

TRANSBOUNDARY WATERSHED CONSERVATION BRIEFING

Iskut River Hydroelectric Development Project

Summer 2011

Project Basics

The AltaGas Iskut River hydroelectric project will be one of the largest river diversion, or “run-of-river,” hydro developments in North America. Located on the Iskut River, 40 kilometres (25 miles) west of Bob Quinn Lake in west central British Columbia (BC), the project consists of three separate hydroelectric facilities – Forrest Kerr, McLymont Creek, and Volcano Creek - all of which are owned by AltaGas Renewable Energy. All power produced by these facilities will be sold to BC Hydro through the Northwest Transmission Line (NTL) which is being constructed from Terrace to Bob Quinn Lake.



Forrest Kerr Creek comes into the picture from the bottom of the frame with the middle Iskut River entering from the left and the combined flows continuing through the Iskut Canyon out of the picture to the upper right. This is the site of the power intake tunnel now under construction. The 15 meter (50 foot) high intake diversion weir will divert the combined Iskut River and Forrest Kerr Creek flows into a parallel tunnel which will drop through electrical turbines and return to the Iskut Canyon four kilometres downstream (upper right corner direction). Photo courtesy of Jim Bourquin.

6 kilometre road to the intake area, a weir to divert water into a 3 kilometre long 4 meter diameter diversion tunnel through rock, a powerhouse and a new 69 kilovolt transmission line to be joined into the electrical grid at Forrest Kerr. AltaGas has applied for a water licence and land tenure, and an investigative use permit is in effect. AltaGas is advancing the McLymont Creek project through the BC environmental assessment process with the goal of receiving an Environmental Assessment Certificate in 2012.

Forrest Kerr, the biggest of the hydroelectric facilities, is currently under construction. In 2002, the project received an Environmental Assessment certificate to generate 112 megawatts of electricity. In 2008, the project received an amendment allowing it to expand to 195 megawatts. The site is accessed off Highway 37 from the all-weather Eskay Creek mine road along the Iskut River Valley and down an additional 8 kilometre road built by AltaGas to the proposed power plant. The project will consist of a 15 meter (50 foot) weir that dams much of the river and diverts water down a 3 kilometre tunnel 11 meters in diameter. Electricity will be generated by water flowing through turbines in an underground powerhouse, with the water released back into the river below the canyon. Produced energy will flow to the NTL from Forrest Kerr via a 37 kilometre 287 kilovolt transmission line to be built by AltaGas to a substation at Bob Quinn Lake.

Ten kilometres west of Forrest Kerr, the McLymont Creek hydroelectric project is planned to generate 55 to 70 megawatts of electricity. Construction and operation of the project would entail building a new 10 kilometre road down the Iskut River Valley from the Forrest Kerr facility, a

TRANSBOUNDARY WATERSHED CONSERVATION

Will Patric, Executive Director, PO Box 1968, Port Townsend, WA 98368, (360) 379-2811 will@riverswithoutborders.org

Chris Zimmer, Alaska Campaign Director, PO Box 210402, Auke Bay, AK 99821, (907) 586-2166 zimmer@riverswithoutborders.org

Tadzio Richards, Canadian Transboundary Conservation Campaigner, PO Box 41, Hazelton, BC V0J 1Y0, (250) 842-2272, tadzio@riverswithoutborders.org

Terry Portillo, Finance and Operations Director, PO Box 154, Clinton, WA 98236, (360) 341-1976 admin@riverswithoutborders.org



The Volcano Creek project would generate 15 to 18 megawatts of electricity. Located 5 kilometres upstream from Forrest Kerr on the Volcano Creek tributary of the Iskut River, the majority of the project can be accessed off the Eskay Creek Mine Road. Spur roads will be constructed to access the weir and intake, the surface powerhouse, and, during construction, the 2.4 kilometre tunnel through which the creek will be diverted. A 10 kilometre 69 kilovolt transmission line will connect the Volcano Creek substation to the Forrest Kerr substation. As Volcano Creek has a capacity of less than 50 megawatts, an environmental assessment is not required. AltaGas' objective is to have Volcano Creek operational in 2016.

AltaGas will contribute \$180 million toward the construction of the NTL. In exchange, AltaGas received a much bigger, unprecedented 60-year Consumer Price Index-tied electricity purchase agreement from BC Hydro for the Forrest Kerr project. As the "anchor project" for the NTL, Forrest Kerr and the connected hydroelectric facilities could serve as a catalyst to the development of multiple mining and hydroelectric projects in the transboundary region.

Review Process Status

Forest Kerr has already received an Environmental Assessment Certificate from the BC Environmental Assessment Office. The project will produce 195 megawatts of electrical power. McLymont Creek is currently in the application stage of the BC Environmental Assessment process, and Volcano Creek does not have to make an environmental assessment application because of its smaller size. Under the Canadian Environmental Assessment Act, the trigger for a comprehensive review process for run-of-river projects is 200 megawatts. If McLymont Creek and Volcano Creek – which adjoin and will be connected to the Forest Kerr site along the Iskut River system – were included, the run-of-river project would produce 265 to 283 megawatts, more than enough to trigger a federal comprehensive environmental assessment. AltaGas has avoided the comprehensive review process by submitting projects for permitting individually rather than collectively, raising questions of "gaming the system".

Time Frame and Cost

AltaGas has a growing on-site work camp with over 50 employees working on initial construction at Forrest Kerr, which is slated to be operating by 2014, concurrent with the completion of the NTL. Peak construction time is anticipated to be in 2013. McLymont Creek is slated to be in commercial operation by 2015 and Volcano Creek by 2016. If all three run-of-river projects are approved and built, AltaGas anticipates an on-site construction crew of up to 400, with an overall project cost of about \$1 billion.



Lower Iskut River above Snip Creek. Photo courtesy of Jim Bourquin.

Threats to Conservation

The AltaGas cluster of hydroelectric projects will have localized effects on the Iskut Canyon, the lower Iskut River, and cumulative effects on the broader transboundary region.



Iskut River. Photo courtesy of Carr Clifton.

The Iskut Canyon marks the upstream extent of salmon passage on the Iskut River and therefore, the hydro projects will not be blocking salmon passage. The Lower Iskut is an important component of the highly productive Stikine river system and is home to grizzly bears, moose, mountain goats, marten, wolverines, salmon and many other species. It also provides up to about 40% of the spawning, rearing and migration habitat for the millions of salmon that return to the Stikine each year. While much is unknown about the effects of river diversion on downstream salmon habitat, these hydroelectric projects could lead to changes in sediment levels and water flow that would impact juvenile salmon and alter key spawning habitat.

At Forrest Kerr alone, building the 3.1 kilometre tunnel will generate 850,000 tons of waste rock that has not been drill-core tested for acid drainage potential. Downstream salmon in the Iskut River could be impacted by acid mine drainage. Changes in water flow could impact juvenile salmon, and threaten biodiversity “hotspots” within the canyon spray zones which shelter many rare species of plants and are critical habitat for several species endemic to northwestern BC.

As an “anchor project” facilitating the construction of the NTL that could enable massive development in the transboundary region, the AltaGas hydroelectric development will likely lead to long-term and poorly understood ecosystem effects on the lower Iskut River, and in turn, the Stikine watershed. Combined with the Galore Creek Mine proposal, the recently approved NTL, and numerous other proposed and planned developments in the area, the river diversion projects could lead to escalating cumulative impacts and piece-meal degradation of key habitat areas in the broader region.

In addition, the road extensions to Forrest Kerr and potentially McLymont Creek will bring the North American electrical grid just 40 kilometres from the Alaska-BC border. A proposed Alaska inter-tie Bradfield Road route would see a power line extend from McLymont Creek, follow the Craig River through the Craig Headwaters Protected Area to the border, then along the Bradfield River, connecting to Tyee Lake and tidewater.

First Nations Positions

The Iskut River hydroelectric project cluster is located solely within the Tahltan Nation traditional territory. AltaGas signed an Impact Benefit Agreement with the Tahltan Central Council with respect to the Forrest Kerr Hydroelectric Project. A similar agreement was recently ratified by Tahltan membership for McLymont Creek and Volcano Creek.

“Our Nation estimates more than \$1.8 billion in total financial benefits [to the Tahltan] over the projected life of the project,” states the Tahltan Central Council website regarding the Forrest Kerr project. The additional financial benefits of the McLymont Creek and Volcano Creek projects are estimated by the Tahltan Central Council to be \$560 million. These amounts do not include financial benefits flowing to the Tahltan through contracting, training and employment opportunities during construction and operation of the projects. Exact details of the pending agreements haven’t been released but provisions do call for upfront cash bonuses, escalating revenue sharing, profit sharing, provisions for an ownership interest, contracts being directly awarded to the Tahltan Nation Development Corporation, and preferential treatment to contractors who include Tahltan in their work.

Community positions

The AltaGas hydroelectric development has avoided intense public scrutiny. That the development was treated as three separate projects rather than one interconnected cluster of hydroelectric projects that would have been subject to a Comprehensive Environmental Assessment has drawn attention to the environmental assessment process. Stikine MLA Doug Donaldson has stated he would like to see the “environmental procedures” overhauled in government. “We need to make sure the public interests are at the core of these developments,” said Donaldson. “It’s the setting of the rules that I think needs to be looked at, and that’s the government’s role.”

Summary

AltaGas is building one of the largest “run-of-river” hydroelectric developments in North America on the Iskut River. This project is the anchor for the NTL. Even though the development in total exceeds the requirements for a federal cumulative impact assessment process, AltaGas has avoided that assessment with piece-meal reviews and permitting. Combined with numerous other proposed and planned developments in the area, the river diversion projects could lead to escalating cumulative impacts and piece-meal degradation of key habitat areas in the broader region.

Since AltaGas needs the NTL to move its generated power, it is contributing \$180 million to BC Hydro to build the NTL. However, BC Hydro has given AltaGas a huge 60-year energy purchase agreement on the Forrest Kerr project which vastly offsets AltaGas’ investment in the NTL. Power generated from this hydroelectric cluster will be used primarily to power mining development in the region. The cost of this hydroelectric development will run in the billions, and will be born by current and future BC Hydro ratepayers in the form of rate increases.



Lower Iskut River looking downstream. Photo courtesy of Jim Bourquin.



Iskut Canyon on the Iskut River. Water from the Iskut River will be diverted to produce hydroelectric power. Photo courtesy of Carr Clifton.

Location of Iskut River Hydroelectric Project



Contacts

Environmental Assessment Office

1st Floor 836 Yates Street, PO Box 9426, Stn Prov Govt,
Victoria BC V8W 9V1

General Inquiries: 250-356-7479 • E-mail: eaoinfo@gov.bc.ca

Environmental Assessment Office – Complete list of contacts

<http://www.eao.gov.bc.ca/contactus.html>

AltaGas

Head Office

1700, 355 - 4th Avenue, S.W., Calgary, Alberta T2P 0J1
Telephone: 1-403-691-7575, Fax: 1-403-691-7576,
Toll-Free: 1-888-890-2715

Vancouver Office

2500 - 1066 West Hastings Street, Vancouver, BC V6E 3X2
Telephone: 1-604-623-4750 or 604-294-1828,
Fax: 1-604-623-4751

Dan Woznow

Vice President, Renewable Energy Operations
604-623-4770 • dan.woznov@altagas.ca

Doug Donaldson

Victoria

Room 201, Parliament Buildings, Victoria, BC V8V 1X4
Tel: 250-387-3655, Fax: 250-387-4680

Smithers

1175 Main Street, Smithers, BC V0J 2N0
Phone: 250-847-8841, Fax: 250-847-8846

Hazelton

4345 Field Street, Box 227, Hazelton, BC V0J 1Y0
Phone: 250-842-6338, Fax: 250-842-6349

Nathan Cullen

Parliament Hill

House of Commons, Ottawa, ON K1A 0A6
Telephone: 613-993-6654, Fax: 613-993-9007,
Toll Free: 1-888-622-0212 • Cullen@parl.gc.ca

Constituency: Smithers Office

1283 Main Street, 2nd Floor, PO Box 4914,
Smithers, BC V0J 2N0
Telephone: 250-877-4140, Fax: 250-877-4141

Terrace Office

4710 Lazelle Avenue, Suite 104, Terrace, BC V8G 1T2
Telephone: 250-615-5339, Fax: 250-615-5344

Prince Rupert Office

818 Third Avenue West, Prince Rupert, BC V8J 1M6
Telephone: 250-622-2413, Fax: 250-624-7737

Resources

AltaGas – <http://www.altagas.ca/>

Forrest Kerr project brochure, including maps -
<http://www.altagas.ca/sites/default/files/Forrest%20Kerr%20Project.v15.Sept%202011.pdf>

Forrest Kerr Hydroelectric Project BC Environmental
Assessment - http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_home_161.html

McLymont Creek project brochure - http://www.altagas.ca/sites/default/files/McLymont%20Creek_Sept.%202011.v2.pdf

McLymont Creek Project BC Environmental Assessment -
http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_home_361.html

McLymont Creek regional location map, McLymont Creek
Hydroelectric Project Approved Application Information
Requirements, page 5, Figure 2.2-1 - http://a100.gov.bc.ca/appsdata/epic/documents/p361/1307375082832_92146c8eb41273def0a6ac0deb978333677c3269fcf8b434a8ae5320607a51f5.pdf

McLymont Creek project location and access map, McLymont
Creek Hydroelectric Project Approved Application Information
Requirements, page 8, Figure 2.2-2 - http://a100.gov.bc.ca/appsdata/epic/documents/p361/1307375082832_92146c8eb41273def0a6ac0deb978333677c3269fcf8b434a8ae5320607a51f5.pdf

McLymont Creek project site overview map, McLymont Creek
Hydroelectric Project Approved Application Information
Requirements, page 12, Figure 2.2-3 - http://a100.gov.bc.ca/appsdata/epic/documents/p361/1307375082832_92146c8eb41273def0a6ac0deb978333677c3269fcf8b434a8ae5320607a51f5.pdf

Volcano Creek project brochure, including maps -
http://www.altagas.ca/sites/default/files/Volcano.Ver_.4.Sept%202011.pdf

Tahltan Central Council project descriptions -
<http://www.tahltan.org/s/Links.asp>