



Recertification Review
Ice House (LIHI Certificate No. 44)
Nashua River, Massachusetts

By Dana Hall
LIHI Deputy Director

Background

On April 23, 2014, the Low Impact Hydropower Institute (“LIHI”) received an application from Ice House Partners, Inc. (“Applicant”) for a second term of Certification of its 0.28 MW Ice House hydroelectric generating station (“Project”). The Project is located on the Nashua River at 323 West Main Street in the Town of Ayer, in Middlesex County, Massachusetts. The original five-year LIHI Certification was granted on August 6, 2009.

The Ice House dam was built in the 1790s. In 1907, an electrical powerhouse was installed at the dam that operated trolley cars until the 1920s, and subsequently, ice-making machinery. During the 1970s, the powerhouse was destroyed by fire. Due to poor economic conditions in the residential ice business, the Project ceased operations in the 1940s. On March 31, 2008 the Federal Energy Regulatory Commission (FERC) assigned project No. P-12769-000, and ordered the Project exempt from FERC licensing, subject to conditions submitted by the U.S. Department of the Interior and Massachusetts Division of Fisheries and Wildlife.

In 2009, when LIHI granted the original Certificate, the project was not yet in operation. LIHI accepted the recommendation of Project Reviewer Ronald Kreisman and certified the Project for a term of 18 months, with an additional 42 months to be added upon documentation that the Project has complied with the requirements in Articles 14 and 16 of its FERC Exemption Order. On or about March 8, 2012, Ice House Partners commenced operations of the facility. Subject to Protective Order, Ice House is in the practice of filing a detailed monthly generation history of the Project for the period of March 2012 to the present.

Project Description

The Project is located on the Nashua River at 323 West Main Street in the Town of Ayer in Middlesex County, Massachusetts. The Ice House Project uses the pre-July 1, 2003 190-foot-long, 12-foot-high Ice House dam and spillway topped with existing 24-inch-high weir boards that impound a 137-acre reservoir. The project includes a pre-July 1, 2003 headgate structure, equipped with four 8-foot-high, 10-foot-wide gates, leading to a pre-September 1, 2005 50-footwide, 109-foot-long power canal. The restored powerhouse, which contains two new

turbine generating units with a total installed capacity of 280 kilowatts, is located in the canal about 75 feet downstream of the headgate.

The project has an average annual generation of 2,500 megawatt-hours. Water used for generation is discharged from the powerhouse into a pre-July 1, 2003 50-foot-wide, 400-foot-long tailrace (measured from the headgate to the tailrace outlet). The Project's power is transmitted through a new 480-volt, 100-foot-long underground transmission cable. From there power is transmitted to distribution lines of Massachusetts Electric Company located along Main Street, in Ayer, Maine. The Nashua River reach that is bypassed by operating the project (measured from the dam to the tailrace outlet) is about 300 feet long. The pre-July 1, 2003 dam, headgate structure and powerhouse building have been restored.

The Project operates in Run-of-River mode – as per the requirement in its FERC Exemption Order:

"The Exemptee shall operate the project in a run-of-river mode, whereby inflow to the project will equal outflow from the project and water levels above the dam are not drawn down for the purpose of generating power. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Exemptee, or for short periods upon mutual agreement between the Exemptee, the U.S. Fish and Wildlife Service, and the Massachusetts Division of Fisheries and Wildlife"

Recertification Standards

LIHI's Certification Handbook (Updated April 2014) regarding Applications for Recertification provides that a "request for renewal of a previously-issued LIHI certification will be granted at the conclusion of the term of the existing certification if re-certification is desired by the certificate holder, subject to re-certification review." Re-certification review focuses solely on determining the answers to the following two questions:

1) Has there been a material change in circumstances since the original certification was issued?

For purposes of recertification review, a "material change in circumstances" will mean one or both of the following:

(a) Non-compliance: Since receiving its last certification from LIHI, the certificate holder/applicant has not implemented, or has delayed implementing, or has done an inadequate job of implementing obligations at or near the facility that are of relevance to LIHI's criteria. These obligations could be in the form of terms and conditions of license(s), settlement agreements, resource agency recommendations or agreements, LIHI conditions of certification including annual notifications, agreements with local municipalities or other third parties or similar relevant obligations; or

(b) New or renewed issues of concern that are relevant to LIHI's criteria: Since receiving its last certification from LIHI, either new issues of concern and relevance to LIHI's criteria have emerged that did not exist or were not made known to LIHI at the time of certification, or there continues to be ongoing problems with previously known issues that appeared to LIHI to be resolved or on the road to resolution at the time of

certification but in fact are not resolved, and are ongoing at the time of the re-certification application. If a new license, settlement agreement, prescription, biological opinion or other similar regulatory decision has been made since the original recertification, these documents will be evaluated to determine if new or renewed issues have been raised.

2) Have any of LIHI's criteria, or the Board's interpretation of one or more criterion, changed in meaningful ways since original certification that are applicable to the circumstances of the facility seeking re-certification?

The re-certification review procedures also provide that "[i]f 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.

Further Review Not Warranted

I have reviewed the materials submitted by the Applicant in support of its application for a second term dated April 23, 2014. In my opinion, the materials provided and described below are sufficient to make a recommendation on re-certification and no further application review is needed.

With their application to re-certify, Ice House Partners submitted: a newly filled out Questionnaire and sworn statement; a March 2014 Bypass Flow Study (to analyze the collected water height data during the 24-month period, commencing on March 8, 2012 through March 8, 2014 to help characterize the available aquatic habitat in the Ice House Partners bypass reach); a Mass DEP waiver of the State 401 Water Quality Certification requirement; monthly generation reporting for December 2013 – January 2014; a map of the Project Boundary; the January 1998 Dam Safety Report from the US Army Corps of Engineers; a 2010 email from Caleb Slater of MA that concurs that "the Ice House Project does not need a fish passage plan until the Division and/or the USFWS call for the construction of such a fish passage facility"; and a 2010 email from John Warner of USFWS concurring with the Applicants eelway plans.

The Applicant has requested an additional three (3) years of certification for providing a buffer zone dedicated for conservation purposes extending 200 feet from the average annual high water line for at least 50% of the shoreline. They referenced the Massachusetts Rivers Protection Act, (Chapter 258 of the Acts of 1996) which creates a 200-foot riverfront area that extends on both sides of rivers and streams. Referencing the Massachusetts Act is not evidence of the owner's provision of a 200 foot buffer zone, therefore I recommend against the additional 3 years of certification.

I reviewed the Applicant's submittals and also reviewed the LIHI file containing the past certification and re-certification decisions and FERC's public information file on the Project.

The FERC record contains filings pertinent to the operation of the facility. There were no issues of concern in the filings.

I also solicited comments from state and federal agencies knowledgeable of the Project. On June 4, 2014 I received a letter from Caleb Slater, Anadromous Fish Project Leader of the Massachusetts Division of Fisheries & Wildlife. His letter described the Project's operation with respect to Run-of-River operation, bypass flows, migratory fish and endangered species. Mr. Slater stated that "the Ice House Project has operated within the terms and conditions of its FERC exemption and NHESP conditions, and the Division has no objection to its re-certification as a "low Impact" facility."

I received a short response on June 19, 2014 from Mr. Robert Kubit, of the Massachusetts Department of Environmental Protection, which stated that DEP believes the Ice House Project operates according to LIHI criteria and should be recertified. I also reached out to the Nashua River Watershed Association, as Ron Kreisman had done so 5 years ago. There were no negative reports, the remaining details of my communications are outlined in Schedule 1 below.

Public Comment

LIHI received no comments from the public.

Answer to Question 1)

I have examined the past re-certification reviews, compliance submittals and the requirements of Certification for the Ice House Project, and find that there has been no material change in circumstances. It appears that the Applicant is in compliance with all obligations of certification and any license, settlement agreements or other similar obligations.

Answer to Question 2)

It is my understanding that LIHI's criteria, or the Board's interpretation of one or more criteria, that are applicable to the circumstances of the Ice House Project have not changed in meaningful ways since the date of the original certification.

Conclusion

In light of the fact that there have been no material changes affecting Project compliance with LIHI criteria, and the Ice House Partners continues to meet all of the criteria, I recommend recertification of the Ice House Hydroelectric Project for a term of five years, effective August 6, 2014 and expiring on August 6, 2019.



Dana Hall
LIHI Deputy Director, Application Reviewer

**SCHEDULE 1
RECORD OF CONTACTS**

Date of Contact: Monday, July 7, 2014
Application Reviewer: Dana Hall
Person Contacted: Elizabeth Ainsley Campbell, Nashua River Watershed Association, Executive Director
Telephone/email: (978) 448-0299, eac@nashuariverwatershed.org
Areas of Expertise: Recreational Access

I spoke with Elizabeth on the phone on Monday 7/7/14. She stated that the Ice House Partners have always been good citizens of the river, and cooperative with the activities of NRWA, including being responsive to scheduling, informing them of maintenance and operations and allowing them access to their parking facility..

Date of Contact: Monday, July 17, 2014
Application Reviewer: Dana Hall
Person Contacted: John Warner, USFWS
Telephone/email: john_warner@fws.gov

John Warner replied in an email to me on July 17, 2014 : “We have no comments on the LIHI cert for this project - jw”