

Ministry of Transportation

Ministry of Transportation

Engineering Office
Planning and Design Section
Northeastern Region
301-447 McKeown Avenue
North Bay, ON P1B 9S9
Tel.: 705-497-5456
Fax: 705-497-5499

Ministère des Transports

Bureau du génie
Section de planification et de conception
Région du Nord-Est
301-447, avenue McKeown
North Bay, ON P1B 9S9
Tél.: 705-497-5456
Télééc.: 705-497-5499



February 18, 2011

OEL-HydroSys Inc.
3108 Carp Rd.
P.O. Box 430
Carp, ON K0A 1L0

Attention: Tami Sugarman

Dear Ms. Sugarman:

RE: Xeneca Power Development Inc.
Larder and Raven GS – MTO New Liskeard Area (Hwy 624)
Ivanhoe the Chute GS – MTO Cochrane Area (Hwy 101)
Serpent Four Slide Falls GS – MTO Sudbury Area (Hwy 108)
Serpent McCarthy Chute GS – MTO Sudbury Area (Hwy 17)
Vermillion River Wabashik GS – MTO Sudbury Area (Hwy 17 or 6)
Wahnapitei River Allen and Struthers GS - MTO Sudbury Area (Hwy 637)

This is in reply to your earlier circulations concerning the above noted proposed power development projects.

I'm pleased to advise that in general, the Ministry of Transportation of Ontario (MTO) has no objections.

According to the information you provided, all sites are to be accessed via existing and proposed new roads that will eventually connect to Provincial Highways using existing entrances. As per the *Public Transportation and Highway Improvement Act*, MTO Entrance permits will be required if any modifications are required at highway entrances. Prior to making permits available, the MTO must inspect the entrance locations to ensure that our safety and operational requirements are met. Depending on the posted speed of the highway, the following minimum visibility requirements are required:

80 km/h posted = 230 metres of visibility in each direction
90 km/h posted = 250 metres of visibility in each direction

(over)

Concerning the proposed power lines, these lines must be placed outside our right-of-ways (ROW). MTO Encroachment and/or Building/Land Use permits will be required for any proposed crossing of our ROW or for lines located within 45 metres from the limits of our ROW. Vertical clearance of highway crossings must meet the requirements of MTOD – 2245.020 (copy attached).

Concerning the Allen and Struthers location, the proposed power line will cross Highway 69 near it's junction with Highway 64 west of Alban. In the near future, the Ministry will be four laning this section of Highway 69 and an interchange is planned at this junction. The power line alignment must not interfere with our proposed interchange location. Detailed information concerning our alignment may be found at www.highway69.ca.

You may obtain further information concerning our permit and setback requirements by contacting the following Corridor Management Officers:

New Liskeard – Ms. Natalie Dugas, e-mail: natalie.dugas@ontario.ca

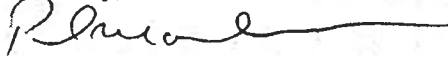
Cochrane – Ms. Sandy Knight, e-mail: sandy.knight@ontario.ca

Sudbury – (Vermillion & Serpent River Sites) – Ms. Lise Taylor, e-mail: lise.taylor@ontario.ca

Sudbury – (Wahnapiatae River site) - Ms. Anne Poliquin-Chaput: e-mail: anne.poliquin-chaput@ontario.ca

I trust the above is of assistance. Should you wish to discuss the contents of this letter, please call.

Sincerely,



Paul F. Marleau
Corridor Management Planner

cc. Natalie Dugas, MTO New Liskeard
Sandy Knight, MTO Cochrane
Lise Taylor, MTO Sudbury
Poliquin-Chaput, MTO, Sudbury

MINIMUM VERTICAL CLEARANCES

LOCATION OF WIRES OR CABLES		MINIMUM VERTICAL CLEARANCES ABOVE FINISHED GRADE										
		COMMUNICATIONS CABLE AND SPAN WIRE	LOW VOLTAGE CABLE 0-750V	HIGH VOLTAGE CABLE								
				>750V ≤22kV	>22kV ≤50kV	>50kV ≤90kV	>90kV ≤120kV	>120kV ≤150kV	>150kV ≤200kV	220kV (350kV)	318kV (500kV)	442kV (735kV)
1	OVER FREEWAYS, EXPRESSWAYS, AND RAMPS	6.0	6.0	6.0	6.0	6.1	6.4	6.9	10.5	15.7	20.7	
2	OVER KING'S HIGHWAYS AND OTHER ROADWAYS	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
3	OVER AREAS LIKELY TO BE TRAVELLED BY VEHICLES (OTHER THAN RESIDENTIAL DRIVEWAYS)	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
4	ALONGSIDE ROADS IN DENSELY POPULATED AREAS	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
5	ALONGSIDE ROADS OR OVER AREAS UNLIKELY TO BE TRAVELLED BY VEHICLES	3.3	3.7	4.5	4.9	5.2	5.5	5.8	6.3	6.5	7.5	8.7
6	OVER RESIDENTIAL DRIVEWAYS	4.0	4.0	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
7	OVER AREAS ACCESSIBLE TO PEDESTRIANS ONLY	2.8	3.4	3.7	4.0	4.3	4.6	4.9	5.4	5.6	6.6	7.8
8	ABOVE TOP OF RAIL AT RAILWAY CROSSINGS	7.6	7.6	7.9	8.4	8.7	9.0	9.3	9.8	10.0	11.0	12.2

NOTES:

- A Clearances shown are under maximum sag conditions as defined in CSA G22.3, No.1-06.
 B Voltages are rms line to ground. Voltages in brackets are phase to phase.
 C This MTOD is the same as OPSP-217.030.
 D All dimensions are in metres unless otherwise shown.

MINIMUM VERTICAL CLEARANCES FOR AERIAL CABLE SYSTEMS

MINISTRY OF TRANSPORTATION ONTARIO DRAWING	November 2007	Rev	0

MTOD-2245.020			

Ministry of the Environment



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

June 10, 2010

Ministry of the Environment
Sudbury District
199 Larch Street, Suite 1201
Sudbury, ON P3E 5P9

To whom it may concern,

As you may be aware, Xeneca Power Development Inc. has been awarded 19 Feed in Tariff contracts by the Ontario Power Authority ("OPA") to purchase water generated renewable power. The following sites are believed to be within your jurisdiction:

Allen & Struthers – MNR site # 2DB13, 2DB14 on the Wanapitei River
Cascade Falls – MNR site # 2CF09 on the Vermillion River
At Soo Crossing – MNR site # 2CF11 on the Vermillion River
Wabageshik – MNR site # 2CF12 on the Vermillion River
McPherson Falls – MNR site # 2CF46, 2CF47 on the Vermillion River

An attached map provided on CD will help to further identify the site locations for each of the projects. Additionally, included in this package is a draft of the Notice of Commencement under the Class EA for Waterpower Projects which will be issued shortly, as well as descriptions of the projects listed above.

This letter is intended to notify your agency of the pending projects and invite agency comment and/or participation where applicable.

Upon review, you may be aware the OPA schedule will prove challenging to both Xeneca and the affected government agencies, as we now have less than 60 months to bring these waterpower projects to commercial operation. This concurs with an analysis of the process by the Ontario Waterpower Association, industry experts and our consultants.

To move forward in a timely manner, we are requesting the following:

- Ministry of the Environment's ("MOE") acknowledgement of receipt of this notice.
- Indication if the MOE intends to comment on some, or all of the projects. If the MOE intends to participate, please indicate the appropriate agency personnel who will handle the Xeneca project files.



- A MOE list of any known issues, concerns and/or comments with respect to the projects, as well as any known non-government stakeholders whom may have interest in these projects.

Please note Xeneca is prepared to meet with the MOE by teleconference to discuss any issues, and requests to be advised of any permits the MOE may require from Xeneca and/or its consultants in order to complete the MOE policy and procedures.

Please contact Xeneca Power Development Inc. with any questions or concerns.

Yours truly,

A handwritten signature in black ink, appearing to read "Patrick Gillette", followed by a circular stamp or seal.

Patrick Gillette
President and COO
Xeneca Power Development LP

Natalie St-Pierre

From: Philippa McPhee
Sent: September 28, 2010 4:39 PM
To: Andrea Clemencio; Kai Markvorsen; Karen Fortin; Philippa McPhee; Pilar DePedro; Tami Sugarman
Subject: FW: Xeneca Power Development FIT Contracts - Vermillion, Wanapatai
Attachments: MOE Sudbury -Cvr Ltr - June 10.pdf; Draft Notice of Commencement -Allen Struthers.pdf; Draft Notice of Commencement -Vermillion River.pdf; Allen Struthers- Project Overview - June10.pdf; Vermillion River- Project Overview - June10.pdf; Xeneca FIT Site Map.pdf

Philippa McPhee - WESA Toronto - (416) 383-0957 x31

From: Vanesa Enskaitis [<mailto:VEnskaitis@xeneca.com>]
Sent: Monday, September 27, 2010 3:05 PM
To: Philippa McPhee
Subject: FW: Xeneca Power Development FIT Contracts

From: Samantha Leavitt
Sent: Friday, June 25, 2010 11:04 AM
To: minister.moe@ontario.ca
Cc: Ed Laratta; Mark Holmes; Vanesa Enskaitis
Subject: Xeneca Power Development FIT Contracts

Dear Hon. Gerretsen,

RE: Ministry of the Environment – Sudbury Division

As you may be aware from recent correspondence forwarded to your regional offices, Xeneca Power Development Inc. is a leading independent renewable energy developer. We are committed to environmentally sound planning, a thorough consultative process, and good corporate social responsibility.

Following up on our recently mailed materials, we wish to provide you with an electronic version of this information. This will assist in ensuring that, in the event mail has been misdirected you are in receipt of information that is of interest to your office, and further that it will enable paperless exchange with relevant departments.

Kindly advise if you have not received a package from Xeneca containing a draft Notice of Commencement, Project Overviews for our proposed waterpower projects, as well as a CD, which shows in greater detail the location of these proposed project sites.

Please don't hesitate to contact Xeneca if you have any questions, comments or concerns.

Kind regards,

Samantha

Samantha Leavitt
Stakeholder Relations Representative
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
Ph: 416-590-9362
Fax: 416-590-9955
samantha@xeneca.com

www.xeneca.com

Danielle Dempsey

From: Hutchison, Carrie (ENE) <carrie.hutchison@ontario.ca>
Sent: October-14-10 2:40 PM
To: Vanesa Enskaitis
Cc: Cramm, Ellen (ENE); Allen, Paula (ENE); Sugar, Alissa(ENE); Amodeo, Piero (ENE); Mitchell, Vicki (ENE)
Subject: RE: Revised Notice of Commencement and PIC Announcement

Hello Vanesa,

As a result of staffing changes, I have been asked to respond to you regarding MOE's comments on the revised Notice of Commencement that was sent to Paula Allen of our Sudbury Office for Xeneca's proposed waterpower sites in the Greater Sudbury Area. I understand from your notice below that that Xeneca would like MOE's comments on the revised Notice of Commencement prior to October 20, 2010. It is not anticipated that MOE will be in a position to respond in detail to your proposed revised Notice of Commencement by that date, however, we may well have concerns regarding statements provided therein. MOE will respond to your correspondence in a timely manner.

Sincerely,

Carrie Hutchison

Carrie Hutchison

Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

From: Vanesa Enskaitis [<mailto:VEnskaitis@xeneca.com>]
Sent: September 30, 2010 11:22 AM
To: Allen, Paula (ENE)
Cc: Tami Sugarman; Philippa McPhee
Subject: Revised Notice of Commencement and PIC Announcement

September 30, 2010

Dear Ms. Allen,

Thank you for your notification of receipt regarding Notice of Commencement filed for Xeneca Power Development Projects within the jurisdiction of your office and for clarifying your position as the point of contact for our proposed waterpower sites in the Greater Sudbury area.

We have revised the Notices of Commencement which are attached for your review and comment. Also note that the revised Notice of Commencement will also include and Notice of Public Information Centres (attached). We believe the notices fulfill requirements outlined in the Ontario Waterpower Association Class Environmental Assessment for Waterpower.

It is intended that the attached will be published in local media within the next 20 days. Any additional comments you may have regarding these attached notices should be provided back to Xeneca prior to October 20, 2010.

Further, we will shortly be issuing invitations to affected government agencies to attend the Public Information Centres. Kindly advise if you will not be attending and who from your office will be attending in order that we may communicate the invitation to them directly.

If you have any questions, please do not hesitate to contact me. We look forward to working with you along the EA process and beyond.

Vanesa Enskaitis

Public Affairs Liaison
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Danielle Dempsey

From: Cramm, Ellen (ENE) <Ellen.Cramm@ontario.ca>
Sent: July-30-12 2:15 PM
To: Muriel Kim
Subject: RE: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Hello Muriel,

Please provide copies of the draft Environmental Report to MOE staff as follows:

1 copy on CD to each of the following:

Ministry of the Environment
Technical Support Section, Northern Region
199 Larch St., Suite 1201
Sudbury, ON
P3E 5P9
Attn: Mohammed Sajjad Khan, Ph.D., P. Eng.
Regional Hydrologist

Ministry of the Environment
Technical Support Section, Northern Region
199 Larch St., Suite 1201
Sudbury, ON
P3E 5P9
Attn: Rod Sein
Surface Water Specialist

1 hard copy plus 1 copy on CD to each of the following:

Ministry of the Environment
Sudbury District Office
199 Larch Street, Suite 1201
Sudbury, ON
P3E 5P9
Attn: Parise Drolet
Senior Environmental Officer

Ministry of the Environment
Technical Support Section, Northern Region
435 James Street South, Suite 331
Thunder Bay, ON
P7E 6S7
Attn: Ellen Cramm
Environmental Planner/EA Coordinator

Thank you.

Ellen Cramm, MCIP, RPP
Environmental Planner/EA Coordinator
Technical Support Section, Northern Region
Ministry of the Environment
Telephone: (807) 475-1728 Toll Free: 1-800-875-7772
Fax: (807) 475-1754
ellen.cramm@ontario.ca

From: Muriel Kim [<mailto:mkim@wesa.ca>]

Sent: July 30, 2012 1:11 PM

To: Cramm, Ellen (ENE)

Subject: RE: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Hi Ellen,

Thank you for your response last week. I just wanted to follow up on whether the additional 3 MNR staff you mentioned in your last email will require hard copies of the draft Environmental Report. Due to the very large size of the report and supporting documents, we would prefer to distribute CDs, but a hard copy/copies can be sent if deemed necessary.

Please let me know by end of day today, otherwise we will assume that one CD-ROM to each of these three individuals will suffice.

Many thanks,
Muriel

Muriel Kim - Environmental Scientist - (613) 839-3053 x261

From: Cramm, Ellen (ENE) [<mailto:Ellen.Cramm@ontario.ca>]

Sent: July-24-12 4:22 PM

To: Muriel Kim

Subject: RE: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Hi Muriel,

I am the appropriate primary contact at MOE for this project, and I will need a hard copy and a CD-ROM copy of the draft ER here are at our Northern Regional office in Thunder Bay. Other staff who will be reviewing this include Sajjad Khan (Regional Hydrologist), Rod Sein (Surface Water Specialist) both in our Northern Regional office in Sudbury, and Parise Drolet (Sr. Environmental Officer in our Sudbury District office). I'm just checking with the other staff as to whether they want hard copies as well as CD copies of the report. I suspect we will need at least one additional hard copy for Sudbury, and perhaps the rest on CD, but I will confirm this.

Regards,
Ellen

Ellen Cramm, MCIP, RPP
Environmental Planner/EA Coordinator
Technical Support Section, Northern Region
Ministry of the Environment
Telephone: (807) 475-1728 Toll Free: 1-800-875-7772
Fax: (807) 475-1754
ellen.cramm@ontario.ca

From: Muriel Kim [<mailto:mkim@wesa.ca>]

Sent: July 24, 2012 10:53 AM

To: kelly.eggars@dfo-mpo.gc.ca; stephanie.davis@ceaa-acee.gc.ca; lisa.mcdonald@tc.gc.ca; EACoordination_ON@inac-a-inc.gc.ca; sheryl.lusk@ec.gc.ca; Caitlin.Scott@NRCan.gc.ca; john.woodward@cta-otc.gc.ca; Cramm, Ellen (ENE); Robinson, Bob L. (MNR); Webber, Gerry (MTCS); Lillie-Paetz, Jennifer (MNDM); Smith, Brett (ENERGY); Pickles, David (MAA); Marleau, Paul (MTO); paul.sajatovic@sudbury.ca

Cc: Tami Sugarman; Kai Markvorsen

Subject: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Good afternoon,

We will soon be distributing the DRAFT Environmental Report (ER) for the proposed Xeneca Power Corporation Inc. waterpower development at the Wabageshik Rapids Project site located on the Vermilion River.

The proposed undertaking is subject to the Class Environmental Assessment for Waterpower Projects as a new project on a managed waterway. While there is no formal requirement for a draft ER in the Class EA for Waterpower Projects, this document will be circulated to key parties in order to facilitate an efficient regulatory review of the final document.

We would like to confirm that you continue to be the appropriate one-window contact at your organization, and whether there are additional individuals within your organization whom you believe should also receive a copy of the draft ER. We are planning to distribute one hard copy and one CD-ROM to each regulator on our contact list; please let us know if you would like to receive additional copies, or if only one form of the report (hard copy or CD-ROM) would suffice.

I will follow up this message with a phone call within the next couple of days to confirm your participation in the review process.

Best regards,

Muriel Kim



Muriel Kim M.Sc.
Environmental Scientist

(T) (613) 839-3053 x261 (C) (613) 294-3886 mkim@wesa.ca www.wesa.ca

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.

Danielle Dempsey

From: Ed Laratta <elaratta@xeneca.com>
Sent: August-27-12 1:37 PM
To: Allen, Paula (ENE); Greenaway, Christine (MNR)
Cc: Tami Sugarman; Ed Laratta; Grace Yu; Uwe Roeper; Mark Holmes
Subject: RE: Wabageshik Rapids Draft ESR review

Hi Paula,

Sorry, I did not see your email or hear your phone message until late this morning.
I am needing to run to the Juravinski Cancer Centre in Hamilton these days for a family issue.

Of course, September 24th is fine.

I realize that you and MNR have been working very hard on meetings with Xeneca in July and August; indeed, this will go on for further meetings into September and October.

These meetings are pressing and are very important to us to be sure we cover all matters for the EAs so I certainly understand that some of the reviews will need to be extended.

Regards,

Ed.

Edmond M. Laratta | Environment Department| **Xeneca Power Development Inc.**
5255 Yonge Street, Suite 1200, Toronto, ON, M2N 6P4; **Xeneca Tel:** 416 590 9362

Tel Direct: 416 590 3069| **Cell:** 416 856 3253| **Fax:** 416 590 9955 | **Email:** elaratta@xeneca.com

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From: Allen, Paula (ENE) [<mailto:Paula.Allen@ontario.ca>]
Sent: August 27, 2012 9:30 AM
To: tsugarman@oel-hydrosys.ca; Ed Laratta
Cc: Greenaway, Christine (MNR)
Subject: Wabageshik Rapids Draft ESR review

Hi Tammy and Ed,

I hope you have enjoyed the summer. It is hard to believe it is already coming to an end.

As you are well aware, the MOE and MNR are making Xeneca files priorities for review. However, with the challenges of workload and summer vacation both Ministries are unable to complete a thorough review of the Draft Wabageshik Rapids

ESR for September 11th. With your agreement, MOE and MNR would like to extend our review time till Monday, September 24th and commit to having comments to you by that date.

I tried calling both Ed and Mark but have been unable to connect with them. I did also leave voicemail messages and unfortunately I do not have Mark's email address.

I look forward to your response. I am currently on holidays but will monitor my email for the response so I can share it with MOE and MNR staff.

Regards,

Paula Allen

Supervisor
Air, Pesticides and Environmental Planning
Technical Support Section
Northern Region

Ministry of the Environment

435 James Street South
Suite 331
Thunder Bay ON P7E 6S7
Tel.: 807 475-1690
Fax: 807 475-1754

Ministère de l'Environnement

435, rue James sud
Bureau 331
Thunder Bay ON P7E 6S7
Tél. : 807 475-1690
Téléc. : 807 475-1754



September 24, 2012

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development Inc.
5255 Yonge St, Suite 1200
North York, ON
M2N 6P4

Dear Ms. Hodsoll:

Re: **Draft Environmental Report
Wabageshik Rapids Generating Station Project
Vermilion River**

Thank you for providing the Ministry of the Environment (MOE) Northern Regional Office with the draft Environmental Report (ER) for Xeneca Power Development Inc.'s (Xeneca) proposed Wabageshik Rapids Generation Station on the Vermilion River (the Project). The draft ER proposes a 3.4 megawatt (MW) waterpower facility at the site known as "Wabageshik Rapids", approximately 50 kilometres (km) southwest of the City of Sudbury, 11 km east of Espanola, and 6 km south of Hwy 17, the TransCanada Highway (legal description: Lot 6, Concession 6, Township of Foster). The Project is located approximately 600 metres (m) from the outlet of Wabageshik Lake, and 5 km upstream of the Vermilion River's confluence with the Spanish River, and is situated between two other Generation Stations on the same river system, one (owned by Vale Inc.) located approx. 11 km upstream, and the other (owned by Domtar Inc.) situated approx. 13 km downstream at Espanola. The Project is being proposed as a run of the river facility with modified peaking, a new project on a managed waterway under the requirements of the Ontario Waterpower Association's Class Environmental Assessment for Waterpower Projects (April 2012) (the Class EA).

Key components of the proposed facility include:

- Headworks structure featuring a 33 m long concrete and earthfill dam, with spillway having an approximate footprint of 200 square metres (m²), with typical construction to feature a broad overflow weir topped by a control feature (Obermeyer or similar pneumatically operated dam);
- Headgate structures either included in the dam design or built as a separate riverside structure depending on water conveyance routing;

- Area excavated for the facility intake will start approximately 45 m upstream of the powerhouse and occupy an area of 200 m²;
- Cofferdams required for construction of the facility intake would dewater 500 m² of riverbed, based on conceptual construction plans;
- Powerhouse occupying 400 m², including powerhouse building, intake, and tailrace, with tailrace extending approximately 30 m downstream of the powerhouse;
- 44 kilovolt (kV) connection line to the provincial electrical power supply grid with two options, each with 20 m wide right-of-way (ROW), being considered for the transmission line route:
 - Option 1: total distance of 15.45 km, requiring seven waterway crossings and the creation of 3.09 km of new corridor; and
 - Option 2: total distance of 17.75 km, with one existing water crossing.
- Two possible routes for access to the site, with each requiring the clearing of a 10 – 30 m ROW for any new road construction, as follows:
 - Option 1: requiring 4.17 km of new road construction, including a single water crossing and crossing of a snowmobile trail;
 - Option 2: requiring 888 m of new road construction and the upgrading of 6.27 km of existing trail/road, with five existing water crossings and one wetland crossing.
- Aggregate borrow/laydown area of 3000 m², with an additional area of 1000 m² for stockpiling topsoil and other materials;
- A 1000 m² construction laydown area for construction materials, equipment storage, construction offices, and parking;
- Gross head of 6.1 m;
- A downstream minimum environmental flow of 2.3 – 2.6 cubic metres/second (m³/s) is proposed.

The project will involve construction of a dam that will result in an area of inundation extending approximately 11.7 km upstream. It is anticipated that there will be a negligible $\pm$ 5cm fluctuation in the water levels of Wabageshik Lake; immediately upstream of the dam, water levels will rise by approximately 5 m. The project is proposed to operate as modified run-of-the-river, meaning that water will be held back for use during peak times. Daily fluctuations in flows and water levels will be altered. The riverine habitat immediately upstream of the dam will become lake-like, and downstream flows will also be altered from the present conditions.

The MOE Northern Region has reviewed the draft ER and supporting documents, and provides the following comments.

Class EA Process

There are a number of environmental assessment principles which are key to successful planning under the *Environmental Assessment Act* (EAA) for waterpower projects, which include: 1) consulting with potentially affected and other interested persons; 2) considering all aspects of the

environment; 3) systematically evaluating net environmental effects; and 4) providing clear, complete documentation.

The following outlines each of these key principles and provides MOE Northern Region's commentary.

1) Consulting with potentially affected and other interested persons:

Consultation with interested persons is a cornerstone of the environmental assessment process and a legal requirement of the EAA. One of the benefits of an approved Class EA is that it provides certainty for both proponents, affected stakeholders, and the public with respect to the consultation process and how to participate in the process. In order to meet the requirements of the EAA, a proponent must successfully follow the planning process in the approved class environmental assessment.

Section 4.1.3 of the Class EA states: "Early and meaningful engagement of representative interests and publics that may be affected by the project is a prudent business practice and a critical element of achieving the intent of the Class EA." Although Xeneca has undertaken a variety of consultation activities, there are outstanding concerns with the Project and potential impacts which have not yet been addressed. As a result additional consultation opportunities should be provided before the preparation of the final ER.

Public Information Centres (PICs) were held in March, 2011 and July, 2012. It is not clear from the draft ER and documentation provided whether a third PIC planned for October 2011 actually occurred. References in various locations in the draft ER (main report and Appendices) refer in some cases to two PICs, and in other cases to three PICs. In one case there is a suggestion that the PIC planned and initially advertised for October 2011 was cancelled. This should be clarified, and the document should be revised to provide a correct record of what occurred. In addition, as field studies and analysis to support the Project are still underway, additional opportunities for public, agency and Aboriginal input should be provided as this information, and any resulting changes to the Project or its potential impacts, become available.

We have concerns with the approach taken by the proponent to provide commitments in the draft ER rather than completing the EA process as outlined in the Class EA. Commitments identified in the draft ER address the completion of additional studies, the identification of appropriate mitigation measures including critical operating parameters of the proposed project, and, where necessary further engagement with affected stakeholders to address issues of concern. This approach is a concern, particularly because the Notice of Completion period offers interested persons and parties an opportunity to submit a Part II Order request (PIIO request), something which would not be available to them if consultation occurs outside of this time period.

Despite the presentation of information summarizing consultation efforts for this Project within the draft ER and Appendixes, sufficient detail has not been provided to determine whether the consultation that has been undertaken to date with the public, agencies, and Aboriginal communities is complete.

Sections 4.4.1 and 6.3 of the Class EA require that the Project documentation detail include: who was concerned; what the concerns were; how those concerns were considered and addressed; and what the outstanding issues are. Further detail should be provided within the final ER to elaborate on these points.

Aboriginal Consultation:

Section 7.1 of the Class EA states: "Proponents are expected to involve Aboriginal communities who may be directly affected by, or have an interest in, the development of a waterpower project and to develop an engagement approach specific to these interests" and "Aboriginal engagement and involvement is intended to allow the proponent to identify and consider the concerns and issues of Aboriginal communities and to provide those communities with an opportunity to receive information about and have meaningful input to the project proposal."

The intent of consultation plans is to produce them early in the process and to set out the consultation that needs to take place during the Class EA process. This is detailed in sections 4.1.3, 4.2.3, and 7.1 of the Class EA. Xeneca's draft Aboriginal Consultation Plan for this Project was provided to identified Aboriginal communities in August, 2011. A revised Aboriginal Consultation Plan was provided in July, 2012. Information presented in the Aboriginal Consultation Plan and the draft ER suggests that Aboriginal engagement is to formally begin after the issuance of the Notice of Completion, at which time the ER will be provided to communities for review for 30 days. Aboriginal Information Centres, community meetings, and additional field visits to Aboriginal Communities are to be scheduled after the submission of the ER.

Although an Appendix to the draft ER contains copies of contact letters from the proponent to Aboriginal communities and a lengthy listing of correspondence and telephone contacts is provided, little information is provided on issues of concern identified by Aboriginal communities, or how these issues have been addressed. Because of the limited documentation provided, the MOE NR is not able to properly assess the adequacy of the consultation that has occurred to date.

2) Considering all aspects of the environment:

The final ER and supporting documents must contain enough information to demonstrate the potential impacts of the Project and identify mitigation measures, to a level that allows the public, Aboriginal communities and agencies to understand the anticipated impacts.

Section 4.2.2 of the Class EA states: "The evaluation, like the entire Class EA process, is proponent-led and will help inform the proponent's approach to obtaining input and information specific to planning and assessing the project. However, it is recommended that the proponent consult with relevant federal and provincial agencies and municipal authorities, appropriately qualified persons, potentially affected and interested individuals and the public when completing the potential effects identification matrix. The results of the environmental, social, cultural and economic evaluation are to be used by the proponent to inform the subsequent consultation, data collection and assessment phases of the Class EA process."

This approach ensures that stakeholders are engaged in a meaningful way that ensures that the proponent takes into account the potential impacts and benefits of the project and which, in turn, informs interested parties about the effects of the project on their interests.

There are statements in the draft ER that refer to future field work and consultation planned for after the release of the final ER. All of this data collection, assessment, and consultation should be completed and documented in the final ER when the Notice of Completion is issued. This will ensure that there is sufficient information available to demonstrate the potential impacts of the Project and identify mitigation measures, to a level that allows the public, Aboriginal communities and agencies to understand the anticipated impacts.

Examples of outstanding potential effects where either studies, analysis, or consultation have not been completed include:

- Wildlife habitat – specifically studies to address the potential for Blanding's turtle habitat, and studies to assess the significance of habitat for several additional species including eastern milksnake, common snapping turtle, denning sites for various mammals including mink, otter, marten, fisher, and eastern gray wolf, and reptile hibernacula.
- Detailed Field Assessments of road and transmission corridors.
- Additional shoreline erosion investigations.
- Analysis of potential for Acid Rock Drainage.
- Analysis and reporting of baseline water quality data.
- Further consultation with agencies to finalize operating parameters and the proposed operating plan for the Project.

3) Systematically evaluating net environmental effects:

Section 4.3.1 of the Class EA outlines an approach to assessing effects. Since all data has not yet been collected, the identification of all effects cannot be complete, and therefore any evaluation of net environmental effects is premature. From the documentation presented, all effects have not been identified, assessed and consulted upon.

4) Providing clear, complete documentation:

Section 4.4.1 of the Class EA provides a list of required elements to be included in the ER document. Attached for your convenience is Table 1, which outlines those required elements and MOE NR's evaluation of the assessment completed and documentation submitted.

Technical Issues

Hydrology:

Hydrology analysis for this project was done using flow data from the WSC station 02CF004 for the period of 1954-1993, which was 18 years old. The WSC station had been discontinued after 1993 but flow data from 1994 to present time are available at Vale and Domtar, collected by the respective agencies as part of their ongoing monitoring. MOE technical staff analysis of the recent data indicates significant differences in flow statistics exist when compared to the statistics derived using flow data up to 1993. This discrepancy proves flow statistics derived using old data are not representative of the current watershed condition. Therefore, a re-analysis of hydrology is required with the current flow data up to 2011. The studies conducted using old hydrology data such as hydraulic analysis of the river system can be considered incorrect in this respect as well.

Hydraulic Modelling:

Steady flow hydraulic modeling was done for the upstream 12-km river reach, starting from the proposed dam site and ending at the tail water of Lorne Falls Generating Station. The modeling report and HEC-RAS modeling files were reviewed by the MOE Regional Hydrologist, and found to be satisfactory. However, a revision is required using the recent hydrology data.

Unsteady flow modeling was completed for the downstream 13-km river reach starting from downstream of the proposed dam site and ending at Domtar's Dam at Espanola. Out of this 13-km reach, the first 4 km was modelled using surveyed river transects and the remaining 9 km was done using transects constructed from MNR's FRI data. Based on our review, the modelling for the first 4 km is satisfactory. The remaining 9 km has some uncertainty because of uncertainty in the FRI data, but that does not result in concerns as this 9 km reach is situated within the inundated area of Domtar's head pond. Water level within this 9 km reach will be managed by Domtar according to the approved dam operating plan. The major issue here however will be reduction of flow during off-peak hours when Xeneca will not be releasing any flow downstream, which will eventually impact Domtar's generation, effluent dilution at Espanola and biology of the river at large.

Effects on Vale's Generation:

Vale Inc. owns and operates a run-of-river generating station at Lorne Falls approximately 11 km upstream of the proposed Wabageshik Dam. The modeling results show back water effects of the proposed dam will propagate upstream up to downstream of Lorne Falls Generating Station, impacting tail water level of the station. The tail water elevation may rise in the range of 0.1-1.0m depending on the flow of the river. This would negatively impact Vale's generation due to reduction of available net head. MOE recommends that Xeneca propose an operating plan which will not adversely affect Vale's generation.

Effects on Domtar's Generation:

Domtar Inc. owns and operates a run-of-river generating station on the same river system at Espanola, approximately 13 km downstream of Xeneca's proposed dam site. This station will be negatively affected by Xeneca's proposed peaking operation as well. During the time of off-peak hours Domtar would receive significantly less flow, and during peaking hours Domtar would receive more flow than its current turbine capacity. This extreme flow fluctuation will adversely affect Domtar's generation as Xeneca will control 40 per cent of the flow of the Vermillion-Spanish river system.

Effluent Dilution:

Domtar is continuously discharging effluent to the Spanish River below Espanola Dam under an approved discharge permit from the Ministry of the Environment. For a satisfactory dilution of the effluent and to maintain river water quality at an acceptable level, an all time minimum flow of $17\text{m}^3/\text{s}$ must be maintained in the Spanish River below Espanola. Out of that $17\text{m}^3/\text{s}$, $6.5\text{m}^3/\text{s}$ comes from the Vermillion River, a major tributary to the Spanish River on which Xeneca's proposed dam will be located.

The minimum flow as proposed by Xeneca (produced below for ready reference) is not acceptable to the MOE to protect water quality of the Spanish River. Domtar's ongoing monitoring and water quality modeling of the Spanish River from Espanola to the mouth of the river at the Great Lakes indicates river health significantly deteriorates when flow goes below $17\text{m}^3/\text{s}$. In a recent year Domtar had to inject liquid oxygen into the river for months to keep the river water quality at an acceptable level. Please note, the Spanish River is a sturgeon river. Because of the biological sensitivity and past incidences, MOE could not agree to a minimum flow less than $6.5\text{m}^3/\text{s}$ released at all times below Wabageshik Rapids. For the protection of the fishery MNR might have a different opinion on minimum flow, but $6.5\text{m}^3/\text{s}$ is the absolute minimum required by the MOE for the protection of water quality. Prior to finalizing the ER and issuing a Notice of Completion, further discussions on minimum flow requirements should be held between Xeneca, MNR, and MOE.

Minimum flows proposed by Xeneca (Table 5, page 28 of the proposed operating plan)

	Flows in m^3/s by hydrologic season			
	Spring	Summer	Fall	Winter
Min. flow in the bypass reach	2.0	0.5	0.5	0.5
Min. flow below the confluence of the bypass and tailrace, which includes bypass flow	No peaking	3.0	2.0	1.0

Water Quality, Benthic Invertebrates, Mercury:

The Vermilion/Spanish River is a managed watercourse. There is a draft water management plan which is currently under review. The Vale Inc. owned and operated Lorne Falls dam and generating station is located upstream of Wabageshik Lake approximately 11 km upstream from the proposed dam. It operates as a run-of-the-river facility. In addition, the Nairn Dam located at the outlet of Agnew Lake (the lake was created by damming the Spanish River 100+ years ago) is located approximately 11km upstream of the Vermilion's confluence with the Spanish. Domtar Inc. owns and operates a dam in Espanola on the Spanish River, approximately 12 km from the Wabageshik Rapids. There are also three more Xeneca projects (Soo Crossing, McPherson Falls, Cascade Falls) proposed for the Vermilion River upstream of the Wabageshik site, all located downstream of Vermilion Lake.

The following general comments address water quality issues related to the proposal.

- Table 5 of the draft ER identifies various water quality issues that may result from construction and operation of the Project, proposing mitigation measures, and then assessing the inherent risk and potential for residual effects of each identified component. Where residual effects are identified, Table 6 then assesses the significance of these residual effects. Impacts identified which are inherent with all undertakings of this nature, include sedimentation/erosion effects, mercury methylation due to inundation area, eutrophication (algal blooms), compliance issues with regards to the Domtar Pulp and Paper Mill, and flow fluctuations downstream, among others. For each of these potential impacts, the draft ER concludes either that no residual effects are anticipated, or that any residual effects are not significant. A review of the information provided indicates that the draft ER does not provide sufficient data, analysis, or documentation to support these conclusions, as noted below.
- Creation of the dam, rising and falling water levels, and sudden increases in flow will result in sedimentation and erosion. Sedimentation occurring during construction can be minimized by Best Management Practices (BMP's); however, only through a sound monitoring program would these be detected. After construction, sedimentation effects which will occur within the impoundment and possibly downstream in the variable flow reach are unavoidable and cannot be mitigated. For example, due to the peaking nature of the facility scouring could result in considerable sediment transport downstream. Even if there was a rigorous water quality monitoring program and impacts were documented, it is unlikely that any mitigation would be possible due to the recurring nature of the disturbance.
- With regard to the mercury methylation, the draft ER indicates that the methylation of mercury due to flooding upstream is considered a low risk, since the area to be flooded is primarily located in a bedrock channel and there is only a ± 5 centimetre (cm) fluctuation anticipated in Wabageshik Lake. We concur that the risk is low, however it is a risk nonetheless. Since recreational fisheries exist adjacent to the proposed site, any increases in mercury above MOE guidelines must be made known to potential resource consumers. Fish consumption advisories may be necessary. As with sedimentation impacts, there is no immediate remediation other than issuing consumption advisories and monitoring fish tissue mercury until such a time as levels return to pre-operational concentrations.

Monitoring of background fish tissue mercury levels in sportfish is ongoing and due to the long-term nature of these impacts, monitoring may be required for decades. Monitoring for mercury should be undertaken as recommended in Annex IV, Surface Water Quality (Hutchison Environmental Sciences Ltd. *“Wabageshik Rapids, Vermilion River Proposed Hydroelectric Generating Station Surface Water Quality and Fish Sampling Guidance”* (July 18, 2012)).

- Although potential for the development of algal blooms has been identified due to increased water retention time in the head-pond, the risk of this occurring has not been addressed. It is very difficult to predict when and where blooms will occur. Total phosphorus concentrations are positively related to bloom occurrence and if concentrations are maintained below 30 parts per billion (ppb) in rivers and below 20 ppb in lakes, the risk is reduced. It is therefore important that phosphorus concentrations be included in the water quality monitoring program. Water quality monitoring for phosphorus should be undertaken as outlined in Annex IV, Surface Water Quality (Hutchison Environmental Sciences Ltd. July 18, 2012).
- Compliance issues related to the Domtar Pulp and Paper Mill are a further likely impact of the Project, as proposed. Currently, Domtar has a plan to deal with Dissolved Oxygen (DO) sags in the Spanish River as a result of Pulp and Paper Effluent discharge. These impacts occur 24km downstream of the Mill, and may be exacerbated by modifying the flow in the Vermilion River downstream of the Wabageshik facility. This could be very problematic, especially due to the peaking nature of the proposed facility as much less water may be available for dilution of the pulp and paper effluent.
- Acid Rock Drainage (ARD) potential needs to be addressed due to blasting activities during construction. A plan needs to be developed which outlines testing methodologies. If ARD potential exists, then rock usage and storage strategies will need to be developed.
- Although MNR and DFO have primary responsibility for issues related to fish and fish habitat, MOE's mandate includes water quality as it relates to protection and maintenance of the natural function of the ecosystem, and the role of the Vermilion River in supporting a diverse fish community, including lake sturgeon, walleye, and other species. It is within this context that we identify concerns with the impacts this facility will have on the land-locked lake sturgeon population known to inhabit this stretch of river. Little is known about the population status or spawning areas, and this project may negatively impact this species. Walleye are also known to spawn in the Wabageshik Rapids. Little data is currently available as to where these fish come from (upstream or downstream). Loss of spawning habitat poses a risk to this population that is currently hard to assess. The recreational fishery and first nation subsistence fishery may be impacted by habitat loss. Further agency-proponent discussion of these issues is needed before a final ER is prepared.
- The draft ER indicates that a report summarizing the available chemistry and biological data is forthcoming in December, 2012. This information should have been made available for review as part of the draft ER.

- Cumulative effects of the Project have not been addressed with regard to the impacts of the three additional proposed Xeneca facilities located on the Vermilion River upstream of the Wabageshik Rapids site.

Peaking versus Run-of-River:

The results of the MOE technical review of the Project to date reveal that this is a sensitive ecosystem that has been impacted previously by hydroelectric facilities and pulp and paper effluent discharge. There are existing water quality concerns down gradient in the Spanish River (dissolved oxygen). A species of special concern (lake sturgeon) is known to inhabit the reach of river where this facility is proposed, walleye spawn in the Wabageshik Rapids, and little is known on the status of either of these populations. Additionally, this section of the Vermilion River supports both a recreational fishery and native subsistence fishery.

In our opinion the proposed project, if operated as a peaking facility, has great potential to adversely affect existing hydropower users upstream and downstream of the project, and water quality of the Spanish River. Because of the extreme fluctuation of flow over a 24-hour period, the proposed operation may harm successful spawning of fishery as well below Wabageshik Rapids. In order to avoid conflict with the existing users and to better protect the environment, MOE recommends changing the design concept of the project from peaking to a run-of-river operation.

Zone of Influence:

Identifying the Zone of Influence (ZOI) is essential to ensuring that all potential effects are identified and considered during the Class EA process. The ZOI should include all areas where effects could occur, including the entire inundation area and areas of variable flow downstream, together with all areas on land that would be impacted due to things such as proponent component footprints, new or expanded road corridors, borrow and laydown areas, parking areas, and areas to be used for the stockpiling of materials. Accurate identification of the ZOI is critical, as this establishes the basis for project evaluation and public and Aboriginal engagement. The full ZOI should be identified in consultation materials presented during the Class EA process, so that the public, Aboriginal communities, and other interested parties are fully aware of the extent of the ZOI within which potential impacts may occur.

To date, there has not been agreement on the full extent of the downstream ZOI for this Project. Minutes of the July 19, 2012 interagency meeting (Appendix C) identify the proponent's commitment to hold further discussions with MOE and MNR to reach consensus on an acceptable definition of the downstream ZOI. These discussions should be concluded before the final ER is prepared and the Notice of Completion issued, so that the agreed-on ZOI can be identified and included in further consultations with the public, Aboriginal communities, and other interested parties prior to the conclusion of the Class EA process.

Archaeological Effects:

Identified Archaeological Site

A Stage 2 archaeological assessment was completed for the project, and one archaeological site was identified as a result. The Stage 2 archaeological assessment report recommends that the identified site be subject to a Stage 3 archaeological assessment. As indicated in the draft ER, completion of a Stage 3 assessment is planned prior to any construction activities. It is our understanding, following discussions with the Ministry of Tourism, Culture and Sport, that Stage 3 archaeological assessments include both a site-specific assessment which determines the extent of the site and the need for mitigation, and recommendations on appropriate mitigation measures.

As described in Section 4.2.2 of the OWA Class EA, proponents are required to assess potential effects of their proposed projects, as well as any net effects after mitigation. Section 4.3.1 of the Class EA (Assessment of Effects) further elaborates that the proponent "confirms the potential effects of the project, determines the appropriate avoidance, prevention and/or mitigation strategies and assesses the net effects of the project." The Class EA also requires that consultation take place during the process with the public, agencies, and Aboriginal communities. The ER must contain enough information to demonstrate the potential impacts of the project and identify mitigation measures to a level that allows the public, agencies, and Aboriginal communities to understand the anticipated impacts.

As it is not until a Stage 3 archaeological assessment that the extent of identified archaeological sites is identified and any necessary mitigation measures are recommended, Stage 3 archaeological assessments (where recommended by a Stage 2 assessment) must therefore be completed during the Class EA process. This will ensure that the proponent is able to include identified mitigation measures and an assessment of any net effects in the ER.

In some cases, where archaeological sites identified during the completion of a Stage 2 archaeological assessment are located outside of the defined Zone of Influence, it may be possible to mitigate potential impacts through avoidance. Where this approach is used, the location of the archaeological site relative to the defined limit of the Zone of Influence must allow for the implementation of an undisturbed buffer area of a minimum of 20 metres around the perimeter of the archaeological site, with no portion of the buffer encroaching into the Zone of Influence. In addition, the proponent will also be required to introduce monitoring up to 50 metres around the archaeological site by a licensed archaeologist (the monitored area may extend into the defined Zone of Influence for the project). Where the above requirements can be achieved, proponents can choose to use the avoidance strategy instead of completing the Stage 3 assessment; however, the completion of a Stage 3 assessment would remove the monitoring requirement and may reduce the required buffer distance to less than 20 metres. Where archaeological sites identified during the completion of a Stage 2 assessment are located within the defined Zone of Influence, this avoidance strategy is not an option because the recommended minimum buffer, as outlined above, cannot be achieved.

Please note that a commitment to undertake the recommended Stage 3 archaeological assessment after completion of the EA process, such as the statement made in Section 2.10.1 of the draft ER, would not meet the intent of the Class EA. All impacts of the project must be assessed as part of the Class EA process, and presented to the public, agencies, and Aboriginal communities for review and comment. Therefore, where a Stage 2 archaeological assessment has recommended

the completion of a Stage 3 assessment, in order to meet the requirements of the Class EA the Stage 3 assessment or (where possible) commitments to implement the above-noted avoidance strategy, must be provided during the EA process, and included within the ER.

The draft ER (including Annex V – Woodland Heritage Services Limited Stage Two Project Report) does not clearly identify the extent of the area subject to the Stage 2 archaeological assessment. The document also does not indicate whether the identified archaeological site is within or outside of the defined Zone of Influence for the project. In addition to the information identified above, the final ER should include this information.

Other Affected Areas, Roads, and Transmission Corridors

A Stage 1 archaeological assessment prepared in support of the project recommended the completion of a Stage 2 assessment for other areas with archaeological potential that could be affected during construction. These included components such as laydown areas, borrow pits, fill areas, road corridors, and transmission corridors.

As the draft ER does not clearly identify the extent of the area subject to the Stage 2 archaeological assessment, it is not clear if any of this work has been completed. However, it is our understanding that further archaeological assessments of at least the road and transmission corridors have likely not been completed, since decisions with respect to the final route of these components are still outstanding.

As noted above, the Class EA requires that proponents confirm the potential effects of the project, determine the appropriate avoidance, prevention and/or mitigation strategies, and assess the net effects of the project. The Class EA also requires that the public, agencies, and Aboriginal communities be provided with information regarding potential impacts, proposed mitigation measures, and net effects of the project. In order to satisfy these requirements the completion of further stages of archaeological assessment, as outlined above, is required prior to finalizing the ER and issuing the Notice of Completion.

In particular, please note that although there is no formal requirement to assess transmission lines < 115 kV through the Class EA process, it is our understanding, based on information contained in the draft ER (Section 4.3.2) that the proponent has elected to incorporate the transmission line in the assessment of this project under the Class EA. The completion of further stages of archaeological assessment, as described above, specific to the transmission corridor, should therefore be undertaken before the ER is finalized and the Notice of Completion issued.

Economic/Socio-economic Effects:

Although the draft ER contains broad statements suggesting positive economic impacts to local economies due to employment and local sourcing of supplies and services during construction, a quantitative financial analysis documenting anticipated positive impacts has not been provided. Additionally, no financial data or analysis has been submitted to evaluate potential economic impacts to tourism. These deficiencies should be addressed prior to finalizing the ER and issuing a Notice of Completion.

The final ER should include a noise screening report, identifying any sensitive receptors within 1000 metres of the Project that may be affected by noise during construction or operation. As a public health and safety issue, this should be included in the evaluation of potential socio-economic impacts.

Socio-economic impacts addressed in the final ER should also include consideration of elevated levels of methyl mercury in fish, since this may affect recommended fish consumption levels.

Cumulative Impacts:

Although the draft ER recognizes that the proposed Project is likely to have effects on the existing Vale and Domtar generating stations, no analysis of cumulative impacts of all the three facilities, or of the cumulative impacts of the three facilities in combination with the three additional Xeneca projects proposed upstream of Wabageshik Rapids. We recognize that a defensible assessment of cumulative impacts would not likely be possible until various operating parameters and the proposed operating plan for the Project have been finalized through further discussion and consultation with agencies and other stakeholders. Once this has been completed, a detailed analysis of cumulative impacts should be included in the final ER.

Because a detailed evaluation of proposed road and transmission line corridors has not been completed, potential impacts of these components of the project have not been fully identified. It is therefore not yet possible to undertake a cumulative impact assessment of the impacts of the proposed corridors in combination with linear corridors that already exist within the study area. The final ER should include a full inventory/evaluation of proposed road and transmission line corridors; a more complete consideration of the role of these corridors in cumulative impacts of the Project should also be presented.

Waste:

The draft ER indicates that construction waste will be removed from the site to an approved disposal location. Waste disposal during the operational stage of the Project does not appear to have been addressed.

The final ER should include information indicating which approved waste disposal site(s) have been identified to receive waste during the construction and operational phases of the Project. Confirmation of willingness of the operator to accept the waste should also be provided. On receipt of this information, MOE staff will be able to confirm whether the identified sites have sufficient remaining approved capacity, and are otherwise able to accept waste from this Project.

Required Permits/Approvals:

Further detail should be provided in the final ER regarding specific activities during construction and operation that will require permits and approvals, with permits/approvals required during construction and operation identified separately. This will assist in ensuring that the public, Aboriginal communities, and other interested parties have a clear understanding of the linkages between the Class EA process, and further regulatory permits and approvals required to implement the project.

Please note that "Certificates of Approval" are now referred to as "Environmental Compliance Approvals".

Additional Technical Comments:

Please refer to additional detailed comments in the attached Table 2.

Conclusions:

Proponents are responsible for ensuring that their projects meet any applicable policies, procedures or guidance material, and to ensure that proponents adhere to all applicable federal and provincial legislation, including obligations under the Class EA.

The draft ER submitted for the Project on August 10, 2012 does not effectively report on meeting these key principles of the Class EA process: consultation with potentially affected and other interested persons; consideration of all aspects of the environment; systematic evaluation of net environmental effects; and provision of clear and complete documentation.

MOE NR staff are available to meet with you to discuss these outstanding concerns.

This concludes our comments at this time. If you have further questions or need clarification regarding the above issues, please contact Paula Allen by email at paula.allen@ontario.ca or by telephone at 705-564-3273.

Sincerely,



John Taylor
Director, Northern Region

Enclosures (2)

- c. Paula Allen, APEP Supervisor, Northern Region, MOE
Christine Greenaway, Renewable Energy Coordinator, MNR Northeast Region
Bob Robinson, Project and Information Management Specialist, MNR Sudbury
Kelly Eggers, Senior Habitat Biologist, Fisheries and Oceans Canada

Table 1 - Mandatory Requirements for the Environmental Report

Section Requirements	Wabageshik draft ER Reference
4.4.1 Environmental Report In accordance with Section 4.4.1 of the Waterpower Class EA, the Environmental Report must contain:	The Executive Summary and Section 3 provide a description of the proposed undertaking, and include information on: • Design Options and Rationale • Generating Station Components • Ancillary Works • Construction Strategy • Operation Strategy In addition, Section 1.2 includes a brief statement of the purpose of the undertaking: "... construction of a 3.4 MW hydroelectric generating station ... to meet government and energy objectives to generate sustainable and reliable hydroelectric power."
Map of project location and study area	A map of the project location (Fig. 1) is provided on page 2. The study area is not shown on this map, and has not been identified elsewhere in the main body of the report. Although Annex III identifies a Study Area for the Natural Environment component of the report, a map depicting the study area for the entire ER has not been included in any of the appendices or annexes. The study area should encompass all of the identified zone of influence, including all areas on land that would be impacted due to things such as project component footprints, new or expanded road corridors (both temporary and permanent access), borrow and laydown areas, and stockpiling areas.
Description of the study area and the existing environmental context	Annex III (Natural Environment Characterization and Impact Assessment Report) includes a map of the Study Area; however, the area identified on the map and in the accompanying text does not appear to encompass all areas that may be impacted by the project.

	Annex V (Archaeological Assessment) includes a map (Fig. 5) generally showing the area investigated during the Stage 1 Archaeological Assessment. Although a Stage 2 Archaeological Assessment was also completed, it is not clear exactly which areas were assessed as no map of the Stage 2 study area is provided. The text (p. 6) notes that "Communication with Xeneca Power Development Inc. provided the locations of those areas to be affected." It is also not clear if potential road and transmission corridors or other areas with archaeological potential that may be affected by the development (laydown areas, borrow pits, fill areas) were assessed during the Stage 2 Assessment, as recommended in the Stage 1 report. Section 1.4.2 of the main report (p. 6) explains that literature reviews, field investigations, and aerial photography were used. Section 2 provides a description of the existing environment within 120 metres of the shoreline, extending from 600 metres upstream of the proposed dam to the outlet of Wabageshik Lake and including the lake itself, and extending downstream 5 km from Wabageshik Rapids to the junction of the Vermilion and Spanish Rivers. Several sections of the report refer to the need to complete additional studies/investigations. Examples include: Executive Summary under "Further Investigations"; p. 19, recommending further studies on potential Blandings' turtle habitat; p. 22, recommending further work to assess potential significant wildlife habitats for several species, as listed; and Table 5, identifying the need for field investigations to ensure roads and transmission line routes avoid sensitive areas. These studies should be completed during the Class EA process, and results should be included in the final ER, along with the identification of any related potential impacts and appropriate mitigation measures. This would allow interested parties to review the work that has been completed and provide input to potential effects and proposed mitigation measures, as required by the Class EA process.
A completed potential effects identification matrix	Included in Tables 5 and 6 of the ER and in Appendix B. There are several situations in the tables where additional research, consultation or discussions are required to fully identify potential effects and propose mitigation (examples include: finalizing operating parameters including flows and levels, completing additional field investigations for specific wildlife habitat concerns, identifying habitat mitigation and compensation measures, completing additional archaeological assessments, identifying

	discharge point in receiving watercourse to minimize scour, consultation with MNR/local boaters to determine periods of use and minimum low flow and water level requirements to maintain downstream access, consultation with cottage owners regarding potential impacts to water supply, consultation with railway company regarding access road crossing of railway). As a result, the determination of whether there are residual effects is premature. The Class EA recommends that proponents apply the potential effects identification matrix separately for construction related effects and operational effects. Tables 5 and 6 and Appendix B should be revised to separate construction and operational effects. This will assist interested parties in reviewing the ER and will also assist with regulatory approvals and required monitoring.
A description of potential effects	Section 5.1 (pages 85 – 115) provides a list of identified potential effects. The assessment of potential effects should be described as outlined in Section 4.3.1 of the OWA Class EA. The proponent should provide information that summarizes: • The potential negative effect; • The relative level of the effect; • The mitigation or impact management measures that will be used; • Any individual net effects (after mitigation) and their significance; • The overall positive neutral and negative effects of the project. As noted above, in Table 5, there are examples where additional investigation or research and consultation is required to confirm potential effects and/or propose or finalize mitigation measures. In these situations, identification and assessment of residual effects cannot be completed until this work has been done. Additional consultation is required to ensure that all potential effects have been identified. Based on information provided in Appendix E, draft ER contains no issues/concerns identified by Aboriginal communities. In addition, the ER states that Aboriginal community engagement will not formally begin until after the issuance of the Notice of Completion. The July 2012 Aboriginal Consultation Plan indicates that Aboriginal Information Centres, field visits, and community meetings will be scheduled after submission of the ER.

The results of the analysis, evaluation, and assessment conducted for the subject effects, concerns or issues	Table 5 lists the identified issues and summarizes the management strategies for each issue. See above comments.
Information on public and agency consultation including: - a description of the public and agency consultation program and consultation activities/events; - a list of agencies contacted; - summary of public and agency concerns or issues; and - how concerns or issues have been or have been attempted to be addressed	Pages 7 – 10 and Sections 4.3 and 4.4 provide a list of agencies, communities, and organizations contacted. Section 4 provides a summary of the stakeholder consultation that occurred: • As indicated in Sections 4.2 and 4.4, public consultation included Public Information Centres, correspondence, newspaper notices and advertisements, PIC invitations, telephone exchanges, stakeholder meeting(s), and a project website. Appendix D provides a record of the public consultation activities that took place. • Government agency consultation included circulation of notices, a project description, correspondence, and in-person and/or teleconference meetings. Section 4.3 summarizes the consultation events that occurred with specific federal, provincial, and municipal stakeholders. Appendix C contains a record of the consultation that took place. We note that some public correspondence has been withheld and not included in the draft ER. The draft ER indicates that specific public correspondence documents not included in the report must be requested from the proponent. In order to fulfill the open and transparent nature of the Class EA process, all public consultation documentation should be included within the ER and made available for review by interested parties.
Information on Aboriginal community involvement, including: - a description of the engagement program and activities/events; - a list of communities contacted; - summary of community concerns or issues; and - how concerns or issues have been or have been attempted to be addressed.	As indicated in Section 4.5, Aboriginal community engagement conducted to date includes correspondence, telephone conversations, community meetings, and agreement negotiations. The summary of activities and discussions included in the draft ER, together with the Aboriginal Consultation Plan (July, 2012) included in Appendix E, suggests that consultation is likely not yet complete. See above comments.

	The log and other information provided in Appendix E suggests that Aboriginal community comments on this project have not yet been incorporated into the draft ER, further suggesting that consultation with Aboriginal communities has not yet been completed. The information presented in the draft ER is not sufficient for MOE to determine whether adequate consultation has occurred. We note that there is Aboriginal correspondence information that has been withheld and not included in the draft ER. Instead, this information must be requested from the proponent. In order to fulfill the open and transparent nature of the Class EA process, all Aboriginal consultation documentation should be included within the ER and made available for review by interested parties.
Changes to the original proposal, if any, resulting from the environmental evaluation and/or consultation and engagement processes	The differences between the proposal as presented at the initial PIC on March 22, 2011, and the final proposal as presented in the ER documentation should be clearly set out in the ER.
Description of the net effect(s) (after mitigation), if any, including an identification of the significance of the net effect(s)	Table 5 identifies those issues with residual effects after mitigation. Section 6 describes the methodology and criteria used to assess significance of residual impacts. The results of this assessment are set out in Table 6. As described in Section 6, the criteria used to assess significance of residual effects were taken from the <i>Guide to Environmental Assessment for Electricity Projects</i>. As the Waterpower Class EA applies to this project, criteria set out in the Class EA should be used. Table 6 relies on information provided in Table 5. As noted above, Table 5 includes examples where additional investigation or research and further consultation are required to confirm potential effects and/or propose or finalize mitigation measures. In these situations it is premature to identify and assess residual effects prior to this work being completed. Within Table 6, some irreversible impacts with continuous duration affecting resources of high value are nevertheless assessed as "not significant". Where this occurs, justification

	should be provided.
Planned avoidance/prevention/mitigation and/or impact management measures for any potential negative effects	Table 5 summarizes planned mitigation measures. As noted above, the table includes examples where further investigation and consultation is needed to fully identify potential effects and/or propose or finalize mitigation measures. The summary of planned avoidance/prevention/mitigation measures is therefore not complete.
A review of overall advantages and disadvantages of the project, including a discussion of any benefits that might offset disadvantages	Advantages and disadvantages are discussed in Sections 5 and 6, including Tables 5 and 6, as well as Appendix B. Within the Executive Summary, the section on "Potential Project Effects" also summarizes negative and positive impacts of the project. Positive Impacts outlined in this section include: • Providing a source of reliable and clean energy to the region; • Displacement of electricity sources reliant on fossil fuels and nuclear technology; • Employment opportunities within the Espanola and the City of Greater Sudbury through local sourcing of material, equipment, and services (where available); • Potential employment opportunities for area First Nations and Aboriginal Communities; and • Financial return to the provincial and federal governments through Gross Revenue Charges and federal and provincial income tax payments. Negative Impacts include: • Creation of a headpond extending 600 m upstream of the dam and coupled to Wabageshik Lake (extending a further 10 km upstream); • Fluctuations in water levels upstream; • Downstream variability in water depth, flow velocity, and wetted perimeter; and • Potential impacts to aesthetic quality and recreational values of the area.

A summary of planned construction and post-construction monitoring programs, as required, including mechanisms for their implementation and reporting	Section 8 lists proposed construction and post-construction monitoring. Implementation mechanisms are not addressed. Further detail is required to address: • Specific parameters to be monitored; • Timing and frequency of inspections; • Timing and frequency of reporting; • Assignment of responsibility for monitoring; and • Which agencies are to receive reports on various issues. Section 8.2 on post-construction monitoring is particularly brief, identifying only monitoring related to erosion, waste management, emergency response (fires, spills), and workplace health and safety. Further detail on other post-construction monitoring requirements is needed within the ER.
Technical reports supporting the findings, as appropriate	Supporting technical reports are provided in Annexes I – VI. However, based on the MOE review of the draft ER and supporting technical reports, additional technical information is still required to support the ER.
Anticipated timelines for project implementation	Section 1.2 (Introduction to Project) includes a Project Development Schedule (Fig. 2, p. 3). Section 3.5 generally describes the timing of site preparation and construction activities, and includes Table 1, providing a tentative construction schedule by project component.
A listing of any other known required approvals and permits	Section 9 (Table 7) provides a list of known approvals, permits, and authorizations required for the project.

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
Section 5.1.11, p. 111 Area Aesthetics	Paragraph 2: "Seasonal residences are also located in proximity to the project site."	residual effect that should be identified. A map showing the location of number of seasonal residences, proximity to the various elements of the Project should be included in the final ER, and referenced in this and other sections of the report.
Section 5.1.12, p. 111 Employment & Economic Effects	Paragraph 2: "Economic benefits will include employment during construction, expenditures on materials, equipment and services ..."	This general claim should be replaced within the final ER with more detailed information based on the results of a quantitative financial analysis evaluating potential benefits to the local economy from factors such as supplies and services which are likely to be sourced locally. Care should be taken not to overstate the likely economic benefits, recognizing that if professional services such as consulting and legal services are sourced centrally for all Xeneca projects, there are unlikely to be local benefits from these aspects of the Project.
6. RESIDUAL ADVERSE EFFECTS AND SIGNIFICANCE		
Section 6, p. 118 Residual Adverse Effects and Significance	Paragraph 2: "The Ministry of the Environment's Guide to Environmental Assessment Requirements for Electricity Projects (March 2001) provides criteria for assessing significance."	As this project is being assessed under the Ontario Waterpower Association Class EA, the criteria provided in that document should be used throughout this section and Table 6. This reference should also be corrected.
Section 6, p. 119	Table 6: Residual Effects and Significance	The completion of this table is premature until data collection and assessment is complete for all potential effects.
7. Cumulative Effects		
Section 7, p. 129 – 132 Cumulative Effects		No analysis of the cumulative impacts of the Project in combination with the existing Dornier and Vale generating stations has been completed. Analysis of the cumulative impacts of these three facilities in combination with the three additional proposed Xeneca projects upstream of Wabageshik Rapids has also not been completed. This analysis should be completed and included in the final ER. The analysis of cumulative impacts should also include consideration of impacts related to road and transmission line corridors, once detailed field investigations has been done, and route selection has been finalized.
9. Regulatory Approvals and Permits		
Section 9, p. 134 Table 7: List of Potential Regulatory Approvals	Permit to Take Water – Ontario Water Resources Act (Section 34), Category 2 (construction) and 3 (operation)	We recommend pre-consultation with Northern Region prior to submitting applications so that confirmation of categorization can occur.

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
Requirements)	Walleye spawning habitat upstream of the facility below Wabageshik Lake. Compensatory habitat will be created downstream of the facility on the Vermilion or Spanish Rivers to mitigate for this loss.	proposed facility.
Section 5.1.3, p. 107 Aquatic Habitat (Ecological Flow, Water Level Requirements)	Mitigation for Impacts Associated with Operation: Paragraph 1: "To reduce the potential for negative habitat impact upstream during modified run-of-river operation, the maximum daily fluctuations of upstream water levels will be limited" Item 2: "The current draft Operating Plan outlines a commitment to operational restrictions for key species..."	Maximum daily fluctuations in upstream water levels and other operating parameters addressed in this section should be finalized through further discussion with the agencies and then included in further consultations with the public, Aboriginal communities and other interested parties prior to inclusion within the final ER. These operational restrictions addressing the needs of key species should be finalized through further discussion with the agencies, and then included in further consultations prior to inclusion within the final ER.
Section 5.1.5, p. 108 Deer Crossing	Paragraph 1: "However, these potential impacts will be limited to the construction of the facility and so are judged to be temporary."	Impacts on the deer crossing resulting from operation of the facility, and in particular due to the variability and magnitude of proposed flow variations should be considered and included in the final ER.
Section 5.1.7, p. 108 Navigation	Paragraph 1: "The river is not used for commercial navigation but is used for recreational purposes. ... The proposed facility will require the establishment of one or more portages to circumvent the dam and ancillary operations." Paragraph 2: "Special arrangements will be required during construction to ensure public safety for recreationalists."	Specific details of this planned mitigation measure, such as number of proposed portages, entry and exit points, and proposed route, should be identified and included in further consultation with recreational users of the waterway prior to inclusion in the final ER. Details of these special arrangements should be available to recreationalists for input, and included in the final ER.
Section 5.1.8, pp. 109 Public Health, Construction and Safety	Paragraph 1: "Signage at railway crossings and known recreational access point will be established to warn users of seasonal dangers due to operations."	Further details regarding consultation with and specific requirements of the railway should be included in the final ER.
Section 5.1.10, p. 111	Surface Water Quality	This section includes no discussion of methyl mercury. This is a significant

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
	agency meeting..."	
Section 4.4, p. 77 Public Consultation	Last Paragraph "The Mayor of Nairn Centre attended the meeting and acknowledged recent correspondence from Nairn Centre in which opposition to the project was expressed."	Further detail should be provided in the final ER regarding specific concerns raised by the Township and how they have been addressed.
Section 4.4.1, p. 79 Industry	3 rd Paragraph: "A meeting with Vale was held on July 19, 2012 and an agreement in principle was reached that our project would not affect the Vale facility at Lorne Falls."	Further details on how this will be achieved, together with documentation confirming concurrence of Vale should be included in the final ER.
5. EVALUATION OF POTENTIAL PROJECT EFFECTS		
Section 5 Evaluation of Potential Project Effects	Table 5 (p. 87), Table 6 (p. 119), and Appendix B	The Class EA recommends that proponents apply the potential effects identification matrix separately for construction related effects and operational effects. For the final ER, Tables 5 and 6 and Appendix B should be revised to separate construction and operational effects.
Table 5, p. 87	Issue: Noise from operation of electrical generator and transformer at powerhouse and electrical generation.	A noise screening should be included in the final ER to identify any sensitive receptors within 1000 metres.
Table 5, p. 89	Issue: methyl mercury due to inundation	This section of the table concludes that there is no residual impact due to the potential for methyl mercury. We suggest that this evaluation should be reconsidered. We concur that the risk is low; however it is a risk that should be recognized. Refer to the text of our letter for a more detailed discussion of this issue.
Section 5.1.1, p. 105 Inundation	5 th bullet: "Under provincial water management planning legislation, the facility would be required to operate and maintain an established lake level compliance range as developed in consultation with the regulators and then finalized in the facility's Operating Plan. Xeneca is committed to meeting with the regulators over the next month to negotiate these compliance levels and finalize the operating plan."	Key operating parameters and compliance levels should be finalized through discussions with agencies and then included in further consultation with the public, Aboriginal communities and other interested parties prior to inclusion within the final ER.
Section 5.1.3, p. 106 Aquatic Habitat (Ecological Flow, Water Level)	Paragraph 2: "The creation of the head pond will result in the alteration of 14,800 m of Lake Sturgeon and	Further details should be provided within the final ER as to the location, area and characteristics of this habitat compensation, as well as timing for when it will be provided relative to the loss of the habitat upstream of the

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
Section 3.5.8, p. 48 Management of Waste Materials During Construction	"Industrial liquids such as will be stored in secure containment areas and disposed of in accordance with provincial and federal liquid waste disposal regulations (e.g. Environmental Protection Act, O. Reg. 347, and Transportation of Dangerous Goods Act).	Although the proponent commits to disposing of any hazardous wastes as required by O. Reg. 347 under the EPA, a facility able to accept this waste has not been identified. This information should be included in the final ER.
Section 3.6.3, p. 56 Operating Parameters for Water Control Structures	"Table 3 provides a description of the proposed operating parameters which have been determined for the facility. These parameters will be further refined following the completion of the environmental assessment, based on discussions with key regulators and stakeholders."	As the operating parameters identified will affect overall environmental impacts of the project, they should be established during the Class EA process, made available for review during consultation, and included within the final ER.
4. FEDERAL, PROVINCIAL AND MUNICIPAL AGENCY AND STAKEHOLDER CONSULTATIONS		
Section 4.2.5, p. 62 Public Information Centres (PICs)	"... two public information centres (PICs) were held to collect information on concerns ...	Different sections of the report differ on how many PICs (two or three) were held. This should be clarified and should be consistent throughout the report.
Section 4.3.2, p. 68 Provincial	Ontario Ministry of Natural Resources "The proponent subsequently provided MNRP with a proposed multi-year telemetry program for lake sturgeon investigations to increase the data on distribution and habitat use of lake sturgeon on the Vermilion River in the vicinity of Wabageshik Rapids. Ontario Ministry of Natural Resources Bullet 1: "It was agreed that the environmental assessment of the project under the Waterpower Class EA would be expanded to incorporate the assessment of the connection line..."	Details and timing of this program should be finalized during the Class EA process and included in the final ER.
Section 4.3.2, p. 68 Provincial	Ontario Ministry of Natural Resources Bullet 1: "It was agreed that the environmental assessment of the project under the Waterpower Class EA would be expanded to incorporate the assessment of the connection line..."	Detailed field investigations of proposed transmission line routes and identification of associated impacts and mitigation measures should be completed during the Class EA process.
Section 4.3.2, p. 70 Provincial	Ontario Ministry of Natural Resources "The MOE regional hydrologist and district technical staff participated in the July 19, 2012	This statement is not accurate; the MOE regional hydrologist did not participate in this meeting.

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
Project	conceptual design information is presented in addition to data collected through field investigations, desktop studies, and agency consultation to ensure that stakeholders are informed about the general scope and extent of the project, particularly as it relates to understanding how the project may impact other uses of the river and the environment." Paragraph 3: "The proponent necessarily reserves the right to variances between the conceptual design presented herein and the final detailed engineering design, provided that such variances do not materially and negatively impact the environment beyond the scope of the impacts described herein."	impacts that the project will have on their interests. This approach may not be consistent with the OWA Class EA (Section 8.8) through which the addendum provisions must be applied where a project has been planned in accordance with the Class EA, but where a proponent decides prior to or during construction that it is not feasible or desirable to implement the project in the manner described in the completed ER. Some of the possible variances listed in this section could, on evaluation, be determined to have new negative effects to the environment. Examples include: changes to the physical size/orientation of structures, changes to specifications of mechanical and electrical equipment, including physical size, number of units, and total rating, and refinement of road and transmission line routes.
Section 3.4.3, p. 44 Access Roads	"Further consultation with government agencies will be required to ensure that regional and provincial access policies and guidelines are met."	Further consultation should occur during the Class EA process, prior to finalizing the ER.
Section 3.5.5, p. 47 Excavation of Powerhouse and Tailrace Canal	"Tailrace excavation at the intersection with the river will be completed within the MNR's established timing window for in-stream work."	Further detail identifying the timing window for in-stream work should be included in this section.
Section 3.5.6, p. 48 Concrete Production	"A concrete batch plant will not be required for the production of concrete for the construction of the facility, due to the proximity of local concrete suppliers."	An assessment of impacts resulting from the trucking of concrete to the site should be included in the final ER.
Section 3.5.8, p. 48 Management of Waste Materials During Construction	"... construction waste (e.g. material packaging) generated during the construction process will be removed from the site to an approved disposal location."	The final ER should identify a specific waste disposal site to receive this waste, and the proponent should confirm that the operator is willing to accept this waste. Disposal of waste generated during the operational phase should be addressed in the final ER.

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
Section 2.9.7, p. 22 Significant Wildlife Habitats	the Endangered Species Act.” Paragraph 1: “Further work is required to assess the significance of these habitats. • Reptile hibernacula; • Denning sites for mink, otter, marten, fisher and eastern gray wolf; • Eastern milksnake habitat; • Common snapping turtle habitat.	Studies assessing the significance of habitat for these species should be completed and included within the final ER.
Section 2.10.1, p. 23 Archaeological Sites	Paragraph 3: “A Stage 2 archaeological assessment for the project site was completed in 2011.” “... a Stage 3 archaeological assessment is recommended at Belmer Site prior to any proposed construction activities ...”	Although a Stage 2 archaeological assessment was completed, it is not clear exactly which areas were assessed, as no map of the Stage 2 study area is provided. This information should be made available with the final ER. In order to meet the requirements of the Class EA, the Stage 3 archaeological assessment or (where possible) commitments to implement the alternate avoidance strategy, consistent with guidance provided by the Ministry of Tourism, Culture, and Sport, should be included within the final ER.
Section 2.11.4, p. 25 Recreation Use and Commercial Tourism Cottaging	Paragraph 1: “Seasonal residences/cottages are located in proximity to the project site.”	The final ER should include maps indicating the location of these residences/cottages in relation to the proposed Project. Information summarizing the distance between the Zone of Influence should be provided.
Section 2.11.4, p. 26 Recreation Use and Commercial Tourism Boating/Kayaking/Canoeing	Paragraph 1: “Xeneca is committed to provide a portage trail around the Wabageshik generating station for easier and convenient recreational use.	Further detail, including a detailed map of the proposed portage route, should be provided within the final ER to allow stakeholders to evaluate and comment on this proposed mitigation measure.
3. DESCRIPTION OF PROPOSED PROJECT		
Section 3, p. 38 – 39 Description of Proposed	Paragraph 2: “During an environmental assessment,	The OWA Class EA requires that enough information be presented so that the public, agencies and Aboriginal communities can understand the

Table 2 – TECHNICAL COMMENTS

Section and Page Reference	Description	MOE Comments
1. INTRODUCTION		
Section 1.2 p. 1 Introduction to Project	Paragraph 2: “The project site falls within the Spanish River Township.”	Elsewhere in the draft ER the project location is identified as within the Township of Foster. This information should be consistent throughout the report.
Section 1.4.4, p. 7 Identify Required Mitigation, Monitoring or Additional Investigations	Paragraph 3: “The proponent has made commitments related to the undertaking which may include additional data and information collection activities.”	Several of the information and data collection initiatives identified are required in order to fully characterize the total Zone of Influence, identify potential impacts, and determine appropriate mitigation. This work should be completed prior to finalizing the draft ER.
2. EXISTING CONDITIONS		
Section 2.1, p. 11 Location and Land Ownership in Project Area	“The proposed project is to be located.... within the Township of Spanish River..”	References in several other locations (e.g. p. 24, p. 36) throughout the draft ER and Annexes identify the project location as Lot 6, Concession 6, Township of Foster. The draft ER should be revised to be consistent in this regard.
Section 2.8.2, p. 14 – 16 Surface Water Quality	Paragraph 4: “In the spring of 2012, water quality samples were collected downstream of the proposed facility..... Additional water quality samples will be collected at the same location in the summer and fall.” Paragraph 5: A detailed discussion of the 2012 baseline analytical results will be provided in addition to the summer and fall 2012 results, in a baseline year-end water quality report, anticipated in December, 2012.	This information should have been provided for review as part of the draft ER. The timing of the draft ER should have been delayed to allow for the inclusion of this information.
Section 2.9.1, p. 17 Study Area and Scoping of Natural Heritage Investigations	Paragraph 2: “The study area described in this section is based on the predicted zone of influence and the lands adjacent to these areas extending approximately 120 m from the shoreline.”	The entire Zone of Influence should have been studied, including all areas on land that would be impacted due to such things as project component footprints.
Section 2.9.2, p. 18 – 19 Terrestrial Habitat and Species	Paragraph 6: “One recommendation for future studies is to complete a turtle survey focusing on potential Blanding’s turtle habitat in the area, as these studies are required under authorizations for	These studies should be completed and the results included in the final ER, so that potential impacts to any identified habitat and associated mitigation measures can be adequately addressed during the Class EA process.

XENECA' RESPONSES TO MOE COMMENTS ON THE WABAGESHIK DRAFT ER

PROPOSER:	Xeneca Power Limited Partnership / Xeneca Power Development Inc. ("Xeneca")
PROJECT TITLE:	Wabageshik Falls Hydroelectric Generating Station (GS) Project
PROJECT LOCATION:	Vermillion River
PREPARED BY:	Xeneca Power Development Inc.

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XENECA'S RESPONSE TO MOE COMMENTS ON WABAGESHIK DRAFT ER

(Letter Dated September 24, 2012)

1. Xeneca's Response to MOE Letter

**Re: Draft Environmental Report
Wabageshik Rapids Generating Station Project
Vermilion River**

Thank you for providing the Ministry of the Environment (MOE) Northern Regional Office with the draft Environmental Report (ER) for Xeneca Power Development Inc.'s (Xeneca) proposed Wabageshik Rapids Generation Station on the Vermilion River (the Project). The draft ER proposes a 3.4 megawatt (MW) waterpower facility at the site known as "Wabageshik Rapids", approximately 50 kilometres (km) southwest of the City of Sudbury, 11 km east of Espanola, and 6 km south of Hwy 17, the TransCanada Highway (legal description: Lot 6, Concession 6, Township of Foster). The Project is located approximately 600 metres (m) from the outlet of Wabageshik Lake, and 5 km upstream of the Vermilion River's confluence with the Spanish River, and is situated between two other Generation Stations on the same river system, one (owned by Vale Inc.) located approx. 11 km upstream, and the other (owned by Domtar Inc.) situated approx. 13 km downstream at Espanola. The Project is being proposed as a run of the river facility with modified peaking, a new project on a managed waterway under the requirements of the Ontario Waterpower Association's Class Environmental Assessment for Waterpower Projects (April 2012) (the Class EA).

Key components of the proposed facility include:

- Headworks structure featuring a 33 m long concrete and earthfill dam, with spillway having an approximate footprint of 200 square metres (m²), with typical construction to feature a broad overflow weir topped by a control feature (Obermeyer or similar pneumatically operated dam);
- Headgate structures either included in the dam design or built as a separate riverside structure depending on water conveyance routing;
- Area excavated for the facility intake will start approximately 45 m upstream of the powerhouse and occupy an area of 200 m²;
- Cofferdams required for construction of the facility intake would dewater 500 m² of riverbed, based on conceptual construction plans;
- Powerhouse occupying 400 m², including powerhouse building, intake, and tailrace extending approximately 30 m downstream of the powerhouse;
- 44 kilovolt (kV) connection line to the provincial electrical power supply grid with two options, each with 20 m wide right-of-way (ROW), being considered for the transmission line route:
 - o Option 1: total distance of 15.45 km, requiring seven waterway crossings and the creation of 3.09 km of new corridor; and
 - o Option 2: total distance of 17.75 km, with one existing water crossing.
- Two possible routes for access to the site, with each requiring the clearing of a 10- 30 m ROW for any new road construction, as follows:
 - o Option 1: requiring 4.17 km of new road construction, including a single water crossing and crossing of a snowmobile trail;
 - o Option 2: requiring 888 m of new road construction and the upgrading of 6.27 km of existing trail/road, with five existing water crossings and one wetland crossing.
- Aggregate borrow laydown area of 3000 m², with an additional area of 1000 m² for stockpiling topsoil and other materials;
- A 1000 m² construction laydown area for construction materials, equipment storage construction offices, and parking;
- Gross head of 6.1 m;
- A downstream minimum environmental flow of 2.3 - 2.6 cubic metres/second (m³/s) is proposed.

The project will involve construction of a dam that will result in an area of inundation extending approximately 11.7 km upstream. It is anticipated that there will be a negligible $\pm$ 5cm fluctuation in the water levels of Wabageshik Lake; immediately upstream of the dam, water levels will rise by approximately 5 m. The project is proposed to operate as modified run-of-the river, meaning that water will be held back for use during peak times. Daily fluctuations in flows and water levels will be altered. The riverine habitat immediately upstream of the dam will become lake-like, and downstream flows will also be altered from the present conditions. The MOE Northern Region has reviewed the draft ER and supporting documents, and provides the following comments.

Class EA Process

There are a number of environmental assessment principles which are key to successful planning under the *Environmental Assessment Act* (EAA) for waterpower projects, which include: 1) consulting with potentially affected and other interested persons; 2) considering all aspects of the environment; 3) systematically evaluating net environmental effects; and 4) providing clear, complete documentation.

The following outlines each of these key principles and provides MOE Northern Region's commentary.

1) Consulting with potentially affected and other interested persons:

Consultation with interested persons is a cornerstone of the environmental assessment process and a legal requirement of the EAA. One of the benefits of an approved Class EA is that it provides certainty for both proponents, affected stakeholders, and the public with respect to the consultation process and how to participate in the process. In order to meet the requirements of the EAA, a proponent must successfully follow the planning process in the approved class environmental assessment.

Section 4.1.3 of the Class EA states: "Early and meaningful engagement of representative interests and publics that may be affected by the project is a prudent business practice and a critical element of achieving the intent of the Class EA." Although Xeneca has undertaken a variety of consultation activities, there are outstanding concerns with the Project and potential impacts which have not yet been addressed. As a result additional consultation opportunities should be provided before the preparation of the final ER. Public Information Centres (PICs) were held in March, 2011 and July, 2012. It is not clear from the draft ER and documentation provided whether a third PIC planned for October 2011 actually occurred. References in various locations in the draft ER (main report and Appendices) refer in some cases to two PICs, and in other cases to three PICs. In one case there is a suggestion that the PIC planned and initially advertised for October 2011 was cancelled. This should be clarified, and the document should be revised to provide a correct record of what occurred. In addition, as field studies and analysis to support the Project are still underway, additional opportunities for public, agency and Aboriginal input should be provided as this information, and any resulting changes to the Project or its potential impacts, become available.

We have concerns with the approach taken by the proponent to provide commitments in the draft ER rather than completing the EA process as outlined in the Class EA. Commitments identified in the draft ER address the completion of additional studies, the identification of appropriate mitigation measures including critical operating parameters of the proposed project, and, where necessary further engagement with affected stakeholders to address issues of concern. This approach is a concern, particularly because the Notice of Completion period offers interested persons and parties an opportunity to submit a Part II Order request (PIO request), something which would not be available to them if consultation occurs outside of this time period. Despite the presentation of information summarizing consultation efforts for this Project within the draft ER and Appendices, sufficient detail has not been provided to determine whether the consultation that has been undertaken to date with the public, agencies, and Aboriginal communities is complete.

Sections 4.4.1 and 6.3 of the Class EA require that the Project documentation detail include: who was concerned; what the concerns were; how those concerns were considered and addressed; and what the outstanding issues are. Further detail should be provided within the final ER to elaborate on these points.

Xeneca's Response:

Our consultation with Agencies stated in March 2010, even before FIT contracts were issued. Our consultation with FN and the general public started formally in May 2010.

Our consultation has been extensive and is complete for all material aspects of the project. Our consultation is far more extensive than required under the OWA Class EA stipulations.

Xeneca conducted 3 PICs for this project: dated March 22, 2011, October 20, 2011, and July 25, 2012. We will correct the clerical error in the draft EA.

Xeneca's outreach to stakeholders has been outlined in a Consultation Plan sent to agencies on August 4, 2011. Consultation efforts are recorded in comprehensive stakeholder log located in Appendix D which, as per Class EA documentation guidelines, contains the following:

- Stakeholder identification, date of contact,
- concerns /comments raised by stakeholder
- how the concerns/comments were addressed.

For any issues concerns raised prior to submission of the Waterpower Class EA, actions taken by Xeneca provided one or more of the following:

- Acknowledgement of the question or concern(s) raised
- Direct written response from Xeneca to provide reference to where information related to questions or comments can be found
- Direct response providing answers to the concerns or comments
- Direct response action taken by Xeneca to address concern or comment
- Direct response noting concern has either been addressed or does not exist in relation to the project

Full detail on stakeholder engagement and Xeneca's response to concerns/comments can be requested from Xeneca on a case-by-case basis

We have met the requirements of Sections 4.1.1 and 6.3

Aboriginal Consultation:

Section 7.1 of the Class EA states: "Proponents are expected to involve Aboriginal communities who may be directly affected by, or have an interest in, the development of a waterpower project and to develop an engagement approach specific to these interests" and "Aboriginal engagement and involvement is intended to allow the proponent to identify and consider the concerns and issues of Aboriginal communities and to provide those communities with an opportunity to receive information about and have meaningful input to the project proposal."The intent of consultation plans is to produce them early in the process and to set out the consultation that needs to take place during the Class EA process. This is detailed in sections 4.1.3.4.2.3, and 7.1 of the Class EA. Xeneca's draft Aboriginal Consultation Plan for this Project was provided to identified Aboriginal communities in August, 2011. A revised Aboriginal Consultation Plan was provided in July, 2012. Information presented in the Aboriginal Consultation Plan and the draft ER suggests that Aboriginal engagement is to formally begin after the issuance of the Notice of Completion, at which time the ER will be provided to communities for review for 30 days. Aboriginal Information Centres, community meetings, and additional field visits to Aboriginal Communities are to be scheduled after the submission of the ER. Although an Appendix to the draft ER contains copies of contact letters from the proponent to Aboriginal communities and a lengthy listing of correspondence and telephone contacts is provided, little information is provided on issues of concern identified by Aboriginal communities, or how these issues have been addressed. Because of the limited documentation provided, the MOE NR is not able to properly assess the adequacy of the consultation that has occurred to date.

Xeneca's Response:

Aboriginal consultation has been in progress since well before the issuance of the original consultation plan in August 2011. The consultation plan has undergone minor revisions with input from agencies and updated copies were sent to the communities. Consultation will continue up to and including issuance of the NOC. Subsequently, Xeneca will continue to keep Aboriginal communities advised of progress on the project of major changes and efforts will continue through the detail design, construction, commissioning and operational period to liaise with Aboriginal communities.

Engagement with the Aboriginal communities is progressing at varied stages and is directly dependant on when and how Aboriginal communities have decided to engage with Xeneca. Xeneca has been working with communities since 2009 and Xeneca is committed to continue working with communities or their organizations with the intention of reaching MOUs where appropriate. The following table describes current status of Xeneca's efforts with consultation efforts and management of issues and concerns.

Community Comments & Responses

A brief text overview would be appropriate for issues resolved and any outstanding issues being worked with in a broad context. It is reasonable to identify some issues that are not resolvable or are being worked on i.e. earthen dam structure

Community	Issues and Concerns	Date	Xeneca Response	Resolution or Position
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Atikameksheng Anishnawbek (Whitefish Lake First Nation)	To date, no issues have been identified by the community as they have not yet engaged despite repeated requests and all technical information being sent to the community.	Xeneca has provided project information on an ongoing basis and continues to provide an open invitation to the community to meet and discuss their concerns. Xeneca is also prepared to sit down and to provide its proposed B2B package for its consideration. There was one informal meeting with Chief and two Councilors at Xeneca's legal counsel's offices, but no subsequent uptake to meet with Xeneca has occurred since early 2011.	This community has refused to engage on environmental issues pending completion of a B2B agreement. We have continued to seek opportunities to meet with this community but to date have not received a response.
Whitefish River First Nation	To date, no issues have been identified by the community, although they are now prepared to begin a process of review of the proposed business plan and seek a first step consultation with Elders in their community.	A meeting between the company CEO and the Chief occurred on October 18 th 2012 in Whitefish River First Nation. The meeting included a discussion of the cultural protocols that will respect Whitefish River's spiritual connection to the land and honour their traditions along with a pathway forward to review the B2B proposal from Xeneca and review of the proposal with Elders in their community.	The initial meeting between the leader of the community and head of the company is a critical step to the beginning of a relationship. The meeting does not represent support for the project but lays out a process that sets a foundation for the community to provide advice and input into the project and management. In the meanwhile, Xeneca is prepared to fund a technical review of the information obtained to date.
Sagamok Anishnawbek	Xeneca has invited the community to all PIC and offered special PICs for them. Archaeological values: the community expressed interest in the Stage II work but ultimately could not participate due to conflicting priorities and staffing availability.	One site was located in the vicinity of the project location, however the site was downstream from the project footprint and a Stage III field investigation is not warranted. Xeneca will take mitigation measures to ensure the site will not be affected by project development or generation operations.	The site may generate interest from any of the communities who are impacted by the project and Xeneca remains willing to provide details on construction and operations mitigation measures to prevent erosion or degradation of the site.
	Fisheries: Sagamok expressed interest in the fishery studies in particular the sturgeon study. The community requested the report on the studies for their review.	Xeneca has previously provided all technical documentation in 2011 and 2012. Xeneca has also provided a copy of the Draft EA materials and is working collaboratively with the community to determine concerns with respect to any issues.	Xeneca is prepared to cover the cost of a technical review to assist the community to address any issues or concerns they have with the fishery report and the draft EA materials.
	Deer Crossing: Sagamok has also expressed concern about deer crossing.	Xeneca has moved the proposed location of the initial dam/powerhouse location, in part, because of concerns with respect to the deer crossing location.	Xeneca submits that the relocation of the location of the dam/powerhouse reduces the potential impact on the deer crossing.
Wikwemikong Unceded Indian Reserve	Wikwemikong and Xeneca have met once in 2011 where Xeneca provided a presentation on the project. No issues were raised at this meeting. Xeneca recently met with Chief & Council on Oct 22 nd , 2012 to provide a presentation and set up a process to engage with the community. Council has endorsed a review of the economic proposal and directed its energy planner to move the consultation process forward. No specific environmental issues have been raised.	Xeneca is working collaboratively to establish concerns about any issues.	The community has indicated at Council its interest in working with Xeneca on this project and has tasked its' energy planner to work cooperatively. Xeneca is prepared to cover the cost of a technical review to assist the community to address any issues or concerns they have with the fishery report and the draft EA materials.
Métis Nation of Ontario – Lands Resources and Consultation Department	Xeneca has invited the community to all PIC and offered special PICs for them. Xeneca and the Lands, Resources and Consultations Department are planning a meeting to invite the Sudbury	Xeneca met on September 21, 2012 with the Lands and Resources Consultation Department to discuss the action plan for the Sudbury and North Channel Métis Communities. We were advised that they are in the middle of an election process but that MNO centrally would review the	Xeneca has provided copies of all technical reports to the MNO, Lands and Resources Dept. and they are in the process of reviewing this documentation. No issues have been raised to date.

	Métis Council and the North Channel Métis Council to a forum to discuss the project and gain feedback and input about the project.		Initial EA material and would seek to arrange meetings once the new Board was in place. This would likely take place in December 2012 or January 2013.	
Sudbury Métis Council	Xeneca has invited the community to all PIC and offered special PICs for them. Xeneca work through the MNO Department.		All pertinent information has been sent to date to the MNO Lands and Resources Department, along with copies going to the Sudbury Métis Council.	Xeneca commits to consultation with the local MNO community and to incorporate their concerns into the process.
North Channel Métis Council	Xeneca has invited the community to all PIC and offered special PICs for them.		All pertinent information has been sent to date to the MNO Lands and Resources Department, along with copies going to the North Channel Métis Council.	Xeneca commits to all necessary consultation with the local MNO community and to incorporate their concerns into the process.

2) Considering all aspects of the environment:

The final ER and supporting documents must contain enough information to demonstrate the potential impacts of the Project and identify mitigation measures, to a level that allows the public, Aboriginal communities and agencies to understand the anticipated impacts.

Section 4.2.2 of the Class EA states: "The evaluation, like the entire Class EA process, is proponent-led and will help inform the proponent's approach to obtaining input and information specific to planning and assessing the project. However, it is recommended that the proponent consult with relevant federal and provincial agencies and municipal authorities, appropriately qualified persons, potentially affected and interested individuals and the public when completing the potential effects identification matrix. The results of the environmental, social, cultural and economic evaluation are to be used by the proponent to inform the subsequent consultation, data collection and assessment phases of the Class EA process."

This approach ensures that stakeholders are engaged in a meaningful way that ensures that the proponent takes into account the potential impacts and benefits of the project and which, in turn, informs interested parties about the effects of the project on their interests. There are statements in the draft ER that refer to future field work and consultation planned for after the release of the final ER. All of this data collection, assessment, and consultation should be completed and documented in the final ER when the Notice of Completion is issued. This will ensure that there is sufficient information available to demonstrate the potential impacts of the Project and identify mitigation measures, to a level that allows the public, Aboriginal communities and agencies to understand the anticipated impacts. Examples of outstanding potential effects where studies, analysis, or consultation have not been completed include:

Xeneca's Response:

Our effects and mitigation tables are complete; any reference to on-going future work are intended as part of a long-term monitoring program where, for example, periods when we operate as RoR might be reduced based on the outcome of the new studies. These are not intrinsic baseline studies being considered; they are meant to support and inform a possible lessening of operating restrictions going forward.

- Wildlife habitat - specifically studies to address the potential for Blanding's turtle habitat, and studies to assess the significance of habitat for several additional species including eastern milk snake, common snapping turtle, denning sites for various mammals including mink, otter, marten, fisher, and eastern gray wolf, and reptile hibernacula.

Xeneca's Response:

For the final EA, impacts will be assessed using the existing information and a precautionary approach. Potential habitat exists for Blanding's turtles within the project area but none have been detected to date. Potential impacts on their habitat will be assessed with the assumption that Blanding's turtles are using the habitat within the project area. Additional survey information will be collected to confirm presence of Blandings Turtle in the area.

Lake Sturgeon habitat is also assumed to occur within the project area based on capture by others at the base of Graveyard Rapids in the spring of 2012, and the likely use of Wabageshik Rapids for spawning. Similar to Blanding's turtles, the habitat will be assessed in the EA using a precautionary approach that assumes Lake Sturgeon are using the habitat within the project area. The need for additional surveys for Lake Sturgeon for ESA permit applications is unclear at this stage. Discussions with MNR on permitting requirements will occur over this coming winter including the scoping of any field work to verify presence.

Xeneca recognises that additional information will be required for Blanding's Turtle, and possibly Lake Sturgeon, as part of the ESA application and review process for agreements and/or authorizations.

The EA is also assuming that all of the Significant Wildlife Habitats identified as "candidate" are in fact present and impacts are being assessed accordingly. Further studies on the Significant Wildlife Habitats are therefore not being conducted for the EA.

- Detailed Field Assessments of road and transmission corridors.

Xeneca's Response:

Roads have been assessed for the EA and in most cases the roads are short extensions of existing trails. These have been presented to the public and studied for SAR issues in collaboration with MNR. All roads construction involves in field verification of routing before construction. The transmission lines are less than 115 KV and are not required in an OWA Class EA. Nevertheless, in the spirit of openness and transparency, we have always provided information on these lines at all our PICs and our EAs.

- Additional shoreline erosion investigations.

Xeneca's Response:

Erosion potential has been assessed for this project at a screening level and no significant concern was identified related to the new inundation or the long term operation of the project. The changes in downstream flows resulting from project operation are within a range of flow rates that are much smaller than the flow rates that would cause downstream erosion or result in changes to channel formations. Similarly, the changes in levels resulting from facility operation have been hydraulic modeled. The model results show that the level fluctuations due to operation are less than half of the level fluctuations that occur naturally. Also, the fluctuations occur at the low and medium range of levels normally experienced by the river channel. The river channel is very stable in at these levels and no concern for downstream erosion exists within this level range. To further mitigate and address any possible concern, the Operating Plan commits to limit the changes in flow rate so as to further constrain the change in levels resulting from operation. With the restrictions imposed in the Operating Plan, the maximum fluctuations in water level occurring downstream will be less than one quarter of those occurring naturally. This imposed constraint provides further assurance that the proposed flow rate changes resulting from operation are safe and will not cause downstream erosion.

Erosion due to upstream operation was determined not to be an environmental risk factor. The upstream operation involves following natural lake levels throughout the year. Hence no seasonal change in water levels is proposed in the Operating Plan. The plan does propose fluctuating upstream water levels daily, but only +/- 5 cm. This very small change in level is not deemed to have any measurable effect on shoreline erosion, as it is less than fluctuation from boats, waves and wind set up that occurs naturally on daily basis.

Erosion due to the inundation was assessed by examining the geologic maps, slopes and proposed levels. The proposed new inundation for this project is very small and extends from the dam to the outlet of Wabagishik Lake, a distance of about 800 meters. New inundation depth ranges from 0 meters at the lake outlet to 6 meters at the dam. The south shoreline consists largely of bedrock with very small localized deposits of sand. No appreciable erosion is expected along the south shoreline. Along the north shoreline, the shoreline consists of bedrock with the higher elevations being covered by a thin veneer of sand and gravel. Only in a small shoreline section in close proximity to the dam will the new inundation shoreline exist in the sand and gravel veneer. Given the thin nature of the sand and gravel veneer and the underlying bedrock, very minor and localized erosion could occur within 250 meters upstream of the dam site. This area will be examined more closely during detailed construction planning. If necessary, steps will be taken to either stabilize any affected location or to monitor it during project operation. However, a significant environmental concern related to inundation related erosion does not appear to exist due to the proposed inundation.

Xeneca is developing a long term erosion measurement program as part of a due diligence program by comparing pre-post construction levels. Baseline studies have been done and Xeneca is involved in verifying these results over the initial operating period.

- Analysis and reporting of baseline water quality data

Xeneca's Response:

Xeneca undertook baseline water quality data analysis in 2010 and has further agreed to participate in a long term monitoring program using the MOE Guidance Protocol for water quality prepared by MOE Thunder Bay with substantial constructive input from Xeneca.

This is a long term commitment extending for two years pre-construction and three years post-construction. Year 1 of the program will be completed in November, 2012 with a baseline year-end report completed and provided to the MOE in December, 2012. The 2012 year-end report will describe the water quality observed at the proposed facility over one year of baseline monitoring, and will be followed by an additional year of monitoring in 2013 and an complete two year baseline water quality monitoring report. The 2012 report will be included in the final EA. The 2013 report (year 2) will serve as a basis of comparison for post-development water quality monitoring. This water quality monitoring program currently underway is under regular guidance and input from MOE Thunder Bay water quality specialists.

- Further consultation with agencies to finalize operating parameters and the proposed operating plan for the Project.

Xeneca's Response:

Xeneca is consulting with MNR, DFO and MOE during the Draft EA review process to reach consensus toward the final Operating Plan. The final EA will include the Final Operating Plan.

- 3) Systematically evaluating net environmental effects:

Section 4.3.1 of the Class EA outlines an approach to assessing effects. Since all data has not yet been collected, the identification of all effects cannot be complete, and therefore any evaluation of net environmental effects is premature. From the documentation presented, all effects have not been identified, assessed and consulted upon.

Xeneca's Response:

Please see answer to item 2 above, Verification Studies will be done in the future. The baseline studies have been done. The effects and mitigation tables are complete. Most EAs do provide for Effects Verification and Mitigation Reviews in post operational periods e.g. DFO always requires that the performance of habitat compensation plans be verified after early operation phase but this would not constitute an incomplete EA.

- 4) Providing clear, complete documentation:

Section 4.4.1 of the Class EA provides a list of required elements to be included in the ER document. Attached for your convenience is Table 1, which outlines those required elements and MOE NR's evaluation of the assessment completed and documentation submitted.

Xeneca's Response:

Please refer to Table 1 below for answers regarding complete documentation.

Technical Issues

Hydrology:

Hydrology analysis for this project was done using flow data from the WSC station 02CFO04 for the period of 1954-1993, which was 18 years old. The WSC station had been discontinued after 1993 but flow data from 1994 to present time are available at Vale and Dornier, collected by the respective agencies as part of their ongoing monitoring. MOE technical staff analysis of the recent data indicates significant differences in flow statistics exist when compared to the statistics derived using flow data up to 1993. This discrepancy proves flow statistics derived using old data are not representative of the current watershed condition. Therefore, are-analysis of hydrology is required with the current flow data up to 2011. The studies conducted using old hydrology data such as hydraulic analysis of the river system can be considered incorrect in this respect as well.

Xeneca's Response:

Xeneca and MOE Engineers have shared flow data recorded at Vale and Domtar generation stations in the past. Xeneca had also shared comparison of SAAS program analysis with the additional data and found to be not significantly different with the present hydrology results. This slight change in hydrology analysis has very little effects on the environmental assessment process. This will be again discussed with MOE engineers and if it is deemed necessary the analysis with the additional flow data will be included in the final EA.

Hydraulic Modelling:

Steady flow hydraulic modeling was done for the upstream 12-km river reach, starting from the proposed dam site and ending at the tail water of Lorne Falls Generating Station. The modeling report and HEC-RAS modeling files were reviewed by the MOE Regional Hydrologist, and found to be satisfactory. However, a revision is required using the recent hydrology data. Unsteady flow modeling was completed for the downstream 13-km river reach starting from downstream of the proposed dam site and ending at Domtar's Dam at Espanola. Out of this 13-km reach, the first 4 km was modelled using surveyed river transects and the remaining 9 km was done using transects constructed from MNR's FRI data. Based on our review, the modelling for the first 4 km is satisfactory. The remaining 9 km has some uncertainty, because of uncertainty in the FRI data, but that does not result in concerns as this 9 km reach is situated within the inundated area of Domtar's head pond. Water level within this 9 km reach will be managed by Domtar according to the approved dam operating plan. The major issue here however will be reduction of flow during off-peak hours when Xeneca will not be releasing any flow downstream, which will eventually impact Domtar's generation, effluent dilution at Espanola and biology of the river at large.

Xeneca's Response:

Xeneca has provided number of documents (memo letters) after the draft EA was submitted for agencies review, including field measured water level information at four different locations in the project area. The field measured water level information has demonstrated that the HEC RAS model results are very accurate. Water level recorded just downstream of Graveyard Rapid on the Spanish River confluence has also demonstrated that water level in this area, in fact, is controlled by Domtar operation and that it has very little effects of the Vermillion River flow.

The recorded water level has also demonstrated the daily fluctuation in Domtar Headpond is as much as 20 centimeters in some months. So, +/- 5cm fluctuations proposed in Operation plan of the Wabageshik Project should not be a concern as it is much less than what the river system experiences in the existing condition. Further, the available water level data shows that the Domtar Headpond drops during the day and rises during the night. The operation of the Wabageshik project occurs in an opposite pattern, thereby reducing the fluctuations currently experienced

Effects on Vale's Generation:

Vale Inc. owns and operates a run-of-river generating station at Lorne Falls approximately 11 km upstream of the proposed Wabageshik Dam. The modeling results show back water effects of the proposed dam will propagate upstream up to downstream of Lorne Falls Generating Station, impacting tail water level of the station. The tail water elevation may rise in the range of 0.1 - 1.0m depending on the flow of the river. This would negatively impact Vale's generation due to reduction of available net head. MOE recommends that Xeneca propose an operating plan which will not adversely affect Vale's generation.

Xeneca's Response:

Xeneca has stated in the operation plan that the operation of Wabageshik Rapids project will closely follow the Wabageshik Lake natural level under most circumstances except when the natural flow in the river is very low (< 20 m3/s). In this case, the Wabageshik Rapid project will maintain the lake level and prevent lake level from further bottoming. This would prevent any effects on operation of the Vale Generating Station tailwater level. Xeneca has also shared this information and hydraulic model results to Vale.

Effects on Domtar's Generation:

Domtar Inc. owns and operates a run-of-river generating station on the same river system at Espanola, approximately 13 km downstream of Xeneca's proposed dam site. This station will be negatively affected by Xeneca's proposed peaking operation as well. During the time of off-peak hours Domtar would receive significantly less flow, and during peaking hours Domtar would receive more flow than its current turbine capacity. This extreme flow fluctuation will adversely affect Domtar's generation as Xeneca will control 40 per cent of the flow of the Vermillion Spanish river system.

Xeneca's Response:

The total volume of water in and out of the headpond of Wabageshik Rapids project will be unchanged from natural levels in any given day. Given that Domtar has significant headpond storage and contribution of the Vermillion river is less than 40 percent, the peaking operation of Wabageshik Rapids, the project will not have negative effects on the Domtar power generation. Moreover, Xeneca has committed to limit the daily fluctuation to +/- 5 cm in the Domtar headpond area. The water level information recorded just downstream of Graveyard Rapids has demonstrated that the daily water level fluctuation is as much as 20cm in some months in the existing condition. The hydraulic effects of Wabageshik Rapids project operation is much less than what is happening in the river system in the current existing condition. In fact, when we closely looked at the hourly water level downstream of Graveyard Rapid, it is apparent that the Wabageshik project operation will help to reduce the headpond fluctuation in the Domtar headpond.

Effluent Dilution:

Domtar is continuously discharging effluent to the Spanish River below Espanola Dam under an approved discharge permit from the Ministry of the Environment. For a satisfactory dilution of the effluent and to maintain river water quality at an acceptable level, an all time minimum flow of 17m³/s must be maintained in the Spanish River below Espanola. Out of that 17m³/s, 6.5m³/s comes from the Vermillion River, a major tributary to the Spanish River on which Xeneca's proposed dam will be located. The minimum flow as proposed by Xeneca (produced below for ready reference) is not acceptable to the MOE to protect water quality of the Spanish River. Domtar's ongoing monitoring and water quality modeling of the Spanish River from Espanola to the mouth of the river at the Great Lakes indicates river health significantly deteriorates when flow goes below 17m³/s. In a recent year Domtar had to inject liquid oxygen into the river for months to keep the river water quality at an acceptable level. Please note, the Spanish River is a sturgeon river. Because of the biological sensitivity and past incidences, MOE could not agree to a minimum flow less than 6.5m³/s released at all times below Wabageshik Rapids. For the protection of the fishery MNR might have a different opinion on minimum flow, but 6.5m³/s is the absolute minimum required by the MOE for the protection of water quality. Prior to finalizing the ER and issuing a Notice of Completion, further discussions on minimum flow requirements should be held between Xeneca, MNR, and MOE.

Minimum flows proposed by Xeneca (Table 5, page 28 of the proposed operating plan):

Xeneca's Response:

	Flows in m ³ /s by hydrologic season			
	Spring	Summer	Fall	Winter
Min. flow in the bypass reach	2.0	0.5	0.5	0.5
Min. flow below the confluence of the bypass and tailrace, which includes bypass flow	No peaking	3.0	2.0	1.0

As MOE has mentioned in meetings, this extreme condition occurred only in Summer of 2010. Xeneca has stated in the operation plan, that in extreme drought conditions Xeneca will work with MOE and if needed the generating station will be operated in a run-of-river operating mode to pass any water to Domtar. As you have indicated, this case arises only when total flow from the Spanish River and Vermillion River is less than 17 m³/s. If the flow from the Spanish River is more than 17 m³/s, this will not be a concern. This is a special condition restriction and should not govern the general operating mode of the Wabageshik Rapid project.

With respect to the request to provide 6.5 m³/s at all times, this request is not warranted given the mitigation commitments already incorporated in the Operating Plan. The effluent dilution concern only exists under very specific conditions that are fully addressed and mitigated.

Water Quality, Benthic Invertebrates, Mercury:

The Vermillion/Spanish River is a managed watercourse. There is a draft water management plan which is currently under review. The Vale Inc. owned and operated Lorne Falls dam and generating station is located upstream of Wabageshik Lake approximately 11 km upstream from the proposed dam. It operates as a run-of-the-river facility. In addition, the Nairn Dam located at the outlet of Agnew Lake (the lake was created by damming the Spanish River 100+ years ago) is located approximately 11 km upstream of the Vermillion's confluence with the Spanish. Domtar Inc. owns and operates a dam in Espanola on the Spanish River, approximately 12 km from the Wabageshik Rapids. There are also three more Xeneca projects (Soo Crossing, McPherson Falls, Cascade Falls) proposed for the Vermillion River upstream of the Wabageshik site, all located downstream of Vermillion Lake.

The following general comments address water quality issues related to the proposal

- Table 5 of the draft ER identifies various water quality issues that may result from construction and operation of the Project, proposing mitigation measures, and then assessing the inherent risk and potential for residual effects of each identified component. Where residual effects are identified, Table 6 then assesses the significance of these residual effects. Impacts identified which are inherent with all undertakings of this nature, include sedimentation/erosion effects, mercury methylation due to inundation area, eutrophication (algal blooms), compliance issues with regards to the Domtar Pulp and Paper Mill, and flow fluctuations downstream, among others. For each of these potential impacts, the draft ER concludes either that no residual effects are anticipated, or that any residual effects are not significant. A review of the information provided indicates that the draft ER does not provide sufficient data, analysis, or documentation to support these conclusions, as noted below.

- Creation of the dam, rising and falling water levels, and sudden increases in flow will result in sedimentation and erosion. Sedimentation occurring during construction can be minimized by Best Management Practices (BMP's); however, only through a sound monitoring program would these be detected. After construction, sedimentation effects which will occur within the impoundment and possibly downstream in the variable flow reach are unavoidable and cannot be mitigated. For example, due to the peaking nature of the facility scouring could result in considerable sediment transport downstream. Even if there was a rigorous water quality monitoring program and impacts were documented, it is unlikely that any mitigation would be possible due to the recurring nature of the disturbance.

- With regard to the mercury methylation, the draft ER indicates that the methylation of mercury due to flooding upstream is considered a low risk, since the area to be flooded is primarily located in a bedrock channel and there is only a $\pm$ 5 centimetre (cm) fluctuation anticipated in Wabageshik Lake. We concur that the risk is low, however it is a risk nonetheless. Since recreational fisheries exist adjacent to the proposed site, any increases in mercury above MOE guidelines must be made known to potential resource consumers. Fish consumption advisories may be necessary. As with sedimentation impacts, there is no immediate remediation other than issuing consumption advisories and monitoring fish tissue mercury until such a time as levels return to pre-operational concentrations.

Monitoring of background fish tissue mercury levels in sportfish is ongoing and due to the long-term nature of these impacts, monitoring may be required for decades. Monitoring for mercury should be undertaken as recommended in Annex IV, Surface Water Quality (Hutchison Environmental Sciences Ltd. "Wabageshik Rapids, Vermilion River Proposed Hydroelectric Generating Station Surface Water Quality and Fish Sampling Guidance" (July 18, 2012).

- Although potential for the development of algal blooms has been identified due to increased water retention time in the head-pond, the risk of this occurring has not been addressed. It is very difficult to predict when and where blooms will occur. Total phosphorus concentrations are positively related to bloom occurrence and concentrations are maintained below 30 parts per billion (ppb) in rivers and below 20 ppb in lakes, the risk is reduced. It is therefore important that phosphorus concentrations be included in the water quality monitoring program. Water quality monitoring for phosphorus should be undertaken as outlined in Annex IV, Surface Water Quality (Hutchison Environmental Sciences Ltd. July 18, 2012).

- Compliance issues related to the Domtar Pulp and Paper Mill are a further likely impact of the Project, as proposed. Currently, Domtar has a plan to deal with Dissolved Oxygen (DO) sags in the Spanish River as a result of Pulp and Paper Effluent discharge. These impacts occur 24km downstream of the Mill, and may be exacerbated by modifying the flow in the Vermilion River downstream of the Wabageshik facility. This could be very problematic, especially due to the peaking nature of the proposed facility as much less water may be available for dilution of the pulp and paper effluent.

- Acid Rock Drainage (ARD) potential needs to be addressed due to blasting activities during construction. A plan needs to be developed which outlines testing methodologies. If ARD potential exists, then rock usage and storage strategies will need to be developed.

Xeneca's Response:

The proposed project does not pose a significant risk with respect to Methyl Mercury release, oxygen stratification or algal bloom.

Inundation related to waterpower projects can be contributing factor to Methyl Mercury release where the following conditions exist:
-Organic Matter: The formation of Methyl Mercury requires the presence of organic material and Mercury.
-Anaerobic Conditions: Methyl Mercury forms in the absence of oxygen as a result of an anaerobic reaction between decaying organic matter and Mercury.

To minimize the risk of organic matter in newly inundated areas, it has become industry practice to remove trees prior to inundation. The occurrence of anaerobic conditions is directly related to water depth and circulation of oxygen in the water body. Anaerobic conditions typically occur where water depths and circulation patterns are such that insufficient dissolved oxygen reaches the affected area. This risk can be minimized by limiting the inundation depth and optimizing circulation patterns through engineering design. Where Methyl Mercury formation does occur, it typically rises rapidly in the first few years of inundation and then gradually declines back to background levels over time. Due to the gradual bio-accumulation in fish tissue, the effect on fish tissue is typically delayed and can persist longer than the effect on water quality.

The proposed project has been designed to have minimal inundation depth – varying from about 1 m to 5 meters at the weir crest. These depths are typically not sufficient to cause lack of circulation of dissolved oxygen and the formation of anaerobic conditions. Oxygen stratification has been observed in reservoirs that are in excess of 10 meters deep and where the design does not provide for deep water circulation.

With respect to the proposed project, the area of new inundation is very small and not deemed large enough to have any appreciable effect on Methyl Mercury formation. Trees that exist in the new inundation area would be removed prior to construction to limit the available biomass that could contribute to Methyl Mercury release. As confirmation of the effectiveness of the mitigation effort, Xeneca has proposed long term monitoring to track Methyl Mercury concentrations for water quality and fish tissue. The details of the monitoring plan have been worked out with the Ontario Ministry of the Environment (MOE). Monitoring data will be submitted to MOE throughout the duration of the monitoring time frame. A copy of the monitoring plan is available as part of the environmental assessment information for the project.

Algal blooms may occur in freshwater lakes due to an excess of nutrients, e.g. phosphorus, and may be favoured when flushing times are decreased. The Wabageshik Rapids project, however, will not change nutrient load or flushing time of Wabageshik Lake.

Wabageshik Lake is located ~600m upstream of the proposed project. The new head pond to be created by the project will extend 600m upstream at a new, stable level, and an additional 400m (total = 1000m) in which water level will fluctuate by less than 20cm over a 24 hour period. A portion of the flow will be held back for 12-16 hours per day to store water, and then released during the 11AM - 7 PM operating period to generate electricity. The amount of water moving through the lake each day will not change and the water level will return to the same level each day so that the overall flushing rate will not change. The project will not, therefore cause any change in the overall flushing rate in the lake or the algal bloom situation.

For areas downstream of the project, Xeneca will be adhering to industry standards for construction and operations by removing vegetation in the inundation area, including some top soils. Removing this vegetation will reduce nutrient sources to downstream and so we do not anticipate that our project will in any way exacerbate nutrient loading in downstream areas.

Algal blooms can also be linked to phosphorus that is released from the bottom sediments of lakes under conditions of anoxia (loss of dissolved oxygen). We do not expect that anoxia will form in the area of project inundation as it is only 6.1 m deep and will not, therefore undergo thermal stratification, which can promote anoxia. We therefore expect to have no impact on oxygen status or water quality downstream of the Wabageshik Rapids Project site.

In summary, the operational scenario for the Wabageshik Rapids project means that it will not materially alter any flushing, nutrient or oxygen relationships in the lake and will therefore have no impact on algal blooms in the lake.

The environmental risk of encountering acid rock drainage ("ARD") is directly related to the degree of sulphide mineralization in certain rock materials. Rock material that is highly mineralized poses a high risk for ARD. ARD results from metallic minerals being leached into the ecosystem from sulphide mineralized rock as a result of oxidation and weathering. The issue is primarily associated with the mining industry because the industry specifically searches for, develops and mines rock material that is high in metallic mineral content. In addition, mining activity can generate very large volumes of mineralized waste rock, thereby further increasing the potential for significant ARD to occur.

The potential for encountering ARD issues related to waterpower projects is rather small. Less than 1% of the landscape is underlain by rocks with a high degree of metallic sulphide mineralization. Even where present, the mineralization often does not exist at the surface, but at some depth underground. As a result, the probability of encountering an ARD issue inadvertently due to general construction is very low. In addition, the rock excavation volumes generated by the construction of waterpower projects is generally very small in comparison to industrial mining activity.

ARD potential in rock can be readily tested by extracting and analysing representative rock samples. This work is generally completed before construction. The required drilling and testing program of the rock material is done in 2013 well before construction to confirm that rock mineralization and the potential for ARD is limited.

• Although MNR and DFO have primary responsibility for issues related to fish and fish habitat, MOE's mandate includes water quality as it relates to protection and maintenance of the natural function of the ecosystem, and the role of the Vermilion River in supporting a diverse fish community, including lake sturgeon, walleye, and other species. It is within this context that we identify concerns with the impacts this facility will have on the land-locked lake sturgeon population known to inhabit this stretch of river. Little is known about the population status or spawning areas, and this project may negatively impact this species. Walleye are also known to spawn in the Wabageshik Rapids. Little data is currently available as to where these fish come from (upstream or downstream). Loss of spawning habitat poses a risk to this population that is currently hard to assess.

- The recreational fishery and first nation subsistence fishery may be impacted by habitat loss. Further agency-proponent discussion of these issues is needed before a final ER is prepared.
- The draft ER indicates that a report summarizing the available chemistry and biological data is forthcoming in December, 2012. This information should have been made available for review as part of the draft ER.
 - Cumulative effects of the Project have not been addressed with regard to the impacts of the three additional proposed Xeneca facilities located on the Vermilion River upstream of the Wabageshik Rapids site.

Xeneca's Response:

We appreciate your concern. Consistent with your recommendation for agency-proponent discussion, Xeneca is in discussions with MNR and DFO regarding fisheries and fish habitat matters. We intend to provide resolution to these issues at a preliminary level for the final ER, and in greater detail during the permit process with these agencies. Considerations include fish migration, loss of fish habitat (including spawning habitat), the need for compensation, and the operation of the facility. We are considering Walleye, Lake Sturgeon and other fish species.

Peaking versus Run-of-River:

The results of the MOE technical review of the Project to date reveal that this is a sensitive ecosystem that has been impacted previously by hydroelectric facilities and pulp and paper effluent discharge. There are existing water quality concerns down gradient in the Spanish River (dissolved oxygen). A species of special concern (lake sturgeon) is known to inhabit the reach of river where this facility is proposed, walleye spawn in the Wabageshik Rapids, and little is known on the status of either of these populations. Additionally, this section of the Vermilion River supports both a recreational fishery and native subsistence fishery. In our opinion the proposed project, if operated as a peaking facility, has great potential to adversely affect existing hydropower users upstream and downstream of the project, and water quality of the Spanish River. Because of the extreme fluctuation of flow over a 24-hour period, the proposed operation may harm successful spawning of fishery as well below Wabageshik Rapids. In order to avoid conflict with the existing users and to better protect the environment, MOE recommends changing the design concept of the project from peaking to a run-of-river operation.

Xeneca's Response:

Xeneca appreciates MOE's perspective that it may be easier to propose a run-of-river operation. Given the low-head nature of this project, this is not feasible economically. Daily operation allows most of the water in the river to be used. In addition, Ministry of Energy encourages hydropower projects to provide operation when the electricity is needed by the province. To this end, the Ministry of Energy provides an economic incentive to electricity produced between 11 am and 7 pm. Xeneca's studies and mitigation efforts have gone a long way to ensure that the socio-economic benefits and the environmental protection objectives can be met.

Extensive technical studies over the past 3 years have shown that the ecosystem in this area is no more sensitive than any typical hydropower development site in the province. The ecosystem may have been impacted by existing hydroelectric facilities and pulp and paper effluent discharge, but there is no evidence to suggest that the addition of the proposed project would, in any way, adversely affect existing conditions or cause an important environmental limit to be exceeded.

Xeneca has been made aware that water quality concerns exist downstream of the Domtar effluent discharge location on the Spanish River. Based on input from the facility owner and MOE, it is our understanding that concern relates to low levels of dissolved oxygen that occur during warm water temperatures and drought flows. To ensure that the Xeneca facility does not exacerbate this concern, commitments were made in the Operating Plan to operate in run-of-river mode when a drought is declared by the Province. Further, it should be noted that Xeneca operation is constrained to daily operation only. The project also has not impact on water temperature or dissolved oxygen. Every day, the total amount of water will be released down the river that would be released naturally. Hydraulic modeling has shown that the variation in flow downstream of the Spanish River confluence is minimal. In addition, an existing hydropower facility is located between the proposed Xeneca project and the location where the effluent discharge concern exists. We have contacted the facility operator and were informed that the facility operates in run-of-river mode. This would further confirm that the effluent dilution is not impacted by the limited daily operation proposed for the Xeneca project.

Xeneca is aware of the existing Lake Sturgeon and Walleye populations in the river. This section of river has been studied for 3 years as part of the proposed Project. Over the past 10 years, this section of river has been extensively studied as part of the ongoing Water Management Planning process of the Spanish and Vermilion Rivers. In addition, studies have been carried out by Vale and this information has been shared with Xeneca and the MNR. It is our understanding that Lake Sturgeon have been radio tagged and their movement and numbers are being studied. We would be pleased to work with MOE to make MOE aware of the extensive studies and information available.

Xeneca is aware that daily operation could affect upstream and downstream waterpower facilities on the river. Xeneca has exchanged data with the upstream and downstream facilities to study this potential concern. A hydraulic modeling study was carried out and shared with the upstream and downstream users. Their comments were solicited and incorporated into the proposed Operating Plan for the facility. The proposed Operating Plan, as provided to MOE will ensure that there is not a significant effect on the upstream and downstream facilities.

As to the "fluctuation of flow over a 24 hour period", great effort was made to model and predict the water level fluctuations that would occur due to daily operation. This information has been extensively shared and reviewed with agencies over recent months. Xeneca has committed to upstream fluctuations of not more than +/- 5 centimeters. Xeneca has also committed not to exceed +/- 5 centimeters downstream of Graveyard Rapids (approximately 3 km downstream). Xeneca has committed not to exceed +/- 15 centimeters in the section of river 300 meters to 3 km downstream. We have also demonstrated that these changes in water levels do not significantly impact wetted perimeter and other important ecological parameters. Xeneca has proposed special flow restrictions during spawning (i.e. ROR) to protect ecological functioning of the spawning bed located immediately downstream (0 to 300 meters).

Xeneca hopes that MOE will recognize that Xeneca has gone to great length to ensure that concerns that could arise due to daily operation have been fully examined and addressed. We would welcome any opportunity to further elaborate on the mitigation measures discussed above.

Zone of Influence:

Identifying the Zone of Influence (ZOI) is essential to ensuring that all potential effects are identified and considered during the Class EA process. The ZOI should include all areas where effects could occur, including the entire inundation area and areas of variable flow downstream, together with all areas on land that would be impacted due to things such as proponent component footprints, new or expanded road corridors, borrow and laydown areas, parking areas, and areas to be used for the stockpiling of materials. Accurate identification of the ZOI is critical, as this establishes the basis for project evaluation and public and Aboriginal engagement. The full ZOI should be identified in consultation materials presented during the Class EA process, so that the public, Aboriginal communities, and other interested parties are fully aware of the extent of the ZOI within which potential impacts may occur. To date, there has not been agreement on the full extent of the downstream ZOI for this Project. Minutes of the July 19, 2012 interagency meeting (Appendix C) identify the proponent's commitment to hold further discussions with MOE and MNR to reach consensus on an acceptable definition of the downstream ZOI. These discussions should be concluded before the final ER is prepared and the Notice of Completion issued, so that the agreed-on ZOI can be identified and included in further consultations with the public, Aboriginal communities, and other interested parties prior to the conclusion of the Class EA process.

Xeneca's Response:

Discussion about the extent of the ZOI started in mid-2011. MNR indicated that it would be important to clearly define the downstream and upstream ZOI. To this end, Xeneca has made major revisions to the proposed operations plan and undertaken detailed hydraulic studies to better inform discussions about the extent of the ZOI. We believe this information is helpful in addressing MNR's questions on the ZOI.

With respect to the upstream ZOI, Xeneca has firmly committed to closely follow natural lake levels in Wabageshik Lake throughout the year and to not significantly alter seasonal levels. Monitoring has shown that the lake levels can fluctuate naturally by approximately 150 centimeters. The operating commitment made by Xeneca will ensure that this natural cycling in lake levels will continue except for a very small effect at very low lake levels (i.e. less than 20cms, the proposed dam will prevent lake levels from dropping to very low levels during such drought conditions).

Xeneca has noted that it plans to operate on daily basis, resulting in daily fluctuations upstream of +/- 5 centimeters. This operating commitment has been specifically made to ensure that any possible impact of daily operation is not readily perceptible to the naked eye. Xeneca has illustrated that this daily change will be less than the daily fluctuations that occur naturally due to waves, wind set up, seiche, boating and other factors that cause lake levels to fluctuate slightly on a continuous basis. Xeneca believes that these strict upstream level commitments will ensure that there is no significant environmental effect upstream due to daily operation.

With respect to the downstream ZOI, Xeneca has indicated that it will operate so that the water levels in the Spanish River are not affected by more than +/- 5 centimeters, thereby ending the downstream ZOI at the confluence of the Vermillion and Spanish River (i.e. immediately downstream of Graveyard Rapids, approximately 4 km downstream). Xeneca has carried out detailed hydraulic modeling to confirm that this rigorous operating commitment is achievable.

At a recent agency coordinating meeting, MNR questioned the potential limitations of predictive modeling and the value of +/- 5 centimeters as a de-minimus value representing no significant environmental effect. Xeneca proposed two strategies to address these questions. Firstly, Xeneca promised to retrieve water level monitoring data from existing recorders to validate the accuracy of the hydraulic model predictions. Secondly, Xeneca committed to verification monitoring after project start-up to validate the model predictions and to serve as evidence of compliance to the operating commitments.

After the coordinating meeting, Xeneca retrieved the first year of water level monitoring data from recording stations along the river (one upstream and two downstream). The observed water level recordings are very consistent with the model predictions and should resolve any questions about possible model limitations. The data also show regular daily fluctuations of water levels in the Spanish River of +/- 10 centimeters. In addition, the timing of the fluctuations occurs such that they largely off-set one another. This data provides further evidence that the proposed compliance limitations of +/- 5 centimeters:

- is consistent with natural daily variations,
- will have no significant environmental effect, and
- Limits the downstream ZOI to the base of Graveyard Rapids are previously defined.

As to the impacts within the extent of the downstream ZOI (i.e. within the first 4 km downstream of the dam), extensive environmental studies have been carried out and documented in the EA. To the extent that MNR has questions on this information, Xeneca would welcome further discussion and joint review of the available information. It should also be noted that Xeneca has committed to fluctuations of not more than +/- 15 centimeters in most of the 4 km downstream ZOI extent, thereby constraining any larger fluctuations to the first 0.3 km downstream.

With respect to downstream riparian owners, Xeneca has made extensive efforts to inform downstream stakeholders. Three public information centres (PICs) have been held on this project as well as other stakeholder specific follow up. Specific follow up has occurred with key land owners, including Domtar and Vale. The issue of daily operation and the extent of the ZOI have been very clearly presented and various comments and follow up discussions with stakeholders have occurred. Xeneca would be pleased to review the related consultation with MNR in more detail.

Xeneca recognizes the importance of defining the total ZOI boundary. We would like to work with MNR to ensure that consensus on the ZOI is reached. We believe all the necessary information has been collected and made available to inform the discussion. We would like to review this information with you at your earliest convenience.

Archaeological Effects:

Identified Archaeological Site

A Stage 2 archaeological assessment was completed for the project, and one archaeological site was identified as a result. The Stage 2 archaeological assessment report recommends that the identified site be subject to a Stage 3 archaeological assessment. As indicated in the draft ER, completion of a Stage 3 assessment is planned prior to any construction activities. It is our understanding, following discussions with the Ministry of Tourism, Culture and Sport, that Stage 3 archaeological assessments include both a site-specific assessment which determines the extent of the site and the need for mitigation, and recommendations on appropriate mitigation measures.

As described in Section 4.2.2 of the OW A Class EA, proponents are required to assess potential effects of their proposed projects, as well as any net effects after mitigation. Section 4.3.1 of the Class EA (Assessment of Effects) further elaborates that the proponent "confirms the potential effects of the project, determines the appropriate avoidance, prevention and/or mitigation strategies and assesses the net effects of the project." The Class EA also requires that consultation take place during the process with the public, agencies, and Aboriginal communities. The ER must contain enough information to demonstrate the potential impacts of the project and identify mitigation measures to a level that allows the public, agencies, and Aboriginal communities to understand the anticipated impacts. As it is not until a Stage 3 archaeological assessment that the extent of identified archaeological sites is identified and any necessary mitigation measures are recommended, Stage 3 archaeological assessments (where recommended by a Stage 2 assessment) must therefore be completed during the Class EA process. This will ensure that the proponent is able to include identified mitigation measures and an assessment of any net effects in the ER. In some cases, where archaeological sites identified during the completion of a Stage 2 archaeological assessment are located outside of the defined Zone of Influence, it may be possible to mitigate potential impacts through avoidance. Where this approach is used, the location of the archaeological site relative to the defined limit of the Zone of Influence must allow for the implementation of an undisturbed buffer area of a minimum of 20 metres around the perimeter of the archaeological site, with no portion of the buffer encroaching into the Zone of Influence. In addition, the proponent will also be required to introduce monitoring up to 50 metres around the archaeological site by a licensed archaeologist (the monitored area may extend into the defined Zone of Influence for the project). Where the above requirements can be achieved, proponents can choose to use the avoidance strategy instead of completing the Stage 3 assessment; however, the completion of a Stage 3 assessment would remove the monitoring requirement and may reduce the required buffer

distance to less than 20 metres. Where archaeological sites identified during the completion of a Stage 2 assessment are located within the defined Zone of Influence, this avoidance strategy is not an option because the recommended minimum buffer, as outlined above, cannot be achieved.

Please note that a commitment to undertake the recommended Stage 3 archaeological assessment after completion of the EA process, such as the statement made in Section 2.10.1 of the draft ER, would not meet the intent of the Class EA. All impacts of the project must be assessed as part of the Class EA process, and presented to the public, agencies, and Aboriginal communities for review and comment. Therefore, where a Stage 2 archaeological assessment has recommended the completion of a Stage 3 assessment, in order to meet the requirements of the Class EA the Stage 3 assessment or (where possible) commitments to implement the above-noted avoidance strategy, must be provided during the EA process, and included within the ER. The draft ER (including Annex V - Woodland Heritage Services Limited Stage Two Project Report) does not clearly identify the extent of the area subject to the Stage 2 archaeological assessment. The document also does not indicate whether the identified archaeological site is within or outside of the defined Zone of Influence for the project. In addition to the information identified above, the final ER should include this information.

Xeneca's response:

The area identified for possible Stage 3 is not part of the operating island for this project. The site will be isolated by fencing and appropriate setbacks (20 meters) so it is not disturbed in any way by construction personnel. A Stage 3 study will not be conducted.

Other Affected Areas, Roads, and Transmission Corridors

A Stage 1 archaeological assessment prepared in support of the project recommended the completion of a Stage 2 assessment for other areas with archaeological potential that could be affected during construction. These included components such as laydown areas, borrow pits, fill areas, road corridors, and transmission corridors. As the draft ER does not clearly identify the extent of the area subject to the Stage 2 archaeological assessment, it is not clear if any of this work has been completed. However, it is our understanding that further archaeological assessments of at least the road and transmission corridors have likely not been completed, since decisions with respect to the final route of these components are still outstanding. As noted above, the Class EA requires that proponents confirm the potential effects of the project, determine the appropriate avoidance, prevention and/or mitigation strategies, and assess the net effects of the project. The Class EA also requires that the public, agencies, and Aboriginal communities be provided with information regarding potential impacts, proposed mitigation measures, and net effects of the project. In order to satisfy these requirements the completion of further stages of archaeological assessment, as outlined above, is required prior to finalizing the ER and issuing the Notice of Completion. In particular, please note that although there is no formal requirement to assess transmission lines < 115 kV through the Class EA process, it is our understanding, based on information contained in the draft ER (Section 4.3.2) that the proponent has elected to incorporate the transmission line in the assessment of this project under the Class EA. The completion of further stages of archaeological assessment, as described above, specific to the transmission corridor, should therefore be undertaken before the ER is finalized and the Notice of Completion issued.

Xeneca's Response:

Archaeology review for roads and laydown area would be included in the final ER. Transmission lines below 115kV are not part of the OWA Class EA process.

- To provide the most complete information possible Xeneca has, through its consultation process and public meetings communicated to all stakeholders all available information regarding transmission lines and the work done to date regarding the process used to select routes.
- Xeneca has:
 - 1) used MNR reference documents to aid in determining ecologically sensitive areas and avoid them,
 - 2) used aircraft reconnaissance to aid in the terrestrial assessment, including wetland assessments,
 - 3) undertaken SAR presence assessment to ascertain if SAR are present, or work in accordance with SAR legal requirements for Plans and Specs.

Please note that the most conservative assessments were used to present to all stakeholders and as such there will be no gaps in information on ecological or socio economic impacts.

Archeological work will be done once the lines are finalized upon incorporation of SAR considerations into the development of the preferred routes. Xeneca is very proud of the extensive work undertaken to develop the preferred routes in association with MNR; this technical work rivals that done for major power lines done by Hydro One.

The area identified for possible Stage 3 is not part of the operating island for this project. The site will be isolated by fencing so it is not disturbed in any way by construction personnel. A Stage 3 study will not be conducted.

Economic/Socio-economic Effects:

Although the draft ER contains broad statements suggesting positive economic impacts to local economies due to employment and local sourcing of supplies and services during construction, a quantitative financial analysis documenting anticipated positive impacts has not been provided. Additionally, no financial data or analysis has been submitted to evaluate potential economic impacts to tourism. These deficiencies should be addressed prior to finalizing the ER and issuing a Notice of Completion. The final ER should include a noise screening report, identifying any sensitive receptors within 1000 metres of the Project that may be affected by noise during construction or operation. As a public health and safety issue, this should be included in the evaluation of potential socioeconomic impacts. Socio-economic impacts addressed in the final ER should also include consideration of elevated levels of methyl mercury in fish, since this may affect recommended fish consumption levels.

Xeneca's Response:

Financial data will be provided in the final EA.

The Noise Screening Report will be prepared and incorporated into the Final EA. Our permits list includes preparation of the Air/Noise application for 2013.

Cumulative impacts:

Although the draft ER recognizes that the proposed Project is likely to have effects on the existing Vale and Domtar generating stations, no analysis of cumulative impacts of all the three facilities, or of the cumulative impacts of the three facilities in combination with the three additional Xeneca projects proposed upstream of Wabageshik Rapids. We recognize that defensible assessment of cumulative impacts would not likely be possible until various operating parameters and the proposed operating plan for the Project have been finalized through further discussion and consultation with agencies and other stakeholders. Once this has been completed, a detailed analysis of cumulative impacts should be included in the final ER. Because a detailed evaluation of proposed road and transmission line corridors has not been completed, potential impacts of these components of the project have not been fully identified. It is therefore not yet possible to undertake a cumulative impact assessment of the impacts of the proposed corridors in combination with linear corridors that already exist within the study area. The final ER should include a full inventory/evaluation of proposed road and transmission line corridors; a more complete consideration of the role of these corridors in cumulative impacts of the Project should also be presented.

Xeneca's Response:

Extensive technical studies over the past 3 years have shown that the ecosystem in this area is no more sensitive than any typical waterpower development site in the province. The ecosystem may have been impacted by existing hydroelectric facilities and pulp and paper effluent discharge, but there is no evidence to suggest that the addition of the proposed project would, in any way, adversely affect existing conditions or cause an important environmental limit to be exceeded.

Xeneca is aware that daily operation could affect upstream and downstream waterpower facilities on the river. Xeneca has exchanged data with the upstream and downstream facilities to study this potential concern. A hydraulic modeling study was carried out and shared with the upstream and downstream users. Their comments were solicited and incorporated into the proposed Operating Plan for the facility. The proposed Operating Plan, as provided to MOE will ensure that there is not a significant effect on the upstream and downstream facilities.

Xeneca has stated in the operation plan that the operation of Wabageshik Rapids project will follow the natural Wabageshik Lake level for the most of the time in any given year except during drought conditions when lake levels will not reach their natural lowest possible level due to presence of the dam. Again, only when the flow in the river is very low (< 20 m³/s), the Wabageshik Rapid project will maintain the lake level and prevent lake level from further depletion. By maintaining the lake level only in the very low flow conditions will not have effects on the Vale Generating station tail water level.

The total volume of water in and out of the headpond of Wabageshik Rapids project will be the same in any given day. Given that Domtar has a significant headpond storage and contribution of the Vermillion river is less than 40 percent, the peaking operation of Wabageshik Rapids project will not have negative effects on the Domtar power generation. Moreover, Xeneca has committed to limit the daily fluctuation to +/- 5 cm in the Domtar headpond area. The hydraulic effects of Wabageshik Rapids project operation is much less than what is happening in the river system in the current existing condition. In fact when we closely looked at the hourly water level downstream of Graveyard Rapid, it is apparent that Wabageshik project operation will help to reduce the headpond fluctuation in the Domtar headpond by providing more flow in the daytime.

Regarding to effluent dilution, in extreme drought conditions Xeneca will work with MOE and, if needed, the generating station will be operated in a run-of-river operating mode to pass any water to Domtar. As MOE has indicated, this case arises only when total flow from the Spanish River and Vermillion River is less than 17 m³/s. If the flow from the Spanish River is more than 17 m³/s, this will not be a concern.

Xeneca has committed to upstream fluctuations of not more than +/- 5 centimeters. Xeneca has also committed not to exceed +/- 5 centimeters downstream of Graveyard Rapids (approximately 3 km downstream). Xeneca has committed not to exceed +/- 15 centimeters in the section of river 300 meters to 3 km downstream. We have also demonstrated that these changes in water levels do not significantly impact wetted perimeter and other important ecological parameters. Xeneca has proposed special flow restrictions during spawning (i.e. ROR) to protect ecological functioning of the spawning bed located immediately downstream (0 to 300 meters).

Xeneca hopes that MOE will recognize that Xeneca has gone to great length to ensure that concerns that could arise due to daily operation have been fully examined and addressed. We would welcome any opportunity to further elaborate on the mitigation measures discussed above.

Transmission lines below 115kV are not part of the OWA Class EA process but for purposes of transparency Xeneca has included info on TL in PICs and in this Class EA. Roads will be included in the final Class EA

Xeneca is not preceding with the Upper Vermillion projects at this time.

Waste:

The draft ER indicates that construction waste will be removed from the site to an approved disposal location. Waste disposal during the operational stage of the Project does not appear to have been addressed.

The final ER should include information indicating which approved waste disposal site(s) have been identified to receive waste during the construction and operational phases of the Project. Confirmation of willingness of the operator to accept the waste should also be provided. On receipt of this information, MOE staff will be able to confirm whether the identified sites have sufficient remaining approved capacity, and are otherwise able to accept waste from this Project.

Xeneca's Response:

The site will be registered and any required disposal of materials will be in accordance with Reg 347.

Operational issues such as waste disposal is planned to be addressed when approval is reached and a contractor is selected for the work. Regulatory requirements and location of acceptable waste site is part of the contract between Xeneca and the general contractor. Waste disposal from Hydro Power plants is usually minimal and clean in nature with primary sources from equipment crating and packaging and some scrap materials including some copper wire, scrap sheet steel, steel pipe cut offs and wooden hording for concrete form work and temporary bracing, etc. These will be collected and made available for recycling.

Required Permits/Approvals:

Further detail should be provided in the final ER regarding specific activities during construction and operation that will require permits and approvals, with permits/approvals required during construction and operation identified separately. This will assist in ensuring that the public, Aboriginal communities, and other interested parties have a clear understanding of the linkages between the Class EA process, and further regulatory permits and approvals required to implement the project. Please note that "Certificates of Approval" are now referred to as "Environmental Compliance Approvals".

Xeneca's Response:

Agree. This is helpful and will be incorporated into the final EA.

Additional Technical Comments:

Please refer to additional detailed comments in the attached Table 2.

Conclusions:

Proponents are responsible for ensuring that their projects meet any applicable policies, procedures or guidance material, and to ensure that proponents adhere to all applicable federal and provincial legislation, including obligations under the Class EA. The draft ER submitted for the Project on August 10, 2012 does not effectively report on meeting these key principles of the Class EA process: consultation with potentially affected and other interested persons; consideration of all aspects of the environment; systematic evaluation of net environmental effects; and provision of clear and complete documentation. MOE NR staff is available to meet with you to discuss these outstanding concerns. This concludes our comments at this time. If you have further questions or need clarification regarding the above issues, please contact Paula Allen by email at paula.allen@ontario.ca or by telephone at 705-564-3273.

Sincerely,
John Taylor
Director, Northern Region

2. Xeneca's Response to MOE Letter Table 1 - Mandatory Requirements for the Environmental Report

Issues and Concerns		Xeneca's Response	Agency Comment
*Specify issue in request		* specify response- either from EA report, separate consultation material, etc.	
1.	4.4.1 Environmental Report in accordance with Section 4.4.1 of the Waterpower Class EA, the ER must contain:		
2.	The Executive Summary and Section 3 provide a description of the proposed undertaking, and include information on: • Design Options and Rationale • Generating Station Components • Ancillary Works • Construction Strategy • Operation Strategy In addition, Section 12 includes a brief statement of the purpose of the undertaking: "... construction of a 3.4 MW hydroelectric generating station ... to meet government and energy objectives to generate sustainable and reliable hydroelectric power." A map of the project location (Fig. 1) is provided on page 2. The study area is not shown on this map, and has not been identified elsewhere in the main body of the report. Although Annex III identifies a Study Area for the Natural Environment component of the report, a map depicting the study area for the entire ER has not been included in any of the appendices or annexes. The study area should encompass all of the identified zone of influence, including all areas on land that would be impacted due to things such as project component footprints, new or expanded road corridors (both temporary and permanent access), borrow and lay down areas, and stockpiling areas.		
3.	Map of project location and study area	Maps of the study area were shown at the PIC. It will be included in the final EA.	
4.	Description of the study area and the existing environmental context	Regarding the Study Area shown in Annex III, NRSI's terrestrial field studies were focused on the dam site and the inundation area, which are generally the areas of greatest potential impact. Because Wabageshik Rapids is a lake-coupled development and ecological impacts within and around the lake are not anticipated, studies were focused on the area along Wabageshik Rapids where the dam is to be located and new inundation will occur. Aquatic field studies encompassed the length of Wabageshik Rapids and the downstream section to the confluence with the Spanish River. Page 19: The EA is assuming that Blanding's Turtles are present in the river downstream of the	

	burrow pits, fill areas) were assessed during the Stage 2 Assessment, as recommended in the Stage 1 report. Section 1.4.2 of the main report (p. 6) explains that literature reviews, field investigations, and aerial photography were used. Section 2 provides a description of the existing environment within 120 metres of the shoreline, extending from 600 metres upstream of the proposed dam to the outlet of Wabageshik Lake and including the lake itself, and extending downstream 5 km from Wabageshik Rapids to the junction of the Vermillion and Spanish Rivers. Several sections of the report refer to the need to complete additional studies/investigations. Examples include: Executive Summary under "Further Investigations"; p. 19, recommending further studies on potential Blandings' turtle habitat; p. 22, recommending further work to assess potential significant wildlife habitats for several species, as listed; and Table 5, identifying the need for field investigations to ensure roads and transmission line routes avoid sensitive areas. These studies should be completed during the Class EA process, and results should be included in the final ER, along with the identification of any related potential impacts and appropriate mitigation measures. This would allow interested parties to review the work that has been completed and provide input to potential effects and proposed mitigation measures, as required by the Class EA process. Included in Tables 5 and 6 of the ER and in Appendix B. There are several situations in the tables where additional research, consultation or discussions are required to fully identify potential effects and propose mitigation (examples include: finalizing operating parameters including flows and levels, completing additional field investigations for specific wildlife habitat concerns, identifying habitat mitigation and compensation measures, completing additional archaeological assessments, identifying discharge point in receiving watercourse to minimize scour, consultation with MNR/local boaters to determine periods of use and minimum low flow and water level requirements to maintain downstream access, consultation with cottage owners regarding potential impacts to water supply, consultation with railway company regarding access road crossing of railway). As a result, the determination of whether there are residual effects is premature. The Class EA recommends that proponents apply the potential effects identification matrix separately for construction related effects and operational effects. Tables 5 and 6 and Appendix B should be revised to separate construction and operational effects. This will assist interested parties in reviewing the ER and will also assist with regulatory approvals and required monitoring.	dam, and impacts are being assessed accordingly. For the permit application review process under the <i>Endangered Species Act</i>, additional studies will be required to confirm the presence of Blandings' Turtles before MNR can issue an authorization. Page 22: The EA is assuming that these Significant Wildlife Habitats are present and impacts are being assessed accordingly. Further studies on these Significant Wildlife Habitats are not recommended for the EA. Table 5: Field investigations will occur for the transmission corridor under a process separate from the Class EA. The Stage 2 Archaeology report will be finalized for the final ER to have all the study area maps and pictures included.	
5.	A completed potential effects identification matrix	Our effects and mitigation tables are complete; any reference to on-going future work are intended as part of a long-term monitoring program where, for example, periods when we operate as RoR might be reduced based on the outcome of the new studies. These are not intrinsic baseline studies being considered; they are meant to support and inform a possible lessening of operating restrictions going forward. Please see also answer to item 2 (in major table), Verification. Studies will be done in the future. The baseline studies have been done. The effects and mitigation tables are complete. Most EAs do provide for Effects Verification and Mitigation Reviews in post operational periods e.g. DFO always requires that the performance of habitat compensation plans be verified after early operation phase but in no sense does this constitute an incomplete baseline assessment or incomplete EA. An updated post-construction monitoring plan is supplied in the final EA. Any long term monitoring issues will be identified and monitoring program put in place to verify that effects/mitigation measures are effective. Details are given in the final section of the EA.	

6.	A description of potential effects	Section 5.1 (pages 85 - 115) provides a list of identified potential effects. The assessment of potential effects should be described as outlined in Section 4.3.1 of the OWA Class EA. The proponent should provide information that summarizes: • The potential negative effect; • The relative level of the effect; • The mitigation or impact management measures that will be used; • Any individual net effects (after mitigation) and their significance; • The overall positive neutral and negative effects of the project. As noted above, in Table 5, there are examples where additional investigation or research and consultation is required to confirm potential effects and/or propose or finalize mitigation measures. In these situations, identification and assessment of residual effects cannot be completed until this work has been done. Additional consultation is required to ensure that all potential effects have been identified. Based on information provided in Appendix E, draft ER contains no issues/concerns identified by Aboriginal communities. In addition, the ER states that Aboriginal community engagement will not formally begin until after the issuance of the Notice of Completion. The July 2012 Aboriginal Consultation Plan indicates that Aboriginal Information Centres, field visits, and community meetings will be scheduled after submission of the ER.	See response above.	
7.	The results of the analysis, evaluation, and assessment conducted for the subject effects, concerns or issues	Table 5 lists the identified issues and summarizes the management strategies for each issue.		
8.	Information on public and agency consultation including: - a description of the public and agency consultation program and consultation activities/events - a list of agencies contacted, summary of how they have been or have been attempted to be addressed	See above comments. Pages 7 -10 and Sections 4.3 and 4.4 provide a list of agencies, communities, and organizations contacted. Section 4 provides a summary of the stakeholder consultation that occurred: • As indicated in Sections 4.2 and 4.4, public consultation included Public Information Centres, correspondence, newspaper notices and advertisements, PIC invitations, telephone exchanges, stakeholder meeting(s), and a project website. Appendix D provides a record of the public consultation activities that took place. • Government agency consultation included circulation of notices, a project description, correspondence, and in-person and/or teleconference meetings. Section 4.3 summarizes the consultation events that occurred with specific federal, provincial, and municipal stakeholders. Appendix C contains a record of the consultation that took	Due to the confidential nature of some correspondence between Xeneca and our stakeholders, we will consider each request for correspondence documents on a case-by-case basis. Some information is absolutely confidential, e.g. B2B negotiations.	

		place. We note that some public correspondence has been withheld and not included in the draft ER. The draft ER indicates that specific public correspondence documents not included in the report must be requested from the proponent. In order to fulfill the open and transparent nature of the Class EA process, all public consultation documentation should be included within the ER and made available for review by interested parties.		
9.	Information on Aboriginal community & public and agency consultation, including: - a description of the public and agency consultation program and consultation activities/ events a list of agencies/communities contacted - a summary of public and agency concerns or issues - how concerns or issues have been or have attempted to be addressed	As indicated in Section 4.5, Aboriginal community engagement conducted to date includes correspondence, telephone conversations, community meetings, and agreement negotiations. The summary of activities and discussions included in the draft ER, together with the Aboriginal Consultation Plan (July, 2012) included in Appendix E, suggests that consultations likely not yet complete. See above comments. The log and other information provided in Appendix E suggests that Aboriginal community comments on this project have not yet been incorporated into the draft ER, further suggesting that consultation with Aboriginal communities has not yet been completed. The information presented in the draft ER is not sufficient for MOE to determine whether adequate consultation has occurred. We note that there is Aboriginal correspondence information that has been withheld and not included in the draft ER. Instead, this information must be requested from the proponent. In order to fulfill the open and transparent nature of the Class EA process, all Aboriginal consultation documentation should be included within the ER and made available for review by interested parties.	All Aboriginal consultation documentation would be included within the final ER	
10.	Changes to the original proposal, if any, resulting from the environmental evaluation and/or consultation and engagement processes	The differences between the proposal as presented at the initial PIC on March 22, 2011, and the final proposal as presented in the ER documentation should be clearly set out in the ER.	Acknowledged	
11.	Description of the net effect(s) (after mitigation), if any, including an identification of the significance of the net effect(s)	Table 5 identifies those issues with residual effects after mitigation. Section 6 describes the methodology and criteria used to assess significance of residual impacts. The results of this assessment are set out in Table 6, as described in Section 6, the criteria used to assess significance of residual effects were taken from the <i>Guide to Environmental Assessment for Electricity Projects</i>. As the Waterpower Class EA applies to this project, criteria set out in the Class EA should be used. Table 6 relies on information provided in Table 5. As noted above, Table 5 includes examples where additional investigation or	Our effects and mitigation tables are complete, any reference to on-going future work are intended as part of a long-term monitoring program where, for example, periods when we operate as RoR might be reduced based on the outcome of the new studies. These are not intrinsic baseline studies being considered, they are meant to support and inform a possible lessening of operating restrictions going forward Please see also answer to item 2 above, Verification Studies will be done in the future. The baseline studies have been done. The effects and mitigation tables are complete. Most EAs do provide for Effects Verification and Mitigation Reviews in post operational periods e.g. DFO always	

		research and further consultation are required to confirm potential effects and/or propose or finalize mitigation measures. In these situations it's premature to identify and assess residual effects prior to this work being completed. Within Table 6, some irreversible impacts with continuous duration affecting resources of high value are nevertheless assessed as "not Significant", where this occurs, justification should be provided.	requires that the performance of habitat compensation plans be verified after early operation phase but in no sense does this constitute an incomplete baseline assessment or incomplete EA. An updated post-construction monitoring plan is supplied in the final EA. Any long term monitoring issues will be identified and monitoring program put in place to verify that effects/mitigation measures are effective. Details are given in the final section of the EA.	
12.	Planned avoidance/prevention/ mitigation and/or impact management measures for any potential negative effects	Table 5 summarizes planned mitigation measures. As noted above, the table includes examples where further investigation and consultation is needed to fully identify potential effects and/or propose or finalize mitigation measures. The summary of planned avoidance/prevention/mitigation measures is therefore not complete.	No additional baseline studies, post EA Verification Studies or long-term monitoring programs are contemplated, see also 11.	
13.	A review of overall advantages and disadvantages of the project, including a discussion of any benefits that might offset disadvantages	Advantages and disadvantages are discussed in Sections 5 and 6, including Tables 5 and 6, as well as Appendix B. Within the Executive Summary, the section on "Potential Project Effects" also summarizes negative and positive impacts of the project. Positive Impacts outlined in this section include: • Providing a source of reliable and clean energy to the region; • Displacement of electricity sources reliant on fossil fuels and nuclear technology; • Employment opportunities within the Espanola and the City of Greater Sudbury through local sourcing of material, equipment, and services (where available); • Potential employment opportunities for area First Nations and Aboriginal Communities; and • Financial return to the provincial and federal governments through Gross Revenue Charges and federal and provincial income tax payments. Negative Impacts include: • Creation of a headpond extending 600 m upstream of the dam and coupled to Wabageshik Lake (extending a further 10 km upstream); • Fluctuations in water levels upstream; • Downstream variability in water depth, flow velocity, and wetted perimeter; and • Potential impacts to aesthetic quality and recreational values of the area. Thank you		
14.	A summary of planned	Section 8 lists proposed construction and post-construction monitoring.	In preparation, to be included in final ER.	

	construction and post construction monitoring programs, as required, including mechanisms for their implementation and reporting	Implementation mechanisms are not addressed. Further detail is required to address: • Specific parameters to be monitored; • Timing and frequency of inspections; • Timing and frequency of reporting; • Assignment of responsibility for monitoring; and • Which agencies are to receive reports on various issues. Section 8.2 on post-construction monitoring is particularly brief, identifying only monitoring related to erosion, waste management, emergency response (fires, spills), and workplace health and safety. Further detail on other post-construction monitoring requirements is needed within the ER.		
15.	Technical reports supporting the findings, as appropriate	Supporting technical reports are provided in Annexes I - VI. However, based on the MOE review of the draft ER and supporting technical reports, additional technical information is still required to support the ER.		
16.	Anticipated timelines for project implementation	Section 1.2 (Introduction to Project) includes a Project Development Schedule (Fig. 2, p. 3). Section 3.5 generally describes the timing of site preparation and construction activities, and includes Table 1, providing a tentative construction schedule by project component.		
17.	A listing of any other known required approvals and permits	Section 9 (Table 7) provides a list of known approvals, permits, and authorizations required for the project.		

3. Xeneca's Response to MOE Table 2 - Technical Comments

Issues and Concerns		Xeneca's Response	Agency Comment
*Specify issue in request		* specify response- either from EA report, separate consultation material, etc.	
INTRODUCTION			
18.	Section 1.2 p. 1 Introduction to Project Paragraph 2: "The project site falls within the Spanish River Township"	Elsewhere in the draft ER the project location is identified as within the Township of Foster. This information should be consistent throughout the report	Noted. Will revise final ER to make the information consistent throughout.
19.	Section 1.4.4, p. 7 Identify Required Mitigation, Monitoring or Additional Investigations Paragraph 3: "The proponent has made commitments related to the undertaking which may include additional data and information collection activities."	Several of the information and data collection initiatives identified are required in order to fully characterize the total Zone of Influence, identify potential impacts, and determine appropriate mitigation. This work should be completed prior to finalizing the draft ER.	Yes, the final OP and support for ZOI will be in final EA
EXISTING CONDITIONS			
20.	Section 2.1, p. 11 Location and Land Ownership in Project Area "The proposed project is to be located within the Township of Spanish River.. "	References in several other locations (e.g. p. 24, p. 36) throughout the draft ER and Annexes identify the project location as Lot 6, Concession 6, Township of Foster. The draft ER should be revised to be consistent in this regard	acknowledged
21.	Section 2.8.2, p. 14 - 16 Surface Water Quality Paragraph 4: "In the spring of 2012, water quality samples were collected downstream of the proposed facility. Additional water quality samples will be collected at the same location in the summer and fall." Paragraph 5: A detailed discussion of the 2012 baseline analytical results will be provided in addition to the summer and fall 2012 results, in a baseline year-end water quality report, anticipated in December 2012.	This information should have been provided for review as part of the draft ER. The timing of the draft ER should have been delayed to allow for the inclusion of this information.	The 2012 year-end report will be ready by December, 2012. In August the entire 2012 program had not been executed and could not be included in the draft EA.

Issues and Concerns		Xeneca's Response	Agency Comment
22.	Section 2.9.1, p. 17 Study Area and Scoping of Natural Heritage Investigations Paragraph 2: "The study area described in this section is based on the predicted zone of influence and the lands adjacent to these areas extending approximately 120 m from the shoreline." Section 2.9.2, p. 18 - 19 Terrestrial Habitat and Species Paragraph 6: "One recommendation for future studies is to complete a turtle survey focusing on potential Blanding's turtle habitat in the area, as these studies are required under authorizations for the Endangered Species Act."	The entire Zone of Influence should have been studied, including all areas on land that would be impacted due to such things as project component footprints. Yes, completed in baseline report. Potentially impacted areas were studied. >>>> Comment	
23.	Section 2.9.7, p. 22 Significant Wildlife Habitats Paragraph 1: "Further work is required to assess the significance of these habitats." • Reptile hibernacula; • Denning sites for mink, otter, marten, fisher and eastern gray wolf; • Eastern milksnake habitat; • Common snapping turtle habitat.	These studies should be completed and the results included in the final ER, so that potential impacts to any identified habitat and associated mitigation measures can be adequately addressed during the Class EA process. Page 19: The EA is assuming that Blanding's Turtles are present in the river downstream of the dam, and impacts are being assessed accordingly. For the permit application review process under the <i>Endangered Species Act</i>, additional studies will be required to confirm the presence of Blanding's Turtles before MNR can issue an authorization.	
24.	Section 2.10.1, p. 23 Archaeological Sites Paragraph 3: "A Stage 2 archaeological assessment for the project site was completed in 2011." "... a Stage 3 archaeological assessment is recommended at Belmer Site prior to any proposed construction activities ..."	Stages assessing the significance of habitat for these species should be completed and included within the final ER. Page 22: The EA is assuming that these Significant Wildlife Habitats are present and impacts are being assessed accordingly. Further studies on these Significant Wildlife Habitats are not recommended for the EA. Stage 3 not needed as area is not in work island, it will be fenced to avoid entry.	
25.			

Issues and Concerns		Xeneca's Response	Agency Comment
26.	Section 2.11.4, p. 25 Recreation Use and Commercial Tourism Cottaging Paragraph 1: "Seasonal residences/cottages are located in proximity to the project site."	The final ER should include maps indicating the location of these residences/ cottages in relation to the proposed Project. Information summarizing the distance between the Zone of Influence should be provided.	Noted. Features Map will be included in final ER
27.	Section 2.11.4, p. 26 Recreation Use and Commercial Tourism Boating/Kayaking/Canoeing Paragraph 1: "Xeneca is committed to provide a portage trail around the Wabageshik generating station for easier and convenient recreational use."	Further detail, including a detailed map of the proposed portage route, should be provided within the final ER to allow stakeholders to evaluate and comment on this proposed mitigation measure.	Noted. Features Map will be included in final ER
28.	Section 3, p 38-39 description of Proposed Project Paragraph 2: " During an environmental assessment conceptual design information is presented in addition to data collected through field investigations, desktop studies, and agency consultation to ensure that stakeholders are informed about the general scope and extent of the project, particularly as it relates to understanding how the project may impact other uses of the river and the environment." Paragraph 3: "The proponent necessarily reserves the right to variances between the conceptual design presented herein and the final detailed engineering design, provided that such variances do not materially and negatively impact the environment beyond the scope of the impacts described herein."	The OWA Class EA requires that enough information be presented to the public, agencies and Aboriginal communities can understand the impacts that the project will have on their interests. This approach may not be consistent with the OWA Class EA (Section 8.8) through which the addendum provisions must be applied where a project has been planned in accordance with the Class EA, but where a proponent decides prior to or during construction that it is not feasible or desirable to implement the project in the manner described in the completed ER. Some of the possible variances listed in this section could, on evaluation, be determined to have new negative effects to the environment. Examples include: changes to the physical size/orientation of structures, changes to specifications of mechanical and electrical equipment, including physical size, number of units, and total rating, and refinement of road and transmission line routes.	Acknowledged. If, through the development of the detailed design of the project, the design or implementation plans of the project changes in such a way which has the potential to negatively impact the environment (including impacts to economic/social considerations or prior commitments to stakeholders made through the EA) Xeneca will conduct a review according to the Waterpower Class EA Addendum Provisions. If it is determined that there is the potential for material new negative effects which were undocumented in the final ER, an implementation review or Addendum will be prepared documenting the change(s) being considered in the design, a summary of the circumstances necessitating the change(s), the anticipated impact(s) and any proposed avoidance/mitigation measures.

Issues and Concerns		Xeneca's Response	Agency Comment
29.	Section 3.4.3 p 44 Access Roads "Further consultation with government agencies will be required to ensure that regional and provincial access policies and guidelines are met."	Further consultation should occur during the Class EA process, prior to finalizing the ER.	Xeneca is meeting with provincial agencies now to gain the best possible information and input for developing a preferred route. Field checks are a standard aspect of work, before the routes are finalized e.g. SAR verification.
30.	Section 3.5.5, p. 47 Excavation of Powerhouse and Tailrace Canal "Tailrace excavation at the intersection with the river will be completed within the MNR's established timing window for in-stream work."	Further detail identifying the timing window for in stream work should be included in this section.	Tailrace Instream work is typically completed in the window of late summer to mid-fall. This scheduling allows for the completion of the blasting and excavation work in a time period which is not typically subject to maximum river flows. This scheduling then allows the timely removal of the coffer dam prior to freeze up or spring freshet.
31.	Section 3.5.6, p. 48 Concrete Production "A concrete batch plant will not be required for the production of concrete for the construction of the facility, due to the proximity of local concrete suppliers."	An assessment of impacts resulting from the trucking of concrete to the site should be included in the final ER.	The primary access road to the site is the Panache Lake Road. This is classified as a primary road and was surveyed as a good road in our preliminary review. Access from this road to the site is planned as a new access road which will be designed and built for the expected traffic requirements of the build. Road grading and/or graveling post project will be carried out as necessary should seasonally softened areas of the primary road be impacted by heavy equipment travel.
32.	Section 3.5.8, p. 48 Management of Waste Materials During Construction "... construction waste (e.g. material packaging) generated during the construction process will be removed from the site to an approved disposal location."	The final ER should identify a specific waste disposal site to receive this waste, and the proponent should confirm that the operator is willing to accept this waste. Disposal of waste generated during the operational phase should be addressed in the final ER.	The specific waste management requirements and all aspects of the EA become an integral part of the contract with the general contractor selected for the work. In addition, contractor(s) considered and selected for the work will be scrutinized on the basis of capability, experience and reputation for quality, safety and environmental responsibility. Specific selection of the disposal site can be verified during the permitting period when a contractor is selected and included in the post EA requirements. In addition, until final design of the project is commissioned and completed after the Statement of Completion, an estimated volume for waste, specifics of waste materials, size and content are unknown.
33.	Section 3.5.8, p. 48 Management of Waste Materials During Construction "Industrial liquids such as will be stored in secure containment areas and disposed of in accordance with provincial and federal liquid waste disposal regulations (e.g. Environmental Protection Act O. Reg. 347, and Transportation of Dangerous Goods Act)	Although the proponent commits to disposing of any hazardous wastes as required by O. Reg. 347 under the EPA, a facility able to accept this waste has not been identified. This information should be included in the final ER.	See 32 above

Issues and Concerns		Xeneca's Response	Agency Comment
34.	Section 3.6.3, p. 56 Operating Parameters for Water Control Structures "Table 3 provides a description of the proposed operating parameters which have been determined for the facility. These parameters will be further refined following the completion of the environmental assessment, based on discussions with key regulators and stakeholders."	As the operating parameters identified will affect overall environmental impacts of the project, they should be established during the Class EA process, made available for review during consultation, and included within the final ER.	
35.	Section 4.2.5, p. 62 Public Information Centres (PICs) "...two public information centres (PICs) were held to collect information on concerns..."	PICs: March 22, 2011 October 20, 2011 July 25, 2012	
36.	Section 4.3.2, p. 68 Provincial Ontario Ministry of Natural Resources "The proponent subsequently provided MNR with a proposed multi-year telemetry program for lake sturgeon investigations to increase the data on distribution and habitat use of lake sturgeon on the Vermilion River in the vicinity of Wabageshik Rapids"	This proposal for a multi-year telemetry program was deemed unnecessary for the EA and was not implemented. Further studies may occur in collaboration with other stakeholders, but these studies would occur to inform the permit application process with the MNR under the provincial <i>Endangered Species Act</i> .	
37.	Section 4.3.2, p. 68 Provincial Ontario Ministry of Natural Resources Bulleted 1: "It was agreed that the environmental assessment of the project under the Waterpower Class EA would be expanded to incorporate the assessment of the connection line."	Lines below 115kV are not covered under the OWA Class EA; an alternative screening process will be used in 2013 with MNR	
38.	Section 4.3.2, p. 70 Provincial	NOTE: MOE's attendees were Rod Sein, MOE Surface Water Specialist – Sudbury District, and Paris Drolet, MOE Senior Environmental Officer – Sudbury District.	

Issues and Concerns		Xeneca's Response	Agency Comment
OMNR "The MOE regional hydrologist and district technical staff participated in the July 19, 2012 agency meeting."			
39. Section 4.4, p. 77 Public Consultation Last Paragraph "The Mayor of Nairn Centre attended the meeting and acknowledged recent correspondence from Nairn Centre in which opposition to the project was expressed."	Further detail should be provided in the final ER regarding specific concerns raised by the Township and how they have been addressed.	Mark Holmes spoke with Laurie Falldien of Nairn at the 2012 PIC and was able to provide information about our project and would absolutely like the opportunity to present the project to Nairn Centre Town Council. By providing a balanced perspective and accurate information your municipality will be able to make informed decisions about the project and how it will be built and operated.	
40. Section 4.4.1, p. 79 Industry 3 rd Paragraph "A meeting with Vale was held on July 19, 2012 and an agreement in principle was reached that our project would not affect the Vale facility at Lorne Falls."	Further details on how this will be achieved, together with documentation confirming concurrence of Vale should be included in the final ER.	Xeneca is working toward an MOU with Vale and has committed to avoid impacts and if any impacts do occur Xeneca will compensate Vale for any losses.	
EVALUATION OF POTENTIAL PROJECT EFFECTS			
41. Section 5 Evaluation of Potential Project Effects Table 5 (p.87), Table 6 (p.119) and Appendix B	The Class EA recommends that proponents apply the potential effects identification matrix separately for construction related effects and operational effects. For the final ER, Tables 5 and 6 and Appendix B should be revised to separate construction and operational effects.	Tables 5 and 6 will be revised to clarify construction and/or operational effects the answer should be that we will separate the info into two tables or keep it as one table with part A (construction) and part B (operation). The Potential Effects Identification Matrix presented in Appendix B documents the initial effects and information gap analysis conducted in the initial stages of the EA process as presented in the original Project Description document. It is presented for the reviewers reference as a conceptual starting point for the assessment process.	
42. Table 5, p. 87 Issue: Noise from operation of electrical generator and transformer at powerhouse and electrical generation.	A noise screening should be included in the final ER to identify any sensitive receptors within 1000 metres.	A Noise screening report would be included in the final ER	

43.	Issues and Concerns	Xeneca's Response	Agency Comment
Table 5, p. 89 Issue: methyl mercury due to inundation	This section of the table concludes that there is no residual impact due to the potential for methyl mercury. We suggest that this evaluation should be reconsidered. We concur that the risk is low; however it is a risk that should be recognized. Refer to the text of our letter for a more detailed discussion of this issue.	The proposed project does not pose a significant risk with respect to Methyl Mercury release. The proposed area of new inundation is of limited depth (ranging from about 1 to 5 meters) and extent (less than 11 hectares). Trees that exist in the new inundation area will be removed prior to construction to limit the available biomass that could contribute to Methyl Mercury release. A long term monitoring program has been put into place to track Methyl Mercury concentrations in water and fish tissue before construction and during long term operation of the proposed project. Inundation related to waterpower projects can be contributing factor to Methyl Mercury release where the following conditions exist: - Organic Matter: The formation of Methyl Mercury requires the presence of organic material and Mercury. - Anaerobic Conditions: Methyl Mercury forms in the absence of oxygen as a result of an anaerobic reaction between decaying organic matter and Mercury. To minimize the risk of organic matter in newly inundated areas, it has become industry practice to remove trees prior to inundation. The occurrence of anaerobic conditions is directly related to water depth and circulation of oxygen in the water body. Anaerobic conditions typically occur where water depths and circulation patterns are such that insufficient dissolved oxygen reaches the affected area. This risk can be minimized by limiting the inundation depth and optimizing circulation patterns through engineering design. Where Methyl Mercury formation does occur, it typically rises rapidly in the first few years of inundation and then gradually declines back to background levels over time. Due to the gradual bio-accumulation in fish tissue, the effect on fish tissue is typically delayed and can persist longer than the effect on water quality. With respect to the proposed project, the area of new inundation is very small and not deemed large enough to have any appreciable effect on Methyl Mercury formation. In comparison, the scientific studies where Methyl Mercury has been extensively studied in Quebec involved thousands of hectares of inundation, no tree removal and relatively stagnant waters. The proposed project has been designed to have minimal inundation depth – varying from about 1 m to 5 meters at the weir crest. These depths are typically not sufficient to cause lack of circulation of dissolved oxygen and the formation of anaerobic conditions. Oxygen stratification has been observed in reservoirs that are in excess of 10 meters deep and where the design does not provide for deep water circulation. The proposed inundation depth for this project is not considered sufficient to pose a significant risk for Methyl Mercury formation. In addition to mitigation of Methyl Mercury risk through project design, Xeneca proposes to remove the trees prior to inundation to minimize possible bio-mass sources. As confirmation of the effectiveness of the mitigation effort, Xeneca has proposed long term monitoring for water quality and fish tissue. The details of the monitoring plan have been	

Issues and Concerns		Xeneca's Response	Agency Comment
		worked out with the Ontario Ministry of the Environment (MOE). Monitoring data will be submitted to MOE throughout the duration of the monitoring time frame. A copy of the monitoring plan is available as part of the environmental assessment information for the project.	
44.	Section 5.1.1, p. 105 Inundation 5th bullet "Under provincial water management planning legislation, the facility would be required to operate and maintain an established lake level compliance range as developed in consultation with the regulators and then finalized in the facility's Operating Plan. Xeneca is committed to meeting with the regulators over the next month to negotiate these compliance levels and finalize the operating plan."	Key operating parameters and compliance levels should be finalized through discussions with agencies and then included in further consultation with the public, Aboriginal communities and other interested parties prior to inclusion within the final ER. Agree work underway	
45.	Section 5.1.3, p. 106 Aquatic Habitat (Ecological Flow, Water Level Requirements) Paragraph 2: "The creation of the head pond will result in the alteration of 14,800 m of Lake Sturgeon and Walleye spawning habitat upstream of the facility below Wabageshik Lake. Compensatory habitat will be created downstream of the facility on the Vermilion or Spanish Rivers to mitigate for this loss	It is planned to develop a compensation strategy following the EA. The project team would like to understand whether the EA can be structured in a manner that makes this approach acceptable. For instance, would it be suitable to indicate that the loss of fish habitat is a significant impact, and commit to developing a compensation strategy to offset this significant impact?	
46.	Section 5.1.3, p. 107	Maximum daily fluctuations in upstream water levels The limits on maximum fluctuations have already been discussed with agencies. Aboriginal	

Issues and Concerns		Xeneca's Response	Agency Comment
Aquatic Habitat (Ecological Flow, Water Level Requirements) Mitigation for Impacts Associated with Operation: Paragraph 1: "To reduce the potential for negative habitat impact upstream during modified run-of-river operation, the maximum daily fluctuations of upstream water levels will be limited" Item 2: "The current draft Operating Plan outlines a commitment to operational restrictions for key species	and other operating parameters addressed in this section should be finalized through further discussion with the agencies and then included in further consultations with the public, Aboriginal communities and other interested parties prior to inclusion within the final ER. These operational restrictions addressing the needs of key species should be finalized through further discussion with the agencies, and then included in further consultations prior to inclusion within the final ER.	communities and the public e.g. in our last PIC and agency meetings. No further PICs are planned unless project parameters and effect change substantively from what has been presented to the public. Xeneca believe the ZOI has been defined and will confirm this in meetings being set up Nov 2012.	
Section 5.1.5, p. 108 Deer Crossing Paragraph 1: "However, these potential impacts will be limited to the construction of the facility and so are judged to be temporary"	Impacts on the deer crossing resulting from operation of the facility, and in particular due to the variability and magnitude of proposed flow variations should be considered and included in the final ER.	With respect to deer migration, Xeneca moved the dam from its original location to a new location (0.3 km upstream) to ensure that the main deer crossing location would be maintained. The wildlife camera studies show that deer crossings occur primarily at the start and end of winter (i.e. to and from the overwintering areas) and at various times of the day. Hydraulic modeling has been carried out to better understand the water depths at the main crossing location under various flow and operating conditions. The proposed daily operation will cause water levels to fall below normal levels for 16 hours per day and then rise above normal levels for 8 hours during the day (typically from 11 am to 7pm). It is expected that the deer will use the opportunity of the lower water levels (i.e. during the 16 hours per day of below normal low flow) to facilitate crossing. In this way, the operation is expected to facilitate the deer crossing activity and off-set the loss of the two lesser crossing locations located a few hundred meters upstream. Xeneca is committed to continue the current deer crossing monitoring for 2 years past start-up to confirm deer crossing success. Observations have shown that the deer crossings occur primarily from 8 am to 3 pm. Under typical operation, water levels would be lower than normal from 8 am to 11 am, but higher than normal from 11 am to 3 pm. Wildlife camera monitoring will be continued after construction to observe if deer utilize the lower water levels from 8 am to 11 am or not. Depending on the results, Xeneca will review the operating plan with MNR. At certain flow rates, the option exists to delay the daily onset of high flows, without negative economic impact on plant operations. Similarly, flow can be increased to rates similar to natural rates at 11 am before further increasing flow rates later in the afternoon. In summary, sufficient operational flexibility exists to adequately mitigate deer crossing impacts between 8 am and 3 pm depending on the outcome of the post-operational monitoring and deer behaviour.	

Issues and Concerns		Xeneca's Response	Agency Comment
48.	Section 5.1.7, p. 108 Navigation Paragraph 1: "The river is not used for commercial navigation but is used for recreational purposes The proposed facility will require the establishment of one or more portages to circumvent the demand ancillary operations." Paragraph 2: "Special arrangements will be required during construction to ensure public safety for recreationalists."	Specific details of this planned mitigation measure, such as proposed portages, entry and exit points, and proposed route, should be identified and included in further consultation with recreational users of the waterway prior to inclusion in the final ER. Details of these special arrangements should be available to recreationalists for input, and included in the final ER. Portage routes will be identified in the final EA, if any, and kept usable, as required. Moreover, safety related information on construction activities, road closures, detour routes or other safety issues will be distributed to recreational user groups before and during construction.	
49.	Section 5.1.8, p. 109 Public Health, Construction and Safety Paragraph 1: "Signage at railway crossings and known recreational access point will be established to warn users of seasonal dangers due to operations."	Further details regarding consultation with and specific requirements of the railway should be included in the final ER. There is no railway in proximity to Wabageshik Rapids. Signage warning of plant operations will be posted in vicinity to the projects to advise recreational users. Signage locations will be included in the final ER.	
50.	Section 5.1.10, p. 111 Surface Water Quality	See response in Row 43 above.	
51.	Section 5.1.11, p. 111 Area Aesthetics Paragraph 2: "Seasonal residences are also located in proximity to the project site."	This section contains no discussion of methyl mercury. This is a significant residual effect that should be identified. A map showing the location of number of seasonal residences, proximity to the various elements of the Project should be included in the final ER, and referenced in this and other sections of the report.	A downstream features map including location of seasonal residences will be included in the final ER.
52.	Section 5.1.12, p. 111 Employment & Economic Effects Paragraph 2: "Economic benefits will include employment during construction, expenditures on	This general claim should be replaced within the final ER with more detailed information based on the results of a quantitative financial analysis evaluating potential benefits to the local economy from factors such as supplies and services which are likely to be sourced locally. Care should be taken not to overstate Qualitative and quantitative economic information comes from qualified, professional assessment and released through industry advocacy associations i.e. Ontario Waterpower Association (OWA) and Canadian Hydropower Association (CHA) and as such are deemed to be accurate in terms of over spending locally and regionally.	

Issues and Concerns		Xeneca's Response	Agency Comment
	materials, equipment and services ...	the likely economic benefits, recognizing that if professional services such as consulting and legal services are sourced centrally for all Xeneca projects, there are unlikely to be local benefits from these aspects of the project.	
53.	Paragraph 2: "The Ministry of the Environment's Guide to Environmental Assessment Requirements for Electricity Projects (March 2001) provides criteria for assessing significance."	As this project is being assessed under the Ontario Waterpower Association Class EA, the criteria provided in that document should be used throughout this section and Table 6. This reference should also be corrected.	Agreed. Reference will be corrected for final ER.
54.	Section 6, p. 119 Table 6: Residual Effects and Significance	The completion of this table is premature until data collection and assessment is complete for all potential effects.	Our effects and mitigation tables are complete; any reference to on-going future work are intended as part of a long-term monitoring program where, for example, periods when we operate as RoR might be reduced based on the outcome of the new studies. These are not intrinsic baseline studies being considered; they are meant to support and inform a possible lessening of operating restrictions going forward.
55.	Section 7 p. 129 - 132 Cumulative Effects	No analysis of the cumulative impacts of the Project in combination with the existing Domtar and Vale generating stations has been completed. Analysis of the cumulative impacts of these three facilities in combination with the three additional proposed Xeneca projects upstream of Wabageshik Rapids has also not been completed. This analysis should be completed and included in the final ER. The analysis of cumulative impacts should also include consideration of impacts related to road and transmission line corridors, once detailed field investigations have been done, and route selection has been finalized.	Extensive technical studies over the past 3 years have shown that the ecosystem in this area is no more sensitive than any typical waterpower development site in the province. The ecosystem may have been impacted by existing hydroelectric facilities and pulp and paper effluent discharge, but there is no evidence to suggest that the addition of the proposed project would, in any way, adversely affect existing conditions or cause an important environmental limit to be exceeded. Xeneca is aware that daily operation could affect upstream and downstream waterpower facilities on the river. Xeneca has exchanged data with the upstream and downstream facilities to study this potential concern. A hydraulic modeling study was carried out and shared with the upstream and downstream users. Their comments were solicited and incorporated into the proposed Operating Plan for the facility. The proposed Operating Plan, as provided to MOE will ensure that there is not a significant effect on the upstream and downstream facilities. Xeneca has stated in the operation plan that the operation of Wabageshik Rapids project will follow the natural Wabageshik Lake level for the most of the time in any given year except during drought conditions when lake levels will not reach their natural lowest possible level due to presence of the dam. Again, only when the flow in the river is very low (< 20 m3/s), the Wabageshik Rapids project will maintain the lake level and prevent lake level from further depletion. By maintaining the lake level only in the very low flow conditions will not have effects on the Vale Generating station tail water level. The total volume of water in and out of the headpond of Wabageshik Rapids project will be the same in any given day. Given that Domtar has a significant headpond storage and contribution of the Vermillion river is less than 40 percent, the peaking operation of Wabageshik Rapids project will not have negative effects on the Domtar power

Issues and Concerns	Xeneca's Response	Agency Comment
	generation. Moreover, Xeneca has committed to limit the daily fluctuation to +/- 5 cm in the Dornar headpond area. The hydraulic effects of Wabageshik Rapids project operation is much less than what is happening in the river system in the current existing condition. In fact when we closely looked at the hourly water level downstream of Graveyard Rapid, it is apparent that Wabageshik project operation will help to reduce the headpond fluctuation in the Dornar headpond by providing more flow in the daytime. Regarding to effluent dilution, in extreme drought conditions Xeneca will work with MOE and, if needed, the generating station will be operated in a run-of-river operating mode to pass any water to Dornar. As MOE has indicated, this case arises only when total flow from the Spanish River and Vermillion River is less than 17 m3/s. If the flow from the Spanish River is more than 17 m3/s, this will not be a concern. Xeneca has committed to upstream fluctuations of not more than +/- 5 centimeters. Xeneca has also committed not to exceed +/- 5 centimeters downstream of Graveyard Rapids (approximately 3 km downstream). Xeneca has committed not to exceed +/- 15 centimeters in the section of river 300 meters to 3 km downstream. We have also demonstrated that these changes in water levels do not significantly impact wetted perimeter and other important ecological parameters. Xeneca has proposed special flow restrictions during spawning (i.e. ROR) to protect ecological functioning of the spawning bed located immediately downstream (0 to 300 meters). Xeneca hopes that MOE will recognize that Xeneca has gone to great length to ensure that concerns that could arise due to daily operation have been fully examined and addressed. We would welcome any opportunity to further elaborate on the mitigation measures discussed above. Transmission lines below 115kV are not part of the OWA Class EA process but for purposes of transparency Xeneca has included info on TL in PICs and in this Class EA. Roads will be included in the final Class EA. Xeneca is not preceding with the Upper Vermilion projects at this time.	

Danielle Dempsey

From: Karen Fortin
Sent: December-18-12 8:39 AM
To: Muriel Kim
Subject: FW: Archaeological Stage 3

From: Uwe Roeper [mailto:URoeper@ortech.ca]
Sent: December-18-12 8:27 AM
To: Allen, Paula (ENE)
Cc: sandra.dosser@ontario.ca; 'Mark Holmes'
Subject: Archaeological Stage 3

Hi Paula:

I just want you to know that I was taken aback by your comment yesterday that a Stage 3 archaeological assessment has to be completed before a Waterpower Class EA can be deemed complete. The statement seems to differ from a meeting discussion that we had just a few months ago on this topic. Kindly follow up on this matter internally and clarify if this is indeed the government's new position.

My view is that the Waterpower Class EA requires a Stage 1 archaeological assessment under the relevant Act. If the Stage 1 assessment identifies heritage potential, then the remaining requirements of the Act are automatically triggered and further work needs to be done. A Stage 2 assessment determines if artifacts exist and the general area in which they are located. Stage 3 defines the extent (i.e. density of artifacts and general areal extent). Stage 4 involves detailed documentation and removal of such artifacts. As an alternative, a project proponent can commit to avoid the location. The Act also provides for First Nation participation in the process.

Xeneca has previously outlined that where a Stage 1 shows potential for heritage potential, that it recognizes that the Act has been triggered and that it will complete the process required under the Act. To this end, Xeneca has carried out Stage 2 assessments to determine if artifacts exist and the area where they are located. Where the archaeologist finds artifacts, we review the location with the archaeologist and determine if we can avoid/exclude the area from the project construction or it conflicts with the project. Where the area can be avoided, we commit to do so and if necessary conduct a Stage 3 assessment to delineate the extent (and then stop). Where it is decided that we cannot avoid the area, we commit to a Stage 3 assessment and a Stage 4 removal of the artifacts, as is contemplated under the Act. It should be noted that the requirements of the Act apply for any construction activity, whether it relates to an EA or not, and hence is independent in its authority and independent of the EA process.

I do not believe that there is any disagreement about the fact that a Stage 1, 2, 3 or 4 archaeological assessment may be required for certain projects. I believe that we may disagree on what Stages are required to deem a Waterpower Class EA process complete. It is my interpretation that the Waterpower Class EA only speaks to the triggering of the Act (Stage 1), with the implied understanding that once an Act has been triggered, any regulatory requirements thereunder automatically apply. However, the Waterpower Class EA does not set out that Stage 1, 2, 3 and 4 have to be completed before it can be deemed complete. All that appears to be required to meet the intent of the Waterpower Class EA is a recognition by the proponent that the Act has been triggered and the proponent commits to following the regulatory requirements thereunder if the project proceeds. In my interpretation, only Stage 1 is part of the Waterpower Class EA; the remainder is a separate regulatory requirement (i.e. separate and independent from the EA).

I believe that there are many analogous circumstances to the above. For example, where a Waterpower Class EA determines that the project will involve the "taking of water" then it becomes clear that a Permit to Take Water (PTTW) will be required under the relevant Act. However, the requirements related to the PTTW are separate from the Waterpower Class EA. Indeed the draft PTTW guidance documentation is very clear about this, as it states that a PTTW

cannot be applied for until EA process has been completed. The same concept holds true for many aspects of LRIA, PLA and other relevant Acts.

As I pointed out on the call, if MOE decides that it will not deem the EAs for projects complete until a Stage 3 assessment has been completed, then several of the projects will be delayed yet another year (now year 4 of the Waterpower Class EA process). This in turn will trigger Xeneca to default under its FIT contract obligations and the need for a Force Majeur claim process. Given these severe consequences, I believe it is very important that MOE clarify its position on this matter and confirm that it is absolutely sure that a Stage 3 assessment is required before a Waterpower Class EA can be deemed complete. It would also be good to know if MOE has applied this requirement to other waterpower EAs in the past. Any assistance that you can give us to seek this clarification would be greatly appreciated.

Sorry for the long e-mail, but I thought it would be better to take this issue off-line rather than side-track yesterday's call. I look forward to hear from you on this.

Best regards,
Uwe.

PS: (Incidentally, it may help to know that Xeneca plans to avoid the artifact areas at Wabageshik and Wanatango projects that were mentioned on the call yesterday).

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Danielle Dempsey

From: Kai Markvorsen
Sent: February-12-13 2:03 PM
To: Caitlin Kenny
Cc: Muriel Kim; Heather Wolczanski
Subject: FW: MOE Clarification on Stage 3 Archaeological for Waterpower EA

FYI and for filing

Kai Markvorsen - Environmental Consultant - (613) 839-1453 x248

From: Uwe Roeper [mailto:URoeper@ortech.ca]
Sent: February-12-13 1:58 PM
To: Allen, Paula (ENE)
Cc: Kirzati, Katherine (MTCS); Kulpa, Paula (MTCS); Kwan, Helen L. (ENERGY); Sugar, Alissa (ENE); Harrison2, Michael (ENE); Brownlee, Laurie (ENE); Cramm, Ellen (ENE); Hutchison, Carrie (ENE); White, Rosanna (ENE); Mitchell, Vicki (ENE); Armstrong, Bill (ENE); Dosser, Sandra (MNR); luke@woodlandheritage.com; Arnold Chan; Greenaway, Christine (MNR); Mark Holmes; Ciara DeJong; Tami Sugarman; Grace Yu; Vanesa Enskaitis; Paul Norris; Stephanie Hodsoll; Ed Laratta; Leah Deveau; Scott Manser; Kai Markvorsen
Subject: MOE Clarification on Stage 3 Archaeological for Waterpower EA

Hi Paula:

Thank you for the detailed clarification requested by Xeneca at our November 16th meeting with you. The information provided and your interpretation thereof seems clear. I will share the information with our team and review it in more detail. We will let you know if we have any further questions.

For the information of your team, we have been working with our archaeological consultant (Woodland Heritage) on both of the project sites mentioned below. It appears that the archaeological site at Wabageshik is clearly outside of the Zone of Influence mentioned in your clarification. We will follow up with documentation from the archaeologist to this effect.

Regarding the Wanatango project, it appears that your interpretation of the EA requirements may require us to carry out further work in 2013 (year 4 of field studies). We will assess this with the archaeologist and follow up with our proposed course of action with your team.

Again, thank you for the follow up. I may not fully understand why the Waterpower industry is once again dealt with differently than Wind and Solar industries, but I none-the-less appreciate this valuable clarification. This will allow us to move forward with more certainty.

Best regards,
Uwe.

Uwe Roeper, M.Sc., P.Eng.
CEO
Xeneca Power Development Inc.
5255 Yonge St, Suite 1200
North York, M2N 6P4
Ontario, Canada

From: Allen, Paula (ENE) [<mailto:Paula.Allen@ontario.ca>]

Sent: February 12, 2013 1:17 PM

To: Uwe Roeper

Cc: Kirzati, Katherine (MTCS); Kulpa, Paula (MTCS); Kwan, Helen L. (ENERGY); Sugar, Alissa (ENE); Harrison2, Michael (ENE); Brownlee, Laurie (ENE); Cramm, Ellen (ENE); Hutchison, Carrie (ENE); White, Rosanna (ENE); Mitchell, Vicki (ENE); Armstrong, Bill (ENE); Dosser, Sandra (MNR); Greenaway, Christine (MNR)

Subject:

Hello Uwe,

To provide the clarification you are seeking, Northern Region staff, in discussions with EAB has formulated the below interpretation below related to archaeological assessment requirements under the Waterpower Class EA.

It is MOE's understanding, following discussions with the Ministry of Tourism, Culture and Sport (MTCS), that Stage 3 archaeological assessments includes both a site-specific assessment which determines the extent of the site and the need for mitigation, and recommendations on appropriate mitigation measures.

As described in Section 4.2.2 of the OWA Class EA, proponents are required to assess potential effects of their proposed projects, as well as any net effects after mitigation. Section 4.3.1 of the Class EA (Assessment of Effects) further elaborates that the proponent "confirms the potential effects of the project, determines the appropriate avoidance, prevention and/or mitigation strategies and assesses the net effects of the project." The Class EA also requires that consultation take place during the process with the public, agencies, and Aboriginal communities. The ER must contain enough information to demonstrate the potential impacts of the project and identify mitigation measures to a level that allows the public, agencies, and Aboriginal communities to understand the anticipated impacts.

We have confirmed with MTCS that it is the Stage 3 archaeological assessment that determines the extent of identified archaeological sites and recommends any necessary mitigation measures. As such, it is MOE's expectation that Stage 3 archaeological assessments (where recommended by a Stage 2 assessment) be completed during the Class EA process. This ensures that the proponent is able to include identified mitigation measures and an assessment of any net effects in the ER.

MTCS has advised that in some cases, where archaeological sites identified during the completion of a Stage 2 archaeological assessment are located outside of the defined Zone of Influence, it may be possible to mitigate potential impacts through avoidance. Where this approach is used, the location of the archaeological site relative to the defined limit of the Zone of Influence must allow for the implementation of an undisturbed buffer area of a minimum of 20 metres around the perimeter of the archaeological site, with no portion of the buffer encroaching into the Zone of Influence. In addition to the 20 metres, an area of 50 metres beyond should be recommended for monitoring by a licensed archaeologist (the monitored area may extend into the defined Zone of Influence for the project).

Where the above requirements can be achieved, proponents can choose to use the avoidance strategy instead of completing the Stage 3 assessment; however, the completion of a Stage 3 assessment would have the added benefit of removing the monitoring requirement, and may also reduce the required buffer distance to less than 20 metres. Where archaeological sites identified during the completion of a Stage 2 assessment are located within the defined Zone of Influence, the use of this avoidance strategy is not possible because the

recommended minimum buffer, as outlined above, cannot be achieved. Where you choose this avoidance strategy (Wabageshik and Wanatango), we encourage you to work with the MTCS to ensure that legislated requirements are met.

As outlined in the Class EA, all impacts of a project must be assessed as part of the Class EA process, and be presented to the public, agencies, and Aboriginal communities for review and comment. Therefore, where a Stage 2 archaeological assessment has recommended the completion of a Stage 3 assessment, it is MOE's expectation that the Stage 3 assessment or (where possible) commitments to implement the above-noted avoidance strategy, be provided during the EA process, and included within the ER.

In follow-up to our meeting on Monday, February 4, 2013, I have reviewed the ministry comments provided to Xeneca on a project by project basis and find that we have been consistent in our messaging on archaeological assessment requirements during the Waterpower Class EA process. Additionally, I have done a fairly thorough review of waterpower projects that followed the Waterpower Class EA or O. Reg. 116/01 and found that all the projects where Stage 2 assessments recommended a Stage 3 assessment, the Stage 3 assessments were completed during the EA process.

I hope this provides the clarification you were seeking. If you have any further question please give me a call.

Paula Allen

Supervisor
Air, Pesticides and Environmental Planning
Technical Support Section
Northern Region
Ministry of the Environment



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July 15, 2013

Ellen Cramm
Environmental Planner/EA Coordinator
Technical Support Section, Northern Region
Ministry of the Environment
Suite 331
435 James St S
Thunder Bay, ON P7E 6S7

Dear Ellen:

Re: Wabagishik Rapids Technical Reports – MOE Draft Comments

Thank you for MOE's comment letters on the draft Wabagishik Operating Plan and Construction Management Plan, received by Xeneca on June 28, 2013. We are currently working on responses to the concerns indicated in these letters.

Xeneca will prepare a cover letter to advise how and where the comments have been addressed. This letter will be sent to MOE along with the final Environmental Report for the proposed Wabagishik Project.

Thanks again for MOE's input to the Class EA process.

Yours truly,

Stephanie Hodsoll
Stakeholder Relations Officer
416-590-3077
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July 18, 2013

Mr. Uwe Roeper
CEO, Xeneca Power Development Inc.
5255 Yonge Street, Suite 1200
Toronto, ON
M2N 6P4

Dear Mr. Roeper:

**Re: Wabageshik Rapids Generating Station Project, Vermilion River
Proposed Construction Management Plan, Proposed Operating Plan**

Thank you for providing the Ministry of the Environment (MOE) Northern Regional Office with the opportunity to review and comment on the following reports, prepared in support of the final Environmental Report (ER) for the Wabegeshik Rapids generation Station Project:

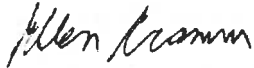
- *Wabageshik Rapids Hydro project Construction Management Plan*, March, 2013, prepared by Canadian Projects Limited.
- *Vermilion River Site # 6 – Wabageshik Rapids, Additional Peaking Scenarios – Hydraulic Modelling*, October 29, 2012, prepared by Canadian Projects Limited.
- *Proposed Operating Plan & Water Management Plan Amendment, Wabageshik Rapid Small Waterpower Project (Draft for Discussion Only)*, March, 2013, prepared by ORTECH Consulting Inc.

MOE has completed its review of the above-noted documents, and our detailed comments are provided in the attachments. Please note that these final comments replace the draft comments provided via E-mail on June 28, 2013.

We would encourage Xeneca to ensure that the attached comments are addressed through the Class EA process and in the final ER. Additionally, it is MOE's expectation that other previous comments, as set out in our comments on the draft ER and subsequent correspondence, will also be addressed during the Class EA process. We look forward to the submission of the final Environmental Report for this project.

If you have questions or require clarification regarding the attached comments, please contact me.

Yours truly,



Ellen Cramm, MCIP, RPP
Environmental Planner/EA Coordinator

encl (2)

cc: Paula Allen, MOE
Don Hamilton, MOE
Christine Greenaway, MNR, Northeast Region
Bob Robinson, MNR, Sudbury District
Kelly Eggers, DFO

Wabageshik Rapids Hydro Project Construction Management Plan (Canadian Projects Limited, March, 2013)

Section 1.4 Public Access During Construction

It is recommended that this section of the CMP be revised to provide for implementation of a complaint procedure during the construction phase, providing on-site signage with contact information should there be questions or complaints from individuals or agency personnel approaching the site during construction.

Section 1.7 Fuels, Oils and Lubricants

All subject wastes (used oils, lubricants, etc.) should be stored, handled and transported in accordance with O. Reg. 347 under the *Environmental Protection Act*. If the proponent is not approved under a Waste Management System Environmental Compliance Approval (ECA) for transporting the subject wastes, then a licensed waste hauler should be retained, and the waste disposed of at a site certified to accept the waste. The wording of this section should be revised to reflect these requirements.

The description of actions to be undertaken in the event of a spill should be include reporting any spills to the MOE's Spills Action Centre (Toll Free: 1-800-268-6060 or (416) 325-3000).

Section 1.8 Solid Waste

All solid wastes should be stored, handled and transported in accordance with O. Reg. 347 under the *Environmental Protection Act*. Prior to the start of construction, the proponent should ensure that an approved Waste Disposal Site (WDS) willing to accept all solid non-hazardous wastes generated from the project has been identified. The final ER should identify which WDS is proposed for disposal of these wastes.

Section 1.10 Dust Control

The requirement for a Permit to Take Water (PTTW) for water takings related to dust suppression should be considered in conjunction with other water takings required for the project; and noted in this section of the CMP. Total anticipated water consumption for all purposes should be considered when applying for the PTTW. In addition, please note that where water is to be drawn for the purposes of dust suppression, it must be taken from approved locations. A map and UTM coordinates for proposed locations must be provided in the PTTW application.

Section 2.1 Vegetation Clearing

This section notes that trees cut in the headpond area will have roots left intact. In addition, we recommend that efforts be made to remove as much organic material as possible from the area of inundation in order to reduce the potential effects of mercury methylation, and that this be reflected in Section 2.1. While we recognize that the risk of impacts due to flooding-induced mercury methylation is low due to the characteristics of the river channel affected by flooding (ie: primarily rock), removing woody debris from the area of inundation would further lower the risk.

Section 2.4 Rock Blasting

MOE NR comments on the draft ER (September 24, 2012) recommended that the potential for Acid Rock Drainage (ARD) be more thoroughly addressed in the final ER due to the need for blasting activities during construction. This was reiterated during proponent-agency meetings in February 2013, resulting in a commitment from Xeneca to circulate proposed procedures for addressing the issue to MOE staff for review and comment.

Additional information on the proposed approach to ARD was subsequently provided to MOE for review. This information included the revised Construction Management Plan (March, 2013) together with a 1-page summary of the proposed procedures for dealing with acid rock.

MOE technical staff have reviewed this information, and note that the Construction Management Plan (Sections 2.4 and 2.4.1) appears to outline general requirements for all Xeneca projects. In addressing ARD, they explain why ARD could be a concern, and indicate that further investigations, mitigation, and treatment will be undertaken at individual project sites to address the issue, if deemed necessary by a geotechnical engineer. It is our understanding that the Construction Management Plan is to be included in the final ER. The additional 1-page summary describes the proposed rock sampling, testing, and analysis to be undertaken to further address potential ARD concerns at individual sites, where deemed necessary. There is no indication as to whether this procedure would be undertaken for the Wabageshik project and if so, at what point in the process this would occur.

In keeping with the requirements of the Class EA, we recommend that, prior to the completion of the final ER, the proponent undertake a field reconnaissance of the proposed site to determine the risk of ARD due to the presence of sulphide minerals in the rock. MOE's expectation is that this work would be completed by a qualified professional (P.Geo. or P. Eng.) and would include the following:

- the results of an initial "desk-top" screening from known geological mapping sources;
- documentation of the field reconnaissance, including observations and conclusions;
- confirmation that the field reconnaissance included areas where it is intended that rock will be removed/used for construction purposes;
- an opinion on the risk of encountering rock with ARD potential during construction;

- recommendations regarding any subsequent rock sampling, testing and analysis that may be necessary to confirm opinions made from the field reconnaissance (based on 1-page summary provided earlier);
- if necessary, recommendations for managing any rock with medium to high ARD potential; and
- signature and stamp with professional designation.

We further recommend that the results of the field reconnaissance, including the components described above, be included in the final ER.

Section 2.5 Concrete Construction

While we recognize that Part B of the CMP, Section 1.2.3 (Concrete Batch Plant) indicates that on-site concrete production is not anticipated for the Wabageshik project due to the proximity of local suppliers, this section of the report, which applies generally to all Xeneca projects, identifies that for some projects on-site concrete production may be required. Should on-site concrete production be anticipated for other Xeneca projects, the requirement for a Permit to Take Water (PTTW) for related water takings should be considered in conjunction with other water takings required for the project, and addressed in this section of the CMP. Total anticipated water consumption for all purposes should be considered when applying for the PTTW.

In addition, where on-site concrete production is proposed, other MOE approvals may be required.

Section 3.5 Changes During Construction

Wording should be added to this section of the CMP to reflect the requirements of the Class EA, which specify that where a proponent decides prior to or during construction that it is not feasible or desirable to implement the project as described in the completed ER, the Class EA addendum provisions must be applied.

Section 4.3 Water Flow Monitoring

Water flow monitoring during construction should consider the needs of downstream users of the watercourse. The proponent should work closely with other watercourse users (ie: Domtar) to ensure that compliance/monitoring requirements for other users can be met.

Memo Report:

Vermilion River Site # 6 – Wabageshik Rapids, Additional Peaking Scenarios – Hydraulic Modelling (Canadian Projects Limited, October 29, 2012)

The additional peaking scenarios provided demonstrate that operation modifications could be implemented to meet previous commitments. To further demonstrate that the proposal is feasible, the proponent should identify specifically how they will adapt their operations to achieve these commitments.

Additional concerns surround the potential operation of the Domtar headpond influencing prior commitments and the isolation of effects.

Proposed Operating Plan & Water Management Plan Amendment Wabageshik Rapid Small Waterpower Project (Draft for Discussion Only), (ORTECH Consulting Inc., March, 2013)

Upstream Headpond Extent/Hydrologic Zone of Influence

The headpond extends into Wabageshik Lake and the potential Zone of Influence. Furthermore, the proposed Operating Plan discusses the management of water levels on the lake, suggesting alteration of natural lake levels within 10 cm of existing conditions, and therefore storage on the lake. Consideration for wind effects of 10 cm variation (as reported by the proponent) into the 10 cm estimated alteration from existing conditions has not been provided (ie: How are wind-caused seiche effects on lake levels taken into consideration when using lake stage measurements?). The proposed Operating Plan should be revised to address this concern.

Downstream Hydrologic Zone of Influence

The EA process requires that proponents confirm the potential effects of the project, determine the appropriate avoidance, prevention and/or mitigation strategies, and assess the net effects of the project. The potential effects of the proposed operation on existing users, together with mitigation and an assessment of net effects, warrants greater consideration during the EA process, and should be addressed in the revised Operating Plan as included in the final ER. Given the potential for the proposed project to have effects on Domtar's generation, all potential impacts should be identified and addressed through the EA process.

Matters considered at the permitting stage of this project will include the fair sharing of the resource and the potential for interference with other uses of the water, the need to protect the natural functions of the ecosystem, and the potential for cumulative effects, among others. One of the objectives of the Class EA is to coordinate environmental approvals and other public involvement processes required prior to project implementation. We therefore recommend that the concerns identified above be given greater consideration during the EA process. Where it is determined during permitting that these matters have not been adequately considered during the EA process, additional information and/or consultation may be required, and this may result in application of the Class EA addendum provisions.

Upstream Operation Parameters

Previously supplied hydraulic modeling supports inundation extending the entirety of Wabageshik Lake. Modelling supporting the new inundation numbers should be provided to support the table provided (Table 4).

Figure 5 is provided as a rating curve for the headpond/Wabageshik Lake, further supporting the argument that the headpond potentially extends into the lake (if the discharge/rating curve is allowed to deviate up to 5cm off the curve). Quantification of the error of the rating curve should be provided if the proponent is suggesting using the rating curve as a compliance tool. Additional flow measurements at the outflow of the lake should be used to help validate the rating curve under various flow conditions (ie: low, medium, high).

Downstream Operation Parameters

All environmental flow numbers as proposed in Table 5 – Downstream Operating Parameters should be confirmed with all agencies. Numbers provided which are below 6.5 m³/s should be identified to have the condition that additional flow must be provided to ensure water quality issues do not occur below the Domtar facility, and that under certain conditions (for example, under low dissolved oxygen), additional water will be provided.

MOE does not object to the proposed minimum flow of 5 m³/s to be maintained below Wabageshik Rapids while the facility is operated in intermittent mode, subject to the execution of an agreement between Xeneca and Domtar providing for Xeneca to switch from an intermittent mode to run-of-river operating mode when needed, to avoid the depletion of dissolved oxygen levels in the Spanish River downstream of the effluent discharge location of Domtar at Espanola, and until such time as dissolved oxygen in the river returns to acceptable levels as defined in Ontario's Provincial Water Quality Objectives (1994). This would require independently measured hourly flows leaving the facility below the confluence of the tailrace and by-pass channel at a suitable location downstream above the effects of the Domtar headpond.

The operating plan as included in the final ER should include specific commitments to the execution and implementation of the agreement between Xeneca and Domtar, as referenced above and as further described below.

Additional Operating Constraints

The following comments refer to proposed operating constraints as identified in Table 6:

- Item 2 (Daily water level fluctuation due to operation not to exceed +/- 5 cm of daily average downstream of Spanish River confluence)

Clarification as to how the +/- 5 cm will be met as a commitment, and the full intention of this commitment with respect to other operators needs to be clarified.

- Item 3 (Facility to go into run-of-river operation when drought declared by Province)

Commitments to switch to run-of-river operating mode when dissolved oxygen issues occur below Domtar have been made previously by the proponent, and should be identified within the revised Operating Plan and reflected in the final ER. Including these commitments in this section of the Operating Plan with other proposed operating constraints would assist in clarify the proponent's position in this document. Clarification as to the response to the different levels of drought as defined by the Ontario Low Water Response should be provided (ie, Level 1-3).

- Item 5 (*Daily water level fluctuations due to operations not to exceed +/- 15 cm of daily average in pool 400 metres downstream of facility.*)

Clarification as to how the 30 cm range will be met in the downstream location should be identified in operational ranges to ensure that the feasibility of potential compliance conditions can be considered during the EA process.

- Item 6 (*Natural lake level and outflow to be maintained in Wabageshik Lake. Total daily facility releases to equal pre-project rating curve.*)

Clarification should be provided as to how "daily facility releases equal to pre-project rating curve" will ensure that lake levels will not be affected on a higher frequency.

Summary Discussion on Operations

Operations will likely affect lake levels, and this should be considered as part of the assessment (as it is indicated that it will only affect lake levels +/- 5 cm from natural conditions).

In addition, potential effects on Domtar's generation (as noted in our comments of September 24, 2012) have yet to be identified and addressed. Downstream effects on Domtar's operations, as well as the timing of water release with respect to Vale's operation on the Spanish River will need to be considered during the EA process, and addressed in the final ER.

Proposed Agreement with Domtar

It is understood through previous discussions that the proponent is committing to mitigate effluent dilution concerns through an agreement with Domtar. MOE has reviewed the draft letter of commitment ("Domtar mitigation letter draft") as provided to MNR on February 12, 2013. It is our understanding, based on subsequent discussions and E-mail correspondence, that the proponent is in discussions with Domtar with the intent of achieving a formal agreement which would outline details of a shift from intermittent operating mode to run-of-river operating mode when necessary to prevent impacts to water quality downstream.

Any environmental flows considered by the agencies will be based on the condition that an agreement is in place which accounts for effluent dilution concerns, otherwise the environmental flow provided will be as previously outlined. The final agreement will need to ensure proper consideration is given to this issue.

A final executed agreement between the proponent and Domtar, which outlines specific triggers to an "event" to prevent impacts to water quality downstream will be required prior to the issuance of a Permit to Take Water for the project.

The agreement should identify specific parameters related to flows, temperature and dissolved oxygen levels which will trigger the shift from intermittent mode to run-of-river operating mode, and the return to intermittent mode. Potential triggers could include the consideration for flows below 17m³/s downstream of Domtar or measured dissolved oxygen at Domtar below 55%.

It is MOE's expectation that Xeneca would ensure that further consultations undertaken before the ER is finalized provide the public, agencies, and Aboriginal communities with information on the proposed agreement, its intent, and general requirements. The final ER should then include specific commitments to the execution and implementation of such an agreement, as outlined above.

MOE will ensure execution of the agreement through the inclusion of an appropriate condition referring to the final agreement, signed by Xeneca and Domtar, which will become an attachment to Schedule "A" of the Permit to Take Water (PTTW) to be issued to Xeneca for water takings for their hydropower generation. In addition, the PTTW will require monitoring which will include independently measured hourly flows leaving the facility below the confluence of the tailrace and by-pass channel at a suitable location downstream above the effects of the Domtar headpond.

It should be noted that, in the absence of a formal agreement between Xeneca and Domtar, as described above, MOE will require a minimum flow of 6.5 m³/s to be released at all times below Wabageshik Rapids, as addressed in our comments of September 24, 2012. This number was estimated by allocating flow to the Wabageshik basin based on current requirements at Domtar, and may require further refinement upon project execution.

It is our understanding that MNR may have minimum flow requirements in addition to those required to address MOE's mandate. MNR's minimum flow requirements, once finalized, will also be addressed through the PTTW.

Ministry of Tourism, Culture and Sport



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

December 7, 2010

Ministry of Tourism and Culture
Culture Services Unit
Suite 1700
401 Bay Street
Toronto, ON M7A 0A7

ATTN: Simon Spooner, Marine Heritage Advisor

Dear: Simon Spooner,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

This Project Description is provided to assist the proponent in ensuring that all aspects of the project are accounted for in enough detail to allow the public, Aboriginal communities and government agencies to provide meaningful comment throughout the Class EA process. This document attempts to delineate the "footprint" of the project within the environmental context of the study area and initially identify features of the environment that may be affected (directly and indirectly) by the proposed project. Xeneca acknowledges that additional potential effects may be identified throughout subsequent phases of the Class EA process as input is received from all stakeholders.

In the early stages of this engagement process, a proponent-led EA coordination meeting will be undertaken with key government agencies and interested Aboriginal communities to coordinate an integrated planning process and to identify environmental concerns and diverse regulatory and management planning requirements that may be associated with the proposed project. This document is intended to assist you in preparing for this engagement process. A detailed list of the federal and provincial regulatory agencies, municipalities, and Aboriginal communities which are receiving a copy of this document directly is included within the document. We will be contacting this distribution group shortly to inquire as to their availability for participation in a Class EA Coordination meeting for this proposed small waterpower development project.

The general public and other groups are also invited to review this document. The document will be provided to these parties through postings on the Xeneca website or, upon request, by direct mail.

If you have any questions or comments in relation to the Class EA for Waterpower Projects planning process or environmental impact assessment related matters, please do not hesitate to contact the OEL-HydroSys Inc. Environmental Assessment Manager, Ms. Tami Sugarman at (613) 839-1453 ext. 229 and tsugarman@oel-hydrosys.ca or Xeneca's Manager of Environmental Studies and Assessment, Edmond Laratta, at (416) 590-9362 ext. 106 and elaratta@xeneca.com.

For questions or comments in relation to all other aspects of the development proposal please contact Xeneca's President, Mr. Patrick Gillette at pgillette@xeneca.com or Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe at dassinewe@xeneca.ca.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Patrick W. Gillette", with a stylized flourish at the end.

Patrick Gillette
President
Xeneca Power Development Inc.

Ref: Xeneca Project Description Cover Let Nov 2010.doc

Ministry of Tourism,
Culture and Sport

Ministère du Tourisme,
de la Culture et du Sport

Culture Programs Unit
Programs and Services Branch
Culture Division
435 S. James St., Suite 334
Thunder Bay, ON, P7E 6S7
Telephone: 807-475-1632
Facsimile: 807-475-1291

Unité des programmes culturels
Direction des programmes et des services
Division de culture
435 rue James sud, Bureau 334
Thunder Bay, ON, P7E 6S7
Téléphone: 807-475-1632
Télécopieur: 807-4751291



Email: andrew.hinshelwood@Ontario .ca

January 31, 2013

Luke Dalla Bona
Woodland Heritage Services Limited
69 Landsdowne Ave.
Sault Ste. Marie, ON P6B 1K5

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: *Stage 2 Archaeological and Cultural Heritage Resource Assessment of a Proposed Hydro Development on the Vermillion River, Foster Township, Sudbury District, Ontario, FIT-G0BZK*. Report dated July 31, 2012, received by MTCS Toronto office December 19, 2012 (filed January 10, 2013).

**MTCS Project Information Form Number P065-157-2011 (P065-138-2010)
MTCS RIMS HD00603**

Dear Luke,

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 1993 *Archaeological Assessment Technical Guidelines* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.*

The report documents the Stage 2 archaeological assessment of the proposed hydroelectric installation and portions of the resulting headpond on the Vermillion River, as depicted in Figures 2 and 3 of the above titled report, and recommends the following:

- The Belmer Site (CbHj-1) is of further cultural heritage value or interest and therefore, it is recommended that the site be subject to a Stage 3 Archaeological Assessment to further

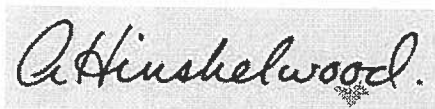
determine the presence of buried artifacts, define the site stratigraphy, cultural features and collect a representative sample of artifacts. This site meets the definition of requiring Stage 3 survey (Section 2.2).

- This Stage 3 archaeological work can only be undertaken after consultation with First Nations and MNO and must be done in advance of any future development. Therefore the Stage 3 work should follow the small pre-contact site test unit strategy as outlined in Section 3.2 and specifically Table 3.1 of the MTCS 2011 Standards and Guidelines.
- Stage 3 work can be avoided if the proposed project will create no impacts to the site. Impacts include protective measures put in place to protect the site from possible impacts (e.g., rip rap along the river to prevent erosion).
- Finally, MTCS regulations require that reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following standard statement: *'Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the Ontario Heritage Act and may not be altered, or have artifacts removed, except by a person holding an archaeological licence'*.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 1993 Archaeological Assessment Technical Guidelines and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me. For further guidance on the Standards and Guidelines and the Terms and Conditions for Archaeological Licences please visit the ministry's website www.ontario.ca/archaeology.

Yours,



Andrew Hinshelwood
Archaeology Review Officer

cc. Archaeology Licensing Officer
Ed Laratta, Xeneca (elaratta@xeneca.com)

* In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

WHS Woodland Heritage Services
(A Division of Settlement Surveys Limited and Pictographics Ltd.)

February 21, 2013

re: Belmer Site, CbHj-1 and the proposed Wabageshik Hydroelectric project

To whom it may concern,

My firm conducted the archaeological assessment for this project. The resulting report was submitted to the Ontario Ministry of Culture, Tourism and Recreation (MTCS). On January 31, 2013, MTCS accepted the report into the provincial registry of archaeology reports (letter attached) and accepted the recommendations made therein. In short, the report recommends that if the site can be avoided and there are no impacts resulting from the proposed project, then no further archaeological work is required.

I have reviewed the letter of Michael J. Vance, PEng. dated February 20, 2013 (attached herein) regarding Xeneca's proposed plans for developing a hydroelectric facility at Wabageshik Rapids on the Vermillion River near Espanola, Ontario. The letter indicates that Xeneca can avoid impacts to the archaeological site and that Xeneca commits to avoiding the site and will take reasonable precautions to ensure as much.

Avoidance is consistent with MTCS policy of protecting Ontario's cultural resources and, in fact, is the preferred option when dealing with archaeological sites. These artifacts, features and sites have existed for hundreds and thousands of years "in the ground" and leaving them there untouched is best. Any investigation by an archaeologist is destructive and indeed a Stage 3 and or Stage 4 excavation, if it is not needed, will result in the destruction of the site.

In my professional opinion, requiring a Stage 3 investigation of a site when a proponent commits to avoiding the locality is not in the best interests of the archaeological resource.

Woodland Heritage Services will continue to work with Xeneca to ensure that the site area is appropriately protected.

Sincerely,



Luke Dalla Bona
Woodland Heritage Services Limited

69 Lansdowne Ave
Sault Ste. Marie, ON P6B 1K5
P: 705.256.5418
web: www.woodlandheritage.com
email: luke@woodlandheritage.com

17 Wellington Street, Box 2529
New Liskeard, ON P0J 1P0
P: 705.647.8833
F: 705.647.7026
web: www.woodlandheritage.com
email: john@woodlandheritage.com

From: [Stephanie Hodsoll](#)
To: [Andrew.Hinshelwood@ontario.ca](#)
Cc: [Mark Holmes](#); [cdejong@ortech.ca](#); [Ed Laratta](#); [luke@woodlandheritage.com](#); [Grace Yu](#); [Mike Vance](#); [Leah Deveaux](#); [Mohammed Hansa](#); [Lynn Moreau](#); [Kai Markvorsen](#)
Subject: Wabagishik Archaeology
Attachments: [1052-001-4.5.06-151A Rev H.pdf](#)
[1052-001-4.5.06-112A Rev H.pdf](#)
[DRAFT Wabagishik Agency Meeting Minutes 21march13.docx](#)
[Wabagishik Monitoring Plan MTCS 17may13.pdf](#)

Dear Andrew:

Please find attached a letter outlining Xeneca's archaeological protocol for our Wabagishik Rapids project. You will also find attached PDFs of the updated site layout and construction sequences plan for the project, and draft minutes (still under review by the agencies) from our March 21 teleconference.

I will also be sending this to you in hard copy.

Yours truly,
Steph

Stephanie Hodsoll

Stakeholder Relations
Xeneca Power Development
5255 Yonge St., Suite 1200
North York, ON M2N 6P4
(416) 590-3077



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tel 416-590-9362 fax 416-590-9955 www.xeneca.com

Andrew Hinshelwood
Archaeology Review Officer - Thunder Bay
Suite 334, 435 James St S
Thunder Bay, ON P7E 6S7

Friday, May 17, 2013

Re: Wabagishik – Monitoring commitment letter

Hi Andrew,

Thanks again for participating in our March 21 Wabagishik teleconference. We are still working with the agencies to finalize the meeting minutes. I have attached a draft copy, but for your quick reference, here are the action items from the archaeology section of the draft meeting minutes:

Archaeology:

ACTION: Xeneca to put its archaeology protocols in a letter to MTCS.

ACTION: Xeneca to use contour maps that denotes construction areas and location of archaeology test pits. (Luke will send UTM coordinates that can be super imposed on topographic maps showing archaeology sites.)

ACTION: Xeneca to forward the monitoring plan for archaeology for construction to MTCS

Regarding the avoidance plan, Woodland Heritage Services (WHS) proposes the following avoidance plan for the Belmer Site [REDACTED] located at Wabagishik Rapids:

Prior to Commencement of Construction Activities

A site visit by WHS staff with representatives of the Xeneca construction team and other interested parties will take place to erect a "fence" marking the [REDACTED] boundary of the Belmer Site. A second fence will be erected 70m east of the first fence. This second fence will be clearly marked and identified as a "Do Not Cross" line.

Appropriate documentation will be created as part of the construction protocols that will instruct all Xeneca staff and subconsultants, construction crews etc. that this line is not to be crossed for any reason.

At a convenient time, prior to the commencement of construction activities, the site supervisor, construction boss, and/or other senior on-site staff will be briefed as to the nature of the fence and the requirement that no people or equipment are to venture any further west than the second fence line nor is the integrity of the fence to be compromised in any way. A cultural heritage protocol will also be presented to the senior on-site staff with instructions to follow in the event of the unexpected discovery of cultural resources.

1/3 of the way through schedule construction activities

A site visit by WHS staff will be undertaken to confirm the integrity of the fence line and that construction activities remain east of the second fence.

2/3 of the way through schedule construction activities

A site visit by WHS staff will be undertaken to confirm the integrity of the fence line and that construction activities remain east of the second fence.

Completion of construction activities

A site visit by WHS staff will be undertaken to confirm the integrity of the fence line and that construction activities remain east of the second fence.

Letter reports will be submitted to Xeneca by WHS upon completion of each site visit detailing observations made at that time.

Discovery of unexpected cultural resources

In the event that cultural resources of any kind are uncovered during construction activities, all work at the location of the discovery are to stop. No further work can occur until the area is examined and written confirmation is given to senior on-site personnel to continue work. No further disturbance of the locality is permitted and all personnel are to be instructed to avoid the area. Xeneca and WHS staff are to be notified immediately.

In the event of the discovery of human remains, all work in that locality is to cease immediately. The area is to be secured and covered (e.g., with a tarp) and the OPP is to be notified immediately. Xeneca and WHS are to be notified as well. In the event that OPP determine that they have no interest in the human remains (e.g., it is not the result of criminal activity), Xeneca will contact First Nations representatives for advice on how to proceed further.

Appropriate contact information will be provided in the final protocol document to be circulated to all relevant personnel.

Please also find attached a map with archaeology stage 2 positive test pits locations and detail contour lines. The contour elevations indicate the rapid change in elevation between the archaeology site and the construction site. This difference in elevation will also help ensure the site will not be impacted by construction activities.

If you have any further questions or comments, please let me know.

Yours truly,

Steph Hodson
Stakeholder Relations Officers
shodson@xeneca.com
416-590-3077

Ministry of Energy and Infrastructure

Danielle Dempsey

From: Smith, Brett (ENERGY) <Brett.Smith@ontario.ca>
Sent: August-07-12 9:57 AM
To: Muriel Kim
Cc: Kwan, Helen L. (ENERGY)
Subject: RE: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Muriel,

Helen Kwan should be the primary point of contact for the Ontario Ministry of Energy. She will be away from the office until August 13th but will be able to reply then regarding the format for the draft ER.

Best regards,
Brett

From: Muriel Kim [<mailto:mkim@wesa.ca>]
Sent: July 24, 2012 10:53 AM
To: kelly.eggert@dfo-mpo.gc.ca; stephanie.davis@ceaa-acee.gc.ca; lisa.mcdonald@tc.gc.ca; EACoordination_ON@inac-a-inc.gc.ca; sheryl.lusk@ec.gc.ca; Caitlin.Scott@NRCan.gc.ca; john.woodward@cta-otc.gc.ca; Cramm, Ellen (ENE); Robinson, Bob L. (MNR); Webber, Gerry (MTCS); Lillie-Paetz, Jennifer (MNDM); Smith, Brett (ENERGY); Pickles, David (MAA); Marleau, Paul (MTO); paul.sajatovic@sudbury.ca
Cc: Tami Sugarman; Kai Markvorsen
Subject: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Good afternoon,

We will soon be distributing the DRAFT Environmental Report (ER) for the proposed Xeneca Power Corporation Inc. waterpower development at the Wabageshik Rapids Project site located on the Vermilion River.

The proposed undertaking is subject to the Class Environmental Assessment for Waterpower Projects as a new project on a managed waterway. While there is no formal requirement for a draft ER in the Class EA for Waterpower Projects, this document will be circulated to key parties in order to facilitate an efficient regulatory review of the final document.

We would like to confirm that you continue to be the appropriate one-window contact at your organization, and whether there are additional individuals within your organization whom you believe should also receive a copy of the draft ER. We are planning to distribute one hard copy and one CD-ROM to each regulator on our contact list; please let us know if you would like to receive additional copies, or if only one form of the report (hard copy or CD-ROM) would suffice.

I will follow up this message with a phone call within the next couple of days to confirm your participation in the review process.

Best regards,
Muriel Kim



Muriel Kim M.Sc.
Environmental Scientist

(T) (613) 839-3053 x261 (C) (613) 294-3886 mkim@wesa.ca www.wesa.ca

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.

Municipal Governments

Espanola



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

June 16, 2010

Mayor Bernie Gagnon
2 - 100 Tudhope St.
Espanola, ON P5E 1S6

Dear Mayor Gagnon,

Xeneca Power Development is one of Ontario's largest developers of renewable energy (waterpower). We are committed to environmentally sound planning, a thorough consultative process, and practicing good corporate social responsibility.

Under the Feed-In Tariff (FIT) Contracts issued by the Ontario Power Authority (OPA), Xeneca is currently developing 19 waterpower facilities across the Province of Ontario, including one site in close proximity to the Town of Espanola:

- Wabagishik

We wish to inform you of our intent to issue a Notice of Commencement for a Waterpower Class Environmental Assessment in 2010. Through the Class EA, comprehensive environmental and archeological studies will be conducted and broad stakeholder and First Nations consultation will occur, including discussion with the Town of Espanola. Concurrently, Xeneca will work to complete all necessary tasks requested by the Crown, which include First Nations business relationship discussions.

Respectfully, we request input from the Town of Espanola in regard to any individual stakeholder or public interest groups for whom our projects would be of interest, as well as any relevant contact information. Furthermore, it would be considered helpful to the process if the Town of Espanola could recommend suitable venues (i.e. town offices, libraries, Community halls) for public meetings.

The economic impact of these projects is one that will benefit the Town of Espanola. Through the Green Energy Act, passed by the Ontario government in 2009, the Province is now procuring renewably produced electricity (wind, solar, water and biomass) to replace all coal-fired generation which is scheduled to close by 2014.

In the case of waterpower, the cost to build is about \$5 million per MW. Approximately half of that money is spent locally or regionally to acquire everything from trucking to concrete, as well as aggregate purchases, legal and surveying services, equipment rentals, labour, accommodations, restaurant services and more.

Over a 40 year period, waterpower pays on average \$5 million per MW in taxes, fees and royalties. Much of this money is returned to the communities where these waterpower plants are operating.

As the Town of Espanola may be interested in some of the renewable energy government programs available, Xeneca would be pleased to assist in identifying those opportunities and provide direction to the appropriate government offices.

Should you require further information, please note that Xeneca has begun the process of posting the information concerning these projects. We invite you to visit our website at www.xeneca.com to provide comments or express any concerns. The website will be updated as information on each of the sites becomes available. For additional information, you may also contact Vanesa Enskaitis, Public Affairs Liaison and at venskaitis@xeneca.com.

Best regards,

Mark Holmes



Mark Holmes
Vice President, Corporate Affairs
Xeneca Power Development
mholmes@xeneca.com

5160 Yonge St., Suite 520
North York, ON
M2N 6L9

T: 416-590-9362
F: 416-590-9955

Cc: Joel Mackenzie, Town Clerk



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

October 13, 2010

Mayor Bernie Gagnon
Town of Espanola
2 – 100 Tudhope Street
Espanola, ON P5E 1S6

Dear Mayor Gagnon:

RE: Invitation to Attend Public Information Centres.

As promised in previous correspondence to your community, Xeneca Power Development is writing to inform your community that Public Information Centres (PICs) are being set up in your area with respect to the following proposed waterpower developments:

■ **Wabageshik Rapids projects on the Vermilion River**

As you may be aware, Xeneca Power Development has issued a Notice of Commencement for the Class Environmental Assessment for Waterpower Projects (Class EA) for the above noted projects. Public Information meetings are an important part of that process.

Xeneca Power Development Inc invites you to attend our Public Information Centre where you will have the opportunity to learn more about the project and provide your input to our project team. Please join us on:

Wednesday, November 10th, 2010
Time: 4:00 to 8:00 pm
Royal Canadian Legion
1 Summerhayes Avenue, Kirkland Lake

Thursday, November 11th, 2010
Time: 4:00 to 8:00 pm
Englehart Community Hall
80 Seventh Avenue, Englehart

Your community's participation in the PICs is greatly valued as is the engagement in archeological, environmental and social-economic aspects of the projects. Communities with an interest in our projects will need information so that well informed decisions can be made. We also believe that a broader knowledge base is extremely important to ensure that any future development is conducted in a way to provide an appropriate balance between environmental, social and economic needs.

Overall, the Class EA is administered by the Ministry of the Environment and is a separate process from Site Release which is administrated by the Ministry of Natural Resources. No permits, approvals or tenure are issued through the Class EA as it is designed to provide information on the potential impacts and viability of each of the projects. The Class EA also allows for comment and dialogue between Xeneca Power Development and Communities, local First Nations, Federal and Provincial governments, as well as any additional stakeholders.

Xeneca Power Development will be posting information regarding our projects, access to information and government programs on its website at www.xeneca.com.

Xeneca Power Development endeavors to proceed in an open, transparent and respectful manner. Our approach includes meaningful, upfront consultation and community participation throughout the development process. If you, council or municipal staff wish to be briefed of our projects in advance of the Public Information Centre we would be pleased to arrange a meeting the evening prior to, or morning of, the scheduled PIC. Briefing can also be conducted further in advance via teleconference.

If there are questions or comments regarding the Public Information session the undersigned or Vanesa Enskaitis can be contacted at any of the numbers listed on our letterhead.

Best regards,

A handwritten signature in black ink, appearing to read 'Mark Holmes', with a stylized flourish at the end.

Mark Holmes
Vice President, Corporate Affairs

Stephanie Hodsoll

From: Traci Denault-Roque [TDenault@town.espanola.on.ca]
Sent: Monday, March 21, 2011 3:12 PM
To: Stephanie Hodsoll
Subject: RE: Offer for Xeneca Project Briefing - March 22

Categories: Public, Logged

Hi Stephanie;

I believe the intentions of some of council will be to attend the PIC.

Thanks
Traci

From: Stephanie Hodsoll [mailto:SHodsoll@xeneca.com]
Sent: Monday, March 21, 2011 2:27 PM
To: Traci Denault-Roque
Subject: RE: Offer for Xeneca Project Briefing - March 22

Hi Traci,
Just want to double check if there is any interest for a meeting with Xeneca?

Thanks,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Mark Holmes
Sent: Monday, March 07, 2011 2:40 PM
To: 'Traci Denault-Roque'
Cc: Stephanie Hodsoll; Vanesa Enskaitis
Subject: RE: Offer for Xeneca Project Briefing - March 22

Traci:

The project will bring significant investment to the Espanola region and have significant short term economic stimulus as much of the construction goods and services would be procured locally i.e. labor, aggregate, concrete, steel, as well as trucking, consulting, legal, surveying, hotels, restaurants, fuel and other services.

Benefits of locally produced electricity include greater stability of energy supply, less transmission infrastructure and costs. These are also green energy projects which are replacing coal fired electricity generation.

Recognizing that the area is very likely utilized by Espanola area residents for hiking, hunting, fishing, camping, canoeing and other recreational interests, we would also like to brief town officials on how those uses will be protected and/or enhanced.

And, in our experience, public meetings often generate public interest that may be communicated back to Town officials, and, as such, an advance briefing will provide the necessary information to address some of the comments that may be forthcoming.

Hope this is of some assistance in clarifying our outreach to Mayor and Council.

Very best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
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mholmes@xeneca.com

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From: Vanesa Enskaitis
Sent: March 7, 2011 1:05 PM
To: Traci Denault-Roque
Cc: Stephanie Hodsoll; Mark Holmes
Subject: RE: Offer for Xeneca Project Briefing - March 22

Hi Tracy,

Thanks for getting back to us!
Actually the intent of the project briefing is give the Mayor & Council a better idea of the project affects and benefits. I can arrange with our VP of Corporate Affairs, Mark Holmes, to give you a call if you'd like to preliminary information? Let me know.

Thanks
Vanessa

Vanessa Enskaitis

Public Affairs Liaison
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Visit the Xeneca website for the most up-to-date project information:
www.xeneca.com

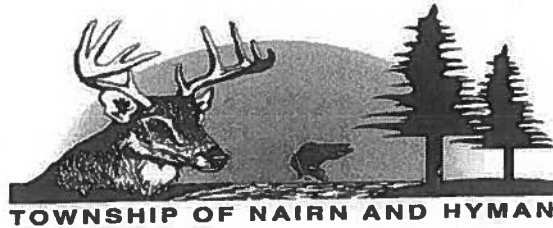
From: Traci Denault-Roque [mailto:TDenault@town.espanola.on.ca]
Sent: Monday, March 07, 2011 12:42 PM
To: Vanessa Enskaitis
Subject: Offer for Xeneca Project Briefing - March 22

Hello Vanessa;

I am hoping that you can provide me with a bit more information to the above mentioned briefing. Can you comment on what affects this will have for the Town of Espanola?

Thank you.
Traci Denault-Roque
Administrative Assistant

Nairn and Hyman



TOWNSHIP OF NAIRN AND HYMAN

64 McIntyre Street • Nairn Centre, Ontario • P0M 2L0 • (705) 869-4232 • Fax: (705) 869-5248
Established: March 7, 1896 Office of the Clerk Treasurer, CAO E-mail: nairncentre@personainternet.com
web page: www.nairncentre.ca

June 5, 2012

Xeneca Power Development Inc.
c/o Stephanie Hodsoll
6255 Yonge Street, Suite 1200
Toronto, Ontario
M2N 6P4

**Re: Waterpower Projects For the Proposed Wabagishik Rapids
Development**

Dear Ms Hodsoll:

Please be advised that our Council adopted the following motion at their meeting of June 4, 2012:

RESOLUTION #2012-9-117

MOVED BY: R. MacDonald

SECONDED BY: L. Falldien

WHEREAS: Xeneca Power Development Inc. is proposing three modified run-of-river hydroelectric dams for the Vermillion River, to be located at Cascade Falls, Soo Crossing and Wabagishik Rapids; and

WHEREAS: the Township of Nairn and Hyman is in favour of responsible and sustainable green energy projects that have had the input, consensus and blessing of the municipalities affected; and

WHEREAS: the modified run-of-river operating strategy would involve holding the majority of river water back from downstream flow for up to 24 hours to fill several kilometers of head ponds, and expose stored river water to solar warming for up to 16 hours during the hot low flow summer and fall seasons; and

WHEREAS: the nine waste water treatment facilities, releasing treated, undertreated and untreated effluent into the Vermillion River Watershed, along with heavy metals resulting from over 100 years of mining effluent and emissions that may have accumulated in the Vermillion riverbed sediment and that these cumulative negative effects could result in an increased incidence of toxic algae blooms

"Home of the Whispering Pines"

and an unnecessary additional risk to the public health and safety of more than 13,000 citizens receiving their drinking water from the Vermillion River; and

WHEREAS: the modified peaking operating strategy could create extreme and frequent river flow velocity and water level changes on the Vermillion River system throughout the majority of the year, this could have an unacceptable negative impact on ice stability and year-round recreational activities such as swimming, boating, snowmobiling, skiing, ice and summer fishing, and create a public safety hazard and/or economic loss in tourism dollars; and

WHEREAS: the impacts of these proposed hydroelectric dams, cumulatively, could reach as far as the confluence of the Vermillion River with the Spanish River, and possibly all the way out to the Domtar Dam in Espanola, and considering this large potential zone of influence, the ecological, environmental, economic and social costs of these dams would be unacceptable; and

WHEREAS: the demand for power in Ontario has been significantly reduced in recent years, and there is much more that can be achieved through energy conservation and efficiencies before resorting to these measures; and

WHEREAS: the entire length of Wabagishik Rapids is unarguably an abundant Walleye spawning area, the loss of any part of this valuable natural resource would be unacceptable; and

WHEREAS: the presence of Lake Sturgeon, an endangered species, was recently confirmed downstream of Wabagishik Rapids, any additional pressure on this population would be unacceptable; and

WHEREAS: these proposals are within the Vermillion River corridor which drains the entire Vermillion River Watershed, and is a key connector for many other green spaces throughout the District of Sudbury, that the potential degradation and fragmentation of such a beautiful and important natural heritage feature would be unacceptable; and

WHEREAS: it has come to our attention that no dam decommissioning provisions are being made for any proposed hydroelectric dams in Ontario, and with scientists' predictions of climate change to bring increasing drought conditions, there is a possibility that these dams will no longer be environmentally, ecologically, economically or socially feasible in the near future, and in that case, removal of these dams would be left to the taxpayers, and this would be unacceptable,

NOW THEREFORE BE IT RESOLVED:

that due to the numerous negative impacts affecting water quality, water quantity, public health and safety, destruction of fish habitat and spawning areas, and the overall environmental, ecological social and economic costs that could result from these three proposed modified run-of-river hydroelectric dams, the Corporation of the Township of Nairn and Hyman resolves to strongly oppose these proposals for Cascade Falls, Soo Crossing and Wabagishik Rapids, on the Vermillion River, and

"Home of the Whispering Pines"

BE IT FURTHER RESOLVED:

that communication of this decision will be made to Xeneca Power Development Inc., the Premier of Ontario, the Minister of Energy, the Minister of Environment, the Minister of Natural Resources, the local Member of Provincial Parliament, in the local newspapers, the local municipalities of the LaCloche Foothills Area, City of Greater Sudbury and the Whitefish First Nations.

CARRIED

Sincerely Yours

A handwritten signature in black ink, appearing to read 'R. Deschene', with a long horizontal flourish extending to the right.

Robert Deschene
CAO/jh

cc: The Hon. Dalton McGuinty, Premier of Ontario
The Hon. Chris Bentley, Minister of Energy
The Hon. Jim Bradley, Minister of Environment
The Hon. Michael Gravelle, Minister of Natural Resources
Michael Mantha, MPP, Algoma-Manitoulin
Vermilion River Stewardship, Linda Heron, Chair
City of Greater Sudbury
Whitefish First Nation
Township of Baldwin
Town of Espanola
Township of Sables-Spanish Rivers
Mid North Monitor, Espanola
Around and About, Espanola
Sudbury Star

Muriel Kim

From: Mark Holmes <mholmes@xeneca.com>
Sent: July-30-12 9:52 AM
To: laurierfalldien@nairncentre.ca
Cc: Uwe Roeper; Stephanie Hodsoll
Subject: presentation to council

Laurier:

Great meeting you at the Wabagehik Public Information Centre in Espanola last week. Am pleased to have been able to provide you information about our project and would absolutely like the opportunity to present the project to Nairn Centre Town Council.

By providing a balanced perspective and accurate information your municipality will be able to make informed decisions about the project and how it will be built and operated.

I look forward to speaking with you again soon.

Very best regards,

Mark Holmes

Vice President

Corporate Affairs

Xeneca Power Development

5255 Yonge St.

Suite 1200

North York



Wabagishik Rapids Waterpower Project on the Vermilion River



Presented to Township of Nairn & Hyman
September 17th, 2012



Today's Presentation

- Xeneca thanks the Township of Nairn & Hyman for this opportunity to present our Wabagishik Rapids project on the Vermilion River
- This presentation is part of our ongoing public consultation efforts. Three Public Information Centres (PICs) have been held in Espanola (March & October 2011; July 2012) – high public interest
- Any interested person that would like information about projects, or to make comments to Xeneca about the project, is encouraged to contact Xeneca.
- For further questions, contact Stephanie:
 - 416-590-3077/ shodsoll@xeneca.com





Presentation Outline

- Part 1: A brief history of waterpower in Ontario
- Part 2: Process leading up to this project
- Part 3: Engineering/operating details of the Wabagishik Rapids project
- Part 4: Addressing stakeholder & community issues




Waterpower History

Decew Gristmill 1872



Waterpower technology, even in its simplest forms had a profound effect on productivity and daily life in Ontario from early settler's days onward.

Decew mill horizontal axial turbine 25" dia, 40 ft head
 Mechanical Power output = 49 horsepower or 36 kW
 Sawmill undershot wheel 6' dia., 3.5 ft head (estimated)

Almonte Electric 1908

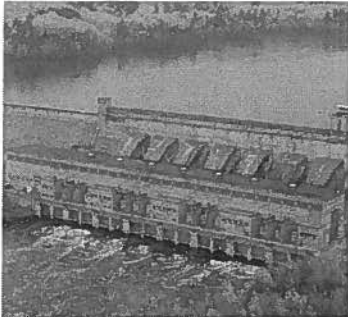


1900+ towns started their own electricity plants like this one near Ottawa to meet growing interest in electricity. These were typically 1 to 10 MW (small).



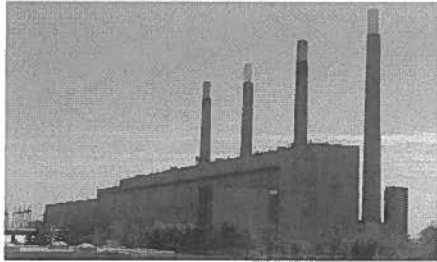
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Water goes big 1930+



Hydro projects grew to grand scale till 1960's but few large hydro sites exist in Ontario and even fewer are close enough to the big cities. Photo: Desloachins, a 429 MW plant, 1950. Three Gorges Dam in China is 22,000 MW. Ontario is limited by topography and rain fall.

Coal is King 1940+

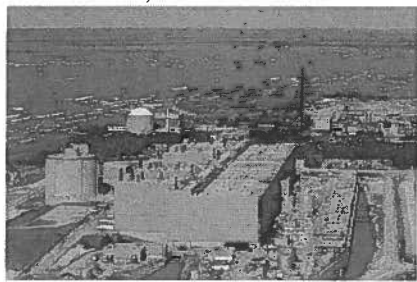


Lakeview station (2,400 MW) commissioned in 1962, now defunct. Coal began to play a growing role as Ontario was running out of accessible waterpower site locations and nuclear was still in its infancy.



Waterpower History (con'd)

Nuclear quenches thirst for power 1966+



Large plants are needed to fill the power gaps created by growing cities and a rapid increased in manufacturing.

This plant is Bruce Nuclear commissioned in 1978 on Lake Huron.

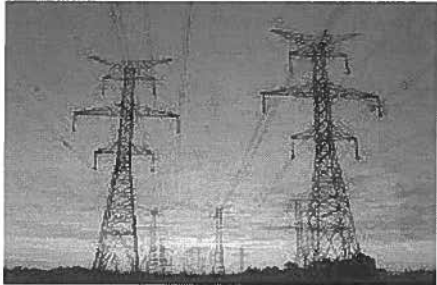
Large plants meant large transmission lines and infrastructure to connect cities to the generation sources.



The Transmission Legacy

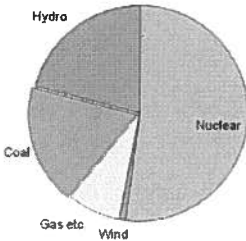
The transmission system of yesteryear is in need of modernization. Successive governments have not made changes that can accommodate new, localized generation.

The result is very limited connection space for new generation.




Our Aging Supply Mix

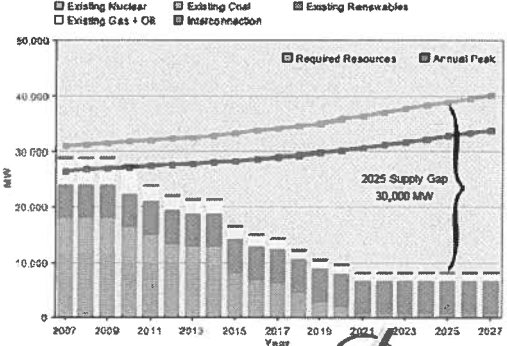
Ontario Supply Mix Today



The growing supply gap could come from:

- New nuclear
- Keeping waterpower operational
- Adding gas for peaking load
- Diversifying the supply mix
- (small hydro, distributed generation, other...)

The big supply problem



2025 Supply Gap 30,000 MW





The Clean, Green Revival

Small hydro comes back with the Green Energy Act and the move to more renewable power like this new powerhouse in Almonte that saw the redevelopment of a 1908 project (5 MW.)

History meets renaissance!




Why Hydro?

- Coal fired generation is mandated to be shut down in Ontario by 2014.
- Portion of replacement generation to come from renewables i.e. wind, solar, biomass and small hydro.

Each fuel source has a role to play in diversification of the supply mix:

- Increased system reliability on local level
- Decreased need for new transmission lines
- Part of global trend to go green
- Make communities part of the solution

(Photo Credit: sustainabilityninja.com)



Why Hydro?

- Wind and solar are clean but are intermittent sources ... i.e. they run when the wind blows or when the sun shines...

...and not necessarily when power is required.
- Water is predictable and provides a stabilizing effect that helps balance power production with consumption.




Why Hydro?

- Waterpower is long lived. Many facilities have been in operation 80+ years.
- Solar and wind have a lifespan of about 20 years and nuclear 40 years.
- Waterpower is the least expensive alternative. In the long run it will help moderate electricity rate increases.



Furry Creek small hydro project near Squamish, BC



12



Small is Beautiful (and Green)

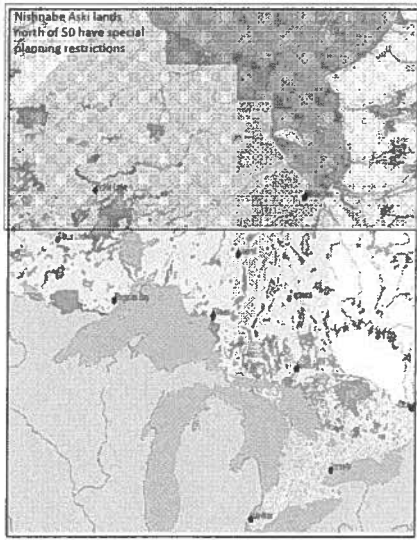
- What makes small waterpower green?
- To be green, small waterpower has to meet multiple criteria:
 - Under 10 MW
 - Minimal or no storage (less than 48 hrs)
 - Minimal environmental impact (e.g. fish)
 - Small physical and ecological footprint
- Facilities that meet green criteria are eligible for “EcoLogo Certification” from Government of Canada.
- Xeneca strives to obtain EcoLogo Certification for each project as a reflection of our efforts to be green.
- Being green means making extra effort in the engineering process to address stakeholder questions and concerns and, where possible, derive benefits.





“It’s Not Easy Being Green”

(Kermit the Frog)



Nishnawbe Aski lands
North of 50 have special
planning restrictions

Government restricts where sites can go:
In addition to the EcoLogo criteria, project sites must be on “general use” rivers, and not in:

- Wilderness parks
- Natural environment parks
- Waterway parks
- Nature Reserve Parks
- Recreation Parks
- Historical Parks
- Conservation Reserves
- National Parks
- First Nation Reserves
- Nishnawbe Aski Lands (North of 50°)

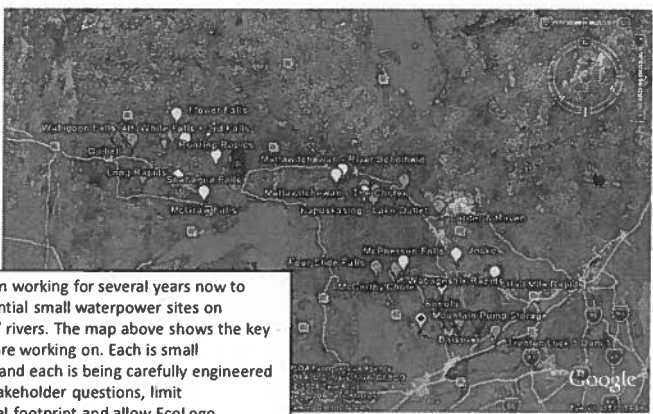
Many rivers and most potential project sites are affected by one or more of these planning constraints.

Planning constraints are a key factor in the focus on a limited number of small (1 – 10 MW) project sites.





Xeneca's Mission: Identify and Built Multiple Small Waterpower Projects Throughout Ontario



We have been working for several years now to identify potential small waterpower sites on "general use" rivers. The map above shows the key projects we are working on. Each is small (1 – 10 MW) and each is being carefully engineered to address stakeholder questions, limit environmental footprint and allow EcoLogo certification. We strongly believe that small waterpower is an important part of the solution for Ontario's supply mix and the right thing to do from a sustainability point of view.




The Vermilion River

- The Wabagishik Rapids project meets the criteria demanded for a green, environmentally friendly, small waterpower project.
- Hydrology and topography show the site has good generation potential with a total installed capacity of about 3.4 MW.
- Supports development of renewable energy that will power between 500 and 700 households per MW. The Wabagishik project will produce enough energy for over 1500 homes.





Environmental Assessment Process

- Currently in the Waterpower Class Environmental Assessment (Class EA) process
- The 12-18 month Class EA process is drawing to its conclusion and Notice of Completion likely to be issued by Xeneca in late 2012
- Statement of Completion from Ministry of Environment leads to permitting and approvals under MNR's Lands and Rivers Improvement Act (approx. 18 months)
- Construction to commence 2014




Project Timeline

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
Conduct Environmental Field Studies/Reports																								
Complete Conceptual Designs																								
Prepare Class EA																								
Issue Class EA - NOC/SOC																								
Engineering - Final Design																								
Initiate Post EA Approvals																								
Procure Equipment																								
Equipment Delivery																								
Site Preparation																								
Construction																								
Project Commissioning																								
Project Operational																								

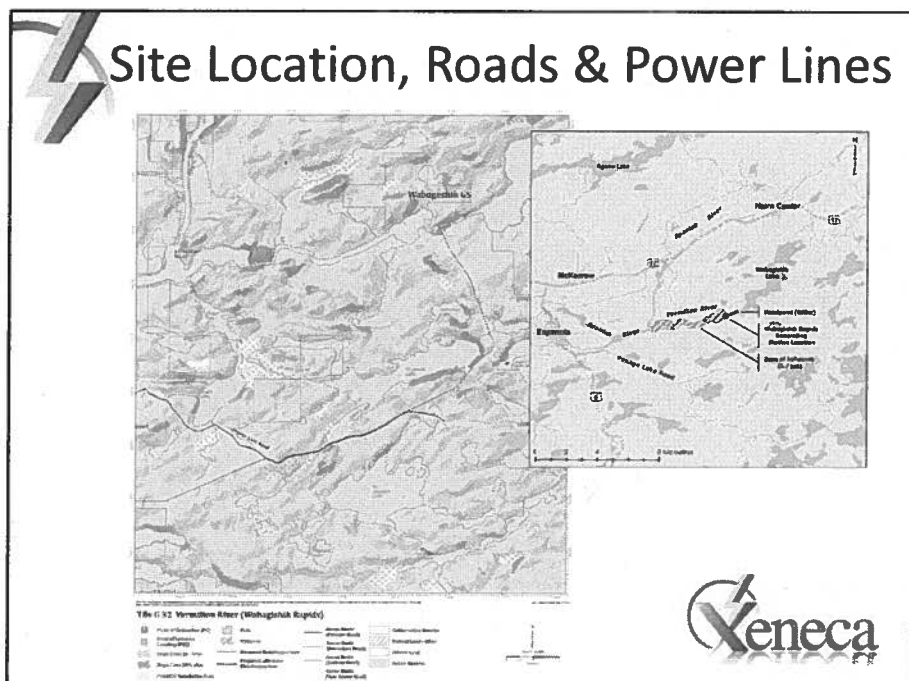
Stakeholders are encouraged to discuss any concerns or issues related to the project with Xeneca staff at any time. Xeneca will put forth its best efforts to include & address your concerns in the Class EA report. If, at the Notice of Completion stage there remain outstanding concerns, a written request for a Part II Order can be made to the Minister of Environment under the Environmental Assessment Act to elevate or "bump-up" the project to a full EA. A copy of the Part II Order request must also be sent to Xeneca at that time.

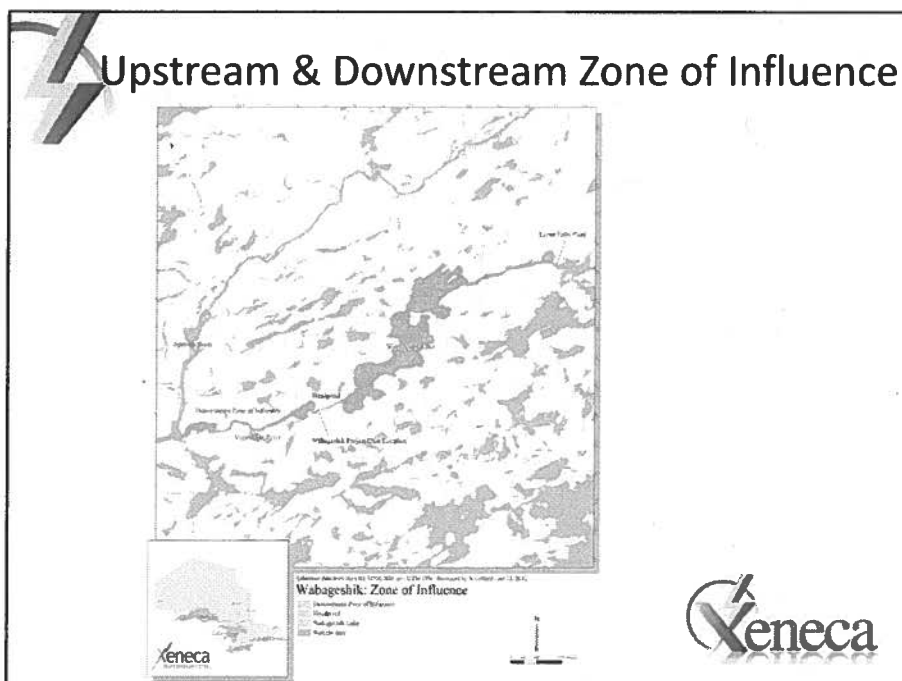
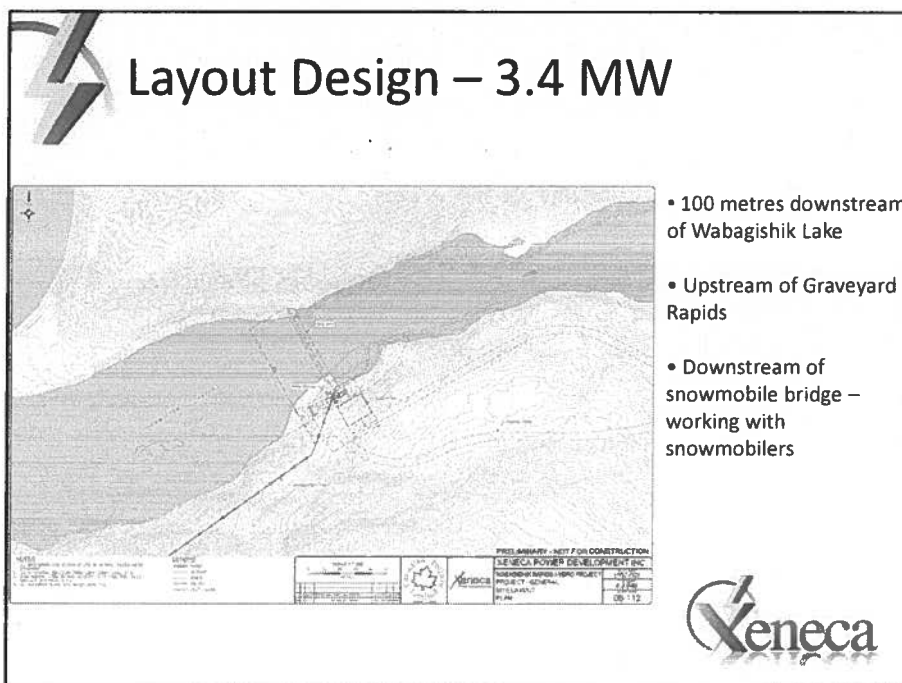
(Extended FIT Contract Operation Date: Oct. 2015)



Project Benefits

- Significant return to the people of Ontario. Royalties & fees of over \$2.2 million are paid to the province over the next 40 years.
- Xeneca working with Ministry of Finance to ensure host municipalities benefit.
- During construction Xeneca strives to procure its goods & services locally. On average about \$2.5 million per MW or approximately \$5 million will be spent locally on labour, trucking, steel, equipment rental, surveying, legal & professional services, food, fuel & accommodation.
- Potential for improved roads access to the site as well as reliable, locally generated electricity supply.
- Direct job creation (construction) is estimated to be approximately 21,000 person hours of work.





Biology Studies – 2010 & 2011

Ecological Study		2010	2011
Aquatic	Summer Fish Community Surveys	✓	✓
	Walleye Spawning Surveys	✓	
	General Aquatic Habitat Characterization	✓	
	Invertebrate Sampling		✓
	Detailed Aquatic Habitat Characterization and Quantification		✓
	Fish Tissue Sampling for Mercury		✓
	Fish Sampling Targeting Sturgeon		✓
	Sturgeon Spawning Survey		✓
Terrestrial	Breeding Bird Surveys	✓	
	Deer Monitoring Surveys		✓
	Incidental Wildlife Surveys	✓	✓
	Vegetation Community Assessments	✓	




Stakeholder Issues

- Snowmobile Routes & Bridges
- Vermilion River & Lake Wabagishik - Water flows, seasonal water levels, water quality, peaking operations
- Recreational safety/portage routes
- Gross Revenue Charge
- Environmental Impacts - Fish/other aquatic species in Vermilion River (including Sturgeon & Walleye), fish passage, terrestrial species, spawning ground, ecological integrity
- Economy – Impact on local economy, job creation






Archaeology

- A Stage 1 archaeological assessment was conducted in fall & winter 2010/2011 - submitted to & accepted by the Ontario Ministry of Tourism, Culture & Sport (MTCS.) The Stage 1 report evaluated the existing archaeological knowledge of the study area & recommended areas where Stage 2 research is required.
- Stage 2 archaeological work was conducted in the fall of 2011. One archaeological site was discovered on the north side of the rapids.
- Stage 3 work is scheduled at this archaeological site for summer/fall of 2012 in accordance with MTCS regulations.
- All archaeological recommendations must be reviewed & approved by MTCS, independent of the Feed-In-Tariff (FIT) process.



Private Landowner Discussion

- All affected landowners contacted and aware of project





Public Input

- Now is the time to provide input to the project.
- Would Township consider rescinding or modifying its resolution.



Thank you for your time today!



Sables-Spanish River

11 Birch Lake Road
R.R.#3, Site 1, Box 5
Massey, ON
P0P 1P0



Telephone: (705) 865-2646
Fax: (705) 865-2736
E-Mail: inquiries@sables-spanish.ca
Web Site: www.sables-spanish.ca

June 11, 2012

Stephanie Hodsoll
Public Affairs Liason
Xeneca Power Development Inc.
6255 Yonge St., Suite 1200
Toronto, ON
M2N 6P4

Dear Ms. Hodsoll,

Re: Waterpower Projects for the Proposed Wabagishik Rapids Development

Please be advised that the Council of the Township of Sables-Spanish Rivers has passed a resolution fully supporting the attached position with regards to opposing the four hydroelectric dams proposed on the Vermilion River.

The concerns expressed are due to the number of negative impacts affecting water quality, water quantity, and destruction of fish habitat and spawning areas that would be experienced. We ask that these considerations be taken into account in your review process.

Yours truly,

Kim Sloss

Clerk-Administrator

cc: Premier of Ontario; Hon. Dalton McGuinty
Minister of Energy; Hon Chris Bentley
Minister of the Environment; Hon. Jim Bradley
Minister of Natural Resources; Hon. Michael Gravelle
Algoma-Manitoulin-Kapuskasing MP; Carol Hughes
Algoma-Manitoulin MPP; Michael Mantha

COPY TO COUNCIL

Consideration of 4 Modified Run-of-River Hydroelectric Dam Proposals for the Vermilion River

WHEREAS Xeneca Power Development Inc., is proposing 4 Modified Run-of-River Hydroelectric Dams for the Vermilion River, to be located at McPherson Falls, Cascade Falls, At Soo Crossing, and Wabagishik Rapids;

AND WHEREAS the LaCloche Foothills Municipal Association is all for Green Energy, but the potential negative impacts of these 4 proposed Modified Run-of-River Hydroelectric Dams, on the Vermilion River ecosystem, and to those citizens relying on its natural resources for the necessities of life, could create an unacceptable public safety hazard;

AND WHEREAS any reduction of river flow rates due to water being held back for up to 48 hours to fill up to 9 kms of head ponds, considering the fact that there are 9 Waste Water Treatment Facilities releasing treated, undertreated and untreated effluent into the Vermilion River Watershed, and considering there are over 13,000 citizens receiving their drinking water from the Vermilion River, could result in an increased incidence of toxic algae blooms, and an unnecessary additional risk to public health and safety;

AND WHEREAS the Wabagishik Rapids proposed dam would have an Installed Capacity (IC) of 3.4 MW, when the actual real energy produced by this dam would be approximately half of IC, and so is generously predicted to be more like 2 MW of power generated, and for this very small amount of generated power, the ecological, environmental & social costs of these dams would be unacceptable;

AND WHEREAS the zone of influence of these proposed hydroelectric dams, cumulatively, could reach as far as the Domtar Dam in Espanola, this large potential zone of influence, for only 2 MW of power generated, would be unacceptable;

AND WHEREAS the entire length of Wabagishik Rapids is unarguably an abundant Walleye spawning area, the loss of any part of this valuable natural resource would be unacceptable;

AND WHEREAS there is a good possibility that Lake Sturgeon could be present in and downstream of the proposed Wabagishik Rapids, and studies were not commenced at the crucial time and temperature to observe their spawning activity, and considering the fact that Lake Sturgeon spawn only once in every 5 to 7 years, it is unacceptable that any decision be made before proper and thorough Lake Sturgeon studies have been conducted over the next 5 to 7 years;

AND WHEREAS the modified peaking operating strategy would create extreme and frequent river flow velocity and water level changes on the Vermilion River system throughout the majority of the year, this could have an unacceptable negative impact on ice stability and year-round recreational activities such as swimming, boating, snowmobiling, skiing, ice and summer fishing, and create a public safety hazard and/or economic loss in tourism dollars;



Wabagishik Rapids Waterpower Project on the Vermilion River



Presented to Township of Sables-Spanish Rivers
November 28th, 2012



Today's Presentation

- Xeneca thanks the Township of Sables-Spanish Rivers for this opportunity to present our Wabagishik Rapids project on the Vermilion River
- This presentation is part of our ongoing public consultation efforts. Three Public Information Centres (PICs) have been held in Espanola (March & October 2011; July 2012) – high public interest
- Any interested person that would like information about projects, or to make comments to Xeneca about the project, is encouraged to contact Xeneca.
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- Part 1: A brief history of waterpower in Ontario
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Waterpower History

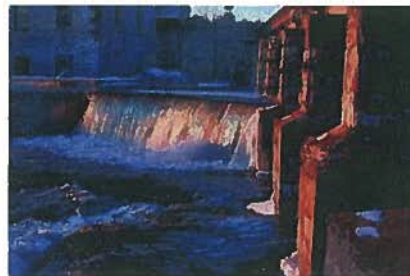
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1900+ towns started their own electricity plants like this one near Ottawa to meet growing interest in electricity. These were typically 1 to 10 MW (small).



Waterpower History (cont'd)

Water goes big 1930+



Hydro projects grew to grand scale till 1960's but few large hydro sites exist in Ontario and even fewer are close enough to the big cities. Photo: Desloachins, a 429 MW plant, 1950. Three Gorges Dam in China is 22,000 MW. Ontario is limited by topography and rain fall.

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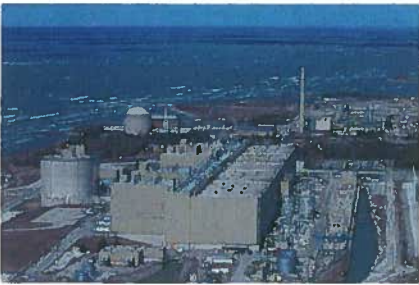


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The Transmission Legacy

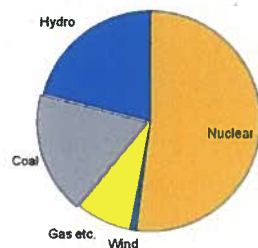
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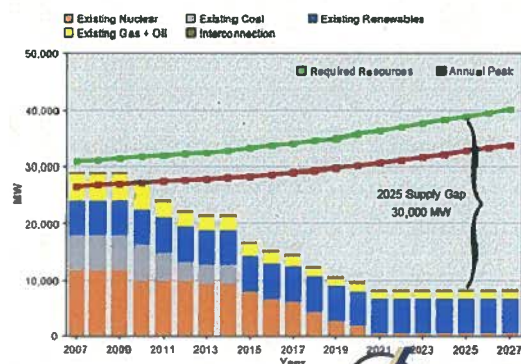
Our Aging Supply Mix

Ontario Supply Mix Today



- The growing supply gap could come from:
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Small hydro comes back with the Green Energy Act and the move to more renewable power like this new powerhouse in Almonte that saw the redevelopment of a 1908 project (5 MW.)

History meets renaissance!



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- Coal fired generation is mandated to be shut down in Ontario by 2014.
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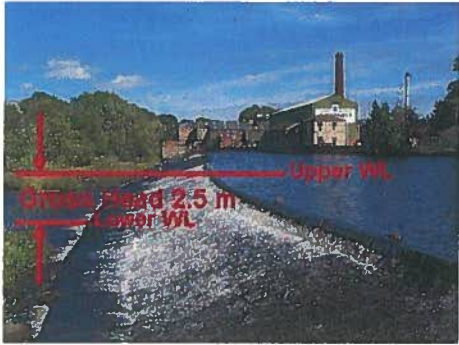


(Photo Credit: sustainabilityninja.com)



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Furry Creek small hydro project near Squamish, BC





Small is Beautiful (and Green)

- What makes small waterpower green?
- To be green, small waterpower has to meet multiple criteria:
 - Under 10 MW
 - Minimal or no storage (less than 48 hrs)
 - Minimal environmental impact (e.g. fish)
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(Kermit the Frog)



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Planning constraints are a key factor in the focus on a limited number of small (1 – 10 MW) project sites.





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We have been working for several years now to identify potential small waterpower sites on "general use" rivers. The map above shows the key projects we are working on. Each is small (1 – 10 MW) and each is being carefully engineered to address stakeholder questions, limit environmental footprint and allow EcoLogo certification. We strongly believe that small waterpower is an important part of the solution for Ontario's supply mix and the right thing to do from a sustainability point of view.



The Vermilion River

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Environmental Assessment Process

- Currently in the Waterpower Class Environmental Assessment (Class EA) process
- The 12-18 month Class EA process is drawing to its conclusion and Notice of Completion likely to be issued by Xeneca in early 2013
- Statement of Completion from Ministry of Environment leads to permitting and approvals under MNR's Lands and Rivers Improvement Act (approx. 18 months)
- Construction to commence 2014




Project Timeline

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
Conduct Environmental Field Studies/Reports																								
Complete Conceptual Designs																								
Prepare Class EA																								
Issue Class EA - NOC/SOC																								
Engineering - Final Design																								
Initiate Post EA Approvals																								
Procure Equipment																								
Equipment Delivery																								
Site Preparation																								
Construction																								
Project Commissioning																								
Project Operational																								

Stakeholders are encouraged to discuss any concerns or issues related to the project with Xeneca staff at any time. Xeneca will put forth its best efforts to include & address your concerns in the Class EA report. If, at the Notice of Completion stage there remain outstanding concerns, a written request for a Part II Order can be made to the Minister of Environment under the Environmental Assessment Act to elevate or "bump-up" the project to a full EA. A copy of the Part II Order request must also be sent to Xeneca at that time.

(Extended FIT Contract Operation Date: Oct. 2015)



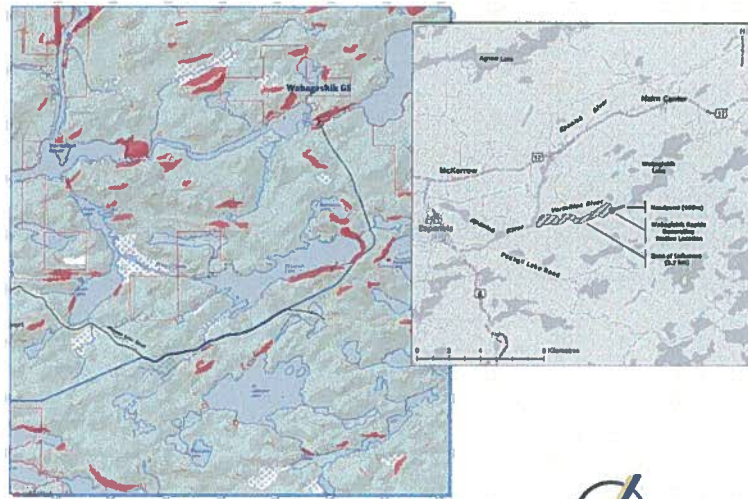


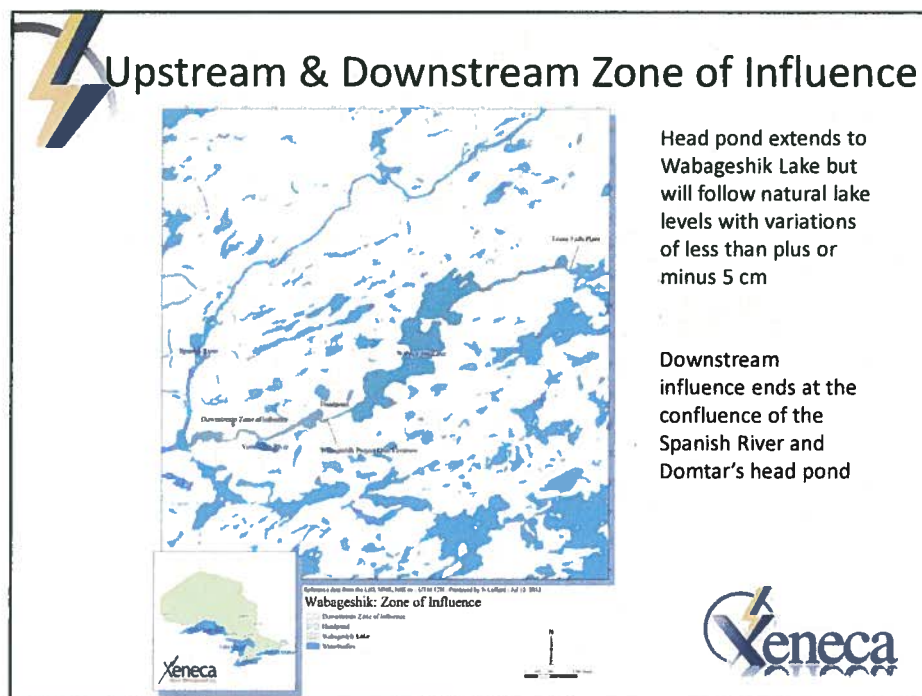
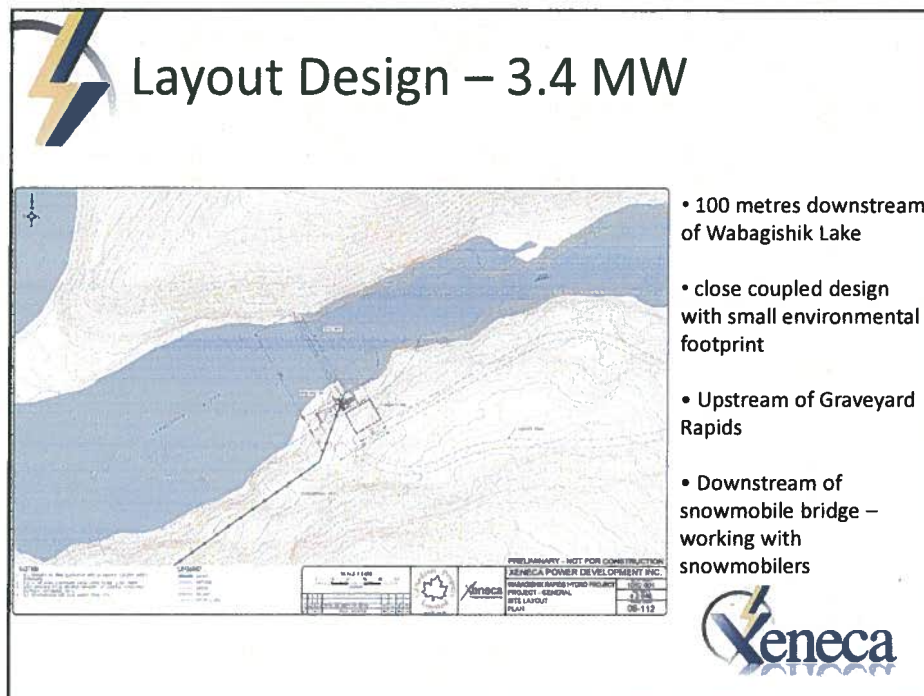
Project Benefits

- Significant return to the people of Ontario. Royalties & fees of over \$2.2 million are paid to the province over the next 40 years.
- Xeneca working with Ministry of Finance to ensure host municipalities benefit.
- During construction Xeneca strives to procure its goods & services locally. On average about \$2.5 million per MW or approximately \$5 million will be spent locally on labour, trucking, steel, equipment rental, surveying, legal & professional services, food, fuel & accommodation.
- Potential for improved roads access to the site as well as reliable, locally generated electricity supply.
- Direct job creation (construction) is estimated to be approximately 21,000 person hours of work.



Site Location, Roads & Power Lines







Biology Studies – 2010 & 2011

	Ecological Study	2010	2011
Aquatic	Summer Fish Community Surveys	✓	✓
	Walleye Spawning Surveys	✓	
	General Aquatic Habitat Characterization	✓	
	Invertebrate Sampling		✓
	Detailed Aquatic Habitat Characterization and Quantification		✓
	Fish Tissue Sampling for Mercury		✓
	Fish Sampling Targeting Sturgeon		✓
	Sturgeon Spawning Survey		✓
	Breeding Bird Surveys	✓	
Terrestrial	Deer Monitoring Surveys		✓
	Incidental Wildlife Surveys	✓	✓
	Vegetation Community Assessments	✓	

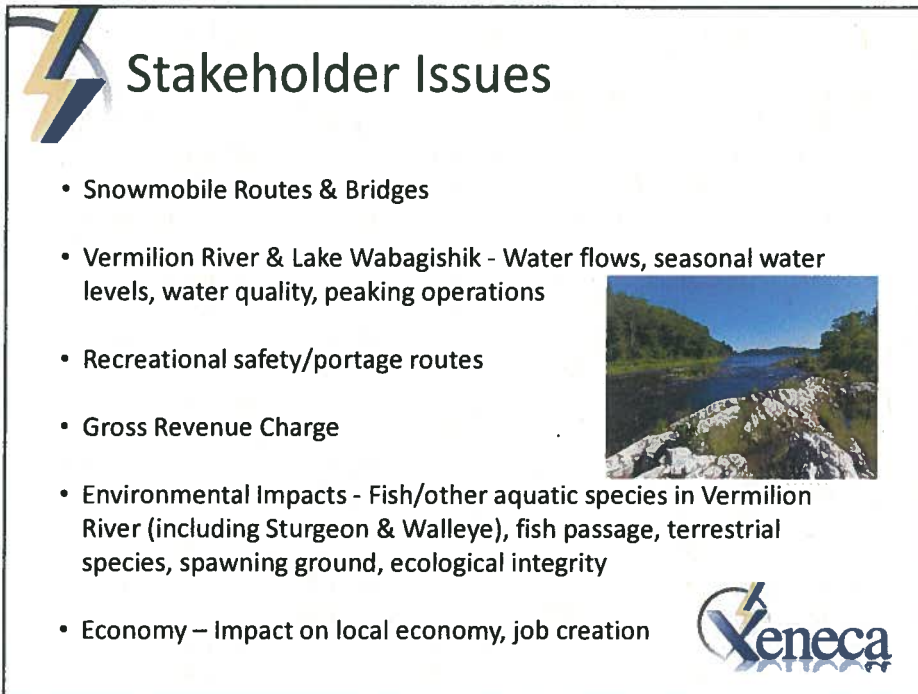



Hydraulics/ bathymetry & more

- Highly accurate LiDAR surveys
- Detailed bathymetry
- Hydraulic modeling
- Natural and man-made features mapping
- Aquatic and terrestrial habitat studies

This river on which Xeneca is building is now as well, or better, understood than any river in Ontario. Our knowledge of how the river behaves under different conditions is extensive and leads to a good understanding of effects both positive and negative.

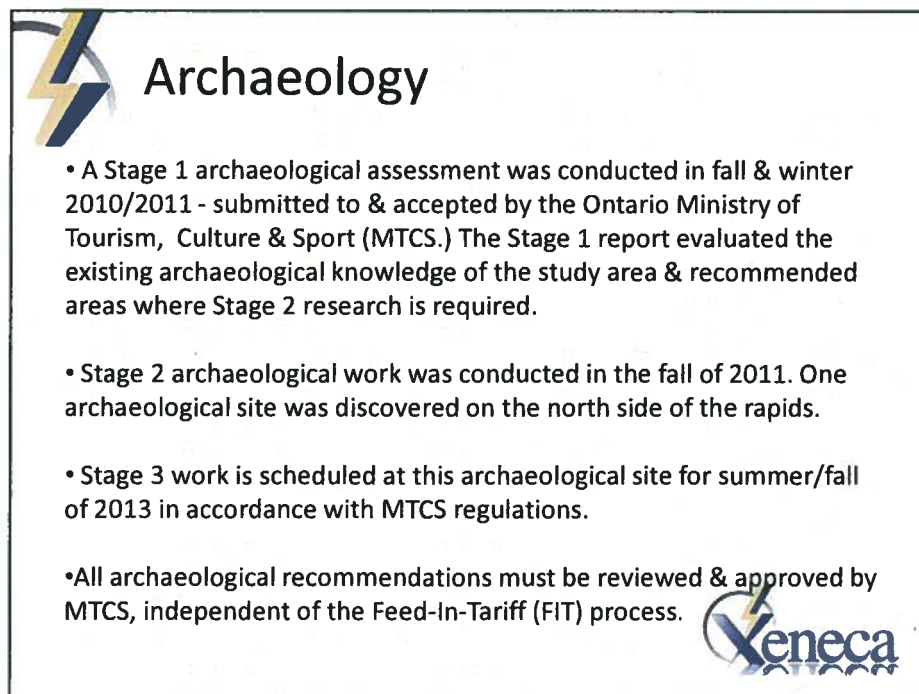




 **Stakeholder Issues**

- Snowmobile Routes & Bridges
- Vermilion River & Lake Wabagishik - Water flows, seasonal water levels, water quality, peaking operations
- Recreational safety/portage routes
- Gross Revenue Charge
- Environmental Impacts - Fish/other aquatic species in Vermilion River (including Sturgeon & Walleye), fish passage, terrestrial species, spawning ground, ecological integrity
- Economy – Impact on local economy, job creation





 **Archaeology**

- A Stage 1 archaeological assessment was conducted in fall & winter 2010/2011 - submitted to & accepted by the Ontario Ministry of Tourism, Culture & Sport (MTCS.) The Stage 1 report evaluated the existing archaeological knowledge of the study area & recommended areas where Stage 2 research is required.
- Stage 2 archaeological work was conducted in the fall of 2011. One archaeological site was discovered on the north side of the rapids.
- Stage 3 work is scheduled at this archaeological site for summer/fall of 2013 in accordance with MTCS regulations.
- All archaeological recommendations must be reviewed & approved by MTCS, independent of the Feed-In-Tariff (FIT) process.





Private Landowner Discussion

- All affected landowners contacted and aware of project.
- Xeneca addressing concerns through strategies to avoiding negative impacts or, where appropriate, undertake compensation.



Public Input

- Now is the time to provide input to the project.
- Would Township consider rescinding or modifying its resolution.





Thank you for your time today!



Danielle Dempsey

From: Stephanie Hodsohl <SHodsohl@xeneca.com>
Sent: February-04-13 3:48 PM
To: Inquiries
Subject: RE: Vermilion River Project

February 4, 2013

Hi Kim,

Xeneca would like to thank Council for considering the request. If any members have outstanding concerns or require clarification, please let me know.

I'd just like to let you know that we expect Notice of Completion for the Marter Twp. project to be forthcoming in the next few weeks. At that time, notification will appear in local media and, as a valued stakeholder, you will receive email notification as well.

Hard copies of the Environmental Report (ER) will be available at various location (including your offices – we will be mailing you a copy), and copies will be posted on the Xeneca website and the Provincial EBR.

If at any time you have further comments or concerns, please let me know.

Thank you!

Yours truly,
Steph

Stephanie Hodsohl
Stakeholder Relations
Xeneca Power Development
5255 Yonge St., Suite 1200
North York, ON M2N 6P4
(416) 590-3077

From: Inquiries [<mailto:inquiries@sables-spanish.ca>]
Sent: Thursday, December 13, 2012 11:34 AM
To: Mark Holmes
Subject: Vermilion River Project

Good Morning Mr. Holmes,

The Council of the Township of Sables-Spanish Rivers had another regular meeting last evening. Your request for reconsideration of their previous resolution was on the agenda.

I must advise that Council did not alter their position and affirmed their support for the Lacloche Foothills motion opposing this project.

*Kim Sloss, Clerk-Administrator
Township of Sables-Spanish Rivers
11 Birch Lake Road*

Box 5, Site 1, R.R. #3
Massey, ON P0P 1P0
Tel. 705-865-2646
Fax 705-865-2736
E-mail: kasloss@sables-spanish.ca

From: Mark Holmes [<mailto:mholmes@xeneca.com>]
Sent: November-30-12 7:27 AM
To: inquiries@sables-spanish.ca
Cc: Stephanie Hodsoll
Subject: thanks!

Dear Kim:

Please extend to Mayor and Council my sincere thanks for the opportunity to present our Wabageshik GS project. I felt it was a great opportunity to share information and to provide answers to the many good questions posed by the Deputy Mayor and members of Council.

Given the information presented and the positive attributes of the project, we remain hopeful that the municipality will rescind or modify its earlier resolution opposing the development.

We look forward to working with your community, and, if there are any other questions, please do not hesitate to contact me or my colleague Stephanie Hodsoll.

Very best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5255 Yonge St.
Suite 1200
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M2N 6P4
416-590-9362
416-590-9955 (fax)
647-588-9707 (cell)

mholmes@xeneca.com

www.xeneca.com

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Sudbury

Stephanie Hodsoll

From: Vanesa Enskaitis
nt: Tuesday, February 22, 2011 11:35 AM
o: Stephanie Hodsoll
Subject: FW: meeting

Categories: Logged, Public

From: Mark Holmes
Sent: Tuesday, September 21, 2010 10:51 AM
To: Mark Simeoni
Cc: Vanesa Enskaitis; Judy Leavitt
Subject: RE: meeting

Mark:

I'm looking forward to meeting with you and your City of Sudbury colleagues on Thursday at 1 p.m. I have a Power Point presentation as well as some maps for everyone to review. If there is anything else you'd like me to bring, or matters I should be aware of, I can be reached via this e-mail or my cell at 416-705-4283.

Best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
North York
M2N 6L9

416-590-9362
416-590-9955 (fax)
6-705-4283 (cell)

mholmes@xeneca.com

www.xeneca.com

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From: Mark Holmes
Sent: September 3, 2010 8:55 AM
To: 'Mark Simeoni'
Cc: Judy Leavitt; Vanesa Enskaitis
Subject: RE: meeting

Thanks Mark:

Looking forward to meeting you there.

Judy pls put in my calendar

Vanesa, you can book book my flight out of Sudbury for late afternoon on the 23rd.

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
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90-9362

416-590-9955 (fax)

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From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: September 3, 2010 8:53 AM
To: Mark Holmes
Subject: RE: meeting

Hi mark we have reserved September 23 from 1:00 pm to 3:00 pm for a meeting. The location will be room C-13 at City hall in sudbury (Tom daves square)

regards, mar

Mark H. Simeoni, MCIP, RPP
Acting Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department
P.O. Box 5000, Station "A"
200 Brady Street
Sudbury ON P3A 5P3
674-4455 ext.4292
690-7765 cell

k
>>> "Mark Holmes" <mholmes@xeneca.com> 8/30/2010 9:27 AM >>>
Good morning Mark:

Just following up regarding our waterpower projects on the Vermilion River and recent expressions of interest from local Council members, City staff and Conservation Authority.

I will be in the Sudbury Region September 23/24 and would be pleased to provide a briefing to interested parties regarding our proposed projects. If amenable to the various schedules, the afternoon of September 23 would work best for me, but I can also try for late morning on the 23rd or morning of the 24th.

Kindly advise on what date and time works best.

Thanks and best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
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416-590-9955 (fax)
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www.xeneca.com

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-----Original Message-----

From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: August 13, 2010 3:05 PM
To: Mark Holmes
Subject: Re: meeting

Thanks mark we will rely on the website in the interim to understand the project. I will forward the link to the community partners

Regards, mark
Sent from blackberry

-----Original Message-----

From: "Mark Holmes" <mholmes@xeneca.com>
To: Mark Simeoni <Mark.Simeoni@city.greatersudbury.on.ca>
Cc: Patrick Gillette <pgillette@xeneca.com>

Sent: 8/13/2010 2:49:05 PM
Subject: RE: meeting

Mark:

Thanks for the advance notice of interest expressed by local councilors and the Conservation Authority.

Our apologies but the workload has been extremely heavy this month and shows no signs of abating. We do very much want to get to Sudbury in the near future to meet with you and other stakeholders and will do so as soon as we can coordinate.

Will keep you posted and please note that we have recently uploaded considerable information about our projects on our website at www.xeneca.com (just click on projects and follow the prompts to view the Vermillion River sites.)

Best regards,

Mark Holmes

Vice President

Corporate Affairs

Xeneca Power Development

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mholmes@xeneca.com <<mailto:mholmes@xeneca.com>>

www.xeneca.com <<http://www.xeneca.com>>

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From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: August 13, 2010 9:56 AM
To: Mark Holmes
Subject: meeting

Mark, I have been contacted by the local Councillor as well as the local Conservation Authority with respect to the proposed internal stakeholder meeting that we have been discussing.

They are asking when this meeting might occur as they are aware that this project is underway and ads have appeared in the local papers.

I am being asked to advise them if they should wait for a meeting or should they simply respond to your proposal individually. At this time it does appear that a meeting is not forthcoming as we have not heard back from you.

If we do not hear from you in the near term we will advise our community partners to deal directly with Xeneca and we would anticipate that you will co-ordinate these meetings as required.

Please advise us of any public meetings that you are planning so that we may attend.

regards, mark

Stephanie Hodsoll

From: Vanesa Enskaitis
Sent: Tuesday, February 22, 2011 2:13 PM
To: Stephanie Hodsoll
Subject: FW: thanks and follow up

Categories: Logged, Public

From: Mark Holmes
Sent: Friday, September 24, 2010 4:33 PM
To: Ed Laratta
Cc: Vanesa Enskaitis; Arnold Chan; Patrick Gillette
Subject: FW: thanks and follow up

Ed,

re: Sudbury official plan to Vermilion sites, pls see below.

Mark

From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: September 24, 2010 3:42 PM
To: Mark Holmes
Subject: Re: thanks and follow up

Hi Mark, that was an excellent meeting. We all waked a way with an understanding of your company and the project. I have included a link to our Official Plan, which is on line. You will find all the background studies, text and mapping there. If for some reason the link does not work etc, or you need clarification with any parts of the document please contact me directly.

kind regards, Mark

http://www.greatersudbury.ca/cms/index.cfm?app=div_planning&lang=en&currID=4741

Mark H. Simeoni, MCIP, RPP
Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department

Stephanie Hodsoll

From: Vanesa Enskaitis
nt: Tuesday, February 22, 2011 1:46 PM
to: Stephanie Hodsoll
Subject: FW: thanks and follow up

Categories: Logged, Public

From: Mark Holmes
Sent: Friday, September 24, 2010 12:08 PM
To: Mark Simeoni; jacques.barbeau@greatersudbury.ca
Cc: bill.lautenbach@greatersudbury.ca; dennis.lenzi@city.greatersudbury.on.ca; judy.sewell@greatersudbury.ca; paul.sajatovic@sudbury.ca; Vanesa Enskaitis; Ed Laratta
Subject: thanks and follow up

Mark:

Once again, thank you for your time and professionalism in setting up yesterday's meeting with your City of Sudbury Colleagues. I felt it a very productive introductory meeting and look forward to our subsequent exchanges as we move forward with our Vermilion R. projects.

Please extend my thanks to Jacques, Bill, Dennis, Judy and Paul for their invaluable input and offers of assistance.

Also wondering if I could get a copy of the City's official plan, specifically any elements related to our projects. This could be helpful to our planning.

Thanks and very best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
North York
M2N 6L9

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416-590-9955 (fax)
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mholmes@xeneca.com

www.xeneca.com



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tel 416-590-9362 fax 416-590-9955 www.xeneca.com

October 28, 2010

Mr. Jacques Barbeau
City of Greater Sudbury
PO Box 5000, STN 'A'
200 Brady St.
Sudbury, ON P3A 5P3

Dear Councilor Barbeau:

Congratulations on your acclamation to the office of Sudbury Council Ward 2.

Your acclamation speaks volumes about the level of trust you have built and the leadership you have – and will continue to provide – to your community. We at Xeneca Power Development look forward to working with you, the City of Sudbury and the people of the region as we proceed with the process of developing waterpower facilities on the Vermilion River.

As our previous correspondence with the City has indicated, Xeneca is available should you, Mayor Matichuk, fellow councilors or City staff require at any time a briefing on our projects. All of our projects and descriptions can be viewed at our website at www.xeneca.com

Further, we anticipate holding Public meetings regarding our projects in the Region. Meetings are tentatively scheduled in Sudbury for January 26 and 27, 2010.

Input from First Nations and municipal leaders is also being sought during archeological and environmental assessments of the project sites, and considerable economic activity is expected to be generated throughout development, particularly when construction is anticipated to commence in late 2012 or 2013.

Again, congratulations and best regards on your respective election to office.

Very best regards,

Mark Holmes
Vice President
Corporate Affairs



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

October 28, 2010

Mayor Matichuk
City of Greater Sudbury
PO Box 5000, STN 'A'
200 Brady St.
Sudbury, ON P3A 5P3

Dear Mayor Matichuk:

Congratulations on your election to the office of Mayor of The City of Greater Sudbury.

Having earned the public trust speaks volumes about the campaign you have run and the leadership you will provide to your community. We at Xeneca Power Development look forward to working with you, the City of Sudbury and the people of the region as we proceed with the development of waterpower facilities on the Vermilion River.

We are also pleased to offer our congratulations to both returning and new members of Sudbury Council. As our previous correspondence with the City has indicated, Xeneca is available should Mayor, Council or City staff require a briefing on our projects. All of our projects and descriptions can be viewed at our website at www.xeneca.com

Further, we anticipate holding Public meetings regarding our projects in the Greater Sudbury Region. Meetings are tentatively scheduled in Sudbury January 26 and 27 2010.

Input from First Nations and municipal leaders is also being sought during archeological and environmental assessments of the project sites, and considerable economic activity is expected to be generated throughout development, particularly when construction commences in late 2012, 2013.

Again, congratulations and best regards on your and council's respective election to office.

Very best regards,

Mark Holmes
Vice President
Corporate Affairs

Stephanie Hodsoll

From: Vanesa Enskaitis
Sent: Thursday, February 24, 2011 2:43 PM
To: Stephanie Hodsoll
Subject: FW: public meeting on Vermillion River

Categories: Public, Logged

Not sure if you have this one

From: Mark Holmes
Sent: Friday, December 10, 2010 7:26 PM
To: mark.simeoni@city.greatersudbury.on.ca; Judy Leavitt; Vanesa Enskaitis
Cc: Patrick Gillette; Arnold Chan
Subject: RE: public meeting on Vermillion River

December 10, 2010

Good evening Mark:

Thanks for your e-mail and want to let you know that public meetings are planned for the first quarter of 2011.

We are currently working to complete our review of lands that may be affected by our projects. While the environmental foot print of each facility is relatively small, there are, as I am sure you are aware, a lot of mining claims, private holdings and infrastructure in the vicinity.

We are also working with MNR and wrapping up environmental studies which is taking a bit longer than anticipated. Once we get through these stages, we can provide you with advance notice of the public meetings as well as a more detailed project description.

In the meantime, I'm hoping we can sit down with the city to talk about the small municipal parcels of land that are in proximity to our projects. Ideally we'd like to discuss a purchase or land easement agreement. If you can help facilitate that meeting or direct me to the appropriate city officials that'd be great.

Kindly advise.

Thanks and best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
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416-590-9955 (fax)
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From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: Thursday, December 09, 2010 1:15 PM
To: Judy Leavitt
Subject: public meeting on Vermillion River

Hi can you please advise when the public information session will be held for the Vermillion river projects.

regards

mark

Mark H. Simeoni, MCIP, RPP
Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department
P.O. Box 5000, Station "A"
200 Brady Street
Sudbury ON P3A 5P3
674-4455 ext.4292
690-7765 cell

Stephanie Hodsoll

From: Stephanie Hodsoll
Sent: Thursday, February 10, 2011 4:36 PM
To: mark.simeoni@city.greatersudbury.on.ca
Subject: RE: wabageshik rapids

Hi Mark,

Just wanted to confirm that I have added you to our stakeholder contact list for our proposed Vermilion River projects. You will be notified of updates as they become available.

Have a nice evening!
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Mark Holmes
Sent: Thursday, February 10, 2011 3:46 PM
To: Mark Simeoni
Cc: Patrick Gillette; Arnold Chan; Ed Laratta; Vanesa Enskaitis; Stephanie Hodsoll
Subject: RE: wabageshik rapids

Thanks Mark:

I will forward this to our appropriate staff.

Best regards,

Mark

From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: February 10, 2011 9:45 AM
To: Mark Holmes
Subject: wabageshik rapids

Hi Mark, I have been looking at our maps and I believe that the Wabageshik rapids are outside of the City's boundaries.

If this is the case, and it looks like it, I do not think we need any further involvement with respect to this project. However we are very much interested in following the other three projects that Xeneca has within the City of Greater Sudbury's limits.

The Local Conservation Authority does have jurisdiction in this area and I believe they will continue to be involved.

regards, mark

Mark H. Simeoni, MCIP, RPP
Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department
P.O. Box 5000, Station "A"
200 Brady Street
Sudbury ON P3A 5P3
674-4455 ext.4292
690-7765 cell

Stephanie Hodson

From: Mark Holmes
nt: Wednesday, March 23, 2011 1:16 PM
ro: john@sudburychamber.ca
Cc: Stephanie Hodson; 'David Crump'
Subject: RE: Greater Sudbury Chamber of Commerce follow-up

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Logged, Public

John:

Thank you for getting back to us.

Looking forward to speaking with you about the Chamber and would be pleased to speak to Chamber members as we advance the project further in the coming weeks.

Best regards,

Mark Holmes

rom: "John Kennedy" <john@sudburychamber.ca>
Date: Fri, 18 Mar 2011 16:07:30 -0400
To: <mholmes@xeneca.com>
ReplyTo: john@sudburychamber.ca
Subject: Greater Sudbury Chamber of Commerce follow-up

Mark,

We would like to thank you for your recent letter sent to President/CEO Debbi Nicholson informing us of the plan for Xeneca's development on the Vermillion River. Unfortunately, we are unable to attend the information session next week in Espanola, but would welcome the opportunity to discuss membership in the Greater Sudbury Chamber of Commerce for Xeneca. The GSCC represents more than 1000 member companies and organizations, and as such is the voice of business for a wide range of companies, large and small, that may be interested in Xeneca's plans for the future. We also advocate on behalf of our members and Sudbury business as a whole, to all three levels of government to promote local economic development. I've taken the liberty of attaching a brief outline of the benefits of Chamber membership, and with your permission, will follow-up with a quick call early next week to discuss the details at your convenience. If you have any questions, please feel free to contact me directly. I look forward to talking with/meeting you.

Yours in business,

John

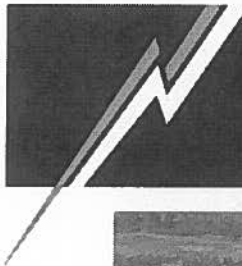
John Kennedy
Membership Accounts Manager
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 223
C: (705) 919-1335
F: (705) 673-1951
john@sudburychamber.ca
www.sudburychamber.ca

Your Business Network

✕

✕

✕



Waterpower on the Vermilion

Addressing Multiple Objectives



Presented to: City of Greater Sudbury Planning Committee,
March 23, 2011



Thank you

- Xeneca thanks the City of Greater Sudbury for providing the opportunity to present our Vermilion River Projects.
- This presentation is part of our efforts toward public consultation. Public Information Centres (PICs) are planned for 2011. Outreach also includes a comprehensive website, newspaper advertising and e-mail links to deal with the many questions we expect to receive about the projects.
- Any interested person that would like information about projects, or to make comments to Xeneca about the project is encouraged to contact Xeneca. Xeneca wants to receive local input so we can address their questions!
 - www.xeneca.com (416) 590-9362
 - shodsoll@xeneca.com



Outline

- Part 1: a bit of history of waterpower
- Part 2: process leading up to this project
- Part 3: engineering details of Vermilion projects
- Part 4: addressing stakeholder & community issues with engineering solutions



Waterpower History

Decew Gristmill 1872



Mechanical mills pre-dated electricity in Ontario. Waterpower technology, even in its simplest form had a profound effect on productivity and daily life in Ontario from early settler's days onward.

Decew mill horizontal axial turbine 15" dia, 40 ft head
Mechanical Power output = 49 horsepower or 36 kW
Sawmill undershot wheel 6' dia., 3.5 ft head (estimated)

Almonte Electric 1908



1900+ towns started their own electricity plants like this one near Ottawa to meet growing interest in electricity. These were typically 1 to 10 MW (small).



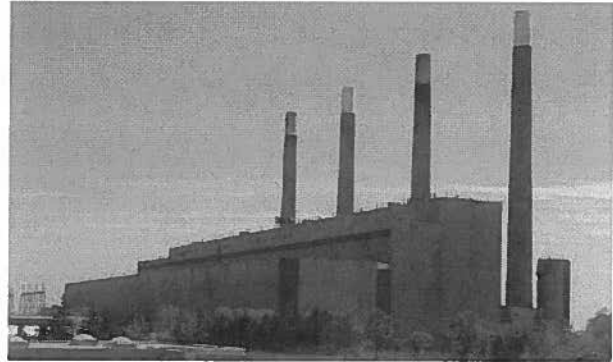
Waterpower History (cont'd)

Water goes big 1930+



Hydro projects grew to grand scale till 1960's but few large hydro sites exist in Ontario and even fewer are close enough to the big cities. Photo: DesJoachims, a 429 MW plant, 1950. Three Gorges Dam in China is 22,000 MW. Ontario is limited by topography and rain fall.

Coal is King 1940+

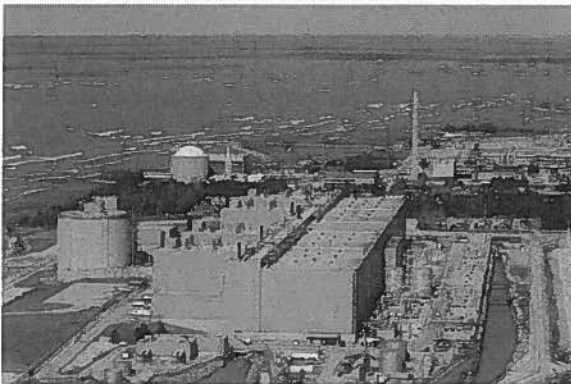


Lakeview station (2,400 MW) commissioned in 1962, now defunct. Coal began to play a growing role as Ontario was running out of accessible waterpower. Site locations and nuclear was still in its infancy.



Waterpower History (cont'd)

Nuclear quenches thirst for power 1966+



Large plants are needed to fill the over growing cities. This plant is Bruce Nuclear commissioned in 1978 on Lake Huron. Large plants meant large transmission lines to connect cities to the generation source.

Green, clean revival

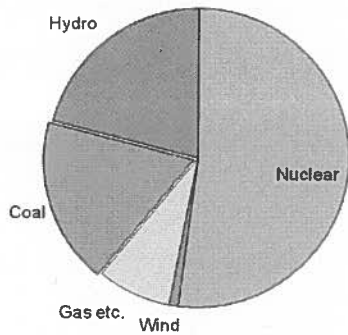


Small hydro comes back with the move to more renewable power like this new powerhouse in Almonte related to the redevelopment of the 1908 project (5 MW). History meets renaissance!



Our aging supply mix

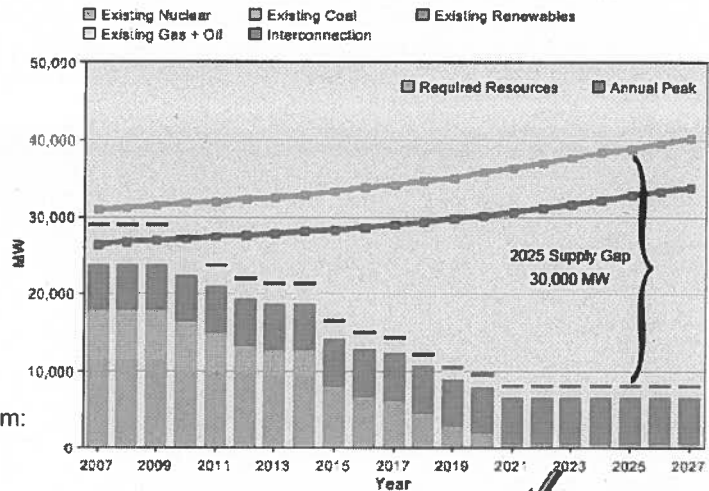
Ontario Supply Mix Today



The growing supply gap could come from:

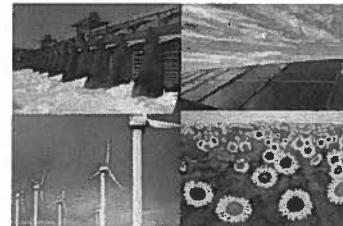
- New nuclear
- Keeping waterpower operational
- Adding gas for peaking load
- Diversifying the supply mix
- (small hydro, distributed generation, other...)

The big supply problem



Why renewables?

- Wind, solar and small hydro have a role to play in diversification of the supply mix:
 - Increased system reliability on local level
 - Decreased need for new transmission lines
 - Part of global trend to go green
 - Make communities part of the solution
- Renewables will not fix Ontario's overall supply gap, but they have an important role to play.
- Nuclear is needed to strengthen our base load supply. Gas and large hydro is needed to meet peak load flexibility. Renewables are required to diversify our supply mix.



(Photo Credit: sustainabilityninja.com)





Waterpower Industry in Ontario

- Ontario has had an active waterpower industry for many decades – engineering, equipment manufacturing, service companies.
- Industry growing globally
 - projected 850,000 MW today to 1,425,000 MW by 2030
 - \$ 3 Billion global market
 - Opportunity for Ontario waterpower industry

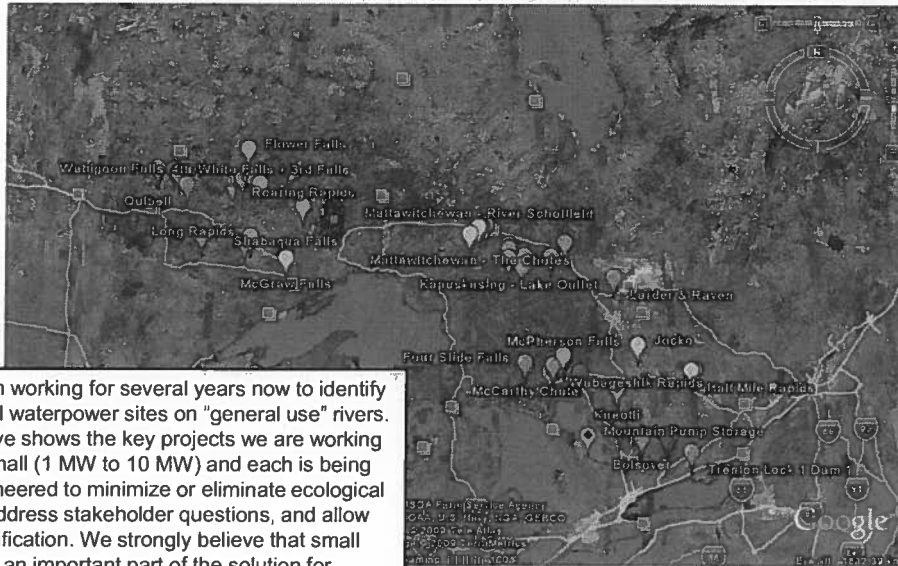


Small is Beautiful (& Green)

- What makes small waterpower green?
- To be green, small waterpower has to meet multiple criteria:
 - Under 10 MW
 - Minimal or no storage (less than 48 hrs)
 - Minimal environmental impact (eg. fish)
 - Small physical and ecological footprint.
- Facilities that meet green criteria are eligible for **EcoLogo[®] Certification** from the Canada government.
- Xeneca strives to obtain EcoLogo Certification for each project as a reflection of our efforts to be green.
- Being green means making extra effort in the engineering process to address environmental issues and stakeholder questions.



Xeneca's Mission: identify and build multiple small waterpower projects throughout Ontario

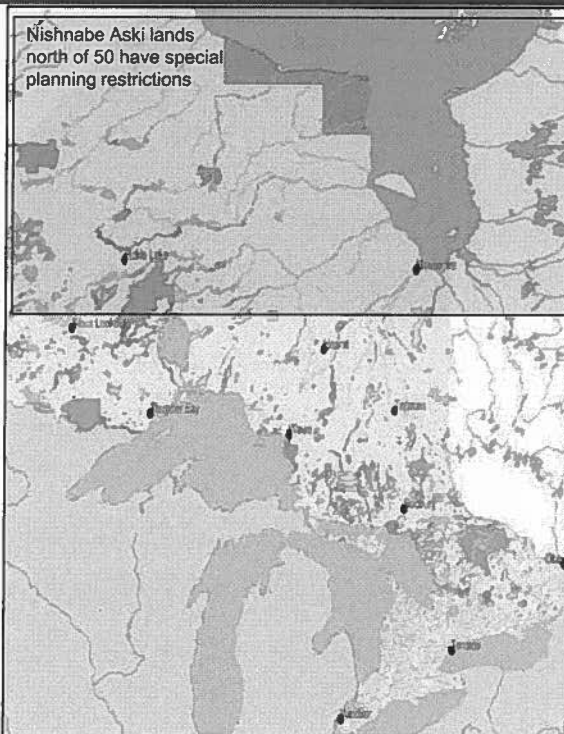


We have been working for several years now to identify potential small waterpower sites on "general use" rivers. The map above shows the key projects we are working on. Each is small (1 MW to 10 MW) and each is being carefully engineered to minimize or eliminate ecological impact, and address stakeholder questions, and allow EcoLogo Certification. We strongly believe that small waterpower is an important part of the solution for Ontario's electricity supply mix and the right thing to do from a sustainability point of view.



"It's not easy being green"

(Kermit the Frog)



Government restricts where sites can go:

In addition to the EcoLogo criteria, project sites must be on "**general use**" rivers, and not in:

- Wilderness parks
- Natural environment parks
- Waterway parks
- Nature Reserve Parks
- Recreation Parks
- Historical Parks
- Conservation Reserves
- National Parks
- First Nation Reserves
- Nishnawbe Aski Lands (North of 50)

Many rivers and most potential project sites are affected by one or more of these planning constraints.

Planning constraints are a key factor in the focus on a limited number of small (1 MW to 10 MW) project sites.





Vermilion River Projects

- All four projects – McPherson Falls, Cascade Falls, Soo Crossing and Wabagishik all meet the criteria demanded for a green, environmentally friendly, small waterpower project.
- Hydrology and topography show the Vermilion sites have good generation potential with a total installed capacity of about 11.8 MW.
- Supports development of renewable energy that will power between 500 and 700 households per MW. Combined, the Vermilion projects will produce enough energy for more than 8000 homes.

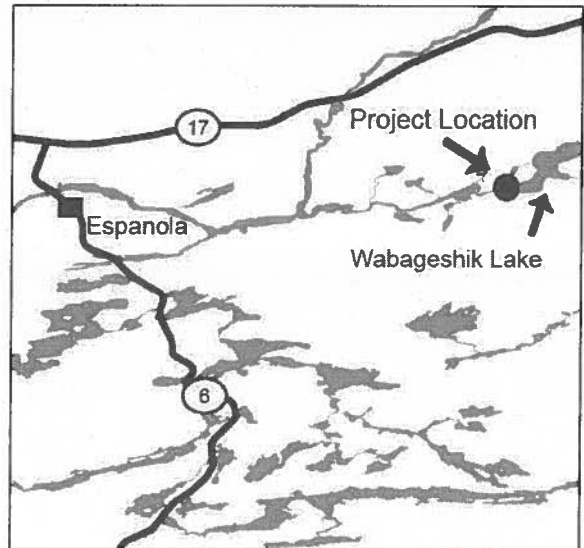
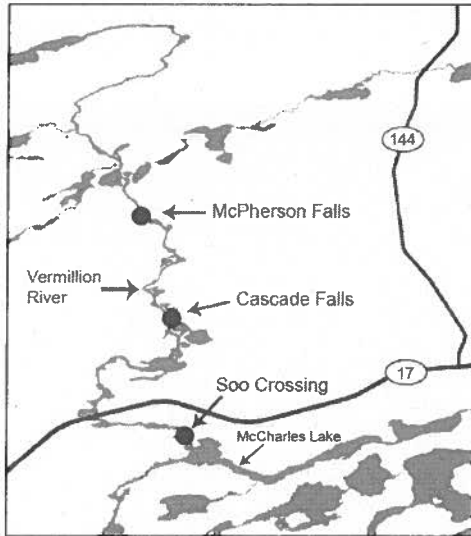


Vermilion River Projects

- There is also a significant return to the people of Sudbury. Royalties and fees of approximately \$5 million per MW are paid to the municipality over the next 40 years.
- That's well in excess of \$50 million!
- In addition, during construction Xeneca strives to procure its goods and services locally. On average about \$2.5 million per MW or approximately \$30 million will be spent locally on labour, trucking, steel, equipment rental, surveying, legal and professional services, food, fuel and accommodation.

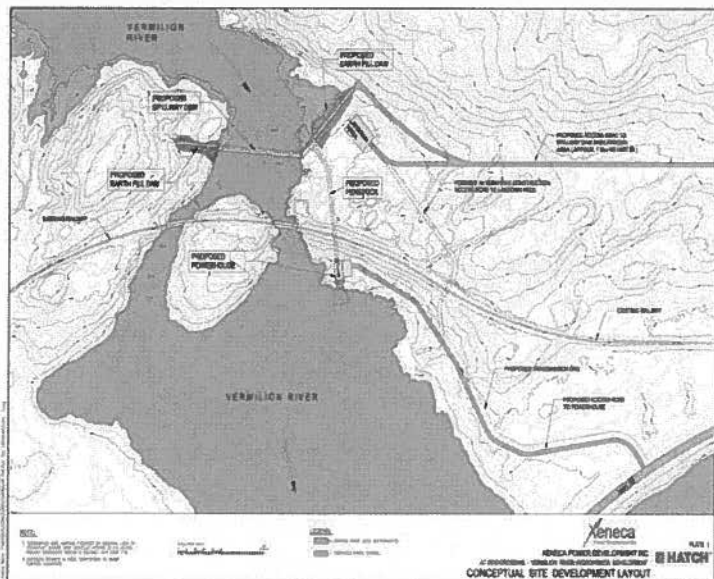


Site locations



At Soo Crossing 4.3 MW

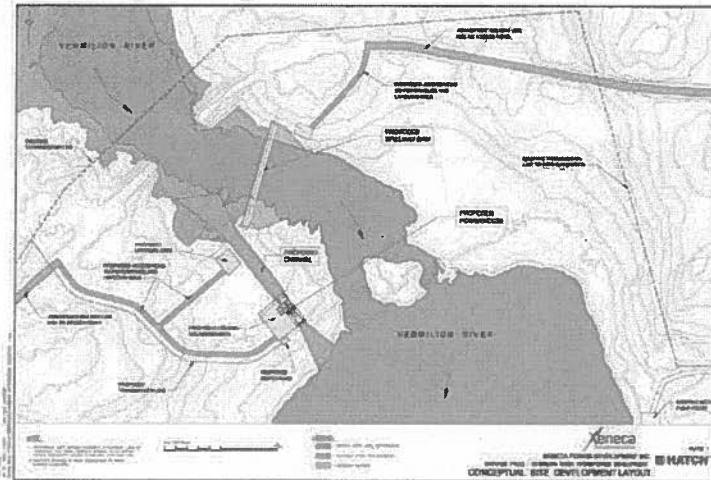
- Existing rapids/falls on Vermilion River ± 70 m upstream of existing railway bridge, ± 2.6 km downstream of Highway 17.
- Concrete spillway dam and fill embankments Penstock and powerhouse.
- ± 1.5 km new access road to existing Hwy 55.
- Xeneca requests City input and support.



Cascade Falls 2.1 MW

- Existing rapids/falls on Vermilion River ± 400 m downstream of hydro corridor, ± 4.4 km upstream of Highway 17.
- Concrete spillway dam, intake channel and Powerhouse, transformer station.
- ± 1.5 km new access road to existing Hwy 55.
- Xeneca requests City input and support.

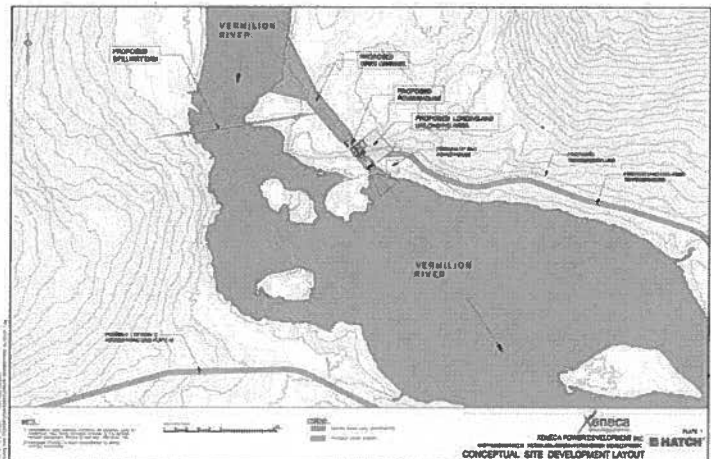
NO IMPACT ON WATER INTAKE



Xeneca
Power Development Inc.

McPherson Falls 2MW

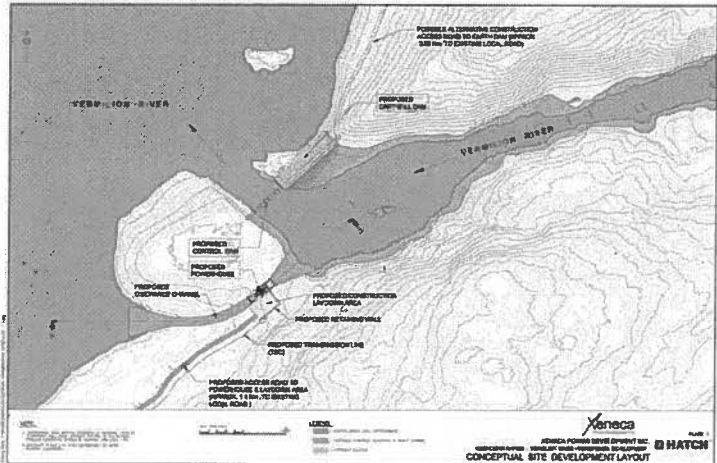
- Existing rapids/falls on Vermilion River ± 8 km upstream of Highway 17.
- Concrete spillway dam Intake channel and Powerhouse, transformer station.
- ± 3.5 km new access road to existing local road.
- Xeneca requests City input and support.



Xeneca
Power Development Inc.

Wabagishik Rapids 3.4 MW

- Existing rapids/falls on Vermilion River approximately ± 400 m downstream of existing road, approximately ± 600 m downstream of Wabageshik Lake.
- Concrete spillway dam, Powerhouse, transformer station, ± 500 m new access road to existing local road.
- Xeneca requests City input and support.



Project Features

Least Environmental Impact of Early Options

Why?

- Small ecological footprint
- Only small sections of river affected
- Avoids impact on recreational uses
- Better aesthetics;
 - No large/unsightly conveyance systems
 - Low profile powerhouses can be tucked into natural depression and/or landscaped
 - Minimal excavation
- No large dams required



Engineering Design Solution

- Continues to be heavily directed by concerns & issues raised by community stakeholders



Addressing Stakeholder Questions

- Various issues have been raised by stakeholders to-date:
 - Fish and canoe passage over or around structures
 - Sharing water between municipal needs, recreation and power production
 - Public safety
- Xeneca has been working actively to address issue with engineering solutions:
 - Project design study
 - Safety study
 - Hydraulic modeling study



Class EA Process

- Xeneca to share information with public
- Xeneca open to public input, ideas and designs



Process is at an early stage with plenty of time for consultation and project review

Process is proponent driven and comments must be directed to Xeneca

Final design and concept is based on result of public and government agency input



Challenge – water sharing

- *Will there be enough water for all considerations*
- *YES!*
- *Water flow must ensure ecological integrity*
- *Navigability must be maintained*



- **Xeneca Engineering can offer solutions**

- *a lot is possible!*

- ie: *ensure municipal infrastructure is not impacted*

- Improve control to reduce flooding or enhance flow during dry periods*

- *Look at flow needed and at what times*
 - *Look at managing plant output at a certain time or for special events!*



Additional Benefits

- **Can the project create benefits to river users, i.e. better portages, rest areas, boat launches? YES!**

- On another site Xeneca has retained a hydraulic laboratory to examine;*

- *Can the project create artificial waves?*
{It has been done elsewhere!}

- *Can the Tailrace area below the Powerhouse be Sculptured to Create a Wave Feature?*



Xeneca Engineering is looking for input from Local Stakeholders to Find Innovative Solutions!





Public safety

- Will the Facility be Safe?
 - *Public Safety is Paramount*
- Safety plan in preparation by an independent engineer.



Summary

- Placing a small waterpower project into a community creates challenges.
- *Xeneca is addressing these challenges through:*
 - Innovative and appropriate design features
 - Plant operation with recreational uses in mind
 - Public Safety oriented engineering to ensure the project is safe and the river accessible.



Stephanie Hodsoll

From: Stephanie Hodsoll
Sent: Monday, April 11, 2011 4:57 PM
To: cortney@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)
Attachments: image001.jpg; image002.jpg; image003.png; image004.jpg
Categories: Public, Logged

That's great, thank you Cortney! We'll be in touch.

Cheers,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Cortney Lanteigne [mailto:cortney@sudburychamber.ca]
Sent: Monday, April 11, 2011 2:38 PM
To: Stephanie Hodsoll
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

Stephanie,

I have penciled that into our events agenda for the fall. Once membership has been processed we will be able to start working on the promotional material.

Thanks
Cortney

Cortney Lanteigne
Special Events Coordinator
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 224
F: (705) 673-1951
cortney@sudburychamber.ca
www.sudburychamber.ca

Your Business Network



Greater Sudbury
**Chamber of
Commerce**



**Chambre de
commerce**
du Grand Sudbury



From: Stephanie Hodson [mailto:SHodson@xeneca.com]
Sent: April-11-11 11:58 AM
To: cortney@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

Great, thanks Cortney. Thursday November 17 would be best for Mark.
Please confirm.

Thanks,
Steph

Stephanie Hodson
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Cortney Lantaigne [mailto:cortney@sudburychamber.ca]
Sent: Monday, April 11, 2011 11:02 AM
To: Stephanie Hodson
Subject: RE: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

Good Morning Stephanie,

After speaking with Debby we have come up with the following potential dates. November 17, 18, 22.

Please let me know if any of these work with you.

Thanks
Cortney
Cortney Lantaigne
Special Events Coordinator
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 224
F: (705) 673-1951
cortney@sudburychamber.ca
www.sudburychamber.ca

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du Grand Sudbury



We want to hear from you! Membership Survey 2011

From: Stephanie Hodsoll [mailto:SHodsoll@xeneca.com]
Sent: April-11-11 10:52 AM
To: debbi@sudburychamber.ca
Cc: cortney@sudburychamber.ca; barbara@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

April 11, 2011

Good morning everyone,

Debbi, thanks for your response. Of course we understand that your calendar gets booked far in advance. Cortney, please let us know what dates this fall would work and Mark & I will figure it out on our end!

Cheers,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Yeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Debbi M Nicholson [mailto:debbi@sudburychamber.ca]
Sent: Tuesday, April 05, 2011 4:50 PM
To: Stephanie Hodsoll
Cc: cortney@sudburychamber.ca; barbara@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

Hi Stephanie

Thank you for your latest email. I have asked my Special Events Coordinator, Cortney Lanteigne, to contact you about potential dates. You should hear from her within the next few days.

If we are to host Mark as a speaker to discuss the project we trust that your plans will be far enough along so that he can share any business opportunities that some of our members may be able to consider. We likely can't consider a date until later this fall as our calendar is fully booked until that time. I hope this timing works for Mark.

All the best.

Debbi

Debbi M Nicholson
President & CEO
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 225
F: (705) 673-1951
debbi@sudburychamber.ca
www.sudburychamber.ca

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Commerce



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commerce
du Grand Sudbury



From: Stephanie Hodson [mailto:SHodson@xeneca.com]
Sent: April 5, 2011 4:31 PM
To: debbi@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

April 5, 2011

Hi Debbi,

Thanks for your email. We're sorry that you were unable to make our Public Information Centre but look forward to another opportunity to meet with you.

We'd like to take you up on your offer for Mark to come and present to your membership about our projects. Could you kindly provide some potential dates over the next while when Mark could present?

Thank you!

Yours truly,
Steph

Stephanie Hodson
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Debbi M Nicholson [mailto:debbi@sudburychamber.ca]
Sent: Monday, March 21, 2011 10:06 AM
To: Stephanie Hodson
Cc: cortney@sudburychamber.ca; 'Jonathan Laderoute'; melanie@sudburychamber.ca; barbara@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

Hello Mark

Thank you for your email and letter about the potential of your waterpower development on the Vermillion River. I appreciate you sharing this information with us. I will not be able to attend your public meeting in Espanola tomorrow evening due to other commitments.

I would encourage you to stay in touch with this office as your plans progress. Our members will be interested in any business opportunities they may be able to partner in with your company. Perhaps at some point in the future, as your plans progress, we could have you or another representative from your company address our membership. For the time being you can forward any additional information through me.

Best of luck with your development.

Thanks and all the best.

Debbi

Debbi M Nicholson
President & CEO
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 225
F: (705) 673-1951
debbi@sudburychamber.ca
www.sudburychamber.ca

Our Business Network



From: Stephanie Hodsohl [<mailto:SHodsohl@xeneca.com>]
Sent: March 18, 2011 10:24 AM
To: debbi@sudburychamber.ca
Subject: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

March 18, 2011

Good morning Ms. Nicholson,

By way of introduction, Xeneca Limited Partnership is the holder of a Feed-in-Tariff contract from the Ontario Power Authority for the potential waterpower development of the Wabagishik Rapids site on the Vermillion River located in proximity to your business interests located in the Sudbury area.

As a responsible developer of renewable energy (waterpower) Xeneca is contacting you to, first and foremost, inform you of our intentions to develop the above note site(s) and to invite you to:

(a) Submit any questions, comments or observations directly to Stephanie Hodsoll from Xeneca at shodsoll@xeneca.com.

(b) Attend our public information centre at the Espanola Recreation Centre from 4 to 8 p.m. on March 22, 2011.

Xeneca's intention is to work with local businesses as it is our company policy -- to the greatest extent possible -- procure locally the goods and services required to develop our projects. Average cost to build waterpower in Ontario is \$5 million per MW, about half of which is spent locally where good and services are available. In addition, through royalties and taxes waterpower provides a significant return to taxpayers of approximately \$5 million per MW over a 40 year period.

Further Xeneca wishes to avoid any negative impacts to business, and, where possible enhance business opportunities.

If you have questions or concerns about Xeneca and/or our projects, please do not hesitate to contact Mark Holmes, Vice President Corporate Affairs, as follows:

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development
mholmes@xeneca.com
416-590-9362 (office)
416-705-4283 (cell)

Please distribute this email and attached letter as appropriate.

Thank you!

Yours truly,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

Stephanie Hodson

From: Arnold Chan
Sent: Tuesday, May 24, 2011 12:23 AM
To: tanya.rossman-gibson@greatersudbury.ca
Cc: Mark Holmes; Judy Leavitt; Patrick Gillette
Subject: Meeting regarding Lands and Impacts from Xeneca's Projects
Attachments: All Landowners Vermillion River may 24 2011.pdf; At Soo Crossing - Inundation Map may 24 2011.pdf; City of Sudbury Affected Lands jan 31 2011.pdf; List of City of Sudbury Properties with potential Impacts on the Vermillion River draft 2 December 21 2010.docx

Categories: Public, Logged

Hi Tanya:

My colleague, Mark Holmes has left me your email to follow up regarding a potential discussion with you on lands as it relates to Xeneca's proposed waterpower projects on the Vermillion River. I had previously sent some information to Mark Simeoni but am not sure if the documentation made it to you.

In any event, I was hoping for your assistance and to set up an opportunity for potential discussion of some of the potential impacts on our project on lands that are in the control (or may be in the control) of the City.

Can you let me know if you ever received the original documentation? In any event, I enclose the following attachments that were part of an email sent several months ago.

I was also hoping for your assistance in clarifying a few parcels which I believe have reverted to City control as a result of tax forfeitures but would appreciate clarification regarding these parcels.

Anyways, I would like to set up a protocol to see if we can enter into discussions about compensation for any proposed impacts from Xeneca's proposed projects.

I will be in Sudbury tomorrow (for a meeting with Vale) and return Thursday. My colleague, Mark Holmes is meeting with Mark Simeoni on Friday morning. If there is a possibility of meeting this week, I would be more than happy to rearrange my schedule and stay longer to meet with you, if that is at all possible.

I look forward to hearing from you at your kind convenience.

Yours truly,

Arnold G. Chan
Xeneca Power Development Inc.
Vice-President, Legal Affairs
5160 Yonge Street, Suite 520
Toronto, Ontario M2N 6L9
Tel: (416) 590-9362, ext. 115
Fax: (416) 590-9955
achan@xeneca.com
www.xeneca.com

Stephanie Hodsell

From: Vanesa Enskaitis
Sent: Thursday, June 02, 2011 12:05 PM
To: Stephanie Hodsell
Subject: FW: request for info

Categories: Public, Logged

From: Mark Holmes
Sent: Monday, May 30, 2011 9:35 AM
To: Arnold Chan; 'Arnold Rudy'
Cc: Mark Simeoni; Patrick Gillette; Vanesa Enskaitis
Subject: FW: request for info

Following a very productive meeting with Mark Simeoni, Manager of Community and Strategic Planning Services Division in Sudbury

we have remapped the path forward to understand and assessment land impacts from our Vermilion River waterpower projects.

As we need to quickly move to ascertain impacts our Vermilion River projects may have on municipal lands in the City of Sudbury, the following steps need to occur.

1. The City requires better mapping, and, specifically, the ability to overlay our project impact zone on their real estate maps. Please see the e-mail below regarding the format that is required. KBM needs to provide maps in the requested format. It may be helpful to also send the raw LIDar data for the affected regions. Arnold Rudy will need to undertake this action as soon as possible.
2. Moving forward with the City on lands issues, Mark Simeoni will be the point person but Keith Forrester, keith.forrester@city.greatersudbury.on.ca who is head of the City Lands Division, and Tanya Rossmann-Gibson Tanya.Rossmann-Gibson@city.greatersudbury.on.ca must be looped in to email and the mapping process.
3. Liaising with our engineering department Arnold Chan will ensure that all potential impacts on lands are fully understood and communicated to the Mark S. and his colleagues at Sudbury City Hall.
4. Please keep me and all others copied on this e-mail in the loop. Vanesa, please ensure all communications and information exchanges are logged.

Thanks and best regards,

Mark Holmes
Vice President

Corporate Affairs
Xeneca Power Development

5160 Yonge St.
North York
M2N 6L9

416-590-9362
416-590-9955 (fax)
416-705-4283 (cell)

mholmes@xeneca.com

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From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: Wednesday, March 09, 2011 4:18 PM
To: Mark Holmes
Subject: Fwd: request for info

Mark H. Simeoni, MCIP, RPP
Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department
P.O. Box 5000, Station "A"
200 Brady Street
Sudbury ON P3A 5P3
674-4455 ext.4292
690-7765 cell

'>>> Mark Simeoni 3/9/2011 4:14 PM >>>

Hi mark, please read below, the request s for electronic mapping files. Can you assist.

regards, mark

Hi Mark,

To make things a bit easier (for us , real estate etc...) can you ask for digital mapping files, preferably ESRI format (shapefile or geodatabase) or at the very least a CAD file (DWG) of the maps that Xeneca provided to us? They had provided 4 maps; one overall map and 3 maps of each of the dam sites.

It would be easier for us to determine the effects of this project if we could incorporate their data with ours.

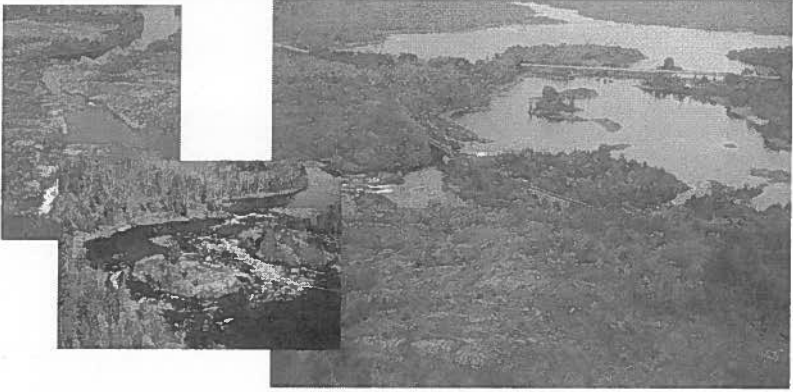
Thanks!

- Dave

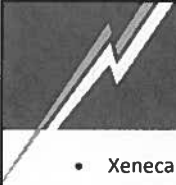
Mark H. Simeoni, MCIP, RPP
Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department
P.O. Box 5000, Station "A"
200 Brady Street
Sudbury ON P3A 5P3
674-4455 ext.4292
690-7765 cell



Vermilion River Hydro Community Impacts and Benefits



Presented to the Greater Sudbury Chamber of Commerce
November 17, 2011



Thank you

- Xeneca thanks the Sudbury Chamber of Commerce and its supporters for the opportunity to present.
- Public awareness and an open process are important to the success of these projects that need to be built on a foundation of good information provided from the broadest spectrum of stakeholders.
- **The better the input, the better the project!**
- Local input also opens the door to many benefits, including economic/business opportunities, social/recreational investments, community partnerships and collaboration.
- Today's presentation is among the first of many to be held in the area, and Xeneca looks forward to working with the people of Sudbury and District as we move forward with these projects.
- Interested in follow up?
 - www.xeneca.com (416) 590-9362
 - shodsoll@xeneca.com



Outline

- Part 1: A bit of history of waterpower
(Why the Vermilion?)
- Part 2: Project concepts
- Part 3: Stakeholder/ecological needs
- Part 4: The business case



Waterpower History

Decew Gristmill 1872



Waterpower technology, even in its simplest forms had a profound effect on productivity and daily life in Ontario from early settler's days onward.

Decew mill horizontal axial turbine 15" dia, 40 ft head
Mechanical Power output = 49 horsepower or 36 kW
Sawmill undershot wheel 6' dia., 3.5 ft head (estimated)

Almonte Electric 1908

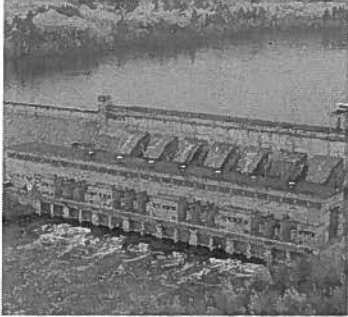


1900+ towns started their own electricity plants like this one near Ottawa to meet growing interest in electricity. These were typically 1 to 10 MW (small).



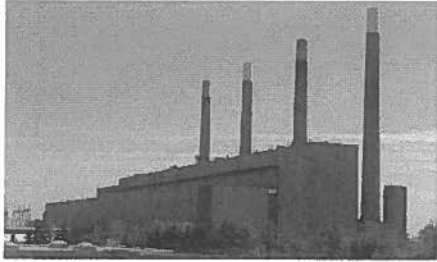
Waterpower History (cont'd)

Water goes big 1930+



Hydro projects grew to grand scale till 1960's but few large hydro sites exist in Ontario and even fewer are close enough to the big cities. Photo: Desloachims, a 429 MW plant, 1950. Three Gorges Dam in China is 22,000 MW. Ontario is limited by topography and rain fall.

Coal is King 1940+

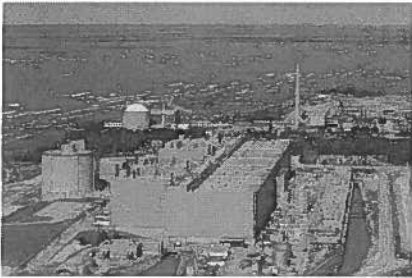


Lakeview station (2,400 MW) commissioned in 1962, now defunct. Coal began to play a growing role as Ontario was running out of accessible waterpower site locations and nuclear was still in its infancy.

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Power Development Inc.

Waterpower History (cont'd)

Nuclear quenches thirst for power 1966+



Large plants are needed to fill the power gaps created by growing cities and a rapid increased in manufacturing.

This plant is Bruce Nuclear commissioned in 1978 on Lake Huron.

Large plants meant large transmission lines and infrastructure to connect cities to the generation sources.

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Power Development Inc.

The Transmission Legacy

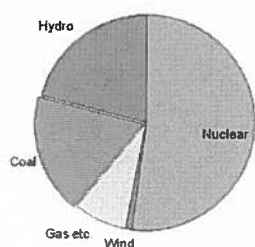
The transmission system of yesteryear is in need of modernization. Successive governments have not made changes that can accommodate new, localized generation.

The result is very limited connection space for new generation.



Our Aging Supply Mix

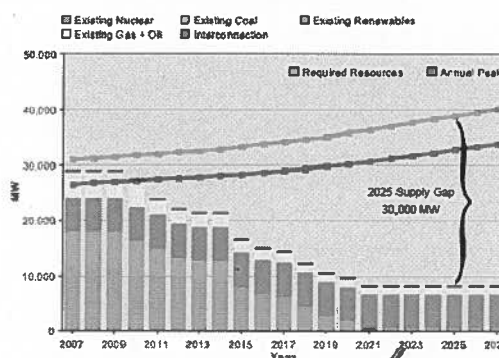
Ontario Supply Mix Today



The growing supply gap could come from:

- New nuclear
- Keeping waterpower operational
- Adding gas for peaking load
- Diversifying the supply mix
- (small hydro, distributed generation, other...)

The big supply problem





The Clean, Green Revival



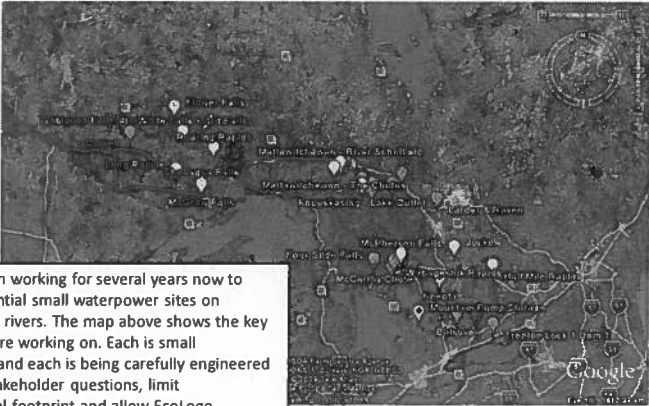
Small hydro comes back with the Green Energy Act and the move to more renewable power like this new powerhouse in Almonte that saw the redevelopment of a 1908 project (5 MW.)

History meets renaissance!





Xeneca's Mission: Identify and Built Multiple Small Waterpower Projects Throughout Ontario



We have been working for several years now to identify potential small waterpower sites on "general use" rivers. The map above shows the key projects we are working on. Each is small (1 – 10 MW) and each is being carefully engineered to address stakeholder questions, limit environmental footprint and allow EcoLogo certification. We strongly believe that small waterpower is an important part of the solution for Ontario's supply mix and the right thing to do from a sustainability point of view.

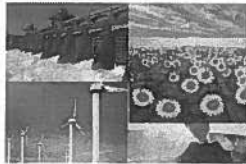


Why Hydro?

- Coal fired generation is mandated to be shut down in Ontario by 2014.
- Portion of replacement generation to come from renewables i.e. wind, solar, biomass and small hydro.

Each fuel source has a role to play in diversification of the supply mix:

- Increased system reliability on local level
- Decreased need for new transmission lines
- Part of global trend to go green
- Make communities part of the solution



(Photo Credit: sustainabilityninja.com)

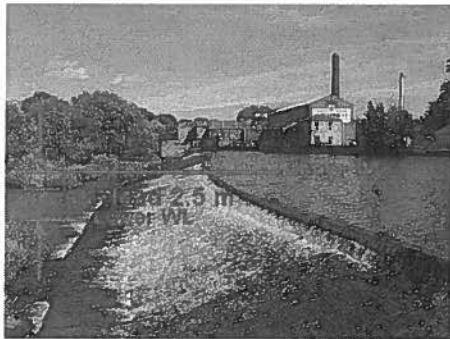


Why Hydro?

- Wind and Solar are clean but are intermittent sources ... i.e. they run when the wind blows or when the sun shines...

...and not necessarily when power is required.

- Water is predictable and provides a stabilizing effect that helps balance power production with consumption.




Why Hydro?

- Waterpower is long lived. Many facilities have been in operation 80+ years.

Solar and wind have a lifespan of about 20 years and nuclear 40 years.

- Waterpower is the least expensive alternative. In the long run it will help moderate electricity rate increases.



Furry Creek small hydro project near Squamish, BC



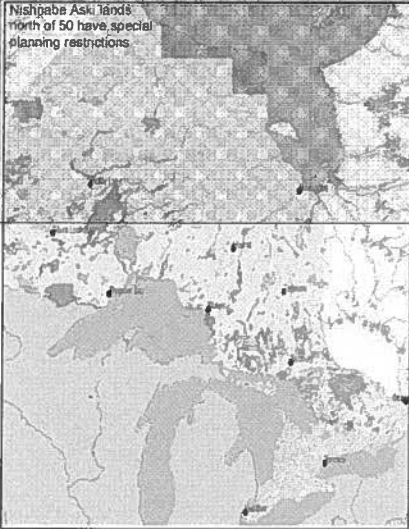
Small is Beautiful (and Green)

- What makes small waterpower green?
- To be green, small waterpower has to meet multiple criteria:
 - Under 10 MW
 - Minimal or no storage (less than 48 hrs)
 - Minimal environmental impact (e.g. fish)
 - Small physical and ecological footprint
- Facilities that meet green criteria are eligible for "EcoLogo Certification" from Government of Canada.
- Xeneca strives to obtain EcoLogo Certification for each project as a reflection of our efforts to be green.
- Being green means making extra effort in the engineering process to address stakeholder questions and concerns and, where possible, derive benefits.



“It’s Not Easy Being Green”

(Kermit the Frog)



Nishnawbe Aski lands north of 50 have special planning restrictions.

Government restricts where sites can go:
In addition to the EcoLogo criteria, project sites must be on “general use” rivers, and not in:

- Wilderness parks
- Natural environment parks
- Waterway parks
- Nature Reserve Parks
- Recreation Parks
- Historical Parks
- Conservation Reserves
- National Parks
- First Nation Reserves
- Nishnawbe Aski Lands (North of 50°)

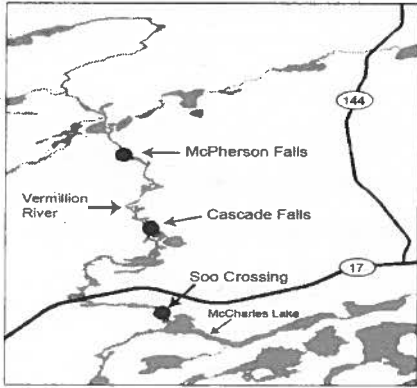
Many rivers and most potential project sites are affected by one or more of these planning constraints.

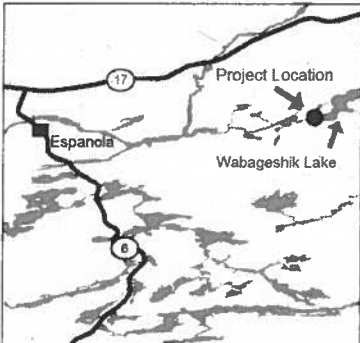
Planning constraints are a key factor in the focus on a limited number of small (1 – 10 MW) project sites.



Vermilion River Site Locations

- McPherson Falls
- Cascade Falls
- At Soo Crossing
- Wabagishik Rapids







Upper Vermilion River Projects

With so many sites removed because of land issues, parks and connection capacity issues, only a few sites in Ontario are viable. All Vermilion projects meet the necessary criteria.

1. River flow and head provide a economical return on investment
2. Site design and location meet constraints of a green, environmentally friendly small waterpower project. That means we are not in a park, we can reach agreements with land owners whom may be affected.
3. The projects can be connected to the grid NOW!



Upper Vermilion River Projects

Combined capacity of the three northern projects (McPherson Falls, Cascade Falls & At Soo Crossing) is 8.4 MW.

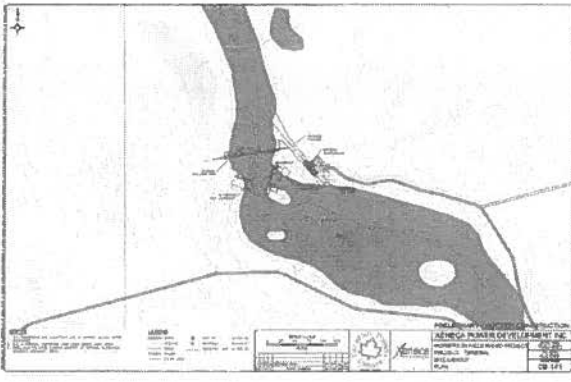
- River long term average flow (LTAF) = approx. 36.5 m³/s
- Project size 2 - 4.3 MW
- Energy output approx. 28,000 MWh/yr, equivalent to:
 - 2,000 Canadian households per year¹
 - about 3 percent of Sudbury's households²
 - reduction of almost 30 million kg / year of coal³
- 'Run of River' operation with modified peaking about 16 percent of the year
- Smaller dam structures and limited storage (less flooding)

Notes:

1. Cdn. Household electricity usage est'd at 12,000 to 12,800 (kWh/yr)
2. Refn: Canadian Census 2006, Population of Greater Sudbury, ON = 157,857
3. Typical US energy output values 2,249 lb coal burned / MWh electricity



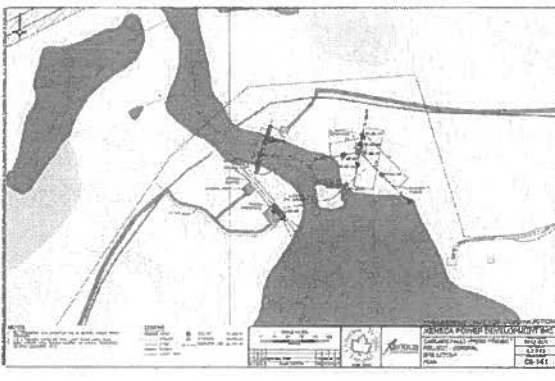
Current Project Proposal – McPherson Falls



Two design options but leaning toward less intrusive close coupled configuration



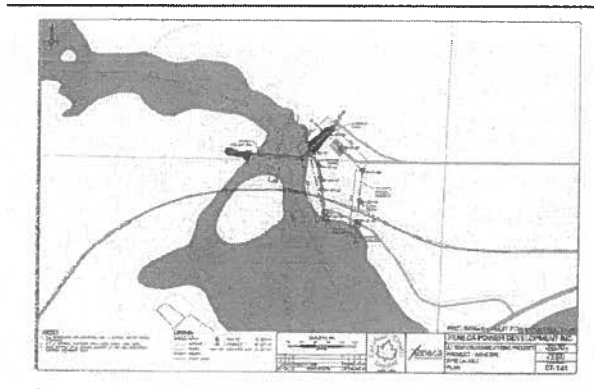
Current Project Proposal – Cascade Falls



Also considering design revisions which protect low lying area from flooding and close coupled design that has smaller ecological footprint.



Current Project Proposal – At Soo Crossing



Original design option remains preferred. No visual or water level impacts to downstream RV camp.



Project Benefits – Goods & Services

During construction Xeneca strives to procure its goods and services locally. On average about \$2.5 million per MW or approximately **\$30 million** will be spent locally on labor, trucking, steel, equipment rental, surveying, legal and professional consulting services, food, fuel and accommodation.

Expenditures have been ongoing since 2010 and will steadily increase through 2014-2015.



Project Benefits – Partnerships

- Xeneca is working with Vale and Xstrata on land issues and potential connections that increase efficiencies.
- Xeneca ready to work with City of Sudbury with a view to developing recreational attributes like hiking trails.
- Xeneca will work with local conservation organizations like Ontario Federation of Anglers and Hunters. Potential partnerships on fish hatchery programs.
- Xeneca is willing work with Laurentian University and other learning institutions on research programs.



Project Benefits – Partnerships

This year, Xeneca became a partner in Sudbury's *EarthCare* program and will help the City meet its objectives of:



- Supporting innovative approaches to energy production on industrial lands,
- Continuing efforts to generate renewable energy locally,
- Using renewable energy to power buildings and facilities,
- Attracting and retaining corporate investment in local renewable energy projects,
- Building local labor capacity in renewable energy,
- Pursuing opportunities for community-based power generation,
- Promoting and facilitate opportunities for energy generation that are supported by Ontario's Green Energy Act.



Long Term Economic Stimulus

Waterpower pays its share back to the People of Ontario. A portion of the Gross Revenue Charges (GRC) are paid on plant revenues generating a cash stream of that can help offset tax increases and can be used for public works that enhance quality of life. Over a 40-year contract period GRC is worth **\$4.5 million**.



Xeneca asserts that a portion of GRC should flow to municipalities hosting waterpower facilities and our company is urging municipal officials to join in lobbying efforts.



Waterpower Industry in Ontario

- Ontario has had an active waterpower industry for many decades – engineering, equipment manufacturing, service companies.
- Green energy initiatives have generated a renaissance and the transfer of a generation of knowledge.
- Actively growing industry globally
 - projected 850,000 MW today to 1,425,000 MW by 2030
 - \$ 3 billion global market
 - Opportunity for Ontario waterpower industry



Recreational Activities Coincide



- Norman Dam is a dam located just 6 km from Kenora. Fishermen will find a variety of fish including sucker, sturgeon and largemouth bass here.
- Belwood Lake Conservation Area occupies 1,400 hectares in the headwaters area of the Grand River. The lake was created in 1942 with the construction of the Shand Dam. The park offers anglers a chance to catch brown trout, small mouth bass, yellow perch, northern pike and carp. Boats and bait can be rented. Downstream of the dam is an excellent brown trout fishery, considered one of the best fly-fishing locations in North America.



Project Benefits – Tourism

Through design, Xeneca can create recreational amenities that can attract tourism. Wave features, predictable water flows can attract commercial operators and paying customers.



Organized activities around these amenities can also attract tourism spending.



A More Stable Electricity Supply

Reliable and predictable, waterpower can help stabilize the electricity transmission and distribution system.

Like water, electricity flows to the nearest outlet, so it is consumed first locally, and, in the event of larger system outages, Sudbury's lights will come on first.

Green energy is an important consideration for our future and Sudbury can enhance its green reputation.



Input to Project Proposal

This is the time for the Community to let Xeneca know:

- (a) How many people are using these sections of river?
- (b) When are people using the river?
- (c) Where is the preferred launch site(s)?
- (d) What are the activities on these parts of the river?
- (e) How can these activities be maintained and/or enhanced?
- (f) What are the safety concerns and how they will be addressed?





Public Safety

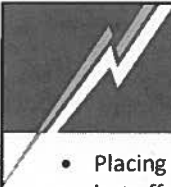
- Will the Facility be safe?
 - *Public safety is paramount*
- Could changes to flows cause safety issues?
 - Design and operation parameters mean no dramatic change in flows upstream or downstream
 - Design decision to go with close coupled systems means no dewatering effects. This is particularly important at Cascades where water intake is located downstream
 - *(Hydraulic modeling work under way) - Control means impact of severe weather or spring freshet can be better managed.*
- Safety plan in preparation by an independent engineer. Plan includes safety assessment, safety plan and hydraulic modeling.



Change

- These projects will bring change to the river, as have the dozens of other dams and structures that have been built on the Vermilion River.
- *We need green energy but must be vigilant in building to a higher standard and ensuring minimal impacts.*
- Changes can be positive. Communities have thrived with hydro in their midst for over 100 years.
- Aquatic habitat may change but can be managed with net positive benefits for fisheries and for people.





Summary

- Placing a small waterpower project into a community creates challenges but offers real and significant economic and social benefits.
- *Xeneca is addressing the challenges through:*
 - Innovative and appropriate design features.
 - Plant operation with recreational uses in mind.
 - Public safety oriented engineering to ensure the project is safe and the river accessible.
- Building partnerships and becoming part of the community is important to success.
- Social and economic benefits should accrue to the community and Xeneca a willing partner to help achieve.



Thank you!



Other



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

November 23, 2010

Department of Fisheries and Oceans Canada
Sudbury Reviewing Office
1500 Paris Street, Unit 11,
Sudbury, ON P3E 3B8

ATTN: Rich Rudolph, Senior Habitat Biologist

Dear: Rich Rudolph,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

This Project Description is provided to assist the proponent in ensuring that all aspects of the project are accounted for in enough detail to allow the public, Aboriginal communities and government agencies to provide meaningful comment throughout the Class EA process. This document attempts to delineate the "footprint" of the project within the environmental context of the study area and initially identify features of the environment that may be affected (directly and indirectly) by the proposed project. Xeneca acknowledges that additional potential effects may be identified throughout subsequent phases of the Class EA process as input is received from all stakeholders.

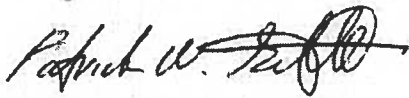
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The general public and other groups are also invited to review this document. The document will be provided to these parties through postings on the Xeneca website or, upon request, by direct mail.

If you have any questions or comments in relation to the Class EA for Waterpower Projects planning process or environmental impact assessment related matters, please do not hesitate to contact the OEL-HydroSys Inc. Environmental Assessment Manager, Ms. Tami Sugarman at (613) 839-1453 ext. 229 and tsugarman@oel-hydrosys.ca or Xeneca's Manager of Environmental Studies and Assessment, Edmond Laratta, at (416) 590-9362 ext. 106 and elaratta@xeneca.com.

For questions or comments in relation to all other aspects of the development proposal please contact Xeneca's President, Mr. Patrick Gillette at pgillette@xeneca.com or Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe at dassinewe@xeneca.ca.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Patrick W. Gillette", with a stylized flourish at the end.

Patrick Gillette
President
Xeneca Power Development Inc.

Ref: Xeneca Project Description Cover Let Nov 2010.doc



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tel 416-590-9362 fax 416-590-9955 www.xeneca.com

November 23, 2010

Department of Fisheries and Oceans Canada
Northern Ontario
Sudbury Office
1500 Paris Street, Unit 11
Sudbury, ON P3E 3B8

ATTN: Carl Jorgensen, Fish Habitat Biologist

Dear: Carl Jorgensen,

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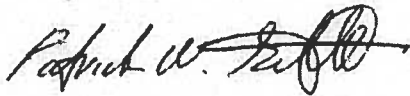
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November 23, 2010

Canadian Environmental Assessment Agency
Ontario Region
55 St. Clair Avenue East,
Suite 907
Toronto, ON M4T 1M2

ATTN: Amiel Blajchman, Project Manager

Dear: Amiel Blajchman,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

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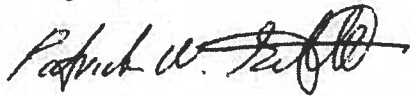
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November 23, 2010

Transport Canada
4900 Yonge Street, 4th Floor
Toronto, ON M2N 6A5

ATTN: Environmental Assessment Coordinator

Dear: Sir/Madam,

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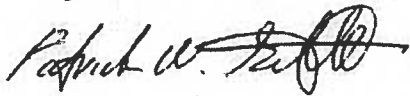
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November 23, 2010

INAC Department of Indian and Northern Affairs Canada
Environmental Assessment Coordination
25 St. Clair Avenue E. 8th Floor
Toronto, ON M4T 1M2

ATTN: Mei Ling Chen, Environment Officer

Dear: Mei Ling Chen,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

This Project Description is provided to assist the proponent in ensuring that all aspects of the project are accounted for in enough detail to allow the public, Aboriginal communities and government agencies to provide meaningful comment throughout the Class EA process. This document attempts to delineate the "footprint" of the project within the environmental context of the study area and initially identify features of the environment that may be affected (directly and indirectly) by the proposed project. Xeneca acknowledges that additional potential effects may be identified throughout subsequent phases of the Class EA process as input is received from all stakeholders.

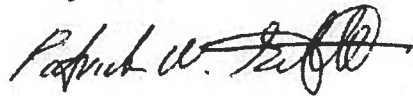
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The general public and other groups are also invited to review this document. The document will be provided to these parties through postings on the Xeneca website or, upon request, by direct mail.

If you have any questions or comments in relation to the Class EA for Waterpower Projects planning process or environmental impact assessment related matters, please do not hesitate to contact the OEL-HydroSys Inc. Environmental Assessment Manager, Ms. Tami Sugarman at (613) 839-1453 ext. 229 and tsugarman@oel-hydrosys.ca or Xeneca's Manager of Environmental Studies and Assessment, Edmond Laratta, at (416) 590-9362 ext. 106 and elaratta@xeneca.com.

For questions or comments in relation to all other aspects of the development proposal please contact Xeneca's President, Mr. Patrick Gillette at pgillette@xeneca.com or Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe at dassinewe@xeneca.ca.

Respectfully submitted,



Patrick Gillette
President
Xeneca Power Development Inc.

Ref: Xeneca Project Description Cover Let Nov 2010.doc



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

November 23, 2010

Health Canada
Ontario Region
180 Queen Street West, 10th Floor
Toronto, ON M5V 3L7

ATTN: Melanie Lalani, Regional Environmental Assessment Coordinator

Dear: Melanie Lalani,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

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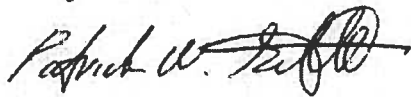
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Respectfully submitted,

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Patrick Gillette
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November 23, 2010

Environment Canada
Ontario Environmental Protection Operations Division
867 Lakeshore Road, P.O. Box 5050
Burlington, ON L7R 4A6

ATTN: Rob Dobos, Manager, Environmental Assessment Unit

Dear: Rob Dobos,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

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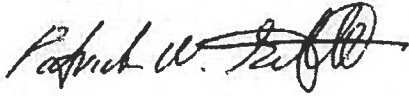
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tel 416-590-9362 fax 416-590-9955 www.xeneca.com

November 23, 2010

Natural Resources Canada
580 Booth Street, 3rd Floor
Ottawa, ON K1A 0E4

ATTN: Caitlin Scott, Junior Policy Analyst

Dear: Caitlin Scott,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

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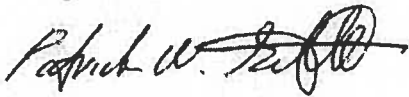
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November 23, 2010

Canadian Transportation Agency
15 Eddy Street, Jules Léger Bldg, 19th Floor
Gatineau, PQ K1A 0M9

ATTN: John Woodward, Senior Environmental Officer

Dear: John Woodward,

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Wabageshik Rapids (Vermillion River) GS project. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

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Patrick Gillette
President
Xeneca Power Development Inc.

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Danielle Dempsey

From: Muriel Kim
Sent: July-10-12 10:34 AM
To: 'kelly.eggers@dfo-mpo.gc.ca'; 'stephanie.davis@ceaa-acee.gc.ca'; 'lisa.mcdonald@tc.gc.ca'; 'EACoordination_ON@inac-ainc.gc.ca'; 'sheryl.lusk@ec.gc.ca'; 'Caitlin.Scott@NRCan.gc.ca'; 'john.woodward@cta-otc.gc.ca'; 'narren.santos@ontario.ca'; 'laurie.brownlee@ontario.ca'; 'phil.landry@ontario.ca'; 'bob.l.robinson@ontario.ca'; 'gerry.webber@ontario.ca'; 'Katherine.Kirzati@ontario.ca'; 'jennifer.lillie-paetz@ontario.ca'; 'helen.l.kwan@ontario.ca'; 'brett.smith@ontario.ca'; 'David.Pickles@ontario.ca'; 'pnorris@owa.ca'; 'choag@owa.ca'; 'paul.marleau@ontario.ca'; 'paul.sajatovic@sudbury.ca'; 'jmackenzie@town.espanola.on.ca'; 'mark.simeoni@city.greatersudbury.on.ca'; 'doug.nadorozny@greatersudbury.ca'; 'information@nairncentre.ca'
Cc: shodsoll@xeneca.com; Tami Sugarman; Kai Markvorsen
Subject: Notice of a Public Information Centre – Xeneca's proposed Wabagishik Rapids waterpower development
Attachments: Wabagishik PIC Ad - July 25 - French.pdf; Wabagishik PIC ad - July 25 final.pdf

Good morning,

This is to notify you that Xeneca will be hosting a public information centre (PIC) for its proposed waterpower development on the Vermilion River (Wabagishik Rapids project) in Espanola on July 25, 2012. The PIC will be held at the Espanola Recreation Centre from 4:00 p.m. to 8:00 p.m.

The advertisement for the PIC will be printed in both English and French in the Midnorth Monitor (July 11 and 18) and the Sudbury Star (July 14 and 18). Copies of the advertisements are enclosed.

Members of the project team will be on hand for the event to provide information on the project and to answer questions from the attendees.

Should you require additional information about the PIC, please contact:

Stephanie Hodsohl
Stakeholder Relations & Public Affairs Liaison
Xeneca Power Development Inc.
5255 Yonge St., Suite 1200
North York, ON M2N 6P4
T: 416-590-3077
F: 416-590-9955
E: shodsoll@xeneca.com

Danielle Dempsey

From: Muriel Kim
Sent: July-24-12 10:53 AM
To: 'kelly.eggers@dfo-mpo.gc.ca'; 'stephanie.davis@ceaa-acee.gc.ca';
'lisa.mcdonald@tc.gc.ca'; 'EACoordination_ON@inac-ainc.gc.ca'; 'sheryl.lusk@ec.gc.ca';
'Caitlin.Scott@NRCan.gc.ca'; 'john.woodward@cta-otc.gc.ca'; 'ellen.cramm@ontario.ca';
'bob.l.robinson@ontario.ca'; 'gerry.webber@ontario.ca'; 'jennifer.lillie-
paetz@ontario.ca'; 'brett.smith@ontario.ca'; 'David.Pickles@ontario.ca';
'paul.marleau@ontario.ca'; 'paul.sajatovic@sudbury.ca'
Cc: Tami Sugarman; Kai Markvorsen
Subject: Proposed Wabageshik Rapids waterpower project – Upcoming distribution of the
DRAFT Environmental Report

Good afternoon,

We will soon be distributing the DRAFT Environmental Report (ER) for the proposed Xeneca Power Corporation Inc. waterpower development at the Wabageshik Rapids Project site located on the Vermilion River.

The proposed undertaking is subject to the Class Environmental Assessment for Waterpower Projects as a new project on a managed waterway. While there is no formal requirement for a draft ER in the Class EA for Waterpower Projects, this document will be circulated to key parties in order to facilitate an efficient regulatory review of the final document.

We would like to confirm that you continue to be the appropriate one-window contact at your organization, and whether there are additional individuals within your organization whom you believe should also receive a copy of the draft ER. We are planning to distribute one hard copy and one CD-ROM to each regulator on our contact list; please let us know if you would like to receive additional copies, or if only one form of the report (hard copy or CD-ROM) would suffice.

I will follow up this message with a phone call within the next couple of days to confirm your participation in the review process.

Best regards,
Muriel Kim



Muriel Kim M.Sc.
Environmental Scientist

(T) (613) 839-3053 x261 (C) (613) 294-3886 mkim@wesa.ca www.wesa.ca

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.

Consultation Logs – Agency Comments and Xeneca Responses:

Ministry of Natural Resources

Ministry of the Environment

Fisheries and Oceans Canada

Municipalities

Other agencies

Wabagishik- MNR Comments

Theme	Date	Comment	Response	Section Reference
Species at Risk	27-Feb-13	MNR wants information gathering forms (IGFs) submitted as soon as possible with regards to Species at Risk	IGFs have been submitted by Andrew Schiedel of NRSI.	Annex III
Species at Risk	27-Feb-13	Xeneca may need an agreement in principle (endangered species act) for LRIA process (Post EA.) Within the ER Xeneca will need to identify potential effects and proposed mitigation	Final reports from NRSI include natural heritage, species at risk, effects tables etc.	Annex III
Aggregate Resources	27-Feb-13	Xeneca will not open its own pit - Xeneca will use local concrete suppliers and local available aggregate pits (Category 9) per recent comments made for the CMP and the EA.		Annex II
Water Management Planning	27-Feb-13	MNR recommends that intent of WMP be met through EA to avoid further process. As the WMP Policy is not yet complete the MNR can not advise on what may still be required, some public consultation post EA may still be required.	Xeneca commits to post-EA consultation if required. Xeneca is also committing to meet the intent of WMP in the EA document and do follow-up work with the WMP committee. At the Public Information Centre (PIC) on July 12, 2012, Xeneca has provided the public with an overview of the Water Management Planning process and opportunities to participate.	Appendix D
Erosion	27-Feb-13	MNR Regional Engineering and hydrologist requested more detailed information on geomorphology	Xeneca has retained Parish Geomorphic and completed detailed fluvial geomorphic assessments of the project site. Reports have been provided to regulatory agencies and can be found in the ER.	Annex I
Public Consultation	27-Feb-13	MNR will require evidence of adequate public consultation for permits/approvals and WMP process	All available information was presented to stakeholders during three Public Information Centres (PIC) in Espanola during March & October 2011, and July 2012. All identified stakeholders were notified of PICs through email blast, advertising in local media and personal invitations. All PIC panels were subsequently posted on the Xeneca website and all identified stakeholders were notified. Furthermore, Xeneca staff have met with landowners and public interest groups on several occasions. All final information is presented to all stakeholder groups in the ER, which will be available on the Xeneca website (soft copy) and at several public viewing locations (hard copy.) We welcome comments from stakeholders at any point during the process, and this will once again be made clear in the Notice of Completion, which will be emailed to stakeholders and appear in local media and on the Xeneca website. Xeneca is prepared to consider additional post-EA consultation if required, and is also prepared to participate with the WMP Committee.	Appendix D
Significant Wildlife Habitat	27-Feb-13	It should be noted that deer yarding occurs between wabagishik site and Elizabeth lake which may be transected by proposed roads and transmission lines	Deer migration routes have been studied and a monitoring program is in place to ascertain that migration across the Vermilion to and from yarding sites is not disrupted. It is not expected that transmission and road corridors will substantively affect deer. Assessments can be found in Annex III of the ER.	Annex III
Cumulative effects	27-Feb-13	It is MNRs perspective that cumulative effects can be addressed to some extent via post-construction monitoring plans and commitments	This is also Xeneca's perspective and intention. Please see Post-Construction Monitoring Plan in the ER	Annex III
Cumulative effects	27-Feb-13	The river system is already significantly altered and the question on whether Xeneca exacerbates those changes needs to be answered. Further discussion is required under effects and monitoring in the final ER	Substantial dialogue with regulatory agencies has occurred and Xeneca has adopted mitigation strategies and operating constraints in order that alteration of the system is not exacerbated. Xeneca has provided a rationalization that shows operations that reduce alteration or at all times remain within the existing condition. Rationalization and relevant reports can be found in Sections 11 and 12 of the ER.	Section 11 and Section 12
Deer Crossing	27-Feb-13	The memo on Deer Crossing that was provided addressed this issue, the final resolution and monitoring need to be reflected in the final ER	This information is included in the Wabagishik effects report and monitoring plan.	Annex III
Hydrological Assessment	27-Feb-13	Suggested that Xeneca use the 1981 to 2011 dataset put together by Sajad Jhan to re-run some of the key analysis for the ER	Noted the initial hydrology done by hatch in 2009. The MOE's draft permit to take water guidelines came out in 2010-2011 and additional studies were undertaken. Analysis of data from 1954-1993 from [Water Survey of Canada] Flow Gauge is very reliable and valid for modelling. Xeneca also used Vale data from 1994 to 2010.	Annex I
Ramping	27-Feb-13	At the time of this meeting Xeneca committed to no intermittent operation when flows are above 19 cms. Xeneca's turbines can operate continuously above 30 to 33% of the design flow value. 19 cms is 30% of design value therefore we can commit to this type of operation. Ramping time has been increased from 20 minutes to one hour.		Annex I

Minimum flow	27-Feb-13	There is habitat value in the pool immediately downstream of the proposed dam, if minimum flow is passed through the tailrace it may bypass this habitat	Xeneca has undertaken studies to determine turn over rates in pool area under various flow conditions. Xeneca has committed to a .5 cms flow through the pool area to ensure habitat functioning. Commitment has also been made to monitoring in the pool area. See Effects Report and Post construction Monitoring Report in the ER.	Annex III
	27-Feb-13	MNR needs to know if Xeneca's operations will exacerbate downstream pulses and some language in ER regarding offsetting pulse effect and/or mitigation at Espanola is needed	Xeneca has conducted relevant hydrological studies and assessment, and committed that operations at the Wabagishik Rapids GS will not force Domtar to operate in a manner that exacerbates flow fluctuations downstream of its Espanola dam. Further, Xeneca has provided a commitment letter to Domtar in which they have been requested to continue to operate in a manner consistent with its current patterns. There is no mechanism for Xeneca to control how Domtar operates.	Section 6.4.2
Domtar/Downstream Fluctuations	February 28, 2013	MNR expressed concerns about how additional water will affect fluctuations downstream of the Domtar facility	Xeneca has provided Domtar discharge data to MNR for review.	See the March 12, 2013 letter from Nava Pokharel to Bob Robinson (Annex I and Appendix C)
Fish spawning	February 28, 2013		Spawning timelines are included in the ER along with temperature based approach to operations during the spawning period.	Annex III
Power Lines & Roads	February 28, 2013	it is MNR's preference that both powerline and road follow the same corridor. MNR Does not want increased access to the area and the tandem approach also makes sense from a maintenance perspective	Xeneca is providing two options for access and powerlines in the EA. Regardless of which option is ultimately selected, the lines and the roads will utilize the same corridor.	Section 3.4 and Annex VI
Power Lines & Roads	February 28, 2013	MNR identified the challenge of locating a road between Elizabeth and Augusta Lakes given required setbacks and rugged topography.	Xeneca is providing two options for access and powerlines in the EA. Regardless of which option is ultimately selected, the lines and the roads will run along the same route. In addition, Xeneca conducted habitat field assessments in the area of concern and determined a possible road corridor between the appropriate setbacks which met habitat and topography requirements for road building. The east/west road route was also re-introduced and was presented at the 2012 Public Information Centre.	Section 3.4, Annex III, Annex VI
Deer Yard	February 28, 2013	MNR identified existing deer yarding habitat along powerline and road corridor north and north east of Elizabeth lake which could present a challenge	Two routes/corridors are under consideration. Habitat field assessment, including potential deer yarding areas was completed in 2013 and is included in the Effects Report.	Annex III
Power Lines & Roads	February 28, 2013	Will temporary road access be required	A temporary access road and a temporary bridge will be constructed to access the north bank of the river to construct the spillway.	Annex II
Aboriginal Consultation	February 28, 2013	Have aboriginal communities been provided with archaeological information and proposed avoidance strategy?	Yes, the Aboriginal Communities have been provided with this information.	Appendix E
Cumulative effects	February 28, 2013	Greatest cumulative effect is downstream of Domtar Dam. Additional analysis downstream of Domtar is required	Xeneca has undertaken thorough hydrological study and modelling exercises which have been combined with operational constraints and written commitments that ensure that operation of Wabagishik Rapids GS will not force Domtar to exacerbate flow fluctuations downstream of their Espanola Dam. Xeneca has also committed to monitoring programs which will assist in managing flows coming into the Domtar headpond from other operators on the Spanish River. A third party review of Xeneca's assessments is being undertaken and an agreement is pending with Domtar. Xeneca has asked Domtar in writing to maintain its current operating regime, but Xeneca cannot control how Domtar chooses to operate and/or affect flows below their dam at Espanola. See section 6.4.2 of the ER and the Operating Plan in Annex I of the ER.	Annex I
Monitoring Plans	February 28, 2013	Monitoring Plans are a major piece of the ER yet to be responded to	Monitoring plan completed in July 2013 and updated based on review of comments from MNR/DFO. Monitoring Plan is included in the ER	Annex III
Operations	February 28, 2013	the proponent needs to confirm that actual fluctuations do not exceed predicted and that unexpected erosion, sedimentation and substrate modification does not occur	Parish Geomorphic has completed geomorphological assessment which is contained with the ER. Post construction Monitoring Plans are in place to confirm, and an adaptive management strategy is in place should unexpected effects occur as a result of operation of the Wabagishik GS	Annex I
Fish Habitat Compensation	April 15, 2013	It would be helpful to get better definition of existing habitat loss in particular it would facilitate discerning between lake sturgeon and walleye spawning habitat	Potential Lake Sturgeon spawning habitat has been conservatively determined using this approach which is appropriate at this conceptual stage and for use in the Environmental Assessment. During the permitting stage, Xeneca will gather additional data as needed and consider using the Sontek river surveyor. The downstream 2D river modeling will inform species specific habitat compensation with a high level of confidence.	Annex III

Fish Habitat Compensation	April 15, 2013	The suitable range of velocities should be expanded to include 0.3 m/s as the minimum velocity. The combined walleye and lake sturgeon velocity should also include this minimum	The suitable range of velocities has been expanded to include 0.3 m/s as the lower limit for walleye, and in turn for the combined design criteria.	Annex III
Fish Habitat Compensation	April 15, 2013	compensation plan needs to show exactly what is presently suitable and will be suitable under proposed design. There may be areas within the existing habitat that could be enhanced to offset productivity loss. Possibly use two dimensional modelling.	Xeneca has prioritized sites for fish habitat compensation: The tailrace and embayment are below Wabagishik GS are the preferred sites. A combination of habitat creation and maintaining existing habitat is contained with the Habitat Compensation Plan and incorporates the advice of MNR/DFO.	Annex III
Fish Habitat Compensation	April 15, 2013	MNR would like to see more concentration on the outlet section at the tailrace through to the embayment	The advice has been accepted and included in the Habitat Compensation Plan.	Annex III
Walleye Spawning/Flows	April 15, 2013	Bulk of energy during freshet flows/walleye spawning period would be absorbed into plunge pool and then routed back around south. The design and proposed flows of up to 64cms indicate that flows will be directed into tailrace area. The flow regime may be altered and this needs to be factored in to the plan. 2D modelling would help examine future condition and habitat suitability.	- The turbines will absorb much of the energy from the water that is currently absorbed by the plunge pool. The turbines run continuously during spawning, incubation and larval drift, further ensuring favorable conditions. Additionally, Xeneca has already committed to placing suitable substrate in the tailrace to maintain the diversity. The optimization of the tailrace will be finalized in the detailed design stage with input from MNR and DFO (Plans & Spec stage of LRIA.) - Secondly, the 2D model will include the tailrace and will work towards maximizing the amount of functional Walleye and Sturgeon spawning habitat.	Annex III
Operating Plan	March 21, 2013	daily numbers max and min flow numbers do not correspond between some tables (table 7 and appendix 1 of the Operating Plan and in table 2 in the memo provided)	Xeneca has updated the tables ensuring accuracy of flow numbers in different sections of the operating plan and throughout the ER	Annex I
Fisheries	March 21, 2013	Navigation must be maintained at Graveyard Rapids.	Modeling has shown that navigation through Graveyard Rapids will not be compromised by operation of the Wabagishik GS	Annex I
Fish Habitat Compensation	March 21, 2013	there is a need to quantify habitat loss and proposed habitat replacement in the EA	Habitat loss and compensation have been quantified in the ER Report. Please see Biological Effects Report and Habitat Compensation Report	Annex III
Monitoring Plan	March 21, 2013	there may be a requirement for monitoring downstream erosion	Xeneca has agreed to monitoring programs that will assess if erosion is occurring outside of predictive models shown in the Parish Geomorphology Report	Annex IV
Species at Risk	March 21, 2013	habitat value of the pool just below the spillway, monitoring of conditions in this pool is warranted	The Monitoring Plan contained within the ER outlines the program is in place to assess conditions in the pool below the GS	Section 12.2
Species at Risk	March 21, 2013	There may be some ESA requirements for Lake Sturgeon	Acknowledged	Section 9, Annex III
Species at Risk	March 21, 2013	Sturgeon netting component can be left out of ongoing monitoring. The known population of 25 fish may not benefit from continued handling for studies. Xeneca should include some acknowledgement that sturgeon monitoring will be part of ESA permitting	Acknowledged. Xeneca has committed to additional sturgeon monitoring and assessment work with other facility operators on the river system.	Section 12.2
	March 21, 2013	Testing in the pool should be included in the biological monitoring plan. Dissolved oxygen, sediment deposition etc. should be tracked and data gathering probes can be installed preconstruction	Xeneca has added monitoring of the pool to water quality monitoring program	Section 7.1.1 (Water Quality)
	March 21, 2013	Spillway flows can be adjusted between 0.5 cms and 2cms and asked how the structure would be designed to pass variable flows	Xeneca will look at this in the detailed design phase. A 2cms pipe with a variable adjustment valve may be used.	Section 7.1.1, Annex I

	March 21, 2013	There is a potential for increased range of daily flows below Domtar. There is a great deal of uncertainty in the numbers presented by Xeneca	Xeneca has undertaken thorough hydrological study and modelling exercises which have been combined with operational constraints and written commitments that ensure that operation of Wabagishik Rapids GS will not force Domtar to exacerbate flow fluctuations downstream of their Espanola Dam. Xeneca has also committed to monitoring programs which will assist in managing flows coming into the Domtar headpond from other operators on the Spanish River. A third party review of Xeneca's assessments is being undertaken and an agreement is pending with Domtar. Xeneca has asked Domtar to writing to maintain its current operating regime, but Xeneca cannot control how Domtar chooses to operate and/or affect flows below their dam at Espanola. See section 6.4.2 of the ER and the Operating Plan in Annex I of the ER.	Annex I: Section 6.4.2
	March 21, 2013	At high flows, a pulse of water from Xeneca could merge with a pulse from Vale creating a concern downstream for Domtar. This scenario could be highly problematic because Domtar has to operate their dam manually and would have to pass water. At flows about 85 cms Domtar has to	Xeneca has undertaken thorough hydrological study and modelling exercises which have been combined with operational constraints and written commitments that ensure that operation of Wabagishik Rapids GS will not force Domtar to exacerbate flow fluctuations downstream of their Espanola Dam. Xeneca has also committed to monitoring programs which will assist in managing flows coming into the Domtar headpond from other operators on the Spanish River. If flows are going to exceed Domtar's ability to process, Xeneca will revert to run-of-river operation. See section 6.4.2 of the ER and the Operating Plan in Annex of the ER.	Annex I: Section 6.4.2
	March 21, 2013	If Domtar has to increase the range of flows and spill water it will affect the range of flows below Espanola as well. A hydraulic model is needed to show what will happen at Espanola and/or below Espanola	Xeneca has undertaken thorough hydrological study and modelling exercises which have been combined with operational constraints and written commitments that ensure that operation of Wabagishik Rapids GS will not force Domtar to exacerbate flow fluctuations downstream of their Espanola Dam. Xeneca has also committed to monitoring programs which will assist in managing flows coming into the Domtar headpond from other operators on the Spanish River.	Annex I: Section 6.4.2
Lines and Roads	March 21, 2013	Roads and powerlines should be assessed at the same time	Work on both roads and powerline corridors is intended to occur simultaneously but because roads are being included in the EA and powerlines are not, roads may in some cases take priority	Section 3.4.3
Lines and Roads	March 21, 2013	Alternative routing should be included in the spring study	Xeneca agreed, but because the alternative route already has an existing road, the swath of study area would be substantially less than 500 m	Section 3.4.3
Water Management Planning	January 21, 2013	MNR would like to confirm that all aspects of Water Management Planning are being adequately addressed, as required through the LRIA.	Xeneca has provided an overview of water management planning to the public through its PICs and will work with regulatory agencies to ensure all aspects of WMP are addressed. Xeneca notes that, although the WMP for existing facilities is not yet completed for this watershed, Xeneca acknowledges its inclusion in this process	Section 2.2 (Water Control Structures and Water Management Plan) and Section 5.9 (Provisions for Plan Reviews, Amendments and Plan Renewals)
Aggregate Resources	January 21, 2013	The contents of the draft EA relating to aggregate use were found to be inadequate. MNR suggests further discussion with Sudbury District to clarify MNR requirements of the Aggregate Resources Act.	Aggregate resources available in the Wabagishik area have been addressed in the CMP (CSP) documents. Category 9 pits have been located. Xeneca does not intend to permit any of its own aggregate extraction as adequate supplies already exist in the area	Annex II
Downstream Zone of Influence	January 28, 2013	It is MNR's understanding that Xeneca is working with MNR/MOE hydrologists on a methodology to determine ZOI. MNR suggests that Xeneca update the status of this exercise and how it contributes to the Wabagishik project. A ZOI with sound rationale is required to support the operating plan and other planning considerations.	Xeneca has provided a rationalization of ZOI both downstream and upstream if its Wabagishik GS project. The rationalization is supported by extensive study and assessment of hydrology, temperature, erosion, bathymetry and aquatic and terrestrial biology. all of which are included in the ER. The extent of ZOI has been included in project advertisements and at three public meetings as well as correspondence, memos and dialogue with public Aboriginal communities and regulatory agencies.	Section 1.2.1 (Zone of Influence) and Appendix A
Monitoring	January 28, 2013	Further discussion is likely required to confirm monitoring projects and how they integrate with the proposed operating plan and mitigation measures. (Fish spawning, deer crossing, SAR etc)	Monitoring plans have been discussed with regulatory agencies and are included in the ER in the Post construction Monitoring Plan	Section 12.2

Roads/Access Routes/Transmission Corridors	January 28, 2013	MNR recognizes this work is on-going (Detailed field assessments). Detailed planning will be required to address Crown land concerns and natural heritage values. Access to surface rights may also require examination.	Detailed field assessment is complete and contained in the Wabageshik ER. Assessment includes effects on natural heritage values and surface rights	Annex III
Archaeology	January 28, 2013	There has been further discussion & direction from Paula Allen on this issue. MOE would like some project-specific information - it seems that Xeneca is trying to use an archaeological avoidance strategy, so would like to know how this will work and what documentation & maps will be in the final ER.	The avoidance strategy involves the use of fencing and signage to prevent access to the archaeological site during construction activities. Licensed archaeologists will conduct regular site visits to confirm the integrity of the fence and that construction activities are not intruding on the buffer zone surrounding the archaeological site. This avoidance strategy was summarized and presented in a May 17, 2013 letter to the Ministry of Tourism, Culture and Sport. The May 17, 2013 letter, as well as a document outlining the rationale for adopting an avoidance strategy, are included in Annex V of the ER. Maps and text highlighting the location of the Belmer site were redacted from public documentation, including the Final ER, in accordance with the guidelines of the Ministry of Tourism, Culture and Sport with respect to archaeological discoveries. Maps of the site were, however, included in the Stage 2 archaeological assessment report submitted to the MTCS in 2012.	Annex V
Erosion	January 28, 2013	Erosion potential, shoreline stability and scour will require closer examination. Should also be considered in the context of the Operating Plan. How will ramping rates and water level fluctuations impact shorelines?	Erosion potential has been assessed for this project at a screening level and no significant concern was identified related to the new inundation or the long term operation of the project. The changes in downstream flows resulting from project operation are within a range of flow rates that are much smaller than the flow rates that would cause downstream erosion or result in changes to channel formations. Similarly, the changes in levels resulting from facility operation have been hydraulic modeled. The model results show that the level fluctuations due to operation are less than half of the level fluctuations that occur naturally. Also, the fluctuations occur at the low and medium range of levels normally experienced by the river channel. The river channel is very stable in at these levels and no concern for downstream erosion exists within this level range. To further mitigate and address any possible concern, the Operating Plan commits to limit the changes in flow rate so as to further constrain the change in levels resulting from operation. With the restrictions imposed in the Operating Plan, the maximum fluctuations in water level occurring downstream will be less than one quarter of those occurring naturally. This imposed constraint provides further assurance that the proposed flow rate changes resulting from operation are safe and will not cause downstream erosion. Erosion due to upstream operation was determined not to be an environmental risk factor. The upstream operation involves following natural lake levels throughout the year. Hence no seasonal change in water levels is proposed in the Operating Plan. The plan does propose fluctuating upstream water levels daily, but only +/- 5 cm. This very small change in level is not deemed to have any measurable effect on shoreline erosion, as it is less than fluctuation from boats, waves and wind set up that occurs naturally on daily basis. Erosion due to the inundation was assessed by examining the geologic maps, slopes and proposed levels. The proposed new inundation for this project is very small and extends from the dam to the outlet of Wabageshik Lake, a distance of about 800 meters. New inundation depth ranges from 0 meters at the lake outlet to 6 meters at the dam. The south shoreline consists largely of bedrock with very small localized deposits of sand. No appreciable erosion is expected along the south shoreline. Along the north shoreline, the shoreline consists of bedrock with the higher elevations being covered by a thin veneer of sand and gravel. Only in a small shoreline section in close proximity to the dam will the new inundation shoreline exist in the sand and gravel veneer. Given the thin nature of the sand and gravel veneer and the underlying bedrock, very minor and localized erosion could occur within 250 meters upstream of the dam site. This area will be examined more closely during detailed construction planning. If necessary, steps will be taken to either stabilize any affected location or to monitor it during project operation. However, a significant environmental concern related to inundation related erosion does not appear to exist due to the proposed inundation. Xeneca is developing a long-term erosion measurement program as part of a due diligence program by comparing pre-post construction levels. Baseline studies have been done and Xeneca is involved in verifying these results over the initial operating period.	Annex I
Deer Crossing	January 28, 2013	Deer crossing discussed between MNR and Xeneca on Jan 21, 2013. MNR comfortable with proposed approach, Xeneca to provide detail re: post-construction monitoring.	Monitoring plan is in place. Please see Post-Construction Monitoring Plan.	Section 12.2
Species at Risk	January 28, 2013	Further discussion required to clarify ESA permitting requirements for Lake Sturgeon and Blandings Turtle.	Acknowledged. ESA permitting is a post-EA process.	Section 2.9.1 (Terrestrial Habitat and Species) and Annex III
Significant Wildlife Habitat	January 28, 2013	MNR would like to request clarification on the assessment of Amphibian Breeding habitat, and it not being considered candidate SWH.	We now identify Amphibian Breeding Habitat (woodland) as Candidate SWH.	Section 2.9.5 (Significant Wildlife Habitat)
Operating Plan	January 28, 2013	The operating plan for this project is central to many of MNR's interests. There is currently effort to confirm the minimum flows, however there are a number of other aspects that need to be confirmed. These include upstream levels, ramping rates and operating regime to accommodate fish spawning. MNR would like to participate in the finalizing of the operating plan, as it pertains to the other items within this list.	Operating Plan finalized following discussion with MNR and other regulatory agencies.	Annex I

Wabagishik - MOE Comments				
Theme	Date	Comment	Response	Section Reference
Dontar Agreement	27-Feb-13	Any agreement with Dontar will need to identify the specific parameters that would trigger the shift from intermittent operating mode to run of river operating mode. The Permit to Take Water issued by MOE will need to refer to the agreement. The final executed agreement will be attached to the Permit.	A copy of the draft Dontar mitigation letter (agreement between Xeneca and Dontar) has been provided to the MOE/MNR. Efforts are underway to have a final executed copy of the Dontar mitigation letter to agencies prior to permitting	Section 6.4.2
Dontar Agreement	27-Feb-13	both the Final ER and any further consultation undertaken before the EA is finalized should provide the public, agencies and Aboriginal communities with information on the proposed agreements, their intent and general requirements	The agreement between Xeneca and Dontar is noted in the ER along with the intent of the agreement. Details can be found in section 6.4.2 and in the Operating Plan.	Section 6.4.2, Annex I
Aggregate Resources	27-Feb-13	Acid rock drainage is a potential effect that should be addressed during the Class EA process	Xeneca outlined the proposed procedures for dealing with acid rock and provided the procedures to the MOE/MNR for review and comment prior to the ER being finalized. Details are provided in the construction management plan in the final ER	Annex II
Public Consultation	27-Feb-13	The Class EA requires that all impacts of a project be assessed as part of the Class EA process and presented to the public, agencies and Aboriginal communities for review and comment. At a minimum any new or different information should be clearly presented in the final ER. However the more consultation the better, and MOE strongly recommends that Xeneca make any new or changed information available to the public, aboriginal communities and agencies prior to issuing the Notice of Completion	All available information was presented to stakeholders during three Public Information Centres (PIC) in Espanola during March & October 2011, and July 2012. All identified stakeholders were notified of PICs through email blast, advertising in local media and personal invitations. All PIC panels were subsequently posted on the Xeneca website and all identified stakeholders were notified. Furthermore, Xeneca staff have met with landowners and public interest groups on several occasions. All final information will be presented to all stakeholder groups in the form of the final ER, which will be available on the Xeneca website (soft copy) and at several public viewing locations (hard copy). While the geographic and physical scope of project influence has been clearly described to the public, additional information has been shared with stakeholders through a variety of means, including face-to-face meetings, email updates, phone calls, advertisements, and further, will be relayed through the final ER.	Appendix D
Public Consultation/Baseline Modelling	27-Feb-13	For the purposes of the Class EA and public consultation there is a need to accurately characterize current conditions on the river prior to development of the project.	The Vermilion is a heavily regulated river system with multiple users. Xeneca and its consultants has conducted extensive aquatic, terrestrial, bathymetric, hydrologic and hydrology baseline studies. Xeneca has also included in its assessment information generated and used by other users on the river system, as well as MNR. These assessments are thorough and provide an accurate characterization of the current conditions on the river prior to development of the Wabagishik GS. This information has been communicated to all stakeholders (public, Aboriginal and agency).	Appendix D; Annex I
Upstream Operations	27-Feb-13	More detail in the ER on the Operating Plan in order to address the issue with regards to maintaining natural lake levels and minimizing effects on Vale operations	Xeneca is in the final stages of achieving a formal agreement with Vale. A commitment letter was drafted with input from Vale, and a final version was sent to them on June 27, 2013, and Xeneca is awaiting formal agreement regarding operation of the Wabagishik Rapids GS. A summary of operations to maintain upstream water levels to natural lake levels on Wabagishik Lake can be found in the Operating Plan.	Annex I
Powerlines and roads	February 28, 2013	The Class EA requires that all impacts of a project be assessed as part of the Class EA Process, and presented to the public, agencies and aboriginal communities for review and comment. As a result it is MOE's expectation that any further analysis/field verification needed to assess potential impacts and identify related avoidance prevention or mitigation strategies be completed during the EA process and reflected in the final ER.	Xeneca has provided options for powerlines and road routing. Those options have been presented to agency, public and Aboriginal stakeholders through PICs, correspondence, website updates and meetings.	Appendix D
Archaeology	February 28, 2013	As the Ministry of Tourism Culture and Sport avoidance strategy approach requires that the site be monitored by a licensed archaeologist, the requirements for monitoring should be reflected in the final ER.	Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Annex II
Archaeology	February 28, 2013	The archaeological site appears to be very close to the water's edge. The MTCS avoidance strategy requires the implementation of a 20m undisturbed buffer area around the perimeter of the site, with no portion of the buffer encroaching into the Zone of Influence.	The buffer distance is measured against the physical location of the project. Water level impacts from the project are well within the normal river channel and will not affect the site.	Annex V
Process	February 28, 2013	Refer to MOE's comments on the draft ER And ensure that all comments are addressed in the final ER	Table A from the draft ER provided to ORTECH for update and compliance	Appendix C
Dontar Agreement	March 21, 2013	The proposed agreement with Dontar is a critical element of the minimum flow proposal and should include specific parameters that would trigger the shift from intermittent to run of river operating mode. MOE will require the Dontar agreement be appended to the PTW. More detailed information about the minimum flow proposal may be required.	Acknowledged. Xeneca has committed to minimum flows of 5 cms sending an agreement with Dontar. In the absence of an agreement with Dontar minimum flows will be 6.5 cms. Details are included in section 6.4.2 and in the Operating Plan.	

Public Consultation	21-Mar-13	The Class EA requires that proponents assess potential effects of their projects as well as any net effects after mitigation, and also requires consultation during the process. As described in the Class EA, all impacts of a project need to be assessed as part of the Class EA process and presented to the public, agencies and aboriginal communities for comments. She urged that any further analysis or field verification needed to assess potential impacts and identify related avoidance, prevent and/or mitigation strategies be completed during the EA process and reflected in the ER. Additional information should be communicated to stakeholders and Xeneca can use a variety of mechanisms to communicate.	Xeneca has clearly defined and provided rationalization for the zone of influence (ZOI) (upstream and downstream) and communicated that ZOI to all stakeholders. The ZOI as defined is supported by extensive study and scientific rationalization, which has also been presented to the public and will be contained in the final ER. While Xeneca is confident that its assessments are accurate, Xeneca will undertake post-operational monitoring to identify if there are unanticipated effects related to the operation of Wabagishik GS. Should monitoring reveal unexpected effects, an adaptive management strategy as outlined in the post-construction biological monitoring plan will be enacted in consultation with the regulatory agencies.	Annex III
Waste Handling	03/02/2013	MOE would like to see some details on plans to deal with waste during operational phase. Will there be waste facilities?	Typically, there is no waste generated at a hydro plant during operation. There are no plans for waste facilities at the site. During routine maintenance and repairs, any waste created will be trucked off-site by maintenance personnel.	Annex II
Effluent Dilution/Minimum Flows	28-Jan-13	would like to know what minimum flows will be during the winter & throughout the year.	Xeneca has committed to minimum flows of 5 cms pending an agreement with Dmtar. In the absence of an agreement with Dmtar minimum flows will be 6.5 cms. Details are included in the Operating Plan.	Annex I
Comments to the Draft Report - Received September 24, 2012				
Public Consultation		Although Xeneca has undertaken a variety of consultation activities, there are outstanding concerns with the Project and potential impacts which have not yet been addressed. As a result additional consultation opportunities should be provided before the preparation of the final ER	As per the Class EA, the project and its effects have been described to Aboriginal, public and agency stakeholders. Comments, questions and concerns arising from the consultation have been addressed and communicated to all stakeholders. The final ER clearly documents this process and contains the background and supporting documents.	Appendices C, D and E
Public Consultation		Public Information Centres (PICs) were held in March 2011 and July 2012. It is not clear from the draft ER and documentation provided whether a third PIC planned for October 2011 actually occurred. References in various locations in the draft ER (main report and Appendices) refer in some cases to two PICs and in other cases to three PICs. In one case there is a suggestion that the PIC planned and initially advertised for October 2011 was cancelled. This should be clarified, and the document should be revised to provide a correct record of what occurred.	Three Wabagishik PICs were held. Xeneca will ensure that the final ER refers to "three PICs" rather than "two PICs." A PIC was held at the Espanola Recreation Complex on October 20, 2011. It was never cancelled.	Appendix D
Public Consultation		Field studies and analysis to support the Project are still underway. Additional opportunities for public-agency and Aboriginal input should be provided as this information and any resulting changes to the Project or its potential impacts become available	For the purposes of the EA, all related field studies are completed and the results have been communicated to stakeholders through a variety of means including face-to-face meetings, PICs, emails, website updates, phone calls, agency meetings and Aboriginal consultation. If there are unanticipated effects from the project, monitoring programs are in place and a mitigation strategy will be employed in consultation with the agencies.	Appendix D
Public Consultation		We have concerns with the approach taken by the proponent to provide commitments in the draft ER rather than completing the EA process as outlined in the Class EA. Commitments identified in the draft ER address the completion of additional studies, the identification of appropriate mitigation measures including critical operating parameters of the proposed project, and where necessary further engagement with affected stakeholders to address issues of concern.	For the purposes of the EA, all related field studies are completed and the results have been communicated to stakeholders through a variety of means including face-to-face meetings, PICs, emails, website updates, phone calls, agency meetings and Aboriginal consultation. If there are unanticipated effects from the project, monitoring programs are in place and a mitigation strategy will be employed in consultation with the agencies.	Appendix D
Public Consultation		Despite the presentation of information summarizing consultation efforts for this Project within the draft ER and Appendices, sufficient detail has not been provided to determine whether the consultation that has been undertaken to date with the public, agencies and Aboriginal communities is complete.	All available information was presented to stakeholders during three Public Information Centres (PIC) in Espanola during March & October 2011, and July 2012. All identified stakeholders were notified of PICs through email blast, advertising in local media and personal invitations. All PIC panels were subsequently posted on the Xeneca website and all identified stakeholders were notified. Furthermore, Xeneca staff have met with landowners and public interest groups on several occasions. All final information will be presented to all stakeholder groups in the form of the final ER, which will be available on the Xeneca website (soft copy) and at several public viewing locations (hard copy). While the geographic and physical scope of project influence has been clearly described to the public, additional information has been shared with stakeholders through a variety of means, including face-to-face meetings, email updates, phone calls, advertisements, and further, will be relayed through the final ER.	Appendix D
Public Consultation		Section 4.4.1 and 6.3 of the Class EA require that the Project documentation detail include: who was concerned; what the concerns were; how those concerns were considered and addressed and what the outstanding issues are. Further detail should be provided within the final ER to elaborate on these points	Please refer to the summary chart of all public stakeholder comments/concerns and responses.	Appendix D
Aboriginal consultation		Because of the limited documentation provided, the MOE NH is not able to properly assess the adequacy of the consultation that has occurred to date	Xeneca is working on obtaining a correspondence from the peer review Communities to highlight the efforts that Xeneca has made to address all of their substantive environmental concerns.	Appendix E
Public Consultation		The final ER and supporting documents must contain enough information to demonstrate the potential impacts of the Project and identify mitigation measures, to a level that allows the public, aboriginal communities and agencies to understand the anticipated impacts.	The final ER has been revised to include the findings of the most recent studies, which are summarized within the main body of the ER and presented in greater detail in the annexes of the ER. Impacts and mitigation measures are presented in Section 7 of the ER. Also, the ER was revised to address agency review comments for the Draft ER.	Section 7, Sections 9-12

Process		There are statements in the Draft ER that refer to future field work and consultation planned for after the release of the final ER. All of this data collection, assessment, and consultation should be completed and documented in the final ER when the Notice of Completion is issued. This will ensure that there is sufficient information available to demonstrate the potential impacts of the Project and identify mitigation measures, to a level that allows the public, Aboriginal communities and agencies to understand the anticipated impacts. (ex: Wildlife habitat, detailed field assessments of road and transmission corridors, shoreline erosion investigations, analysis for acid rock drainage, baseline water quality data, consultation with agencies on operating parameters)	When additional post-ER data collection or consultation is proposed, it's because it concerns details that are not required at the EA phase of development (e.g. final engineering design), or it can ONLY occur during/after construction and operation (e.g. monitoring), or because it is an ongoing activity that is expected to continue even after issuance of the Notice of Completion (e.g. Aboriginal engagement). Clarification was also added in the ER that an Addendum EA must be prepared if any changes to project plans result in the introduction of new negative effects (such as a statement was added in Section 3 "Description of Proposed Project" and Section 5 "Operation Strategy").	Section 3 "Description of Proposed Project" and Section 5 "Operation Strategy"
Impact Assessment		From the documentation presented, all effects have not been identified, assessed and consulted upon.	The additional studies have confirmed what was presented to all stakeholders at PICs and meetings. As such, additional PICs are not required. Where possible, updated information and confirmation of facts have been provided and will be contained within the final ER.	Appendix D
Hydrology		Hydrology analysis for this project was done using flow data from the WSC station 02CF004 for the period to 1954-1993, which was 18 years old. The WSC station had been discontinued after 1993 but flow data from 1994 to present time are available at Vale and Domtar, collected by the respective agencies as part of their ongoing monitoring. MOE technical staff analysis of the recent data indicates significant differences in flow statistics exist when compared to the statistics derived using flow data up to 1993. This discrepancy proves flow statistics derived using old data are not representative of the current watershed condition. Therefore a re-analysis of hydrology is required with the current flow data up to 2011. The studies conducted using old hydrology data such as hydraulic analysis of the river system can be considered incorrect in this respect as well.	Xeneca has used data from Water Survey of Canada (WSC) Gauge and used for analysis. As per MOE request data collected by Vale has also been analyzed and modelled. Consensus has been reached with regulatory agencies that modelling data is now considered sufficient. Please refer to hydrology Report 2009 Hatch	Annex I
Hydraulic Modeling		The modelling report and HEC-RAS modeling files were reviewed by the MOE Regional Hydrologists, and found to be satisfactory. However, a revision is required using the recent hydrology data.	Request acknowledged. Consensus has been reached with regulatory agencies that modelling data is now considered sufficient. Please refer to hydrology Report 2009 Hatch	Annex I; Appendix C
Hydraulic Modeling		The modelling for the first 4km is satisfactory. The remaining 9km has some uncertainty because of uncertainty in the FRI data, but that does not result in concerns as this 9km reach is situated within the inundated area of Domtar's headpond. Waterlevel within this 9km reach will be managed by Domtar according to the approved dam operating plan. The major issue here however will be reduction of flow during off-peak hours when Xeneca will not be releasing any flow downstream, which will eventually impact Domtar's generation, effluent dilution at Espanola and biology of the river at large	Xeneca has provided hydraulic (Hec-Ras) reports as well as detailed modelling that clearly show the extent of the Domtar headpond and the effects of Xeneca's operation on the Domtar headpond. Xeneca has committed to operational constraints that ensure Domtar's headpond can assimilate flows and will not create a situation in which they must spill water. All water discharged into the Domtar headpond will be within the Domtar headpond operating band. During low flow periods, Xeneca has committed to reduce or eliminate intermittent operation in order to assist Domtar in meeting downstream effluent and ecological commitments. Xeneca's commitments are summarized in section 6.4.2 of the ER, and will be outlined in a MOU to be developed in agreement with Domtar. Operational constraint information can be found in the Operating Plan. Furthermore, Xeneca has committed to monitoring flows at the confluence of the Vermilion and Spanish rivers as well as inflow above the facility in order to avoid inflow impacts to Domtar as a result of unanticipated release of water by operators upstream on the Spanish River. Details are in the Monitoring Report. While negative impacts on Domtar are not anticipated as a result of the operation of Wabagishik Rapids, Xeneca has committed in section 6.4.2 to indemnifying Domtar if their interests are harmed by Xeneca operation.	Annex I
Effects on Vale's Generation		The tail water elevation may rise in the range of 0.1-1.0m depending on the flow of the river. This would negatively impact Vale's generation due to reduction of available net head. MOE recommends that Xeneca propose an operating plan which will not adversely affect Vale's generation.	Acknowledged and completed. Xeneca is in the final stages of a signed agreement with Vale regarding operations - A commitment letter was drafted with input from Vale, and a final version was sent on June 27, 2013 and Xeneca is awaiting formal agreement. The letter includes operational commitments that avoid impacts to Vale's generation and provide indemnity against any inadvertent harm that caused by Xeneca's operation of Wabagishik GS.	Annex I
Effect's on Domtar's Generation		Extreme flow fluctuation will adversely affect Domtar's generation as Xeneca will control 40% of the flow of the Vermilion-Spanish river system	Xeneca has provided hydraulic (Hec-Ras) reports as well as detailed modelling that clearly show the extent of the Domtar headpond and the effects of Xeneca's operation on the Domtar headpond. Xeneca has committed to operational constraints that ensure Domtar's headpond can assimilate flows and will not create a situation in which they must spill water. All water discharged into the Domtar headpond will be within the Domtar headpond operating band. During low flow periods, Xeneca has committed to reduce or eliminate intermittent operation in order to assist Domtar in meeting downstream effluent and ecological commitments. Please see section 6.4.2. Operational constraint information can be found in the Operating Plan. Furthermore, Xeneca has committed to monitoring flows at the confluence of the Vermilion and Spanish rivers as well as inflow above the facility in order to avoid inflow impacts to Domtar as a result of unanticipated release of water by operators upstream on the Spanish River. Details are in the Monitoring Report. While negative impacts on Domtar are not anticipated as a result of the operation of Wabagishik Rapids, Xeneca has committed to indemnifying Domtar if their interests are harmed by Xeneca operation. Xeneca's commitments can be found in section 6.4.2.	Section 6.4.2; Annex I

Minimum Flows	The minimum flow proposed by Xeneca is not acceptable to the MOE to protect water quality of the Spanish River. Domtar's ongoing monitoring and water quality modelling of the Spanish River from Espanola to the mouth of the river at the Great Lakes indicates river health significantly deteriorates when flow goes below 17 m³/s. In recent years Domtar has to inject liquid oxygen into the river for months to keep the river water quality at an acceptable level. Please note, the Spanish River is a sturgeon river. Because of the biological sensitivity and past incidences, MOE could not agree to a minimum flow less than 6.5 m³/s released at all times below Wabagashik Rapids. For the protection of the fishery MNR may have a different opinion on minimum flow, but 6.5 m³/s is the absolute minimum require by the MOE for the protection of water quality. Prior to finalising the ER and issuing a Notice of Completion, further discussions on minimum flow requirements should be held between Xeneca, MNR and MOE.	Xeneca has committed to minimum flows of 5 cms pending an agreement with Domtar. If no agreement with Domtar is reached, minimum flow will be 6.5 cms. Please see Operating Plan.	Annex I
Water Quality	Table 5 of the draft ER identifies various water quality issues that may result from construction and operation of the Project, proposing mitigation measures, and then assessing the inherent risk and potential for residual effects of each identified component. Where residual effects are identified, Table 6 then assesses the significance of these residual effects. Impacts identified which are inherent with all undertakings of this nature, include sedimentation/erosion effects, mercury methylation due to inundation area, eutrophication (algal blooms), compliance issues with regards to the Domtar Pulp and Paper Mill, and flow fluctuations downstream, among others. For each of these potential impacts, the draft ER concludes either that no residual effects are anticipated, or that any residual effects are not significant. A review of the information provided indicates that the draft ER does not provide sufficient data, analysis or documentation to support these conclusions as noted below.	A water quality study including methyl mercury and a sedimentation study are now complete and are included in the final ER.	Section 2.8.2, Annex I and Annex IV
Sedimentation & Erosion	Creation of the dam, rising and falling water levels, and sudden increases in flow will result in sedimentation and erosion. Sedimentation occurring during construction can be minimised by Best Management Practices (BMPs); however, only through a sound monitoring program would these be detected. After construction, sedimentation effects which will occur within the impoundment and possibly downstream in the variable flow reach are unavoidable and cannot be mitigated.	A detailed fluvial geomorphology study of the project has been completed. The report concludes that sedimentation and erosion are not significant concerns for this project. However, Xeneca has proposed a number of monitoring and mitigation measures for the post-project operation phase.	Section 7.1.2; Section 7.1.3 and Section 12
Mercury	Since recreational fisheries exist adjacent to the proposed site, any increases in mercury above MOE guidelines must be made known to potential resource consumers. Fish consumption advisories may be necessary. As with sedimentation impacts, there is no immediate remediation other than issuing consumption advisories and monitoring fish tissue mercury until such a time as levels return to pre-operational concentrations. Monitoring of background fish tissue mercury levels in sportfish is ongoing and due to the long-term nature of these impacts, monitoring may be required for decades. Monitoring for mercury should be undertaken as recommended in Annex IV, Surface Water Quality (Hutchison Environmental Sciences Ltd. "Wabagashik Rapids, Vermillion River Proposed Hydroelectric Generating Station Surface Water Quality and Fish Sampling Guidance" [July 18, 2012]	Xeneca has committed to monitoring programs specific to water quality. Baseline conditions have been established. Agreements with MOE on water sampling protocols have been reached and can be found in the Post Operation Monitoring Report	Annex III
Water Quality	Although potential for the development of algal blooms has been identified due to increased water retention time in the head-pond the risk of this occurring has not been addressed...it is therefore important that phosphorus concentrations be included in the water quality monitoring program. Water quality monitoring for phosphorus should be undertaken as outlined in Annex IV, Surface Water Quality (Hutchison Environmental Sciences Ltd. July 18, 2012).	The monitoring program is based on the MOE guidance document for water quality and includes total phosphorous.	Annex III
Effluent	Compliance issues related to the Domtar Pulp and Paper Mill are a further likely impact of the Project, as proposed. Currently, Domtar has a plan to deal with Dissolved Oxygen (DO) sags in the Spanish River as a result of Pulp and Paper Effluent discharge. These impacts occur 24 km downstream of the Mill, and may be exacerbated by modifying the flow in the Vermillion River downstream of the Wabagashik facility. This could be very problematic, especially due to the peaking nature of the proposed facility as much less water may be available for dilution of the pulp and paper effluent.	Xeneca has committed to minimum flows of 5 cms pending an agreement with Domtar. If no agreement with Domtar is reached, minimum flow will be 6.5 cms. Please see Operating Plan. Xeneca has provided hydraulic (Hec-Ras) reports as well as detailed modelling that clearly show the extent of the Domtar headpond and the effects of Xenece's operation on the Domtar headpond. Xenece has committed to operational constraints that ensure Domtar's headpond can assimilate flows and will not create a situation in which they must spill water. All water discharged into the Domtar headpond will be within the Domtar headpond operating band. During low flow periods, Xenece has committed to reduce or eliminate intermittent operation in order to assist Domtar in meeting downstream effluent and ecological commitments. Xenece has set out commitments in a draft Domtar mitigation letter, which is still under review by Domtar. Operational constraint information can be found in the Operating Plan. Furthermore, Xenece has committed to monitoring flows at the confluence of the Vermillion and Spanish Rivers as well as inflow above the facility in order to avoid inflow impacts to Domtar as a result of unanticipated release of water by operators upstream on the Spanish River. Details are in the Monitoring Report. As noted in Section 6.4.2 of the ER, negative impacts on Domtar are not anticipated as a result of the operation of the Wabagashik Rapids GS, but Xenece nonetheless commits to indemnifying Domtar if their interests are harmed by Xenece's operation. Xenece is working towards reaching a final MOU in agreement with Domtar, which will further confirm this commitment.	Annex I; Section 6.4.2
Acid Rock	Acid Rock Drainage (ARD) potential needs to be addressed due to blasting activities during construction. A plan needs to be developed which outlines testing methodologies. If ARD potential exists, then rock usage and storage strategies will need to be developed.	Xeneca will reference the procedure for how we will manage acid rock drainage (ARD) if it occurs.	Annex II

Lake Sturgeon	MOE identifies concerns from the context of water quality as it relates to protection and maintenance of the natural function of the ecosystem, on the impacts of this facility on the land locked lake sturgeon population known to inhabit this stretch of river. Little is known about the population status or spawning areas, and this project may negatively impact this species. Walleye are also known to spawn in the Wabagishik Rapids. Little data is currently available as to where these fish come from (upstream or downstream). Loss of spawning habitat poses a risk to this population that is currently hard to assess. The recreational fishery and first nation subsistence fishery may be impacted by habitat loss. Further agency-proponent discussion of these issues is needed before a final ER is prepared.		Further agency-proponent discussion of fisheries issues has taken place. We have developed an understanding with MNR and DFO about the location of existing spawning habitat in Wabagishik Rapids, and suitable locations for constructing compensation fish habitat for walleye and lake sturgeon spawning.	Annex III
Reporting	The draft ER indicates that a report summarizing the available chemistry and biological data is forthcoming in December 2012. This information should have been made available for review as part of the draft ER.		The 2012 report is now complete and is included in the final ER. Please see Hutchinson "Baseline Water Quality and Fish Tissue Mercury" report from 2013.	Annex IV
Cumulative Impacts	Cumulative effects of the Project have not been addressed with regard to the impacts of the three additional proposed Xeneca facilities located on the Vermilion River upstream of the Wabagishik Rapids Site.		The Wabagishik ER addresses only the Wabagishik project and as such cumulative effects of other other pending Xeneca projects are not included. Cumulative effects will be reported when the projects on the Upper Vermilion proceed.	Section 11
	In our opinion the proposed project, if operated as a peaking facility, has great potential to adversely affect existing hydropower users upstream and downstream of the project, and water quality of the Spanish River. Because of the extreme fluctuation of flow over a 24-hour period, the proposed operation may harm successful spawning of fishery as well below Wabagishik Rapids. In order to avoid conflict with the existing users and to better protect the environment, MOE recommends changing the design concept of the project from peaking to a run-of-river operation.		Xeneca has provided operational constraints that limit water level fluctuations that reduce or mitigate adverse effects on water quality and recreational use of the river. Operational commitments are in place to facilitate spawning. Commitments contained with the Operating Plan, Monitoring Plan, Compensation Plan and in agreements with upstream and downstream users, Xeneca has minimized impacts. Post operation monitoring reports outline how operational commitments will be met and assumed impacts to water quality are confirmed. Should unintended effects be revealed through monitoring, an adaptive management strategy is in place.	Annex I, Annex III
OZOI	To date, there has not been agreement on the full extent of the downstream ZOI for this Project. Minutes of the July 19, 2012 interagency meeting (Appendix C) identify the proponent's commitment to hold further discussions with MOE and MNR to reach consensus on an acceptable definition of the downstream ZOI. These discussions should be concluded before the final ER is prepared and the Notice of Completion issued, so that the agreed on ZOI can be identified and included in further consultations with the public. Aboriginal communities, and other interested parties prior to the conclusion of the Class EA process.		Please refer to the Randy Pickering communication from June 6, 2013, which will be found in Appendix C of the final ER.	Appendix C
Stage 3 Archaeological assessment	As it is not until a Stage 3 Archaeological assessment that the extent of identified archaeological sites is identified and any necessary mitigation measures are recommended, Stage 3 archaeological assessments (where recommended by a Stage 2 Assessment) must therefore be completed during the Class EA Process. This will ensure that the proponent is able to include identified mitigation measures and an assessment of any net effects in the ER.		The Wabagishik project will not affect the identified archaeology site, and therefore a Stage 3 archaeological assessment is not required. Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Annex V
Stage 3 Archaeological assessment	Please note that a commitment to undertake the recommended Stage 3 archaeological assessment after completion of the EA process, such as the statement made in Section 2.10.1 of the draft ER, would not meet the intent of the Class EA. All impacts of the project must be assessed as part of the Class EA process, and presented to the public, agencies, and Aboriginal communities for review and comment. Therefore, where a Stage 2 archaeological assessment has recommended the completion of a Stage 3 assessment, in order to meet the requirements of the Class EA the Stage 3 assessment or (where possible) commitments to implement the above-noted avoidance strategy, must be provided during the EA process, and included within the ER.		The Wabagishik project will not affect the identified archaeology site, and therefore a Stage 3 archaeological assessment is not required. Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Annex V
Extent of Stage 2 Archaeological assessment	The draft ER (including Annex V - Woodland Heritage Services United Stage Two Project Report) does not clearly identify the extent of the area subject to the Stage 2 archaeological assessment. The document also does not indicate whether the identified archaeological site is within or outside of the defined Zone of Influence for the project. In addition to the information identified above, the final ER should include this information.		The extent of the Stage 2 archaeological assessment, as well as its place outside of the ZOI, has been detailed in Annex V of the final EA. Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the May 17 letter outlines monitoring commitments during construction.	Annex V
Extent of Stage 2 Archaeological assessment - Other Affected Areas, roads, and Transmission Corridors	As the draft ER does not clearly identify the extent of the area subject to the Stage 2 archaeological assessment, it is not clear if any of this work has been completed. However, it is our understanding that further archaeological assessments of at least the road and transmission corridors have likely not been completed, since decisions with respect to the final route of these components are still outstanding.		The Wabagishik project will not affect the identified archaeology site, and therefore a Stage 3 archaeological assessment is not required. The lines and roads corridors have been assessed by Woodland Heritage Ltd. and there is no effect due to the project. Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Annex V
Additional Archaeological Assessment	In order to satisfy these (Class EA) requirements, the completion of the further stages of archaeological assessment, as outlined above, is required prior to finalizing the ER and issuing the Notice of Completion.		The Wabagishik project will not affect the identified archaeology site, and therefore a Stage 3 archaeological assessment is not required. Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Annex V
Additional Archaeological Assessment	The completion of further stages of archaeological assessment, as described above, specific to the transmission corridor, should therefore be undertaken before the ER is finalized and the Notice of Completion issued.		The Wabagishik project will not affect the identified archaeology site, and therefore a Stage 3 archaeological assessment is not required. Xeneca sent the avoidance strategy to Andrew Hinshelwood at MTCS on May 17, 2013. Consensus with Andrew Hinshelwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Annex V

Economic/Socio-economic Effects	Although the Draft ER contains broad statements suggesting positive economic impacts to local economies due to employment and local sourcing of supplies and services during construction, a quantitative financial analysis documenting anticipated positive impacts has not been provided. Additionally, no financial data or analysis has been submitted to evaluate potential economic impacts to tourism. These deficiencies should be addressed prior to finalizing the ER and issuing a Notice of Completion.	Data on economic impact, locally and regionally, is derived by economic assessment from the Canadian Hydro Association and Ontario Waterpower Association. Regional and local impacts will be definitively and quantitatively defined during service, procurement, pre-construction, and as such, is not required as part of the EA. It is known, however, that services and materials such as aggregate, concrete, steel, trucking, accommodation, food, fuel and professional services will be sourced locally. With respect to tourism, the project is not expected to have a significant impact other than possibly providing increased access to resource users via upgraded and/or new roads. An agreement with United Walleys Clubs outlines how Xeneca will assist in construction of fish hatchery and education centre. This will enhance tourism value within the area, but quantitatively, cannot be determined until facility numbers and attendance can be ascertained.	Appendix D
Noise Screening	The final ER should include a noise screening report, identifying any sensitive receptors within 1000 metres of the Project that may be affected by noise during construction or operation. As a public health and safety issue, this should be included in the evaluation of the potential socio-economic impacts.	A sound study has been completed; the summary can be found in section 7.2.8. Socio-economic effects can be found in section 7.2.	Section 7.2.8, Section 7.2; Annex I (sound study report)
Fish Mercury Levels	Socio-economic impacts addressed in the final ER should also include consideration of elevated levels of methyl mercury in fish, since this may affect recommended fish consumption levels.	This is completed and included in the final ER in Section 7.2.	Section 7.2
Cumulative impacts	We recognize that a defensible assessment of cumulative impacts would not likely be possible until various operating parameters and the proposed operating plan for the Project have been finalized through further discussion and consultation with agencies and other stakeholders. Once this has been completed, a detailed analysis of cumulative impacts should be included in the final ER.	Discussions with agencies have advanced in the draft ER was issued. A discussion of Dornier is considered in the Operating Plan. The Upper Vermilion projects are not proceeding at this time.	Annex I and Section 6.4.2
Cumulative impacts	The final ER should include a full inventory/evaluation of proposed road and transmission line corridors; a more complete consideration of the role of these corridors in cumulative impacts of the Project should also be presented.	An inventory/evaluation of proposed roads and power lines is contained within the ER in Section 3.4. Two options for roads are being contemplated pending discussions with private riparian landowners. Environmental effects and archeology have been assessed and reports are included in the ER in Section 2.10 (archaeology) and Section 8 (environmental effects).	Section 3.4; Section 2.10; Section 8
Other approvals / Permits	Further detail should be provided in the final ER regarding specific activities during construction and operation that will require permits and approvals, with permits/approvals required during construction and operation identified separately. This will assist in ensuring that the public, Aboriginal communities, and other interested parties have a clear understanding of the linkages between the Class EA process, and further regulatory permits and approvals required to implement the project.	Following the successful completion of the EA and the completion of detailed engineering design, the proponent will make application to various federal, provincial and municipal agencies for regulatory permits, approvals and authorizations. These permits, approvals and authorizations are required before site preparation or construction, or prior to the commissioning of the facility. A list of the regulatory permits that may be required for this undertaking is presented below in Section 13 of the ER.	Section 13
Conclusions	The draft ER submitted for the Project on August 10, 2012, does not effectively report on meeting these key principles of the Class EA process: consultation with potentially affected and other interested persons, consideration of all aspects of the environment; systematic evaluation of net environmental effects; and provision of clear and complete documentation.	The final ER has moved this effort to full completion, with useful input from the agency review.	Entire ER document
Draft ER Comments - Table 1			
Project Study Area	A map of the project location (Fig. 1) is provided on Page 2. The study area is not shown on this map, and has not been identified elsewhere in the main body of the report. Although Annex II identifies a Study Area for the Natural Environment component of the report, a map depicting the study area for the entire ER has not been included in any of the appendices or annexes.	Xeneca has assessed the zone of influence thoroughly and has provided a rationalization for both upstream and downstream extent of direct and immediate effects (Section 1.2.1 of the ER). A map included in final ER which shows study area. Please see Figure 1.	Section 1.2.1, Annex III, Figure 1
Project Study Area	Annex II (Natural Environment Characterization and Impact Assessment Report) includes a map of the study area; however, the area identified on the map and in the accompanying text does not appear to encompass all areas that may be impacted by the project.	Multiple different EA studies were conducted in order to cover the project's entire zone of influence. Figure 1 of the Natural Environment Characterization and Impact Assessment Report (Annex III) shows only those areas that were studied by Natural Resource Solutions Inc. in 2010 and 2011. The remainder of the ZOI (namely, the lines and roads corridors) was studied in natural heritage assessments conducted by Northern Bioscience and ORMG in 2013. The full extent of the project's zone of influence is illustrated in Figure 1 of the final ER.	Annex III, Figure 1
Project Study Area	Annex V (Archaeological Assessment) includes a map (Fig. 5) generally showing the area investigated during the Stage 1 Archaeological Assessment. Although a Stage 2 Archaeological Assessment was also completed, it is not clear exactly which areas were assessed as no map of the Stage 2 study area is provided. The text (p. 6) notes that "Communication with Xeneca Power Development Inc. provided the locations of those areas to be affected." It is also not clear if potential road and transmission corridors or other areas with archaeological potential that may be affected by the development (laydown areas, borrowpits, fill areas) were assessed during the Stage 2 Assessment, as recommended in the Stage 1 report.	Requested mapping can be found in the Stage 2 Archeology Report and in the Construction Management Plan where avoidance protocols are in place to ensure the site is not disturbed during construction or post-construction operation.	Annex V; Annex II

Additional Studies	Several sections of the report refer to the need to complete additional studies/investigations. Examples include: Executive summary under "Further investigations"; p.19, recommending further studies on potential Blanding's turtle habitat; p.22, recommending further work to assess potential significant wildlife habitats for several species, as listed; and Table 5, identifying the need for field investigations to ensure roads and transmission line routes avoid sensitive areas. These studies should be completed during the Class EA process, and results should be included in the final ER, along with the identification of any related potential impacts and appropriate mitigation measures. This would allow interested parties to review the work that has been completed and provide input to potential effects and proposed mitigation measures, as required by the Class EA process.	ER related studies are now complete and can be found in the final ER in the Habitat Effects Report.	Annex III
Additional Studies	Included in Tables 5 and 6 of the ER and in Appendix B. There are several situations in the tables where additional research, consultation, or discussions are required to fully identify potential effects and propose mitigation (examples include: finalizing operating parameters including flows and levels, completing additional field investigations for specific wildlife habitat concerns, identifying habitat mitigation and compensation measures, completing additional archaeological assessments, identifying discharge point in receiving watercourse to minimize scour, consultation with MNR/local boaters to determine periods of use and minimum low flow and water level requirements to maintain downstream access, consultation with cottage owners regarding potential impacts to water supply, consultation with railway company regarding access road crossing of railway.) As a result, the determination of whether there are residual effects is premature.	Xeneca has completed ER-related studies and identified potential effects and proposed mitigation. Please refer to Effects Report, Operational Report, Compensation Report	Annex III
	The Class EA recommends that proponents apply the potential effects identification matrix separately for construction related effects and operational effects. Tables 5 and 6 and Appendix B should be revised to separate construction and operational effects. This will assist interested parties in reviewing the ER and will also assist with regulatory approvals and required monitoring.	A row was added to the tables, specifying if the impacts occur during the construction phase, operation phase, or both. Xeneca opted to keep project impacts all together in the same table instead of making separate tables for construction and operation, as a number of impacts apply to both phases.	Annex III
Additional Studies	Section 5.1 of (pages 85-115) provides a list of identified potential effects. The assessment of potential effects should be described as outlined in Section 4.3.1 of the OWA Class EA. The proponent should provide information that summarizes: - The potential negative effect; - The relative level of the effect; - The mitigation or impact management measures that will be used; - Any individual net effects (after mitigation) and their significance; - The overall positive, neutral, and negative effects of the project As noted above, in Table 5, there are examples where additional investigation or research and consultation is required to confirm potential effects and/or propose or finalize mitigation measures in these situations, identification and assessment of residual effects cannot be completed until this work has been done.	Xeneca has completed ER related studies and identified potential effects and proposed mitigation. Please refer to Effects Report, Operational Report, Compensation Report	Annex III
Additional Studies	Additional consultation is required to ensure that all potential effects have been identified. Based on information provided in Appendix C, draft ER contains no issues/concerns identified by Aboriginal communities. In addition, the ER states that Aboriginal community engagement will not formally begin until after the issuance of the Notice of Completion. The July 12 Aboriginal Consultation Plan indicates that Aboriginal Information Centres, field visits, and community meetings will be scheduled after submission of the ER.	The consultation record is updated in this final ER.	Appendix E
Additional Studies	Table 5 lists the identified issues and summarizes the management strategies for each issue. See above comments.	Noted	
Withheld comments	We note that some public correspondence has been withheld and not included in the Draft ER. The draft ER indicates that specific public correspondence documents not included in the report must be requested from the proponent, in order to fulfill the open and transparent nature of the Class EA process, all public consultation documentation should be included within the ER and made available for review by interested parties.	All public correspondence is available for public review in the ER under Appendix D.	Appendix O

Additional Consultation	Pages 7-10 and Sections 4.3 and 4.4 provide a list of agencies, communities, and organizations contacted. Section 4 provides a summary of the stakeholder consultation that occurred: - As indicated in Sections 4.2 and 4.4, public consultation included Public Information Centres, correspondence, newspaper notices, and advertisements, PIC invitations, telephone exchanges, stakeholder meeting(s), and a project website. Appendix D provides a record of the public consultation activities that took place. - Government agency consultation included circulation of notices, a project description, correspondence, and in-person and/or teleconference meetings. Section 4.3 summarizes the consultation events that occurred with specific federal, provincial, and municipal stakeholders. Appendix C contains a record of the consultation that took place. As indicated in Section 4.5, Aboriginal community engagement conducted to date includes correspondence, telephone conversations, community meets, and agreement negotiations. The summary of activities and discussions included in the draft ER, together with the Aboriginal Consultation Plan (July, 2012) included in Appendix E, suggests that consultation is likely not yet complete.	Xeneca has consulted extensively with Aboriginal Communities - please refer to Appendix E. Xeneca is working on obtaining a correspondence from the peer review Communities to highlight the efforts that Xeneca has made to address all of their substantive environmental concerns.	Appendix E
Additional Consultation	The log and other information provided in Appendix E suggests that Aboriginal community comments on this project have not yet been incorporated into the draft ER, further suggesting that consultation with Aboriginal communities has not yet been completed.	Xeneca is working on obtaining a correspondence from the peer review Communities to highlight the efforts that Xeneca has made to address all of their substantive environmental concerns.	Appendix E
Additional Consultation	The information presented in the ER is not sufficient for MOE to determine whether adequate consultation has occurred.	Public Consultation - All available information was presented to stakeholders during three Public Information Centres (PIC) in Espanola during March 8, October 2011, and July 2012. All identified stakeholders were notified of PICs through email blast, advertising in local media and personal invitations. All PIC panels were subsequently posted on the Xeneca website and all identified stakeholders were notified. Furthermore, Xeneca staff have met with landowners and public interest groups on several occasions. All final information will be presented to all stakeholder groups in the form of the final ER, which will be available on the Xeneca website (soft copy) and at several public viewing locations (hard copy.) While the geographic and physical scope of project influence has been clearly described to the public, additional information has been shared with stakeholders through a variety of means, including face-to-face meetings, email updates, phone calls, advertisements, and further, will be relayed through this final ER. Aboriginal Consultation - Xeneca has consulted extensively with Aboriginal Communities - please refer to Appendix E. Xeneca is working on obtaining a correspondence from the peer review Communities to highlight the efforts that Xeneca has made to address all of their substantive environmental concerns.	Appendices D and E
Withheld comments	We note that there is Aboriginal correspondence information that has been withheld and not included in the Draft ER. Instead, this information must be requested from the proponent. In order to fulfill the open and transparent nature of the Class EA process, all Aboriginal consultation documentation should be included within the ER and made available for review by interested parties.	Xeneca agrees, except for any material that may be of sensitive nature to the Communities, for example cultural heritage information, which may be redacted if a Communities requests it.	Appendix E
	The differences between the proposal as presented at the initial PIC on March 22, 2011, and the final proposal as presented in the ER documentation should be clearly set out in the ER.	The changes are discussed in Section 3.2 "Design Options and Rationale."	Section 3.2
	Table 5 identifies those issues with residual effects after mitigation. Section 6 describes the methodology and criteria used to assess significance of residual impacts. The results of this assessment are set out in Table 6. As described in Section 6, the criteria used to assess significance of residual effects were taken from the Guide to Environmental Assessment for Electricity Projects. As the Waterpower Class EA applies to this project, criteria set out in the Class EA should be used.	Based on agency comments on past Draft ERs, the summary of the criteria for assessing significance was substantially expanded in order to define and outline each criterion (Value of Resource, Magnitude, Geographic Extent, etc.).	Section 10
Additional Studies	Table 6 relies on information from Table 5. As noted above, Table 5 includes examples where additional investigation or research and further consultation are required to confirm potential effects and/or propose or finalize mitigation measures. In these situations it is premature to identify and assess residual effects prior to this work being completed.	Additional research and consultation noted in the draft ER is now complete.	Sections 7.9 and 10
Justification for "not significant" irreversible impacts	Within Table 6, some irreversible impacts with continuous duration affecting resources of high value are nevertheless assessed as "not significant". Where this occurs, justification should be provided.	Significant effects and impacts are addressed in the ER. Please see Effects Report and Mitigation Report.	Annex III
Additional studies	Table 5 summarizes planned mitigation measures. As noted above, the table includes examples where further investigation and consultation is needed to fully identify potential effects and/or propose or finalize mitigation measures. The summary of planned avoidance/prevention/mitigation measures is therefore not complete.	Study and assessment relevant to the ER are now completed and contained with the Effects Report, Operations Plan, Compensation Plan.	Annex III

		Advantages and disadvantages are discussed in Sections 5 and 6, including Tables 5 and 6, as well as in Appendix B. Within the Executive Summary, the section on "Potential Project Effects" also summarizes negative and positive impacts of the project. Positive impacts outlined in this section include: - Providing a source of reliable and clean energy to the region; - Displacement of electricity sources reliant on fossil fuels and nuclear technology; - Employment opportunities within the Espanola and the City of Greater Sudbury through local sourcing of material, equipment, and services (where available); - Potential employment opportunities for area First Nations and Aboriginal Communities; and, - Financial return to the provincial and federal governments through Gross Revenue Changes and Federal and Provincial Income tax payments. Negative impacts include: - creation of a headpond extending 600 m upstream of the dam and coupled to Wabageshik Lake (extending a further 10 km upstream); - Fluctuations in water levels upstream; - Downstream variability in water depth, flow velocity, and wetted perimeter; and, - Potential impacts to aesthetic quality and recreational values of the area.	Acknowledged		
Post-construction monitoring		Section 8 lists proposed construction and post-construction monitoring. Implementation mechanisms are not addressed. Further detail is required to address: - Specific parameters to be monitored; - Timing and frequency of inspections; - Assignment of responsibility for monitoring; and, - Which agencies are to receive reports on various issues. Section 8.2 on post-construction monitoring is particularly brief. Identifying only monitoring related to erosion, waste management, emergency response (fires, spills), and workplace health and safety. Further detail on post-construction monitoring requirements is needed within the ER.	The Post Construction Monitoring plan is complete and available within the ER	Section 12.1	
Technical Information		Supporting technical reports are provided in Annexes I – VI. However, based on the MOE review of the draft ER and supporting technical reports, additional technical information is still required to support the ER. Section 1.2 (Introduction to Project) includes a Project Development Schedule (Fig 2, p.3). Section 3.5 generally describes the timing of site preparation and construction activities, and includes Table 1, providing a tentative construction schedule by project component. Section 9 (Table 7) provides a list of known approvals, permits, and authorizations required for the project.	Additional technical information has been provided to regulatory agencies. Technical reports are now complete and can be found in Annex I of the ER.	Annex i	
Other approvals			Acknowledged		
Table 2: Technical Comments			Acknowledged		
Location of Site		Section 1.2 p. 1 Introduction to Project Paragraph 2: "The project site falls within the Spanish River Township." Elsewhere in the draft ER the project location is identified as within the Township of Foster. This information should be consistent throughout the report.	The ER now specifies the Township of Foster as the project location. References to Spanish River Township were removed.	Section 2.1	
Additional Studies		Section 1.4.4, p.7 Identify Required Mitigation, Monitoring or Additional Investigations Paragraph 3: "The Proponent has made commitments related to the undertaking which may include additional data and information collection activities." Several of the information and data collection initiatives identified are required in order to fully characterize the total Zone of Influence, identify potential impacts, and determine appropriate mitigation. This work should be completed prior to finalizing the ER.	Work on identifying then total Zone of Influence is complete and is consistent with information provided in consultation with Aboriginal Communities, regulatory agencies and member of the public. Rationale for the ZOI is also included in the ER in Section 1.2.1.	Section 1.2.1; Appendix A	
Location of Site		Section 2.1, p. 11 Location and Land Ownership in Project Area "The proposed project is to be located... within the Township of Spanish River..." References in several other locations (e.g. p. 24, p.36) throughout the draft ER and annexes identify the project location as Lot 6, Concession 6, Township of Foster. The draft ER should be consistent in this regard.	ER now specifies the Township of Foster as the project location. References to Spanish River Township were removed.	Section 2.1	

Additional Studies	Section 2.8.2, p. 14-16 Surface Water Quality Paragraph 4: "In the spring of 2012, water quality samples were collected downstream of the proposed facility. Additional water quality samples will be collected at the same location in the summer and fall." Paragraph 5: A detailed discussion of the 2012 baseline analytical results will be provided in addition to the summer and fall 2012 results, in a baseline year-end water quality report, anticipated in December 2012. This Information should have been provided for review as part of the Draft ER. The timing of the draft ER should have been delayed to allow for the inclusion of this information.	Baseline year end water quality analysis complete and included in ER.	Section 2.8.2
Project Study Area	Section 2.9.1, p. 17 Study Area and Scoping of Natural Heritage Investigations Paragraph 2: "The study area described in this section is based on the predicted zone of influence and the lands adjacent to these areas extending approximately 120 m from the shoreline." The entire Zone of Influence should have been studied including all areas on land that would be impacted due to such things as project component footprints.	ZOI of influence identified and rationalized (section 1.2.1.) Project area has been studied to the level required by the Class EA. Please see Operation Plan, hydrology report, biology field assessment, archeology reports, erosion and sedimentation reports, temperature reports, Compensation reports	Annex I - V; Section 1.2.1
Additional Studies	Section 2.9.2, p. 18-19 Terrestrial Habitat and Species Paragraph 6: "One recommendation for future studies is to complete a turtle survey focusing on potential Blanding's turtle habitat in the area, as these studies are required under authorizations for the Endangered Species Act." These studies should be completed and the results included in the final ER, so that potential impacts to any identified habitat and associated mitigation measures can be adequately addressed during the Class EA process.	Blanding's turtles will be studied in the river downstream of the proposed generating station as part of the permits and approvals process. For the EA, Xeneca and NRSI are assuming they are present in the river and tributaries, utilizing suitable overwintering habitat. NRSI & Xeneca are assessing impacts using this conservative approach.	Section 2.9
Additional Studies	Section 2.9.7, p. 22 Significant Wildlife Habitat Paragraph 1: "Further work is required to assess the significance of these habitats: - Reptile hibernacula; - Denning sites for mink, otter, marten, fisher and eastern grey wolf; - Eastern milksnake habitat; - Common snapping turtle habitat" Studies assessing the significance of habitat for these species should be completed and included within the final ER.	In the draft ER, the main ER report incorrectly stated that work was required for these Significant Wildlife Habitats. For the final ER, we are taking a conservative approach by considering these habitats to be confirmed, and assessing impacts accordingly.	Section 2.9
Study Area / Additional studies	Section 2.10.1, p. 23 Archaeological Sites Paragraph 3: "A Stage 2 archaeological assessment for the project site was completed in 2011." "... A Stage 3 archaeological assessment is recommended at the Belmer Site prior to any proposed construction activities..." Although a Stage 2 archaeological assessment was completed, it is not clear exactly which areas were assessed, as no map of the Stage 2 study area is provided. This information should be made available with the final ER. In order to meet the requirements of the Class EA, the Stage 3 archaeological assessment or (where possible) commitments to implement the alternate avoidance strategy, consistent with guidance provided by the Ministry of Tourism, Culture, and Sport, should be included within the final ER.	Xeneca sent the avoidance strategy to Andrew Hinselwood at MTCs on May 17, 2013. Consensus with Andrew Hinselwood has been achieved on this protocol and the archaeological monitoring plan will be contained in the Construction Management Plan contained within the final ER.	Section 2.10; Annex II
	Section 2.11.4, p. 25 Recreation Use and Commercial Tourism, Cottageing Paragraph 1: "Seasonal residences/cottages are located in proximity to the project site." The final ER should include maps indicating the location of these residences/cottages in relation to the proposed Project information summarizing the distance between the Zone of Influence should be provided.	There is one property located approximately 550m away from the powerhouse/transformer location. The powerhouse/transformer will not be visible from the residence and a noise screening and assessment report has been completed (Annex 1.1). The only other properties located in proximity to physical elements of the project are located along the proposed access roads depending on the option selected (Annex VI.)	Annex I and VI

Portage Details	Section 2.11.4, p. 26 Recreation Use and Commercial Tourism, Botsaling/Kayaking/Canoing Paragraph 1: "Xeneca is committed to provide a portage trail around the Wabageith generating station for easier and convenient recreational use." Further detail, including a detailed map of the proposed portage route, should be provided within the final ER to allow stakeholders to evaluate and comment on this proposed mitigation measure.	Portage trail routes and protocols for safety during construction and included in the Construction Management Plan.	Annex II
	Section 3, p. 38-39 Description of proposed project Paragraph 2: "During an environmental assessment, conceptual design information is presented in addition to data collected through field investigations, desktop studies, and agency consultation to ensure that stakeholders are informed about the general scope and extent of the project, particularly as it relates to understanding how the project may impact other uses of the river and the environment." Paragraph 3: "The proponent necessarily reserves the right to variances between the conceptual design presented herein and the final detailed engineering design, provided that such variances do not materially and negatively impact the environment beyond the scope of the impacts described herein." The OWA Class EA requires that enough information be presented so that the public, agencies, and Aboriginal communities can understand the impacts that the project will have on their interests. This approach may not be consistent with the OWA Class EA (Section 8.8) through which the addendum provisions must be applied where a project has been planned in accordance with the Class EA, but where a proponent decides prior to or during construction that it is not feasible or desirable to implement the project in the manner described in the completed ER. Some of the possible variances listed in this section could, on evaluation, be determined to have new negative effects on the environment. Examples include: changes to physical size/orientation of structures, changes to specifications of mechanical and electrical equipment, including physical size, number of units, and total rating, and refinement of road and transmission line routes.	A new section (1.3.1) was added to the ER, explaining the addendum provisions under the Class EA for Waterpower Projects. Additionally, further clarification was provided in Section 3 (Project Description) to specify that variances to the project design will be subject to the addendum provisions if they result in new negative impacts.	Section 1.3.1; Section 3
Variances			
Additional Consultation	Section 3.4.3, p.44 Access Roads "Further consultation with government agencies will be required to ensure that regional and provincial access policies and guidelines are met." Further consultation should occur during the Class EA process, prior to finalizing the ER.	Two options have been presented and described to stakeholders. The two road options are discussed in Section 3.4 "Access Roads."	Section 3.4
Excavation timing-window	Section 3.5.5, p.47 Excavation of Powerhouse and Tailrace Canal "Tailrace excavation at the intersection with the river will be completed within the MNH's established timing window for in-stream work." Further detail in identifying the timing window for in-stream work should be included in this section.	Instream work will avoid the fish spawning season from April 1 to June 30 based on the previous consultation between Xeneca and regulatory agencies, as well as MNH's Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales. Please see Section 4 of the ER (Construction Strategy.)	Section 4
Additional studies	Section 3.5.6, p.48 Concrete Production "A concrete batch plant will not be required for the production of concrete of the facility, due to the proximity of local concrete suppliers." An assessment of impacts resulting from the trucking of concrete to the site should be included in the final ER.	The impacts tables "Identified Issues, Summary of Mitigation and Potential Residual Effects" (Section 7) and "Residual Environmental Effects and Significance" (Section 10) have been updated to include a separate assessment to review the impacts related to trucking concrete to the site.	Section 7; Section 10
Waste disposal details	Section 3.5.8, p. 48 Management of Waste Materials During Construction "... construction waste (e.g. material packaging) generated during the construction process will be removed from the site to an approved disposal location." The final ER should identify a specific waste disposal site to receive this waste, and the proponent should confirm that the operator is willing to accept this waste. Disposal of waste generated during the operational phase should be addressed in the final ER.	Xeneca has identified a waste disposal site (Dodge Waste Disposal) within proximity of the project site, near Espanola, which will accept the project's non-hazardous waste products. This facility has no limits on the amounts of waste. More information can be found in the Construction Management Plan located in Annex II, Keith R Thompson Inc. (KRT), located in Lively ON, has been contacted and has the capability to transport and dispose of liquid hazardous waste from the project site.	Annex II
Waste disposal details	Section 3.5.8, p. 48 Management of Waste Materials During Construction "Industrial liquids such as ... will be stored in secure containment areas and disposed of in accordance with provincial and federal liquid waste disposal requirements (e.g. Environmental Protection Act, O. Reg. 347, and Transportation of Dangerous Goods Act)." Although the proponent commits to disposing of any hazardous wastes as required by O. Reg. 347 under the EPA, a facility able to accept this waste has not been identified. This information should be included in the final ER.	Keith R Thompson Inc. (KRT), located in Lively ON, has been contacted and has the capability to transport and dispose of liquid hazardous waste from the project site. This has been updated in the CMP in Annex II.	Annex II

Operating parameters	Section 3.6.3, p.56 Operating Parameters for Water Control Structures "Table 3 provides a description of the proposed operating parameters which have been determined for the facility. These parameters will be further refined following the completion of the environmental assessment, based on discussions with key regulators and stakeholders." As the operating parameters identified in will affect the overall environmental impacts of the project, they should be established during the Class EA process, made available for review, and included within the final ER.	Operating parameters have been established and are contained with the Operating Plan. The Operating Plan has been presented to the public and Aboriginal Communities.	Annex I; Appendices D and E
Public Information Centres	Section 4.2.5, p.62, Public Information Centres "... two public information centres (PICs) were held to collect information on concerns..." Different sections of the report differ on how many PICs (two or three) were held. This should be clarified and should be consistent throughout the report.	Thank you for pointing this out. Three PICs have been held for this project and all references have been corrected.	
Lake Sturgeon Telemetry Program	Section 4.3.2, p. 68, Provincial Ontario Ministry of Natural Resources "The proponent subsequently provided MNR with a proposed multi-year telemetry program for lake sturgeon investigations to increase the data on distribution and habitat use of lake sturgeon on the Vermillion River in the vicinity of Wabegeshik Rapids." Details and timing of this program should be finalized during the Class EA process and included in the final ER.	Additional work on Lake Sturgeon has been completed in co-operation with MNR and Aboriginal Communities including a peer review report and implementation plan.	Appendix E
Additional Studies	Section 4.3.2, p.68, Provincial Ontario Ministry of Natural Resources Bullet 1: "It was agreed that the environmental assessment of the project under the Waterpower Class EA would be expanded to incorporate the assessment of the connection line..." Detailed field investigations of proposed transmission line routes and identification of associated impacts and mitigation measures should be completed during the Class EA Process.	Power line routes will as, per MNR request, follow roads in a single corridor. Detailed field investigation of environmental and archaeological significance are completed and can be found with sections 7 and 2 of the ER.	Sections 7 and 2
	Section 4.3.2, p.70, Provincial Ontario Ministry of Natural Resources "The MOE regional hydrologist and district technical staff participated in the July 19, 2012 agency meeting..." This statement is not accurate; the MOE regional hydrologist did not participate in this meeting.	The text was revised to simply say that the MOE was present at the meeting. Although the regional hydrologist was not at the meeting, other MOE staff members were present.	Section 4.3.2
Consultation details	Section 4.4, p. 77, Public Consultation Last paragraph "The Mayor of Nain Centre attended the meeting and acknowledged recent correspondence from Nain Centre in which opposition to the project was expressed." Further detail should be provided in the final ER regarding specific concerns raised by the Township and how they have been addressed.	Please see PowerPoint presentation given by Mark Holmes to the Township of Nain on September 17, 2012 in Appendix O. The presentation answers questions and concern raised by the Township and Mayor.	Appendix O
Consultation details	Section 4.4.1, p. 79 Industry 3rd paragraph: "A meeting with Vale was held on July 19, 2012, and an agreement in principle was reached that our project would not affect the Vale facility at Lorne Falls." Further details on how this will be achieved, together with documentation confirming concurrence of Vale, should be included in the final ER.	Xeneca and Vale are in the final stages of signing an agreement letter. A commitment letter was drafted with input from Vale, and a final version was sent to them on June 27, 2013, but formal agreement has not been signed yet.	Section 6.4.2
	Section 5 Evaluation of Potential Project Effects Table 5 (p.87), Table 6 (p.119) and Appendix B. The Class EA recommends that proponents apply the potential effects identification matrix separately for construction related effects and operational effects. For the final ER, Tables 5 and 6 and Appendix B should be revised to separate construction and operational effects.	This reference refers to the Project Description for this project which was included in the ER for reference purposes. Xeneca has no intention to make edits or release this document. The effects table in the final ER has been updated to reflect this comment.	Annex III

Noise screening	Table S, p.87 Issue: Noise from operation of electrical generator and transformer at powerhouse and electrical generation. A noise screening should be included in the final ER to identify and sensitive receptors within 1000 metres.	Screening report completed and can be found in Section 7.2.8 of the ER. (The initial sound study is summarized in Section 7.2.8 of the ER. The sound study report is in Annex I)	Section 7.2.8
Residual effects-methyl mercury	Table S, p.89 Issue: methyl mercury due to inundation This section of the table concludes that there is no residual impact due to the potential for methyl mercury. We suggest that this evaluation should be reconsidered. We concur that the risk is low; however it is a risk that should be recognized. Refer to the text of our letter for a more detailed discussion of this issue.	Acknowledged. Potential for increased methyl mercury is low. A monitoring program is in place to measure post-operational impacts. Please see monitoring report contained within the ER.	Section 12
Operating parameters	Section 5.1.1, p. 105 5th bullet: "Under provincial water management planning legislation, the facility would be required to operate and maintain an established lake level compliance range as developed in consultation with the regulators and then finalized in the facility's Operating Plan. Xeneca is committed to meeting with the regulators over the next month to negotiate these compliance levels and finalize the operating plan." Key operating parameters and compliance levels should be finalized through discussions with agencies and then included in further consultation with the public, Aboriginal communities, and other interested parties prior to inclusion within the final ER.	Operating parameters and compliance levels have been established and are contained with the Operating Plan. The Operating Plan has been presented to the public and Aboriginal communities. Similarly compliance will be confirmed through monitoring programs contained with the ER's Post Construction monitoring plan.	Section 12, Appendices D and E
Habitat compensation	Section 5.1.3, p.106 Aquatic Habitat (Ecological Flow, Water Level Requirements) Paragraph 2: "The creation of the head pond will result in the alteration of 14,800 m of Lake Sturgeon and Walleye spawning habitat upstream of the facility below Wabageshik Lake. Compensator habitat will be created downstream of the facility on the Vermillion or Spanish Rivers to mitigate for this loss." Further detail should be provided within the final ER as to the location, area, and characteristics of this habitat compensation, as well as timing for when it will be provided relative to the loss of the habitat upstream of the proposed facility.	Please see the Compensation Plan and Post-Construction Monitoring Plan within the ER. Further details has been provided as requested.	Sections 9 and 12
Operating parameters	Section 5.1.3, p. 107 Aquatic Habitat (Ecological Flow, Water Level Requirements) Mitigation for Impacts Associated with Operation: Paragraph 1: "To reduce the potential for negative habitat impact upstream during modified run-of-river operation, the maximum daily fluctuations of upstream water levels will be limited" Item 2: "The current draft Operating Plan outlines a commitment to operational restrictions for key species..." Maximum daily fluctuations in upstream water levels and other operating parameters addressed in this section should be finalized through further discussion with the agencies and then included in further consultations with the public, Aboriginal communities, and other interested parties prior to inclusion within the final ER. These operational restrictions addressing the needs of key species should be finalized through further discussion with the agencies, and then included for further consultations prior to inclusion within the final ER>	Operating parameters and compliance levels have been established and are contained with the Operating Plan. The Operating plan has been presented to the public and Aboriginal communities as well as a regulatory agencies. Similarly compliance will be confirmed through monitoring programs.	Annex I, Appendices C, D and E

Consultation details		Please note that there is no railway infrastructure in the Wabagshik project zone of influence. For other known recreation areas, Xeneca recognizes that signage and installation of safety booms at GSs is an important part of a comprehensive safety program mandated by the Canadian Dam Association (CDA). These signs as part of the safety program address concerns that may include but are not limited to: - Warnings to watercraft above the dam related to awareness of the proximity of the dam and dam crest, flows over the weir and the potential for water flow and level changes without notice - Warnings to watercraft and terrestrial interlopers regarding locations and proximity of other GS conveyance infrastructure including water intakes and canals, the potential for drowning related to these infrastructures and potential for water flow and level changes without notice. - Notifications for the locations of safe egress and portage routes around dams - Downstream of dams, warnings on signage may again include potential for water flow and level changes in the riverbed, especially near spillways and in the powerhouse tailrace areas. - Seasonal drowning issues related to flow and water level changes may include signage identifying thin ice hazards for trekkers, country skiers and snowmobilers. - Finally, drowning hazard signs may also be required at weirs related to potential turbulent flows downstream of weirs, so called 'drowning machines'. - Signage often includes the name of the Dam, emergency call number(s) and the dam owners name. In the context of these concerns, the choice of appropriate signs and locations of the signage is part of the detailed design process which occurs in advance of final site construction permitting process. Further, lettering signage is governed by FERC Public Safety Guidelines for Hydropower projects (Appendix 2, 1992).	
Residual effects -methyl mercury		Section 5.1.10, p. 111 Surface Water Quality This section includes no discussion of methyl mercury. This is a significant residual effect that should be identified.	Annex IV
		Section 5.1.11, p. 111 Area Aesthetics Paragraph 2: "Seasonal residences are also located in proximity to the project site." A map showing the location of a number of seasonal residences, proximity to the various elements of the Project should be included in the final ER, and referenced in this and other sections of the report.	Annex I; Annex VI
Economic/Socio-economic Effects		Sections 5.1.12, p.111 Employment & Economic Effects Paragraph 2: "Economic benefits will include employment during construction, expenditures on materials, equipment and services..." This general claim should be replaced within the final ER with more detailed information based on the results of quantitative financial analysis evaluating potential benefits to the local economy from factors such as supplies and services which are likely to be sourced locally. Care should be taken not to overstate the likely economic benefits, recognizing that if professional services such as consulting and legal services are sourced centrally for all Xeneca projects, there are unlikely to be local benefits from these aspects of the project.	Section 7.2
Additional Studies		Section 6, p. 118 Residual Adverse Effects and Significance Paragraph 2: "The Ministry of the Environment's Guide to Environmental Assessment Requirements for Electricity Projects (March 2001) provides criteria for assessing significance." As this project is being assessed under the Ontario Waterpower Association Class EA, the criteria provided in that document should be used throughout this section and Table 6. This reference should also be corrected.	Section 6
		Section 6, p.119 Table 6: Residual Effects and Significance The completion of this table is premature until data collection and assessment is complete for all potential effects.	Section 6; Section 12

Cumulative Effects / Additional Studies	Section 7, p. 129-132 Cumulative Effects No analysis of the cumulative impacts of this Project in combination with the existing Domtar and Vale generating stations has been completed. Analysis of the cumulative impacts of these three facilities in combination with the three additional proposed Xeneca projects upstream of Wabagashik Rapids has also not been completed. This analysis should be completed and included in the final ER. The analysis of cumulative impacts should also include consideration of impacts related to road and transmission line corridors, once detailed field investigations has been done, and route selection has been finalized.	A cumulative effects study including the combined impact of the existing Domtar/Vale facilities and additional upstream proposed Xeneca projects has been included in the final ER. Furthermore, a Xeneca/Vale commitment letter was drafted with input from Vale, and a final version was sent to them on June 27, 2013, however formal agreement has not been reached yet. Xeneca is working towards an agreement with Domtar (see section 6.4.2) and working to have the agreement signed prior to permitting, pending completion of third-party review.	Section 11; Section 6.4.2
	Section 9, p. 134 Table 7: List of Potential Regulatory Approvals Permit to Take Water – Ontario Water Resources Act (Section 34), Category 2 (construction) and 3 (operation) We recommend pre-consultation with Northern Region prior to submitting applications so that confirmation of categorization can occur.	Pre-consultation will occur during the early post ER period and well before any site work is done.	

Wabagishik - DFO Comments

Theme	Date	Comment	Response	Section Reference
Fisheries	27-Feb-13	Section 35 Fisheries Authorization will be required for HADDs	We acknowledge this, and anticipate further development of the fish habitat compensation plan post-EA in consultation with DFO.	Annex III
Post EA	27-Feb-13	Information regarding type of turbines being used and associated fish mortality is required for federal authorization (Post EA)	We acknowledge this, and will confirm the type of turbines being used as part of detail design and permitting. The fish mortality assessment in the EA will be updated as required for federal authorization.	Section 7.1.5 and Annex III
Fisheries	27-Feb-13	Monitoring will be required for both Section 35 and 32 fisheries Act Authorizations. Monitoring of effectiveness of mitigation required during construction, monitoring of habitat compensation required post construction, and monitoring of fish mortality required during operation.	We acknowledge these monitoring requirements and will further develop the monitoring plan based on the specific requirements for the Section 35 and Section 32 Fisheries Act authorizations.	Annex III
Post EA	27-Feb-13	Prior to issuing authorizations DFO will need to ensure aboriginal groups have no fisheries related concerns. Will require records of consultation showing that aboriginal groups have been made aware of the potential impacts to fisheries and fish habitat, what concerns they had and how these were addressed.	Xeneca sponsored a peer-review process with SENES Consulting on behalf of the First Nation Communities, led by Sagamok Anishnawbek, which incorporated all consultation Communities except Serpent River FN and Whitefish Lake FN. Whitefish Lake did participate in a peer-review briefing at Whitefish River in May 2013. The Chief of Sagamok had sent a detailed issues list, including fish-related concerns, and these have been addressed with the participating Communities. Xeneca and the Communities have arrived at a consensus on how to manage the Sturgeon issue.	Appendix E
Fish Habitat/Minimum Flow	27-Feb-13	if fish habitat is harmfully altered or disrupted from flow due to tailrace orientation that would be part of the HADD	The final ER acknowledges a 1,000m ² area of habitat that will be affected by the daily fluctuations in water levels. Other effects on habitat due to the tailrace orientation and other changes in flow distribution will be addressed through a 2-dimensional modelling exercise that will be used to develop a design that maximizes spawning habitat downstream of the proposed generating station.	Annex I
Fish Compensation Plan	15-Apr-13	More detail added to the HADD in order to quantify it using available modeling information in order to better delineate where habitat suitability is and under what flows	Additional details have been added to Section 2.1 to better define how the HADD was quantified for the preliminary draft Habitat Compensation Plan. The HADD has been conservatively determined for the requirements for the EA and updated text will be included in the final ER. During the permitting stage, Xeneca will gather additional data as needed and consider using the Sontek river surveyor.	Section 2.1
Fish Compensation Plan	15-Apr-13	Compensation plan should discuss benefits of the compensatory habitats to benthics	The fish habitat compensation plan, section 2.1, now discusses benthic invertebrates as part of the design.	Section 2.1
Monitoring Plans	15-Apr-13	sampling larval drift to show hatching success, use of egg mats show use of habitat but also need to show the success of spawning habitat creation. For sturgeon you may only need to sample larval drift if sturgeon eggs are captured by mats	Larval drift sampling is now included in the compensation fish habitat monitoring plan, contingent on capture of adults and/or eggs.	Annex III
Monitoring Plans	15-Apr-13	Fish mortality monitoring should be added to the monitoring plan	Fish mortality monitoring has not been included in the monitoring plan. However, section 6.6.3 of the natural environment report commits to conducting this monitoring.	Section 6.6.3

Fish Compensation Plan	25/04/2013	More details are needed regarding the HADD quantification - e.g. what parameters were used and how (i.e. should be the same habitat suitability indices based on velocity, depth, and substrate that are used to focus on locating and creating compensatory habitat); at what flows were the parameters applied (e.g. the document indicates moderate spring flow - what does that mean?).	Additional details have been added to Section 2.1 to better define how the HADD was quantified for the preliminary draft Habitat Compensation Plan. The HADD has been conservatively determined for the requirements for the EA and updated text will be included in the final ER. During the permitting stage, Xeneca will gather additional data as needed and consider using the Sontek river surveyor.	Section 2.1
Fish Compensation Plan	25/04/2013	The habitat suitability parameters (i.e. depth, velocity, substrate) used to quantify the HADD and used as design criteria for compensatory habitat have been based on values from the literature which is good, but from a quick scan of the literature as well as discussion with MNR on walleye spawning in Ontario, it appears that walleye use lower velocities than indicated in Table 1 for spawning (i.e. starting at 0.3 m/s). Table 1 should be revised accordingly.	Table 1, now called Table 2 after updating the report, has been revised to show 0.3m/s as the lower limit of the velocity range for walleye and the combined design criteria.	Annex III
Fish Compensation Plan	25/04/2013	The plan will need to demonstrate rigour around the locations chosen for compensatory habitat, focussing in on specific rather than general areas. One of the factors in determining the appropriate compensation ratio is confidence in the functioning of the habitat to be created. This confidence could be increased by use of modelling such as River 2D to show that the appropriate habitat suitability indices can be met.	The Fish Habitat Compensation Plan now includes a commitment to using 2-dimensional modelling for the design of habitat between the proposed dam and the downstream end of Wabageshik Rapids before it enters the large bay.	Annex III
Fish Compensation Plan		Focussing compensation efforts primarily on Wabageshik Rapids makes sense as fish will likely bypass Graveyard Rapids as they head upstream to spawn. In addition to installing new habitat at the embayment at the lower end of Wabageshik Rapids there may be opportunities to enhance habitat within Wabageshik Rapids as well, which could count towards offsetting the loss of production from the loss of the habitat upstream of the proposed dam.	The Fish Habitat Compensation Plan now lists Wabageshik Rapids between the proposed dam and the large bay as the first-priority location for building compensation fish habitat. The bay and Graveyard Rapids are now second- and third-priority locations, respectively.	Annex III
		Comments in the appendix to the plan (January 9th letter from Nava) indicate under item 3 that there may be impacts to habitat due to construction of the tailrace. Will these impacts result in a loss of habitat, or will the same amount and type of habitat be re-created within the tailrace?	The tailrace will contain cobble and/or boulder substrate, and the 2-dimensional modelling will be used to determine effects on spawning habitat suitability in the tailrace location, as compared to existing conditions. The objective will be to maintain the existing habitat function through tailrace design and/or modification of habitat elsewhere in Wabageshik Rapids downstream of the proposed dam.	Annex I
Fish Compensation Plan	25/04/2013	Timing of the compensatory habitat functioning relative to timing of the HADD of the habitat should be addressed. Should compensatory habitat not be functioning before the HADD occurs, then there is a lag period where there is a loss of productive capacity of the habitat. The ratio of HADD to compensatory habitat would need to be higher than 1:1 to offset this loss of production.	We acknowledge the need to address the loss of production due to temporary habitat disturbances. Section 2.1.4 of the updated Preliminary Fish Habitat Compensation Plan addresses this matter. As the construction sequencing has not been fully established, this consideration will be addressed during the detailed design phase through permits and approvals.	Section 2.1.4
Fish Compensation Plan	25/04/2013	DFO identified the dewatering of a horseshoe shaped area within the rapids as a harmful alteration of feeding habitat (January 2, 2013). While the focus of this plan is on spawning habitat, and it is recognized that the creation of walleye spawning habitat will offset the alteration of the feeding habitat and the associated loss of productive capacity of this habitat, this should be better articulated in the Plan (along with any benefits to other life stages or species from the habitat creation).	The fish habitat compensation plan, section 2.1, now discusses benthic invertebrates as part of the design.	Section 2.1

Fish Compensation Plan	25/04/2013	In considering the riffle upstream of the snowmobile bridge as still providing some spawning habitat under inundation - while this area may continue to provide some spawning function for the lake-dwelling population (provided that conditions under inundation will flush accumulating sediment from this habitat) which may support the downstream population by providing some recruitment to that population, the weighted value of this is likely impossible to determine prior to dam construction because we currently can't differentiate whether its lake dwelling or river dwelling fish using it. Monitoring following dam construction may show that it is still being used as spawning habitat which would mean by lake-dwelling fish, and then estimations could perhaps be made about how much of the recruitment goes over the dam and becomes part of the lower Vermilion population. What is known for sure is that spawning habitat for fish in the lower Vermilion is being lost and is needed to meet the management objectives, and they will not be able to access the riffle upstream of the dam. In this context, whether this habitat still provides spawning function for the lake-dwelling population or not should not be considered as rationale in support of a 1:1 compensation ratio for the compensation plan.	Agreed. Xeneca will not include this as remaining functioning spawning habitat. Section 2.1 of the Fish Habitat Compensation Plan has been adjusted to reflect this	Section 2.1 of the Fish Habitat Compensation Plan
Fish Compensation Plan	25/04/2013	Monitoring of the compensation habitat should show that the habitat is suitable, fish are using it, and spawning is successful, so in addition to what is described we suggest adding sampling larval drift, so it can be determined that the conditions in the compensatory habitat are appropriate for a successful spawn.	Larval drift sampling is now included in the compensation fish habitat monitoring plan, contingent on capture of adults and/or eggs.	Annex III
Letter of Credit	25/04/2013	I would like to bring to Xeneca's attention that a Letter of Credit will be required upon application for a Fisheries Act Authorization as financial security for ensuring construction of the compensatory habitat is completed.	Thank you for the advice, Xeneca will follow up with DFO regarding this requirement.	

Wabagishik - Municipality Comments

Theme	Town/Township/City	Date	Comment	Response
General	City of Sudbury	13-Aug-10	Local councillor and conservation authority expressed interest in the project and inquired about when a meeting might occur.	Directed to website for information. Meeting scheduled, ultimately resulting in Sep-23-2010 meeting.
Public Consultation	City of Sudbury	10-Dec-10	City requests information on when public information centres will occur.	Public Information Centres are scheduled for first quarter 2012.
Lands	City of Sudbury	10-Dec-10	Certain parcels of land that may be controlled by City of Sudbury may be impacted (by the Project). However wabagishik rapids is outside of city limits and that if this is the case, the city does not require further involvement, although the local conservation authority should remain involved.	A meeting was held on May 25, 2011 after which Sudbury requested better mapping (p 68 pdf). Xeneca indicated that they would keep Sudbury updated on potential impacts to land. Xeneca continues to keep the City of Sudbury informed of the project which is outside the City boundaries and does not impact city property.
Lands Resources	Town of Espanola	07-Mar-11	City inquired on potential impacts to Espanola.	The project will bring significant investment to the Espanola region and have significant short term economic stimulus as much of the construction goods and services would be procured locally. Locally produced electricity will provide greater stability of energy supply. At the March 2011 PIC, Xeneca staff (Mark Holmes) briefed town officials on how recreational uses of the project area may be impacted.
Socioeconomic Impacts	Township of Nairn & Hyman	05-Jun-12	City passed a resolution stating that it will strongly oppose the project based on numerous negative impacts affecting water quality, water quantity, public health and safety, fish habitat and spawning areas, the overall environment, as well as ecological and social costs that could result from the proposed hydroelectric dam.	The Mayor of Nairn attended the July 2012 Public Information and talked to Xeneca staff. Subsequently, Xeneca staff (Mark Holmes) presented to Nairn Mayor and council on November 28, 2013. Mayor and Council did not alter their position.

Operations	Township of Nairn & Hyman	05-Jun-12	The modified run of river strategy would involve holding the majority of the river back from downstream flow for up to 24 hours to fill several kilometers of head ponds, and expose stored river water to solar warming for up to 16 hours during the hot low flow summer and fall seasons.	The proposed additional new inundation is only 0.4 hectares. In comparison, the existing lake (Lake Wabagishik) is 620 hectares. No notable change in water temperature is expected. All daily inflow will be released within a 24-hour period. Due to the small size of the headpond and the limited storage, solar warming will not occur to any extent greater than what occurs under existing conditions.
Water Quality & Public Health	Township of Nairn & Hyman	05-Jun-12	Cumulative negative effects of the nine wastewater treatment facilities, releasing treated, under treated, and untreated effluent into the Vermillion River watershed, along with heavy metals resulting from over 100 years of mining effluent and emissions that may have accumulated in the Vermillion riverbed sediment, could result in an increased incidence of toxic algae blooms and an unnecessary additional risk to public health and safety for more than 13,000 citizens receiving drinking water from the Vermillion River.	Xeneca is aware of algae blooms within the Vermillion River watershed, however, the nature of the Wabageshik Rapids project will not increase or exacerbate algal blooms as the short term overnight storage of water will not substantively change temperature or water quality. Please refer to Hutchison Water Quality Report.
Public Safety	Township of Nairn & Hyman	05-Jun-12	The modified peaking operating strategy could create extreme and frequent river flow velocity and water level changes on the Vermillion River system through the majority of the year, which could have an unacceptable negative impact on ice stability and year-round recreational activities such as swimming, boating, snowmobiling, skiing, and ice and summer fishing, as well as create a public safety hazard and/or result in economic loss in tourism dollars.	Safety is of utmost concern around a generating station. Xeneca is creating a portage trail for recreational users on the south side of the riverbank. Further, extensive design elements addressing safety have been incorporated into this project. Design projects to the one in 100-year flood. Additional safety elements will be developed through detailed design and before construction. Design elements addressing concern over ice build-up have been incorporated into the project design. Xeneca will post warning signs in areas determined to be susceptible to ice instability as a result of the operation of Wabagishik Rapids GS. Xeneca has committed to limit water level fluctuations and the effects will not be felt beyond the area known as Graveyard Rapids, as it is directly influenced by the existing conditions created by Domtar's Espanola mill.

Zone of Influence	Township of Nairn & Hyman	05-Jun-12	The impacts of the proposed hydroelectric dams, cumulatively, could reach as far as the confluence of the Vermillion River with the Spanish River, and possibly all the way out to the Domtar Dam, in Espanola. Considering this large potential zone of influence, the ecological, environmental, economic and social cost of these dams would be unacceptable.	In discussions with MNR, MOE and DFO, Xeneca has committed to limit water level fluctuations and the effects will not be felt beyond the area known as Graveyard Rapids, as it is directly influenced by the existing conditions created by Domtar's Espanola mill.
General	Township of Nairn & Hyman	05-Jun-12	The demand for power in Ontario has been significantly reduced in recent years, and there is much more than can be achieved through energy conservation and efficiencies before resorting to these measures.	Green energy, such as small hydro, is part of Ontario's long-term energy plan.
Fish Spawning	Township of Nairn & Hyman	05-Jun-12	The entire length of the Wabageshik Rapids is unarguably an abundant Walleye spawning area. The loss of any part of this valuable natural resource would be unacceptable.	Xeneca is in discussions with MNR and DFO about a suitable approach to fish habitat compensation focused on spawning habitat for both walleye and lake sturgeon. The operating plan (Annex I) also contains special provisions for the walleye and lake sturgeon spawning period.
Lake Sturgeon	Township of Nairn & Hyman	05-Jun-12	The presence of Lake Sturgeon, an endangered species, was recently confirmed downstream of the Wabageshik Rapids, and any additional pressure on this population would be unacceptable.	Xeneca understands that lake sturgeon spawning habitat exists at Wabageshik Rapids, and is in discussions with MNR and DFO about a suitable approach to fish habitat compensation focused on spawning habitat for walleye and lake sturgeon. The operating plan also contains special provisions for the walleye and lake sturgeon spawning period.
Incentive Programs	Township of Nairn & Hyman	15-Aug-12	Would like to know about government incentives, bonuses etc. involved in these projects.	Response sent Aug 15/12 - Outside of the FIT contract, there are no bonuses or government incentives for proponents.

Natural Heritage	Township of Nairn & Hyman	05-Jun-12	These proposals are within the Vermillion River corridor which drains the entire Vermillion River Watershed, and is a key connector for many other green spaces through the District of Sudbury. The potential for degradation and fragmentation of such a beautiful and important natural heritage feature would be unacceptable.	Extensive environmental studies have been conducted in order to understand project impacts and provide mitigation or compensation strategies.
Dam Decommissioning	Township of Nairn & Hyman	05-Jun-12	It has come to our attention that no dam decommissioning provisions are being made for any proposed hydroelectric dams in Ontario, and with Scientists' predictions of climate change to bring increasing drought conditions, there is a possibility that these dams will no longer be environmental, ecologically, economically, or socially feasible in the near future, and in that case, removal of these dams would be left to the taxpayers. This would be unacceptable.	Given the expected significant lifespan of hydro assets (many existing facilities have been producing reliable renewable energy for more than a century) and the continued advancement of engineering and ecological science, it is not particularly prudent to predict the details of potential decommissioning. We will comply with the standards of the day (e.g. Canadian Dam Association) should decommissioning become necessary. Should decommissioning occur, advance planning would include dedication of revenues to a decommissioning fund.
Socioeconomic Impacts	Township of Sables-Spanish Rivers	11-Jun-12	City passed a resolution supporting the opposition of the four hydroelectric dams proposed for the Vermillion river. Issues related to water quality, water quantity, and fish habitat are expressed.	Mark Holmes of Xeneca presented to Mayor & Council on September 17, 2013. However, the resolution was not reversed.
Public Safety	Township of Sables-Spanish Rivers	11-Jun-12	The potential negative impacts of these 4 modified run of river hydroelectric dams on the Vermillion River ecosystem and on those citizens relying on its natural resources for the necessities of life could create an unacceptable public safety hazard.	The proposed Wabagishik Rapids GS is being assessed solely on its development in the context of existing conditions including those from other existing operations on the river system. Should Xeneca proceed with other projects on the Upper Vermillion, those cumulative effects will be assessed at that time.

Effluent and Water Quality	Township of Sables-Spanish Rivers	11-Jun-12	Any reduction of river flow rate due to the water being held back for up to 48 hours to fill 9 kms of headponds, considering the fact that there are 9 waste water treatment facilities, releasing treated, undertreated, and untreated effluent into the Vermillion River Watershed, and considering that there are over 13,000 citizens receiving their drinking water from the Vermillion River, could result in an increased incidence of toxic algae blooms and an unnecessary additional risk to public health and safety.	Water will not be held back for longer than 24 hours. Xeneca has committed not to exceed the fluctuation of plus or minus 15 centimetres 400 m downstream of the facility. When the plant is operating in intermittent operation mode, the maximum flow will be limited to 25 cms, whereas the turbine capacity for the plant is 64 cms.
Socioeconomic Impacts	Township of Sables-Spanish Rivers	11-Jun-12	While the proposed dam would have an installed capacity of 3.4 MW, the actual real energy produced by the dam would be approximately half of this figure (generously 2 MW), and for this very small amount of generated power, the ecological, environmental, and social costs of these dams would be unacceptable.	Procurement of dispatchable renewable electrical power is a directive of Ontario's energy regulatory bodies. Small hydro has a smaller ecological footprint than larger hydro generating facilities. Renewable energy such as waterpower is considered a preferred and environmentally sound means to generating electricity.
Zone of Influence	Township of Sables-Spanish Rivers	11-Jun-12	The zone of influence of these proposed hydroelectric dams, cumulatively, could reach as far as the Domtar Dam in Espanola. This large potential zone of influence, for only 2 MW of power generated, would be unacceptable.	Xeneca's zone of influence ends within the Domtar headpond at a point known as Graveyard Rapids. Operational constraints and commitments to Domtar ensure Domtar will not be forced to change downstream flows or spill water that would otherwise be used for generation. Similarly, commitments by Xeneca will ensure Domtar's downstream effluent treatment will not be adversely affected during drought periods.
Walleye Spawning	Township of Sables-Spanish Rivers	11-Jun-12	The entire length of the Wabageshik Rapids is unarguably an abundant Walleye spawning area. The loss of any part of this valuable natural resource would be unacceptable.	Xeneca is in discussions with MNR and DFO about a suitable approach to fish habitat compensation focused on spawning habitat for both walleye and lake sturgeon. The operating plan (Annex I) also contains special provisions for the walleye and lake sturgeon spawning period.

Lake Sturgeon	Township of Sables-Spanish Rivers	11-Jun-12	There is a good possibility that Lake Sturgeon could be present in and downstream of the proposed dam, and studies were not commenced at the crucial time and temperature to observe their spawning activity. Considering the fact that Lake Sturgeon spawn only once every 5-7 years, it is unacceptable that any decision be made before proper and thorough Lake Sturgeon studies have been conducted over the next 5-7 years.	Xeneca understands that lake sturgeon spawning habitat exists at Wabagishik Rapids, and is in discussions with MNR and DFO about a suitable approach to fish habitat compensation focused on spawning habitat for walleye and lake sturgeon. The operating plan also contains special provisions for the walleye and lake sturgeon spawning period.
Public Safety	Township of Sables-Spanish Rivers	11-Jun-12	The modified peaking operating strategy would create extreme and frequent river flow velocity and water level changes on the Vermillion River system, throughout the majority of the year, and this could have an unacceptable negative impact on ice stability and year-round recreational activities such as swimming, boating, snowmobiling, skiing, ice and summer fishing, and could create a public safety hazard and/or economic loss in tourism dollars.	There will not be extreme or frequent changes to the river. There will only be one peaking cycle in any given day. Ramping up and down will take one hour. Minimum flows are in place, and a maximum flow has been established for intermittent operations, both of which serve to restrict the degree of variation in river flows. There are also water level compliance commitments for Wabagishik Lake upstream and the bay below Wabagishik Rapids downstream.

Wabagishik - Other Agency Comments

Theme	Agency	Date	Comment	Response	Section Reference
Provincial					
Public Consultation	Ministry of Municipal Affairs and Housing	20-Jul-10	It is recommended that any municipalities that may be affected by these projects should be provided with notice. A list of municipalities that may be affected was provided.	The identified municipalities are: Township of Nairn and Hyman; City of Greater Sudbury; Town of Walden and Town of Onaping Falls (please note that Onaping Falls was amalgamated into Greater Sudbury in 2001.) Project notifications were sent to all of these municipalities. Xeneca has consulted with all of these and has made at least one presentation to all Mayor and Councils. Xeneca also presented to the Sudbury Chamber of Commerce in November 2011.	Appendix D
Permits and Approvals	MTO	18-Feb-11	MTO issued a letter in response to Xeneca circulations indicating that they have no general opposition to the projects. MTO advised that permits would be required for any modifications at highway entrances, and that power lines must be placed outside of MTO right of ways. Permits will be required for proposed crossing of an MTO right of way. Additional information on permitting requirements was provided.	Thank you.	
Federal					
Federal Coordination	CEAA	14-Feb-11	CEAA indicated federal coordination request is complete, and that Transport Canada has requested that an application to their Navigable Waters Protection Office be submitted.	Xeneca contacted TC to enquire about NWPO applications, and was referred to and subsequently contacted NWPO to inquire.	Appendix C
Public Consultation	CEAA	19-Nov-10	CEAA indicated they were having difficulty downloading project (documents).	Documents were sent by e-mail.	Appendix C
Federal Coordination	CEAA	12/07/2010	Cover letter sent to CEAA indicates 19 (project) locations, but a preliminary review of data submitted indicates only 18. If Xeneca requires a determination on whether the CEAA applies to the projects, notification will not be sufficient and project descriptions will need to be provided.	CEAA no longer applies to the project.	
Permits and Approvals	TC - Navigable Waters Protection Office	21-Feb-11	In response to a Xeneca Inquiry, NWPO indicated that 1 application could be submitted for all projects, and that while conceptual layouts and profiles could be included, approval could not be completed until final design and construction methods are determined. Early submission was encouraged.	Xeneca has informed TC of the Wabagishik Rapids GS project and has applied for permits under the Navigable Waters Protection Act.	Appendix C
Permits and Approvals	Environment Canada	25/07/2012	Environment Canada requested project documents either by FTP download or CD.	Documents will be shared with all agencies, including Environment Canada. On August 16 2013, the EA Officer from Environment Canada was contacted by Xeneca. She requested an electronic copy, which will be provided when the final ER is released.	Appendix C