



June 29, 2012

SaveTheBalaFalls.com
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Re: Peer Review of The Addendum Report for the North Bala Small Hydro Project, Prepared by Hatch Energy

Attached, please find our peer review of the abovementioned report. Should you have any questions regarding our review, please contact the undersigned.

Yours sincerely,

Dillon Consulting Limited

A handwritten signature in black ink, appearing to read "Mario Buszynski".

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Limited**



*Peer Review of Swift River Energy Limited's
Environmental Screening / Review Report and Addendum
for the North Bala Small Hydro Project*

*Submitted by: Dillon Consulting Limited
<http://www.dillon.ca>*

June 2012

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1.0 Introduction

Dillon Consulting Limited (Dillon) was retained by *Save the Bala Falls.com* to undertake a peer review of the Environmental Screening / Review Report and Addendum prepared for the North Bala Small Hydro Project. The Notice of Completion for this project was filed in October 2009 as per the requirements of the *Electricity Projects Regulation (O. Reg. 116/01)*. Subsequently, during the appeal period, the Director of the Environmental Assessment and Approvals Branch (EAAB) received numerous appeals which the Director ultimately denied. The Director's decision was appealed to the Minister of the Environment and the Minister, after reviewing the appeals, supported the Director's decision.

After submission of the Environmental Screening / Review Report, Swift River Energy Limited (SREL) proposed to change the project location and the operational regime for the facility from that approved by the Ministry of the Environment (MOE). SREL has submitted an Addendum Report, using the "Addendum Provisions" outlined in section B.5.2 (pages 50 through 52) of the MOE's *Guide to Environmental Assessment Requirements for Electricity Projects (MOE, January 2011)*, referred to as *the Guide*.

Since the Minister of the Environment supported the Director's decision with respect to the Environmental Screening / Review Report submitted for the original project, the focus of the peer review will not be on the adequacy of that document (and appendices) to support the Minister's decision but rather the adequacy of that document and Addendum Report to support approval of the new project location and operating regime.

The purpose of the peer review thus is:

- To comment upon how adequately the proponent followed the Environmental Assessment (EA) process throughout the course of the study;
- To comment upon the adequacy of the baseline data;
- To comment upon the adequacy of the effects assessment, including mitigation and monitoring; and,
- To recommend to *Save the Bala Falls.com* whether the Addendum sufficiently meets the requirements as outlined in section B.5.2 (Addendum Provisions) of the Guide or whether *Save the Bala Falls.com* should request that the modification to the project be elevated to an Environmental Review or an Individual EA.

The focus of Dillon's work will be on the Addendum Report, however, the main documents will be referred to as they relate to the new alternative which is now being proposed.

While we will generally not comment on spelling and typographical errors, we would like to point out that in the October 2009 Main Report prepared by Hatch Energy the cover page indicates that it is "Rev 1," while subsequent footers in the report identify it as "Rev. 0."

We would also point out that it is common practice in the industry to refer to the report as an “Environmental Review Report or ERR”. The Hatch Energy report refers to the document as an “ESR” in the footer, an “Environmental Screening/Review Report” on the cover page and an “ES/RR” in the main body of the report. Our peer review will refer to the document as an ERR or by name as the Addendum Report.

A large amount of information has been collected by the proponent during the conduct of the study and there have been numerous consultation opportunities offered by the proponent during the process. The purpose of the peer review is not to focus on all of the good work that was undertaken but to determine if, in fact, the new alternative (1A) is a new project and if the studies undertaken in the Addendum Report adequately meet the requirements of the MOE’s Environmental Screening Process.

In order to complete the peer review, the following sources of information were used:

- Hatch Energy, Swift River Energy Limited Environmental Screening/Review Report, Volume 1 – Main Report, North Bala Small Hydro Project, Rev. 1, October 2009.
- Hatch Energy, Swift River Energy Limited Environmental Screening/Review Report, Volume 2 – Appendices, North Bala Small Hydro Project, Rev. 1, October 2009.
- Hatch Energy, Swift River Energy Limited Environmental Screening/Review Report - Addendum, North Bala Small Hydro Project, Rev. 2, May 2012.
- Ministry of the Environment, Guide to Environmental Assessment Requirements for Electricity Projects, January 2011.
- Ministry of Natural Resources (MNR), A Class Environmental Assessment for MNR Resource Stewardship and Facility Development Projects, 2003.

2.0 EA Process

In the Main Report (Section 1, Page 1-1), the proponent indicates that the document addresses: (1) an environmental screening under O. Reg. 116/01; (2) a screening level EA under the Canadian Environmental Assessment Act (CEAA); and (3) information to assist in an application for an amendment to the Muskoka River Water Management Plan.

At the time when this project was being planned, the government lands associated with the project were managed by the Ontario Realty Corporation (ORC), now Infrastructure Ontario (IO). No mention of the ORC/IO Class EA process was mentioned in the main Report, nor was the public informed as to how the Class EA process was being addressed. The Addendum Report is also silent on this matter, although the government lands were transferred from the ORC/IO to the MNR in 2011 and some mention should have been made as to how the MNR Class EA process was being addressed. This becomes more significant as evidenced by the amount of government land required for temporary equipment storage/laydown / parking that will displace existing recreational uses in what can only be described as a tourist town that derives most of its economic base (including employment) from tourism.

The proponent's Screening of Effects, provided in section 4, commencing on page 19 of the ERR Addendum makes improper use of the application of the screening criteria. In section B.2.2, page 29 of the Guide, it states:

"Mitigation measures are not to be considered in concluding that there is "No" potential negative environmental effect. That is, if the proponent determines that there is a potential environmental effect, but that the effect could likely be addressed through mitigation, the proponent is required to answer "Yes" to the question. This approach will ensure that the potential environmental effects of a project and the proponent's proposed plans and methods for mitigating and managing any impacts are open to discussion and review by all interested and affected public and agency stakeholders, and that the proponent has made a binding commitment to implement mitigation measures."

In section 4, page 19 of the Addendum Report, it states *"The potential for negative effects is assessed on the basis that the mitigation previously identified in the ES/RR (Hatch Energy, 2009) would remain in place for the proposed modifications (if applicable)."* Furthermore, in the same section the proponent states that *"The following sections provide a summary of the difference(s) between the project as proposed in the ES/RR and the proposed modifications related to physical...natural environment...resources...socioeconomic and Aboriginal parameters on the basis of the comparative screening."* In our opinion, the alternatives are significantly different and since the new location / project is the only one being proposed, the evaluation should be related to that one location / project (called Alternative 1A in the Addendum Report) and the screening table should relate to that location / project prior to mitigation measures being applied.

2.1 Addendum Provisions

Based upon the description provided on page 50, Section B.5.2 of the Guide, we concur that it is possible to employ the addendum provisions in this case.

"where a project has been planned in accordance with the Environmental Screening Process, but where a proponent decides prior to or during construction that it is not feasible or desirable to implement the project in the manner described in the completed Screening or Environmental Review Report."

We also concur with the purpose of the addendum provisions as described on page 50, Section B.5.2 of the Guide.

"The purpose of the addendum provisions is to require proponents to consider the environmental significance of minor modifications to projects, and to require consultation on changes that are environmentally significant."

In our opinion, the proponent should have proceeded directly to an environmental review of Alternative 1A since the significance of public concern and environmental effects is so high.

We have seen a successful use of the addendum provisions in the case of Sithe Energy's Goreway Generating Station whereby changes in gas-fired turbine technology between the time the ERR was completed and the time that the turbines were installed resulted in a greater than 5 megawatt increase in capacity with the same turbines. Based upon the example provided in the Guide, this is exactly the type of minor modification that, in our opinion, was contemplated by the MOE.

While the addendum in the case of Sithe Energy was very minor, the company still engaged in a consultation process with the public.

The proposed changes to the Bala Falls project from what was approved by the MOE include a new project location (Alternative 1A), significant changes to the powerhouse, intake and outfall structures and significant changes to the construction process and temporary areas required during construction. It is our opinion that the significance of these changes were not what the MOE developed the addendum provisions to address and that an equivalent Environmental Review should be conducted, rather than trying to compare the new project (1A) with a previous alternative (1) that was rejected as clearly being inferior to the preferred alternative (2D).

It is thus our recommendation to *Save the Bala Falls.com* that they request that the MOE elevate the project to an Environmental Review in order that the new project (1A) is subjected to the same level of assessment and public review as the preferred alternative (2D).

3.0 Adequacy of the Baseline Data

We are not going to detail all of the areas where, in our opinion, additional data should be provided (this is primarily due to a lack of review time since Swift River Energy denied an extension to the 30 day review period for the Addendum). We will point out a number of areas where additional data would be of benefit in the assessment in order of occurrence in the Addendum Report:

- 2.1.2 Water Conveyance and Powerhouse. A profile drawing would allow a better assessment of the visual effects of the powerhouse and a description of the depth of bedrock blasting required adjacent to the highway bridge structure would set the stage for the impact assessment and mitigation;
- 2.1.3 Electrical Interconnection and Distribution. The Addendum Report describes “an overhead cable” connecting the powerhouse to the existing local line but doesn’t provide details on whether there will be three conductors (3 phase power) and what structures (e.g. guy-wire and anchor, top of pole 3-phase disconnect, metal ground platform and manual actuation handle or motorized activator enclosure) will be required. This may have a very significant effect on the aesthetics of the project;
- 2.2 Operational Modifications. Elements of the MOE Director’s decision include “2. *Lake Muskoka would not be used as storage with respect to the operating regime of the proposed undertaking*” yet in the same section it states that “*The maximum water level change in the upstream Lake Muskoka during this cycling will be 2 cm and will be dependent on the rate of inflow to the lake.*” It has been our experience when working with local conservation authorities that they expect flood modeling to be undertaken on a worst case” basis. We see no evidence that this is the case here;
- 3.1 Municipal and Public Stakeholders. While Swift River Energy undertook a large amount of consultation, they did not provide the specifics of Alternative 1A to the community for review prior to releasing the Addendum Report;

- 3.4 Aboriginal Communities. While a number of aboriginal communities have been circulated, there is no evidence in the Addendum Report that feedback has been received and incorporated.

4.0 Adequacy of the Effects Assessment Including Mitigation and Monitoring

As mentioned previously, it is difficult to understand the proponent's commitments to mitigation when the effects of a previously preferred alternative are compared to a new location/project.

- 4.1 Surface and Groundwater. "The proposed modification to the operational regime will result in a change in the amount of flow leaving Lake Muskoka and entering the Bala Reach during periods when cycling is in effect." We understand that cycling was agreed to in order to maximize the power potential of the associated Ontario Power Generation (OPG) facilities, however, there are outstanding questions as to the amount of water that will be released through the Bala Falls as this is a significant tourist attraction. As well, potential safety issues related to the new facility during periods of extreme weather events and during normal conditions need to be clearly addressed.
- 4.2 Land. The proponent states that "*The proposed modification will be consistent with municipal policies.*" It is our opinion, based upon discussions with the Township of Muskoka Lakes that this is not the case.
- 4.3 Air and Noise. An assessment of air and noise emissions from the project is a requirement of the environmental assessment process. It is unsatisfactory to indicate that "*The noise levels and need for mitigative measures will be reviewed in more detail when the Certificate of Approval submission is made prior to construction.*" Also, the Certificate of Approval (CofA) is now called an Environmental Compliance Approval (ECA).
- 4.4.1 Fisheries – Effects Due to Change in Project Location. Additional detail on the type and quality of habitat affected by the new project/location would be beneficial in order to address compensation issues.
- 4.4.2 Fisheries – Effects Due to Change in Operational Regime. A statement is made that "*Additional mitigation is required over and above that specified within the ES/RR and the Letter of Intent issued to DFO in order to mitigate this potential adverse effect.*" It would be beneficial to have this information detailed at this point as it will form a commitment by the proponent to the government.
- 4.6 Socio-economic. Alternative 1A, according to the proponent, has the potential to result in adverse effects to: (a) neighbourhood and community character, (b) recreation, (c) cottaging and tourism. A significant omission is the potential economic effects of Alternative 1A. Bala's economy is extremely dependent upon the summer cottage population. The local lumber/hardware stores supply existing and new cottage construction. Food stores, recreational facilities like the "Kee to Bala" (written up in the June 2012, 25th Anniversary Issue of Cottage Life), the Cranberry Festival and the historic and scenic falls

areas draw a large tourist population to the area. A number of scuba diving clubs have used the foot of the falls as an area to “check out” novice divers and the Burgess Park is a big picnicking and recreational draw in the summer months. The only highway through Bala is Muskoka Road 169. In our opinion, the potential socio-economic and community effects have been grossly underestimated. This is evidenced by the level of community opposition to the project. The proponent doesn't detail the potential effects of traffic delays resulting from construction and doesn't consider such things as accidents and malfunctions and their effect on the community.

- 4.6.1 Heritage and Culture. Alternative 1A, in our opinion, will have significantly worse effects than Alternative 2D on the cultural landscape of the area, will negatively affect the traditional portage area and will result in the destruction of significant trees that are in the process of being formally designated as “heritage trees.” Included in this is a tree that is documented to have served as an aboriginal marker tree.
- 4.7 Aboriginal. Based upon the lack of response from aboriginal communities contained in the Addendum report we don't understand how the proponent can make the statement that *“The proposed modifications to the Project will not result in any net adverse effects to the components identified under the heading of “Aboriginal” within Table 4.”*
- 5.2.2 Public Access and Use of Land During Construction. There is no assessment of the construction effects (as well as the disruption to existing land use) on government owned land e.g. the mature natural vegetation and landscape on thin soils that are easily subjected to damage through construction in Burgess Park (which was not a consideration previously). Likewise there are no commitments to restoration contained in the Addendum Report. This is the same for land at Diver's Point. Normally, disposition of lands for these purposes would be the subject of a Class EA by the government and there has been no similar treatment within the Addendum Report. The proponent would also be advised to review recent land transactions as some of the land that they were depending upon has been recently been acquired by the District of Muskoka for public parking.
- 5.2.3 Local Traffic. In Table 5.1 of the Addendum Report under the employment category it states that the project will *“generate approximately 4000 to 6000 person days of labour requirements extending over a 12 to 18 month period.”* While there will be a mix of local and non-local labour employed, over an 18 month period at a rate of about 2,000 person hours per year this means that at eight hours per day, about 375 persons could be employed on the project. It would be more beneficial to understand the duration period during which the largest number of persons will be employed and thus determine parking requirements near the project and consider how this will conflict with the reduction in public parking for tourists and local shoppers. As well, the proposed construction in the vicinity of the existing road bridge and dam involves blasting and rock removal, consideration of the possible effects on the road bridge and dam should be part of the Addendum Report since Muskoka Road 169 forms a vital community link and anything that could potentially disrupt the flow of traffic over the bridge would have devastating effects on the community. We also consider it very likely that there will be traffic disruptions due to lane closures, delivery of materials to the site and blasting under the bridge and at the project locations so to suggest in section 5.2.3 that *“there is a positive benefit to local traffic on these roads for Alternative 1A”* is questionable.

- 5.2.4 Navigation. The effects to upstream navigation have been discussed but the effects to downstream navigation have not.
- 5.3 Significance of Net Adverse Effects. Based upon our previous comments, Table 5.2 is inadequate and isn't a true reflection of the significance of net adverse effects of alternative 1A during construction. There are also numerous potential construction effects that have not been discussed such as the dewatering method to be used should excavations become filled with water and stormwater management during construction.
- Table 6.1. Will the back-up diesel generator be located within the powerhouse building or will it be separate? Will it have secondary containment? How will it be refuelled?
How much flow will be experienced at the north and south dams during the peak tourist season?
- 6.2.3 Adverse Effects on Cultural Heritage. As previously discussed, it is our opinion that there will be significant effects on cultural heritage, including, aesthetically pleasing landscapes, an existing portage route, an aboriginal marker tree and properties that are proposed for heritage designation. **In fact, Bala Falls is on the Heritage Canada Foundation's "Top Ten Endangered Places" list** (see <https://www.heritagecanada.org/en/issues-campaigns/top-ten-endangered>).
- 6.2.5 Adverse Effects on Navigation and Public Safety. In our opinion, stating that the "downstream modeling illustrates that there will be no impact to the riparian rights of the properties along the north (right) shore of the Moon River downstream of the North Bala Dam" is insufficient.
- 6.3 Significance of Net Adverse Effects. We concur with the statement that "A more visible powerhouse does represent a long-term, potentially negative adverse effect..." In an area that is so significantly dependent upon tourism and cottaging as Bala, the significance of this statement has not been given enough emphasis in the Addendum Report.
- 8. Monitoring Requirements. This section indicates that no changes to the monitoring program are recommended from that previously identified in section 10 of the Main Report. In a review of Table 10.1 in the main report we note that the proponent will conduct acid base accounting on rock samples prior to commencement of site works (for acid rock drainage) to determine management of excavated materials. Some documentation should be provided to the MOE prior to construction.
- 9. Conclusions. As in our previous comments, it is our opinion that the Conclusions section does not adequately portray the effects that would result from construction and operation of the North Bala Small Hydro Project.

5.0 Summary and Recommendation

In our opinion, the Addendum Provisions were not meant to be used to justify changes of this magnitude to the original project. We recommend that the proponent prepare an Environmental Review Report since it is clear that the significance of public and environmental concerns warrant one.

In addition, as described in previous sections of this peer review, there is significant information missing from the Addendum Report. The comparison of Alternative 1A with the approved alternative is somewhat misleading as significance is determined relative to the approved alternative rather than to the effect on the environment.