OEL-HydroSys

a BluMetric™ company

March 12, 2013
Project Number: O-E8982-00-04

RE: Public review comments on the Environmental Report for the Enerdu GS Expansion and Redevelopment Project

Dear participants of the environmental assessment process,

Thank you for your comments on the Final Environmental Report (ER) for the proposed expansion and redevelopment of the Enerdu generating station (GS), herein referred to as the proposed Enerdu project. Throughout the review period of the ER, the proponent, Enerdu Power Systems Inc. (herein referred to as Enerdu), and the environmental assessment (EA) project team received a number of comments from public interest groups, industry and private citizens. Due to the substantial amount of overlap among the comments we received, we opted to issue a consolidated response to all comments for which we have not already issued a formal response.

In the following letter, we offer our responses to your questions and concerns.

1. Purpose and scope of the environmental assessment (EA) and the zone of influence for the proposed Enerdu project

We would like to clarify at the outset the confusion over the purpose and scope of the environmental assessment (EA), the findings of which are presented in the Final Environmental Report.

As indicated throughout the environmental assessment process, the proposed Enerdu project is categorized as a project associated with existing infrastructure. As explained in the "Class Environmental Assessment for Waterpower Projects" (April 2012), Section 3.1.1,

> "the scope of *change* will often be restricted to the infrastructure itself and the *zone of influence resulting from modification*." (Emphasis added)

Additionally, Section 4.2.2 of the same document explains that,

> "An effect is any change to the environment, positive or negative, that could occur as a result of a project."

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The EA is intended to assess the potential impacts associated with the proposed expansion and redevelopment of the Enerdu GS; that is, *existing conditions* were compared to what may occur if the project proceeds. Since the proposed upgraded facility would continue to adhere to the Mississippi River Water Management Plan (MRWMP) as it currently exists, no changes to water levels between the Enerdu GS and the Appleton GS (i.e. Reach 18) would occur as a result of the proposed project redevelopment. The zone of influence of the proposed project itself therefore spans from the proposed excavation area near the upper limit of the existing weir, down to the tailrace of the proposed new powerhouse. Since the scope of the EA focused on the areas that would experience change due to the proposed project, the study area for the EA (including the natural heritage component of the EA) was generally focused on the immediate project area, rather than extending 9 km upstream to include the Appleton wetland and the tailrace of the Appleton GS and 15 km downstream to include the Galetta GS.

Figure 1 illustrates the difference between 1) the Zone of Influence of the proposed Enerdu project and 2) the Zone of Influence of current operations at the Enerdu GS compared to pre-developed conditions.

Figure 1. Zones of influence – EA vs. current operations at the Enerdu GS

Zone of influence of the proposed expansion and redevelopment of the Enerdu GS:

Limited to the area that would experience change as a result of the project, *compared to current conditions*.

- Upstream limit: the upper limit of the existing weir, including the proposed excavation area
- Downstream limit: the end of the tailrace of the proposed new powerhouse

Zone of influence of current operations of the Enerdu GS:

The zone of influence of current operations of the Enerdu GS compared to pre-developed conditions is widely reported to encompass the entire extent of Reach 18 (up to the Appleton GS).

Scope of the natural heritage assessment

The study area for the natural heritage assessment, the results of which are presented in Annex II of the ER, was determined based on the potential impacts from both direct and indirect causes, and the study area was confirmed during the pre-consultation biology meeting on March 16, 2011 with Mississippi Valley Conservation and the Ministry of Natural Resources.

The scope of work to be undertaken was also agreed upon during the same pre-consultation meeting. Note that the level of work and types of surveys must match the size of the project, the potential impacts and the risks associated with the project. The potential impacts associated with small hydro development are well understood. The proposed Enerdu project involves the re-development of a site that already has an existing weir and powerhouse and would not result in changes to water levels upstream or downstream; as such, it does not necessitate a large

volume of studies. Furthermore, this site is isolated by both natural (bedrock steps and falls) and man-made (dams/weir) barriers both upstream and downstream, creating a limited area of impact.

While the EA project team appreciates being provided with an extensive and informative list of species in the general area by local naturalists, please note that much of the areas covered in the list fall outside the zone of influence of the proposed Enerdu project, and as such are not reflected in the assessment.

2. Confusion over the appropriate planning process for the resolution of issues and concerns

Numerous requests have been made from members of the public to address the alleged impacts of *current* operations at the Enerdu GS on the Appleton wetland and riparian rights in Reach 18 of the Mississippi River; please note that this EA planning process is not intended to address these existing issues. The request to change the existing approved MRWMP was not initiated by Enerdu and is not part of the proposed upgrade of their facility. Any changes to current operations at the Enerdu GS would be the result of amendments as requested by other parties *and* as formally approved by the MNR.

Throughout the EA process leading up to the distribution of the ER (as well as throughout meetings with the public, government regulators and Aboriginal communities), the EA proceeded with the assumption that the management strategies outlined in the MRWMP would not change, because there was no indication that a formal amendment was pending. During the review period of the ER, it was noted by several parties that a recommendation was recently made by the Standing Advisory Committee to amend the existing MRWMP. The implications of such an amendment on operations of the Enerdu GS (whether the proposed project proceeds or not) would be evaluated as part of the amendment process. The purpose of the EA for the proposed Enerdu project was to assess the impacts of the project itself on the environment, not to assess the impacts of amending the MRWMP; therefore, the recommendation of the Standing Advisory Committee was not discussed in the ER as it was simply not within the scope of the EA.

Should the MRWMP be amended to require the Enerdu GS to operate at lower levels, the financial implications would be borne entirely by Enerdu Power Systems Inc. Given that the proposed Enerdu project would not impact the actual amendment process, the EA will not be withdrawn on the grounds that the effect of a potential amendment of the MRWMP on the proponent cannot yet be estimated.

Additionally, multiple comments were received regarding the absence of final and detailed engineering and architectural plans, detailed eel passage design, etc. in the ER. It must be noted that plans and designs such as these are generally finalized at the permitting and approvals stage of development, following the completion of the EA process. In the EA, conceptual plans are presented in order to obtain feedback from regulatory bodies, stakeholders and other interested parties. Following the collection and review of all comments and concerns, it can be expected that revisions would need to be applied to the plans. Due to the potential need to make a number of minor and/or major amendments, it is not efficient for a proponent to invest substantial amounts of time and effort at the EA stage of development in producing *final* engineering plans to the level of detail normally required for construction.

3. Classification of the Enerdu GS as a Run-of-the-River facility

The existing Enerdu GS was referred to as a run-of-river facility due to the limited storage capacity of the headpond, its limited ability to manipulate flows, and the absence of seasonal regulation. We appreciate your concern over the strictness of the terminology; however, we must highlight the fact that there is not a universally-accepted, precise definition for "run-of-river"; different sources vary with regards to the extent to which run-of-river facilities can presumably store water and manipulate flows:

From an information document by the Ministry of Natural Resources, called "Waterpower in Ontario":

Run-of-river waterpower facilities (also called diversion facilities) use the existing natural head and flow of water. Therefore, they have a limited potential for storing water."

From the "Community Guide to Waterpower Development" by the Ontario Waterpower Association (OWA):

Run-of-River:

A run-of-river facility uses only the natural flows in the river, as they are available, for generation. Therefore, the flow in the river is either passed through the plant, or partially released around the plant if the flow exceeds the capacity of the plant to use all of it.

Run-of-River with modified peaking:

Many run-of river plants allow for limited storage of water over the course of the day or days. This allows the plant to produce more electricity during periods of high demand i.e., during the day/work week, and save water during periods of low demand i.e., at night/weekends. This type of plant can provide electricity service to the system,

but with limitations imposed by the amount of storage and flexibility available (generally through a headpond).

From "Waterpower – Ontario's Primary Renewable Resource" - a PowerPoint by the OWA:
Run-of-River: A hydroelectric power plant with a limited amount of storage potential for water.

- A run-of-river plant operates at a fixed head and passes whatever natural inflows enter the headpond.
- Run-of-river plants do not have reservoirs on the immediate upstream side of them, but generally do have headponds.

From the Mississippi River Water Management Plan (2006):
A generating facility is called a run of the river operation when it has minimal forebay storage, passes all or most of the inflow of water from upstream through one or more turbines on a consistent basis, with the remainder of the water spilling over existing falls or the dam's spillway.

A key factor in the decision to refer to the Enerdu GS as a run-of-river facility was the definition provided in the Mississippi River Water Management Plan (MRWMP), which also specifically referred to the Enerdu GS as a run-of-river facility. We would also like to point out that the best management practices range (also referred to as the "target range") and the compliance range of the Enerdu GS were clearly outlined in the report. Please note that there was never any attempt to deceive the reader over the nature of current and proposed operations of the facility. Additionally, Enerdu has always adhered to the operating requirements outlined in the MRWMP, and is not operating out of compliance.

While we acknowledge that operations at the Enerdu GS do not fit perfectly with the strictest definition of "run-of-river", it is not accurate or appropriate to refer to it as a peaking facility. The latter implies a large storage capacity and seasonal fluctuations in water levels in the headpond, neither of which are currently the case for the Enerdu GS, nor would they be the case for the proposed expanded and redeveloped facility. The Enerdu GS was referred to as a run-of-river facility as its operations resemble those of a run-of-river facility much more closely than those of a peaking facility. For this proposed project, the Enerdu GS would continue operating as it has since the MRWMP was formalized and approved.

4. Characterization of the project as an expansion and redevelopment

With regards to comments that the proposed project should be considered a "new" project, rather than an expansion and redevelopment, we offer the following explanation.

In describing the proposed project, the project team relied on the guidance and information presented in the Class Environmental Assessment for Waterpower Projects (April 2012). In Appendix A of that document, the following definition is provided:

> *Redevelopment involves a major modification to, or an extension of, a hydroelectric facility. A redevelopment is normally carried out on a facility that is beyond economic maintenance/repair and is often at the end of its useful life. Redevelopment involves the replacement of a facility or a substantial portion thereof. Facility redevelopment may result in the construction of a new facility and retirement of the existing one. The redevelopment of generation facilities may not necessarily occur at the same locations, but may take place in the same general area as the existing facilities. An extension to a generating station traditionally refers to the addition of one or more complete generating unit(s) which increases the name plate capacity of the facility. This extension may be in the same general area or near the existing facilities.*

The project was also categorized as a "project associated with existing infrastructure", based on the definition in Section 3.1.1 of the Class Environmental Assessment for Waterpower Projects, which explains that,

> *This category includes waterpower projects that result in additional nameplate capacity and that are expansions, modifications or redevelopments and are proposed at, near or around existing facilities or water management infrastructure. As an example, this could include the retrofit of an existing dam to incorporate a waterpower facility.*

The proposed Enerdu project was therefore presented as an expansion and redevelopment project throughout the course of the EA. The project was presented as such to regulatory agencies at the early stages of the EA, in the summer of 2011; to this day, these agencies have not objected to the categorization.

5. Rapids Clubtail dragonfly

The Rapids Clubtail is a species of dragonfly, as indicated in Table 9 of Annex II of the ER.

In the ER, it was stated that "no specimens were observed during any of the site visits and therefore this species is considered absent". Although the Rapids Clubtail is reported as being present in the Almonte area, note that it is not documented within Reach 18 of the Mississippi River, but rather in the reaches downstream. For clarification, the statement in the ER was not intended to be a suggestion that no Rapids Clubtail dragonfly exist in the entire Almonte area.

6. Species located within the Appleton wetland and Reach 18 of the Mississippi River

Several commenters believed that species known to exist throughout Reach 18 of the Mississippi River (from the Enerdu GS to the Appleton GS), as well as throughout the Appleton wetland, ought to have been considered in the ER. Species cited by commenters included the Flooded Jellyskin, Butternut and poison sumac.

Given the actual geographical scope of the EA, any species that were not observed or known to occur within the actual zone of influence of the proposed Enerdu project were not given further consideration.

7. American Eel – Detailed Management Strategies

The proponent is proposing to implement mitigation measures and management strategies to improve the safe passage of American eel past the Enerdu GS. As explained in Section 7.2.3 of the ER, the management strategy for minimizing impacts to American eel will be developed and agreed upon with the Ministry of Natural Resources (MNR) as well as the Algonquins of Ontario. Discussions with these parties are ongoing. Additionally, the precise details of the management strategy are dependent on the final design of the proposed facility. Conceptual, rather than final, engineering plans are presented in the ER so that the proponent can incorporate any additional required modifications to the project plans based on feedback from regulators, Aboriginal communities and the public. The final engineering plans would be prepared at the permitting and approvals stage, following completion of the EA, and would require approval by the MNR under the *Lakes and Rivers Improvement Act* (LRIA) and possibly by Transport Canada under the *Navigable Waters Protection Act*. The project would not proceed to the construction phase without the necessary permits, approvals and plans in place. By extension, the detailed plans for eel passage structures will also be prepared during the permitting and approvals stage of the project. These designs are also considered in relation to the *Endangered Species Act* and the *LRIA*.

8. Methyl Mercury Impacts

No changes to water levels are proposed for this project. The production of methyl mercury is a concern when a project contemplates the inundation of land. No additional land would be flooded as a result of the proposed Enerdu project, so methyl mercury impacts are not anticipated; for this reason, a study of fish mercury levels was not conducted for this EA.

9. Impacts Associated with Excavation Activities

A qualified blasting company will be contracted for all excavation works. It was always the intention of the proponent that excavation works be conducted according to industry standards and the highest level of safety and precision. In addition to the pre- and post-excavation surveys mentioned in the ER, the proponent will follow the guidance provided by the Ministry of the Environment: that is, noise, dust and flyrock will be controlled; protocols will be developed and followed for on-site and receptor blast monitoring; and 48-hour notice will be given to nearby residents prior to any blasting activity.

In the unlikely event of damages to surrounding structures as a result of the excavation activities, the contractor conducting the excavation would be responsible for the necessary repairs.

10. Public access to the river

Safe access to the Mississippi River would not be compromised by the proposed expansion and redevelopment of the Enerdu GS, given that the latter would continue operating in the same fashion as it has these past years, and the layout of the facility would be largely the same. Any limitations on public access to the river would be restricted to the immediate area surrounding built structures for safety reasons. Similarly, during construction, temporary access restrictions would be required around the immediate vicinity of the construction sites to ensure public and worker safety, but these restrictions would be removed once the construction phase of the project is complete.

11. Potential flooding in the by-pass reach

Flood control is expected to be improved with the use of controllable weirs. Note that due to the higher turbine capacity of the new facility, a larger proportion of the flow would in fact be directed through the new powerhouse compared to the existing powerhouse during any given flood event.

The contracted engineering team determined that the placement and orientation of a new powerhouse as presented in the Environmental Report would be the most optimal option for electricity generation. The existing powerhouse would not be large enough to accommodate the proposed project components.

During the review period of the ER, concerns were expressed regarding the risk of flooding in the bypass reach due to the location of the proposed new powerhouse. The engineering team will be conducting HEC-RAS modeling downstream of the weir to quantify the impact, if any, of the proposed new powerhouse on flooding in the bypass reach compared to pre-construction conditions. Should the modeling suggest that the proposed powerhouse would significantly exacerbate flooding impacts compared to pre-construction conditions; appropriate mitigation measures will be developed and applied.

12. Powerhouse Noise

Please note that the Noise Screening process, through which the MOE Noise Screening form (in Appendix E of the ER) was completed, explained that "If the closest Point of Reception is closer than the minimum required separation distance calculated in Step 3 then further assessment is required." The form showed the closest Point of Reception as being 50 metres, and the minimum required separation distance as being 1000 metres. The condominiums in the mill building were not identified as a Point of Reception because they fall within the property boundaries of the Enerdu GS facility, and the Noise Screening form defined a Point of Reception as "any point on the premises of a person where sound or vibration originating from other than those premises is received." As a result, the closest Point of Reception was determined to be at a distance of 50 metres.

Please note that even if a Point of Reception was defined differently to include *any* points within the premises of the facility, the result of the screening would have been the same: that further assessment of noise impacts is required to support an application for an Environmental Compliance Approval under the *Environmental Protection Act* (*EPA*). Similarly, the outcome of the noise screening would have been the same whether the surrounding area was categorized as a "Class 1 Area" or a "Class 2 Area".

Estimated sound levels would be available in the final detailed engineering design. As noted in Section 9.0 of the ER, a noise assessment will be conducted and the powerhouse will be designed to ensure outside noise levels do not exceed the regulatory requirements of Section 9 of the *EPA*.

13. The Public Consultation Process

In response to comments concerning the effectiveness of the public consultation process, we offer the following summary of consultation efforts.

During the fall of 2011, at the early stages of the EA process, the Notice of Commencement (NOC) was published in the Almonte-Carleton Place EMC. Additionally, arrangements were made to directly distribute the NOC to riparian landowners via post. The creation of a mailing list of nearby riparian and other landowners was arranged with the Town of Mississippi Mills from the municipal tax roll (see Appendix B of the ER for correspondences between the EA project team and the Town of Mississippi Mills on this subject). Once the mailing list was compiled, the NOC was distributed. However, during the public meetings in 2012, it was brought to the team's attention that a number of nearby landowners still did not receive the NOC. The project team sought to correct this deficiency by requesting the contact details (mailing address and/or email) of individuals wishing to remain informed of project updates.

At the April 11, 2012, community-organized meeting, various individuals noted that they did not receive the NOC. Having been informed of the issue, the EA project team acknowledged that the distribution of information was still deficient despite their efforts towards due diligence, accepted responsibility, and offered their apologies. The EA project team subsequently sought to further improve the public consultation process, the results of which are explained below.

Project updates were provided via email to the public contacts for the proposed Enerdu project and were posted on the EA team's website at www.wesa.ca (please refer to Appendix C of the ER for copies of these updates). The Notice of Completion, which included information on accessing both printed and electronic versions of the ER, was issued in mid-December, 2012. The notice was published in the Almonte-Carleton Place EMC and The Humm. Copies of the notice were hand-delivered to the residences surrounding the project site, and were posted throughout the Town of Mississippi Mills at the following locations:

- Almonte Post Office
- Almonte Municipal Office
- Mississippi Mills Public library (Almonte branch and Pakenham branch)
- Old Town Hall
- The Book Store (an abridged notice was posted here, as the notice board did not have sufficient room for the 2-page Notice of Completion)

A copy of the Notice of Completion was also delivered to the Millfall Condominiums with the request that it be given to the president of the Board of Directors. The Notice of Completion was emailed to all public contacts who provided the EA team with their email addresses; phone calls were also made to public contacts who only provided their phone numbers to ensure and confirm that they were well aware of the availability of the ER.

We hope this document addresses the questions and concerns raised in your comment letters submitted to the proponent and EA project team during the review period of the ER. Thank you for your ongoing participation in the environmental assessment process for the proposed Enerdu GS expansion and redevelopment.

Should you have additional comments or concerns, please do not hesitate to contact the undersigned at mkim@wesa.ca or at (613) 839-3053 ext. 261.

Respectfully,

Muriel Kim, M.Sc.
Environmental Scientist

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