



Petawawa Hydro Project - Big Eddy at Railway Rapids



Newsletter #2

Dear Resident,

I am writing today to update you on the status of our proposed Big Eddy renewable green energy project at Railroad Rapids on the Petawawa River. Over the course of the past few years, our team has had the opportunity to meet many of you and gather extensive community input in this project. We have developed a clear understanding that recreational activities on the river, public safety and environmental protection are key areas of interest. I am pleased to let you know that we have listened and made important design improvements that will make the Big Eddy project better, safer and visually more appealing.

A state-of-the-art natural rock weir will allow kayak passage at high flows and look appealing when visible during lower flows. Emulating the natural river, a fish passageway has been incorporated to ensure spawning and fish migration remain unimpeded. Reduced flow velocities are planned in the intake channel, powerhouse and tailrace areas to reduce the risk of fish entrainment and enhance public safety. A powerhouse bypass is being constructed to avoid unexpected flow and level changes during operation.

There will be no storage of water at the site and the project is true "run of river" which means all natural river flow remaining in the river and only diverted from the relatively small section of river between a point just upstream of the CPR bridge and the tailrace just upstream of the Petawawa Blvd. bridge.

With these very significant changes, I believe that the Big Eddy project will not only become an important local attraction that is well planned to fit within the natural environment and the community. We greatly appreciate the fact that the success of this project is significantly due to the constructive input we have received from the people of Petawawa and the surrounding region.

In follow up to our public meeting on May 5, 2011 and our Public Information Centre (PIC) on May 31, 2011, we are now planning to host a new PIC in the summer of 2012. The purpose of meeting will be to show the work that has been done to follow up on the areas of interest to the community and to listen to any additional questions that may arise. In addition to posting notices in media, we will also notify all stakeholders on our e-mail list. If you would like to be added to the e-mail list, or if you have questions about the Big Eddy project, please contact Vanesa at venskaitis@xeneca.com. If you were not able to attend last year's events, the display panel information from 2011 is still available at http://www.xeneca.com/projects/current_projects/petawawa_river.html

Best regards,

Uwe Roeper, P.Eng
Chief Executive Officer
Xeneca Power Development

Community Involvement

There is an ongoing need for community input and assurances that concerns are being addressed. We are working on putting together a second Frequently Asked Questions (FAQ) document to distribute to the community. The first set of FAQs, which were put together as a result of questions from the community, are posted on the Xeneca website.

Xeneca has had many meetings, teleconferences, emails and other correspondence with recreational river users including members of the kayaking community, municipality, residents' associations and anglers and hunters. We intend to continue the dialogue throughout development and through an already-existing advisory committee during the long term operational phase of the facility.

CONTACT US

- Call Vanesa Enskaitis: (416) 590-3078
- Email Vanesa Enskaitis: venskaitis@xeneca.com
- Visit our website: www.xeneca.com
- Write to: Xeneca Power Development, 5255 Yonge Street Suite 1200 North York, ON M2N 6P4

Project Updates

During the fall of 2011 we were working on Waterpower Class Environmental Assessments (Class EAs) for projects on the Ivanhoe, Frederickhouse and Serpent Rivers, as well as advancing the Petawawa projects. Some of these Class EAs are currently under agency review. The process is rigorous and requires government review by no less than 17 separate Federal and Provincial agencies. This same comprehensive review will occur for all of our other projects.



Big Eddy at Railway Rapids Project

In preparation for both government and public review of the Big Eddy project, we have also been steadily making progress. The studies that we've been undertaking over the summer and fall of 2011 and early 2012 include environmental, engineering and design features.

Project Features

Some changes have been made to the project because of community input from stakeholders like you.

- Run-of-river operation
- State-of-the-art weir, which allows water to pass over the structure
- Fish passage
- Kayak/boat navigation – discussion with the kayaking community will be on-going in order to determine how we can all share the river
- Creation of the Petawawa Stakeholder Advisory Committee (PSAC)
- Integration of Town Parks and Recreation into development and design

Engineering Design

On the engineering design side, our team has carefully reviewed all of the comments we've received from government agencies, Aboriginal Communities and public stakeholders. Your input has been used to develop options for a generating station that minimizes impacts and maximizes benefits to the community. Xeneca has recently completed the following work at the Big Eddy site:

1. More detailed upstream bathymetry survey (summer 2011) that provides a much more detailed look at the way the river flows under different conditions such as flood, drought and long term average conditions.
2. A dynamic 'flow' model to assess the upstream extent of changes to water levels in relation to the type of weir placed in the river.
3. Revised conceptual models and options resulting from increased understanding of the hydrology in the headpond area of the project.
4. Review of boat passage and fish passage in the latest round of conceptual modeling.

Big Eddy Environmental Studies

The government agencies that oversee the Class EA process have asked Xeneca and our environmental consultants to undertake and prepare studies additional to those originally requested. These studies will improve our knowledge of existing water quality.

Furthermore, over the last six months our consultants have been in the field collecting data to expand our understanding of the environment and ecology in the areas affected by our project. The 2011 Environmental Studies Report will be available in the coming months and will include the following studies:

- Invertebrate assessment using targeted surveys
- Targeted non-capture surveys for Blanding's Turtle, Map Turtle, Milksnake
- Targeted survey for American Eel (eel pots)
- Spawning area assessment (Sturgeon, Walleye)
- Avian/amphibian call monitoring using modern technology
- Water/sediment quality testing
- Fish tissue sampling for methylmercury

Big Eddy Project - Petawawa River

FIT Schedule

ID	Task Name	2010				2011				2012				2013				2014				2015			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Conduct Environmental Field Studies/Reports																								
2	Complete Conceptual Designs																								
3	Prepare Class EA																								
4	Issue Class EA - NOC/SOC																								
5	Engineering - Final Design																								
6	Initiate Post EA Approvals																								
7	Procure Equipment																								
8	Equipment Delivery																								
9	Site Preparation																								
10	Construction																								
11	Project Commissioning																								
12	Project COD																								



(FIT Contract Operation Date: Oct. 2015)

The Future of Ontario’s Energy

As part of Ontario’s Long Term Energy Plan to build a clean, modern and dependable electricity system for current and future generations, there is a mandate to eliminate all coal fired generation of electricity by the year 2014. Currently, coal is a main source of “peaking power” for the province. Peaking power is required for periods of exceptionally high demand or when outages occur in part of the generation/transmission system.

Although there is currently an over-supply of baseload power, the surplus situation cannot be expected to remain for the long term. As coal is taken off line and other generating assets reach the end of their lifespan, the need for new generation becomes increasingly important. The Green Energy Act was introduced with the intention of replacing coal power and other non renewable energy sources with a cleaner, renewable energy supply mix, including hydropower.

An Overview of the Waterpower Class EA Process

The Ministry of the Environment (MOE) describes Environmental Assessment (EA) as a planning process that allows the proponent to assess the potential for effects to the environment using best information available to make informed decisions about how or whether a project should proceed. The process began when Xeneca filed the Notice of Commencement, which was published in local media. The process takes approximately 24 months to complete.

Here is an overview of the studies that need to be completed within this process:

Existing Conditions

- Locations & Land Ownership In Project Area
 - Existing Infrastructure
 - Topography
 - Climate
 - Soils
 - Geology
 - Hydrology
 - River Hydrology
 - Water Levels/Flow and Movement
 - Ecology
 - Surface Water Quality
- Scoping of Natural Heritage Investigations
 - Terrestrial Habitat and Species
 - Other Wildlife and Habitats
 - Ecosystem Components
 - Endangered and Threatened Species
 - Cultural Heritage
 - Archaeological Sites
 - Current Land and Water Use
 - Social And Economic

Recent Changes to Requirements of the Class EA

In 2010, the Ontario Waterpower Association (OWA) petitioned to clarify the definition of a managed vs. unmanaged waterway. These definitions have been modified and are now listed as:

- Managed Waterway** – A waterway, including its full reach on which other water management infrastructure (dams, diversions, weirs etc.) and/or waterpower facilities exist.

Unmanaged Waterway – A waterway, including its full reach, generally in Ontario’s Far North, on which no other water management infrastructure (dams, diversions, weirs etc.) and/or waterpower facilities exist.

The government agencies that oversee the process consider the Petawawa River a “Managed Waterway.”

Figure 1: Powerhouse tailrace view from the bridge on Petawawa Blvd.



Figure 2: The illustration is of the water flowing over the natural rock weir. The rock weir is designed to allow kayak passage during high flows and during hours when flow is being provided for kayak recreation.



Figure 3: Upstream view from shoreline near railway bridge showing flows during low water with plant operating. Illustrated is the natural rock weir and nature like fish ladder bypass with ecological flows provided through the fish ladder.



Xeneca is committed to good corporate citizenship.

We want to make our projects the best they can be for the community and Ontario. We recognize that, once built, waterpower facilities are among the longest lived sources of energy. Some plants have been in operation in Ontario for over 100 years. Many cities and towns were built around waterpower facilities that are an integral part of their respective communities.

Given the long term nature of our project, Xeneca fundamentally understands that we will become part of the community, contributing not just to our bottom line but to the betterment of the communities that host our generating facilities.

Xeneca is committed to ensuring we give back to the community.

Xeneca is committed to local values and history.

We hope this newsletter was helpful and gave you a clearer picture of what is happening with the projects. I look forward to meeting with all of you at our next Public Information Centre this summer.