

1 Q. **C-166, Replace Compressed Air Piping and Install Air Monitor, \$28,400**

2 Please provide reasons why or why not it would be possible and feasible to delay
3 the installation of a second compressed air dryer for one year or two?
4

5

6 A. Currently, if the existing dryer at the Buchans Terminal Station either malfunctions
7 or has to be taken out of service for a period of time for maintenance, the dryer has
8 to be by-passed and the remainder of the compressed air system must remain in
9 operation. This results in a potential for wet compressed air to be supplied to the
10 air blast circuit breakers. Water vapour present inside the interrupting chamber of
11 an air blast circuit breaker could potentially cause a pressure increase that may
12 result in an explosive failure of the breaker. Two such failures have been
13 experienced by Hydro since 2002 as indicated on page C-168 of the capital proposal
14 report. Failures of this type not only present a risk to equipment, but also pose a
15 significant safety risk for employees that may be in the vicinity when a failure
16 occurs. Therefore, it is important that the installation of a backup air dryer at the
17 Buchans Terminal Station not be delayed.
18

19 There are no government regulated standards requiring that backup dryers be
20 installed for this application; however, due to the damaging effects that moisture in
21 the compressed air system can cause on air blast circuit breakers, Hydro has
22 adopted the philosophy of installing a backup air dryer in terminal stations
23 undergoing compressed air system replacements. Hydro also contacted several
24 other large utilities in Canada to determine their practice regarding the use of back-
25 up air dryers in terminal stations. The responses were as follows:

- 1 1) Hydro Quebec: Use redundant air dryers.
- 2 2) Manitoba Hydro: Have redundant air dryers in some stations and will
- 3 include in future upgrades to other sites.
- 4 3) Churchill Fall (Labrador) Corporation: Use redundant air dryers.
- 5
- 6 Other utilities have been contacted but have not replied at this time.