Q. GENERATION - HYDRO

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

PUB 4.0 NP

Please provide a general comparison of the costs that would be incurred in the event of a catastrophic failure of the penstock and the subsequent repair/replacement with the replacement of the penstock in a planned and orderly manner.

A. Cost related to replacement of the penstock after a failure in-service would vary. Depending on the time of year in which the failure occurs, the outage length could vary from 16 to 24 months.

Because the design of the proposed Rattling Brook penstock is substantially complete, the length of outage after a failure would tend to be on the lower end of the 16 to 24 month range, say 16 to 20 months.

Cost variation to reinstate the Rattling Brook facility as a result of a catastrophic failure is by its nature impossible to predict. It will depend largely on damage to the site, to other structures and equipment, and possibly to property owned by third parties. While the cost variation could be as little as 20% over the $11.7 million projected for the planned replacement of the Rattling Brook penstock, it could be much higher than this.

The cost associated with replacement energy under an in-service failure scenario will be multiples of that currently projected. Production loss associated with the proposed Rattling Brook refurbishment is estimated to be approximately 38 GWh. The loss under an in-service failure scenario could easily be 2 to 3 times that amount.

Catastrophic in-service failure also raises issues of safety which do not lend themselves to cost estimation.

It is Newfoundland Power's position that prudent engineering practice indicates in-service failure of the Rattling Brook penstock should be avoided, if possible.