

**Redacted Information In
New Hampshire PUC
Docket # DE 12-278
(Second Item)**

Identify the four improvements that have had the greatest impact on the increased electricity production at the Hopkinton Project, describe the causal connection between these specified improvements and the increases in production, and provide a good faith estimate of the quantity of increased production to each improvement (either in KWh or on a percentage basis).

This plant was in [REDACTED] condition when it was bought by Contoocook Hydro, LLC.

Nearly all of the investments could be viewed as efficiency improvements that increased electricity production.¹ Of the nearly 70 improvements made, the dam improvements, the leaf boom, the exhaust fans and the pond level sensor probably had the greatest impact on the increased electric production.² Each of these improvements did not exist prior to 2008. Contoocook made or installed them. Each item helped materially to increase electric production, particularly for the months of July through November.

Prior to 2008 the dam had [REDACTED] leaks in its structure. Water that could have flowed through the turbines was seeping under, through and over the dam particularly during low flow periods. The leaf boom continuously diverts leaves, grass and other debris away from the turbine intakes. There is now very little manual raking of the trash racks. The air compressor is used to blow the racks clean. The exhaust fans brought the interior temperature below 130°F, preventing false trips to the over-heating protection system. The pond level sensor shuts the station down automatically on low pond levels. Previously, the station would continue to drain the pond when left unattended overnight or on weekends.

The demonstrated results are that, in the July-November period from 1995 through 2007, the station generated an annual average production of 136 MWh. Since 2009 through 2012, generation during this same time period averaged 335 MWh, for a 147% increase.

¹ A list of such investments was supplied already to the Commission when the Applicant replied to Items 1 and 4 of the Second Request for Additional Information.

² Of the other improvements, they reduced downtime and, thus, increased production. Given the sheer number of improvements and their breadth and scope, it is impossible to determine accurately the individual impact of any one improvement.