

November 14, 2014

The Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, Newfoundland & Labrador
A1A 5B2

Attention: Ms. Cheryl Blundon
Director Corporate Services & Board Secretary

Dear Ms. Blundon:

**Re: Newfoundland and Labrador Hydro - the Board's Investigation and Hearing into
Supply Issues and Power Outages on the Island Interconnected System – Request for
Generation Availability Additional Reporting**

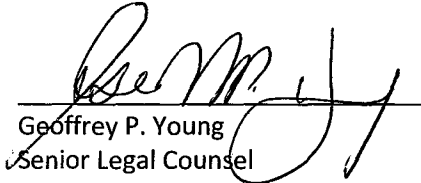
Please find attached Hydro's Monthly Generation Availability Additional Reporting update as requested by the Board in its letter of August 13, 2014. The following items are addressed in this update:

- The status of Annual Work Plan Items;
- The status of progress on the milestones for critical spares indicated in Hydro's June 16, 2014 report on Generation Availability; and
- The status and progress of activities to secure economically available interruptible loads.

We trust the foregoing is satisfactory. If you have any questions or comments, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO


Geoffrey P. Young
Senior Legal Counsel

GPY/jc

cc: Gerard Hayes – Newfoundland Power
Paul Coxworthy – Stewart McKelvey Stirling Scales
Sheryl Nisenbaum – Praxair Canada Inc.
ecc: Roberta Frampton Benefiel – Grand Riverkeeper Labrador

Thomas Johnson – Consumer Advocate
Thomas O' Reilly – Cox & Palmer
Danny Dumaresque

*Investigation and Hearing into Supply Issues and Power Outages on the
Island Interconnected System*

**Additional Reporting to the
Board of Commissioners of Public Utilities
Related to Generation Availability**

November 14, 2014



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1 **1.0 BACKGROUND AND INTRODUCTION**

2 On June 16, 2014, Newfoundland and Labrador Hydro (“Hydro”) submitted a report to the
3 Board of Commissioners of Public Utilities (the “Board”) on various matters related to
4 Generation Availability. Specifically, that Report outlined Hydro’s plans and progress in the
5 areas of winter readiness and generation availability improvement; critical spares; and
6 securing economically available interruptible loads.

7 This Report is in response to a request by the Board in its letter dated August 13, 2014 that
8 the following reports be filed monthly by the 15th of each month, reporting on the previous
9 month’s activity, commencing August 15th:

- 10 1. The status of Annual Work Plan items, comparing items planned for the year, items
11 planned to be complete as of the report date, and those actually completed for each of
12 the three generating units at the Holyrood Thermal Generating Station, the balance of
13 plant at Holyrood, the Hardwoods and Stephenville gas turbines, and the hydro units;
- 14 2. The status of capital projects showing the number forecast to be completed by the end
15 of the year and an S-curve of actual capital spending through the month for which the
16 report is filed in comparison to the planned spending for that month;
- 17 3. The status of progress for each milestone for critical spares on Tables 3.1, 3.2, and 3.3
18 of Hydro’s June 16 report on Generation Availability and the procurement status of the
19 list of critical spares developed for the Holyrood Thermal Generating Station, the
20 Hardwoods and Stephenville gas turbines, and the Hydro units; and
- 21 4. The status and progress of activities on Hydro’s work plan to secure economically
22 available interruptible loads.

23 The following sections of this Report address items 1, 3, and 4 above, respectively.

24 An update regarding the status of capital projects (item 2) is provided separately.

1 **2.0 ANNUAL WORK PLAN STATUS**

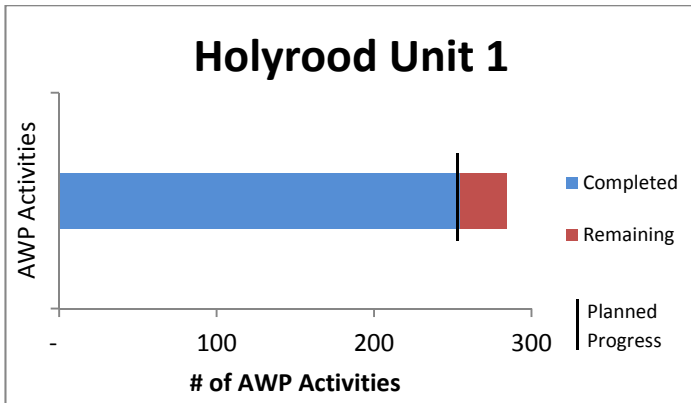
2 Hydro’s Annual Work Plan (AWP) integrates all planned activities for the year related to the
3 corrective maintenance, preventive maintenance, and capital project support which are
4 critical to safe, reliable production. Work orders generated during the year are also
5 integrated into the AWP as appropriate. Hydro regularly measures the progress of AWP
6 execution in comparison with plan, and is able to track AWP status down to the level of
7 individual work plan items. This Report produces a consolidated summary of actual AWP
8 progress versus plan as of the week ending November 8, 2014 for each of the following
9 generation assets:

- 10 1) Holyrood Thermal Generating Station
- 11 a. Units 1, 2 and 3
- 12 b. Balance of Plant
- 13 2) Gas Turbines
- 14 a. Hardwoods
- 15 b. Stephenville
- 16 3) Hydraulic Generation
- 17 a. Bay D’Espoir
- 18 b. Cat Arm
- 19 c. Hind’s Lake
- 20 d. Paradise River
- 21 e. Upper Salmon
- 22 f. Granite Canal

23 In each case, comments have been included next to the bar graph presentations to provide
24 context and to address any areas where recovery is planned for items that may be behind
25 plan.

1 **2.1 AWP Status: Holyrood Thermal Generating Station**

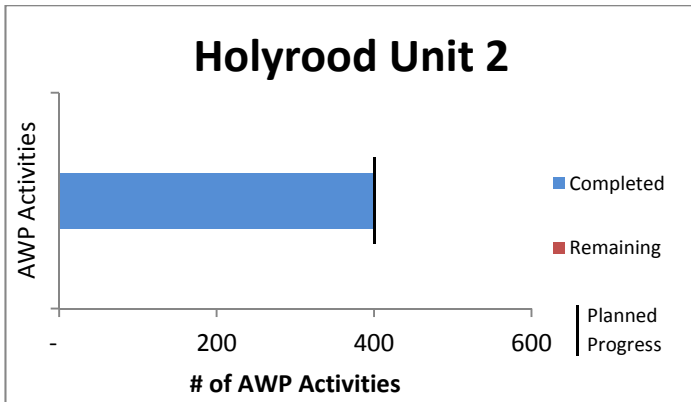
2 The current status of AWP execution at Holyrood is summarized in the charts below. Progress
 3 to the end of the reporting period is in line with plan, and the forecasted completion status of
 4 all remaining 2014 AWP items is Green.



Forecast Completion Status (R/Y/G): Green

Comments and Schedule:

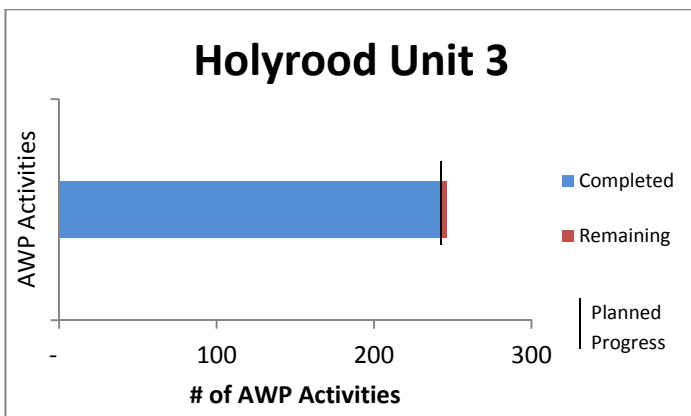
- Planned maintenance outage has a completion date of November 7
- Overall program completion status, including work in progress, is 89%
- Capital project commissioning & start-up activities are ongoing



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

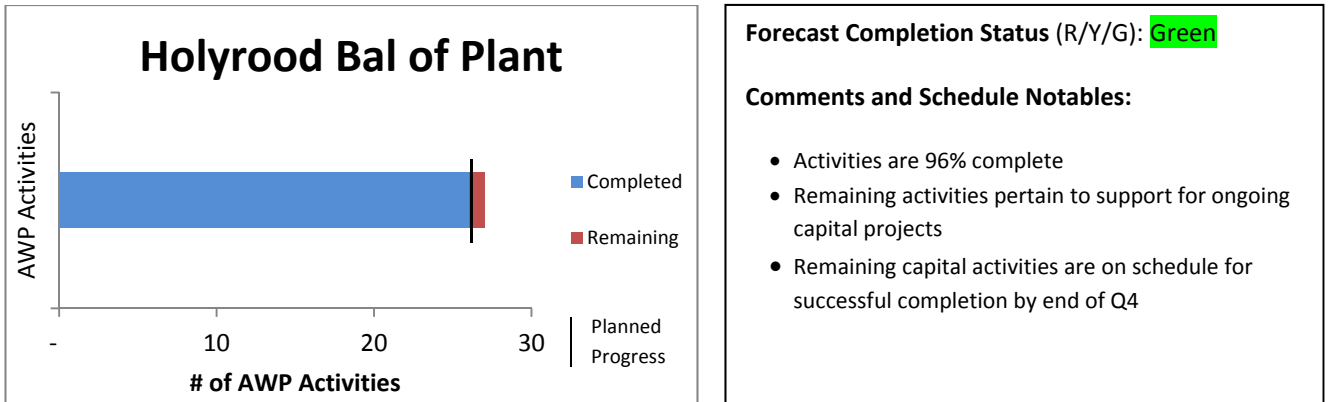
- Planned maintenance outage complete
- Overall program completion status, including work in progress, is 100%



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

- Planned maintenance outage is complete
- Overall program completion is 99%
- EVT Testing to be completed by Nov. 14th

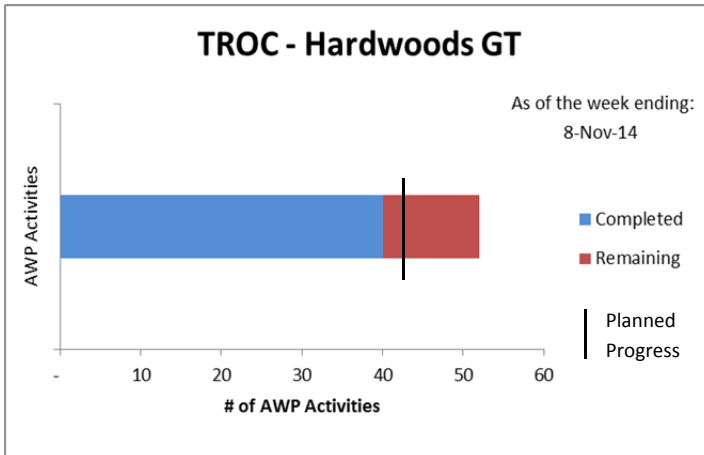


1 **2.2 AWP Status: Gas Turbines**

2 The current status of AWP execution at the Hardwoods and Stephenville gas turbines is
 3 summarized in the charts below. Overall progress to the end of the reporting period is slightly
 4 behind plan; the forecasted completion status of all 2014 AWP items at Hardwoods is Green.
 5 The progress to date status of 2014 AWP items at Stephenville is Yellow, however the
 6 forecasted completion status is Green, with all items still expected to be completed prior to
 7 December 1.

8 A fire at Hardwoods on July 25, 2014 resulted in a forced outage to the entire facility. The unit
 9 has since been returned to service.

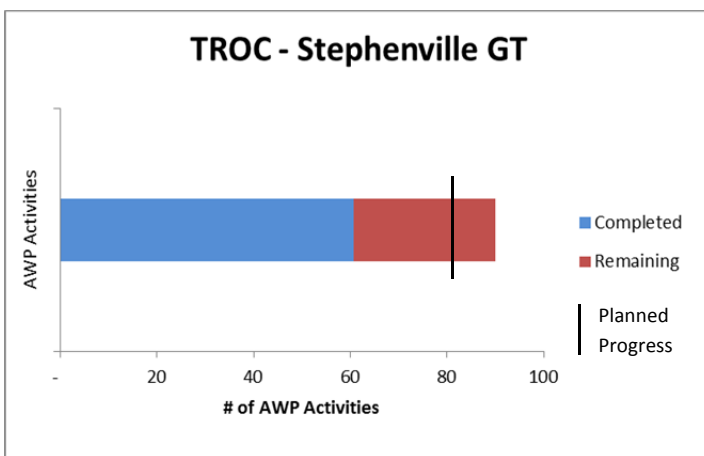
10 The capital work at Stephenville was delayed as a result of a delayed start to the unit outage
 11 due to system generation requirements; the overall completion schedule has been delayed
 12 one (1) week. While the majority of the capital project work has now been completed, a fire
 13 at Stephenville on November 10 has resulted in extension of the current outage to investigate
 14 the cause and make repairs.



Forecast Completion Status: (R/Y/G): **Green**

Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- 40 of 43 planned activities fully completed
- Planned PMs are slightly ahead of schedule; CMs are slightly behind schedule
- Overall program completion status, including work in progress, is 76%



Progress to Date Status (R/Y/G): **Yellow**

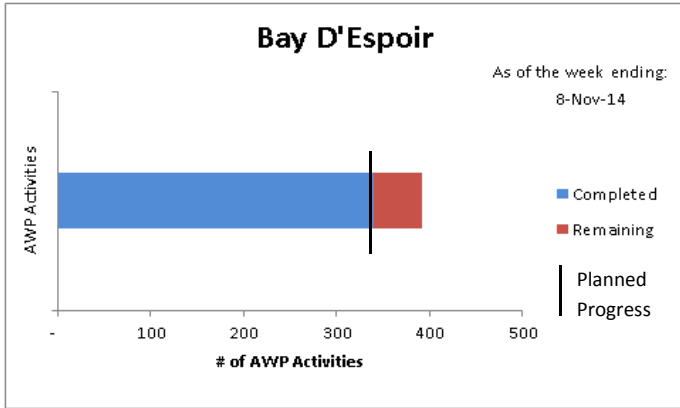
Forecast Completion Status (R/Y/G): **Green**

Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- 61 of 82 planned activities fully completed
- Planned PMs, CMs are behind schedule
- Overall program completion status, including work in progress, is 74%
- Fire restoration work has begun
- All planned PMs and CMs are expected to be completed

1 **2.3 AWP Status: Hydraulic Units**

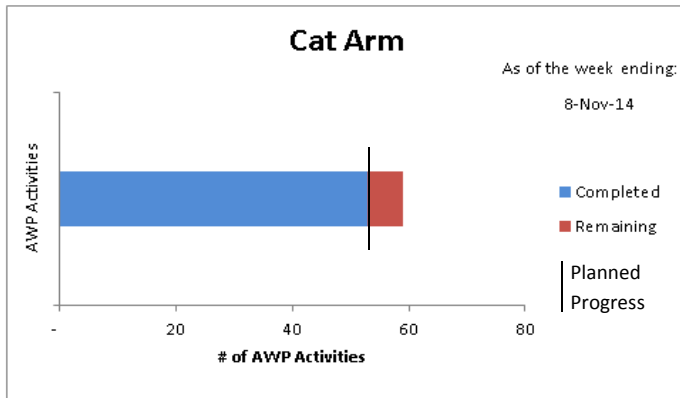
2 The current status of AWP execution at Bay d’Espoir and other hydraulic generation facilities
 3 is summarized in the charts below. Progress to the end of the reporting period is in line with
 4 the overall plan, but site specific plans have changed slightly due to a modified generation
 5 outage schedule as a result of recent spilling operations at various sites, and the required 24-7
 6 plant operation at Granite Canal for fish compensation flow. Other than the remaining short-
 7 duration outages at Paradise River and Granite Canal, all outstanding items are minor in scope
 8 and relate to normal operational activities. The forecasted completion status of all remaining
 9 2014 AWP items is Green.



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

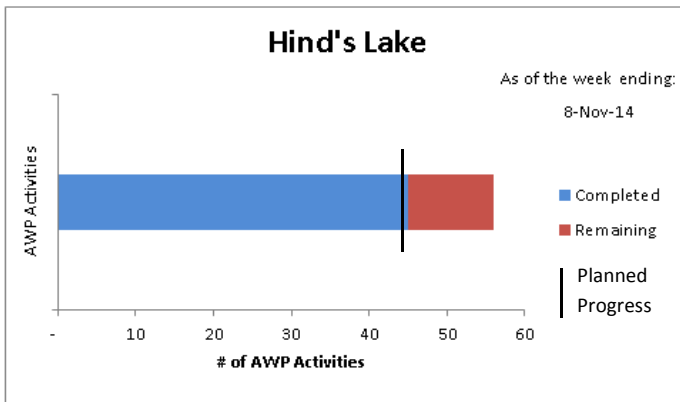
- 6 of 7 planned unit outages are complete
- Overall program completion status, including work in progress, is 87%
- Remaining work is on schedule for successful completion by Nov. 28th



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

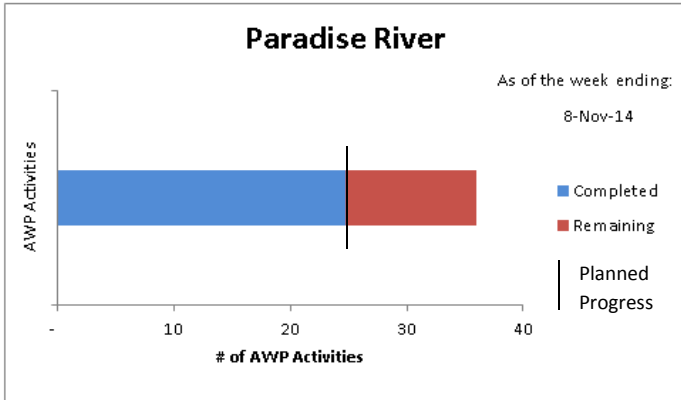
- Both unit outages are complete
- Overall program completion status, including work in progress, is 90%
- Remaining work is on schedule for successful completion by Nov. 21st



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

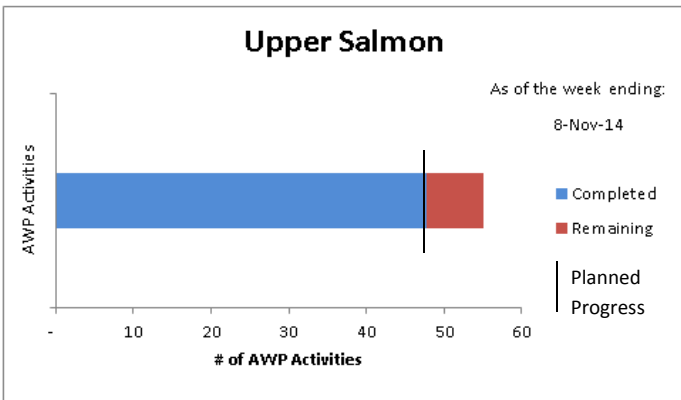
- Unit outage is complete
- Overall program completion status, including work in progress, is 80%
- Remaining work is on schedule for successful completion by Nov. 28th



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

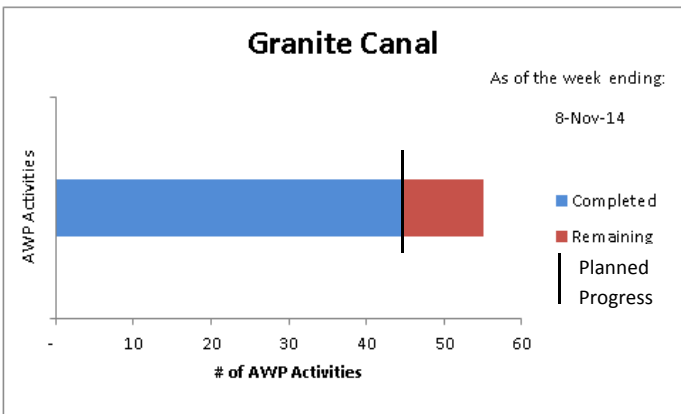
- Unit outage is complete
- Overall program completion status, including work in progress, is 69%
- Remaining work is on schedule for successful completion by Nov. 28th



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

- Unit outage is complete
- Overall program completion status, including work in progress, is 87%
- Remaining work is on schedule for successful completion by Nov. 21st



Forecast Completion Status (R/Y/G): Green

Comments and Schedule Notables:

- Unit outage is complete
- Overall program completion status, including work in progress, is 92%
- Remaining work is on schedule for successful completion by Nov 28th

1 **3.0 CRITICAL SPARES**

2 The following sections provide brief updates on the status of the critical spares reviews being
 3 completed in Hydro’s three main generation areas – the Holyrood Thermal Generating
 4 Station; the Gas Turbines at Hardwoods and Stephenville; and Hydro Generation. More
 5 detailed updates are provided separately in Hydro’s responses to a series of Board Requests
 6 for Information (RFIs PUB-NLH-450 through 455).

7 **3.1 Holyrood Thermal Generating Station**

8 The milestones for Holyrood’s critical spares review were indicated in Hydro’s June 16, 2014
 9 report on Generation Availability. The current status of these milestones is noted below.

Phase 1 of Critical Spares Review - HTGS		
Activity	Completion Date	Status
Purchase Order Issued	May 8, 2014	Complete
Kick Off Meeting	May 14, 2014	Complete
Draft Report of Spares to be Stocked	August 7, 2014	Complete
Presentation of Report	August 28, 2014	Complete
Finalized Report of Critical Spares to be Stocked	Sept 30, 2014	Complete
Finalized Critical Spares Listing Including: a) Bill of Materials; b) Estimated Lead Times; and c) Cost Estimates	November 30, 2014	70% Complete On target

10 The Consultants engaged to assist Holyrood with their review of critical spares to be stocked
 11 are currently seeking out suppliers and soliciting quotations from them with respect to cost
 12 and delivery of the items required. Hydro is continuing to work with the Consultant in this
 13 effort to ensure accuracy and to further scrutinize the list of parts based on probability of
 14 failure. The preparation of cost estimates in relation to the last milestone above continues to
 15 progress and is on target. Overall, Holyrood remains on track to complete its review of critical
 16 spares within the planned schedule.

1 **3.2 Gas Turbines**

2 The milestones for the critical spares review for Hydro’s Hardwoods and Stephenville Gas
 3 Turbines were indicated in its June 16, 2014 report on Generation Availability. The current
 4 status of these milestones is noted below.

Critical Spares Review – Gas Turbines		
Activity	Completion Date	Status
Project Start	June 18, 2014	Complete
Kick-off Meeting	June 20, 2014	Complete
Preliminary Spares List Complete	August 8, 2014	Complete
Draft Report Submitted	August 29, 2014	Complete - Sept 5
Final Report Submitted	Sept 12, 2014	Complete - Sept 22
Completed Procurement of Critical Items	November 15, 2014	On Target

5 All milestones to date have been completed.

6 Procurement activities are continuing in the following areas:

- 7 • Sourcing of components to be procured;
 8 • Procurement of sourced components; and
 9 • Sourcing/procurement of additional spares is ongoing as identified through completion
 10 of preventative and corrective maintenance activities.

11

12 Some components are no longer available and options for repair components as well as
 13 replacement components are being investigated. To date, 42% of recommended spares are in
 14 stock; 42% are in the procurement process; and 16% are being sourced.

15 **3.3 Hydro Generation**

16 The milestones for Hydro Generation’s critical spares review were indicated in Hydro’s June
 17 16, 2014 report on Generation Availability. The current status of these milestones is noted
 18 below.

Critical Spares Review – Hydro Generation		
Activity	Completion Date	Status
Identify Equipment and Critical Equipment/Components	July 31, 2014	Complete
Assess Critical Spares for Critical Equipment/Components	Sept 30, 2014	Completion date changed to Oct 31
Cross Reference Assessed Spares with Existing Critical Spares List	October 31, 2014	Slightly behind - Revised date is Nov 30
Order Critical Spares that are not already set-up in inventory	November 30, 2014	Expect 50% will be ordered by Nov 30. The remaining will be ordered early Dec.

- 1 Based on the analysis to date, greater than 95% of the 635 critical spares identified through
2 the analysis already exist in inventory. Due to challenges with inventory descriptions, it has
3 taken longer than expected to cross-reference inventory with the critical spares list to identify
4 the gaps. This has impacted the final two milestone dates. A capital proposal was prepared
5 for six priority critical spares, and is awaiting submission to the Board. A small percentage of
6 spare parts (including relays) will require unit outages to verify installed equipment part
7 numbers to verify that they match the parts in inventory. Unfortunately, most unit outages
8 were completed for the year by the time the critical spares analysis had advanced far enough
9 to identify this need. This is less than 5% of critical components in this year's assessment. It is
10 expected that most or all of these parts are already set up in inventory, but this needs to be
11 visually confirmed.
- 12 Hydro Generation's 2014 scope of work for its critical spares analysis is on track for 98%
13 completion by year end.

1 **4.0 SECURING ECONOMICALLY AVAILABLE INTERRUPTIBLE LOADS**

2 The work plan for securing economically available interruptible loads presented in Hydro's
3 June 16, 2014 report on Generation Availability is indicated below. With the exception of item
4 numbers 12 and 13, all work plan activities are complete. The table below reflects these
5 updates.

6 Hydro's internal expertise has undertaken assessments of Hydro's isolated island system
7 needs as well as legal and regulatory considerations. The Company conducted research into
8 interruptible load arrangements in other Canadian jurisdictions and reviewed its own historic
9 interruptible contracts to inform discussions with customers.

10 Hydro has had either telephone or face-to-face discussion with most of its Industrial
11 Customers regarding their ability to participate in an interruptible service/capacity assistance
12 arrangement. The discussions were largely concerned with determining how much capacity
13 each customer can provide; the costs associated with the provision of interruptible capacity
14 assistance; and the potential impacts on the customers' operations. The conversations
15 indicated that two of Hydro's island Industrial Customers, Corner Brook Pulp and Paper
16 Limited ("CBPP") and Vale, have the ability to commit to providing varying degrees of winter
17 capacity assistance to Hydro. On October 28, 2014, Hydro filed with the Board for approval of
18 an agreement with CBPP for 60 MW of capacity assistance. Discussions between Hydro and
19 Vale for a potential capacity assistance arrangement are ongoing.

20 Hydro anticipates having capacity assistance arrangements in place in advance of the 2014/15
21 winter season.

Status of Work Plan for Securing Economically Available Interruptible Load			
Item number	Description of Activity	Status	Expected Completion Date
A. Preliminary Research			
1.	Research interruptible loads and capacity assistance in other Canadian jurisdictions	Complete	August 31, 2014
2.	Review Hydro's previous interruptible power and capacity assistance contracts to inform discussion with customers	Complete	June 15, 2014
3.	Complete analysis of costs expected to be incurred by potential customers for the provision of interruptible load	Complete	August 31, 2014
4.	Complete analysis of Hydro's cost of providing additional capacity for incorporation into developing pricing considerations for interruptible load	Complete	August 31, 2014
B. Legal Considerations			
5.	Complete legal review of any potential issues associated with obtaining interruptible power and/or capacity assistance	Complete	September 15, 2014
C. Regulatory Considerations			
6.	Determine regulatory process to follow with respect to obtaining interruptible power and/or capacity assistance arrangements	Complete	September 15, 2014
D. System Considerations			
7.	Assess most appropriate means of incorporating interruptible power and/or capacity assistance arrangements into Hydro's Isolated Island System	Complete	September 15, 2014
E. Commercial Considerations			
8.	Assess appropriate commercial terms (including rate structure) to be incorporated into potential agreements	Complete	September 15, 2014
F. Engagement of Customers			
9.	Make contact with Industrial Customers inquiring as to their ability to curtail or provide capacity assistance	Complete	June 30, 2014
10.	Meet with Industrial Customers as necessary	Complete	September 21, 2014
11.	Determine optimal combination of interruptible and/or capacity assistance contracts moving forward	Complete	September 15, 2014
12.	Obtain alignment/agreement with applicable Industrial Customers on terms & conditions/commercial arrangements	Complete (CBPP) In Progress (Vale)	September 21, 2014
G. Approval of Commercial Arrangements & Execution			
13.	Put forward for final PUB approval and execute arrangements as required	In progress	October 2014