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FISH AND WILDLIFE SERVICE

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In Reply Refer To: FERC Nos. 1904-073, 1855-045, and 1892-026
TransCanada Hydro Northeast Inc.
Connecticut River
COMMENTS ON UPDATED STUDY REPORT

November 13, 2014

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, DC 20426

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FEDERAL ENERGY
REGULATORY COMMISSION

Dear Secretary Bose:

This responds to the Updated Study Report (USR) submitted by TransCanada Hydro Northeast Inc. (TC) on September 14, 2015 as part of the relicensing of the Vernon, Bellows Falls and Wilder projects, located on the Connecticut River in New Hampshire and Vermont. On October 1 and 2, 2015, TC held meetings to discuss the USR and TC submitted its USR meeting minutes to the Federal Energy Regulatory Commission (FERC) on October 14, 2015. We have reviewed the USR and the USR meeting minutes and offer the following comments.

INCOMPLETE STUDIES

The majority of study reports for the Vernon, Bellows Falls and Wilder projects are incomplete and the USR provides only an update on study progress to date. The amount of information included in the USR varies from report to report. To a large extent, we are withholding written comments on the incomplete studies pending receipt of the final reports, including all data and data analysis. At the USR meeting and similar meetings for First Light Power Resources' Turners Falls and Northfield Mountain Pumped Storage projects on September 29 and 30, 2015, FERC staff indicated that it was acceptable to delay commenting on incomplete studies, while also noting that it would accept comments on incomplete reports.

We note that although some reports were defined as "final" by TC, some of these, like the tributary access study will require additional analysis upon completion of final study reports on associated studies such as the instream flow and fish passage studies. Therefore, it is possible that after the review of all study reports, additional comments and/or requests for more information or study may be appropriate at a later date relative to the studies with "final" reports.

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Below are comments on final study reports and a few incomplete studies.

STUDY 13: TRIBUTARY AND BACKWATER FISH ACCESS AND HABITATS STUDY

We support the New Hampshire Fish and Game Department's (NHFGD) comments on this study dated November 10, 2015. It was previously agreed upon between resource agencies and TC that water depth less than 0.5 feet would be considered inadequate access for fish to enter tributaries and backwater from the mainstem river. However, in the USR, TC defines inadequate access for fish entering into tributaries and backwaters from the mainstem as depth less than 0.5 feet occurring more than 25 percent of the time and only examined sites that met those criteria to determine the negative effects of project operations. The U.S. Fish and Wildlife Service (Service) believes it is inappropriate for TC to have used this pre-screening tool absent stakeholder consultation and approval, as it represents a deviation from the Study Plan Determination. We recommend that TC re-analyze the data using the original criterion and provide those results in the report.

Additionally, this study was performed between late July and mid-November 2014, excluding spring time data. We feel that it is important to include an assessment of spring time conditions and request that TC investigate whether it is possible to extrapolate data from various other studies to determine if fish access was limited (less than 0.5 feet for any period of time) during spring of 2014 at all 37 study sites examined in Study 13. If data cannot be extrapolated to determine if fish access at the 37 sites was limited during the spring spawning period, the Service requests that Study 13 be performed again during the spring of 2016.

STUDY 14: RESIDENT FISH SPAWNING IN IMPOUNDMENT STUDY AND STUDY 15: RESIDENT FISH SPAWNING IN RIVERINE SECTIONS STUDY

The NHFGD submitted comments and recommendations on these two studies by letter dated November 10, 2015. In their letter, NHFGD identifies the concern that sampling for spawning by walleye, northern pike, chain pickerel, black crappie golden shiner, spottail shiner and possibly white sucker was geographically and/or temporally inadequate. Given that these are reasonably common species in the project area and the project operations have the potential for adversely affecting spawning by these species due to flow and or impoundment level fluctuations, it is imperative that robust spawning data are gathered for use in the analysis of project impacts. Therefore, we fully support NHFGD's comments and their recommendations for additional analysis and, if needed, a repeat of the study in the spring of 2016.

STUDY 17: UPSTREAM PASSAGE OF RIVERINE FISH SPECIES

At the USR meeting, we noted the concern raised by our fishway engineer that, based on a site visit on September 4, 2015, the attraction water and pool-to-pool flows in the Wilder ladder appeared to be outside of normal operational parameters. These conditions could have impacted passage counts, especially for poorer swimming fish (juveniles, eels, etc.). Our engineer noted:

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- the Ice Harbor fishway is designed for ~11" of drop per pool; however the drop varied greatly from pool to pool; some drops look insurmountable for weaker swimming riverine species; the cause is likely blockages in the submerged orifices and/or degradation of the weir crests; and
- at capacity, the attraction water system appears to be designed to feed two or three entrances; the study used only one entrance (shore side, right river) and too much flow is running through that entrance. Visually, the flow in the collection gallery was estimated to be between 6 and 8 feet per second (fps) and the velocity outside of the entrance was over 8 fps.

TC indicated that they would provide a discussion on the ladder operation parameters in their final report. We will withhold final comments until we review the final report for the entire passage season, but the passage data and/or response on operational issues may indicate that there is a need for additional summer/fall passage counting under appropriate ladder operation conditions.

STUDY 18: AMERICAN EEL UPSTREAM PASSAGE ASSESSMENT

The 2015 eel passage monitoring consisted of nighttime visual surveys, setting of eel pots in locations below the three projects and monitoring eel passage through the existing fishways. The deployment of temporary eel ramp traps was contemplated as part of this study, but no traps were deployed because no areas of sufficient eel concentration were identified in the visual surveys or eel pots.

In late August, the agencies agreed to the suspension of eel pot deployment, as eel pots were not capturing eels, even in locations where eels were otherwise observed, like in the Vernon ladder entrance area. Sampling and fish counting continued after issuance of the USR and those data have not yet been provided.

The fish counting at Vernon indicated large numbers of eels were attempting to use the existing fish ladder for upstream passage. However, the efficiency of that ladder in passing eels is not known. The ladder was running all summer and fall in 2015 as part of the resident fish passage study. The final report on that study has not been completed and whether the ladder will be operated through summer and fall under a new license has yet to be determined.

Since ladder operation may or may not occur through the eel upstream passage period in 2016 or under a new license, eel passage in the absence of ladder operation must be assessed. Such a study would assess whether a trapping facility could offer interim or permanent eel passage at the projects. In 2016, if the ladders are not operated, temporary eel ramp traps should be installed in the lower sections of the three project fish ladders. These temporary ramp traps should be operated and monitored from the time when the fish ladders are closed for anadromous fish passage through the end of the eel migration season.

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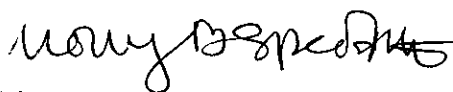
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The design of and attraction flow used for the in-ladder eels traps have not been determined. To the extent that the ramp trap evaluations release less attraction flow than currently used to operate the ladders, attraction to the ladder entrances may be lower, and more eels may seek alternate passage routes. To assess any changes in attraction to the traps versus the full ladder operation, at least some visual observations should be repeated in 2016 simultaneously with trap operations. These surveys can be focused on general periods of higher eel observations and ladder counts.

Thank you for the opportunity to comment on the revised study plans. If you have any questions regarding these comments, please contact Mr. John Warner of this office at 603-223-2541.

Sincerely yours,

Acting
for



Thomas R. Chapman
Supervisor
New England Field Office

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