

1 **Q. Re: Rocky Pond Plant Refurbishment (p. 2 of 81, Schedule B) - Has NP**
2 **undertaken, as it did in the case of the Rattling Brook Penstock, a study to**
3 **determine the optimum diameter for the replacement penstock?**
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5 A. A study similar to that undertaken to determine the optimum diameter of the replacement
6 penstock at Rattling Brook has not been undertaken for the replacement penstock at
7 Rocky Pond.
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9 Rattling Brook plant has 2 generating units. It was originally designed to be operated on
10 an isolated system in the Grand Falls area. Only one unit was expected to be operated at
11 a time, with the second unit available as a backup. When the plant was connected to the
12 Island Interconnected System the operating regime changed and operation of both units
13 was feasible.¹ However, the plant output and capacity were limited when operating the
14 two units due to high head losses in the penstock. To reduce the head losses, the
15 penstock was replaced with a larger diameter penstock which resulted in higher plant
16 production and capacity.
17

18 Rocky Pond plant has 1 generating unit. It was originally designed as part of a system of
19 plants on the Southern Shore which served the eastern Avalon Peninsula. Unlike
20 Rattling Brook, the operating regime associated with Rocky Pond has not changed
21 significantly since its 1942 construction. Accordingly, the design criterion that was used
22 for determining the existing penstock diameter has not changed materially. As part of the
23 final detailed design of the Rocky Pond plant, the optimum penstock diameter will be
24 determined, however, it is unlikely the new penstock diameter will differ materially from
25 that of the existing penstock.

¹ Prior to the connection of the Rattling Brook plant to the Island Interconnected System, operation of both units was not feasible as electrical demand on the isolated Grand Falls system did not require 2 unit operation.