Q. Re: Portable Substation: The report at Tab 2.4 states that (p.14) of NP's 147 Station Power and Distribution Power Transformers, 92% (or 135) can be backed up by NP's 50 MVA portable substation (P4). On p. 9, it states that P3 is capable of providing back up to 87% (or 128). On what basis is NP proposing the purchase of a 50 MVA portable substation?

A. Newfoundland Power has identified concerns related to high utilization of the existing portable substation fleet for the Company's capital and maintenance programs and for emergency back-up.

In recent years, there have been significant periods of time when Newfoundland Power's two largest portable substations, P3 and P4, were in service simultaneously and therefore unavailable for immediate response to power transformer failures.[1] A total of 89 of the Company's power transformers can be backed up only by portable substation P3 or P4.[2] If one of these 89 power transformers were to fail at a time when both P3 and P4 were already in use, the time required to remove one of the portable substations from service and transport it to the location of the failed unit could result in an outage to customers of greater than four days' duration.

Four alternatives were considered to address these concerns.[3] The least cost alternative consistent with reliable service is the purchase of a new 50 MVA portable substation. The proposed purchase of a new 50 MVA portable substation would substantially address the risk of a portable being unavailable in the event of a power transformer failure, while allowing continued utilization of portables to minimize customer outages related to capital and maintenance programs.

[1] Please refer to Figure 7, page 10 of the report at Tab 2.4 titled *Portable Substation Study* for an explanation of the in-service overlap duration of portable substations P3 and P4.

[2] If Hydro's portable substation P2 were available, then the number of the Company's power transformers that can only be backed up by portable substation P3 or P4 is reduced to 54.

[3] Please refer to Section 4, page 11 *et seq.* of the report at Tab 2.4 titled *Portable Substation Study* for description of the four alternatives considered.