



Information Brochure



Amisk Hydroelectric Project

AHP Development Corporation (AHP) is in the planning stages of the Amisk Hydroelectric Project (Amisk/the Project). Amisk is a 330 MW run-of-river hydroelectric project proposed for the Peace River in northwestern Alberta. The Project would generate approximately 1,875 GWh per year of renewable electricity, which is enough power to supply roughly 250,000 homes while producing minimal greenhouse gas emissions in comparison to fossil fuels.

Amisk is being developed by AHP Development Corporation on behalf of a number of partners including Concord Green Energy. Concord Green Energy has invested in several renewable energy projects across Canada and is a wholly owned subsidiary of Concord Pacific, a Vancouver-based company that is primarily involved in residential real estate development.

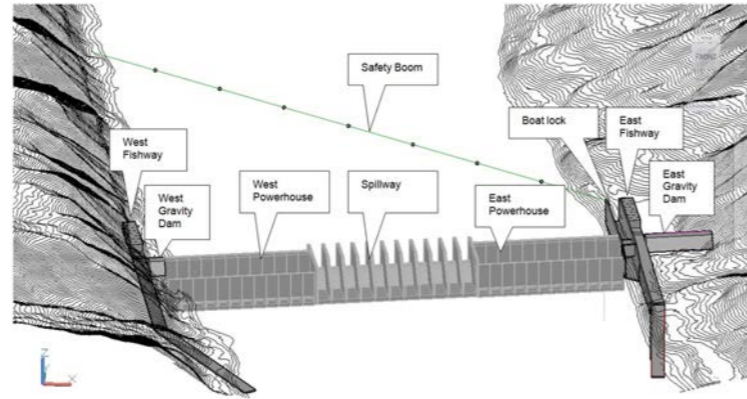
Project Justification

Amisk represents a cost-effective source of renewable energy to replace a portion of the over 4,000 MW of coal-fired generation to be retired over the next 15 years in Alberta. It is also baseload power, which can be relied on at all times of the day similar to coal-fired generation.

Hydroelectric generation is the largest source of electricity in Canada, providing roughly 63% of electricity. The largest source of electricity in Alberta is coal-fired generation, which provided 68% of electricity to the Alberta Interconnected Electric System in 2014, compared to hydroelectric generation which provided only 3%. The Amisk project would increase hydroelectric generation in Alberta by roughly 76%.

Project Description

Prefeasibility engineering studies were undertaken to determine the most appropriate design for the Project. The major components of Amisk are expected to include a spillway, two powerhouses, gravity dams, a reservoir, a substation, two fishways, access roads, and a transmission line connection to the Alberta Interconnected Electrical System.



Major components of the dam facing upstream

In addition, various options are being evaluated for boat transportation around the dam structure. These options include: boat lock, portage system, and boat launches upstream and downstream of the dam.

The spillway and powerhouse will collectively act as the main dam and have a combined length of approximately 370 m (see diagram). These structures will consist mainly of reinforced concrete and various steel gates which control reservoir levels and the passage of river flows through the site.

The headpond created by the dam will extend roughly 50 km upstream and will flood approximately 800 ha of the Peace River valley walls. The run-of-river operation of the Project, which, may incorporate a limited extent of active storage, implies the existing river flow regime would not materially change after impoundment.



Location Justification

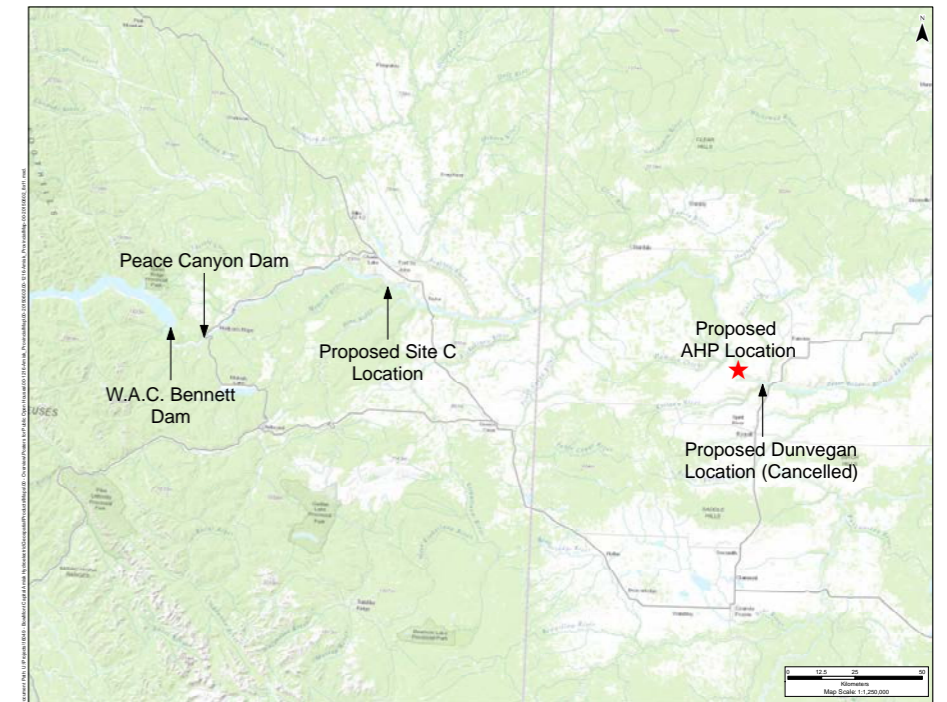
The Peace River has been considered an attractive candidate for hydroelectric projects in Alberta for several decades. This is largely a function of the size of the river and the fact that flows are regulated by BC Hydro to meet electricity demands in British Columbia (BC). The area around Dunvegan has been of particular focus because of the deeply incised river valley found at the proposed project location and upstream which helps to make the project layout more efficient and prevent excessive flooding during impoundment. It's also close to existing infrastructure including roads and electricity transmission.

The proposed site is located approximately 28 km southwest of the town of Fairview and 15.2 km upstream of the Dunvegan Bridge on Highway 2 at 4-36-80-6W6 (east) and 1-35-80-6W6 (west). The brochure map shows the location of the Project relative to regional landmarks. Geotechnical analyses of multiple sites along the river have confirmed that this location has unique attributes that make it the only site that could support the proposed structure.

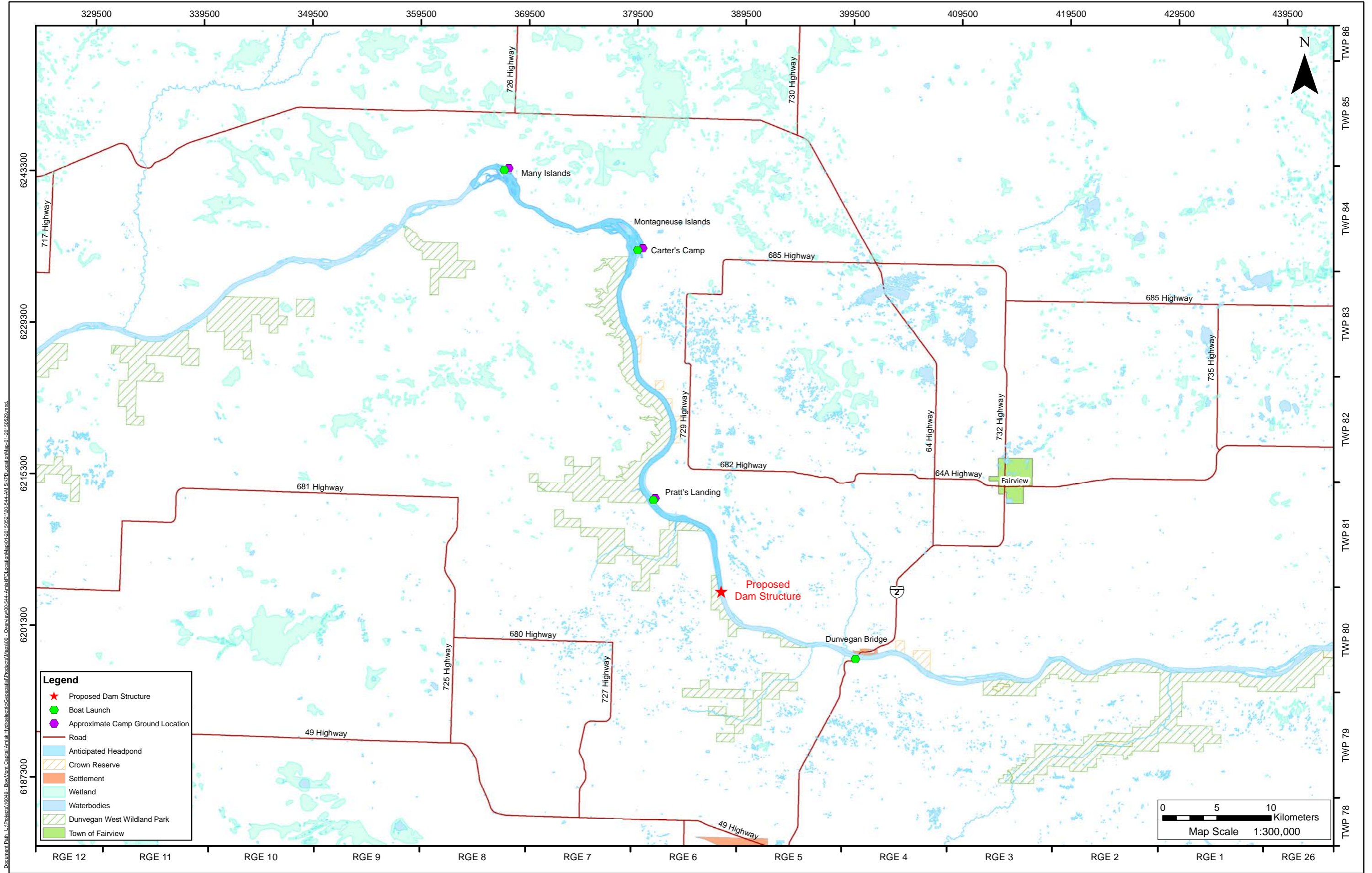
Flow Regime

Amisk benefits from regulated water flows provided by the large storage capacity of Williston Reservoir behind BC Hydro's W.A.C. Bennett Dam located approximately 265 km upstream on the Peace River (see map below).

Williston Reservoir storage of surplus spring and summer flows for release during the winter low flow period, results in relatively uniform water flows throughout the year along the reaches of the Peace River below the W.A.C. Bennett Dam. Amisk would operate as run-of-river with potentially a limited extent of active storage.



Amisk Location Map



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Potential Environmental Impacts

Prior to initiating environmental baseline studies of the area, AHP performed desktop studies and consulted with technical experts to gain a preliminary understanding of potential forecasted impacts. AHP will look to mitigate potential project impacts where feasible.

At this stage potential impacts that are being evaluated include: noise and traffic levels, wildlife near the Project site and headpond areas, vegetation and wildlife habitat, historical resources and traditional land use, aquatics, fish passage, water quality and temperature, sediment transport and sedimentation, river geomorphology, aesthetics of the area, composition, chemistry and productivity of soil, and ice regime.

Early forecasting suggests that campgrounds at Pratt's Landing and Carter's Camp may be impacted by the impoundment. AHP aims to provide compensation to mitigate any negative impacts to those sites.



The impoundment created by the dam will extend approximately 50 km upstream and flood approximately 800 ha of the Peace River Valley walls. AHP believes the resulting impoundment from the Project would produce a significant increase in the type and quality of recreational opportunities near the dam structure and along the reservoir through the valley.

Regulatory Process for Amisk Project

An Environmental Impact Assessment (EIA) will be completed by AHP based on both provincial and federal review requirements. The intent of the EIA is to examine the environmental, social, economic and health impacts of the project, to provide mitigation plans to address any adverse impacts and to address the significance of any residual impacts.

Upon completion of the EIA, AHP will make application to various provincial and federal agencies for the Project. At that point, the applicable board or Minister will decide whether it is in the public interest to let the Project go ahead. These multiple regulators may set specific conditions under which the Project can be constructed and operated.

Dunvegan West Wildland Provincial Park

The Project map located in the centre of the brochure shows the Project location relative to Dunvegan West Wildland Provincial Park, comprised of 20,967 ha located on the west and south banks of the Peace River Valley. Portions of the Project and some of the subsequent impoundment would impact the Dunvegan West Wildland Provincial Park (the Park).



It is estimated that construction and impoundment would impact approximately 295 ha of the Park. AHP is evaluating compensation options for these impacted areas and commits to a resultant net positive gain to the Park.

The Park area impacted by the Project may need to be redesignated and the land use changed to one more suited to the new aesthetics of the area. Lands removed from the Park for the purpose of Amisk will need to be done so through an Order in Council. It is AHP's desire that recreational area developments would enhance and compensate for any lands withdrawn from the present Park.

Schedule/Timelines

As of spring 2015, AHP has begun the preparation of an EIA PTOR for submission to ESRD and an EIA PD for submission to the CEAA. Environmental baseline studies have been initiated. AHP expects to submit its application in 2016 and following regulatory approvals, final design and construction would commence in 2018 with a construction time frame estimate of approximately 5 years.

AHP will be hosting a number of Open Houses to provide detail and to obtain stakeholder input. Upcoming Open Houses are as follows:

- Monday, June 22, 2015 – Grande Prairie, Pomeroy Hotel & Conference Centre, 6 pm to 9 pm
- Tuesday, June 23, 2015 - Fairview – Dunvegan Inn & Suites, 6 pm to 9 pm
- Wednesday, June 24, 2015 – Peace River – Sawridge Inn and Conference Centre, 6 pm to 9 pm

Glossary

Boat Locks - a device for raising and lowering boats between stretches of water of different levels e.g. on a river that has a dam.

Fishway - a device, structure, or operating system that facilitates and provides for efficient fish passage upstream or downstream of any obstruction impeding the free passage of fish.

Gravity Dam - a concrete dam structure bound to the side of a slope where gravity holds it down preventing water in the reservoir from pushing it over.

Head - the elevation difference between the headpond and the receiving water body immediately downstream of the hydroelectric facility.

Headpond - a slower and deeper section of water situated upstream, and created by the presence, of the hydroelectric facility.

Hydroelectric Power - electricity produced from the energy found in falling or fast-flowing water.

Impoundment - a body of water created or stored by impoundment structures such as dams, dikes, and levees.

Order in Council - Orders in Council are the instrument by which the Lieutenant Governor in Council makes its orders. These orders may or may not be a Regulation, as defined in the Regulations Act.

Powerhouse - the structures, machinery, and associated equipment needed for generating electric energy from a hydroelectric dam.

Run-of-River - a term used to describe hydroelectric facilities that do not have significant long-term storage (i.e. less than 48 hour retention time in the headpond).

Sedimentation - occurs when particles in water settle and come to rest against a barrier.

Substation Infrastructure – a set of equipment which reduces the high voltage of electrical power transmission to that suitable for supply to consumers.

Contact Us

If you would like to learn more about the Project, AHP encourages you to contact us at 1-844-287-1529 or at info@amiskhydro.com. Additionally, you can visit the project website at www.amiskhydro.com.

