

January 12, 2011

Nancy McNeil
Regulatory Affairs Officer/Clerk
Nova Scotia Utility and Review Board
1601 Lower Water Street, 3rd Floor
P.O. Box 1692, Unit "M"
Halifax, NS B3J 3S3

**Re: CI 38266 – 2010 Protection Upgrades- NSPI Information Requests (IRs) -
P –128.10**

Dear Ms. McNeil:

Enclosed are the IR responses pertaining to the capital item referenced above.

These IRs were received on December 22, 2010.

Attachment 1 included with IR-2 is confidential because the information is the intellectual property of the Northeast Power Coordinating Council (NPCC).

Intellectual property is provided to NSPI under the condition that the information is for the Company's sole use. NSPI is prohibited from copying the information and from providing the information to another entity. NPCC requires a membership to access this information.

Full disclosure is provided to the Board and to confidential intervenors.

Regards,



Lee Thomson-Lutz MBA, CMA
Manager Capital,

Encl.

NON-CONFIDENTIAL

Request IR-1:

Please explain if any of the stations included in the planned upgrade program were previously identified as Bulk Power System stations as defined by NPCC prior to the current revision of document A-10 (1/12/2009).

Response IR-1:

In 2007, NSPI conducted A-10 assessment of Nova Scotia Power Inc.'s system. This process resulted in 9 existing substations becoming Bulk Power System (BPS) stations, which are listed below:

79N-Hopewell 138 kV
1N-Onslow 138 kV
120H-Bushy Hill 138 kV
103H-Lakeside 138 kV
90H-Sackville 138 kV
47C-Stora* 138 kV
108H-Burnside 138kV
104H-Kempt Road 138 kV
91H-Tufts Cove 69 kV

*Stora's name was later changed to New Page

In 2010, NSPI re-assessed these stations using the current revision of A-10 and using faster protection clearing times at the remote line terminals. This process resulted in 4 substations being re-classified non-BPS. A presentation of these results was made to NPCC. The 4 substations listed below were approved by NPCC as non-BPS in 2010:

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1 Response IR-1: (cont'd)

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3 90H-Sackville 138 kV

4 47C-Stora 138 kV

5 108H-Burnside 138kV

6 104H-Kempt Road 138 kV

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Request IR-2:

Please provide a copy of the plan and schedule for bringing the identified stations into compliance that was submitted to NPCC for their review and acceptance.

Response IR-2:

Please refer to Confidential Attachment 1 for the information that was submitted to NPCC regarding Hopewell. The details pertaining to Hopewell can be found on page 9 in Confidential Attachment 1.

The plans for upgrading protection at 138 kV and 69 kV substations for NPCC compliance are as follows:

- The majority of the design phase for this project for 79N Hopewell was complete in 2010. The field work pertaining to this project has been rescheduled to 2011 due to station outages.
- 91H Tufts Cove will be completed in 2011. The detailed plan for this project has not been submitted to NPCC.
- 103H Lakeside will be designed in 2011 and the field work will be executed in 2012. The detailed plan for this project has not been submitted to NPCC.
- 120H Brushy Hill and 1N Onslow will now be completed in 2012. The detailed plans for these two stations have not been submitted to NPCC.

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Request IR-3:

For each station that was completed in 2010 please itemize the upgrades determined to be necessary to meet NPCC design criteria for BPS stations based on the items identified in Section 5.0 of the NPCC Regional Reliability Reference Directory #4 document. Please include the estimated labor and material costs for each item at each station.

Response IR-3:

The upgrades required at Hopewell are as follows:

1. Add a second bus protection on 79N-B61.
2. The A and B line protection schemes for L-6507 and L-6508 were contained in the same panels so the A scheme was separated from the B scheme by re-cabling and re-labeling the schemes such that the L-6507A protection and the L-6508 A protection were in panel P13 and the B protections for each line were in panel P14.
3. Breaker failure protection is already implemented on the 138 kV breakers at 79N Hopewell so modifications were required to add breaker back-up to initiate from the new bus protection scheme.
4. Breakers 79N-601 and 79N-606 will be modified to add a second trip coil.
5. Communications channels and teleprotection equipment will be modified to separate the A & B protection schemes.

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1 Response IR-3: (cont'd)

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3 The labour and material costs for each of the items referenced above (1-5) are not itemized.

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5 As referenced in the revised capital submission, Tufts Cove has been deferred from 2010 to
6 2011.

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8 Please refer to IR-1. Burnside does not need to be upgraded to BPS due to modifications at this
9 substation.

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Request IR-4:

Please provide the following information by station

(a) Estimated labor and material costs of the upgrades from ACE 2010

(b) Actual labor and material costs

(c) Variance and reasons for same

Response IR-4:

(a) The 2010 ACE budget of \$2,071,661 is predominately costs associated with the Tufts Cove upgrade. Tufts Cove has been deferred to 2011. The Burnside substation was estimated at approximately \$200,000. This substation no longer requires upgrading to BPS due to substation modifications. The amount budgeted for Hopewell is \$313,331. The estimated labour amount for this project is \$119,714 and the estimated materials amount is \$65,320.

(b) Only upgrades to the Hopewell substation have been completed in 2010. The actual labour total for this project as of Dec. 1, 2010 is \$40,991. The actual material costs are \$16,897.

(c) The variance is due to the following:

- Tufts Cove upgrades have been deferred to 2011
- Burnside substation no longer requires upgrading to BPS
- The field portion of work associated with the Hopewell substation has been deferred to 2011.