

December 30, 2016

**FERC Project No. 2572
Article 402**Kimberly S. Bose, Secretary
Federal Energy Regulatory Commission
Mail Code: DLC, HL-11.2
888 First Street, N.E.
Washington, D.C. 20426**RE: Follow-up to Minimum Flow Deviation at the Ripogenus Project;
Update on McKay Station Braking System**

Dear Secretary Bose:

On May 23, 2016, Great Lakes Hydro America, LLC (GLHA), licensee for the Ripogenus Project (FERC Project No. 2572) in Maine, reported to the Commission a May 13, 2016 reduction in outflow from the Project's McKay Station to the West Branch of the Penobscot River. The excursion detailed in this report resulted from both an unscheduled interruption in generation at McKay Station (due to a transmission line failure) and a malfunction of the station's minimum flow system (which is intended to provide a 400 cfs flow during station outages). As described in the report, GLHA promptly reacted to the excursion by opening two crest gates at Ripogenus Dam and by repairing the triggering transmission line pole cross arm failure. GLHA also undertook additional remedial measures to prevent a recurrence, including:

- Replacement of poles and cross arm components as part of GLHA's long-term maintenance strategy for the transmission line.
- Added a second braking system to Unit #1 (and Unit #2) to increase the clamping force on the units and better ensure that the minimum flow system (which is designed to ensure continued outflow of 400 cfs during a station outage) functions properly.
- Keeping a sluice gate open at Ripogenus Dam until testing demonstrates that the minimum flow system will function properly during any subsequent station outages (to provide the required 400 cfs minimum flow).

GLHA stated that it intended to test the second braking system at higher impoundment levels and under conditions that exceed normal operating parameters. Although this braking system had functioned properly during testing in December 2015, GLHA believes that a higher current impoundment level contributed to the May 13, 2016 malfunction, due to the increased forces needed to stop the units under the greater head.

On August 30, 2016, the Commission acknowledged GLHA's report on the May 13, 2016 event, and concluded that the deviation in minimum flow release was caused by equipment failure; thus, the Commission would not consider the deviation to be a violation of Article 402 of the Ripogenus FERC license. However, the Commission did request (by December 31, 2016) a status report on the development of the new braking system at McKay Station. The intent of this correspondence is to provide this requested update to the Commission on the braking system.

Work on the minimum flow system at McKay Station is ongoing and is expected to continue into 2017. Since this work is ongoing, GLHA has maintained spill from Ripogenus Dam to ensure that the minimum flow (400 cfs) is maintained in the event of a station outage. Details on the minimum flow system upgrades are as follows:

- A second braking system was added to Units #1 and #2 to increase the clamping force on the units.
- All air piping to the units is being replaced, with Unit #1 complete; Units #2 and #3 are expected to be completed in January, 2017.
- All oil piping to the units is being replaced that could directly affect the brake system. Unit #1 is complete, and Units #2 and #3 are expected to be completed in January, 2017.
- The brake pads and discs are being thoroughly cleaned and inspected on each of the units.

Once this work is complete, the brake systems on these units will be individually tested for holding effectiveness. In addition, this testing will be performed biannually to verify functionality of the minimum flow system. In the meantime, GLHA will keep a gate open at Ripogenus Dam until it is confident that the minimum flow system will function properly and provide the minimum flow during a station outage.

Unfortunately, the drought conditions in the summer and fall of 2016 have resulted in low Ripogenus impoundment water levels. This has made it impossible to test this system under higher impoundment levels, i.e., simulate the May 2016 conditions under which the system did not function properly (due to the increased forces needed to stop the units under a greater head). Although testing is being conducted under current water level conditions, GLHA will not be able to fully test the minimum flow system until water levels recover, hopefully after the spring 2017 run-off. Therefore, GLHA intends to provide the Commission with a second status report on the minimum flow system upgrades and testing **by June 30, 2017**.

Please feel free to contact me at (207-723-4341, x118) if you have any questions or comments.

Sincerely,



Kevin Bernier
Senior Compliance Specialist

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