

September 15, 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**

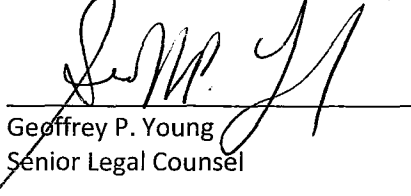
Please find attached Hydro's Monthly Generation Availability Additional Reporting update as requested by the Board in its letter of August 13, 2014. The following items are addressed in this update:

- 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/cp

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**

Newfoundland and Labrador Hydro

September 15, 2014



TABLE OF CONTENTS

1	BACKGROUND AND INTRODUCTION.....	1
2	ANNUAL WORK PLAN STATUS.....	3
2.1	AWP Status: Holyrood Thermal Generating Station	4
2.2	AWP Status: Gas Turbines.....	5
2.3	AWP Status: Hydraulic Units	6
3	CRITICAL SPARES.....	9
3.1	Holyrood Thermal Generating Station.....	9
3.2	Gas Turbines.....	10
3.3	Hydro Generation.....	10
4	SECURING ECONOMICALLY AVAILABLE INTERRUPTIBLE LOADS.....	12

1 **1 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 securing
6 economically available interruptible loads.

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

- 11
- 12 1. The status of Annual Work Plan items, comparing items planned for the year, items
13 planned to be complete as of the report date, and those actually completed for each of
14 the three generating units at the Holyrood Thermal Generating Station, the balance of
15 plant at Holyrood, the Hardwoods and Stephenville gas turbines, and the hydro units.
16
 - 17 2. The status of capital projects showing the number forecast to be completed by the end
18 of the year and an S-curve of actual capital spending through the month for which the
19 report is filed in comparison to the planned spending for that month.
20
 - 21 3. The status of progress for each milestone for critical spares on Tables 3.1, 3.2, and 3.3 of
22 Hydro’s June 16 report on Generation Availability and the procurement status of the list
23 of critical spares developed for the Holyrood Thermal Generating Station, the
24 Hardwoods and Stephenville gas turbines, and the Hydro units.
25
 - 26 4. The status and progress of activities on Hydro’s work plan to secure economically
27 available interruptible loads.
28

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

- 1 An update regarding the status of capital projects (item 2) will be provided separately.

1 **2 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 critical
4 to safe, reliable production. Work orders generated during the year are also integrated into the
5 AWP as appropriate. Hydro regularly measures the progress of AWP execution in comparison
6 with plan, and is able track AWP status down to the level of individual work plan items. This
7 Report produces a consolidated summary of actual AWP progress versus plan as of the week
8 ending September 13, 2014 for each of the following generation assets:

9

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

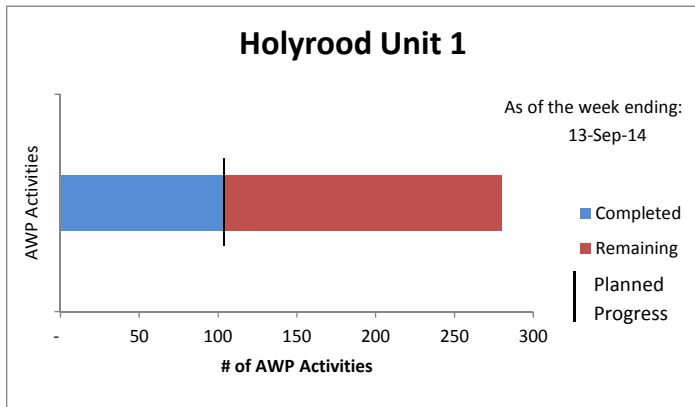
24 In each case, comments have been included next to the bar graph presentations to provide
25 context and to address any areas where recovery is planned for items that may be behind plan.

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.

5
 6 Ongoing, planned maintenance inspections conducted since Hydro’s update on August 15, 2014
 7 have identified a small number of required maintenance activities which have been added to
 8 the scope of work for this current maintenance season. These have been added to the AWP,
 9 and scheduled and fully resourced. The forecast completion notes include these additional
 10 activities.

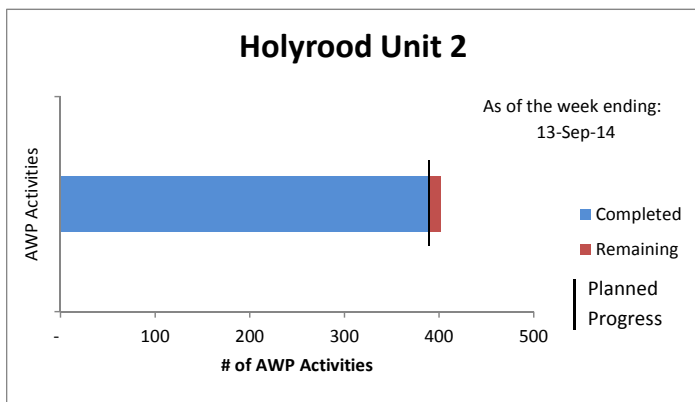
11



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

Comments and Schedule:

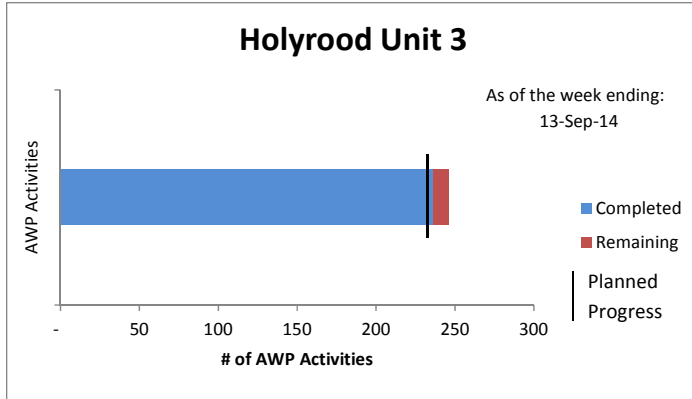
- Planned maintenance outage has a completion date of November 7
- Overall program completion status, including work in progress, is 35%
- Planned work is on schedule for successful completion



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

Comments and Schedule Notables:

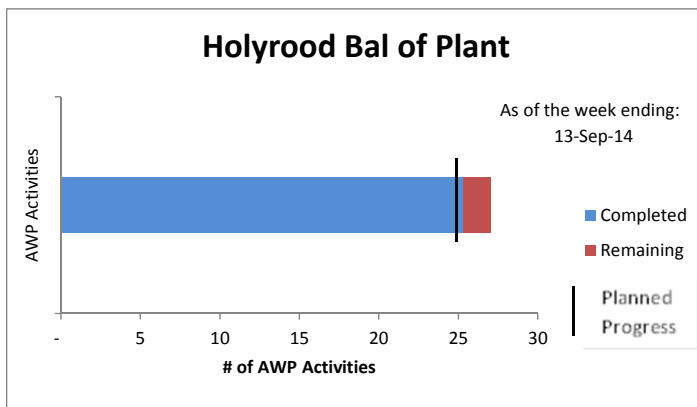
- Planned maintenance outage complete
- Overall program completion status, including work in progress, is 95%
- Remaining items are related to post outage, unit start up activities and are on schedule for successful completion



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

Comments and Schedule Notables:

- Planned maintenance outage is complete and unit has been returned to service
- Overall program completion is 95%
- Remaining activities are on schedule for successful completion



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

Comments and Schedule Notables:

- Activities are 90% complete
- Remaining activities primarily pertain to support for ongoing capital projects
- Remaining activities are on schedule for successful completion

1

2 **2.2 AWP Status: Gas Turbines**

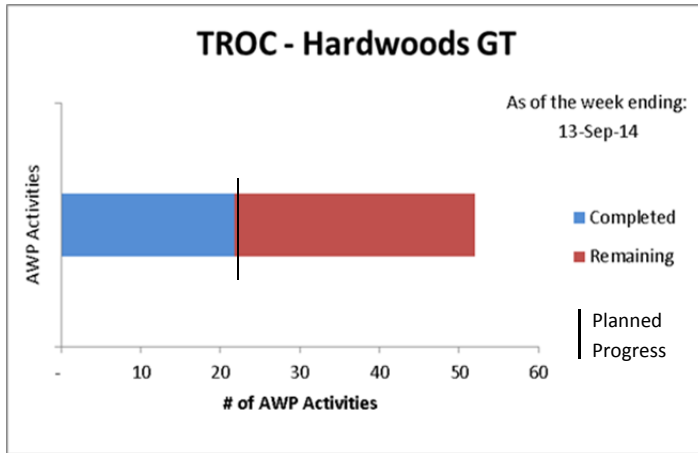
3 The current status of AWP execution at the Hardwoods and Stephenville gas turbines is
 4 summarized in the charts below. Overall progress to the end of the reporting period is slightly
 5 behind plan; however, the forecasted completion status of all 2014 AWP items at both facilities
 6 is Green.

7

8 A fire at Hardwoods on July 25, 2014 resulted in a forced outage to the entire facility. The
 9 return of the unit to service has been Hydro’s priority.

10

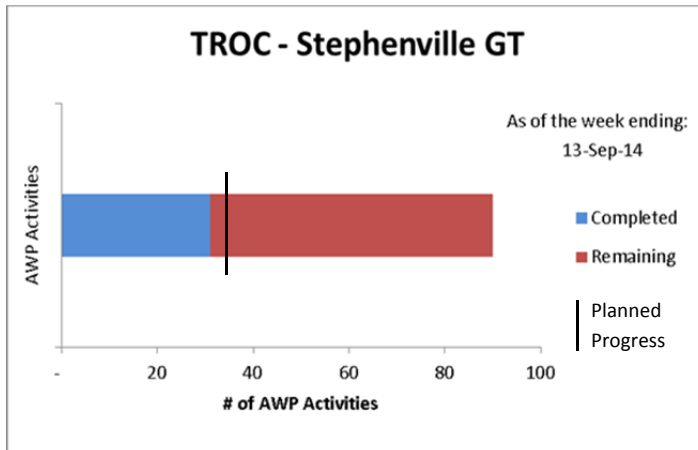
11 Some capital work at Stephenville has been slightly delayed as a result of changes in the Factory
 12 Acceptance Testing (FAT) schedule, but overall completion schedule has not changed.



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

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

- 22 activities fully completed (21 planned to date)
- Planned PMs, CMs are on schedule
- Overall program completion status, including work in progress, is 42%



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

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

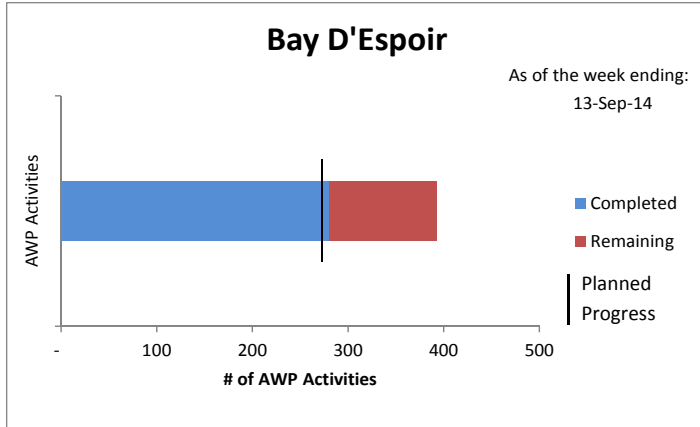
- 31 of 34 planned activities fully completed
- Planned PMs, CMs are on schedule
- Overall program completion status, including work in progress, is 35%
- Capital project work is slightly behind schedule due to a delay in FAT schedules

1
2
3
4
5
6
7
8
9
10
11

2.3 AWP Status: Hydraulic Units

The current status of AWP execution at Bay D’Espoir and other hydraulic generation facilities is summarized in the charts below. Progress to the end of the reporting period is in line with plan, and the forecasted completion status of all remaining 2014 AWP items is Green.

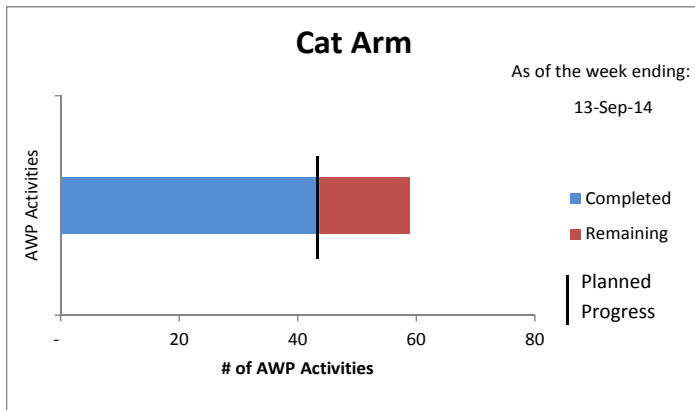
There have been some small increases in the total number of planned activities in this report compared to Hydro’s update report of August 15, 2014. Planned inspections conducted since that date have identified additional items which Hydro has determined should be completed during this maintenance season. These have been added to the AWP, and have been scheduled and fully resourced. The forecast completion notes include these additional activities.



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

Comments and Schedule Notables:

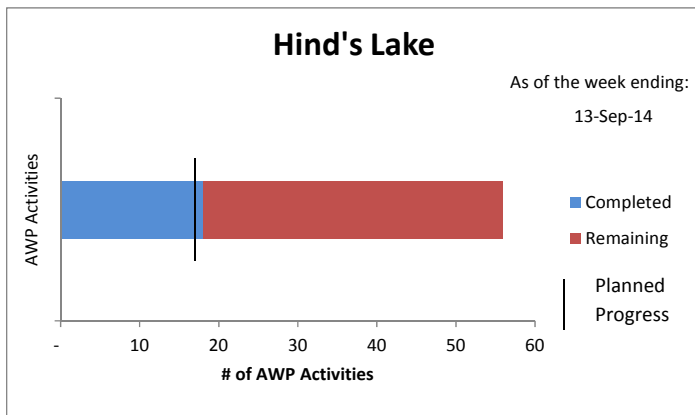
- 5 of 7 planned unit outages are complete
- Remaining 2 outages run through September - October
- Overall program completion status, including work in progress, is 70%
- Remaining work is on schedule for successful completion



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

Comments and Schedule Notables:

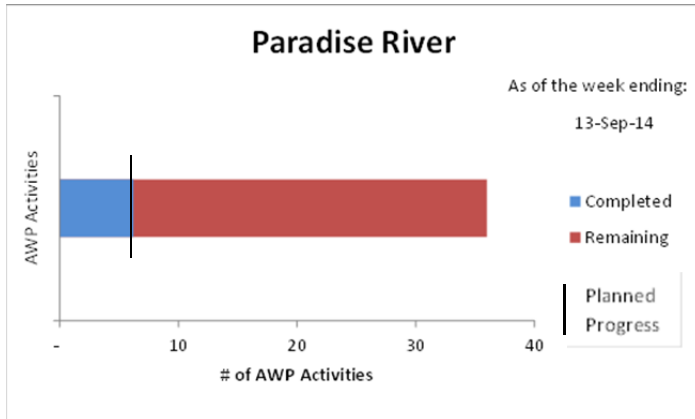
- Planned work to date is on schedule
- Overall program completion status, including work in progress, is 75%
- Remaining work is on schedule for successful completion



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

Comments and Schedule Notables:

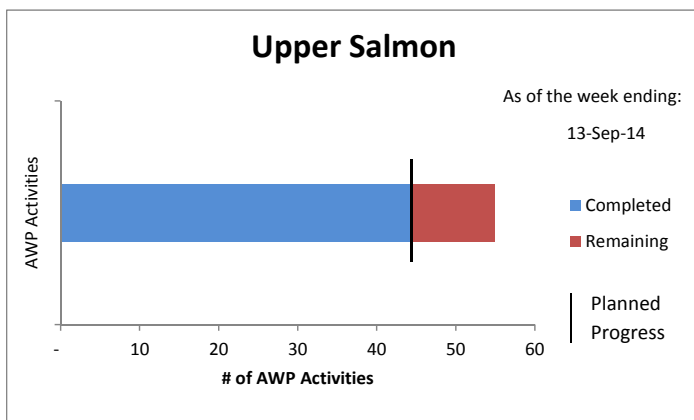
- Planned maintenance outage is scheduled from October through mid-November
- Overall program completion status, including work in progress, is 30%
- Planned work to date is on schedule
- Good results on early inspection of turbine runner



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

Comments and Schedule Notables:

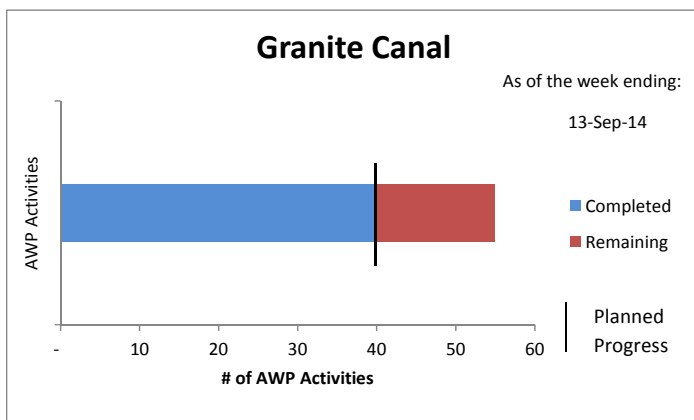
- Planned maintenance outage is scheduled for mid-September start
- Overall program completion status, including work in progress, is 20%
- Planned work to date is on schedule



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

Comments and Schedule Notables:

- Planned work to date is on schedule
- Overall program completion status, including work in progress, is 80%
- Remaining work is on schedule for successful completion



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

Comments and Schedule Notables:

- Planned maintenance outage was completed August 13, unit is fully available
- Non-outage items are being worked
- Overall program completion status, including work in progress, is 70%
- Remaining work is on schedule

3 CRITICAL SPARES

3.1 Holyrood Thermal Generating Station

The milestones for Holyrood’s critical spares review were indicated in Hydro’s June 16, 2014 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 - Sept 4
Finalized Report of Critical Spares to be Stocked	September 11, 2014	95% complete. New completion date of Sept 30.
Finalized Critical Spares Listing Including: a) Bill of Materials; b) estimated lead times; and c) cost estimates	November 30, 2014	10% complete. On target.

The presentation of the draft report which was originally scheduled for August 28 was completed on September 4. This one week delay has resulted in a re-scheduling of the completion date for the finalized report to September 30. The preparation of cost estimates in relation to the last milestone continues to progress and is on target. Overall, Holyrood remains on track to complete its review of critical spares within the planned schedule.

Hydro has completed an assessment of its critical spares requirements and approach for 4kV motors. Three options are currently being evaluated to determine the most reliable and cost effective solution as the basis for a procurement recommendation. These options are: a) purchase nine new motors; b) purchase spare parts for the nine motors; and c) purchase the four most critical motors and spare parts for the others.

1 **3.2 Gas Turbines**

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

5

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	September 12, 2014	Completion date changed to Sept 22
Completed procurement of critical items	November 15, 2014	On Target

6

7 Procurement activities are continuing in the following areas in parallel with the formal review:

8

- 9 • Review/confirmation of spares on hand and identification of procurement requirements
 10 based on a prioritized spares list;
- 11 • Finalization of DCS system spares requirements and ordering of required spares;
- 12 • Spares information related to capital work being completed this year is being
 13 documented; and
- 14 • Sourcing of additional spares is ongoing as identified through the completion of
 15 preventative and corrective maintenance activities.

16

17 **3.3 Hydro Generation**

18 The milestones for Hydro Generation’s critical spares review were indicated in Hydro’s June 16,
 19 2014 report on Generation Availability. The current status of these milestones is noted below.

20

21 This critical spares assessment is on track for completion as scheduled.

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	September 30, 2014	On Target
Cross reference assessed spares with existing critical spares list	October 31, 2014	On Target
Order critical spares that are not already set-up in inventory	November 30, 2014	On Target

1 **4 SECURING ECONOMICALLY AVAILABLE INTERRUPTIBLE LOADS**

2 The work plan for securing economically available interruptible loads presented in Hydro’s June
3 16, 2014 report on Generation Availability, updated August 25, 2014 to reflect expected
4 completion dates, is indicated below. With the exception of Item number 13, all work plan
5 activities are either in progress or complete. The table below reflects these updates.

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

11
12 Hydro has been in either telephone or face-to-face discussion with most of its Industrial
13 Customers regarding their ability to participate in an interruptible service/capacity assistance
14 arrangement. These discussions have been largely concerned with determining how much
15 capacity each customer can provide; the costs associated with the provision of interruptible
16 capacity assistance; and the potential impacts on the customers’ operations. These
17 conversations have indicated that two of Hydro’s island industrial customers, Corner Brook Pulp
18 and Paper Limited and Vale, have the ability to commit to providing varying degrees of winter
19 capacity assistance to Hydro. Discussions regarding potential rates, terms and conditions of
20 potential arrangements with these customers are ongoing.

21
22 Hydro is advancing in accordance with its schedule as reflected in the table below. This process
23 will be finalized in advance of the 2014/15 winter season.

Status of Workplan 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	In progress	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	In progress	September 21, 2014
G. Approval of Commercial Arrangements & Execution			
13.	Put forward for final PUB approval and execute arrangements as required	Pending	October, 2014