

June 27, 2011

Township of Muskoka Lakes P.O. Box 129 1 Bailey Street Port Carling, ON P0B 1J0

Attn: Mr. Walt Schmid, P.Eng., CAO

## Re: Responses to 156 Questions Regarding the Proposed North Bala Dam Small Hydro Project

Dear Walt:

The following letter provides written responses to the 156 questions provided to Swift River Energy Limited on March 24, 2011. While it had been assumed that these questions would be addressed at a council meeting, as discussed on the phone previously, we have prepared the following written responses to satisfy your email request of June 7, 2011. Responses are provided in italics after the question.

Please note that the vast majority of these questions have been addressed by Swift River in its October 2009 ESR and in the long list of correspondence with the Township and yourself over the last 4 years. Instead of repeating the more detailed responses already provided to the Township for these duplicate questions, we have simply provided references where the issue has been addressed in the past. For the small handful of "new" questions, we have provided as detailed a response as is possible at this stage in the process.

Please also find attached a letter that was prepared by Hatch's engineers and environmental scientists with respect to the impacts from the proposed cycling operations as outlined in the conditions of the MOE director's decision dated March 25, 2011.

## List of Questions Submitted to the Township of Questions Submitted to the Township of Muskoka Lakes – February 28, 2011 Regarding the North Bala Falls Proposed Small Hydro Generating Facility

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# **EXISTING BALA HYDRO STATIONS**

1 We already have 2 generating stations on the Moon River, both probably capable of improvement. What does it require to modify these 2 operations to make up the capacity of the proposed new station?

This analysis is beyond the scope of the terms of reference for a Category B, Environmental Screening Process as required for waterpower facilities less than 200 MW as outlined in the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act. Furthermore, the other stations are owned by other proponents and information is not readily available to Swift River.

2 What percentage of the operating time (presumably 24 hours per day, 365 days per year) are the existing stations and the proposed station, operating at full capacity? If that percentage is quite low (which I would guess is the case) for the existing plants, what is the justification to build a third plant?

Please see answer to Q1 above.

# WATER LEVELS and SCENIC FLOW

#### **Scenic Flow**

3 Can you tell me exactly what the flows will be over the South Falls during each month of the year? What they will be over The North Falls for each month of the year? I'm not looking for a combined flow as mentioned on their web site.

Unfortunately, hydrology is not an exact science and flow conditions will vary with the amount of rain that occurs each month and each year. Therefore, exact monthly flows cannot be provided for a year. However, the proposed <u>minimum</u> flows over each dam are provided in the Environmental Screening Review Report dated October 2009.

4 Where are the results of the Scenic Flow Committee?

This Question was answered in a letter dated November 5, 2010 to the Township and in follow-up emails to the Township CAO on February 1, 2011 and April 20, 2011.

5 There appears to be lot of water coming over the falls in their new renderings, certainly a lot more that 1 cubic meter. Is SREL deliberately deceiving the public?

No, Swift River is not "deliberately deceiving" the public with the renderings. The exact amount of water over the falls, as shown in these renderings, is not known. The renderings were intended to depict the building and landscaping only.

#### MRWMP and BMZ

6 More detail is needed on the proposed changes to the Muskoka River Water Management Plan and the proposed Best Management Zone. We were under the impression from the beginning that the management plan would be strictly followed, not altered to suit the demands of a proposed generating station. I am extremely concerned about increased fluctuation in water levels as a result of the "ponding" scheme, and in Section 6.2.2.2, Section 9.9 and Figure 9.3 of the report.

This issue has been addressed in the letter to the Township on March 17, 2010 and again in the letter to the Ministry of Environment, in which the Township was copied, on May 13, 2011. It should be noted that the proposed cycling plan was a result of a request of a third party and was not originally considered in the ESR. However, since the MOE director's decision dated March 25, 2011 included this as one of the conditions of the approval, Swift River has had its engineering and environmental consultants evaluate the impacts of this plan. The attached letter summarizes the findings of this evaluation.

7 An attempt to maintain the target level is not acceptable. SREL has to do better than that. A clear answer with documentation must be given as to whether or not the operation of this facility will have an impact on water levels in Lake Muskoka and Bala Reach? What will that impact be?

This issue has been addressed in the letter to the Township on March 17, 2010 and again in the letter to the Ministry of Environment, in which the Township was copied, on May 13, 2011. Furthermore, the proposed amendment to the MRWMP will need to be approved by the Ministry of Natural Resources prior to any operation of this facility.

8 More detail is needed on the proposed changes to the Muskoka River Water Management Plan and the proposed Best Management Zone. Does this mean the water flow through the station would be stopped and started more frequently during the summer months?

Please refer to the answer to Q7 above, and to the attached letter from Hatch's engineers and environmental specialists outlining the impacts regarding the proposed cycling plan as outlined in the MOE director's decision dated March 25, 2011

9 If approved and built, Swift River Energy will be required to operate the facility and the Ministry's Bala dams in accordance with strict water level and flow requirements identified in the existing Muskoka River Water Management Plan (MRWMP), including those that address public safety and protection of property. What happens if you do not, and what happens if your company no longer exists?

This issue was addressed in the MOE director's decision to the Township dated March 25, 2011. The Ministry of Natural Resources is the agency responsible for enforcing compliance under the MRWMP. Section 13 of the MRWMP outlines the compliance monitoring plan that will be followed by Swift River and enforced by MNR.

## Water Levels Post Construction

10 What guarantee is there that during operation of the plant, Lake Muskoka levels and Moon River levels will be managed in a way that protects abutting properties, given a largely undefined division of responsibility between the power company and the old system of logs on the north and south dams in Bala, and another dam and power plant a few miles down river?

This issue was addressed in the MOE director's decision to the Township dated March 25, 2011. SREL will be required to operate the project under the rules of the MRWMP. Please also refer to Question 9 above.

11 In fact, there are obvious conflicts between the need for the power company to make a return on its investment, and the affected public. For example, over a period of months in the coldest part of the year water levels in Lake Muskoka are drawn down to prepare for spring runoff. In Bala Bay, the draw-down amounts to an astonishing or 4 or 5 feet, and is no

doubt substantial as well throughout the main body of the lake, reaching as far as Bracebridge, Gravenhurst, and Port Carling. In the spring of 2008, a large runoff was inadequately prepared for, with the result that many docks, boathouses, and shorelines sustained unusual damage from high water and floating ice. Keeping the level of Lake Muskoka high in advance of spring runoff would be in the economic interest of the power company. The more flooding of Lake Muskoka properties, the more electricity is produced and sold. Where is the regulatory authority to protect shoreline owners' interests?

This issue was addressed in the MOE director's decision to the Township dated March 25, 2011. The proposed amendment to the MRWMP will need to be approved by the Ministry of Natural Resources prior to any operation of this facility. The Ministry of Natural Resources is the agency responsible for enforcing compliance under the MRWMP. Section 13 of the MRWMP outlines the compliance monitoring plan that will be followed by Swift River and enforced by MNR.

12 Ponding -Hatch Energy has addressed this issue in the Environmental Screening Report, Section 9.9 and Figure 9.3 using very technical jargon, which we find extremely difficult to understand. Their proposal (Operation Plan for North Bala Falls Generation Station) appears to state their intention to maintain the levels prescribed within the Lake Muskoka Water Level Operation Plan; BUT what if, at some future date, and for some (probably financially advantageous) reason, they choose NOT to do so? All of us, who have cottages, boathouses and or docks on or near the lake shore, are painfully aware of the devastation caused by extreme fluctuations in lake level -especially when compounded by freeze and thaw factors. Reconstruction of these structures is horrendously expensive -to the individual cottage owners, -not to SREL or Hatch Energy. We suggest that Swift River Energy Limited post a substantially large bond that could be used to offset any costs incurred to individuals if their (SREL's) plans result in damage to individual property. The reserved amount could be returned, with interest, at the termination of their contract -if all goes well.

# *Please see responses to Q9 and Q10 above. The facility will be insured appropriately against operational accidents and/or errors. No bonding is required.*

According to D15, Public Information Centre 2008, SREL has entered into an understanding with Bracebridge Generation Ltd. to operate the North Bala power project including the power station and dam structures. Clarification of "understanding" is required and requested. Who is ultimately responsible for operating the dams and power station? Who will be held responsible in the event of a malfunction, oil spill or a fatality at or around the site?

The facility Owner and/or Operator will be responsible for operating the dams and power station. Responsibility for malfunctions and/or accidents will be determined based on where the fault lies with respect to the specific incident. Please also see answer to Q12 above.

#### **Construction Flooding Concerns**

14 What measures are proposed to mitigate upstream flooding during construction

should the introduction of the working platform create increased water levels on the Lake?

This question has been addressed in letters to the Township on March 17, September 22, and November 5, 2010. It was also addressed in the MOE director's decision to the Township dated March 25, 2011. SREL and its contractor(s) will be required to ensure that lake levels, as outlined in the MRWMP, can be maintained throughout the construction period. MNR, however, will continue to be responsible for operation of the dams throughout the construction period.

15 Will the temporary coffer dam/ working platform result in temporary higher water levels in Lake Muskoka? If so to what extent?

*No. This question has been addressed in letters to the Township on March 17, September 22, and November 5, 2010.* 

16 In the event of an emergency, how long would it take to completely remove the coffer dam?

The coffer dam could be removed in a matter of hours. This question has been addressed in the letter to the Township on September 22, 2010.

17 Does the south dam have the capability to convey all the upstream flow? If not, to what extent does the south dam have the ability to relieve higher water levels on Lake Muskoka?

This question has been addressed in letters to the Township on March 17, September 22, and November 5, 2010. SREL and its contractor(s) will be required to ensure that lake levels, as outlined in the MRWMP, can be maintained throughout the construction period. MNR, however, will continue to be responsible for operation of the dams throughout the construction period.

18 Are there other constrictions upstream of the North Dam that have a greater effect on any backwater effects in Lake Muskoka than those created by the working platform?

This question was addressed in a letter to the Township dated March 17, 2010.

19 What are the guaranteed Bala Bay Lake levels on a month by month basis?

*This information is provided in the project ESR dated October 2009 and in the MRWMP.* 

20 What will happen if the lake levels approach the minimum? Will the Generator be turned off?

This issue is outlined in the ESR Section 9.

# SAFETY AND EMERGENCY MEASURES

How will SREL mitigate the danger posed by the project, to swimmers and boaters both up and down stream?

This issue was addressed in the MOE decision addressed to the Township dated March 25, 2011. The general site safety plan is outlined in the ESR. A more detailed plan will be developed prior to operations during the permitting stage. In particular, the project will require a Navigational Water Protection Act Authorization from Transport Canada with respect to the safety booms for boaters. The more detailed plan will conform to the Ministry of Natural Resources (MNR) Public Safety Guidelines for Dams that is currently under review prior to finalization by MNR. The detailed safety plan for this site, will take into consideration the recommendations from MNR's March 2011 Safety Assessment for the Bala Dams and what recommendations MNR ultimately implements prior to the project's completion.

22 What additional steps will be taken to protect swimmers, boaters and sightseers from the intake channel for this generator?

See response to Q21 above.

The Bala Falls is host to a number of recreational activities. The proposed power station's water intake would create currents that would put human life in danger. I do not feel that this has been adequately addressed in the report (Sections 6.2.3.1 and 6.2.5.6 and Figure 6.2c).

See response to Q21 above.

24 The proponent suggests that the viewing deck on the Moon River side would be designed to discourage jumping. I do not see any specific details of this design.

Architectural and landscaping details will be finalized during the detailed design stage of the project, and in coordination with the proposed Landscaping Advisory Committee.

25 The power station's water intake would create currents near the town docks that would be dangerous to boating, swimming and other existing recreational activities. The developer has stated in writing, "No mitigation measures possible to protect public safety". As residents, we are aware that youth already ignore signs to not jump off the railway bridge into the north channel. Again, the experts pointed out that the proposed power station's water intake would make this jumping extremely dangerous at high-flow times as the area below the railway bridge would be downstream of a safety boom. The proposed upstream safety boom does not facilitate rescue due to the concave shape facing upstream and the awkward positioning of boats drawn into the current. What is the mitigation plan?

*This question has been addressed in letters to the Township on March 17, September 22, and November 5, 2010. Please also refer to the response to Q21 above.* 

Warning signs to not jump off the railway bridge are already ignored and youth jump into the north channel. The proposed power station's water intake would make this extremely dangerous as the area below the railway bridge would be downstream of a safety boom and during the low water flow of the summer months, the flow into the water intake could vary widely, so that sometimes it would be found to be "safe" to jump and this would result in youth jumping at unsafe higher-flow times as well. In Table 6.1. the proponent notes, "No mitigation measures possible to protect public safety". The same youth would be tempted to jump off the lookout of the proposed power station into the turbulent tailrace water exiting the power station (I can imagine that being quite fun -but stupidly dangerous). The proponent's only suggestion is that posted signs would discourage this (Section 6.3.1, Figure 6.5). SREL needs to review their level of responsibility in these activities and produce an action plan to address these dangers.

This issue was addressed in the MOE director's decision addressed to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Swift River has started discussions with CPRail the owner of the bridge and adjacent land and agreed that a mutually acceptable solution to this issue is required prior to operation of the facility. Please also see response to Q21 above.

In Table 6.1 SREL notes "No mitigation measures possible to protect public safety". The same youths who swim in the basin beside Purk's Place would be tempted to jump off the lookout of the proposed power station into the turbulent tailrace water exiting the power station. The sole mitigation proposed is that posted signs would discourage this behavior, see Section 6.3.1, Figure 6.5. Also moving the fast water which is currently from the south channel 160' closer (which is where the proposed tailrace would be) to the recreation area at the base of the north falls will create danger for this important public area, see Section 6.2.2.3 and Figure 6.2b. They proposed safety booms and warning signs will not provide public safety, see Section 6.3.2, Section 6.3.6.1 Appendix B Table Bl Effect 6.8. No true measures to protect and provide public safety are being proposed by SREL. The provision of warning signs as explained in Section 6.3.2, Section 6.3.6.1 Appendix B Table Bl Effect 6.8 will not provide any adequate means of public safety. It is much more likely that high chain link fences will have to be installed to keep people out of and way from most of the two sites. SREL needs to be required to produce a true mitigation plan.

This issue was addressed in the MOE director's decision addressed to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Swift River has started discussions with CPRail the owner of the bridge and adjacent land and agreed that a mutually acceptable solution to this issue is required prior to operation of the facility. Please also see response to Q21 above.

On the Moon River side of the facility, there may be situations where swimmers and boaters, including canoeists, are inside the log boom despite the warning signs. How might they be rescued? By whom? With what equipment? How long will rescues take? No mitigation of any of these concerns has been suggested by SREL. Instead, they have advised simply to "call the OPP". There are no full-time OPP officers station in Bala, there are no permanent rescue craft stationed in Bala by any emergency organization so how would an emergency situation be handled? In summer months, on occasion, boaters are available to help, however outside of the summer, few boats are around and thus immediate responses by

rescue organizations will take time and thus, lives will needlessly be placed in jeopardy.

See Q21 above.

29 Will the upstream and downstream floating booms be lit at night?

The upstream and downstream navigational safety booms will conform to Transport Canada specifications including the required visibility requirements. An approval from TC under the Navigational Waters Improvement Act will be required from TC prior to commencement of the project. It is Swift River's understanding, however, that such booms do not need to be lit at night.

Who will be responsible for rescue if an accident occurred? Who will be responsible for rescue if an accident occurred? Will special training be required? Who will design a rescue procedure? Will appropriate rescue equipment be available above and below the dam? Who will be responsible for the financial costs of a rescue, special training and rescue equipment? Who will be responsible for maintaining this equipment and making sure it remains available at all times? Where will this equipment be stored?

This issue was addressed in the MOE director's decision addressed to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Any rescue procedure, and responsibility for such rescue will obviously be based on the nature of the specific accident. Please also see response to Q21.

31 As the facility will be unmanned, what will the process be and how quickly could the facility be shut down in an emergency?

This issue was addressed in the MOE director's decision addressed to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. It is becoming standard practice to provide the operator's contact number on safety signage at the site for use in the case of an emergency. Should the generating facility need to be shut down during an emergency, it could potentially be done remotely within seconds of notification.

32 Hazardous Waste / Accidental Spill -In (Fig 6.1), this is identified as a 'Source of Effect' for groundwater contamination. There could be a spill inside the facility during cleaning and maintenance and points are made in the report as to how this would be dealt with, but what if there is an equipment malfunction during normal running when the facility is unmanned. What is the spill plan and who would be paying for the clean-up and remediation?

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to the Township by Swift River via email on March 28, 2011. This issue is addressed in the ESR dated October 2009. Swift River will follow all laws and regulations with respect to environmental spills including any clean-up and/or remediation required.

33 When the facility is unmanned how will a crisis or malfunction be identified?

The facility will be monitored remotely via computer connection and will be visited routinely by operators. A combination of equipment sensors and visual inspections will be used to identify any "crisis or malfunction". Equipment sensors will have the capability to send notices to the operator via computer/internet connection.

34 If there is a spill and groundwater and surrounding areas are contaminated, who will be responsible for the damage and clean up?

See response to Q 32 above.

The report states (6.2.4.3.) that a "contaminant handling procedure will be developed'. This is incomplete and needs to be established before SREL is considered for approval. What if the proposed mitigation doesn't work or isn't put into place quickly enough?

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. It is premature to specify additional detail at this stage in the development. As stated in the ESR, the handling procedure will be designed to MOE standards and will comply with all applicable environmental laws and regulations.

What is SREL's detailed Public Risk Management Plan? There is no reason why they should not prepare such a plan prior to approval of the proposal. This Public Risk Management Plan should include details of the fence designs and heights, signs, booms, warning lights and sirens as well as rescue plans.

See response to Q21 above.

While pollution is on high alert in the world now, this could be quite a disastrous undertaking. Inexperienced company blasting just a few feet from an old existing railway that transports hazardous materials. Ready to just have a derailing and spill out into the waterways!!! That's not a comfort for all of us residence.

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. All blasting will be done by a qualified, experienced contractor and will comply with all laws and regulations. As stated in the ESR dated October 2009, blasting will also comply with CPRail specifications for blasting near a railway.

We use these bodies of water for our drinking, bathing etc. We are not on town water only a very small percentage of Lake owners are; they border the town. This might not seriously concern them but we all depend on clean safe water here in our town. Silt, air, noise, oil, diesel fuel, and dead fish will all create pollution in our water. Will the town clean this up the moment we have a crisis or before there is another toxic disaster and we all get sick or have cancer from contaminated water? Is SREL responsible? They should be.

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Swift River will comply with all laws and regulations with respect to monitoring water quality during

both construction and operations. Water quality monitoring will be performed by qualified experts.

39 Will the province promise to guarantee us fresh clean water? We have a right to good clean water and we need to protect our waterways. No added pollutants caused by man-made creations.

## See response to Q38 above.

40 If the infrastructure of the rail tracks is damaged during the construction phase and we have a train derailment who is paying for the damage? 19 trains travel over this exact location and carry toxic-hazardous materials. Any derailment will be an emergency crisis and pollute all the way to Georgian Bay. We would not have the ability to stop this disaster. The cost of all properties damaged need to have insurance to subsidize such a disaster. Our emergency team of professionals are not equipped to handle such disasters, are they? What precautions are being put in place? What bonds are taken for insurance that this will never happen? SREL feels that the blasting company carry that burden? Not likely, an irresponsible act such as that needs to hold SREL fully accountable. Are they responsible and are to be fully accountable?

See response to Q37 above. All contractors will have appropriate liability insurance within industry standards for such an undertaking.

41 How are SREL proposing to keep the waterways and navigation safe and clear? How are they proposing the make sure no little boats or boats that lose power are not swept up and held in the current with no one able to rescue them?

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. The Project will require authorization from Transport Canada under the Navigational Water Protection Act. Therefore, the design of all navigational safety devices will meet Transport Canada standards.

42 Danger to tourists and residents. Will you be posting dangerous water signs at the town dock? People use this dock extensively and would need and want to know of hazardous water danger.

See responses to Q21 and Q41 above.

43 Do you plan to educate the local residents, seasonal residents and tourists on the hazards of the power station?

Yes, however it is premature to outline a plan at this stage in the development. Swift River is, however, open to accepting ideas for such a campaign.

44 The Ontario Provincial Police and Ontario Power Generation are running televised commercials on Ontario TV stations and in print media, warning the public to stay away from power stations, stating that the area/water is not safe anywhere near them. How can SREL

pretend that they can still allow access to the Falls with these restrictions?

*This issue was addressed by the MOE director in her March 25<sup>th</sup> decision that was distributed to the Township on March 28, 2011.* 

Like most people on the Moon River, we draw our water exclusively from the river for drinking, showering, cooking and household use. The river is our only year-round source of water and therefore, I am concerned about its quality. Since all moving turbines require lubricants, how will SREL test to ensure the lubricants are not making their way into our water source? What is SREL's spill response plan to quickly and effectively address any toxic fluid and its clean up? Is there a Performance Bond to address the loss of use of our water source? Is there Performance Bond for flooding of our property? How will property owners be compensated for their loss?

See response to Q38. No performance bond is required. Swift River and its operator will hold appropriate insurance for the operation of this facility to cover any accidents or malfunctions.

46 Concerned re dangerous intermittent unannounced increased flow of water and current dangerous to swimmers. If you answer with some paid engineers baffles peak, then how is it that swimming below a HEP INSTALLATION IS ILLEGAL AND SUBJECT TO FINES because of safety issues?

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Please also see attached letter from Hatch regarding the impacts of the proposed cycling operations.

47 If this project does go through, will there be sidewalks for pedestrians on the temporary bridge?

It is premature to answer this question at this stage in the development.

48 Effect of blasting -concern re safety with the numerous trains that pass through Bala daily, effects on foundations, structures etc. SREL response "Please note that advances in blasting are such that these blasts can be done with great precision. Indeed many of the cottages in the Muskoka area have blasting done during their construction without effecting neighbours." Does this comment really answer the question and can you compare this project with someone doing home construction?

See response to Q37 above.

# **PUBLIC ACCESS**

49 Snowmobiling forms a significant component of the Bala's winter economy and the economy of the businesses that use the MSR trail both north and south of Bala. The proposed

provision of a temporary Bailey bridge over the intake channel may be problematic to the safe operation of the snowmobile route through Bala. How will concerns of the snowmobilers be mitigated by SREL?

This issue was addressed in the letter to the Township on March 17, 2010. This issue was also addressed in MOE director's decision to the Township dated March 25, 2011.

50 In section 6.3.2 SREL acknowledges that swimming is not compatible with hydro generating facilities and they describe mitigation designed to protect the public during plant operations. However, I cannot find any mitigation measures that mitigate the loss of access to the area. According to the report, the area "is heavily used by the public for both aquatic and terrestrial recreational activities including scuba diving." I have asked to know what measures, if any, are planned to mitigate this loss of public use. They have not responded.

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. This was also addressed in letters to the Township dated March 17, September 22, November 5, 2010.

51 The ESR admits that 500 feet of extremely scarce Muskoka waterfront will be Fenced off and lost to public access. They mitigate this by saying there is lots of waterfront in the area but they don't specify where. Over 98% of the waterfront in the area is private, inaccessible or unsafe. The loss is significant and unmitigated.

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Public shoreline access is also available in Bala at Windsor Park, Jaspen Park, Diver's Point, the two public docks, and nearby Torrance beach and dock, to name a few locations.

52 Access to Town Dock: Current runs past the town dock on Moon River, which can make landing difficult even in the summer. Boats need to take a sweeping arc around the Bay to safely approach or leave the dock. The presence of a boom would make this maneuver all but impossible to execute safely. How do the planners of this site propose that boaters access the dock once a power plant and boom are in place?

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. The project will require a Navigational Water Protection Act Authorization from Transport Canada with respect to the safety booms for boaters.

53 Will SREL and successive owners guarantee that Margaret Burgess Park will never be fenced off and thereby prohibiting access to the north side of the North Bala Falls?

This issue was addressed an email to council on March 28, 2011.

54 How is it that we know most of the shoreline in this area would seem to be rendered useless by the go ahead of this project and yet the proponent fails to mention or address this

with any reassurance for the local residents?

This issue was addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011.

55 SREL has suggested that a downstream portage landing site may be possible. Where will the downstream portage landing location be? None is shown in any recent drawing or photograph.

*This issue was addressed in the MOE director's decision to the Township dated March 25, 2011.* 

56 The proposed portage route, during and after the construction, is dangerous and totally unacceptable. How does SREL intend to compensate those who are not able to use the portage route ie. childrens' summer camps and camps for the mentally/physically challenged?

See response to Q55 above. No compensation required.

# **ECOLOGICAL, PHYSICAL AND VISUAL IMPACTS**

## Fish Habitat

57 Recreational fishing forms part of Bala's economy. The ESR has proposed to remove 200 m2 of walleye spawning habitat, and construct 200 m2 of new spawning habitat. Will reduced flows over the North and South Falls have a negative effect on both existing and new spawning beds? Is 200 m2 of "manmade" spawning habitat sufficient to maintain the fishery? Will SREL undertake studies to monitor the new spawning beds? How will local fishermen be compensated if the new beds fail to produce adequate numbers of new fish?

This issue was addressed in a letter to the Township dated March 17, September 22, and November 5, 2010. The fisheries impacts and compensation are addressed in detail in the ESR dated October 2009. In addition, the Letter of Intent to the Department of Fisheries and Oceans (DFO) and MNR, dated November 30, 2010, outlining further detail on this issue is provided the project website at <u>www.balafalls.ca</u>. An email to the Township dated January 13, 2011 provides DFO acceptance of this fisheries plan. Further information is provided in the attached letter from Hatch outlining the impacts to fisheries as a result of the proposed cycling operations as contained in the MOE director's conditional acceptance of the project ESR.

58 The report does not provide a plan how to mitigate the destruction of priceless spawning grounds at the bottom of the Falls, as the construction of the 'small' hydro station will require major blasting of the rock island and building of a temporary dam right on top of an existing white fish spawning bed.

See response to Q57 above.

59 How is the fish habitat guaranteed to survive these current changes? If the spawning beds are disturbed and the fish habitat goes away who will take care of this recreational lose?

See response to Q57 above.

60 How do you intend to prevent the turbines from becoming a bass-o-matic? This equipment could become a large destroyer of fish and other critters.

Fish entrainment and impingement is addressed in the project ESR dated October 2010. Further information is provided in the attached letter from Hatch outlining the impacts to fisheries as a result of the proposed cycling operations as contained in the MOE director's conditional acceptance of the project ESR.

#### b. Biological Impact

61 The Moon River below the Bala Falls is the last part of a huge drainage basin, which includes everything west of Algonquin Park and all of the Muskoka Lakes. Presently, there is a generating plant in Bala on the "Mill Stream", the north waterway around Burgess Island. With the construction of this second "run of the river" generator on the Bala Falls, virtually all of the water entering the Moon River will now pass through power turbines. I believe this will result in most of the water from Lake Muskoka being sterilized of all living ichthyoplankton and zooplankton. This can only have a detrimental effect on the Moon River Eco-system. What is the SREL response to this issue?

The following expert has been prepared by Hatch's fisheries biologists:

The project will not result in any significant adverse effects on planktonic organisms (i.e., ichthyoplankton, zooplankton and phytoplankton) or microorganisms (e.g., smaller planktonic organisms, bacteria) due to water level or flow changes. Downstream movement of planktonic organisms within the water column will continue to occur from Lake Muskoka into the Bala Reach. Under most operational flow scenarios, the volume of water passing through the Bala area will not be different due to operation of the facility; therefore, the planktonic organisms in the water column will continue to be transported downstream in similar abundances. During periods of low flow, some cycling of flow will occur, resulting in periodic times when outflow from Lake Muskoka is lower than would naturally occur. However, the short duration of each flow cycle (24 hours) will ensure that, over the course of several days, outflow, and hence the volume or planktonic organisms moved, will continue to be similar to pre-existing conditions. Therefore, no significant change in the volume or organisms moving from Lake Muskoka to Bala Reach is anticipated to occur.

Changes in flow path due to the presence of the facility may result in some redistribution of planktonic organisms that are being carried within the water column as the river flows, such that more organisms flow through the proposed facility as opposed to over the North and South Bala Dams. This redistribution of flow itself will not have any adverse effect on planktonic organisms, as they will continue to move into the downstream reach (see Turbine Entrainment and Mortality section for potential effects). Changes in flow vector downstream from the facility will result in some redistribution in planktonic life forms in the reach, since areas of standing water and flowing water will be altered, but this will not have any adverse effect on overall plankton populations.

Water level fluctuations as a result of facility operation will be very small (as summarized in the ESR). Planktonic organisms and other microscopic species are buoyant and carried in the flow and are not generally susceptible to adverse effects due to dewatering from these very minor water level fluctuations.

As discussed in the ESR, the facility will not result in any long term adverse effects on water temperature or water chemistry, so the conditions for growth and survival of plankton and other microorganisms will not be adversely affected.

Potential for short term changes in water chemistry during construction due to accidental spills or erosion and sedimentation does exist and this could potentially have localized adverse effects on planktonic organisms. However, general environmental protection mitigation measures during construction (e.g., sediment and erosion control, spill prevention and response) and operations (minimum flow requirements) will prevent changes in the environment that could have potential effects on plankton and microorganisms.

(References available on request).

62 What is the expected mortality of ichthyoplankton and zooplankton passing through the proposed turbine?

The following expert has been prepared by Hatch's fisheries biologists:

The potential for adverse effects on planktonic organisms due to turbine passage is dependent on the probability of i) organisms being entrained into the intake flow and through the facility, and ii) the potential for mortality due to passage through the facility.

The probability that organisms will be entrained into the intake flow is dependant on the probability that organisms will be present with the zone of influence of the intake flow. The aquatic habitat within the intake area is non-specialized habitat and is not used for any specialized spawning or nursery areas that would congregate eggs and ichthyoplankton. Species that are known and/or would be expected to be present within the intake zone, such as various sunfish species (e.g., Pumpkinseed, Smallmouth Bass) typically nest in slower moving waters and spawning would not be expected to occur to any significant degree within the channel between Lake Muskoka and the North Bala Dam. If nesting is occurring, these species typically deposit eggs in a protected nest, or eggs are adhesive and adhere to substrates (rocks, woody debris) and are not broadcast in the water column.

Travnichek (1993) assessed the quantity of ichthyoplankton and fish eggs moving through a hydroelectric facility downstream from a large reservoir. They found that

entrainment of larvae was limited to only several fish species that were typically present within the intake area and they indicated this was likely due to the habitat conditions in the area, which were not conducive to spawning or nursery. A similar situation is present upstream from the proposed North Bala GS, where the majority of the fish in Lake Muskoka would not be spawning in the immediate vicinity of the intake and hence, large numbers of eggs and ichthyoplankton are not anticipated to be present.

Therefore, it is not anticipated that there is a high probability of significant movement of ichthyoplankton and fish eggs through the proposed facility. However, it is likely that some movement will occur and therefore, the potential for mortality due to this passage is used to determine the overall potential for adverse effects.

The extremely small size of plankton and other microorganisms makes the potential for physical damage to individual organisms from turbine impact extremely low. Studies such as Cada (1991) show that ichthyoplankton mortality rates due to turbine passage are typically less than 5% and for most larval fish are less than 2%. Further, Cada (1991) indicates that the shear stresses and pressure changes in low head, bulb turbine installations such as the proposed Bala facility are insufficient to cause high mortality. Cada (1991) notes that a 1-mm diameter fish egg has a 0.1% chance of being struck by a turbine blade. Mortality rates for smaller zooplankton, phytoplankton and microorganisms would be expected to be lower than larger ichthyoplankton. Therefore, minimal levels of mortality on plankton and microorganisms are anticipated due to turbine passage.

Given that negligible changes in the movement of planktonic organisms are anticipated to occur due to the presence of the facility, that entrainment of ichthyoplankton should be relatively low given the habitat conditions at the site, and that mortality for organisms that are entrained is low, no significant effects are anticipated to occur. Travnichek (1993) concluded that ichthyoplankton that passed through the turbine in their study would likely recruit to downstream populations, and it is anticipated that this will be the case for the North Bala site as well.

(References available on request).

63 Will the mortality of the aquatic life passing through the turbine be measured? By what means? How will mitigation take place?

See responses to Q60 and Q62 above.

64 How will the mortality of the aquatic life passing through the turbine be measured?

See responses to Q60 and Q62 above.

65 What is the expected effect on the Moon River Ecosystem?

This issue is addressed throughout the ESR dated October 2009, Letter of Intent provided to DFO and MNR dated November 30, 2010 provided on website at

<u>www.balafalls.ca</u>, and the attached letter from Hatch. It is also addressed in the letter from the MOE Director to the Township dated March 25, 2011.

66 How will the effects, of construction and operation of the proposed generator, on the Moon River Ecosystem, be measured?

See response to Q65.

67 What base line data has been taken?

This is fully described in the ESR dated October 2009.

68 Did the base line data include Moon River life further up the food chain like turtles, Weasels, Muskrats, Owls, Loons, Great Blue Herons and Kingfishers that would be a measure of the ecosystems health?

Yes, this is fully described in the ESR dated October 2009.

69 Who will be responsible if there is destruction of the Moon River ecosystem?

Swift River will be responsible for compliance with all environmental laws and regulations. It will also be responsible to ensure that all commitments made in the ESR dated October 2009 (and supporting documentation) are fulfilled, and for obtaining and complying with all required permits and approvals from the appropriate government agencies.

Do power companies have an interest in conservation? Have impartial biologists qualified to speak to this very specific issue had an opportunity to comment on this proposal? How can there not be an irretrievable loss of fish spawning area as the project is built and what assurance is there that the proposed new spawning habitat would be successful or even approved by Fisheries and Oceans and the MoE? As well, there is a very real threat to numerous fish being caught and destroyed in the intake or simply perishing when the water level goes down. One frightening example that should be considered is Miller Creek, BC, where a hydro electric project had a disastrous effect on aquatic ecosystems. It appears warnings there were not heeded.

Swift River entered the green energy business because of its belief that projects like Bala play an important role in helping to solve the pollution and global warming issues of today (also see response to Q149 below)

The project ESR, and supporting documentation, has been completed by professional biologists and engineers that by nature of their profession must uphold impartial views with respect to environmental assessments. In addition, experts from various federal and provincial government agencies have reviewed the results of the project biologists and engineers. Permits and approvals are indeed required by DFO, MOE and MNR (to name a few) prior to construction of the project. Comments received from these agencies have already been addressed and were taken into consideration in the MOE director's decision dated March 25, 2010 sent to the Township by MOE.

Also see response to Q57 and Q60 above.

#### Noise and Vibration

The noise from the operation of the proposed power generating station is also of great concern and the report does not adequately address this. The report does not include noise calculations for the turbine, generator, inverter electronics, and the transformer cooling fan, nor does it address any vibration which may be felt in the land above and surrounding the site (Appendix C1 and Section 6.3.4).

This issue is addressed in the ESR dated October 2009 and was also addressed in the MOE director's decision to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Swift River will comply with all provincial and local noise laws and regulations.

In Appendix C, suggests sound levels in the power plant to be 87.3 dBA (requiring hearing protection according to the OH&SA), yet SREL claims all sound will be masked by the flow of water from the waterfalls. The waterfalls will of course be reduced to a trickle by this proposal as most of the flow will be through the turbine. To further confuse the reader, SREL states "The definitive sound power levels of the generator cooling equipment and the transformer will be obtained from the suppliers, once the supplier and generator/air cooling systems and transformer have been selected during the detailed design process", and yet they go on to estimate the powerhouse noise to a tenth of a dBA (87.3 dBA). In spite of saying they refuse to predict what the noise from the equipment will be until they buy it, they go on to present pages of "data" that has no purpose other that to confuse the reader, and give the impression of rigorous analysis. What will the mitigation plan be?

See response to Q71 above.

I read something written by the developer that noise from the project would be reduced by the "urban hum" of Bala. What??? Has the developer been to Bala??? What urban hum??? If the falls are reduced to a trickle, Bala will be almost silent.

The ESR dated October 2009 states that the project area was considered to have the characteristics of a Class 2 area. It further states that some characteristics of a Class 2 area include "**absence** of urban hum between 19:00 and 23:00 hours".

Noise: The noise calculations in Appendix C1 only include two noise sources: the generator cooling fan and the step-up transformer magnetostrictive noise. There is no noise analysis or vibration analysis for the turbine, generator, inverter electronics, power transformer, back up diesel generator, or the transformer cooling fan. The proponent admits "The definitive sound power levels of the generator cooling equipment and the transformer will be obtained from the suppliers, once the supplier and generator/air cooling systems and transformer have been selected during the detailed design process." These components and their characteristics are well established as this equipment is common to the power generating business. This is not a barrier for analysis for this critical issue given the proximity of homes, and the contention that the top of the power house will be a "park like" setting. There is also no mention of noise from the diesel generator for back up power that would be run regularly

as part of a maintenance program. The proponent only mentions getting a C of A for emissions at a later date and fails to address any noise mitigation issues from this equipment. Where is the exhaust, how loud will it be, how often will it be run, and at what hours will it be run? Again, there is no data, and consequently, no proposed mitigation. There is absolutely no vibration analysis for the locations on and beside the power station where the public will be expecting a "park like setting" (Section 6.3.4). As a power plant engineer for over 30 years, it is clear to me that generating stations are a huge source of both very high frequency vibration, and very low frequency vibration that can be felt at great distances from the source. The issue of vibration has not been addressed at all. The noise analysis in Appendix C1 assumes the area is a Class 1 or Class 2 with a background urban hum. Anyone standing at the site would realize there is no urban hum. The greatest source of noise is the flow of water over the south and north falls. This project would eliminate that sound as the falls would be reduced to a trickle. The analysis is clearly flawed. It would appear to me that the analysis is not objective, and as a result, presents tables of meaningless data to feign the appearance of rigorous analysis and ultimately mislead the reader. Conclusion: Further study is needed to address the major issues raised above. The unanswered questions of economic impact, public safety, public access, appearance, and noise, need to be established and mitigated. The proponents report reads more like a marketing brochure -one that is stuffed with tables and pictures, but skirts the issues of critical importance to the community.

# See response to Q71 above. No perceptible vibration is expected to be felt from the park above the powerhouse.

The ESR makes no references to the noise associated with the construction of the facility. This omission is significant and highly important to all residents of Bala and extremely important to those who reside within direct line-of sight of the project locations. Anyone living either in line with the intake location or downstream and in-line with the generator location will be highly impacted by construction noise. What is the SREL plan to mitigate construction noise? The noise calculations (Appendix Cl) assume the area is Class 1 or Class 2 (as defined in the Ministry of the Environment's Sound Level Limits for Stationary Sources in Class 1 and 2 Areas (Urban), which assumes that Bala has a background "urban hum" to mask the noise of the power station. Firstly, Bala doesn't have an urban hum (which is defined as the "aggregate sound of many unidentifiable, mostly road traffic related noise sources"). Secondly, if the project proceeds, the Falls would be reduced to a trickle, so there wouldn't be any masking background sound from the Falls. Table 7.1. Clearly there is a definite need to have mitigation in relation to all matters related to noise in Bala that will be attributed to the proposed development.

This issue was indeed addressed in the ESR dated October 2009 and was also addressed in the MOE director's decision addressed to "Concerned Citizen" that was sent to council by Swift River via email on March 28, 2011. Swift River and its contractor(s) will comply with all local noise bylaws.

There is no estimate of vibration from this massive equipment either. What will people standing in the alleged "park like setting" on top of the powerhouse experience in terms of vibration and noise. The requisite analysis has not been done, and so no mitigation can be proposed.

See response to Q74 above.

#### Landscape

77 The report does not provide any real, concrete measures how the landscape would not be forever transformed from the beautiful rock cropping of the Cambrian Shield into an industrial site with few "citified' shrubs and plants. They do not, because even 600 pages of 'self assessment' cannot hide the facts that it just cannot be done.

Updated renderings of the proposed project were emailed to the Township on February 15, 2011 and presented to Township at the February 22, 2011 Township Council Meeting. These renderings are also provided on the project website at www.balafalls.ca. It is premature to finalize the landscaping plans without a commitment from the Township to lease the lands newly acquired from the District. Furthermore, as outlined in the ESR dated October 2009 and in letters to the Township dated March 17 and September 22, 2010, Swift River will be seeking input from a Landscape Advisory Committee for the development of the final landscaping / architecture plan.

All drawings and "Photoshoped" pictures that have been circulated by SREL are illustrated with "mature" trees or with existing trees relocated by the magic of a computer. We know that in real life this cannot happen and thus I would ask that the images and drawings be re-done and supplied with trees and other landscaping elements that are real, not contrived or set up to show what the sites would look like in 25 years. Let's see what they would look like the day after the job is finished. Note: The average pine tree grows (gain in height) at the rate of 13 to 24 inches per year while the average oak grows (gain in height) at just over 24 inches per year and a white birch grows (gain in height) at a rate of 13 to 24 inches per year. Therefore, even if more mature trees are replanted, the island may not look like this drawing for years. Overall, it could easily take 2-3 generations to replace the existing trees, if large nursery stock were supplied and would grow.

Swift River's proposed project life span is expected to be in excess of 40 years. Therefore, the final landscaping plan will take into consideration the use of a variety of vegetation with respect to species and age class.

79 What could SREL do for the side of the power station facing the north falls other than pile up blasted rock?; what would be the appearance of the 75'-long and 15'-high retaining wall (facing the Moon River)?

#### See response to Q77 above.

80 Proper renderings/drawings to scale have not been done. Why not? So far SREL have not satisfactorily prepared and given to the public, community, councilor even the media. This is a major construction project that affects everybody. No public input is necessary on this from them? Why are they so exceptional that they don't have to comply like the rest of us? The community doesn't want to lose any of our natural beauty that already exists at our falls. How will they leave the existing trees and rock alone? No blasting? Can they be allowed to cut down and trees that exist now? See response to Q77 above. This was also addressed in the MOE director's decision to the Township dated March 25, 2011. In addition, press releases were issued on February 15, 2011 with the renderings referred to in the response to Q77 and posted in several local newspapers.

81 Will all the trees need to be cut down and cleared between the North and South Falls for the construction of this project? If not all, then what will be cut and cleared?

This issue is addressed in the ESR dated October 2009. It is premature to map out exact trees to be cut at this stage in the project. Also see response to Q77 above.

82 Who will be on the Landscape Advisory Committee mentioned and how will they be selected and by whom?

Swift River will be responsible for establishing the proposed Landscape Advisory Committee including the selection of its members. It is intended that this committee will be comprised of members of the community with experience in landscaping and architecture as well as representatives of local aboriginal communities, business associations, the municipality, and neighbouring land owners. It is also likely that government officials will be invited to attend as observer and to provide informational resources.

83 The latest renderings displayed on the proponents website extremely and offensively deceptive. These renderings show mature trees. The trees/foliage in the renderings will never look like this in our lifetime. SREL is showing the mature trees seem to be about 50-60 years old (ie. they photoshopped on to a current photo of Burgess island). In fact, however the trees/foliage will be starting from scratch because they will be clear-cut and blasted out and citified landscaping will be put in. Therefore, it will be impossible to have trees of such natural species and of such an age. Why can't SREL give a TRUE rendering of their proposal? Why are they continuing to deceive the public?

See response to Q78 above.

# **ECONOMIC IMPACTS**

## **Tourism and Local Economy**

84 Tourist impact -will they ever come back? or will Bala simply be left to die a slow death? .

This statement / insinuation is not supported by the results of the independent Economic Impact Assessment completed for the project by the Centre for Spatial Economics dated November 2010. This issue is also addressed in the MOE director's decision to the Township dated March 25, 2011.

85 There may no longer be a tourist attraction or a cause for people to return to Bala to experience the natural beauty of the Bala Falls and the solid bedrock of the Canadian Shield.

Any negative and long-term effect on the tourism and economy of the area would be irreversible. How does the proponent plan to compensate business owners and The Township of Muskoka Lakes?

This statement is not supported by the results of the independent Economic Impact Assessment completed for the project by the Centre for Spatial Economics dated November 2010. This issue is addressed in the MOE director's decision to the Township dated March 25, 2011. No compensation is required.

86 Economic Impact. The Bala Falls is a valued scenic site that attracts many visitors to the Bala area due to the falls. The economic impact of a big ugly power facility on tourist visits has not been addressed. What if the power facility diverts all the water to maximize revenue and the falls are reduced to a trickle, who's coming to Bala to see this and what is the impact on the business community when there are no tourists?

This issue has been addressed in the ESR dated October 2009, the letter to the Township dated November 5, 2010, and the independent Economic Impact Assessment completed for the project by the Centre for Spatial Economics dated November 2010. It was also addressed in the MOE director's decision to the Township dated March 25, 2011.

THIS MIGHT BE A GOOD PROJECT BUT IN ANY OTHER PLACE BUT ASMALL TOWN TOURIST BASED TOWN LIKE BALA. The proposed project expects to take up 1/3 of the town. Tap into our water and take the rush of the falls away. The Muskoka Brand that we all travel for and recreate for. This is not found in the city of Toronto. We spent our hard earned dollars to come to a muskokian setting. The natural granite precambrian rock, water, water sports, and the nature all in a natural beautiful setting.

The issue of site selection was addressed in the MOE director's decision to "Concerned Citizen" dated March 25, 2011 and forwarded to the Township by Swift River on March 28, 2011. The site was selected by the Minister of Natural Resources as part of a government initiative. This question should, therefore, be deferred to MNR.

88 This historical site has years of history. Over 100 years. Quite remarkable. How do they propose to maintain our precious historical sites? The portage path that is used to portage over from Lake Muskoka to the Moon River and is used daily thoughout the summer months and for over a hundred years campers travel this exact path. How will cottagers and campers be able to maintain this sport safely?

The historical uses of the site were was addressed in the project ESR dated October 2009 including the Stage 1 and 2 Archaeological and Heritage Impact Assessments contained therein. It was also addressed in a letter to the Township dated March 17, 2010 and the MOE director's decision to the Township dated March 25, 2011.

The issue regarding the portage was also addressed in letter to the Township dated March 17 and, September 22, 2010, and in the MOE director's decision to the Township dated March 25, 2011.

89 The Falls are the heart and soul of this town and people take great pleasure in the Falls and surrounding scenery. It is a tourist destination because of the Falls -One just has to be in Bala on a summer day, or at Cranberry Festival time to enjoy this site! How would destruction of the Bala Falls affect the social, environmental, and cultural conditions of the Bala community?

This issue is addressed throughout the project ESR dated October 2009 and in the MOE director's decision to the Township dated March 25, 2011.

## Employment

90 The ESR estimates that there will be 4000 to 6000 person days of labor during the construction period. The ESR states that no mitigating measures are necessary as any effect on the local labour force will be positive. Employers and residents do not necessarily concur as it is anticipates that certain areas businesses/employers, commuters of the local economy may be effected during the construction period. What mitigation plans does the proponent have?

See response to Q86.

91 This project is not producing any employment in Bala hence, again no benefit to a growing community. What employment do they think they are producing?

See response to Q86.

Business impact -how long will businesses be interrupted and can they ever recover? Other towns have never recovered because the work not only went on too long but people went elsewhere not necessarily more convenient, but without the detours etc. and quite simply continued with their newfound routine.

See response to Q86.

93 The proponent claims that there are 3 full time positions locally (page 30) which is impossible since the installation will be 'remotely controlled' from outside the area with existing manpower. In previous town hall meetings, the proponent has admitted that there is no permanent employment impact from the project. How does SREL explain this?

This issue has been addressed in Centre for Spatial Economics response to the Township's peer review of the EIS dated May 2011 and sent to the Township via email dated May 13, 2011.

## **Property Values**

94 The issue of the effect of this massive project on property values is not addressed other than a comment that water levels changes will not effect property values: "... it is expected that likely causes of property value reduction such as increased risk of flooding or nuisance noise during operation, will not be an issue. "What if their guess is wrong?

Swift River will be responsible for ensuring that the project is operated in compliance with the MRWMP and the required MOE noise approval.

95 Significant Damage to Property Values -The sight and sound of an operating industrial hydroelectric generating station would undoubtedly cause significant unmitigated environmental effects to the value of Moon River waterfront property in "line of site" of the Bala Falls. No more invigorating view of water falling from Lake Muskoka to the Moon River, instead an unpleasant view of an industrial hydroelectric generating station with all of its urban accessories i.e. concrete, chain link fencing, barb wire, security lighting, orange safety booms, an ugly blast rock retaining wall supporting the service road, a huge gate raised to let water out etc. No mitigation other than a few potted plants is offered by the proponent.

This does not appear to be a question. The ESR dated October 2009 addresses property values.

## **Economic Impact Study**

Why did the authors of the Financial Impact Study on the Bala Falls not survey the residents of Bala, Bala Bay and the Moon River? These are the most impacted group. The excuse of not knowing who they are is inexcusable. Many other groups, organizations (Township, MPAC, Newspapers, etc.) have no problems determining who these residents are? Is it possible to have a Town Hall Meeting dedicated to this Financial Study?

The survey conducted by the Economic Impact Assessment completed for the project by the Centre for Spatial Economics dated November 2010 was intended to gather information from local "businesses". Therefore, residents were not included in the list to be surveyed. Note that the Township of Muskoka Lakes and the Muskoka Lakes Chamber of Commerce reviewed the list of businesses to be surveyed prior to it being issued and all names provided were included in the distribution list.

People (locals and cottagers) shop in Bala. People (locals and cottagers) shop in Bala and it is important that HWY 169 be 2 lanes by mid-April at the latest. (connected to point #1). SREL response was" the fact that the majority of cottagers no longer come and stay for the whole summer as they used to in the 1950s. They instead come for shorter periods and bring all their supplies with them, reducing the need to purchase supplies from the local retailers. I also based the statement on my observation that many of the businesses in town (especially on Bala Falls Road) are closed and boarded up." The comment that cottagers bring all their supplies with them is ludicrous. Has anyone from SREL actually spent any time in Bala along the Hwy 169 corridor? There is a difference between the Hwy 169 corridor and the Bala Falls Rd and SREL does not seem to understand the difference. For example, on the Hwy 169 corridor there are various clothing stores, The Cottage Butcher, Don's Bakery, Annie's Deli, the Liquor Store, Ice Cream Dreams, Fresh Fruit and Vegetable Stands, The Fresh Mart Grocery store, and Muskoka Lumber, to name a few. These businesses have to make their money from mid-April to mid-October.

The subsidy SREL is getting from the gov't, hence the taxpayers and hence me. SREL response, "The idea that we will be getting a rate that is "much greater than our cost" is frankly incorrect. The price was determined by the government to provide developers with a modest return on investment. The real driver for us to develop this project isn't a high price compared to costs, but instead a guaranteed long-term return since our contract with the Ontario Power Authority will be for 40 years. Some people assume the returns are higher because the rate is higher than what Ontario Hydro used to charge for these projects. The fact is that private developers can develop this project much more economically than the old crown corporation could. And while household bills may indeed rise over the upcoming years, the reason isn't because profits are coming up, it is the fact that users are starting to see the "true cost" of electricity. Unfortunately the old Ontario Hydro hid most of these "true costs" in the enormous stranded debt that is added to your utility bills now. Other alternative forms of electricity are nuclear that is significantly more expensive than waterpower, and coal that may be cheaper but at what environmental and health costs." This does not answer the question and our understanding is SREL is getting 13 cents vs. 5 cents and in our books this is a subsidy or to put it another way, what is the government actually paying them. What is a modest return -please be specific?

The statement being quoted & referenced to SREL was actually made in reference to the Economic development Strategic Plan & Urban design Guidelines, Town of Bala and West Muskoka, dated May 2002 for the Township and Chamber of Commerce completed separately from this project. It was not an observation by Swift River.

Swift River was awarded a contract from the Ontario Power Authority allowing all power produced at the project to be sold to Ontario Power Authority for a period of 40 years. The rate provided in the contract will be the rate available for all new waterpower projects under the Green Energy Act and equal to 13.1 cents/kWh. It should be noted that on the other side of this is that Swift River will be required to pay the Ontario Ministry of Natural Resources 14.5% of the gross revenue from the project as part of its Waterpower Lease Agreement.

98 Why was the economic impact study conducted in the Fall when many businesses were preparing for season end closing?

The survey was sent September 12, not in the fall. Throughout the last 4 years of the EA process, Swift River has been told by residents and businesses that the "busy season" for local businesses was between April and November. Therefore, it can be assumed that businesses were still available in late summer. Furthermore, the majority of the surveys were issued via email that would not require the business owner to be at the physical location if it had indeed closed for the season.

99 There will be negative economic impacts on Bala and vicinity; we are therefore requesting that, a complete economic impact study of this proposed development be undertaken. Furthermore this study should:

- Be carried out at the expense of SREL.
- Be carried out independently of SREL.
- Establish a "bench mark" economic model for pre-construction period Bala.

- Be repeated 1 year after completion of all development work if the project is undertaken.
- Examine all direct, in-direct and induced impacts on the businesses in Bala and area.
- Examine the immediate, short-term and long-term impacts.
- Evaluate and quantify the positive and negative impacts on:
  - o Employment.
  - o Business income and profitability.
  - o Tourism.

This analysis is beyond the scope of the terms of reference for a Category B, Environmental Screening Process as required for waterpower facilities less than 200 MW as outlined in the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act.

Note that the scope of the study, and the selection firm (Centre for Spatial *Economics*) to complete it were agreed on by the Township in August 2010.

#### **Financing and Performance Bond**

100 My main concern is the financing of the project by Swift River Energy Limited. They have estimated a cost of approximately \$ 25 million to finance the project. What guarantee is there that SREL possesses sufficient funds to complete the project to its completion?

This has been confirmed by both the Ministry of Natural Resources and the Ontario Power Authority during the site release and the FIT Contract processes respectively. The project will likely be financed. Therefore, Swift River's financial capability to complete this project will again be assessed by the financial institution providing the project financing prior to construction.

101 It would be prudent to ask for and review by Township Council the audited financial statements published by SREL to verify the ability of the Company to afford financing the project. We must never face a situation which exists in Port Carling where the Developer (Shawn Leon) was unable to financially complete the project. Examples of failed businesses –Eatons, Simpsons, Nortel to name a few.

See response to Q100 above.

102 If, after 5O years, the facility is decommissioned, (Sect 6.6) the "owner may choose to remove some or all facility components" and the site would need "rehabilitation". Will SREL provide a performance bond to guarantee funds will be available for this work?

It is more likely that the project will be refurbished as opposed to decommissioned at the end of its lifespan, as is typical for these types of project. No performance bond is required.

103 There is no performance bond for a guarantee that if construction begins, the project would be fully completed and the site fully restored.

Swift River's contractor will be required to provide sufficient performance bonds for the project to ensure that it is completed. In addition, security has been provided to the Ontario Power Authority as a requirement of its Feed-in Tariff contract, to ensure that Commercial Operation is achieved. No further performance bonds are required.

In order to guarantee that these studies are done and that compensation, if deemed necessary, is available, we would request that a "surety bond" be required to be posted by SREL. The amount would have to be sufficient to enable completion of the construction project, carry out the second economic impact study and provide a "compensation fund" pool should compensation be required. SREL must be required to carry out these requests.

See response to Q103 above. Swift River will be required to fulfill all commitments made in the project ESR dated October 2009 and supporting documentation as well as all conditions of the required permits and approvals for the project that will be obtained prior to construction and operations. No "surety bond" and/or "compensation fund" are required.

105 Experts have pointed out that very important engineering details are lacking in the proposal, including ventilation, exhaust, disguising the 75' long and 13' high retaining wall etc. Etc. I am not versed to speak on these construction details but my architect husband and a neighbour engineer insist that all related details must be seen BEFORE decisions to proceed are made-not afterwards. These professional residents also want any proposal to abide by existing laws that other buildings conform to (e.g. connecting to sewer lines) and have financial guarantees in place lest a developer not be able to complete a project for whatever reason.

Ventilation, exhaust and retaining walls are shown on the most recent renderings and preliminary engineering drawings provided in the ESR and on the project website at <u>www.balafalls.ca</u>. Swift River will be required to abide by all applicable laws and regulations for the project and the conditions of all licences, permits and approvals received.

106 How much liability insurance will you have? Will you be posting a completion bond?

It is premature to put a figure to the insurance at this stage in the project. However, Swift River, its operator and its contractors will all be required to have sufficient (within industry standards) liability insurance for the project. See response to Q103 above.

107 The Town of Port Carling has an ugly eye sore that was left by a developer who ran out of money. Why is there no Performance Bond required for the SREL project?

See response to Q103 above.

#### Accountable Engineer

108 Who is accountable at Swift Energy and the accountable engineer at Hatch Engineering if something goes wrong during and after construction is complete?

There will ultimately be several "accountable engineers" and engineering firms for this project, as there are many different disciplines involved. It is premature to name these specific engineers at this stage in the process.

## Compensation

109 The Economic Impact Study prepared by C4SE states that Bala will suffer on page 33 "Our assessment also points out that the costs of the project –the loss of business and the inconvenience costs –will all be borne by the Bala Community". How much does SREL intend to compensate the business owners and property owners for their losses?

This issue has been addressed in the Economic Impact Study dated November 2010 and in the MOE director's decision addressed to the Township dated March 25, 2011. No compensation required.

110 The two year disruption in business and consequential destruction of the town's principal tourist asset will no doubt have a profound negative effect to local business. The many businesses are interdependent and the loss of a few will likely have a domino effect. The prospective loss of the livelihoods of the local citizens does not even warrant a mention in this report. Will there be compensation offered? What will the process be to qualify for compensation?

Note that construction is expected to take between 12 to 18 months only. See response to Q109 above.

111 How much rent does SREL anticipate paying to use the Option 2 location and the Township land in front of Purk's Place?

It is premature to answer this question as, to date there have been no negotiation discussions between the Township and Swift River regarding the lease of the municipal lands requested.

With respect to the crown lands, Swift River will be required to pay the province a total of 14.5% of revenues from the facility under its Water Power Lease Agreement with the Ministry of Natural Resources, that is a requirement of the operations of the proposed facility.

112 The 18 months of construction with intermittent road closures of our highway (the only road through a town built on islands) will surely bankrupt several businesses and leave the rest of us "clinging for dear life." What does SREL plan to do to offer us compensation?

Economic impacts were addressed in the project ESR dated October 2009 and the subsequent Economic Impact Assessment completed by the Centre for Spatial Economics in November 2011. This was also addressed in the MOE director's decision to the Township dated March 25, 2010.

The above statement is simply not supported by these studies and reviews. No compensation is required.

113 In the event of a major power crash in Ontario, can Bala be guaranteed to tap into their power in the area? Will SREL promise and make it law that such, the town of Bala in never without power? Can all the property owners be subsidized by SREL use of our water?

Swift River is not a distributer of electricity and, therefore, has no authority make such a guarantee nor can it pass any laws. Hydro One Networks Inc., will ultimately be responsible for distributing the power from the project as it feels appropriate.

Use of water: Swift River will be required to pay 14.5% of its gross revenue from the facility to the Province of Ontario under the required Waterpower Lease Agreement it will have with the Ministry of Natural Resources in compensation for the use of the water and the crown land.

114 Compensation (during construction and after). Is SREL going to compensate local businesses for lost business? No answer received.

See response to Q109 above.

## Cost to the Taxpayer

115 How is this Green? For the foreseeable future, the net effect on the environment of Option 2 will most certainly not be Green. In fact, the first several years will be profoundly negative to the environment, when you consider the consequences of construction involving: the destruction of land, rock and trees, the harmful effects on the fish and dislocation of wildlife, the carbon footprint and pollution from the construction trucks and equipment, and car exhaust from the traffic jams that will result. It will be several years before the area even recovers from the devastation. Why does SREL continue to promote Option 2 when it would clearly be devastating to Bala and clearly not green?

The issue of impacts to the environment are addressed in the project ESR dated October 2009 and supporting documentation. This has also been addressed by the MOE director's decision dated March 25, 2011 sent to the Township.

The ESR identified Option 2 as being the "preferred option". This opinion has been supported by the vast majority of the members of the public over the extensive 4 years of public consultations.

116 Can we be guaranteed that the owners of this company remain in Canada. That they are Canadian and never allow any investment offshore or out of country as a condition of the lease, if there ever is one? We need to preserve our natural resources.

Swift River is a 100% Canadian owned company based in Toronto, ON. The guarantees requested is unreasonable and out of scope of the project.

117 Financial-what will it cost us, the taxpayers? and just how much money is being given to the Proponent by all levels of government including tax breaks that in the end cost us all? Cost to Bala and the taxpayer does NOT justify this project.

No subsidies have been applied for under this project. Swift River was awarded a contract from the Ontario Power Authority allowing all power produced at the project to be sold to Ontario Power Authority for a period of 40 years. The rate provided in the contract will be the rate available for all new waterpower projects under the Green Energy Act and equal to 13.1 cents/kWh. It should be noted that on the other side of this is that Swift River will be required to pay the Ontario Ministry of Natural Resources 14.5% of the gross revenue from the project as part of its Waterpower Lease Agreement.

118 The claim that this generator is needed by the Province is questionable as it will only add approximately 0.017% to the total generating capacity of the province. We should also note that at this time, the province apparently has too much generation available. So why should we the consumer pay you 13.5 cents a k Watt hour for your electricity. The major generator in the province only gets around 5.8 cents a k Watt hour?

This analysis is beyond the scope of the terms of reference for a Category B, Environmental Screening Process as required for waterpower facilities less than 200 MW as outlined in the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act.

119 How much annual revenue do you expect to earn from the generation of 3MW. Have you considered a future government deciding the contract that McGuinty signed is odious and will no longer pay the exorbitant power rates to you. This is already happening in Germany.

The proposed project will actually be 4.5 MW. If the contract is cancelled or changed by the government, the project may indeed be cancelled by Swift River.

# **CONSTRUCTION**

## Drawings, Renderings and Technical

120 With regards to their current before and after images: I find these totally misleading and deceptive, as they have pretty much just Photoshop the proposed station and left all natural landscaping as is. Then follow with "Potential landscaping and architectural features shown may be subject to change." Which pretty much says they can totally change what ever they want.

This does not appear to be a question.

121 At the presentations and meetings, the drawings of the developers were proven to be deceptively inaccurate which startled us. Since then, we have not seen fully accurate drawings and we understand the developer has refused to provide the details of the appearance of this proposed industrial facility. How can this refusal be allowed??? How can decisions be made without details??? This is a major concern when the project affects the main part of town where residents, guests and tourists visit.

See response to Q77 above.

122 Why is it that the wash sink in the proposed power station wouldn't need to connect to the town sewer line?

The project design will comply with all laws and regulations regarding the connections to the wash sink.

123 More detail is needed concerning the testing for leaks and contaminants into the 288,000 liters per day of water which would be dumped into the Moon River after being used for cooling of equipment in the proposed power station.

See response to Q33 above.

Experts have pointed out that very important engineering details are lacking in the proposal, including ventilation, exhaust, disguising the 75' long and 13' high retaining wall etc. etc. I am not versed to speak on these construction details but my architect husband and a neighbour engineer insist that all related details must be seen BEFORE decisions to proceed are made-not afterwards. These professional residents also want any proposal to abide by existing laws that other buildings conform to (e.g. connecting to sewer lines) and have financial guarantees in place lest a developer not be able to complete a project for whatever reason.

This is a repeat of Q105. Please see response provide under Q105 above.

## **Construction and Physical Aspects of Plant**

125 Importance of Hwy 169 as the only way to get through Bala. If road (Hwy 169) goes down to one lane only, it has to be completed by mid-April and way before the May 24th weekend (this is too late, is not realistic and does not allow for delays -planned or unexpected). SREL response was, "Unfortunately, there is always some disruption to people during construction. Cottagers are also very affected by the road construction on highway 400 and highway 11 on their way up to Muskoka. This is, however, the reality of the situation." SREL does not seem to get it that Muskoka is a fairly large area with different routes in to various areas (e.g. Port Carling) but Bala is smaller and there is only one road through -Hwy 169). Hwy 169 is the economic life blood of Bala.

This issue was addressed in letters to the Township on March 17 and September 22, 2010 and in the Economic Impact Assessment completed by the Centre for Spatial Economics dated November 2010. It is further addressed in the MOE director's decision to the Township dated March 25, 2011.

126 SREL estimates the project can be completed in a period of 18 to 24 months. I fear the town will resemble a war zone during this period. As we are aware, Muskoka endures severe weather conditions in the winter and unexpected serious situations could arise preventing and delaying completion of the project as projected. Any delays could harm the community even further beyond all the damage created during the construction period. How can SREL guarantee completion as disclosed in the Environmental Screening Report? As stated in project ESR dated October 2009 and all accompanying information, Swift River estimates that the project can be completed in a period of 12 to 18 months. Economic impacts due to construction have been addressed in ESR, the Economic Impact Assessment completed by the Centre for Spatial Economics dated November 2010 and in the MOE director's decision to the Township dated March 25, 2011.

127 The blasting will occur in an area where existing water and sewer mains, linking the north end of town to the south end of town, are located. How will SREL effectively prevent any damage, environmentally or otherwise, to the water and sewer mains?

This issue has been addressed in the ESR dated October 2009 and in the MOE director's decision to "Concerned Citizen" dated March 25, 2011 and sent to the Township on March 28, 2011.

128 Section 5.2.1 of the ESR speaks to the possible crushing of rock on site. How will noise and dust emissions be monitored and controlled? During what time of year is the crushing proposed?

*This question was answered in a letter to the Township dated March 17, 2010. No crushing will be completed on site.* 

129 How would waste from within the plant be stored and handled?

This issue is addressed in the project ESR dated October 2009.

130 Where is the emergency back-up generator's diesel engine exhaust?

It is premature to provide these specific details at this stage in the process. The design of the exhaust will comply with all laws, regulations and permits required for the facility.

131 It is understood that the facility's cooling system would be a 'closed loop' type cooling system, seals and gaskets can fail and leaks can still occur. I also understand that regular maintenance, as proposed, may reduce the potential for leaks, but I do not see in the Environmental Screening Report how leaks can be detected by the lone operator. What is SREL's plan to monitor and address any leakages? Who will be responsible for monitoring compliance and performance?

See response to Q33 above.

132 Can we please see drawings that show the view of the proposed structures (sites 1 and 2) from highway 169?

*Option 2 will not be visible from Highway 169. All available renderings for the project were sent to the Township in February 2011 and are available on the project website at www.balafalls.ca.* 

133 What locations will be used by SREL for the purposes of material and equipment storage? What remediation is planned for these locations once the project is complete and the sites are no longer required?

It is premature to specify these locations at this stage in the process. All sites will be restored as required by the respective land owner(s).

134 What are SREL's precise mitigation plans to protect the buildings in the area of the proposed facility location from damage caused by vibration and flying debris during blasting and heavy equipment use times? Will property owners be compensated for damage? How?

General plans have been in the project ESR dated October 2009. It is premature to outline "precise" plans prior to a contractor being chosen for the blasting work.

135 If SREL has a lease on The Shield Parking lot, where will visitors park, where will the Cranberry Festival vendors be located?

This analysis is beyond the scope of the terms of reference for a Category B, Environmental Screening Process as required for waterpower facilities less than 200 MW as outlined in the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act.

## **Option 1 Alternative**

For several months SREL has threatened to simply move to the Option 1 Site and start to build if the Option 2 Site is not leased to them immediately. In the ESR Section 1.5.1.1 SREL states -"The location of the powerhouse would remove any access to the falls from the south bank of the dam. The tailrace of the powerhouse would be located in close proximity to the falls which could cause safety issues and public concern. Furthermore, the location of the intake would be between the North Bala Dam and the highway bridge. This is not an optimum location from a hydraulic standpoint and head losses would be incurred. Approach area excavations near and below the road bridge to improve the hydraulics would be difficult and could threaten the bridge or dam." If these conditions existed in 2009 when the report was prepared what changes have taken place between 2009 and the present day that would make feasible to move to Site 1 and, what possible damage might occur to the bridge and/or the dam?

As stated in the project ESR dated October 2009, the Option 2 site has been determined to be the "preferred site". However, if the municipal lands are not made available to facilitate the Option 2 plan, the Option 1 plan will be pursued. Swift River's engineering consultants have assured it that the Option 1 plan is indeed feasible and that the blasting required for Option 1 can be done without damage to the bridge or dam.

137 Section 1.5.1.1 of the ESR states -"The roof levels are intended to be tiered with public access to the upstream roof area. The lower roof could be used for some components of the powerhouse". The recent layouts proposed by SREL for this optional site are not as per this statement. One illustration shows a roof with a large elevated portion close to the road.

The second shows a completely flat roof. What has changed to make the flat roof possible?

The drawings provided to the Township, and available on the project website (www.balafalls.ca) are consistent with the engineering drawings and statements in the project ESR dated October 2009.

138 Section 1.5.1.1 of the ESR states -"Alternative 1 was presented during the Public Information Centre (PIC) of2007. However strong public sentiment, in combination with the technical considerations discussed above determined that the powerhouse should be shifted farther to the south, away from the dam as described in Section 1.2. Public concerns expressed during stakeholder consultation included access to the Bala Falls area, and aesthetic preservation of the Bala Falls and surrounding parkland. By moving the project away from the North Channel, these concerns are better addressed. The potential occupation of lands owned by the District Municipality of Muskoka, the Town of Bala and Crown land by the project, as an alternative, represents amicable mitigation ofsome major public concerns expressed during the initial PIC. Due to the difficulties noted above, this layout alternative was not considered further." This paragraph tells us that SREL stopped doing any technical, design or engineering work on this location back in 2009 at the latest. Thus moving to it now would involve new work. What work would that be?

Should Swift River decide to pursue Option 1, an addendum to the ESR dated October 2009 would be required, as per the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act.

We see that the "new" Option 1 drawings provided by the proponent in September 2010 show that 75% of the north channel would need to be obstructed by a coffer dam during construction (see attached). Given that the Ministry of Natural Resources was very concerned about the coffer dam required in the north channel during construction of the proposed Option 2, it appears that for Option 1:

- The obstruction of the north channel caused by the coffer dam would be much greater.
- The obstruction would need to be in place for much longer.
- The coffer dam could not be removed quickly (if necessary for a high flow event) as the construction crane would likely be located within the area protected by the coffer dam, and the supports for the District Road 169 bridge and the excavating adjacent to the north dam would not be ready to handle the force of the water for much of the time when the coffer dam needs to be in place.

Accordingly, we do not believe that the MNR would approve of the construction steps required for Option 1. We therefore do not believe that Option 1 could ever be built. We request a response from the MNR on this issue.

Swift River is not aware of the above mentioned concerns from the MNR regarding the Option 2 cofferdam and defer this issue to MNR.

140 Inasmuch as the size of the Crown land site for Option 1 is very limited and contiguous to District land; if SREL decides to attempt to build here how does the proponent

intend to:

- Build the power station with retaining wall, safety fences, room for hoisting equipment etc etc with the District denying all access or trespass on its land -possibly including some part of the road over the bridge?
- Build the power station without locating it on the probable District or Township shore road allowance on this Crown site, which may also extend under the water?
- Anchor the tailrace safety boom without this anchor being on District land or a shore road allowance?
- Satisfy provincial laws protecting the riparian rights of downstream property owners, public and private, against the dangerous and potentially damaging effects of fast water exiting the power plant?
- Easily obtain an addendum to any provincial environmental certification obtained for Option 2, when the characteristics and impact of the alternative site are so dramatically different?
- Satisfy Township noise and safety bylaws (which are subject to ongoing modification) regarding construction, exhaust fans and other machinery etc?
- Adequately compensate affected local businesses such as Purk's?
- Continue building if Township/District work crews are required to do extensive and delaying road work at the approach to the site, e.g. for bridge repairs, sewers or water mains?

Plans for the proposed alternative "Option 1" plan were sent to the Township on September 17, 2010 and are also provided on the project website at <u>www.balafalls.ca</u>. Specific impacts of this alternative will be outlined in required addendum to the October 2009, should Swift River decide to pursue this option.

## South Channel

141 And what is wrong with using the already damned area between Lake Muskoka and the Moon River, with the ready made chute if council goes so far astray as to allow this ludicrous project.

This issue was addressed in a letter to the Township on February 10, 2009, August 6, 2009, and in a letters addressed to the District and copied to the Township on February 17 and October 30, 2009. It was also addressed in the MOE director's decision to "Concerned Citizen" dated March 25, 2011 and forwarded to the Township by Swift River on March 28, 2011.

# **PARTICIPANTS IN THE PROCESS**

#### **Public Consultation**

142 Changes & Amendments the proponent has more than once issued a statement at a

public meeting or in a written communication only to change their position after the fact. Significant changes in the proponents stated position require that additional meetings be held and written communications sent to inform stakeholders so that these changes may be included in their deliberations. This has not been done. When will such meetings be held? A recent example is the request by the proponent for an amendment to the MRWMP giving them the right to operate in peaking/ponding mode. This change would allow operation during peak demand hours for electricity which just happen to coincide with boating hours. While this mode would maximize private profits it would also maximize the increase in danger for recreational users of the waterway and waterfront. Making significant changes in the proposal requires additional "Information Meetings" to consult the public and other stakeholders. Holding additional meetings would enable SREL to consult with stakeholders regarding these changes.

It is unclear what "positions" this statement is referring to that have been changed "significantly". While no further "open houses" are currently scheduled for this project, Swift River has presented in front of the public municipal council meeting on several occasions and is agreeable to delegating at future such council meetings if deemed helpful - but it is not "required" under the provincial or federal environmental assessment processes.

See attached letter from Hatch for information on the impacts of the proposed cycling operations as outlined in the MOE director's decisions conditions.

The MOE director's decision to "Concerned Citizen" dated March 25, 2011 and forwarded to the Township on March 28, 2011 addresses the issue of public consultation requirements for this project.

143 The Proponent should be required to demonstrate that the public benefits from the Project, beyond any reasonable doubt, far outweigh the adverse impact the Project will have on the area and its many stakeholders.

This issue was addressed in Swift River's response to the Township's appeal request to the Minister of MOE dated May 13, 2011.

We cannot believe that Council is not requiring the Proponent to appear before it. At least if they appeared, everyone could hear their responses at the same time and not be forced to emails. Cannot believe that you, our elected Council, would bow to the proponent and go so far as to set up this email address because" the proponent responded that because they wouldn't know in advance which experts would be needed, they prefer to receive such questions in writing." By now, we would think that everyone on SREL has become an expert on this subject.

It should be noted that Swift River requested that these questions be addressed at a council meeting but was denied by the Township. Written requests for this forum were sent on February 17, June 2 2011 in addition to Swift River's delegation to Township Council on February 22, 2011.

145 Our family concerns have not been addressed by the proponent! If this proposed

project proceeds, there will be a lasting impact on the natural features of the Bala Falls and surrounding parkland, and on the citizens of this community. These Falls and adjoining parkland have been enjoyed by four generations of our family -we owe it to our future generations to NOT MAKE A MISTAKE.Full-time residents, seasonal residents and tourists alike go into Bala for many reasons.

#### This is not a question, but a statement.

146 It is unconscionable to suggest that the Bala Falls, as "resources", are not unique. Anyone who knows Muskoka and Bala Falls in particular, understands that the uniqueness of these resources drives tourism and the local economy. Words like "majority" and "low magnitude" are as diversionary here as a cheap magic trick. Defining the standard of review with vague and self-serving terms such as "based on the criteria used", and then concluding confidently that the residual effects are not "considered significant", is hollow and deceptive. Indeed, the Report is rife with such examples. It is an insincere sales pitch that must be viewed with skepticism. The Report's failure to address (and in no way mitigate) these important considerations demands that the Project be elevated to an Individual Environmental Assessment. Furthermore, the promises of the Proponent to attempt to mitigate certain damage in the future (such as by maintaining water levels in Lake Muskoka) cannot be accepted as proper mitigation given the practical limitations on enforcing the Proponent's covenants and the fact that the damages, when incurred, could not be compensated by monetary damages (if in fact a direct causal connection could ever be proven in what would no doubt be protracted and legalistic maneuvering).

This analysis is beyond the scope of the terms of reference for a Category B, Environmental Screening Process as required for waterpower facilities less than 200 MW as outlined in the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act.

147 We have had the same questions outstanding for over a year. We detailed a total of 69 questions in our technical response to the proponent's environmental screening report, and in over a year the proponent has only addressed two of our questions (16 and 54). The remainder of their responses have not answered the questions asked, but have simply repeated what they already said. We request answers to the questions we asked, rather than the evasive, non-committal replies previously received.

This is assumed to be from "SavetheBalaFalls". Written responses to all 69 of its questions were provided to SavetheBalaFalls on April 5, 2010 as best as they could be answered at this stage in the project. In addition, the MOE director's decision dated March 25, 2011 was based, in part, on MOE's review of all questions submitted in response to the ESR. The MOE decision found that the answers provided were sufficient to satisfy the requirements of a Category B, Environmental Screening Process as required for waterpower facilities less than 200 MW as outlined in the Guide to EA Requirements for Electricity Project, as set out in Regulation 116/01 under the Environmental Assessment Act.

## Proponent

148 Is Swift River Energy a real company? Do you have a company website? The only website is related to the Bala Falls Project. Is that all you have?

Yes, Swift River Energy Limited is a real company, incorporated in the province of Ontario. It has no "company website" only the "project website" www.balafalls.ca.

149 Have you ever built a power station such as the one being proposed for Bala?

The project team for the North Bala Dam Small Hydro Project has a combined experience well exceeding 180 years in designing, developing, and operating power stations such as the one being proposed for Bala.

Swift River was founded by John Wildman, in his retirement, to fulfill a personal vision to create a company to redevelop previously decommissioned waterpower projects, to contribute to the growing demand for renewable energy in Ontario. Mr. Wildman focused on this specific subsection of projects based the knowledge that the vast majority of the ecological impacts had already occurred at these locations during their initial developments and were, therefore, viewed to having the least impact on the environment.

Mr. Wildman initially pursued both the Bala project and the Wasdell Falls Small Hydro Project in Washago. It was ultimately decided, however, that Swift River would focus its efforts on the Bala project. Mr. Wildman was then joined by longtime friend and business partner Paul Fisher, and Toronto real estate leader Horizon Legacy, through its renewable energy subsidiary Horizon Hydro. Horizon ultimately became the majority shareholder of Swift River, with the original founders remaining actively in the project as minority shareholders.

Horizon is a private, family-owned and operated, Toronto based company, formed in the 1950s. Horizon has built and financed many of Toronto's landmarks over the last 50 years including the Yonge Eglinton Centre, One Financial Place, 2 St. Clair Avenue West, 40 St. Clair Avenue West and 18 King Street East, to name a few. Horizon has created over 6 million square feet of developments, and over \$500 million of financings and construction project administration, as construction managers.

In 2005, Horizon branched out from the Toronto real estate sector into renewable energy including solar, wind, and waterpower. Completed projects include Uilk Wnd Farm in Minnesota and Maryvale Wind Farm in Antigonish, NS. Current projects in development include the Big Thunder Wind Park in Thunder Bay, Ernestown Wind Farm in Amherstview, and Troutlake River Small Hydro Project in northerwestern Ontario.

Swift River's experience in developing and financing real estate and renewable energy, as described above, is enhanced by the specialist team members it has retained for the Bala Falls Project:

- Hatch (formerly Acres International of Niagara Falls) is a world leader in the waterpower industry for engineering design and environmental planning. Hatch's history spans well over 100 years including the development of the original waterpower projects in Niagara Falls and, more recently, as the author of the Muskoka River Water Management Plan.
- McGhee-Krizsan Engineering Limited (MKE) of Burlington, ON has been retained to Project Manage the development. MKE brings over 18 years of waterpower and project management experience throughout Ontario, Canada and overseas, to the Bala Falls Project Team.
- Lakeland Power/Bracebridge Generation Swift River has an informal agreement with this Bracebridge company to take over operations and administration of the project after construction including the dams.

150 Do any of SREL's investors, officers or staff own property in the township of Muskoka Lakes? Who and in which Ward?

This question is out of scope of a project of this nature.

151 What experience as a limited company does Swift River Energy Limited have in Hydro-Electric Generating Station construction and or operation?

See response to Q149 above.

152 Swift River Energy Limited needs to demonstrate it's expertise in risk management. What conditions of its contract with the government addresses structural failure during the proposed construction? What a catastrophe if that was to happen and the waters of Lake Muskoka were let surge uncontained down the Moon River. Who is underwriting this company?

Swift River has already demonstrated its expertise in risk management for both the Ministry of Natural Resources and the Ontario Power Authority through the crown site release and feed-in tariff application processes. See responses to Q106 and Q149 above.

153 Curious as to who/what company/companies are actually involved with this. There seems to be many, SREL, Hatch Energy, Horizon Wind Inc., McGhee-Krizsan Engineering to name a few. We wrote a letter to Ian Baines (see attached) and A. Zwig but no response was ever received back. After emailing Hatch, we finally got a response from Karen McGhee. Each person seems to be in multiple companies so difficult to connect the dots and follow the trail. Also wrote a letter to the Premier and the former mayor of Muskoka Lakes and got no response from either.

- Swift River Energy is the developer/proponent
- A. Zwig is the president of Swift River (and Horizon see response to Q149 above)

- I. Baines is former COO for Swift River (and Horizon), he remains a minority shareholder of Swift River.
- Hatch, or Hatch Energy, is providing the engineering and environmental planning services to Swift River. Hatch acquired the former Acres International of Niagara Falls a few years ago.
- Horizon Wind Inc. is a subsidiary of Horizon Legacy and has nothing to do with this project. A.Zwig is the President of Horizon Wind Inc. as well.
- McGhee-Krizsan Engineering Limited (MKE) is providing project management services to Swift River. Karen McGhee is the President of MKE and is the main contact point for government, contractors and public/stakeholders, for this project during the development stage.
- Bracebridge Generation will provide operations, maintenance, and management services to Swift River post construction.
- Contractor and equipment suppliers have not yet been identified.

#### **First Nations**

154 Correspondence with the First Nations was described in the Environmental Screening Report with a fairly non-reactionary response reported. What information was rendered to them by the proponent? What is the current nature of the relationship between SREL and the various First Nation's communities on the Moon and Musquash Rivers? Does the band have or will they have an equity position in the development?

First Nations and Metis communities identified by the various government agencies have received the same information as the general public for this project. There is no business relationship with aboriginal communities at this time.

#### **Agency Approvals**

155 SREL reportedly has received approval from Transport Canada and The Department of Fisheries and Oceans with regards to their project. What precise approvals did they receive, are there any conditions and what are those conditions?

No approvals or authorizations have been received from these federal agencies. Both, however, have commented on the project ESR dated October 2009 and accompanying information including the Fisheries Letter of Intent dated November 30, 2010 (available on the project website at <u>www.balafalls.ca</u>). These comments were provided to the Township on March 17, 2010 (Transport Canada) and January 13, 2011 (DFO).

Generally authorizations from these agencies are not applied for until after the Statement of Completion has been issued under the provincial environmental assessment process.

## Ministry of Tourism and Culture

156 Has the Ministry of Culture signed a letter of clearance of the archaeological condition?

Yes, this letter was provided the Township on March 17, 2010.

Respectfully,

Pla

North Bala Small Hydro Project Manager Swift River Energy Limited

c.c. MOE EAAB, Adam Sanzo



May 17, 2011 327078.101.01

Karen McGhee Swift River Energy Limited c/o 1959 Creston Place Burlington, ON L7P 2Y5

Dear Ms. McGhee:

#### Subject: North Bala Hydro: Proposed Cycling of the Plant

This letter has been prepared in response to DFO's email of March 31, 2011 to Swift River Energy Limited (SREL). DFO's e-mail was earlier prompted by a letter from members of the public which requested clarification whether there would be any impacts from cycling at the proposed North Bala hydro plant and, if so, how these impacts will be addressed. The issues raised in the email are itemised and addressed below.

With regard to the cycling, the agreement between SREL and Ontario Power Generation ("OPG") states:

- "... 1. The Proposed Undertaking shall be operated only as a run-of-river facility, incorporating a flow plan developed weekly in consultation with the Ministry of Natural Resources ("MNR") and OPG, based on the conditions forecast for each week. The facility would initially be run flat under normal flow conditions (i.e., no load cycling of the unit throughout the day)...
  - 2. Lake Muskoka would not be used as storage with respect to the operating regime of the Proposed Undertaking.
  - 3. When Inflow at the Proposed Undertaking is less than 26 cms (the minimum operating capability of Ragged Rapids GS), the Proposed Undertaking shall be cycled such that its operating discharge is 26 cms or more. Compliance with the WMP and public safety will continue to be ensured. During summer months, this discharge is to be timed in order to provide adequate navigable water conditions for Go Home Lake on Friday and Sunday evenings. This requirement would be included in the weekly flow plan. ..."

To provide the required operating discharge of 26 m<sup>3</sup>/s (26 cms), continuous minimum flows of 1 m<sup>3</sup>/s through each of the North and South Bala dams will be maintained and the proposed North Bala facility will be operated at 20 m<sup>3</sup>/s (the minimum operating capability of the proposed facility), leaving a flow of 4 m<sup>3</sup>/s for Burgess GS. The proposed North Bala facility will be operated at a flow rate of 20 m<sup>3</sup>/s for up to 24 hours, which could draw down the level of Lake Muskoka by up to 2 cm.

Once the planned daily release from Lake Muskoka (according to the weekly plan) is reached, operation of North Bala facility would temporarily cease; the minimum flow at each dam and the flow through Burgess GS would continue to provide discharges at Bala Falls. This would allow the water level of Lake Muskoka to rise back up to the original level. The cycling process would then be repeated the next day.

Based on an analysis of the flow regime expected under the MRWMP, the Inflow at the Proposed Undertaking will fall below 26 m<sup>3</sup>/s from mid-July to mid-August in most years, thus requiring cycling during

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this time period. Furthermore, it is expected that in 50% of the years on average, the Inflow at the Proposed Undertaking will fall below 26 m<sup>3</sup>/s for a longer duration, potentially between mid-June to mid-September and cycling would occur throughout this period, except when inflows increase in response to precipitation events. If there is a dry fall period, the inflow can fall below 26 m<sup>3</sup>/s from mid-September to late November, but this only occurs in 10 to 20% of the years. In the spring, the Inflow at the Proposed Undertaking can fall below 26 m<sup>3</sup>/s from late April to mid-May but the North Bala facility would not be cycled in this period due to the MOE restrictions for spring spawning.

Cycling would therefore not be occurring "every few hours" as suggested by the public. Furthermore, this condition is clearly outlined to only be applicable during low flow conditions when daily average flows are less than 26 m<sup>3</sup>/s. The plant will be operated without cycling the rest of the time.

It should be noted that the cycling will occur so as to pass 20 m<sup>3</sup>/s, the minimum flow allowable without damaging the North Bala hydro-turbine, and not the maximum capacity of 96 m<sup>3</sup>/s. Thus, minimizing the variation in discharge and minimizing the duration of the cycling to the most possible extent, while providing beneficial clean renewable power to the province of Ontario from the OPG and SREL facilities. If cycling was not initiated, this valuable water resource would be lost during low flow periods.

The condition of the MOE decision with respect to cycling (included in the OPG agreement) will have no effect on spring spawning fish species, for which critical habitat exists downstream from the North and South Bala dams and the proposed facility. Cycling shall not occur during the walleye spawning period, which typically occurs at some point between April 15 and June 1, although the actual date of the restrictions on cycling will be determined based on the timing of the spawn each year, which is dependant on a number of variables including water temperature, flow and photoperiod. This condition of the MOE decision will be adhered to.

1. Tailrace habitat: The tailrace shoal habitat proposed in the screening report will be designed to be wetted at all times, based on the known water level regime of the Bala Reach, with only the velocity over the shoals varying due to changes in flow through the facility. This constant wetting will not change with cycling. The cycling would lead to a variation in flows and velocities over the shoals during the time when cycling is occurring. Cycling will typically be limited to the summer season when flows and velocities in the area in the Bala Reach are typically at their lowest, with the majority of the reach relatively slow moving with little noticeable flow velocity.

It is not anticipated that cycling of flows on a daily basis during the time periods noted above will have any significant adverse effects on benthic productivity within the shoal area. A variety of benthos species will colonize the area, each with different tolerances to flow velocity. During periods of cycling, some highly localized drift of less-tolerant benthos may occur from the shoal area in response to changes in velocity. However, given the generally high abundance of benthos on the surface and within the interstitial spaces of shoal rocks (e.g., typically in the range of 1000's per  $m^2$ ), drift loss is only anticipated to occur in a relatively small proportion of the population within the localized shoal area. Further, drift loss will likely only occur along the inside face of the tailrace shoal structures (the area subject to velocity changes), limiting loss to a smaller proportion of the shoal area. The drifting invertebrates will become part of the forage base for the local fish community, so the area may develop into an important foraging location during periods of cycling. It is anticipated that benthos will recolonize areas that have been vacated by other drifting organisms. Therefore some drift may occur during periods of cycling, but it is not anticipated that this drift will have any significant effect on overall production on the shoal area. During the other time periods of the year when cycling does not occur, the facility will be operated continuously, resulting the relatively constant hydraulic conditions discussed in the Environmental Screening/Review Report, resulting in conditions that will facilitate abundant benthic production.

The shoal structures will be designed to be stable at the velocities that will occur at the maximum plant outflow rate, so movement/erosion of the substrate will not occur. Cycling flows as well as full flows



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during the spring period will continue to cleanse the shoals to keep them free of fine sediments. Therefore, cycling will have no adverse effects on the physical integrity of the shoal structure and its suitability as benthic habitat.

Minimum flows of 1 m<sup>3</sup>/s over the North and South Bala dams will occur at all times, such that during periods of cycling, some flow passage will continue into the Bala reach to prevent stagnation of flows, which may have some mitigating effects on benthos on the shoal areas.

Therefore, the cycling operation may result in some change in benthic utilization during the periods when cycling operations are in effect, but it is not anticipated to have any significant adverse effects on overall benthic invertebrate production on the proposed tailrace habitat shoals. These shoals will continue to produce benthos that will be a component of the local forage base for the fish community, as per the original intended function of these shoals.

**Fish entrainment and impingement**: When the facility is temporarily shut down during cycling operations, there will be no flow going through the intake facility, creating a low velocity zone within the intake channel. Fish may then move into this intake zone to forage or find refuge. Upon facility start-up, commencement of flow through the turbine will induce a flow velocity within the intake channel. The predicted flow velocity that would occur at the intake at a flow of 14 m<sup>3</sup>/s is 0.22 m/s, which is generally below the swimming capability of most fish species. However, depending on the rate of increase in velocity (i.e., the "ramping rate"), some fish, particular small fish with weaker swimming capability and those in very close proximity to the intake, could potentially be entrained through the facility and subject to the turbine mortality estimated in Table 6.6 of the ESR. Cycling operations will be resulting in restarting the turbine once per day during periods when cycling is in effect, which, due to the factors noted previously, could potentially result in more fish mortality than originally predicted in the ESR.

Several options exist to mitigate this potential mortality, as described briefly in the following sections. The preferred option will be selected during the detailed design process in consultation with DFO and MNR, and commitments made will be incorporated into the DFO Authorization for the Project.

The first option would be to implement a ramping rate restriction during the turbine start-up process, such that velocity changes at the intake occur over an extended period, to allow fish time to notice the change in velocity (i.e., from around 0 to 0.22 m<sup>3</sup>/s) and leave the intake area, as opposed to very rapid increases in velocity, which could entrain fish before they have a chance to react. The normal start-up time in the absence of ramping rate restrictions would be on the order of 5 to 7 seconds. The ramping rates that are feasible will depend on the final design of the turbine and its associated controls, but it should be possible to slowly increase from the no-flow condition to the minimum turbine flow over a duration of 1 minute or more without damaging the turbine, which will result in a slower velocity increase. The adherence to those ramping rates will be part of the operational approval conditions. All operations, including the cycling will be covered by the operational plan. Given that facility start-up is only anticipated to occur once over a 24-hr period when cycling operations are in effect, the minor increase in flow velocity during turbine start-up is not anticipated to have any significant effect on fish entrainment at the intake.

A second option would be to use an underwater infrasound generator to emit a sound that would scare fish away from the intake immediately prior to turbine start-up, such that fish are not caught within the intake flow velocity. This technology has been used at other water intake locations to minimize fish entrainment. This option would primarily be implemented if slowly ramping up turbine flow is not possible due to the design characteristics of the turbine selected during detailed design.

Given the uncertainty associated with the potential for fish congregation at the intake area during cycling operations, the third option would be to implement an adaptive management program to assess effects and implement mitigation (such as the sound generator) if necessary to mitigate impacts. This would involve monitoring actual fish use of the intake area and the entrainment that occurs during cycling





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operations once the facility is commissioned. Monitoring could be undertaken by underwater camera, sonar or some other technology. Results would be discussed with the agencies and mitigation would be implemented if required.

Given implementation of one of these options, as determined through further agency consultation, it is not anticipated that cycling operations will have any significant adverse effects on fish due to entrainment.

- 2. Upstream water levels: Based on our calculations, the upstream water levels in Lake Muskoka would be fluctuating a maximum of 2 cm/d under low flow conditions when cycling is occurring. Also, and as stated above, cycling will only occur once per day at a maximum. This variation is equivalent to what could be seen due to wind or wave movement on such a large body of water and therefore the impact of this on shoreline habitats would be undetectable/negligible.
- 3. Safety concerns upstream: Based on in situ velocity measurements taken upstream of the proposed safety boom, the velocity of the water at the boom would be in the order of 0.5 to 0.6 m/s at a plant flow of 80 m<sup>3</sup>/s. This cycling condition is applicable only for plant flows in the range of 20 m<sup>3</sup>/s (1/4 of this value). Therefore, it follows that velocities at the boom would be in the order of 0.2 m/s. As discussed above, since it will only be necessary to do this cycling once per day, the timing could be done to minimize the likelihood of public being present. It is expected that an upstream camera will be installed to view the area upstream and downstream of the plant prior to starting the project, to ensure no one is in the restricted zone. Whether the plant is on or off, the restricted zone would be in effect. Whatever means were intended to be employed as warning for the previously proposed "start-up" following low flow shutdown hours will be applied during cycling start-ups.

Yours faithfully,

Trion Clarke, PhD. Senior Environmental Scientist TC:srg

