

FEDERAL ENERGY REGULATORY COMMISSION

Washington, DC 20426

March 16, 2018

OFFICE OF ENERGY PROJECTS

Project No. 1889-085 – Massachusetts
Project No. 2485-071 – Massachusetts
FirstLight Hydro Generating Company

Douglas Bennett
Plant General Manager
FirstLight Power Resources, Inc.
99 Millers Fall Road
Northfield, MA 01360

Subject: Additional Information Request on Downstream Passage Study 3.3.3

Dear Mr. Bennett:

The February 21, 2014 study plan determination required FirstLight Hydro Generating Company (FirstLight) to conduct study 3.3.3 (*Evaluate Downstream Passage of Juvenile American Shad*). The objective of the study is to assess the effects of the Turners Falls Hydroelectric Project No. 1889 (Turners Falls Project) and the Northfield Mountain Pumped Storage Project No. 2485 (Northfield Mountain Project) on the downstream migration of juvenile American shad, including route selection, migration rates, timing, and survival.

On October 14, 2016, FirstLight filed an interim report for study 3.3.3 indicating that the radio-tagging¹ and hydroacoustic² components of the study did not provide the

¹ FirstLight tagged 218 juvenile shad with radio tags to collect data on downstream passage route selection and the amount of time required to migrate through the project area. However, 73 percent of the tagged shad provided no usable information because they were never detected after release, not detected downstream of the dam, or had identification codes that overlapped with tagged fish from another study. In addition, the control fish held during the study experienced high rates of mortality and tag loss.

² FirstLight installed hydroacoustic arrays to collect data on the entrainment rates of juvenile shad, and the timing and duration of the juvenile shad downstream migration period. However, based on the direction of fish movement in the hydroacoustic beams, it was determined that the study did not produce reliable estimates of entrainment rates at

information needed to fully satisfy the study objectives. In response to the study report, the U.S. Fish and Wildlife Service and National Marine Fisheries Service requested that FirstLight repeat the radio-tagging and hydroacoustic components of the study; and the Connecticut River Conservancy and Massachusetts Division of Fisheries and Wildlife requested that FirstLight repeat the radio-tagging component of the study.

In a letter filed February 7, 2017, FirstLight stated that repeating the study would not produce reliable results or provide significant additional data to inform the development of potential license requirements.³ Rather than undertake the additional effort and cost associated with repeating study 3.3.3, FirstLight proposed to evaluate the need, cost, and feasibility of measures related to downstream juvenile shad passage, in consultation with resource agencies. On February 17, 2017, Commission staff issued a study determination letter in which it deferred a decision on study 3.3.3 until after FirstLight discussed potential downstream passage measures with interested stakeholders.

On July 31, 2017, FirstLight filed a progress report stating that it had consulted with resource agencies and other interested stakeholders on potential measures for downstream juvenile shad passage. In the letter, FirstLight requested that the Commission further delay action on study 3.3.3 until April 30, 2018 to allow additional time to explore protection, mitigation, and enhancement measures with resource agencies. On August 17, 2017, Commission staff issued a letter granting FirstLight additional time to consult with the resource agencies on downstream passage measures, and requiring FirstLight to file a progress report by February 28, 2018 documenting the status of its consultation efforts. Staff stated that a decision on the need to repeat all or parts of study 3.3.3 would be made after FirstLight filed the progress report.

On February 23, 2018, FirstLight filed the progress report in which it states that it is still consulting with resource agencies and other stakeholders on environmental

the Northfield Mountain Project, or reliable information about the timing, duration, and peaks of juvenile shad migration at the Turners Falls Project.

³ FirstLight referenced its January 17, 2017 filing explaining that the hydroacoustic technology is not feasible at the Northfield Mountain Project because site-specific constraints prevent the safe installation of the equipment at a location where fish cannot escape entrainment. FirstLight suggested that a juvenile shad entrainment study that was conducted in 1992 might be sufficient for assessing the effects of the Northfield Mountain Project on emigrating juvenile shad. FirstLight also stated that repeating the radio-telemetry aspects of the study would not add significant information to the record to inform license requirements, and that the level of effort and cost of repeating study 3.3.3, in whole or in part, would be in the range of hundreds of thousands of dollars.

measures related to downstream shad passage. FirstLight proposes to evaluate the feasibility of installing a barrier net in the tailrace of the Northfield Mountain Project to protect juvenile shad and other aquatic species from becoming entrained at the project. FirstLight requests that the Commission delay action on the study until February 28, 2019 to allow additional time to test the feasibility of the barrier net. FirstLight states that it intends to file an amended final license application by June 30, 2019. FirstLight filed correspondence from the National Marine Fisheries Service, U.S. Fish and Wildlife Service, Massachusetts Division of Fisheries and Wildlife, and the Connecticut River Conservancy indicating that they do not object to FirstLight's request for an extension of time.

We need additional information to make a more informed decision on this latest request for an extension of time. To date, Commission staff has delayed a decision on study 3.3.3 for over a year, since February 17, 2017, to provide FirstLight with an opportunity to consult with stakeholders on downstream passage measures. An additional one-year extension until February 28, 2019 could unreasonably delay the licensing process. Under section 5.21 of the Commission's regulations, you have 21 days from the date of this letter to provide the information requested in the enclosed Schedule A.

Within 5 days of receipt, please provide a copy of this letter to all agencies you will consult in response to this request. When you file the requested information with the Commission, provide a complete copy of the information to each agency and other entities consulted, as well as to all parties on the service list.

The Commission strongly encourages electronic filing. Please file the requested information using the Commission's eFiling system at <http://www.ferc.gov/docs-filing/efiling.asp>. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, you may send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426. The first page of any filing should include docket numbers P-1889-085 and P-2485-071.

If you have any questions regarding this letter, please contact Brandon Cherry at (202) 502-8328, or via email at brandon.cherry@ferc.gov.

Sincerely,



Vince Yearick

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Director
Division of Hydropower Licensing

Attachments: Schedule A – Request for Additional Information

REQUEST FOR ADDITIONAL INFORMATION

The following is a list of additional information needs related to FirstLight's request to delay action on study 3.3.3 (*Evaluate Downstream Passage of Juvenile American Shad*), as proposed in FirstLight's February 23, 2018 progress report. Please file the requested information within 21 days of the date of this letter. In your filing, please describe any disagreements with resource agencies on the responses to the additional information requested below.

1. Please describe all downstream juvenile shad passage measures that are currently being discussed with resource agencies and other stakeholders. The measures should be listed separately for the Turners Falls Project and the Northfield Mountain Project.
2. Please explain why it is necessary to wait until August 1, 2018 to begin testing the barrier net and collecting information on biofouling and debris loading.
3. Please explain why FirstLight is proposing to use test panels that are 2-foot by 2-foot in size, and how the test panels will be of sufficient size to provide information about the retention of larger debris and the debris-loading characteristics of a full-sized net for the Northfield Mountain Project.
4. From 1995 to 2014, FirstLight deployed a barrier net from April to June to prevent the entrainment of Atlantic salmon smolts at the Northfield Mountain Project.⁴ Please provide any available information collected from the deployment of the salmon barrier net that could be relevant to the proposed barrier net test for juvenile shad, such as the extent and frequency of repairs due to debris damage.
5. In its October 14, 2016 study report and its October 31, 2012 pre-application document, FirstLight provided a list of previously-conducted fish passage studies. Please file copies of the following studies, and other prior studies referenced in the study report and pre-application document that are relevant to the effects of the project on downstream juvenile shad passage:
 - a) Harza Engineering Company (Harza) & RMC Environmental Services (RMC). (1992). Turners Falls downstream fish passage studies: Downstream passage of juvenile clupeids, Fall 1991. Report to Northeast Utilities Service Company. Berlin, CT.
 - b) Harza & RMC. (1993). Turners Falls downstream fish passage studies: Downstream passage of juvenile clupeids, Fall 1992. Prepared for Northeast Utilities Service Company. Berlin, CT.

⁴ See FirstLight's April 29, 2016 Final License Application.

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- c) RMC. (1994). Emigration of juvenile clupeids and their responses to light conditions at the Cabot Station, Fall 1993. Prepared for Northeast Utilities Service Company. Berlin, CT.
- d) RMC. (1995). Log sluice passage survival of juvenile clupeids at Cabot hydroelectric station Connecticut River, Massachusetts. Drumore, PA. Report to Northeast Utilities Service Company.