Description of the Proposed TSB Projects

Introduction

Innergex Renewable Energy Inc. (Innergex), operating in BC under the business name Cloudworks Energy, is proposing to construct and operate three waterpower projects on Tretheway Creek, Shovel Creek and Big Silver Creek in the vicinity of Harrison Lake, BC. The three proposed projects would generate approximately 72 megawatts (MW) of energy combined.

The application for an environmental assessment certificate, which is required before any work can be undertaken on the proposed Projects, was accepted for review on January 4, 2012 by the BC Environmental Assessment Office. The water licence and land tenure applications associated with the three proposed projects are being reviewed separately by the Ministry of Forests, Lands, and Natural Resources.

All projects will consist of the following on-site components:

- An intake structure diverts a licensed amount of water from the stream
- A penstock and/or tunnel to convey the water downhill
- A powerhouse to enclose the generating equipment
- A tailrace channel to return all water to the stream
- A switchyard
- A transmission line
- Temporary land use during construction

Tretheway Creek Waterpower Project

Tretheway Creek is an eastward flowing tributary to Harrison Lake. The proposed Tretheway Creek Waterpower Project is located near the southeast slope of Robertson Peak, approximately 64 km north-northeast from the community of Mission, and 10 km southeast of the Douglas IR 8. The project will produce 23 MW of electricity and will power approximately 8,700 homes per year.

Parameters	Data
Generating Capacity	23 MW
Diversion Flow (max.)	11.4 cubic metres per second (m^3/s)
Diversion Length	4.5 km (approx.)
Penstock Type	Low-pressure steel/Weholite pipe, high-pressure steel
Intake Type	Weir with intake screen
Transmission Line Length	8 km (approx.)
Transmission Pole Type	138 kilovolt (kV) line, single wood poles

Shovel Creek Waterpower Project

Shovel Creek is a main westward flowing tributary to Big Silver Creek. The proposed Shovel Creek Waterpower Project is located near the confluence of Shovel Creek and Big Silver Creek, approximately 8 km upstream (north) of the Big Silver Creek Waterpower Project intake site. The project will produce just over 13 MW of electricity and will power approximately 4,800 homes per year.

Parameters	Data
Generating Capacity	13 MW
Diversion Flow (max.)	12.0 m^3/s
Diversion Length	2.6 km (approx.)
Penstock Type	Low-pressure steel/Weholite pipe, high-pressure steel
Intake Type	Weir with intake screen
Transmission Line Length	11 km (approx.)
Transmission Pole Type	138 kV line, single wood poles

Big Silver Creek Waterpower Project

Big Silver Creek flows south into Harrison Lake near the mid-point of its eastern shore. The proposed Big Silver Creek Waterpower Project is located in the valley southeast and adjacent to Mount Breckenridge, approximately 46 km north of the community of Harrison Hot Springs, and 47 km northeast of the Chehalis IR 5. The project will produce 36 MW of electricity and will power approximately 14,000 homes per year.

Parameters	Data
Generating Capacity	36 MW
Diversion Flow (max.)	42 m^3/s
Diversion Length	3.1 km (approx.)
Penstock/Tunnel Type	Tunnel and high-pressure steel
Intake Type	Inflatable rubber weir
Transmission Line Length	36 km (approx.)
Transmission Pole Type	138 kV line, single wood poles and submarine cable

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