



September 14, 2015

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: FirstLight Hydro Generating Company, FERC Project Nos. 2485 and 1889
Filing of Updated Study Report

Dear Secretary Bose:

Pursuant to the regulations of the Federal Energy Regulatory Commission (FERC or Commission), Title 18 Code of Federal Regulations (18 C.F.R.) §5.15(f), FirstLight Hydro Generating Company (FirstLight) encloses for filing its Updated Study Report (USR) for the relicensing of its Turners Falls Hydroelectric Project (FERC No. 1889) and Northfield Mountain Pumped Storage Project (FERC No. 2485).

FirstLight is applying for license renewal using the Commission's Integrated Licensing Process (ILP). As part of the ILP, FirstLight has previously filed its Pre-Application Document (PAD) and Notice of Intent (NOI) (October 30, 2012), Proposed Study Plan (PSP) (April 15, 2013), *Updated* Proposed Study Plan (June 28, 2013), Revised Study Plan (RSP) (August 14, 2013), Study Progress Report (July 23, 2014) and Initial Study Report (ISR) (September 15, 2014).

FERC Study Plan Determination

On September 13, 2013, the Commission issued its first Study Plan Determination Letter (SPDL) on 20 of FirstLight's 38 proposed studies and withheld action on the remaining 18 studies until issues relative to the Vermont Yankee (VY) Nuclear facility closure were resolved.¹ The Commission did not act on 18 studies related primarily to fish/aquatic and water quality resources and sought stakeholder input as to whether the study schedules and/or study scopes of the 18 studies could potentially change due to the VY closure. On November 25, 2013, the Commission held a stakeholder meeting to seek input on the study schedules and/or study scopes associated with the remaining 18 studies. On February 21, 2014, the Commission issued its second SPDL on the remaining 18 studies, and amended the proposed schedule for 11 of those studies due to the VY decommissioning.

On March 13, 2014, the United States Fish and Wildlife Service (USFWS) filed for study dispute resolution, requesting that FirstLight conduct an ichthyoplankton entrainment assessment at the Northfield Mountain

¹On August 27, 2013 Entergy Corp announced that the VY facility, located at the lower end of the Vernon Impoundment, would be closing no later than December 29, 2014. VY withdrew water from the Vernon Impoundment (Connecticut River) for cooling purposes.

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Pumped Storage Project. In the end, FirstLight filed an Ichthyoplankton study plan that was approved by the Commission with modifications in its January 22, 2015 Determination Letter. Thus, there are a total of 39 relicensing studies addressed in this USR.

Study Status and Schedule

[Table 1](#) (end of letter) lists the 39 relicensing studies, along with a status update on each study, which indicates one of the following:

- the report is complete and was previously filed with the Commission²,
- the report is complete and is being filed with the Commission as part of this USR, or
- a summary status update is being filed as part of this USR.

Most of the 2015 studies are underway with field data collection and/or analysis on-going. The 2015 field studies have not been completed to a point where reports have been developed. For these studies, the USRs include summary status updates that address the following:

- a study summary and consultation record,
- study progress summary by task,
- variances (if any) from the study plan and schedule, and
- remaining activities.

As reflected in the USRs, the majority of 2015 aquatic studies have ongoing field data collection occurring through the fall of 2015 and a few studies require sampling in the spring and fall of 2016. This includes a suite of fish passage-related telemetry studies for spring and fall migrations of American shad and American eel which involve the analysis of a significant amount of data. The study developed to address Commission and stakeholder information requests regarding migrating adult American shad, for example, resulted in the deployment of over thirty telemetry receivers which will require processing and analysis of several million data points. Also, due to the complexity of modeling required for the Instream Flow study, transect-specific data collection originally planned for the summer of 2015 will not be completed until fall of 2015. The results of the Instream Flow study will need to be incorporated into the results of many of the aquatic studies in order to assess effects of project operations and instream flows on aquatic resources, particularly with respect to aquatic habitat and fish passage. The significant effort required for data analysis for these aquatic studies will affect the schedule for study reporting.

The development of the Northfield Mountain Sediment Management Plan, Study No. 3.1.3, will similarly affect the current schedule for study reporting. FirstLight extended the field data collection efforts for the study into 2015, and also expanded the scope of work for the study. It now includes the development of a 2-dimensional sedimentation model of the upper reservoir intake area; a 3-dimensional sedimentation model of the Connecticut River intake/tailrace area; a physical model of the Connecticut River intake/tailrace area; and a pilot dredge of the upper reservoir, which is ongoing. In order to provide

² There were four previously filed reports as follows:

- Study No. 3.1.1 2013 Full River Reconnaissance (Report filed 9/15/2014, FERC required Addendum filed 2/24/2015);
- Study 3.6.2 Recreation Facilities Inventory (Report filed 9/15/2014, FERC required Addendum filed 6/15/2015);
- Study 3.7.1 Phase 1A (Reconnaissance) Archaeological Survey (Reports, one for Massachusetts and one for New Hampshire/Vermont, filed as privileged on 12/31/2014; Massachusetts Report re-filed with technical revisions based on comments by the Massachusetts Historical Commission on 5/15/2015); and
- Study 3.7.2 Survey and National Register Evaluation of Historic Architectural Resources (Report filed 12/31/2014, re-filed as non-privileged on 1/21/2015, and Appendix C re-filed with modifications based on comments by the New Hampshire Division of Historical Resources on 7/22/2015).

FirstLight sufficient time to conduct the field work, modeling, consultation, and rigorous statistical analysis required to complete the sediment management and aquatics study reports, FirstLight respectfully requests modification to the study report schedule as set forth in the individual USRs. FirstLight's projected completion dates for the remaining studies also appear in [Table 1](#).

FirstLight does not believe that extension of the schedule for completing these studies will impact the overall ILP schedule for relicensing the Projects. Even under the current schedule, several of the studies will not be completed until well after FirstLight files its final license application on April 30, 2016, so FirstLight's application will necessarily be incomplete. Moreover, the Commission has approved TransCanada's request for a one-year license extension. This will extend the schedule for all five Connecticut River projects undergoing relicensing, as the Commission intends to complete a single EIS for the TransCanada and FirstLight projects.

USR Review Process and Schedule Overview

Consistent with requirements under 18 CFR § 5.15(c)(2), FirstLight within 15 days following the filing of this USR will hold a meeting with stakeholders and FERC staff to discuss the study results. On July 21, 2015, FirstLight filed a letter with the Commission notifying stakeholders that the USR meetings will be held on September 29 and 30, 2015, beginning each day at 9:00 am at the Northfield Mountain Visitor Center located at 99 Millers Falls Road, Northfield, MA 01360. On August 26, 2015, FirstLight posted the USR meeting agenda to its website.

Within 15 days following the USR meetings (October 14, 2015), FirstLight will file a USR meeting summary. Any stakeholder may file a disagreement concerning FirstLight's summary, along with any modifications to ongoing studies or new studies proposed, within 30 days (November 13, 2015). FirstLight will then have 30 days (December 14, 2015) to respond to the study disputes. Within 30 days (January 13, 2016) of FirstLight's response, any remaining disagreement will be resolved by the Commission, and the study plan will be amended, if necessary.

Notification of Filing Draft License Application

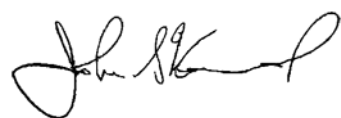
Pursuant to 18 C.F.R. § 5.16(b)(3c), a license applicant may elect to file a Draft License Application (DLA) which includes the contents of a license application required by § 5.18 instead of the Preliminary Licensing Proposal. A potential applicant that elects to file a DLA must include notice of its intent to do so in the USR. Thus, as required by regulation, FirstLight hereby is notifying the Commission and stakeholders of its intent to file a DLA.

USR Availability

FirstLight is filing the USR with the Commission electronically. To access the USR on the Commission website (<http://www.ferc.gov>), go to the "eLibrary" link, and enter the docket number, P-1889 or P-2485, to access the document. FirstLight is also making the USR available for download at the following website: <http://www.northfieldrelicensing.com>.

If you have any questions, or need additional information, please feel free to contact me.

Sincerely,



John Howard

Table 1: Updated Study Report- Study Status Update and Proposed Report Completion Dates

Study No.	Title	Report Complete and previously filed with FERC	Report Complete and filed as part of USR	Summary Status Update	Date Report Uploaded to Website	Proposed Report Completion Date
3.1.1	2013 Full River Reconnaissance	X			09/15/2014 Report 02/24/2015 Addendum	Already filed
3.1.2	Northfield Mountain/Turners Falls Operations Impact on Existing Erosion and Potential Bank Instability			X		3/1/2016
3.1.3	Sediment Monitoring Study			X		9/1/2016
3.2.1	Water Quality Monitoring Study			X		3/1/2016
3.2.2	Hydraulic Study of Turners Falls Impoundment, Bypass Reach and below Cabot		X		03/31/2015	Filed as part of this USR
3.3.1	Conduct Instream Flow Habitat Assessments in the Bypass Reach and below Cabot Station			X		9/1/2016
3.3.2	Evaluate Upstream and Downstream Passage of Adult American Shad			X		9/1/2016
3.3.3	Evaluate Downstream Passage of Juvenile American Shad			X		9/1/2016
3.3.4	Evaluate Upstream Passage of American Eel at the Turners Falls	X (Year 1 Study)		X (Year 2 Study)	03/31/2015 Year 1 Study	3/1/2016
3.3.5	Evaluate Downstream Passage of American Eel (2015 & 2016 study)			X		3/1/2017
3.3.6	Impact of Project Operations on Shad Spawning, Spawning Habitat and Egg Deposition in the Area of the Northfield Mountain and Turners Falls Projects			X		3/1/2016
3.3.7	Fish Entrainment and Turbine Passage Mortality Study			X		10/1/2016
3.3.8	Computational Fluid Dynamics Modeling in the Vicinity of the Fishway Entrances and Powerhouse Forebays			X		12/1/2015
3.3.9	Two-Dimensional Modeling of the Northfield Mountain Pumped Storage Project Intake/Tailrace Channel and Connecticut River Upstream and Downstream of the Intake/Tailrace			X		12/1/2015
3.3.10	Assess Operational Impacts on Emergence of State-Listed Odonates in the Connecticut River		X (Year 1 Interim Report)	X (Year 2 Study)	04/02/2015 Interim Report	3/1/2016
3.3.11	Fish Assemblage Assessment			X		3/1/2016
3.3.12	Evaluate Frequency and Impact of Emergency Water Control Gate Discharge Events and Bypass Flume Events on Shortnose Sturgeon Spawning and Rearing Habitat in the Tailrace and Downstream from Cabot Station			X		3/1/2016

Study No.	Title	Report Complete and previously filed with FERC	Report Complete and filed as part of USR	Summary Status Update	Date Report Uploaded to Website	Proposed Report Completion Date
3.3.13	Impacts of the Turners Falls Project and Northfield Mountain Project on Littoral Zone Fish Habitat and Spawning Habitat			X		6/1/2016
3.3.14	Aquatic Habitat Mapping of Turners Falls Impoundment		X		06/30/2015	Filed as part of this USR
3.3.15	Assessment of Adult Sea Lamprey Spawning within the Turners Falls Project and Northfield Mountain Project Area			X		6/1/2016
3.3.16	Habitat Assessment, Surveys, and Modeling of Suitable Habitat for State-listed Mussel Species in the CT River below Cabot Station			X		3/1/2016
3.3.17	Assess the Impacts of Project Operations of the Turners Falls Project and Northfield Mountain Project on Tributary and Backwater Area Access and Habitat		X		06/30/2015	Filed as part of this USR
3.3.18	Impacts of the Turners Falls Canal Drawdown on Fish Migration and Aquatic Organisms		X		03/31/2015	Filed as part of this USR
3.3.19	Evaluate the Use of an Ultrasound Array to Facilitate Upstream Movement to Turners Falls Dam by Avoiding Cabot Station Tailrace			X		3/1/2017
3.3.20	Ichthyoplankton Entrainment Assessment at the Northfield Mountain Project			X		3/1/2016
3.4.1	Baseline Study of Terrestrial Wildlife and Botanical Resources			X		12/31/2015
3.4.2	Effects of Northfield Mountain Project-related Land Management Practices and Recreation Use on Terrestrial Habitats		X		06/30/2015	Filed as part of this USR
3.5.1	Baseline Inventory of Wetland, Riparian and Littoral Habitat in the Turners Falls Impoundment, and Assessment of Operational Impacts on Special-Status Species			X		12/31/2015
3.6.1	Recreation Use/User Contact Survey			X		12/31/2015
3.6.2	Recreation Facilities Inventory and Assessment	X			09/15/2014 Report 06/15/2015 Addendum	Already filed
3.6.3	Whitewater Boating Evaluation		X		03/31/2015	Filed as part of this USR
3.6.4	Assessment of Day Use and Overnight Facilities Associated with Non-Motorized Boats		X		03/31/2015	Filed as part of this USR
3.6.5	Land Use Inventory			X		12/31/2015
3.6.6	Assessment of Effects of Project Operation on Recreation and Land Use			X		6/30/2016

Study No.	Title	Report Complete and previously filed with FERC	Report Complete and filed as part of USR	Summary Status Update	Date Report Uploaded to Website	Proposed Report Completion Date
3.6.7	Recreation Study at Northfield Mountain, including Assessment of Sufficiency of Trails for Shared Use		X		06/30/2015	Filed as part of this USR
3.7.1	Phase 1A, 1B and II Archaeological Surveys	X			Privileged Reports; not posted to website	Already filed (Phase 1A only)
3.7.2	Survey and National Register Evaluation of Historic Architectural Resources	X			1/20/2015 Report; 7/22/2015 Revised Appendix C	Already filed
3.7.3	Traditional Cultural Properties Study		X		03/31/2015	Filed as part of this USR
3.8.1	Evaluate the Impact of Current and Proposed Future Modes of Operation on Flow, Water Elevation and Hydropower Generation			X		3/1/2017