



Province of British Columbia

Water Act

Order ***Water Act*** **Section 88**

File No. 4004825; 76975-35/Aberfeldie

WHEREAS British Columbia Hydro and Power Authority (BC Hydro) is the operator of the Aberfeldie hydroelectric project, in respect of which it holds Final Water Licences 120650 and 120651;

WHEREAS BC Hydro has proposed to redevelop the project, now also referred as the Aberfeldie Redevelopment hydroelectric project, in respect of which it has been issued Conditional Water Licence 119823;

WHEREAS the Comptroller has issued an order dated May 10, 2005, to carry out certain compensation works;

WHEREAS BC Hydro has engaged in consultation to determine values for system parameters and develop operating procedures that may provide benefits as described below for the Aberfeldie Redevelopment project;

WHEREAS BC Hydro has re-submitted the Aberfeldie Project Water Use Plan which incorporates the Aberfeldie Redevelopment proposal and recommends minimum instream flows via a fish water release valve, a bypass valve for outage management, ramping rates, and enhancement works all of which are intended to benefit fisheries and wildlife habitat downstream of the project;

WHEREAS the Aberfeldie Project Water Use Plan proposes a monitoring programme to determine whether operating the facility in accordance with the parameters, works, and procedures of the Water Use Plan will provide the expected benefits; and

WHEREAS the Comptroller has accepted the Aberfeldie Project Water Use Plan updated November 6, 2006;

I HEREBY ORDER THAT:

1. The Section 88 Order dated May 10, 2005, is revoked.
2. The licensee shall implement and maintain the following minimum instream flows immediately below the dam upon completion of the Aberfeldie Redevelopment project:
 - a) 0.5 cubic metres per second from April 1 to May 31;
 - b) 2.0 cubic metres per second from June 1 to September 30;
 - c) 0.5 cubic metres per second from October 1 to November 30; and
 - d) 0.25 cubic metres per second from December 1 to March 31.
3. The licensee shall, for planned discharge changes, ramp down the combined discharge from the bypass valve and the generating station:
 - a) at a maximum rate of $10 \text{ m}^3/\text{s}$ per hour when the combined discharge is greater than $20 \text{ m}^3/\text{s}$;
 - b) over a minimum of 2 hours when the combined discharge is equal to or less than $20 \text{ m}^3/\text{s}$;
 - c) changes to discharge rates must be done in step intervals of 30 minutes or less;
 - d) the ramp rates in 3a) and 3b) do not apply to changes in generation discharge in response to variation in natural inflow; and
 - e) the ramp rates in 3a) and 3b) do not apply when the combined discharge from the bypass valve and the generation station is less than 20% of the total discharge measured immediately downstream of the generation station.
4. The licensee shall maintain a bypass valve and release flows during unplanned outages sufficient to provide 80% or more of the generation discharge observed immediately prior to the outage event up to a maximum of $20 \text{ m}^3/\text{s}$.
5. In lieu of further operational changes, the licensee shall submit within 12 months of the date of this Order, for approval by the Comptroller of Water Rights, terms of reference for 3000 square metres of fish habitat works and 3000 square metres of benthic habitat works, which may be achieved in whole or in part with each other.
6. The licensee shall submit within 12 months of the date of this Order, for approval by the Comptroller of Water Rights, terms of reference for:
 - a) monitoring of primary and secondary productivity within the diversion reach between the dam and powerhouse;
 - i) for 2 years prior to completion of the Aberfeldie Redevelopment Project and
 - ii) for 2 years upon completion of the Aberfeldie Redevelopment project;
 - b) monitoring the effectiveness of fish habitat works as outlined in 5 above;
 - c) monitoring the effectiveness of changes in habitat associated with the instream flow provisions between the dam and the generating station; and

- d) monitoring the effectiveness of winter flow provisions between the dam and the generating station.
7. Upon receiving from the Comptroller, approval of the above terms of reference and leave to commence, the licensee shall:
- a) implement the aforementioned works and monitoring programs in accordance with the approved schedule and terms of reference;
 - b) provide the Comptroller with a project completion report on the requirements associated with 5); and
 - c) provide annual monitoring reports for the programs in 6) until the conclusion of the programs.
8. With respect to the maintenance and provision of records the licensee must:
- a) Keep records of:
 - i) headpond elevations;
 - ii) total flow release from Aberfeldie Dam;
 - iii) discharge from the generation station; and
 - iv) discharge from the fish water release valve.
 - b) Provide a written report to the Comptroller of Water Rights on or before February 1 of each year summarizing the records from the previous calendar year; and
 - c) Provide on request of the Comptroller of Water Rights records collected under 8a.
9. The licensee may operate the works in an alternate manner in the event of an emergency, dam safety requirement, or an extreme hydrological event.
10. All emergency operations or other deviations from operations ordered above shall be reported to the Comptroller of Water Rights in a timely manner.

Dated at Victoria, B.C., this 8th day of November, 2006.



Pieter J. Bekker
Deputy Comptroller of Water Rights