Q. GENERATION - HYDRO

Rattling Brook Hydro Plant Refurbishment (Clustered) - $18,242,000

PUB 14.0 NP

For each of the past five years provide, if possible, the incremental cost that has been incurred as a result of restrictions on this plant due to maintenance: ie lost production due to dewatering of the penstock, or lost water due to spillage or leakage. If actual figures cannot be obtained, is it possible to estimate this cost by using downtime and available data?

A. During the past five years there has been no instance of lost production due to spillage as a result of the de-watering of the Rattling Brook penstock. There has been one instance of lost production resulting from a shutdown for plant maintenance.

In 2002, the stator winding of Unit #2 failed unexpectedly, putting the unit out of service. Fortunately, inflows to the Rattling Brook hydroelectric system in 2002 were below normal, and the other generating unit was able to accommodate the water, thus avoiding a loss of production.

In order to avoid a similar winding failure on Unit #1, which is of the same vintage, the Company replaced the Unit #1 stator winding on a planned basis in 2004.

The capital project to replace the Unit #1 winding took place from August to November of 2004. During this period, Unit #2 remained in service. Due to higher than normal inflows in 2004, the Rattling Brook storage reservoirs were unable to accommodate the inflows with one generating unit out of service. It is estimated that this resulted in approximately 4.85 GWh of water being spilled out of the system. The value of this lost production at the current Holyrood fuel forecast is $417,340 ($54.20 x 7,700 bbls. = $417,340).[1]

The Rattling Brook penstock has been dewatered 4 times during the last five years. On at least 3 of those occasions, significant leakage was encountered. However, a value cannot be established for the lost water, as there is no way to measure or even estimate the quantity of water lost due to such leakage.

The material risk of lost production at Rattling Brook as a result of the condition of the woodstave penstock is not in the relatively small loss of water resulting from ongoing leakage or brief and intermittent shutdowns for maintenance in the normal course of operations. The material risk of lost production relates to the possibility that an event may occur that requires the penstock to be de-watered for an extended period, and that

[1] Had this occurred on an unplanned basis in 2004, as occurred with the Unit #2 winding in 2002, it is estimated that lost production would have been approximately 12 GWh, at a value of $1,032,510 ($54.20 x 19,050 bbls. = $1,032,510).

the resulting leakage may render it difficult or impossible to return the penstock to service.

Please see the response to CA-30.0 NP for additional information on the operational difficulties associated with de-watering of the woodstave penstock.