

Q. Please identify the advantages and disadvantages of delaying the proposed Pierre's Brook project by one year, two years and three years.

A. The Pierre's Brook project cannot reasonably be delayed for 1, 2 or 3 years. The assessments of the penstock and surge tank completed by AMEC in February 2014 recommended that the penstock be replaced and the surge tank refurbished in the near future. The project as presented in the Application will see the penstock replacement and surge tank refurbishment undertaken in the summer of 2016. Delaying the work beyond that timeline will increase the risk of an in-service failure resulting in plant downtime, equipment damage and risks to employee and public safety.¹

Deferring the replacement of the penstock beyond 2016 would increase the likelihood that significant leaking of the penstock could require plant outages. It is possible that the repair of a major leak could require the de-watering of the penstock. This, in turn, could trigger a series of events that could result in the Pierre's Brook plant being out of service for a lengthy period due to the inability to safely re-water the penstock. In addition, the current limitations imposed on the operation of the plant as a result of the need to avoid de-watering the penstock limits the Company's ability to maintain and service other equipment in the plant.

Deferring the refurbishment of the surge tank beyond 2016 would increase the likelihood of additional sections of cladding coming free of the structure in high wind conditions.² Also the extent of material loss on the exposed steel sections of the support structure due to corrosion is expected to increase due to the proximity to the ocean and exposure to salt laden air.

Finally, deferring the replacement of the penstock beyond 2016 would increase the risk to the safety of the public and employees. The woodstave penstock borders on residential properties on Gull Pond Road and Tamarack Drive, runs parallel with the access road to the upstream reservoir in several areas and, at one point, crosses under the Route 10, the Southern Shore Highway. The access road is used on a daily basis by the general public to reach homes and cabin areas. The penstock is in poor condition, with substantial leakage along the entire penstock. Engineering reports also indicate that the surge tank requires significant rehabilitation to address structural deficiencies. In such circumstances, the assessment of the safety risk is a matter of judgment.

There is the possibility of a catastrophic failure of the penstock, in addition it has been our experience that a major leak could develop at any time with penstocks in similar condition. Should a major leak or blowout develop, washouts may occur affecting sections of residential properties, the access road, the abutments of the highway bridge,

¹ The Pierre's Brook development is largely located within the community of Witless Bay. As a result there is significant public presence near the various plant assets.

² Adjacent to the surge tank is an old rail bed that has all-terrain vehicle ("ATV") traffic. Sections of cladding coming free of the structure in high wind conditions would present a hazard to pedestrians and ATV users.

1 areas surrounding the powerhouse and the river downstream of the powerhouse. Such
2 events would present a risk to safety of employees or members of the public should they
3 be travelling in the area at the time of the failure. Additionally, penstocks in this
4 condition require that leaks be plugged on a regular basis. There is potential for serious
5 injury to employees should a major blowout of the penstock occur while they are carrying
6 out such repairs.

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8 Should failure of the surge tank occur, washouts affecting the access road, the area
9 surrounding the powerhouse and service building, and the bridge downstream of the
10 powerhouse are likely. Should they be in the area at the time of the failure, employees
11 and the public would be at risk from falling water and debris.

12
13 The advantage associated with delaying the project for 1, 2 or 3 years is associated with
14 delaying the carrying cost of undertaking the capital project, offset by the increase in
15 project cost related to inflation and changes in material cost.³ The longer the project is
16 delayed, the higher the annual maintenance cost, and if the penstock was to fail the cost
17 to repair the associated damage and the potential increase in lost production would
18 outweigh any potential benefit received from the delay.

³ For example, a big variable in penstock replacement projects is the cost of steel at the time the contract is entered into.