

Ivanhoe River: The Chute & Third Falls - FAQs

1. What foot print will construction have; the blasting, dredging, and excavation of the sites including the tail race?

Answer: Xeneca makes all attempts to minimize our environmental footprint. The footprint breaks down into the following components:

- *Two 1000 m² construction laydown areas which may also eventually become part of the public access/ rest/picnicking area;*
- *A 250 m² area for vehicle parking;*
- *A 5000 m² stockpile area*

The footprint of physical structures associated with the facility include:

- *Powerhouse footprint approximately 28 m long x 23 m wide = 644 m²*
- *Intake channel: 474 m²*
- *Tailrace areas: 571 m²*
- *Dam: 1141 m²*
- *Spillway dam: 191 m²*
- *Embankment dam on the upstream tributary: 1,222 m²*

During construction:

The cofferdam: Phase I upstream: 912 m², downstream: 1,741 m²; Phase II upstream: 1350 m², downstream: 606 m²

The total permanent footprint of physical structures will be approximately 11,493 m². To put that number in context, your area Canadian Tire store ranges between 5,000 and 13,000 m².

Recognizing there should be a commensurate return for the project impact on natural areas. The energy output from the Ivanhoe River projects will be approximately 34,000 mwh/year which is enough to power over 2,800 Canadian households for a year. Furthermore, these projects will reduce approximately 35 million kg of coal burning per year.

2. Will the riverbed and instream structures be altered so as to impede the spawning of natural species Walleye, Speckles, Pike and Lake Sturgeon in the river and streams above and below the dams?

Answer: Xeneca has hired a team of biologists who review and study fish spawning, fish migration and suggest suitable mitigation efforts. Xeneca incorporates their findings into the design to minimize impacts. No construction will occur during spawning periods and discussions are underway with the Ministry of Natural Resources(MNR) and other government agencies regarding operation of the facility during spawning periods. It is Xeneca's intent to minimize or avoid impacts to fish spawning areas and, where appropriate, measures may be taken to create or improve existing conditions.

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3. Will peak power operations deplete the head water pond on a daily schedule? As stated in the project overview, 24 hour storage is rare but the head pond will have to be filled to produce power during high usage periods. Will this cause erosion of the river banks and cause additional sediment to be produced to flow down streams and cover spawning and feeding areas? *Answer: The projects will be operating as modified run-of-river facilities which allow for temporary storage of water. Xeneca has considered the potential for erosion and sediment transfer and will take steps to avoid or minimize impacts. The engineering review will consider these potential effects and measures will be incorporated into the Operating Plan which will be made available in the EA.*

4. Ivanhoe Lake is upstream from the Town of Foleyet. The Lake has a man-made dam which holds back water and is controlled by the Ministry of Natural Resources. This dam has historical significance and provides a constant flow of water during dry seasons to the Town of Foleyet. The water level in the River is kept constant so to provide enough water over the intake pipe for the Town's water treatment plant. There are concerns from the residents of Foleyet and Ivanhoe Lake that during the dry seasons that corporate greed looking for their \$.18 kw peak power income will lower the reservoirs to feed the dams leaving both communities with not enough water for their intake pipes. How is this going to be prevented? *Answer: The Ivanhoe Lake Dam is owned and Operated by the MNR which has clearly stated that it will not operate its facility in a manner that will divert water for power generation. The current Water Management Plan, and MNR's operation of Ivanhoe Lake Dam, clearly makes water supply to the Town of Foleyet a primary focus, which Xeneca supports. Moreover, Xeneca's FIT Contract is not seasonal; therefore, when the water is released from Ivanhoe Lake, there is little to no effect on revenues.*

5. Upstream from the dams – the Ivanhoe River runs through mostly sand and silt deposited from a pro-glacial lake 8 – 10 thousand years ago with very little gravel on its banks. The structure of the river is continually changing year to year with erosion. During high water, sediment and sand are transported downstream. With the water being held back by these dams, there is a potential of these reservoirs being filled with sand and silt. At some point in time, the aquatic spawning locations will be affected and potentially the reservoirs will eventually fill up and have to be dredged. Why is there no mention of this in the project overview? *Answer: More than 90% of sediment transport in rivers occurs during high flows (spring freshet or rainfall flood flows.) In high flows, Obermeyer dam or spillway gates will be kept open. Therefore, the suspended sediment will flow to the downstream of the project. Xeneca has done potential riverbank erosion studies and will also study the reservoir sedimentation during the detail design phase.*

6. Will there be a potential for the thermal regime to be affected by the lowering of the head pond at peak power intervals? *Answer: Due to the small amount of storage in the headpond (a few hours at most flows), there is not enough residence time to significantly alter water temperatures. Further, any temporary storage would occur during nighttime hours when additional solar absorption is limited.*

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7. During off peak periods when the reservoir is being filled, what consideration has been given to a continuous flow of water downstream to create the same oxygen levels as a natural water falls to sustain aquatic life? *Answer: Some flow will be provided at all times to protect the aquatic habitat. Ecological flows will be determined through input from Regulatory Agencies and various stakeholders, and based on biological studies which have been ongoing for the past two years. During the ecologically sensitive spring period, the facility will operated continuously (no intermittent operation.) During the remainder of the year, a small amount of flow will be provided over the spillway and through the powerhouse when the facility is not running. The total amount of water passed every day will equal the total amount of natural inflow.*
8. Moose aquatic feeding areas are protected in forestry operations, what provisions have been made to protect these locations along the boundaries of the river? *Answer: No moose aquatic feeding areas were located within the zone of influence based on the inundation mapping provided to Natural Resources Solutions Inc. (NRSI) in 2010.*
9. Bald eagle nesting sites are also protected in forestry operation. Why is there no data found by Natural Resources Solutions Inc., of eagles during the assessment period? According to guests that stay at White Pine Lodge, bald eagles have been seen year round. What impact will the fluctuation of water flow have on migratory birds nesting and feeding locations? *Answer: Most impacts will be aquatic in nature but terrestrial studies are ongoing. At this juncture no impacts on Bald Eagles are expected.*
10. From my own experience, I have found by scuba diving in fast water and in the rapids that this is a staging area for spawning and feeding fish. Why is there no mention of this in the Natural Resources Solutions Inc. report? How will the dams affect these locations? *Answer: Any loss of fish habitat will require an authorization from the Department of Fisheries and Oceans (DFO.) This authorization will require effective compensation for habitat losses incurred as a result of the undertaking. The habitat conditions and ecological values of the areas within the zone of influence have been included in our existing conditions report.*
11. What is the strategy for lost fish habitat and spawning locations? Should this project move forward? The proponent should have to implement a recovery project and return fingerlings back into the Ivanhoe at both Locations, not elsewhere in the province. Will spawning grounds be developed? There is once again no mention of this in Natural Resources Solutions Inc. report. *Answer: It is Xeneca's intent to limit impact on fish habitat wherever possible and to enhance the existing spawning habitat in the proposed tailrace area. Due to the steep inclines, it is unlikely that upstream fish passage occurs at The Chute. Downstream fish passage is being contemplated in both project design and operation. On the regulatory side, be advised that a loss of fish habitat will require an authorization from the DFO. This authorization will require effective compensation for habitat losses incurred as a result of the undertaking. The project is being designed to ensure that spawning can continue to occur.*

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12. What will be the social and economic impact to the tourist outfitters in the Foleyet area as well as tourists from Ontario and USA who frequent the areas? A conservative estimate from the guests at White Pine Lodge alone would be approximately 150 days a year of fishing on the Ivanhoe. Not to mention those who fish from the rocks and river banks below the falls. The yield has been high with trophy fish being taken, will this continue or fall short on expectation?

Answer: Xeneca will work with the recreational fishing community, tourism operators and other interested parties to ensure a) impacts to fisheries are minimum; b) access to those fishing areas are not impeded; and c) to facilitate improvements to accessing the fishery and maximizing tourism potential.

13. What will the bypass flow be during low flow seasons, if power is generated? We were told at the open house that water would always be flowing over the spillway.

Answer: Some flow (ecological flow; see Q7) will be provided at all times to protect the aquatic habitat. During the ecologically sensitive spring period, the facility will operated continuously (no intermittent operation.) During the remainder of the year, a small amount of flow will be provided over the spillway and through the powerhouse when the facility is not running. The total amount of water passed every day will equal the total amount of natural inflow.

14. What effect will the high/low water have on the ice during the winter months for the local residents who ice fish the river basin?

Answer: Xeneca has proposed maximum 1 meter headpond fluctuation. There is a possibility of unstable and broken ice, especially in the river edge. These issues will be reviewed in post-project operation monitoring, and the necessary steps will be taken to address the public safety and ice fishing access.

15. What will be the benefit to the people of Ontario if

- a. they have to pay 3 – 5 times more than what they are paying for electricity now
- b. a bonus is paid to Xeneca to have the dams running by 2015
- c. the proponent is paid \$.125 kw for regular power and \$.18 kw for peak power
- d. there is a delivery charge
- e. there is HST

Answer: In terms of energy procurement, hydro is one of the most cost-effective for the people of Ontario and over the long term will assist in moderating cost increases to consumers. The price paid for hydro is less than all of the other renewables, and hydro plants last for generations. Therefore the benefit is low-cost energy that is virtually emission free, and, with regular upgrades and maintenance, hydro plants can last for 80 years or more. In comparison, the lifespan of solar and wind generators is about 20 years and nuclear about 40 years.

With respect to the hydro rate paid by consumers, this is within the jurisdiction of regulators, but it can be surmised that, by procuring generation that is less expensive i.e. hydro, the cost borne by consumers will also be less over the long term.

Regarding peaking power, this term only refers to the time of day and week that generation occurs. As long as there is adequate flow, Xeneca will generate electricity 24 hours a day and will receive a slight premium during peak periods (roughly 11 a.m. to 7 p.m. on weekdays.) The delivery charge is levied by your supplier, i.e. Hydro One or a local utility that provides the wires and infrastructure to bring the electricity to the consumer. HST is a taxation policy over which Xeneca has no control.

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16. What will the end user pay? Do you know who is funding these projects?
Answer: Please see the answer to the previous question (# 15). These projects are funded by Firelight Infrastructures Partners LP, which is seeking a long term return for its Canadian partners.
17. Can 3 – 5 mega watts of power sustain a mine or industry and how can industry get cheaper rates when it will cost more to produce power under the feed in tariff (fit) program?
Answer: Xeneca is working with mining companies and manufacturers to determine if there are mutual benefits. By connecting directly to mines or manufacturing some energy costs can be reduced. Cost sharing on transmission lines, more reliable energy supplies and transmission system stability can all have positive impacts on industrial and commercial consumers.
18. What effect on the environment will installation and maintenance of the transmission lines have on streams and water crossing?
Answer: Environmental assessment on transmission lines and roads will be part of the Waterpower Class Environmental Assessment process. Xeneca strives to minimize or avoid impacts and is cognizant that protection of endangered species and habitat is vitally important.
19. Why is there no money put aside by Xeneca in the event that the dams will cease to function and will be required to return the land back to its natural state once it has ceased to be viable (like mining companies are mandated to do)?
Answer: There are no plans to decommission these projects. FIT Contracts are 40 years in duration. Waterpower facilities have a lifespan of 80+ years and can be retro-fitted to last decades longer.
20. If the esthetic value of both falls is lost and the fish population has a high potential for loss, then how can you say there will be ***“no net loss”***?
Answer: These projects have a relatively small footprint, and, with public and agency input, landscaping and other measures can be undertaken to ensure esthetics are considered. Please refer to previous answers with respect to avoiding or minimizing impacts to fisheries. Also note that efforts can be made to enhance recreational and tourism values.
21. Why does the project description have no data on pike, walleye, and speckle trout?
Answer: Environmental and biological reports are forthcoming and will be available to the public through the Class EA.
22. This was once a fur trade route - why has an archeology study not been done?
Answer: Phase One archeology studies are completed and Phase Two is underway.
23. What guidelines are in place if for example the proponent has been refused permission to construct the dams? Can this proponent or others reapply in the future?
Answer: Please visit the Ontario Power Authority website for information on the FIT Program and the rules surrounding it.

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24. The chutes and third falls will collectively only produce 8.7 mw of power. At a cost of \$5 million per mw, this relates to \$43.5 million to construct both dams – there are the extras, over price for electricity. Yes we will be paying 3 to 4 times more for electricity in the near future. This will be the breaking point for small businesses. I would like to point out at this time that the proponent will be sitting back receiving royalty at our expense. Is this what we want for power consumers?

Answer: Power at 13.1 cents/kwh may seem expensive now, but, under a 40-year contract, those rates will seem quite low in 10, 15, 20 years with rising energy prices and inflation. Overall, waterpower is one of the least expensive renewable energy alternatives and serves to mitigate energy price increases.

25. Will the water levels at Ivanhoe Lake be impacted by either of the projects?

Answer: The water levels at Ivanhoe Lake will NOT be impacted by either of the projects. The zone of influence of The Chute is limited to downstream of where the Ivanhoe River and Shawmere Rivers merge. This is more than 25 km downstream of Ivanhoe Lake.

26. Has the environmental Impact report been completed?

Answer: The Impact Report, otherwise known as the Environmental Assessment Report, is very close to completion. It will be available for public review for a period of 60 days and the public will be notified of the commencement of this review period.

27. Will there be roads built into these two locations? If yes, will the public have access to them?

Answer: Existing roads will be upgraded and about 100 metres of new road built for The Chute project. Current public access to the river will be maintained and may be enhanced by road upgrades. As previously noted, Xeneca is willing to improve boat launching, parking areas, turn arounds, canoe portage, etc.

28. Does Xeneca have any agreement with the MNR or the Province to have the dam opened to provide water to these plants when water is needed?

Answer: As noted in Question #4, MNR will not operate its Ivanhoe Lake Dam to operate Xeneca's facilities downstream. If you are referring to The Chute operating in tandem with Third Fall, some coordination may occur but within the bounds prescribed by government to ensure that flows in the river remain at levels required to protect ecological integrity at all times. These flow numbers will be available in the EA Report.

29. Are there any other plans to increase the number of plants on the Ivanhoe River up or downstream?

Answer: Xeneca currently holds two FIT Contracts with the Province of Ontario for development on the Ivanhoe River; the Chute and Third Falls. Xeneca has no plans to develop any additional sites on the Ivanhoe River.

30. Will boat traffic be altered or restricted at these sites?

Answer: Navigation has not historically occurred through The Chute. Portage routes will be maintained or replaced as required and Xeneca will comply with the Navigable Waters Protection Act, which is overseen by Transport Canada. Boat traffic will not substantively be restricted except in areas where safety issues may exist.

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31. What are the benefits do these projects bring to the local community?

Answer: Benefits include:

Waterpower creates jobs, generates revenue to the taxpayers of Ontario and is the longest lived and most reliable source of clean, renewable electricity.

- Approximate economic activity (direct) to build in Ontario is \$5 million per megawatt, about half of which is spent locally procuring everything from consulting and legal services to concrete, steel, trucking and other services such as hotels, restaurant and fuel.*
- Direct job creation (construction only) 10,000 person hours per MW. Indirect jobs multiply by 1.5.*
- Local/Regional economic boost of \$2.5 million per MW – about \$9 million.*
- First Nations and non-aboriginal Community participation incentives. For overview see Xeneca Website.*
- Significant return to the people of Ontario paid through Gross Revenue Charges (GRC) and Provincial and Federal Income taxes.*
- May assist mining companies or local industry by providing more reliable power with some potential cost savings.*
- Waterpower lasts... Many power plants built in the early 1900s are still in operation and with regular maintenance and upgrades can last for generations to come. In comparison the lifespan for other sources of clean power are: Nuclear 40 years, Wind 20 years, Solar 20 years.*
- Increased stability for the transmission system*
- Clean, emission free energy production*

32. Is it correct that Xeneca does not have to commit to any restoration provision should it be necessary after the lifespan of the stations?

Answer: It is in our investors' best interest (in terms of a return) to maintain the generating stations in order to increase their lifespan.

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33. Exactly what Ministry or Ministries or whom in Government does Xeneca work with to move this project along?

Answer:

<p>Federal Government Canadian Environmental Assessment Agency Environment Canada Fisheries and Oceans Canada Health Canada Indian and Northern Affairs Canada Infrastructure Canada Natural Resources Canada Transport Canada</p>
<p>Provincial Government Ministry of Aboriginal Affairs Ministry of Tourism and Culture Ministry of Energy and Infrastructure Ministry of the Environment Ministry of Municipal Affairs and Housing Ministry of Natural Resources Ministry of Transportation Ministry of Northern Development, Mines and Forestry</p>

34. We have been told that Xeneca wants to have these plants in place by 2015 to get a bonus package. Are these projects a done deal?

Answer: There is no "bonus package." Operational dates form part of the contractual obligations between the Ontario Power Authority and Xeneca. As part of our binding contract with the OPA and Province of Ontario, there are substantial penalties if commissioning dates are not met.

35. ****REQUEST**** We would like a letter from Xeneca stating that they will not interfere with the operation of the Ivanhoe Lake Dam, or will they be asking for the Dam to be opened to provide water to the plants when needed and they will not interfere with the lake level of Ivanhoe Lake or attempt to influence or make an agreement with the MNR to have the Dam opened to provide power to these stations. In other words it will be a natural river flow system.

Answer: Xeneca does not control operation of the Ivanhoe lake Dam, nor are we asking MNR to modify the operation of Ivanhoe Lake Dam in any manner and we are willing to state such in writing.