FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D. C. 20426
April 25, 2014

OFFICE OF ENERGY PROJECTS

Project No. 2485-063—Massachusetts
Project No. 1889-081—Massachusetts
FirstLight Hydro Generating Company

Mr. John Howard
Director – FERC Hydro Compliance
FirstLight Hydro Generating Company
North Field Mountain Station
99 Millers Falls Road
Northfield, MA 01360

Reference: Approval Letter for Modified Study 3.6.3 – *Whitewater Boating Evaluation*

Dear Mr. Howard:

On September 13, 2013, the Director, Office of Energy Projects, issued the study plan determination (determination) for the relicensing of FirstLight Hydro Generating Company's (FirstLight) Turners Falls Hydroelectric (P-1889) and Northfield Mountain Pumped Storage (P-2485) projects. That determination required FirstLight to modify and file, for Commission approval, study 3.6.3 – *Whitewater Boating Evaluation.*

On January 13, 2014, FirstLight filed the modified study plan for study 3.6.3. We reviewed FirstLight's modified study plan and stakeholder comments. Our findings and recommended modifications are discussed in detail in Appendix A.

We conclude that the study plan, with staff's recommended modifications, will meet the goals and objectives of the study and address the concerns we identified in the determination. Therefore, we are approving the study plan, with staff's recommended modifications, for study 3.6.3.

If you have any questions, please contact Adam Beeco at (202) 502-8655 or via email at: adam.beeco@ferc.gov.

Sincerely,

Timothy J. Welch, Chief
West Branch
Division of Hydropower Licensing

Enclosures: Appendix A—Staff's Recommendations on Modified Study Plan

cc: Mailing List
Public Files

APPENDIX A

STAFF'S RECOMMENDATIONS ON MODIFIED STUDY PLAN

The following discusses FirstLight's proposed modified study plan, filed on January 13, 2014, and comments thereon, including staff's basis for recommending or not recommending certain modifications to the study.

Study 3.6.3 - Whitewater Boating Evaluation

Background

The initial study plan determination (determination), issued September 13, 2013, required FirstLight to submit a detailed study plan for the controlled whitewater boating assessment of the Turners Falls bypassed reach, including methods to identify and evaluate access to the reach in consultation with interested stakeholders. FirstLight was also required to provide documentation of consultation, copies of comments and recommendations on the completed study plan, and reasons for not adopting any stakeholder recommendations.

FirstLight held two teleconferences with interested stakeholders on October 10, 2013 and November 1, 2013, and filed the modified study plan for Study 3.6.3 on January 13, 2014.

Some stakeholders commented on the study objectives and the survey forms. Those aspects of Study 3.6.3 were approved by the September 2013 initial study plan determination and, therefore, are not the subject of this study plan modification.

American Whitewater stated that FirstLight should study its ability to restore bypassed reach flows by foregoing generation and utilizing the upper reservoir capacity of Northfield Mountain. We view American Whitewater's comment as a premature proposed protection, mitigation, and/or enhancement measure that would be more appropriate to discuss after the study has been completed.

American Whitewater also raised issues regarding FirstLight's requirement to sign a Release of Liability and Indemnification waiver releasing FirstLight of liability and indemnifying FirstLight as a result of a boater's participation in the whitewater boating evaluation. We expect applicants to use their own legal discretion with respect to liability releases for study participants and, therefore, have no opinion on the matter.

Study Description

FirstLight proposes to conduct a controlled flow study of the Turners Falls bypassed reach to identify minimum and optimal flows for whitewater boating. It proposes to conduct four test flows during July, August, or September on a single weekend with two test flows per day. A third consecutive day may be added if post-boating evaluation discussions identify the need to evaluate up to two additional controlled releases and such releases cannot be accommodated during the two weekend days.

FirstLight proposes to provide test flows using the Turners Falls Project's available storage and release test flows over Bascule Gate No. 1. The magnitude of releases for the first day of study will range between 2,500 and 3,500 cubic feet per second (cfs) with all following releases to be determined by boating participants. The boaters' staging area will be at either Great Falls Discovery Center or Unity Park. Boaters will launch from below the fishway and take-out at Poplar Street access site.

Test flows will also be photographed/videoed from four locations.

Utilizing Northfield Mountain's Available Storage for Controlled Flow Releases

Applicant's Proposed Study

For purposes of the study, FirstLight proposes to provide whitewater flow releases from Turners Falls dam using inflow that reaches the Turners Falls reservoir. FirstLight proposes to coordinate with TransCanada (specifically, releases at Vernon dam) to provide the releases needed to complete the whitewater boating evaluation. FirstLight states that every effort will be made to preclude operation at its Station No. 1 powerhouse during the flow study, because it releases flows into the middle of the bypassed reach. It also explains that its Cabot Station powerhouse (at the end of the bypassed reach) will likely be operating and its operation may impact the hydrology and hydraulics in the lower portion of the bypassed reach.

Comments on the Study

Appalachian Mountain Club suggests that, in the event there is not enough inflow into the Turners Falls reservoir to provide study flows, FirstLight should augment study flows using Northfield Mountain Project's available storage rather than delay or have incomplete test flows.

In response to this comment, FirstLight states it does not propose to augment study flows by drafting the Northfield Mountain Project's available storage.

Discussion and Staff Recommendation

The Turners Falls reservoir is shared storage between FirstLight's Turners Falls Project and its Northfield Mountain Pump Storage Project. Inflow to Turners Falls reservoir comes from Vernon dam (owned and operated by TransCanada), Millers River, and Ashuelot River.

FirstLight indicated it will coordinate with TransCanada to ensure whitewater flows are available for the study. Thus, releasing flows from the Northfield Mountain Project is unlikely to be necessary to meet study goals. Further, depleting the Northfield Mountain Project's available storage to augment flows may restrict project operations or render the Northfield Mountain Project inoperable until the storage has been replenished and therefore, may add significant cost to the study (section 5.9(b)(7)). As such, we do not find it necessary to augment the controlled flow releases with the Northfield Mountain Project's available storage.

FirstLight states that it is 'likely' that Cabot Station (at the end of the bypassed reach) will be operating and that this operation may impact the hydrology and hydraulics in the lower portion of the bypassed reach. Operation of Cabot Station during the study period is appropriate, as long as its operation does not interfere with the boating evaluation. Therefore, we recommend FirstLight halt operations at Cabot Station during the study period if boating participants indicate it is negatively impacting study evaluations or if it is necessary to have adequate flows for study evaluations (section 5.9(b)(5) and (7)).

Whitewater Study Flow Release Gates

Applicant's Proposed Study

FirstLight will conduct at least four controlled whitewater releases at Turners Falls dam from Bascule Gate No. 1[1] on the western most portion of the dam as part of the proposed study. It proposes to conduct two whitewater flow evaluations on the first day of study (in the approximately range of 2,500 and 3,500 cfs), and then consult with boating participants to determine the volume of two additional test flows the following day. Based on post-evaluation interviews, additional flow releases will be considered if the interviews suggest more are warranted.

[1] FirstLight explains that Bascule Gate No. 1 is the only gate at the Turners Falls Project that can be automated to discharge a desired flow based upon the water elevation at Turners Falls dam.

Comments on the Study

American Whitewater requests that FirstLight perform releases from each of the four bascule gates as well as the three tainter gates during the study.[2] American Whitewater states that ledges located below each of these gates may create different recreational boating opportunities that should be explored, as opposed to only assessing releases from Bascule Gate No. 1.

In a letter filed on February 10, 2014, FirstLight reiterates its commitment to release flows from only Bascule Gate No. 1 and not from any of the three tainter gates on east side of the dam. FirstLight states that each tainter gate has an optimal minimum five-foot opening – openings less than five feet can damage the gates' submerged seals and result in leaks. It states that with an opening of five feet, large debris can 'hurl' beneath a gate, which would pose a safety hazard to whitewater boaters in the vicinity of the gates. Additionally, a five feet opening would release approximately 5,000 cfs, which FirstLight states is in excess of the 2,500-3,500 cfs proposed for the first day of evaluation.

Discussion and Staff Recommendation

In addition to the volume of flows, uncertainties also exist about how flow releases from various gates may affect recreational opportunities on the rock ledges directly below Turners Falls dam. Based on our review of satellite and on-the-ground photographs provided by FirstLight,[3] it is evident that releases from different gates may provide different or additional recreation boating opportunities on the rock ledges directly below Turners Falls dam. FirstLight's proposed methods to release all study flows from Bascule Gate No. 1 would not provide for an evaluation of these opportunities (section 5.9(b)(7)). Therefore, having boating participants also consider and direct both the volume of flow and which gate to release test flows from (after the first day of study),

[2] Commission staff emailed with Bob Nasdor of American Whitewater to clarify which gates he was referring to in his original comments on the study plan. Mr. Nasdor clarified that the three gates of Turners Falls dam he listed as "Bascule Gates #5-7" were intended to identify tainter gates 1-3. Within this email communication, Mr. Nasdor stated his intent was to ask FirstLight to perform releases from each of the bascule gates as well as the tainter gates during the flow study. Memo to public files filed by Commission Staff on January 31, 2014.

[3] On-the-ground photos were submitted by FirstLight at the request of Commission staff and filed by Commission Staff on January 31, 2014.

would allow for an adaptive approach that will provide more information on the whitewater boating opportunities in the bypassed reach than FirstLight's proposed methodology (section 5.9(b)(5)).

FirstLight notes operational constraints with releasing flows from the tainter gates. Specifically, it states that the minimum releasable flow from each tainter gate is 5,000 cfs. While 5,000 cfs is above the proposed starting flow range of 2,500-3,500 cfs as noted by FirstLight, it would be premature to consider 5,000 cfs as an upper flow limit prior to the first day of evaluation.

Firstlight also raises the concern of boater safety for releases at the tainter gates. It states that the tainter gates present a unique safety concern compared with the bascule gates (i.e., large debris flushing under the gates at speed). While we recognize FirstLight's concern, there are measures that it could implement to ensure boater safety including, but not limited to: (1) a pre-run flush to clear debris that has accumulated directly behind the gate(s), and (2) use of a spotter(s) immediately below the dam to identify and warn boaters of passing debris while releases are occurring. Once releases begin, if boating participants consider the boating opportunity(s) nearest the dam to be unsafe, then boaters may forgo paddling or portage this area, focus on the rest of the bypassed reach, and identify any concerns in the post-run surveys.

Therefore, we recommend, after the first day of flow evaluations, FirstLight consult with boating participants to determine not only the volume of the two additional test flows, but also the gate (including bascule gates 1-4 and tainter gates 1-3) which the test flows would be released. Any releases from the tainter gates should include any necessary measures to ensure boater safety including, at a minimum, the two measures noted above.

Woody Debris

Applicant's Proposed Study

For safety purposes, prior to the boating evaluation, FirstLight proposes to inspect the bypassed reach for rebar, and if found, remove it to the extent possible. However, FirstLight does not propose to remove woody debris because it is a natural and common occurrence on the Connecticut River and would give study participants a false impression of the river under normal circumstances.

Comments on the Study

American Whitewater states that FirstLight should inspect the bypassed reach to determine whether there is any woody debris that might pose a hazard to study

participants. Further, American Whitewater states that fallen trees that are not easily avoided should be moved or removed for the safety of all participants.

Discussion and Staff Recommendation

The Commission has recognized that all whitewater boating poses some risk,[4] yet a reasonable removal of known manmade risk, such as rebar, is appropriate to maintain safety. However, because of the lack of information about whitewater boating in the bypassed reach, it would be exceptionally difficult to know which trees or other woody debris pose a risk and which do not. Therefore, we are not requiring the removal of woody debris from the bypassed reach prior to the study's implementation. However, it would be appropriate to evaluate and identify specific hazards as part of the study. FirstLight should include in its study report areas of the bypassed reach that pose specific hazards, including both natural and manmade hazards. To address this study need, Question 15 of the Single Flow Evaluation Form should be modified to read "***Did you experience any difficulties (e.g., pinned, wrapped boat, swam) or identify any specific risk (e.g., downed trees, woody growth in the river bed) during your run at this flow? Provide a brief description and location of these experiences or identified risks.***"

[4] *Public Utility District No. 1 of Chelan County, Washington*, 119 FERC ¶ 61,055, at P 10 (2007).

Document Content(s)