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17 May 2013

The Honourable Minister Jim Bradley
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Dear Sirs:

Re: Trout Lake River Hydro Proposal – Part II Order Request

Ontario Rivers Alliance (ORA) is a Not-for-Profit grassroots organization with a focus on healthy river ecosystems all across Ontario. ORA members represent numerous organizations such as the French River Delta Association, CPAWS-Ottawa Valley, Friends of Temagami, Council of Canadians, Whitewater Ontario, Vermilion River Stewardship, Mississippi Riverwatchers, along with many other stewardships, associations, and private and First Nations citizens, who have come together to support healthy river ecosystems in Ontario and to ensure that development affecting Ontario rivers is environmentally, ecologically and socially sustainable.

Please note that all underlined text contained in this letter is ORA's emphasis, used strictly to draw the reader's attention.

Summary of Recommendations:**Recommendation 1:**

After having carefully reviewed the information as presented, and in consideration of all the concerns and recommendations as set out in this letter, ORA is requesting a Part II Order be issued to elevate this proposal to an Individual Environmental Assessment.

Recommendation 2:

ORA is requesting that Horizon be required to

- a. Provide supporting documentation to show how and when the NamekosipiiwAnishinaapek were consulted;
- b. Provide supporting documentation that confirms how the issues in Table 3.27 were resolved, and
- c. Fulfill their duty to consult with the NamekosipiiwAnishinaapek before a Statement of Completion is issued.

Recommendation 3:

ORA requests that the proponent be required to complete a comprehensive methylmercury study that will examine all of the above identified factors existing within the proposed headpond area, including soil and sediment, to provide a quantitative analysis and a projected post-construction estimate of increased mercury levels in fish tissue.

Recommendation 4:

A socio-economic impact study be undertaken to understand the net costs, both short-term and long-term, to potentially affected stakeholders who rely on fishing as an economic driver, and for First nations who rely on fish as a main staple in their diets.

Recommendation 5:

ORA requests that Horizon be required to adhere to the recommendations of the Class EA for Waterpower, and incorporate fish passage into the project design to allow fish to migrate freely upstream and downstream.

Recommendation 6:

ORA requests fish friendly turbines to reduce fish mortality.

Recommendation 7:

Decommissioning provisions be required up-front in the event the facility is no longer socially, environmentally or economically sustainable and needs to be removed.

Recommendation 8:

If this facility is built as suggested, it would be capable of a cycling or peaking operating strategy, and should therefore either eliminate the headpond to fit the definition of run-of-river, or redefine their project and be required to expand their zone of influence and environmental assessment to take this possibility into account.

1. First Nation Consultation:

For the purposes of this letter, whenever reference is made to the Trout Lake Community, people, Anishinaabe, or adhesion community, ORA is referring to the

NamekosippiwAnishinaapek.

It is very difficult to properly assess and comment on whether the prescribed First Nation consultation has properly taken place when not all related correspondence and documentation are included, or when it has been dissected, summarized, and taken out of context. However, the ER stated, "*Consultation with Lac Seul First Nation including their "adhesion community" at Trout Lake.*"¹ Also, "*Prior to the meeting, it was noted that Treaty #3 was signed by Lac Seul FN in 1872 and that their "adhesion community" at Trout Lake also signed the treaty in 1874. The Trout Lake Community no longer exists, but some FN encampments may happen seasonally."*"²

The ER reports the following response to the Notice of Inspection, "*I am writing to you out of concern for Horizon's proposed hydro project at Big Falls. I urge you to stop your steps toward the project immediately. The First Nations people of Trout Lake are concerned about the impact of this project on their lands and water. Their concerns need to be addressed, and their understanding of what needs to happen on those lands should be given high priority in decision making. It is indeed the job of the MNR to consult properly before licenses are granted, but experience shows that their assessment may not include some very important voices of people who have called Trout Lake home for many, many generations. These same people have been struggling to feel free on their lands which are their homes and sacred places. In this time of climatic change, alternatives to dirty generation are very important. But this should not take precedent over the wishes of the Trout Lake Anishinaabe.*"³

Also, "*A self-declared spokesperson for the Trout Lake community voiced opposition to the project including inadequate project related consultation for the Trout Lake Community.*"⁴ Horizon's response was, "*Horizon notes that three meetings were held with Trout Lake community members since 2007 (including the one held by the peer review team) to discuss the project in addition to meetings in Frenchman's Head, sharing of information with Lac Seul Chief and Council, and the creation of a project website (www.troutlakehydro.ca). No further community meetings have been requested.*"

The actual dates that the Trout Lake Community were consulted is not clearly indicated in the Environmental Report, so it is difficult to know on which dates these three consultation meetings took place. Also, it is not up to the Trout Lake Community to request a meeting – it is up to Horizon to properly fulfill their duty to consult.

The ER states, "*On October 15, 2007, a letter was received from the MAA. MAA provided a list of First Nations that could be impacted by or interested in the Project and should be contacted. This letter has been included in Appendix C11.*"⁵ Unfortunately this letter was not present in Appendix C11. ORA would be very interested to see the letter to know whether the Trout Lake Community was listed as a First Nation community to be contacted.

Table 3.13 indicated, "*Advised that Lac Seul First Nation would be meeting with Band members from the Red Lake/Trout Lake area to discuss the Project.*"⁶ Was Horizon relying on Lac Seul First Nation to consult with the Trout lake Community?

¹ Table 3.8 Issues Raised by the MNR During August 15, 2007 Meeting Issue, P3-23,

² Appendix C8, P3 – Agenda Item 9 – First Nation and Public Consultation, j)

³ 3.3.1.8 Responses to the Notice of Inspection, P3-21

⁴ Table 3.27 Lac Seul First Nation Peer Review Comments/Concerns, P3-71 to 3-73

⁵ 3.5.3.2, Responses to the Notice of Commencement, P3-48

⁶ 3.5.3.2, Table 3.13 Responses/Issues Raised by Aboriginal Community Members Following the Notice of Completion, P-3-48

In Table 3.27 under the “Issue Status” column it states “Resolved” in 14 out of 17 instances, and yet there is no clear and traceable means to know how and if these issues were resolved.

As a result of a lack of documentation in the ER, it is difficult to get a clear picture of why the Trout Lake Community was not adequately consulted. It is disturbing to note that the Trout Lake Community were identified as an “adhesion community” with interests in this proposal; and at least one of their people, that we know of, declared their opposition to the project, and informed Horizon that there had been “*inadequate project related consultation for the Trout Lake Community*”.

Recommendation 2:

ORA is requesting that Horizon be required to

- d. Provide supporting documentation to show how and when the NamekosipiwAnishinaapek were consulted;
- e. Provide supporting documentation that confirms how the issues in Table 3.27 were resolved, and
- f. Fulfill their duty to consult with the NamekosipiwAnishinaapek before a Statement of Completion is issued.

2. 4.2.5.4 - Mercury in Fish Tissue

The potential for methylmercury production in the headpond, and any resulting elevations of mercury levels in fish tissue, or increased fish consumption restrictions, has not been properly assessed in this ER. Since this proposal involves a headpond that inundates a wetland area, and mercury levels in fish tissue above the proposed dam location are already elevated and carry consumption restrictions, it is imperative that a full mercury projection study be performed.

A report resulting from the Experimental Lakes Area Reservoir Project (ELARP), entitled “*Impacts of Reservoir Flooding 1991 to Present, states, “This study demonstrated dramatic increases (10X to 20X) in both methyl mercury and greenhouse gases (carbon dioxide and methane) production in response to flooding of wetland vegetation. Clearly, the microbial breakdown of dead plants and organic soils resulted in the methylation of mercury already present in the system, and the production of significant quantities of carbon dioxide and methane.”* Horizon’s ER also reports “*MeHg generation rates were highest from the moderate C forest and lowest in the Low C forest. The annual export of methylmercury from the reservoirs was up to 13 times the pre-flood rates, with concentrations peaking in the second year and decreasing in the third year. Comparatively, these upland reservoirs had significantly lower MeHg generation rates and correspondingly lower MeHg levels in surface waters than did flooded peat lands in the ELARP experiment (Bodaly et al., 2004).”*”⁷

Another ELA study indicated, “In summary, our study confirmed the results of previous studies that flooding of terrestrial catchments invariably results in large increases in MeHg concentrations in zooplankton. Although initial increases in MeHg concentrations in zooplankton were not correlated with the amount of flooded terrestrial C in each catchment, the duration of elevated MeHg increased with C stores. The magnitude and

⁷ 6.3.6.2, Methyl Mercury – Application to Project Head Pond, P6-30

duration of changes in zooplankton MeHg were most strongly determined by changes in MeHg in unfiltered water but were also modified by changes in water chemistry, especially DOC.”⁸

The ER even points out, “As noted above, the production of methyl mercury in reservoir systems is largely governed by the amount and type of organic matter inundated. The ultimate concentration of mercury in aquatic organisms within these environments depend on a number of factors including: biological and chemical characteristics of the water body and sediment-water interface, including pH, dissolved oxygen, oxidation-redox potential, sulphate concentrations, etc, which affect the potential for and rate of bacterial decomposition and methylmercury generation and transfer from sediments to the overlying water.”⁹ All these factors must be taken into account within a study – not just a quick desktop calculation.

Mercury levels have already been a major issue for the Grassy Narrows First Nation, and any additional increase in mercury in fish tissue could make this main dietary staple unavailable for a large portion of several aboriginal communities. A comprehensive study must be completed before the Statement of Completion is issued so there are assurances that this project will not result in increased mercury levels in fish tissue, and result in a further risk to public health and safety. It is not sufficient to wait for adaptive management strategies, which would be much too late, when this main staple would already have been lost to several First Nation communities. ORA submits that this is not acceptable.

This is a public health and safety issue that must take precedence over all other considerations.

Recommendation 3:

ORA requests that the proponent be required to complete a comprehensive methylmercury study that will examine all of the above identified factors existing within the proposed headpond area, including soil and sediment, to provide a quantitative analysis and a projected post-construction estimate of increased mercury levels in fish tissue.

Recommendation 4:

A socio-economic impact study be undertaken to understand the net costs, both short-term and long-term, to potentially affected stakeholders who rely on fishing as an economic driver, and for First nations who rely on fish as a main staple in their diets.

3. Fish Friendly Turbines and Fish Passage

No fish passage or fish friendly turbines have been included in this project design. Section 22(2) of the Fisheries Act states, “The design of the dam and/or other barriers must allow for the safe passage of both ascending and descending migratory fish.”¹⁰ Also, the Class EA for Waterpower recommends that waterpower structures “incorporate fish passage structures into project design where appropriate.”¹¹

⁸ Changes in methyl mercury concentrations in zooplankton from four experimental reservoirs with differing amounts of carbon in the flooded catchments, Britt D. Hall, Katharine A. Cherewyk, Michael J. Paterson, and R. (Drew) A. Bodaly

⁹ 4.2.5.1 Mercury in Fish Flesh, P4-199

¹⁰ Class EA for Waterpower, Table 1 Key Legislative Considerations for a Waterpower Project, P-14

¹¹ Class EA for Waterpower, Appendix B: Examples of Typical Mitigation, 1.6 FISH AND WILDLIFE, P-91

Recommendation 5:

ORA requests that Horizon be required to adhere to the recommendations of the Class EA for Waterpower, and incorporates fish passage into the project design to allow fish to migrate freely upstream and downstream.

Recommendation 6:

ORA requests fish friendly turbines to reduce fish mortality.

4. Dam Decommissioning

Ontario is littered with old and derelict dams that are no longer in use, along with access roads, and in the case of hydro dams, transmission lines and poles that must be monitored and maintained (at a cost, usually to the taxpayer), and ultimately removed for safety and/or ecological reasons. This all takes dollars that taxpayers should not have to pay. Developers reap the rewards for at least the 40 year life cycle of their contract, and a portion of these funds must be secured for dam decommissioning.

If the FIT Program were to be terminated, profits reduced, or costly repairs were needed due to damage caused by ice or flooding, or if climate change reduced the amount of water available for energy production, the payback from these small rivers could make this facility unprofitable. This could result in bankruptcy and/or abandonment. There is no commitment in this ER for setting provisions aside to decommission the facility and its infrastructure if events such as the foregoing should occur. Provisions for dam decommissioning are essential.

Recommendation 7:

Decommissioning provisions be required up-front in the event the facility is no longer socially, environmentally or economically sustainable and needs to be removed.

5. Run-of-River

This ER claims that the project would operate as a run-of-river hydroelectric proposal; however, ORA questions this when Horizon is proposing a gross head of 18.8 m, and an inundated area that will extend approximately 1.7 km, with a total headpond area of 15.8 ha – of which 6.3 ha is newly inundated land. Up until a short time ago, Ministry of Energy had a definition of run-of-river on their website that read, *“Run-of-River: A run-of-river facility uses only the natural flows in the river as they are available for generation. Therefore, all flow in the river is either passed through the plant, or partially released around the plant if the flow exceeds the capacity of the plant.”*

Natural Resources Canada’s RETScreen textbook states, *“Run-of-river” refers to a mode of operation in which the hydro plant uses only the water that is available in the natural flow of the river, as depicted in Figure 6. “Run-of-river” implies that there is no water storage and that power fluctuates with the stream flow.*¹²

¹² RETScreen International – Clean Energy Project Analysis: RETScreen Engineering & Cases Textbook, Small Hydro Project Analysis – Natural Resources Canada, P-11



Figure 6.
*Run-of-River Small
Hydro Project in a
Remote
Community.*

Photo Credit:
Robin Hughes/PNS

ORA submits that this facility as designed is not a run-of-river operation, as it meets neither of the above definitions.

Recommendation 8:

If this facility is built as suggested, it would be capable of a cycling or peaking operating strategy, and should therefore either eliminate the headpond to fit the definition of run-of-river, or redefine their project and be required to expand their zone of influence and environmental assessment to take this possibility into account.

Conclusion:

After having carefully reviewed the information as presented, and in consideration of the lack of due diligence to properly consult with and resolve the issues of the Trout Lake Community, as well as the potential health and safety risks to First Nation communities, ORA is requesting a Part II Order be issued to elevate this proposal to an Individual Environmental Assessment.

ORA also requests that the Minister consider each of the recommendations we have set out above.

Thank you for this opportunity to comment. ORA looks forward to your response.

Respectfully,

A handwritten signature in black ink, appearing to read "L. Heron".

Linda Heron
Chair, Ontario Rivers Alliance

Cc: Kaaren Dannenmann, Trout Lake
John Paul Kejick, Red Lake