differences, and was originally certified as "Low Impact" on April 30, 2011. The Facility is owned and operated by Martinsville Hydro Corporation, and generates approximately 800 MWh/year.

This application review for recertification was conducted using the new, 2nd Edition Handbook that was published in March 2016.



Figure 1 - Martinsville Reservoir



Figure 2 - Martinsville Powerhouse

II. Recertification Standards

On March 18, 2016, LIHI notified the applicant of upcoming expiration of the Low Impact Hydropower Institute certification for the Martinsville Hydroelectric Facility. The letter included an explanatory statement from LIHI governing the re-certification process for facilities during 2015 due to the transition year while new criteria are implemented. The Explanatory Statement contained Intake Review instructions requiring the Application Reviewer to conduct an Intake Review of the application focused solely on determining the answer to the following questions:

- (1) Has there been a material change in circumstances (defined as areas of non-compliance and/or new or renewed issues of concern that are relevant to LIHI's criteria) since the original certification was issued?
- (2) Does the complexity of the application require an additional fee to cover the cost of the review?

The Recertification review criteria also provide that "If the Application Reviewer can definitively determine from the submitted application materials, a review of the LIHI file containing the past certification decision(s), any public comments received during the application process, and any limited reviewer-initiated questioning by LIHI of the applicant and/or third parties, that the answer to both questions above is "no," the Application Reviewer will recommend re-certification approval to LIHI's Executive Director, and there will be no further application review."

III. Adequacy of the Recertification Package

I completed the Stage I Review of the Recertification Application on October 26, 2016, and noted several deficiencies for the applicant to resolve in the Stage II Application. The Applicant provided an updated Recertification Application on November 11, 2016 which included additional supporting information and stated there have been no: “(1) change of mode of plant operation (2) type, size or rating of generation equipment (3) agency requests, actions, concerns, or recommendations for change.” To verify this, I have reviewed the application package, supporting comments and documentation and public records on FERC e-library posted since the original certification report (Goldfarb, 05/01/12.) I also independently verified the submitted criteria were appropriate given the changes in the 2nd edition LIHI handbook.

The application was public noticed and received no comments.

IV. There have not been any “material changes” at the facility that would affect recertification

In accordance with the Recertification Standards, "material changes" mean non-compliance and/or new or renewed issues of concern that are relevant to LIHI's criteria. Based on my review of materials provided, review of FERC's public records, and consultation with the noted individuals, I found that there are no areas of noncompliance or new or renewed issues of concern. The previous LIHI certificate has one condition that, worded as:

“If during the certification period, American eel upstream passage facilities are constructed and become operational at Bellows Falls Dam on the Connecticut River, or the U.S. Fish and Wildlife Service or the Vermont Fish and Wildlife Department request passage facilities at the Project, the Project owner shall so notify LIHI within 30 days and shall enter into, and provide LIHI with a copy of, an agreement reached among the Project owner, the U.S. Fish and Wildlife Service, and/or the Vermont Fish and Wildlife Department to provide both interim (if requested by an agency) and permanent safe, timely, and effective passage for American eel. The Agreement must be finalized within 120 days of the request for passage and must include a description of the planned passage and protection measures and the implementation schedule for design, installation, and operations. The agreement shall be filed with LIHI within 30 days of its execution.”

Melissa Grader from U.S. Fish and Wildlife Service (USFWS) responded by email on January 17, 2017, confirming that American eel passage is not anticipated to be required at the facility during this LIHI term, but will likely be required during the next LIHI Term (2022 – 2027.) This will be due to the anticipated future installation of eel passage at mainstem Connecticut River hydroelectric facilities.

V. LIHI certification criteria are satisfied in all zones

The Applicant properly selected 3 zones for the Martinsville Facility. Standard 1 “Not Applicable/De Minimis Effect” was appropriately applied for Criteria C – H. Fish passage is not a concern at the facility, as the steep gradient present at the project bypassed reach has little direct value for fish reproduction, and the downstream system of chutes represent a natural barrier for passage. As mentioned above, eel passage is not currently required at the site but will be required in the next recertification (2022) when eel passage facilities are installed at mainstem Connecticut River Projects owned by Transcanada. There are no cultural or historic resources at the site. The location of the project in a steep rocky gorge precludes recreational opportunities, and the adjacent shoreline does not have any management plans in place.

Standard 2 “Agency Recommendations” was appropriately applied for Criteria A (Flows) and B (Water Quality¹.) Conditions pertinent to these Criteria are contained in the original Water Quality Certificate issued for the site, and no party has ever intervened or challenged the existing operations at the site. All terms in the WQC are pertaining to flows, so the two criteria are interrelated. The fully automated plant controls and dam configuration maintains a minimum bypass flow release of 2 cfs for all inflows greater than 4 cfs, and 4 cfs at all other times. Lull Brook is not on the list of 303(d) Impaired Waters for Vermont, and The Vermont Agency of Natural Resources Department of Environmental Conservation previously stated they have “no plans to re-evaluate operation of the Martinsville Hydro Project prior to the project’s relicensing” which begins in 2029 (Fitzgerald email, see Recertification Application.)

VI. Conclusion

In my opinion, the materials provided and referenced above are sufficient to make a recertification recommendation, and no further application review is needed. In conclusion, I recommend Recertification of the Martinsville Hydroelectric Facility to one new, five-year term, with no conditions required

Please contact me if you have any questions.

Sincerely,



Peter R. Drown, President
Cleantech Analytics LLC

¹ Were it not for the existence of an agency recommendation contained in the Water Quality Certificate, I would recommend applying B1 for this Criterion (and in fact the original recertification application applied B1.) The facility clearly does not alter the physical, chemical or biotic water characteristics necessary to support fish and wildlife resources or human water uses.

Attachment 1
Agency and Applicant Communications

Date: January 17, 2017
Contact Person: Melissa Grader, Fish and Wildlife Biologist
Agency: USFWS

1/17/2017

Gmail - Re: Martinsville Hydro



Peter Drown <peter.drown@gmail.com>

Re: Martinsville Hydro

1 message

Grader, Melissa <melissa_grader@fws.gov>

Tue, Jan 17, 2017 at 12:32 PM

To: Jay Boeri <jboeri@vermontel.net>

Cc: Peter Drown <peter.drown@cleantechanalytics.com>, "Crocker, Jeff" <Jeff.Crocker@vermont.gov>, "Davis, Eric" <Eric.Davis@vermont.gov>, "Will, Lael" <Lael.Will@vermont.gov>

Hello Jay,

Sorry it has taken me a while to respond. I have reviewed reports that have come in from TransCanada's relicensing studies and based on that information, the FWS provides the following response:

The Service does not have plans to require catadromous fish passage at the Martinsville Project within the next five years. However, the Service will be pursuing eel passage as part of the relicensing of the mainstem Connecticut River Projects (including Turners Falls, Vernon, Bellows Falls and Wilder). Lulls Brook enters the mainstem between Bellows Falls and Wilder. Therefore, the Martinsville Project likely will need to provide eel passage during the next LIHI certification period (2022-2027).

Regards,

Melissa Grader
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service - New England Field Office
103 East Plumtree Road
Sunderland, MA 01375
413-548-8002 x8124
melissa_grader@fws.gov