

1 Q. Please provide copies, or if not completed an update and preliminary
2 conclusions, with respect to the 2006 feasibility studies in respect of Island
3 Pond and Portland Creek generating stations.
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6 A. Status updates for the Island Pond and Portland Creek 2006 feasibility
7 studies are as follows:
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9 **Island Pond Hydroelectric Development**

10
11 Newfoundland and Labrador Hydro is presently carrying out engineering and
12 environmental studies to confirm the economic feasibility of the Island Pond
13 Hydroelectric Project. The studies will complement previous feasibility and
14 environmental studies, completed in 1988 and 1990, and include a field
15 program of topographic surveys, geotechnical investigations and fish habitat
16 assessment. The engineering studies will finalize the development layout
17 and parameters and will culminate with a comprehensive and definitive
18 capital cost estimate and schedule suitable for preparing a capital budget
19 proposal for submission to the Public Utilities Board. The environmental
20 studies will confirm the amount of fish habitat compensation required under
21 the Fisheries Act, administered by Fisheries and Oceans Canada, as a result
22 of Harmful Alteration, Disruption or Destruction (HADD) of existing fish
23 habitat by the development construction.
24

25 Description of Development
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27 The development is located within Newfoundland and Labrador Hydro's Bay
28 d'Espoir system in southern Newfoundland and Labrador between Meelpaeg

1 Reservoir and Crooked Lake, approximately 50 km south of Millertown.

2
3 The development will utilize the flow from Meelpaeg Reservoir to develop the
4 existing 25 m head between the reservoir and Crooked Lake. Construction
5 of a 3,000 m long diversion canal between Meelpaeg Reservoir and Island
6 Pond and 3,400 m of channel improvements in Meelpaeg Reservoir and
7 Island Pond will raise the water level in Island Pond to that of the reservoir
8 and enable water to flow through Island Pond to a forebay canal and the
9 power plant. The plant will discharge the water, via a short tailrace canal,
10 into Crooked Lake. The plant capacity will be 36 MW with an average annual
11 energy output of 188 GWh.

12
13 Permanent access to the project site will be from Bay d'Espoir via the Upper
14 Salmon development, requiring approximately 23 km of new road, 8.5 km
15 upgrading of existing roads and a new 64 m span bridge across the Upper
16 Salmon Diversion Canal. Temporary construction access will be from
17 Millertown via the existing Granite Canal access road, requiring
18 approximately 29 km of upgrading of existing roads, a temporary bridge
19 across Noel Paul's Brook and a permanent bridge across the Diversion
20 Canal. In addition, approximately 20 km of new temporary on-site
21 construction access roads will be required.

22
23 A 230 kV switchyard, located near the powerhouse, will contain the 230 kV
24 power transformer(s) and switchgear for incoming and outgoing transmission
25 lines to tie into the existing 230 kV transmission line between the Granite
26 Canal and Upper Salmon projects.

27
28 To meet the requirements of the Fisheries Act, new fish habitat will be
29 developed in specific locations of the project to replace affected habitat per

1 HADD. This will include the number and type of units of habitat, determined
2 by the environmental studies and through negotiation with DFO, for brook
3 trout and/or ouananiche.

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5 Status of Studies
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7 The engineering studies were awarded to SNC-Lavalin/BAE Newplan Group
8 of St. John's on July 28, 2006, based on evaluation of proposals received
9 from four hydroelectric consultants in response to a request for proposals
10 (RFP) sent to nine consultants, and posting of the RFP on Hydro's website.
11 As of September 10, 2006, the engineering field program was completed and
12 analysis had started. The engineering studies started include:

- 13
14 • evaluation of alternative dam/intake/powerhouse arrangements, based on
15 specific topographical and geotechnical conditions collected in the field
16 program,
17 • selection of the permanent access road route,
18 • development of cost estimating criteria, and
19 • evaluation of locations for fish habitat development.

20
21 A final report on the engineering studies is scheduled for receipt by
22 December 15, 2006.

23
24 The environmental studies were awarded to Amec Earth and Environmental
25 Limited of St. John's, based on evaluation of one proposal received in
26 response to a RFP issued to three consultants and posted on Hydro's
27 website. As of September 10, 2006, the environmental field program was
28 completed and analyses of the results were well underway. A report on the

1 environmental studies is expected by early October 2006 and will provide
2 input regarding HADD requirements to the engineering studies.

4 **Portland Creek Hydroelectric Development**

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6 Newfoundland and Labrador Hydro is presently carrying out a feasibility
7 study to confirm the technical and economic feasibility of the Portland Creek
8 Hydroelectric Project. The study will complement pre-feasibility studies,
9 completed in 1987 and 2004, and include a field program of preliminary
10 topographic surveys, geotechnical investigations and fish habitat
11 assessment. The feasibility study will finalize the development layout and
12 parameters, identification and preliminary assessment of environmental
13 issues for future studies, and will culminate with a detailed capital cost
14 estimate and a detailed construction schedule suitable for presentation to
15 Hydro's management team for approval of the project. The environmental
16 work will provide a preliminary assessment of the amount of fish habitat
17 compensation required under the Fisheries Act, administered by Fisheries
18 and Oceans Canada, as a result of Harmful Alteration, Disruption or
19 Destruction (HADD) of existing fish habitat by the development construction.

21 Description of Development

22
23 The development is located in western Newfoundland and Labrador, near
24 Daniel's Harbour on the west side of the Great Northern Peninsula. More
25 specifically, it is located on Main Port Brook, a tributary of Portland Creek. It
26 will develop 440 m of head along Main Port Brook with a powerhouse located
27 near the confluence of Main Port Brook with Portland Creek, approximately
28 three (3) kilometres upstream from Inner Pond.

1 The development will utilize a long-term average flow of approximately 4.45
2 m³/s from 108 km² of drainage area on the plateau above the powerhouse. It
3 will comprise a series of small concrete gravity dams, including a headpond
4 dam and intake, a storage dam and a small diversion dam and canal.

5
6 The flow would be conveyed to the powerhouse via a 1.1 m diameter and
7 2.84 km long, steel penstock. The plant capacity will be approximately 12
8 MW with an average annual energy output of approximately 89.8 GWh.

9
10 Access to the site will be from Route 430 near Daniel's Harbour via
11 approximately 7 km of existing woods access road and 19 km of new access
12 road to the powerhouse location. From the powerhouse there will be
13 approximately 17 km of new access road to the headpond, storage and
14 diversion dam locations.

15
16 A 69 kV switchyard, located near the powerhouse, will contain the power
17 transformer and switchgear. Power will be transmitted from the site via 26
18 km of new 69 kV transmission line to connect with Hydro's grid at Daniel's
19 Harbour.

20
21 To meet the requirements of the Fisheries Act, new fish habitat will be
22 developed in specific locations of the project to replace HADD. This will
23 include the number and type of units of habitat, determined by future
24 environmental studies and through negotiation with DFO, for brook trout
25 and/or atlantic salmon.

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27 Status of Studies

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29 The feasibility study was awarded to SNC-Lavalin/BAE Newplan Group of St.

1 John's on September 1, 2006, based on evaluation of proposals received
2 from three hydroelectric consultants in response to a request for proposals
3 (RFP) sent to six consultants, and posting of the RFP on Hydro's website.
4 As of September 27, 2006, engineering studies had started, including:

- 5
- 6 • hydrologic and hydraulic analyses to assess alternative intake/headpond
 - 7 dam locations;
 - 8 • tentative layouts for dams, access road and transmission line; and
 - 9 • development of cost estimating criteria,

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11 and the field program was scheduled to start on September 29, 2006.

12
13 Also, as of September 27, 2006, a preliminary HADD review of Portland
14 Creek and water bodies associated with the development had been
15 completed and analysis of the results was started. A meeting with Provincial
16 Wildlife concerning caribou issues had been requested.

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18 A final feasibility study report is scheduled for receipt by December 15, 2006.