



Nova Scotia Utility and Review Board

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By Email: alan.richardson@nspower.ca

Mr. Alan Richardson, P. Eng.
VP Integrated Customer Service
Nova Scotia Power Inc.
PO Box 910, Scotia Square
Halifax, NS B3J 2W5

Dear Mr. Richardson:

NSPI's Relay Testing Report 2009 – P-401.32 / Matter No.: M03232

The Board has reviewed Nova Scotia Power Inc.'s ("NSPI") Relay Testing Report for 2009 received by the Board on June 3, 2010. Board staff requested additional information with respect to the report on October 5, 2010, to which a response was received on October 19, 2010.

The report notes that NSPI tested 325 relays in 2009. Of those, 10 (3%) were replaced or repaired due to "serious functional failures", 53 (16%) were recalibrated, 3 (1%) required maintenance and 259 (80%) were acceptable. NSPI also provided a pie chart of summary results for the entire three year cycle (2007 through 2009). The three year total showed a distribution of results very similar to the final year.

Total cost of the 2009 program was \$92,200. The three year cycle total cost was approximately \$440,000.

Now that all transmission system relays have been tested with the last year being a reasonably low failure rate (2%), NSPI believes it would be appropriate to relax the schedule to a ten year cycle and requests Board approval to do so. NSPI also advised that relays classified as "Bulk Power System Elements" will continue to be tested every four years. In its response to IR-3, NSPI stated:

The rationale for extending the testing period to ten years is based on cost effectively managing the risk to the transmission system.

Historically NSPI has found few issues with the reliability of the mechanical relays and the testing over the past three years confirms this experience with a failure rate of approximately 2%. Each of the relays that failed during testing had back up protection in place in the event of a failure to operate properly.

Based on the testing results of the past three years NSPI is confident that the chances of finding failed units in the next three year cycle has been reduced even further. A 10 year cycle is a more appropriate time frame for this testing program.

The actual practice of testing the units can be a higher risk to the system reliability as parts of the protection system are removed from service resulting in single contingency situations during the testing period.

In the Board's view, the three year test cycle was appropriate in order for NSPI to get caught up to where they should be in managing the integrity of the relays; however, now that that point has been achieved, it is reasonable that the maintenance cycle be relaxed somewhat. The Board is not persuaded, however, that it is appropriate to make the leap from a three year to a ten year cycle.

Accordingly, the Board hereby directs NSPI to implement a six year cycle for relay testing for the 69 kV and 138 kV systems and directs NSPI to continue to file annual reports in the current format.

Yours very truly,

A handwritten signature in cursive script, reading "Nancy McNeil".

Nancy McNeil
Regulatory Affairs Officer/Clerk

c.c. Eric Ferguson, Director, Regulatory Affairs

By Email