

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

**A Report to the Board of Commissioners of Public Utilities  
Regarding 2015-16 Winter Readiness Planning**

September 30, 2015



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1 **1.0 BACKGROUND AND INTRODUCTION**

2 This Report is in response to a request by the Board of Commissioners of Public Utilities (the  
3 Board) in its letter dated September 11, 2015 that Newfoundland and Labrador Hydro  
4 (Hydro) provide a report related to its winter readiness planning for the 2015-16 winter  
5 season. This Report addresses the following items as requested by the Board:

- 6 1. The status of Annual Work Plan (AWP) items for Hydro's generating plants and  
7 transmission and terminal stations, including the completion date; outstanding items  
8 to complete; and any risks to completion or as a result of failure to complete;
- 9 2. A description and schedule for all outstanding 2015 capital projects for Hydro's  
10 generating plant and transmission and terminal stations, including progress on  
11 completion status to date and expected completion date;
- 12 3. The identification of all equipment and plant testing to be carried out in advance of the  
13 winter period, including progress on completion status to date;
- 14 4. The planned generation outage schedule for the period September to December 31,  
15 2015, including an explanation for any planned outages extending beyond December  
16 1, 2015;
- 17 5. An update of critical spares assessment and procurement;
- 18 6. The forecast loads and expected generation capacity and reserves (setting out the  
19 basis for calculation) for the upcoming winter, as of December 1, 2015, and including  
20 capacity assistance agreements in place or planned; and,
- 21 7. An identification of any risks that could impact the winter readiness of assets as of  
22 December 1, 2015 and associated contingency plans.

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.

8    This Report produces a consolidated summary of actual AWP progress versus plan as of the  
9    week ending September 19, 2015 for each of the following areas of operations:

- 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       4) Transmission and Rural Operations
  - 24           a. Transmission
  - 25           b. Terminal Stations

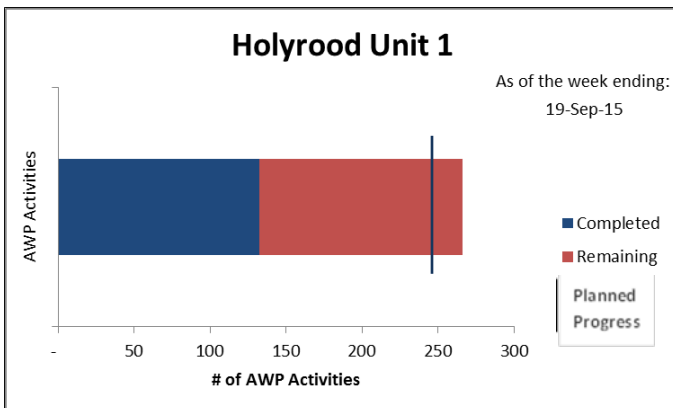
26    A text box to the right of each chart below indicates Hydro’s forecasted completion status as  
27    of December 1, 2015 in relation to AWP winter readiness activities (Green/On Target, Yellow/

1 Caution, Recovery Required, Red/Target Will Not be Fully Met). Relevant highlights are also  
 2 provided.

3 **2.1 AWP Status: Holyrood Thermal Generating Station**

4 The status of AWP execution at Holyrood is summarized in the charts below. As noted, all  
 5 planned 2015 winter readiness work is expected to be complete by December 1, 2015.

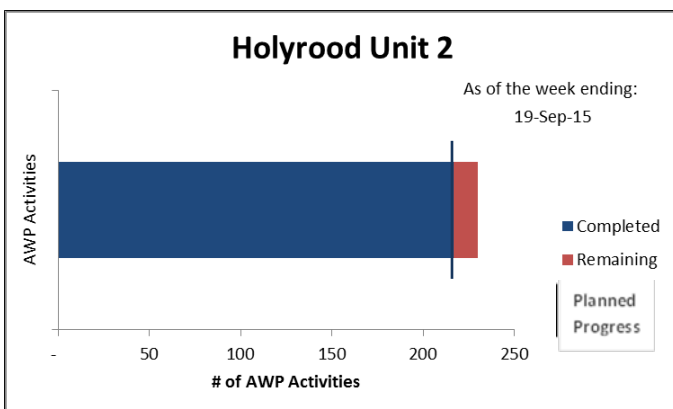
6 The chart for Unit 1 indicates that AWP execution is behind plan. Actual progress to date is  
 7 higher than indicated by the graph because many of the AWP activities for Unit 1 have been  
 8 significantly progressed as part of the unit outage, but not finally completed. Similarly, many  
 9 activities in the AWP will not be marked complete until the maintenance outage has been  
 10 completed and the unit is available for service. The approved outage schedule for Unit 1  
 11 extends to late October, and Hydro is confident that all remaining winter readiness work will  
 12 be completed on time and according to the established plan.



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

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

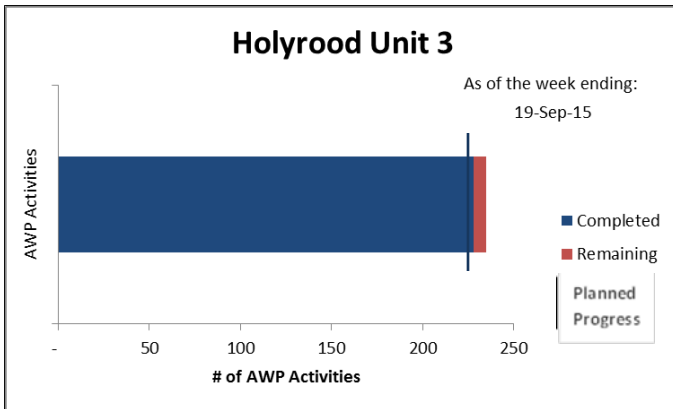
- Planned maintenance outage has a completion date of October 27
- Overall program completion status, including work-in-progress, is 50%
- Planned work is on schedule for successful completion



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

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

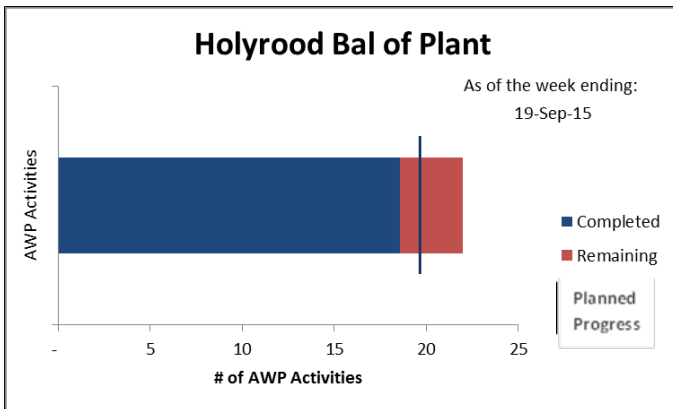
- Planned maintenance outage has a completion date of September 25 and is presently transitioning through commissioning and start-up activities
- Overall program completion status, including work-in-progress, is 94%



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

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

- Planned maintenance outage is complete
- Overall program completion is 97%
- EVT testing to be completed by October 31
- Remaining items are related to online testing and will be dependent on load availability from the ECC



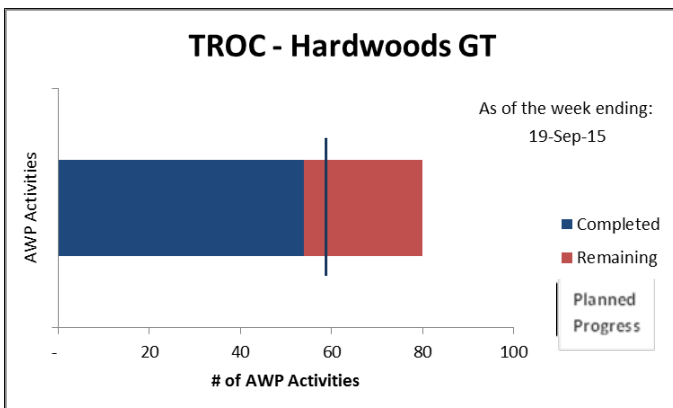
Forecast Completion Status: (R/Y/G): **Green**

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

- Activities are 86% complete
- Planned work is on schedule for successful completion

1 **2.2 AWP Status: Gas Turbines**

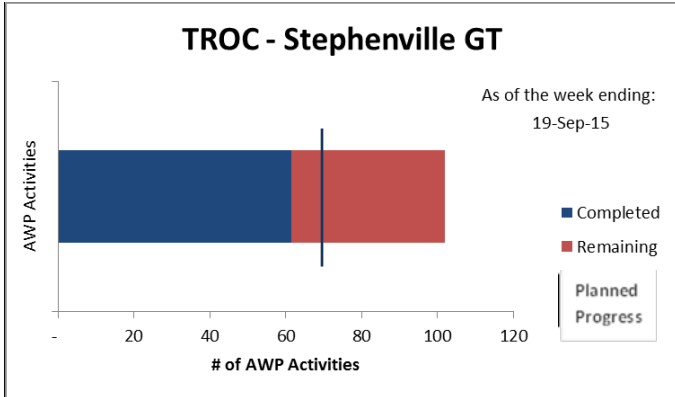
2 The current status of AWP execution at the Hardwoods and Stephenville gas turbines is  
3 summarized in the charts below. As noted, all planned 2015 work is expected to be complete  
4 by December 1, 2015.



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

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

- YTD progress relative to plan is 90%; 54 of 60 planned activities completed
- Planned capital work is complete (tank inspection)
- Expect all winter readiness activities to be completed by the end of November



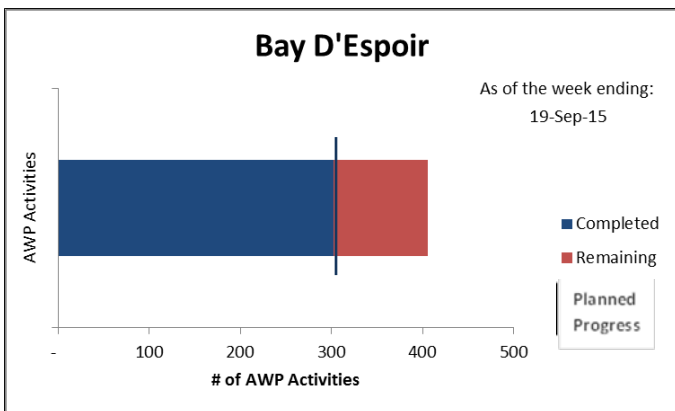
Forecast Completion Status (R/Y/G): **Green**

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

- YTD progress relative to plan is 90%; 62 of 69 planned activities completed
- Planned capital work is on schedule
- Expect all winter readiness activities to be completed by December 1

1 **2.3 AWP Status: Hydraulic Units**

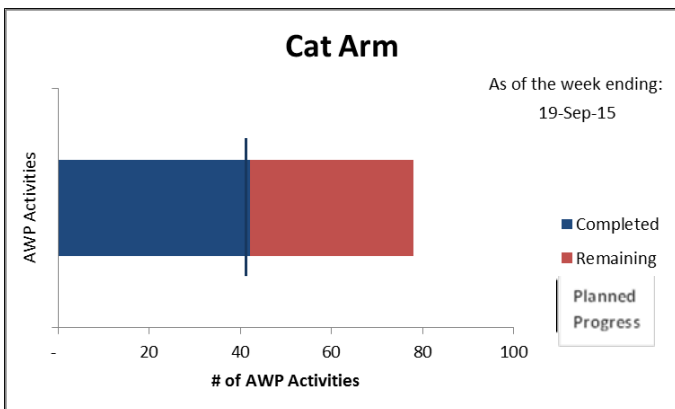
2 The current status of AWP execution at Bay d’Espoir (BDE) and other hydraulic generation  
 3 facilities is summarized in the charts below. As noted, it is expected that all planned 2015  
 4 winter readiness activities will be completed by December 1, 2015.



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

Comments and Schedule Notables:

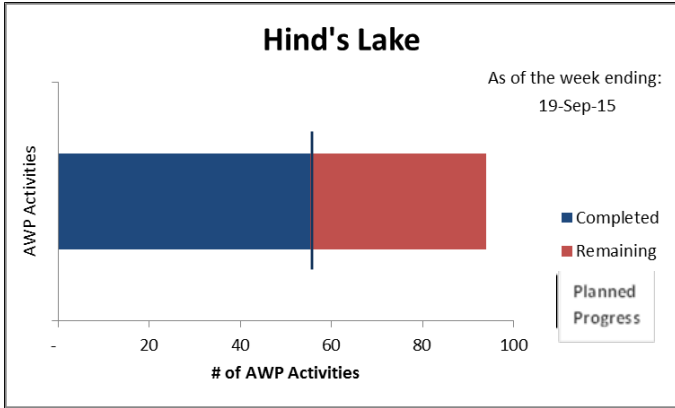
- 5 of 7 planned unit outages are complete
- Overall program completion status, including work in progress, is 75%
- Continuing with work to resolve unit #1 vibration issue
- Remaining work is on schedule for successful completion by November 15<sup>th</sup>.



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

Comments and Schedule Notables:

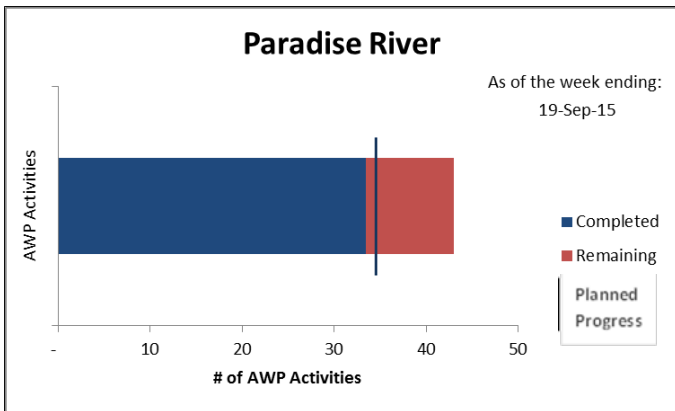
- Unit 2 outage complete and Unit 1 scheduled to begin Nov. 2<sup>nd</sup>
- Unit 2 Exciter and station service breaker replacements are in progress and on schedule
- Overall program completion status, including work in progress, is 55%
- Remaining work is on schedule for successful completion by November 15<sup>th</sup>.



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

**Comments and Schedule Notables:**

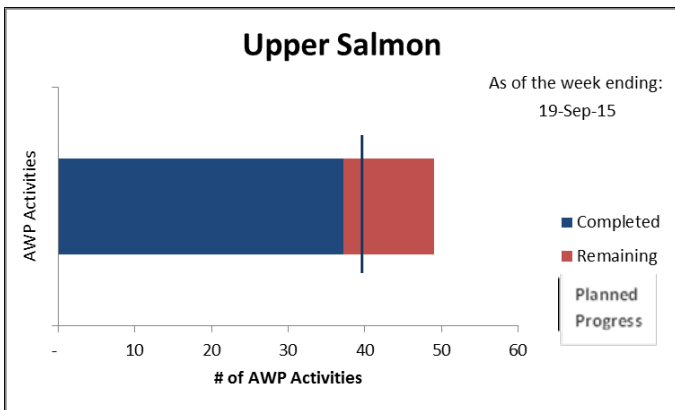
- Unit outage scheduled for Oct. 26<sup>th</sup> to Nov. 1<sup>st</sup>
- Overall program completion status, including work in progress, is 58%
- Remaining work is on schedule for successful completion by November 15<sup>th</sup>.



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

**Comments and Schedule Notables:**

- Unit outage is complete and runner repairs are in progress and near completion
- Overall program completion status, including work in progress, is 77%
- Remaining work is on schedule for successful completion by November 15<sup>th</sup>.

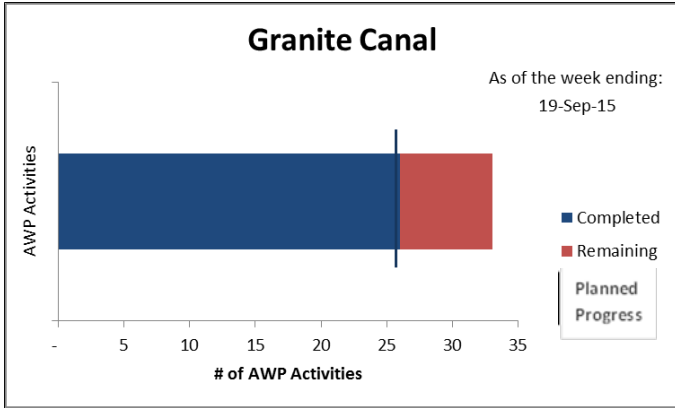


**Forecast Completion Status (R/Y/G):** Green

**Comments and Schedule Notables:**

- Unit outage is complete
- Overall program completion status, including work in progress, is 74%
- Remaining work is on schedule for successful completion by November 15<sup>th</sup>.





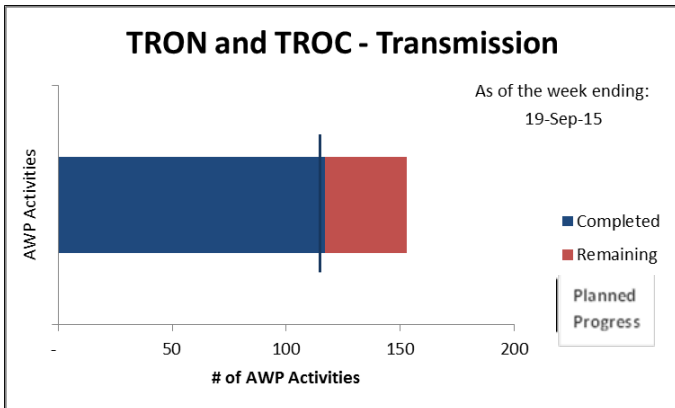
**Forecast Completion Status (R/Y/G):** Green

**Comments and Schedule Notables:**

- Unit outage is complete
- Overall program completion status, including work in progress, is 76%
- Remaining work is on schedule for successful completion by November 15<sup>th</sup>.

1 **2.4 AWP Status: Transmission and Terminal Stations**

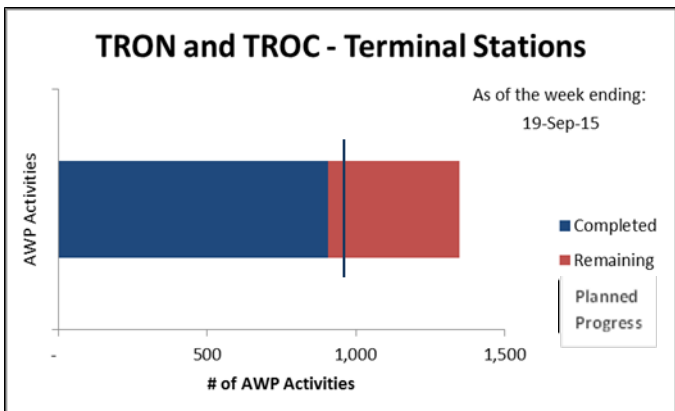
2 The current status of AWP execution in Transmission and Rural Operations (TRO) for both  
 3 transmission equipment and terminal station facilities on the IIS is summarized in the charts  
 4 below. As noted, it is expected that all planned 2015 winter readiness activities will be  
 5 completed by December 1, 2015.



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

**Comments and Schedule Notables:**

- Overall completion status relative to plan is 97%; 117 of 121 planned activities are complete
- Continue to execute Wood Pole Line Management program
- Expect all planned activities to be completed by December 1



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

**Comments and Schedule Notables:**

- Overall completion status relative to plan is 92%; 906 of 980 planned activities are complete
- Battery discharge testing, distribution recloser PMs, and relay meter maintenance behind schedule, crews to be redeployed to focus on completion
- Expect all planned activities to be completed by December 1

### 1 3.0 STATUS OF WINTER READINESS CAPITAL PROJECTS

2 Appendix A of this Report identifies the 2015 capital projects which include scope related to  
 3 2015-16 winter readiness. Table 3.1 below summarizes the current status of the winter  
 4 readiness components of these projects by asset category.

<b>TABLE 3.1</b>			
<b>2015 Projects Related to Winter Readiness</b>			
<b>Asset Category</b>	<b>Complete</b>	<b>Outstanding</b>	<b>Total</b>
Thermal Generation	8	7	15
Hydraulic Generation	4	3	7
Gas Turbines		1	1
Transmission		1	1
Terminal Stations	5	10	15
Distribution	3	3	6
			<b>45</b>

5 One of the projects included in this group is a supplemental project which was approved in  
 6 September, 2015 relating to the replacement of two excitation transformers at Holyrood.  
 7 These transformers have been ordered, delivery is expected in January, 2016, and they will be  
 8 available on site during the winter period in the unlikely event of an in-service failure prior to  
 9 planned replacement. The timing of installation will depend on the availability of a Holyrood  
 10 generating unit outage window. Installation will therefore be planned following the winter  
 11 peak demand period.

12 Hydro's project schedule contemplates that all other outstanding projects will be completed  
 13 by the end of November, 2015 with any projects requiring generator outages completed in  
 14 accordance with the annual planned generation outage schedule. Thus, the majority of these  
 15 will be completed by the end of October.

1 The completion of outstanding projects in accordance with the schedule indicated in Appendix  
2 A is contingent on several factors which have the potential to change completion dates. For  
3 example, if any of the projects which are dependent on generator or line outages encounters  
4 a delay this could have a knock-on effect on the completion of other projects which are also  
5 generator or line outage dependent. Such issues are not anticipated at the present time, but  
6 in the meantime all such potential risks have been identified, and associated  
7 contingency/mitigation plans have been developed, consistent with Hydro's project execution  
8 processes and standards.

1 **4.0 PLANT AND EQUIPMENT TESTING**

2 In its thermal and hydraulic generation facilities Hydro follows a structured checklist for  
3 planning and documenting its testing and inspection of plant and equipment from a winter  
4 readiness standpoint.

5 In its transmission, terminal station and gas turbine operations, Hydro relies on its Annual  
6 Work Plan (AWP) process to plan and track its winter readiness testing and inspection of these  
7 assets. The AWP in these areas include planned preventative maintenance (PM) activities, as  
8 well as corrective maintenance (CM) items, both of which involve inspection and testing. The  
9 AWP in Transmission and Terminal Stations are predominantly comprised of PM and CM  
10 activities. Planned PMs, CMs, and any other activities pertaining to winter readiness are  
11 flagged inside the respective AWP, and may therefore be tracked separately from AWP items  
12 which are not winter readiness related.

13 **4.1 Thermal Generation**

14 Winter readiness testing of generating equipment in Thermal generation is focused primarily  
15 around annual unit maintenance outages. Following annual outages, units are run up,  
16 synchronized, and all systems are verified before operating status is determined and  
17 preparedness is confirmed. Unit load tests are performed at this time as well.

18 The winter readiness testing protocol includes the testing of appropriate Balance of Plant  
19 components as well.

20 The current status of equipment/plant testing for Thermal Generation is indicated in Appendix  
21 B of this Report. Consistent with the generation outage schedule shown in Appendix D, it is  
22 expected that all winter readiness testing will be completed by December 1, 2015.

23 **4.2 Hydraulic Generation**

24 Winter readiness testing of generating equipment and balance of plant in Hydraulic  
25 Generation is completed using the same process as for Thermal Generation as described in  
26 section 4.1 above.

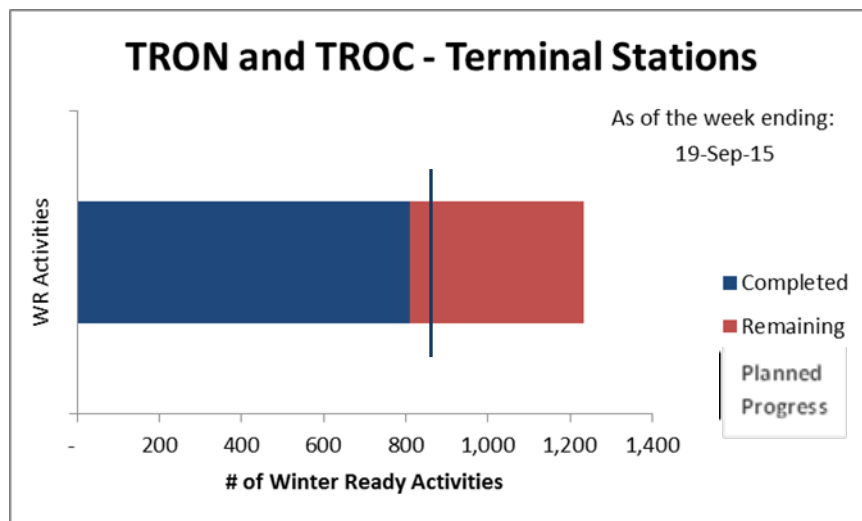
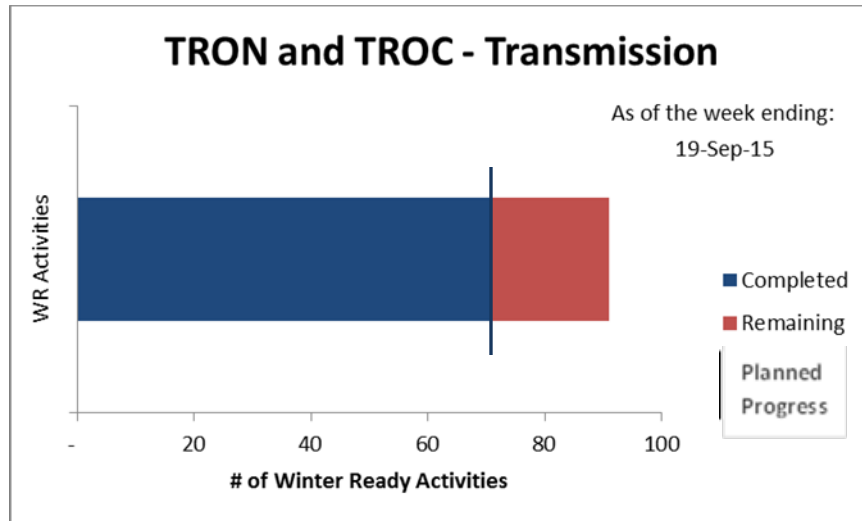
1 The current status of equipment/plant testing for Hydraulic Generation is indicated in  
2 Appendix C of this Report. Consistent with the generation outage schedule shown in  
3 Appendix D, it is expected that all winter readiness testing will be completed by December 1,  
4 2015.

#### 5 **4.3 Transmission and Terminal Stations**

6 As noted above, the AWP's for both Transmission and Terminal Stations are predominantly  
7 comprised of PMs and CMs, which inherently involve inspection and testing. Examples of  
8 winter readiness activities that are included in the AWP work scopes include the following:

- 9 a) Transformer PMs and CMs
- 10 b) Annual exercises on all high voltage circuit breakers
- 11 c) Exercise of 230 Kv circuit breakers from protection during PM inspections
- 12 d) Infrared scans at all terminal stations
- 13 e) Annual ultrasonic leak testing on all terminal station air systems
- 14 f) Annual helicopter patrol of transmission lines prior to the winter season

15 AWP charts which include winter readiness activities only are shown below to indicate the  
16 year-to-date status of winter readiness equipment testing in Transmission and Terminal  
17 Station operations. The Transmission chart confirms that progress to date is in line with plan,  
18 and it is expected that all activities will be completed by December 1. The Terminal Stations  
19 chart indicates that year-to-date completion status is somewhat behind schedule, and this is  
20 attributable to testing and maintenance activities in three areas: a) battery discharge testing;  
21 b) PMs on distribution reclosers; and c) maintenance on relay meters. Crews are being  
22 redeployed to focus on the execution of this work, and it is expected that all activities will be  
23 completed by December 1.



1 **4.4 Gas Turbines**

2 Examples of winter readiness activities that are included in the AWP work scopes and  
 3 maintenance plans for the Hardwoods, Stephenville and Holyrood gas turbines include the  
 4 following:

- 5 a) PMs and CMs for major components and auxiliary systems
- 6 b) Black start testing
- 7 c) Monthly operational testing
- 8 d) Execution of capital upgrades and refurbishment

1 As of September 26, 2015 the completion status at Hardwoods on winter readiness AWP  
2 activities was 94% of plan (15 of 16 activities completed). The completion status at  
3 Stephenville was 85% of plan (22 of 26 activities completed). Completion status to date is a  
4 little behind plan, primarily reflecting the status of several activities that are tied to the major  
5 capital work ongoing at the Stephenville facility. However, as indicated in Section 2.2 it is  
6 expected that all work related to winter readiness testing will be completed by December 1,  
7 2015. Black start testing has been completed for the Holyrood CT and is scheduled to be  
8 completed for the Hardwoods and Stephenville CTs by December 1.

9 Given the timing of final construction and commissioning activities for the Holyrood CT in  
10 early 2015, and the time required to finalize and integrate planned maintenance requirements  
11 for this new asset within the framework of its technical service agreement with the CT vendor  
12 (ProEnergy), Hydro's 2015 maintenance program for the Holyrood CT was not included in its  
13 2015 AWP. However, the required maintenance activities in 2015 were identified, and work is  
14 being executed in accordance with this plan. It is expected that all required winter readiness  
15 maintenance will be completed by December 1.

1 **5.0 GENERATION OUTAGE SCHEDULE**

2 Hydro's 2015 Master Generation Outage Schedule for the period September 1 to December  
3 31, 2015 is attached to this Report as Appendix D. This Schedule does not currently  
4 contemplate any planned generation outages beyond the week of November 15, 2015 and it  
5 is expected that all generation assets will be fully available as of December 1, 2015.



1 **6.0 CRITICAL SPARES**

2 In 2014 Hydro completed extensive reviews of its critical spares requirements in all three  
3 areas of its generation operations: hydraulic generation; thermal generation (Holyrood); and  
4 the gas turbines in Hardwoods and Stephenville. These reviews included a detailed analysis of  
5 asset criticality and spare parts in reference to several factors, including their impact on  
6 generation reliability and replacement part availability.

7 Hydro's evaluation of critical spares is an ongoing process where consideration is given to:  
8 asset condition; level of criticality; parts availability/order lead time; and cost. In some cases,  
9 a balanced consideration of these factors may result in a decision to not procure into  
10 inventory where the risk to reliability is judged to be low and/or other measures are available  
11 to mitigate against generation unavailability.

12 In its report to the Board dated February 16, 2015 Hydro provided a full update on the status  
13 of its critical spares for the 2014-15 winter season. This update included a detailed listing of  
14 critical spares requirements for each area of generation operations and the in-stock or on-  
15 order status of each item. A further update on the status of critical spares is briefly provided  
16 in the following sections.

17 **6.1 2015-2016 Winter Season**

18 Hydro's critical spares status leading into the 2015-16 winter season is very strong. A total of  
19 1,194 critical spares have been identified by Hydro's three generation operations areas.<sup>1</sup> Of  
20 this total, 1,116 items are in stock (93.5%) and a further 35 items are on order (2.9%), all with  
21 an expected delivery by December 1, 2015. Hydro's expected in-stock status as of December  
22 1 is therefore expected to be over 96%.

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<sup>1</sup> The following items are not included in this total: 1) Critical spares at HTGS which share a common spare with another area of thermal operations are not stocked separately but are considered as being in-stock given the availability of a spare if required. 2) The critical spares updates for HTGS and Hydraulic Generation identify 39 components which have been assessed in 2015 as not being critical and these will not appear in any future critical spares updates. 3) Predictive maintenance and ongoing condition monitoring and assessment to maximize asset life have been determined as the optimum approach for 10 items at HTGS.

1 A further 20 spares are identified as capital spares (i.e., involve a cost in excess of \$50,000 and  
2 require Board approval). Eleven of these are on order as part of Hydro's approved 2015  
3 capital plan and are expected to be in stock by the end of 2015, which includes all seven  
4 capital spares identified for the Hardwoods and Stephenville gas turbines. Procurement plans  
5 for the remaining capital spares are incorporated into Hydro's capital plans for 2016 and later  
6 years. In all cases, procurement timelines have considered the appropriate relevant factors  
7 including equipment age and condition; part criticality; and procurement lead time, and Hydro  
8 does not associate any significant reliability risk to those spares which have yet to be  
9 procured.

10 Finally, 23 components in Hydro's hydraulic and gas turbine operations are identified as  
11 requiring re-engineering and/or consultation with original equipment manufacturers because  
12 the equipment or spare parts concerned are no longer manufactured or available. Given the  
13 age and favorable condition of the equipment involved, and Hydro's recent and continuing  
14 investments in asset overhaul and refurbishment, Hydro does not feel that these areas  
15 represent a significant risk to reliability. Nonetheless, the company continues to pursue all  
16 options for alternative parts, equipment reconfiguration or other possibilities to ensure that it  
17 is able to address the impacts of any in-service failure should it occur.

18 Appendix E of this Report indicates the current status of the critical spares program at the  
19 Holyrood Thermal Generating Station. Hydro's 2014-15 critical spares plan for Holyrood  
20 included the procurement of four spare 4 kV motors (one FD fan motor and a boiler feed  
21 pump motor for each of the three generating units) as well as additional spare parts for these  
22 motors to supplement those already in inventory. In its update to the Board in February, 2015  
23 Hydro indicated that the procurement of these motors was in progress. These motors have  
24 since been procured, and they are in heated storage with Siemens in St. John's and undergo  
25 monthly PM preservation maintenance.

26 Appendix F of this Report indicates the current status of the critical spares program for the  
27 Hardwoods and Stephenville gas turbines. Appendix G of this Report indicates the current  
28 status of the critical spares program for Hydraulic generation.

1 **7.0 FORECASTED LOADS, CAPACITY AND RESERVES**

2 Hydro filed a Reply Submission in response to the Phase I report by Liberty Consulting on  
3 February 5, 2015. In this submission, Hydro committed to provide the Board with a  
4 generation adequacy update as of August in each year leading up to interconnection, and that  
5 this update would include the following:

- 6 a) An updated P90 load forecast for the period up to one year beyond the then  
7 anticipated interconnection date;
- 8 b) A summary of the previous winter's generation performance and an outlook of peak  
9 available generating capacity for each year of the load forecast; and,
- 10 c) A forecast of generation reserves in both percentage and total MW terms.

11 The first of these annual update reports was filed with the Board on September 16, 2015. It  
12 contains the detailed information requested by the Board for the Island Interconnected  
13 System (IIS) in its letter of September 11, 2015, including the following with respect to the  
14 2015-16 winter season:

- 15 a) The forecasted peak load on the IIS, on both a P50 and a P90 weather forecast basis;
- 16 b) Hydro's forecasted capacity at peak load; and,
- 17 c) The forecasted generation reserves at peak load on both a percentage and MW basis.

18 For the current forecast, Hydro's Generation Adequacy Report discusses capacity at peak and  
19 reserves in the context of two different assumptions related to the availability of capacity  
20 from the black start diesels at Holyrood: a) 16 MW of capacity from the black start diesels  
21 assuming these diesels are purchased by Hydro and the associated work is completed to avail  
22 of the full 16 MW (subject to Board approval)(Table 2); and b) 0 MW of capacity available  
23 from these diesels assuming the units are removed from service (Table 3).

24 Hydro's capacity and reserve forecasts also assume a total of 93 MW of capacity assistance is  
25 available through the 2015-16 winter season, if needed, under the capacity assistance  
26 agreements Hydro has in place with Corner Brook Pulp and Paper and Vale. The details of

- 1 these agreements have been outlined in previous reports to the Board, most recently in  
 2 Hydro's Generation Availability Report to the Board on January 15, 2015.
- 3 Table 7.1 below indicates Hydro's various forecasts for the 2015-16 winter season based on  
 4 information provided in Tables 2 and 3 of its Generation Adequacy Report with the  
 5 assumption that the Holyrood black start diesels will continue to be available in their current  
 6 10 MW configuration as of December 1, 2015.<sup>2</sup>

<b>TABLE 7.1</b>			
<b>Forecasts of Peak Load, Capacity, and Reserves – 2015-16</b>			
A	IIS Peak Load – P50	1,758 MW	
B	IIS Peak Load – P90	1,815MW	
C	Capacity at Peak	2,008 MW	
D	Add: Voltage Reduction (+20 MW)	2,028 MW	
E	Add: Capacity Assistance (+93 MW)	2,121 MW	
	Reserves (E-B)	306 MW	16.9%

<sup>2</sup> Hydro's planned purchase and reconfiguration of the black start diesels at Holyrood is subject to Board approval, and Hydro is currently preparing an application in this regard. Assuming this application is approved, any opportunity to complete the outages and capital work required to increase the capacity of these units from 10 MW to 16 MW by December 1 will be evaluated and implemented as the circumstances permit.

1 **8.0 RISKS AND RISK MITIGATION**

2 Hydro is confident that its readiness planning for the 2015-16 winter season is on track and  
3 will position the company to be fully ready in terms of generation and transmission availability  
4 by December 1, 2015.

5 As noted in Section 3, there are potential risks to the schedule for completing 2015 capital  
6 program winter readiness scopes. No schedule delays are foreseen at this time, but any  
7 project delays caused by the need for outage extensions, the unavailability of resources for  
8 final commissioning, weather or other factors could delay the completion of one more  
9 projects beyond their planned completion dates. Potential schedule risks are mitigated  
10 through a daily monitoring of critical capital project progress which enables an early  
11 identification of risks and the development of appropriate mitigation or recovery plans.  
12 Ongoing PM and CM programs are regularly monitored as well to ensure that any delays in  
13 the execution of this work will not have an impact on capital project commissioning and  
14 completion.

15 A fire at the Hardwoods gas turbine facility on May 1, 2015 resulted in damage which has  
16 necessitated an overhaul of the End B turbine. Contractor resources have been engaged to  
17 complete this work which will start immediately upon receipt of the Board's approval of this  
18 project on October 1. There is a low risk that the required work may not be completed by  
19 December 1, however this will be mitigated by Hydro maintaining its existing lease of a 35  
20 MW turbine at the Hardwoods site until this overhaul work has been completed and  
21 Hardwoods is back to full capacity.

## **APPENDIX A**

### Status of 2015 Capital Projects Related to Winter Readiness

## 2015-16 Winter Readiness Planning Report

Asset Category	Project Title	Expected In Service Date (for 2015 Winter Readiness Scope)
Distribution	Upgrade Distribution System - Hampden	Complete
Distribution	Upgrade Distribution Systems - Various Sites (2015/2016)	20-Oct-15
Distribution	Upgrade L1 Distribution System - Plum Point	Complete
Distribution	Upgrade Distribution System - Main Brook	14-Oct-15
Distribution	Upgrade Distribution System - Daniels Harbour	26-Nov-15
Distribution	Relocate Voltage Regulator - Hawkes Bay	Complete
Gas Turbine	Upgrade Gas Turbine Plant Life Extension - Stephenville	16-Oct-15
Hydraulic	Overhaul Turbine/Generator Units - Paradise River	Complete
Hydraulic	Overhaul Turbine/Generator Units - Bay d'Espoir	Complete
Hydraulic	Replace Station Service Breakers - Cat Arm	Complete
Hydraulic	Replace ABB Exciter Unit 2 - Cat Arm	Complete
Hydraulic	Excitation Transformers Replacement - Bay D'Espoir	7-Nov-15 - Note 1
Hydraulic	Replace Generator Bearing Coolers - Bay D'Espoir	24-Oct-15
Hydraulic	Replace 125VDC Battery Bank - Paradise River (Hydraulic)	15-Oct-15
Terminals	Upgrade Power Transformers - Various Sites	8-Nov-15
Terminals	Replace Pumps on Mobile Transformer P235 - Bishop's Falls	Complete
Terminals	230kV Transformer Capacity - Oxen Pond Terminal Station	19-Nov-15
Terminals	Upgrade Circuit Breakers - Various Sites (2014-2015)	13-Nov-15
Terminals	Replace Disconnect Switches - Various Sites (2014-2015)	Complete
Terminals	Replace Optimho Relays on TL203 - Western Avalon to Sunnyside	Complete
Terminals	Transformer T1 Replacement - Sunnyside	Complete
Terminals	Upgrade Circuit Breakers - Various Sites (2015-2016)	27-Nov-15
Terminals	Replace Disconnect Switches - Various Sites (2015-2016)	27-Oct-15
Terminals	Replace Instrument Transformers - Various Sites	9-Oct-15
Terminals	Replace Insulators - Various Sites	24-Oct-15
Terminals	Replace Surge Arrestors - Various Sites	20-Oct-15
Terminals	Upgrade Transformer Differential Protection - Grandy Brook	Complete
Terminals	Upgrade Control Wiring Phase 1 to Terminal Station 1 - Bay d'Espoir	7-Oct-15
Terminals	Replace Valve - Breaker B12L42 - Holyrood Terminal Station	Complete
Thermal	Purchase of Critical Spares - Holyrood	Complete
Thermal	Overhaul Extraction Pumps - Unit 3 South - Holyrood	Complete
Thermal	Overhaul Extraction Pumps - Unit 1 North - Holyrood	31-Oct-15
Thermal	Overhaul Turbine Valves Unit 1 - Holyrood	31-Oct-15
Thermal	Overhaul Boiler Feed Pump East Unit 1 - Holyrood	31-Oct-15
Thermal	Replace Economizer Inlet Valves - Holyrood	Complete
Thermal	Install Cold-Reheat Condensate Drains and High Pressure	Complete
Thermal	Replace Unit 1 Air Compressor - Holyrood	Complete
Thermal	Replace DC Distribution Panels and Breakers - Holyrood (2015)	Complete
Thermal	Install Variable Frequency Drives on Forced Draft Fans - Holyrood	5-Oct-15
Thermal	Upgrade Vibration Monitoring System - Holyrood	Complete
Thermal	Replace DC Distribution Panels and Breakers - Holyrood (2014)	30-Oct-15
Thermal	Upgrade Quarry Brook Dam Equipment - Holyrood	Complete
Thermal	Replace Excitation Transformers - Holyrood	31-Jan-16 - Note 2
Transmission	Perform Wood Pole Line Management Program - Various Sites	9-Oct-15
All	Purchase Critical Spares - Generating Stations	30-Nov-15

**Notes**

1

The transformers for 5 of the 7 units at Bay d'Espoir are in service. The remaining two transformers are on site and scheduled to be installed during planned outages.

2

This is a supplemental project approved in September. The excitation transformers have been ordered and expected delivery is January 2016.

## **APPENDIX B**

Status of Winter Readiness Testing of Plant and Equipment  
Holyrood Thermal Generating Station  
As of September 30, 2015



**Appendix B**

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**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Plant:**

Following Annual outages, Unit is run up, Synchronized and all Systems verified before Operating Status determined, as per ECC, prior to coming Winter Operating Season to ensure preparedness. A Unit Load Test is performed at this time.	S/U	S/U	✓	N/A
Black Start Test of the black start systems is performed prior to the Winter Operating Season.	N/A	N/A	N/A	End of October
Perform Megger testing of 600 volt motors prior to the Winter Operating Season.	✓	✓	✓	✓

**Safety:**

Boiler Service Pressure Test performed as required by Regulator.	S/U	S/U	✓	N/A
Safety Valves testing as required.	S/U	S/U	✓	N/A
Boiler Operational Off-Line High / Low Drum Level Trip Tests.	S/U	S/U	✓	N/A
Breaker & Disconnect Operation verified by Ops. Dept. & Whitbourne Crew.	S/U	S/U	✓	N/A

**Service Air and Instrument Air Systems:**

All Stationary Air Compressors available.	N/A	N/A	N/A	✓
Air Compressor operational checks performed (e.g. oil levels, cooling water, etc.)	N/A	N/A	N/A	✓
Air Compressor STBY / Sequencing capability.	N/A	N/A	N/A	✓

**Raw and Makeup Water System:**

Quarry Brook Dam Integrity.	N/A	N/A	N/A	✓
Raw Water Sump Water Supply Control Valve operational.	N/A	N/A	N/A	✓
Raw Water Pumps operational.	N/A	N/A	N/A	✓
Adequate supply of Chemicals (1172, 1179, Polymer, etc.).	N/A	N/A	N/A	✓
1172, 1179, Polymer Injection Pumping Sets, Pumps, valves, lines, agitators, etc. operational.	N/A	N/A	N/A	✓
Portable Diesel Pump check of Emergency Plant Water Supply from Quarry Brook Dam.	N/A	N/A	N/A	✓
Adequate & Readily available supply of Hoses for the Portable Diesel Pump from Quarry Brook Dam to Plant.	N/A	N/A	N/A	✓

**Raw and Makeup Water System & Water Treatment Plant:**

Instrumentation & Controls operational.	S/U	S/U	✓	N/A
Analytical Rack Sample Cooler Filters cleaned/replaced as required.	S/U	S/U	✓	N/A
Analytical Rack Sample Coolers cooling water in service.	S/U	S/U	✓	N/A
Two (2) Sample cooling water pumps availability.	S/U	S/U	✓	N/A

**Clarifier:**

Clarifier Recirculator, VFD Motor, VFD Controller.	N/A	N/A	N/A	✓
Clarifier Recirculator Scraper.	N/A	N/A	N/A	✓
Clarifier Badger Meter and Clearwell Instrumentation.	N/A	N/A	N/A	✓

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

**Page 2 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Sand Filters:**

Sand Filters (#s 1, 2 & 3) Resin integrity.	N/A	N/A	N/A	✓
Sand Filters (#s 1, 2 & 3) Valve Operation (Normal & Backwashing, etc.).	N/A	N/A	N/A	✓
Two (2) Clearwell Pumps available.	N/A	N/A	N/A	✓

**Demineralization System:**

Cation & Anion Trains (A, B & C) Resin integrity.	N/A	N/A	N/A	✓
Adequate supply of Chemicals (Caustic Soda, Sulphuric Acid, 1172, 1179, Polymer, etc.).	N/A	N/A	N/A	✓
Sulphuric Acid & Caustic Soda Transfer Pumps, valves, lines, etc.	N/A	N/A	N/A	✓
Sulphuric Acid & Caustic Soda Regeneration Sets, Pumps, valves, lines, etc.	N/A	N/A	N/A	✓

**Reserve Feedwater System, 'RFW':**

RFW Transfer Pump Oil Normal Operating Level.	S/U	S/U	✓	N/A
RFW Transfer Pumps operational.	S/U	S/U	✓	N/A

**Circulating Water 'CW' and Screen Wash System:**

Vacuum Seal Pits operational.	S/U	S/U	✓	N/A
All CW Travelling Screens Operational.	S/U	S/U	✓	N/A
CW Pump Motorized discharge valves 'Manual' & 'Auto', 'Cracked' Position operation verified.	S/U	S/U	✓	N/A
CW Pump Motors Oil Normal Operating Level,	S/U	S/U	✓	N/A
CW Pumps operational.	S/U	S/U	✓	N/A
CW Pump Discharge Vacuum Breakers operational.	S/U	S/U	✓	N/A
CW Travelling Screens Wash Pumps operational.	S/U	S/U	✓	N/A
Condenser Flushed.	S/U	S/U	✓	N/A
Condenser Backwashed.	S/U	S/U	✓	N/A
General Service 'GS' Coolers Backwashed, cleaned, etc.	S/U	S/U	✓	N/A
Turbine / Generator 'TG' Coolers Backwashed, cleaned, etc.	S/U	S/U	✓	N/A
Vacuum Pump Coolers Backwashed, cleaned, etc.	S/U	S/U	✓	N/A

**Boiler:**

Pre-Outage Valve Survey conducted of Boiler Drains.	✓	✓	✓	N/A
Service pressure test on boiler for tube leaks.	S/U	S/U	✓	N/A

**Condenser Air Extraction System:**

Vacuum Pumps available & tested for STBY 'Auto-Start'.	S/U	S/U	✓	N/A
Vacuum Pump Seal Water Tank water level controller operational.	S/U	S/U	✓	N/A
Vacuum Pump Seal Water Pump operational.	S/U	S/U	✓	N/A
Condenser Vacuum Breakers operational.	S/U	S/U	✓	N/A

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

**Page 3 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**High Pressure 'HP' Feedwater System:**

**Boiler Feed Pumps:**

Boiler Feed Pumps available.	S/U	S/U	✓	N/A
Boiler Feed Pump Oil Tank Normal Operating Level and checked for moisture content.	S/U	S/U	✓	N/A
Boiler Feed Pump Auxiliary Oil Pumps available.	S/U	S/U	✓	N/A
Boiler Feed Pump Suction Valves & Limit Switches.	S/U	S/U	✓	N/A
Boiler Feed Pump Emergency Gland Seal Injection Pump available.	S/U	S/U	✓	N/A
Boiler Feed Pump Emergency Gland Seal Pump Oil Normal Operating Level.	S/U	S/U	✓	N/A
Boiler Feed Pump Gland Seal Water available from the Emergency Pump and Condensate Extraction Pumps.	S/U	S/U	✓	N/A
Boiler Feed Pump Gland Seal Water Control Valve operational.	S/U	S/U	✓	N/A
Boiler Feed Pump Gland Seal Water Drains Tank Level Float Operated Valve operational (Units 1 & 2).	S/U	S/U	N/A	N/A
Boiler Feed Pump Gland Seal Water Transfer Pumps operational (Units 1 & 2).	S/U	S/U	N/A	N/A
Boiler Feed Pump Gland Seal Water Drains Tank Level Control Valve operational (Unit 3).	N/A	N/A	✓	N/A
Boiler Feed Pump Gland Seal Water Transfer Pumps operational (Unit 3).	N/A	N/A	✓	N/A
Boiler Feed Pump Recirculation Control Valves operational.	S/U	S/U	✓	N/A
Boiler Feed Pump Motorized Discharge Pilot & Main Valves operational.	S/U	S/U	✓	N/A
Low Load Feedwater Isolator & Control Valves operational.	S/U	S/U	✓	N/A
Main Feedwater Isolator & Control Valves operational.	S/U	S/U	✓	N/A
High Pressure Heater Motorized Valves (Inlet, Outlet & Bypass) checked for proper operation, sequencing, etc.	S/U	S/U	✓	N/A

**Miscellaneous:**

Economizer 'Manual' Operated Valve operational.	S/U	S/U	✓	N/A
Economizer Motorized Recirculation Valve operational (Unit 3).	N/A	N/A	✓	N/A
Boiler Drum Level Instrumentation operational.	S/U	S/U	✓	N/A
HP Heater Bled Steam Check Valves operational.	S/U	S/U	✓	N/A
Start-up Desuperheater Steam & Water valving operation / position verified (Unit 3).	N/A	N/A	✓	N/A
Main Steam & Reheat Steam Desuperheater Spray Water Isolators & Control Valves operational.	S/U	S/U	✓	N/A
Auxiliary Steam Desuperheater Spray Water Control Valve operational (Unit 3).	N/A	N/A	✓	N/A

**Low Pressure 'LP' Feedwater System:**

**Condenser:**

Condenser Hotwell Make-Up / Surplus Control Valves operation verified.	S/U	S/U	✓	N/A
Condenser Hotwell Make-Up Motorized Isolating Valve operation verified (Unit 3).	N/A	N/A	✓	N/A
Condenser Dye test for leaks, as required.	S/U	S/U	✓	N/A

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

**Page 4 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Ammonia & Control System:**

Adequate Supply in place.	✓	✓	✓	N/A
Pumps operational.	S/U	S/U	✓	N/A
Control Instrumentation operational.	✓	✓	✓	N/A

**Condensate Extraction Pumps:**

Condensate Extraction Pumps available.	S/U	S/U	✓	N/A
Condensate Extraction Pump Motors Bearing Oil Normal Operating Level.	S/U	S/U	✓	N/A
Condensate Extraction Pump Motor Cooling Water available (Unit 3).	N/A	N/A	✓	N/A

**Condensate Polishers:**

Resin integrity verified.	✓	✓	✓	N/A
Two (2) Polishers Rinsed and available.	✓	✓	✓	N/A
Valve Operation (Normal & Regenerating, etc.).	✓	✓	✓	N/A
Regeneration System Skids available (valving, pumps, blowers, tanks. Etc.).	✓	✓	✓	N/A
Condensate Polisher Bypass Control Valve operational.	S/U	S/U	✓	N/A

**Low Pressure Heaters:**

Low Load Recirculation Control Valve operation.	S/U	S/U	✓	N/A
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**Deaerator:**

Deaerator Normal Operating Level	S/U	S/U	✓	N/A
Deaerator Steam Coil operational.	S/U	S/U	✓	N/A
Deaerator Pegging Steam operational.	S/U	S/U	✓	N/A
Deaerator Low Level Trip Test	S/U	S/U	✓	N/A

**Miscellaneous:**

Condenser Flash Tank Control Valve operation / position.	S/U	S/U	✓	N/A
Turbine Low Pressure Exhaust Hood Spray Motorized Valve operation.	S/U	S/U	✓	N/A
Start-up Desuperheater Steam & Water valving operational (Units 1 & 2).	S/U	S/U	N/A	N/A
LP Heater Bled Steam Check Valves operational.	S/U	S/U	✓	N/A

**Bled Steam and Heater Drains System:**

LP and HP Instrumentation and Control operational.	S/U	S/U	✓	N/A
LP and HP Heater Level Control operational.	S/U	S/U	✓	N/A
Low Pressure 'LP' Heater Condensate Drains Pumps operational.	S/U	S/U	✓	N/A
#4 High Pressure 'HP' Heater Condensate Drains Pump operational.	S/U	S/U	✓	N/A

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

**Page 5 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Air and Flue Gas System:**

Instrumentation and Control operational.	S/U	S/U	✓	N/A
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**Forced Draft 'FD' Fans and Air Dampers:**

Two (2) FD Fans available.	S/U	S/U	✓	N/A
Bearing Oil Normal Operating Level.	S/U	S/U	✓	N/A
Cooling Water on to Fans.	S/U	S/U	✓	N/A
Stroke Variable Inlet Vanes, 'VIVs'.	S/U	S/U	✓	N/A
Stroke Discharge Dampers.	S/U	S/U	✓	N/A
FD Fan Motor Variable Speed Drives operational.	S/U	S/U	✓	N/A
All Burner Auxiliary Air Dampers/Positioners operation (Units 1 & 2).	S/U	S/U	N/A	N/A
All Elevation Air Flow Dampers/ Positioners operation (Unit 3).	N/A	N/A	✓	N/A

**Rotary Air Heaters:**

Rotary Air Heaters operational.	S/U	S/U	✓	N/A
Rotary Air Heaters Bearing Oil (Top & Bottom) Normal Operating Level.	S/U	S/U	✓	N/A
Rotary Air Heaters Bearing Cooling Water On.	S/U	S/U	✓	N/A
Rotary Air Heaters Electric Motor Drives operational.	S/U	S/U	✓	N/A
Rotary Air Heaters Air Supply to Air Heater Air Motor Drives Open.	S/U	S/U	✓	N/A
Rotary Air Heaters Start-up of Air Motor Drive upon loss of AC Power Supply to the normal operating Electric Drive Motor.	S/U	S/U	✓	N/A
Rotary Air Heaters Steam Supply Control Valves operational. (*Note: Two Steam Supplies on (Units 1 & 2)).	S/U	S/U	✓	N/A
Rotary Air Heaters Sootblowers operational.	S/U	S/U	✓	N/A

**Boiler Sootblowing System:**

Sootblower Control Panel operational.	S/U	S/U	✓	N/A
Sootblowers Steam Supply Control Valve operational.	S/U	S/U	✓	N/A
Sootblowers Overhauled during Annual Outage Verify operation (e.g. Rotation, Travel Advancing/Retracting from Furnace, leaks, etc.) first time Unit is placed on Line.	S/U	S/U	✓	N/A

**Light Fuel Oil System:**

Hydro Pad operational.	S/U	S/U	✓	N/A
Light Oil Pumps available.	S/U	S/U	✓	N/A
Pumps, Valves (including Control & Trip), lines, strainers, pressure (locally & UCB).	S/U	S/U	✓	N/A
Check Light Oil Supply & Return Lines to / from Plant respectively.	S/U	S/U	✓	N/A
Suction Strainers cleaned with covers secured.	S/U	S/U	✓	N/A
Ignitors cleaned, securely in place with associated lines securely fastened.	S/U	S/U	✓	N/A
Ignitors all checked for operation during Unit Start-up (e.g. Ignitor Control Box, Valve Operation, Lighting, etc.).	S/U	S/U	✓	N/A

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

**Page 6 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Fuel Oil Delivery System, Auxiliary Steam & Fuel Oil Piping System:**

Adequate Heavy Oil Storage.	N/A	N/A	N/A	✓
Heavy Oil Piping from Dock to Tankfarm, Tankfarm to Plant Day Tank and Day Tank to Heavy Oil Sets.	N/A	N/A	N/A	✓
Adequate Light Oil Storage.	N/A	N/A	N/A	✓
Light Oil Piping from Road Tanker Transfer Pump to Tanks and from Tanks to Light Oil Sets in Plant.	N/A	N/A	N/A	✓
All Storage Tanks Suction Heaters available when required.	N/A	N/A	N/A	✓
All Storage Tanks Flatform Heaters available when required.	N/A	N/A	N/A	✓
Auxiliary Steam for Suction Heaters available.	N/A	N/A	N/A	✓
Auxiliary Steam for Flatform Heaters available.	N/A	N/A	N/A	✓
Auxiliary Steam for Heat Tracing available.	N/A	N/A	N/A	✓
Electrical Heat Tracing for Fuel Oil Lines available.	N/A	N/A	N/A	✓
Day Tank Supply Line Trip Valve Tested.	N/A	N/A	N/A	✓
Day Tank available to receive oil.	N/A	N/A	N/A	✓
Day Tank steam coil available.	N/A	N/A	N/A	✓

**Fuel (Heavy) Oil System:**

Fuel Oil Heating Sets:	S/U	S/U	✓	N/A
Fuel Oil Heaters available.	S/U	S/U	✓	N/A
Fuel Oil Heaters cleaned and inspected.	S/U	S/U	✓	N/A
Steam Supply to Heavy Oil Set Heaters available as required.	S/U	S/U	✓	N/A
Fuel Oil Heaters Temperature Steam Control Valve operational.	S/U	S/U	✓	N/A
Suction Strainers cleaned (including standby & extras) with covers secured.	S/U	S/U	✓	N/A
Fuel Oil Accumulator operational.	S/U	S/U	✓	N/A
Fuel Oil Pumps available.	S/U	S/U	✓	N/A
Pumps 'Auto-Start' check Off-Line.	S/U	S/U	✓	N/A
Header Pressure Control Valve operational.	S/U	S/U	✓	N/A
Fuel Oil Meter operational.	S/U	S/U	✓	N/A

**Fuel Oil Supply Control, Trip, Long & Short Recirculation Valves:**

Fuel Oil Supply Control Valve operational.	S/U	S/U	✓	N/A
Fuel Oil Trip Valve operational.	S/U	S/U	✓	N/A
Fuel Oil Long Recirculation Valve operational (Units 1 & 2).	S/U	S/U	N/A	N/A
Fuel Oil Short Recirculation Valve operational (Units 1 & 2).	S/U	S/U	N/A	N/A
Elevation Fuel Oil Trip Valves operational (Unit 3).	N/A	N/A	✓	N/A
Elevation Fuel Oil Minimum Supply Control Valves operational (Unit 3).	N/A	N/A	✓	N/A
Elevation Fuel Oil Supply Control Valves operational (Unit 3).	N/A	N/A	✓	N/A
Main Fuel Oil Recirculation Valve operational (Unit 3).	N/A	N/A	✓	N/A
Elevation Recirculation Valves operational (Unit 3).	N/A	N/A	✓	N/A

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

**Page 7 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Burners:**

All Burners cleaned, securely in place with associated lines securely fastened.	S/U	S/U	✓	N/A
All Burners checked for operation during Unit Start-up (e.g. Advancing / Retracting, Valve Operation, Lighting, etc.).	S/U	S/U	✓	N/A
All Burner Tilts checked for operation (Units 1 & 2).	S/U	S/U	N/A	N/A

**General Service 'GS' System:**

GS Heat Exchangers Backwashed, cleaned, etc.	N/A	N/A	✓	N/A
Stage I GS Plate Cooler Strainers cleaned.	S/U	S/U	N/A	N/A
Stage I GS 'Auto-Clean' Strainer operational.	S/U	S/U	N/A	N/A
Stage I GS Duplex Strainers cleaned.	S/U	S/U	N/A	N/A
GS Pump Suction Strainers cleaned.	S/U	S/U	✓	N/A
GS Pump Oil Normal Operating Level.	S/U	S/U	✓	N/A
GS Pumps available & tested for STBY 'Auto-Start'.	S/U	S/U	✓	N/A

**Turbine / Generator 'TG' Auxiliary Cooling System:**

TG Head Tank Normal Operating Level.	S/U	S/U	✓	N/A
Turbine Lube Oil Coolers operational.	S/U	S/U	✓	N/A
TG Heat Exchangers Backwashed, cleaned, etc.	S/U	S/U	✓	N/A
TG Pump Oil Normal Operating Level.	S/U	S/U	✓	N/A
TG Pumps available & tested for STBY 'Auto-Start'.	S/U	S/U	✓	N/A

**Turbine Generator 'TG' System:**

**Hydraulic System Units 1 & 2:**

Hydraulic System Accumulators operational.	S/U	S/U	N/A	N/A
Hydraulic System Storage Tank Normal Operating Level and checked for moisture content.	S/U	S/U	N/A	N/A
Hydraulic System Storage Tank air purging of moisture in place.	S/U	S/U	N/A	N/A
Hydraulic Set Primary, Secondary Filter indications ok.	S/U	S/U	N/A	N/A
Two (2) Hydraulic Fluid Pumps availability.	S/U	S/U	N/A	N/A
Hydraulic Pump Auto Start Testing.	S/U	S/U	N/A	N/A
Two (2) Hydraulic Fluid Pump Coolers availability.	S/U	S/U	N/A	N/A

**Valves:**

Turbine Main Stop Valve Testing (Units 1 & 2).	S/U	S/U	N/A	N/A
Turbine Two (2) Main Stop Valves Testing (Unit 3).	N/A	N/A	✓	N/A
Turbine 'Left-Hand' & 'Right Hand' Reheat Stop & Intercept Control Valve Testing verified.	S/U	S/U	✓	N/A
Turbine Six (6) Main Control Valve operation (Units 1 & 2).	S/U	S/U	N/A	N/A
Turbine Four (4) Main Control Valve operation (Unit 3).	N/A	N/A	✓	N/A
Turbine Blowdown Valve operation.	S/U	S/U	✓	N/A

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

**Appendix B**

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**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Lubricating System:**

Lube Oil Tank Normal Operating Level and checked for moisture content.	S/U	S/U	✓	N/A
Lube Oil Tank Oil Centrifuge operational (Unit 3).	N/A	N/A	✓	N/A
Portable Centrifuge operational.	S/U	S/U	✓	N/A
Lube Oil Tank Vapor Extractor operation.	S/U	S/U	✓	N/A
Bowser Oil Conditioner Vapor Extractor Operation (Units 1 & 2).	S/U	S/U	N/A	N/A
Two (2) AC Lube Oil pumps available & tested for STBY 'Auto-Start' (Units 1 & 2)	S/U	S/U	N/A	N/A
DC Pump Testing & Starting from UCB (Units 1 & 2).	S/U	S/U	N/A	N/A
Verify Discharge Pressure of EACH AC Lube Oil Pumps (Locally & UCB) (Units 1 & 2).	S/U	S/U	N/A	N/A
Verify Discharge Pressure of DC Lube Oil Pump (Locally & UCB) (Units 1 & 2).	S/U	S/U	N/A	N/A
Jacking Oil Pump Testing & Starting from UCB (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of Jacking Oil Pump (Locally & UCB).	N/A	N/A	✓	N/A
Auxiliary Oil Pump 'AOP' Testing & Starting from UCB & Turbine Lube Oil Tank (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of AOP Pump (Locally & UCB) (Unit 3).	N/A	N/A	✓	N/A
AC Pump Testing & Starting from UCB & Turbine Lube Oil Tank (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of AC Flushing Oil Pump (Locally & UCB) (Unit 3).	N/A	N/A	✓	N/A
DC Pump Testing & Starting from UCB & Turbine Lube Oil Tank (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of DC Flushing Oil Pump (Locally & UCB) (Unit 3).	N/A	N/A	✓	N/A
Barring / Turning Gear Low Oil Pressure Trip Test.	S/U	S/U	✓	N/A

**Barring / Turning Gear:**

Turning Gear operation verified.	S/U	S/U	✓	N/A
Perform trip test of Turning Gear.	S/U	S/U	✓	N/A

**Miscellaneous:**

Steam Seal Regulator operational.	S/U	S/U	✓	N/A
Operational On-Line / Off-Line Overspeed Trip Tests.	S/U	S/U	✓	N/A

**Hydrogen 'H2' & Carbon Dioxide 'CO2' System:**

H2 and CO2 systems in operation.	N/A	N/A	N/A	✓
Adequate H2 Bulk Packs on hand.	N/A	N/A	N/A	✓
CO2 Adequate Bulk Packs on hand.	N/A	N/A	N/A	✓

S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable



**Appendix B**

**Page 9 of 9**

**2015-16 Winter Readiness Planning Report**

Status of Test			
Unit 1	Unit 2	Unit 3	BoP

**Generator:**

Generator Exciter Operation checked Off & On Line.	S/U	S/U	✓	N/A
Seal Oil System tested with 'Air' on Generator in preparation for Leak Testing.	S/U	S/U	✓	N/A
Seal Oil Regulator operational.	S/U	S/U	✓	N/A
AC Seal Oil pumps available & tested for STBY 'Auto-Start' (Units 1 & 2).	S/U	S/U	N/A	N/A
AC Seal Oil Pump available (Unit 3).	N/A	N/A	✓	N/A
DC Seal Oil Pump available & tested for STBY 'Auto-Start'.	S/U	S/U	✓	N/A
Seal Oil Vacuum Pumps available.	S/U	S/U	✓	N/A
Vacuum Tank Level Control operational.	S/U	S/U	✓	N/A
Leak Testing Performed prior to 'Gassing Up' Generator.	S/U	S/U	✓	N/A
Purity, Dew Point, etc. Instrumentation operation verified.	S/U	S/U	✓	N/A

**Powerhouse and Switchyard Single Line:**

**Plant 129V System:**

129 V Battery Banks checked Stage I & II.	✓	✓	✓	N/A
129V Battery Chargers checked Stage I & II.	✓	✓	✓	N/A

**Plant 258V System:**

258V Battery Banks checked Stage I & II.	✓	✓	✓	N/A
258V Battery Chargers checked Stage I & II.	✓	✓	✓	N/A

**Plant Uninterrupted Power Supplies 'UPS':**

Number's 1, 2, 3 & 4 'UPS' Power Supplies including Batteries, Cooling Fans, etc., checked.	✓	✓	✓	N/A
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**Emergency Diesel Generators:**

Stage I & II Emergency Diesel Generators Tested for Emergency Stop.	✓	✓	✓	N/A
Stage I & II Emergency Diesel Generators Tested for Manual & Auto-Start Operation along with Auto Breaker Closure as well as Emergency Manual Closing of Breakers.	✓	✓	✓	N/A
Diesel Bus Tie Breaker, 'DBT' operation verified.	✓	✓	✓	N/A

**Holyrood Main Powerhouse:**

Back-Up ECC and Guardhouse Propane Generator.	N/A	N/A	N/A	✓
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**Plant Air Conditioning System:**

Control & Relay Rooms.	N/A	N/A	N/A	✓
Uninterrupted Power Supply 'UPS' #1 Room.	N/A	N/A	N/A	✓
Generator Excitation and 'UPS' #s 2, 3 & 4 Room (Unit 3).	N/A	N/A	N/A	✓

**Plant Heating Steam:**

All Systems operational for when required.	N/A	N/A	N/A	✓
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S/U - Final confirmation completed during Start Up. When possible, test also completed during annual outage.

✓ - Test completed

N/A - Not Applicable

## **APPENDIX C**

Status of Winter Readiness Testing of Plant and Equipment  
Hydraulic Generation  
As of September 30, 2015









## 2015-16 Winter Readiness Planning Report



Status of Test											
Cat Arm			HLK		USL		GCL		PRV		
Unit 1	Unit 2	Bop PH	Unit 1	Bop	Unit 1	Bop	Unit 1	Bop	Unit 1	Bop	

<b>TG Cooling Water Systems:</b>											
Cooling water pumps available	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
Emergency Cooling water available Penstock Supply	✓	✓	✓	✓	✓	N/A	N/A	✓	✓	✓	✓
Cooling water system available	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TG Pumps available & tested for Auto/manual Start.	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
Shaft seal sytem available	N/A	N/A	N/A	✓	✓	✓	N/A	✓	✓	✓	✓
CW Pump Motorized discharge valves 'Manual' & 'Auto', 'Cracked' Position operation verified.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotary (Water)Strainer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Turbine Generator Governor System:</b>											
Hydraulic System Accumulators operational.	✓	✓	N/A	✓	N/A	✓	N/A		N/A	✓	N/A
Governor System Testing	13-Nov	✓	N/A	1-Nov	N/A	✓	N/A	✓	N/A	✓	N/A
Governor System Available	✓	✓	N/A	✓	N/A	✓	N/A		N/A	✓	N/A
Hydraulic pump(s) availble	13-Nov	✓	N/A	1-Nov	N/A	✓	N/A	✓	N/A	✓	N/A
Hydraulic Pump Gov Auto Start Testing.	13-Nov	✓	N/A	1-Nov	N/A	✓	N/A	✓	N/A	✓	N/A
<b>Generator:</b>											
Generator Exciter Operation checked Off & On Line.	13-Nov	✓	N/A	1-Nov	N/A	✓	N/A	✓	N/A	✓	N/A
<b>Lubricating System:</b>											
Portable Centrifuge operational.	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Portable oil Pump (Jacking)	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Oil level system generator metering	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Oil level system turbine metering	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	N/A	N/A







## **APPENDIX D**

Master Generation Outage Schedule  
September 1 to December 31, 2015

### 2015 Planned Generation Outage Schedule\*

Unit	Month Week Starting	August					September				October				November				December				Scheduled Annual Maintenance Outages
		30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27				
Holyrood - G1	170																				Aug 01 - Oct 27		
Holyrood - G2	170																				June 06 - Sept 26		
Holyrood - G3 <sup>Note 1</sup>	150																				Apr 10 - Aug 18		
Bay D'Espoir - G1 <sup>Note 2</sup>	76.5																				Apr 26 - July 09		
Bay D'Espoir - G2	76.5																				Apr 05 - May 15, Aug 2 - Sept 12		
Bay D'Espoir - G3	76.5																				Oct 04 - 24		
Bay D'Espoir - G4	76.5																				Sept 27 - Nov 8		
Bay D'Espoir - G5	76.5																				May 27 - Aug 12		
Bay D'Espoir - G6	76.5																				May 27 - July 31		
Bay D'Espoir - G7	154																				Aug 16 - Sept 06		
Upper Salmon	84																				Aug 02 - 14		
Granite Canal	40																				July 19 - 30		
Hinds Lake	75																				Oct 25 - Nov 07		
Cat Arm - G1	67																				July 06 - 16, Nov 01 - 14		
Cat Arm - G2	67																				Sept 08 - 26		
Paradise River	8																				May 10 - 23, Sept 13 - 23		
Hardwoods GT <sup>Note 3</sup>	50																				Apr 13 - May 29, Aug 31 - Oct 17		
Stephenville GT	50																				Apr 13 - May 29, Aug 31 - Oct 17		
Holyrood CT	123.5																				June 08 - 11, Sept 07 - 12		
Star Lake	18																				June 08 - 11, Sept 07 - 12		
Exploits	63																						
CoGen	8																						
NLH Diesels <sup>Note 4, 9, 10</sup>	24.7																						
Newfoundland Power	117.9																						
CBPP 60 Hz	99.1																						
Available Capacity <sup>Note 5, 10</sup>	1,998	1,253	1,322	1,288	1,288	1,288	1,573	1,611	1,661	1,832	1,768	1,919	1,948	1,998	1,998	2,011	2,011	2,011	2,011				
Forecasted Gross Island Peak Load <sup>Note 6, 7</sup>		780	850	845	905	984	994	1,043	1,101	1,152	1,211	1,262	1,314	1,365	1,417	1,758	1,758	1,758	1,758				
Total Reserves <sup>Note 8</sup>		473	472	443	383	304	579	568	560	680	557	657	634	633	581	363	363	363	363				
Largest Operating Unit		150	154	154	154	170	170	170	170	170	170	170	170	170	170	170	170	170	170				
n-1 Reserve		323	318	288	228	134	409	398	390	510	387	487	464	463	411	193	193	193	193				

Legend	
Unit Available	White
Unit Unavailable	Dark Blue
Unit Derated	Light Blue
Unplanned / Extension	Gray

Notes:

- Holyrood Unit 3 derated to 70 MW due to a failed cold water pump motor (Reference PUB Advisory 2015-H-314).
- Bay d'Espoir Unit 1 has been experiencing vibration problems resulting in a derating to 40 MW. The outage indicated is for Hydro's investigation and testing work (Reference PUB Advisory 2015-H-189).
- Hardwoods Gas Turbine derated to 38 MW due to a temporarily installed leased engine (Reference PUB Advisory 2015-H-057).
- Hawke's Bay G2 (2.5 MW) out of service due to a failed static exciter (Reference PUB Advisory 2015-H-166).
- As of December 01, planned Vale Diesels capacity of 13 MW is included in Available Capacity. A pre-winter capacity test is required to prove capacity up to 13 MW.
- The Forecasted Gross Peak Load values for Aug 30, Sept 6, Sept 13, Sept 20, and Sept 27 are the actual Gross Peak Load values.
- December's Forecasted Gross Peak Load is the 2015 - 2016 Island Winter Peak Load (1,758 MW). This is a P50 forecast.
- December's Total Reserves reflect the planned agreements for CBPP Capacity Assistance (80 MW), Newfoundland Power Curtailable Load (9.9 MW), and System Voltage Reduction (20 MW).
- 24.7 MW includes Hawke's Bay (5 MW), St. Anthony (9.7 MW), and Holyrood Diesels (10 MW).
- Hydro intends to submit a proposal to the Board to purchase the Black Start Diesels and increase their system capacity output to 16 MW (from 10 MW). The December Available Capacity only includes the 10 MW.

\* Preventative/Corrective Maintenance items that require short duration outages are not reflected in this chart. They are planned in conjunction with system operations for an appropriate time.

## **APPENDIX E**

### Critical Spares Status Listing – Thermal Generation

2015-16 Winter Readiness Planning Report

Asset	Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update September 30, 2015
System	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Fire Protection System	Pump	In Stock			10	1	10	10	10	41	
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	8" Butterfly Valve and Actuator	In Stock			10	10	10	5	5	40	
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	Actuator	In Stock			10	10	10	1	5	36	
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	16" Gate Valve	In Stock			10	10	5	1	5	31	
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	6" Control Valve	In Stock			10	10	10	1	10	41	
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	Actuator	In Stock			10	10	10	1	5	36	
Hydrogen Generation and Storage	1/2 " Valve	In Stock			10	10	10	1	10	41	
Hydrogen Generation and Storage	Tubing - See Parts List # COM - 1	In Stock			10	10	10	1	1	32	
Powerhouse and Switchyard Single Line	Repair Parts	In Stock			10	1	10	1	10	32	
Raw and Makeup Water System & Water Treatment Plant	Cation Valve - KV2205C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Cation Valve - KV2206C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Anion Valve - KV3205C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Anion Valve - KV3206C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Cation Valve - KV2203C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Cation Valve - KV2207C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Cation Valve - KV2202C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Cation Valve - KV2208C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Anion Valve - KV3203C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Anion Valve - KV3207C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Anion Valve - KV3202C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Anion Valve - KV3208C	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4003B	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4004A	In Stock			10	10	5	1	10	36	

2015-16 Winter Readiness Planning Report

Asset	Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update September 30, 2015
System	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4005B	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4006B	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4007B	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4008B	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4009B	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4010A	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - KV4011A	In Stock			10	10	5	1	10	36	
Raw and Makeup Water System & Water Treatment Plant	Mixed Bed Valve - PCV4071	In Stock			10	10	10	1	10	41	
Raw and Makeup Water System & Water Treatment Plant	Sodium Monitor	In Stock			10	1	10	1	10	32	
Raw and Makeup Water System & Water Treatment Plant	Frequency Drive	In Stock			10	10	10	1	10	41	
Raw and Makeup Water System & Water Treatment Plant	Recirculator - Double Induction Speed Reducer - In Stock	In Stock			10	1	10	1	10	32	
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	18 " Butterfly Valve	Not in Stock - on Order	\$8,000.00	Nov-15	10	10	10	1	5	36	Tier 2 Critical Spare - Addition to Inventory process in progress
Fire Protection System	Fire Pump Controller	Not in Stock	N/A	N/A	10	1	10	5	10	36	Expect to replace the control panel in Q1, 2016. A replacement panel is on site and is available in the event of any failure.
Powerhouse and Switchyard Single Line	Breakers	Not in Stock	N/A	N/A	10	10	5	1	10	36	2015 Capital Project.
Raw and Makeup Water System & Water Treatment Plant	Silica Analyzer	Not in Stock - Not Critical	N/A	N/A	10	1	10	1	10	32	Not critical to unit operation.
Raw and Makeup Water System & Water Treatment Plant	Sample Heater	Not in Stock - Not Critical	N/A	N/A	10	1	10	1	10	32	Not critical to unit operation.

2015-16 Winter Readiness Planning Report

Asset		Define Spares Parts		Price Spare Parts			Spare Part Criticality						Status Update September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Circulating Water and Screen Wash System	CW Discharge Valves	Butterfly Valve	36" Butterfly Valve	In Stock			10	1	10	1	10	32	
Circulating Water and Screen Wash System	CW Discharge Valves	Butterfly Valve	Actuator	In Stock			10	1	10	1	10	32	
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Network Interface Modules	In Stock			10	10	10	1	10	41	
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Master Fuel Trip Relays	In Stock			10	10	10	5	10	45	
Combustion Air & Gas Instruments	Burner Management	Burner Automation	DCS Control Processor	In Stock			10	10	10	5	10	45	
Combustion Air & Gas Instruments	Burner Management	Elevation Oil Flow Transmitter	Meter & Sensor	In Stock			10	10	5	5	5	35	
Combustion Air & Gas Instruments	Burner Management	Elevation Oil Flow Transmitter	Transmitter	In Stock			10	10	5	5	5	35	
Combustion Air & Gas Instruments	Burner Management	Flame Scanners	24Vdc Scanner Power Supply	In Stock			10	10	5	5	10	40	
Combustion Air & Gas Instruments	Burner Management	Air Flow Transmitters	Transmitter	In Stock			10	10	10	5	10	45	
Combustion Air & Gas Instruments	Burner Management	Oil Flow Transmitter	Transmitter - Unit 1	In Stock			10	10	5	5	10	40	
Combustion Air & Gas Instruments	Burner Management	Oil Flow Transmitter	Sensor - Unit 2	In Stock			10	10	5	5	10	40	
Combustion Air & Gas Instruments	Burner Management	Oil Flow Transmitter	Transmitter - Unit 2	In Stock			10	10	5	5	10	40	
Condenser Air Extraction System	Vacuum Breakers		6" Flanged	In Stock			10	1	10	5	5	31	
Generator	Seal Oil System	Seals	See Parts List #U1&2 - 1 from Service Contractor	In Stock			10	1	10	1	10	32	
Generator	Exciter	Bridges	See OEM Parts List #U1&2 - 2	In Stock			10	1	10	1	10	32	
Generator	Exciter	Channels	See OEM Parts List	In Stock			10	1	10	1	10	32	
Generator	Stator	PT Cubicle	Primary Contact for Generator P.T.	In Stock			10	1	10	1	10	32	
Generator	Seal Oil System	Regulator	1.5" Regulating Valve	In Stock			10	10	10	1	10	41	
Ignitor Light Oil and Air Supply	Light Oil	Trip Valve	1" Valve	In Stock			10	10	10	5	10	45	
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Ignition Transformer	In Stock			10	10	5	1	5	31	
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Sunspot	In Stock			10	10	5	1	5	31	
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Valve Assembly / Oil Igniter	In Stock			10	10	5	1	5	31	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Level Transmitters	In Stock			10	10	10	5	10	45	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Aquarian Alarm Modules	In Stock			10	10	10	5	10	45	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Relays	In Stock			10	10	10	5	10	45	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Solenoid	In Stock			10	10	10	5	10	45	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Conductivity Probe	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	Level Control	Level Switch	In Stock			10	10	5	5	10	40	
L.P. Feedwater System	Deaerator System	Level Control	Level Transmitter	In Stock			10	10	10	5	10	45	
L.P. Feedwater System	Deaerator System	Level Control	Relay	In Stock			10	10	10	5	10	45	
L.P. Feedwater System	Ammonia System		Bulk Chemical	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Non-Return Valve	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Gaskets	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	NRV Valves (2)	O-Rings	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Packing	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Seal washers	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves	Non-Return Valve	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves	Gaskets	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves	o-Rings	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves	Packing	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves	Seal washers	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Polisher Bypass Valve		Valve	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Condensate Polishers (Units 1, 2)	Valves	3" Valves	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Condensate Polishers (Units 1, 2)	Valves	2" Valves	In Stock			10	10	10	1	10	41	
Main Steam & Reheat Steam; Turbine Drains	Vacuum Trip Device		Pressure Transmitter - Unit 1	In Stock			10	10	10	5	10	45	
Powerhouse and Switchyard Single Line	258V DC System	Unit 1 & 2 Field Breakers	Field Breaker	In Stock			10	10	10	5	10	45	
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - cable assemblies	In Stock			10	10	10	1	10	41	
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 50 gal. Intercept Control Valve Servos	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 50 gal. Main Control Valve Servos	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 6 gal. Intercept Control Valve Servos (scram)	In Stock			10	1	10	1	10	32	

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Asset		Define Spares Parts		Price Spare Parts			Spare Part Criticality						Status Update September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 6 gal. Main Stop Valve Servos	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Governor	Governor	Linear Variable Differential Transducer for Intercept Control Valve & Main Control Valve	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Governor	Governor	Linear Variable Differential Transducers for 1 per Main Stop Valve	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Governor	Governor	Trip Manifold Assembly (TMA) - Unit 2 OEM \Parts list #U1&2 -4 List of OEM recommended	In Stock			10	10	10	1	10	41	
Turbine Generator System Stage 1	Governor	Governor	Go Switch - Limit Switches	In Stock			10	10	10	1	10	41	
Turbine Generator System Stage 1	Governor	Governor	Fluid Power Products	In Stock			10	10	10	1	10	41	
Turbine Generator System Stage 1	Turbine Lube Oil System	DC Oil Pump	Pump	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Turbine Lube Oil System	DC Motor	Motor	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Turbine Lube Oil System	Pressure Switches	Switch	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Hydraulic Fluid System	Fluid Pumps	Pump	In Stock			10	10	10	5	10	45	
Turbine Generator System Stage 1	Turbine Lube Oil System	AC Oil Pumps	Pump	In Stock			10	1	10	5	10	36	
Turbine Generator System Stage 1	Turbine Lube Oil System	AC Motor	Motor	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Turbine Lube Oil System	Pressure Switch 2	Switch	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Steam Seal Regulator		Main Steam Valve - Actuator Repair Kit - Unit 1 & 2	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Steam Seal Regulator		Main Steam Control Valve - Repair Kit - Unit 1 & 2	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Steam Seal Regulator		Dump Control Valve - Actuator - Repair Kit - Unit 1 & 2	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Steam Seal Regulator		Dump Control Valve - Body - Repair Kit - Unit 1 & 2	In Stock			10	1	10	1	10	32	
Units 1 & 2 Air & Flue Gas	Furnace Pressure TX (Trip)		Pressure Transmitter	In Stock			10	10	5	1	10	36	
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Baskets	See OEM Parts List #U1&2- 6	In Stock			10	10	10	1	10	41	
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Rotating Element & Bearings	See OEM Parts List #U1&2- 6	In Stock			10	10	10	1	10	41	
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Drive System	See OEM Parts List #U1&2- 6	In Stock			10	10	10	1	10	41	
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Soot Blowers	See OEM Parts List #U1&2- 6	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Combustion Control Valve	Combustion Control Valve	2" Flanged valv	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Atomizing Steam Valve	Atomizing Steam Valve	2" Flanged Valve	In Stock			10	10	5	5	5	35	
Units 1 & 2 Fuel Oil System	Main Fuel Oil Trip Valve	Main Fuel Oil Trip Valve	Flanged Valve	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Header Pressure Control Valve	Header Pressure Control Valve	327680000	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Fuel Oil Pumps	Fuel Oil Pumps	Pump	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Mechanical Seal	Mechanical Seal	Seal	In Stock			10	1	10	1	10	32	
Units 1 & 2 Fuel Oil System	Short Recirculation Valve	Short Recirculation Valve	Welded Flange	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Long Recirculation Valve	Long Recirculation Valve	Welded Valve	In Stock			10	10	10	1	10	41	
Units 1 & 2 Fuel Oil System	Fuel Oil Heaters	Fuel Oil Heaters	Gaskets	In Stock			10	10	5	1	10	36	
Units 1 & 2 Fuel Oil System	Fuel Oil Heaters	Fuel Oil Heaters	Tube Bundles	In Stock			10	1	10	1	10	32	
Units 1 & 2 Fuel Oil System	Burners	Oil Valve	oil, Steam & Svange Valves - All Same	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve - Unit 1	See Pats List #U1&2-8	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps - Unit 1 E & W	Pump or Parts	In Stock			10	1	10	5	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Unit 2 E & W	Pump	In Stock			10	1	10	5	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Rotating Assembly	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Volute casing for rotating assembly	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Throttle bushing (2 req'd)	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Sleeve bearing	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Balance bushing	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Thrust bearing	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Gaskets	In Stock			10	10	5	1	10	36	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Main Feedwater Low Load Control Valve	See Pasrts List #U1&2-9	In Stock			10	10	10	5	5	40	



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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit #1 - All HP Heaters	Level Transmitters	In Stock			10	10	10	1	1	32	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 2 - HP Heater # 4 & 6	Leve Transmitter	In Stock			10	10	10	1	1	32	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 2 -HP Heater # 5	Level Transmitter	In Stock			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit 1 - All HP Heaters	Aquarian Alarm Modules	In Stock			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit #2 - Heater # 4 & 6	Aquarian Alarm Modules	In Stock			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 2 -HP Heater # 5	Aquarian Alarm Modules	In Stock			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit 1 & 2 - All HP Heaters	Conductivity Probe	In Stock			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 1 & 2 - All HP Heaters	Relay	In Stock			10	10	5	1	5	31	
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit 1 & 2	Solenoid	In Stock			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Suction Valve Limit Switch	Oil Tight Limit Switch	In Stock			10	10	10	1	1	32	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Suction Valve	10" Valve	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	Motorized Bypass Valves	8" Valve	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	NRV Valves - Heater # 4	8"- 150#	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	NRV Valves - Heater # 5	8"- 300#	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	NRV Valves - Heater # 6	8"- 600#	In Stock			10	1	10	1	10	32	
Units 1 & 2 H.P. Feedwater System	Steam Drum	Level Control Transmitters	Level Transmitter	In Stock			10	10	10	1	1	32	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Suction Line Safety Valve	1/2" x 1" Valve	In Stock			10	10	10	1	1	32	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Boiler Feed Recirculation Valve to DA	4" Valve	In Stock			10	10	10	1	10	41	
Combustion Air & Gas Instruments	Burner Management	Positioner	2.5" x 5 "Pneumatic PowerPositioner In Stock	In Stock			10	1	10	5	10	36	
L.P. Feedwater System	Condensate Extraction Pumps		See OEM Parts List -# U1&2 - 3	In Stock			10	1	10	1	10	32	
Powerhouse and Switchyard Single Line	258V DC System	Cable	In Stock	In Stock			10	10	5	1	5	31	
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - speed probes	In Stock			10	10	10	1	10	41	
Turbine Generator System Stage 1	Turbine Lube Oil System	Pressure Switch 1	Switch	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 1	Steam Seal Regulator		Main Steam Control Valve - Positioner - Unit 2	In Stock			10	1	10	1	10	32	
Condenser Air Extraction System	Mechanical Vacuum Pumps	Motor	Motor	Not In Stock - on Order	\$8,038.82	Oct-15	10	1	10	5	5	31	
Generator	Stator	PT Cubicle	Potential Transformer (PT)	Not In Stock - on Order	\$4,663.21	Oct-15	10	1	10	1	10	32	
Turbine Generator System Stage 1	Governor	Governor	Truck V-Fast Cables	duplicate			10	10	10	1	10	41	
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Unit 2	Flanged Valve - TJ to chek system	duplicate			10	10	10	1	10	41	
Generator	Rotor	Rotor	Rotor	Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Rotor	Rotor Poles	Rotor Poles	Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator		Stator and Brush Rigging Assembly	Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.

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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Generator	Stator	Stator Poles	Stator Poles	Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Units 1 & 2 Air & Flue Gas	F.D. Fans	Unit 1& 2 - Fans	See Parts List #U1&2 - 5 - from OEM	Not in Stock	N/A	N/A	10	1	10	10	10	41	Predictive and preventative maintenance plus condition monitoring are utilized to maintain the FD Fans, mitigating the requirement for whole spare replacements.
Powerhouse and Switchyard Single Line	258V DC System	Panel	Breakers	Not in Stock	N/A	N/A	10	10	10	5	10	45	Capital Project in 2015.
Powerhouse and Switchyard Single Line	258V DC System	Unit 1 & 2 - Rectifying Transformers	Rectifying Transformer	Not in Stock	N/A	N/A	10	1	10	5	5	31	Capital Project in 2018.
Powerhouse and Switchyard Single Line	258V DC System	Charger	Breakers	Not in Stock	N/A	N/A	10	1	10	1	10	32	Capital Project in 2015.
Powerhouse and Switchyard Single Line	258V DC System	Charger	Charger	Not in Stock	N/A	N/A	10	1	10	1	10	32	Capital Project in 2015.
Generator	Stator	Stand Off Insulators	Stand Off Insulator	Not In Stock - on Order	Capital Spare	Capital Spare	10	1	10	5	10	36	Tier 2 Critical Spare - Additional Engineering Required
Units 1 & 2 Fuel Oil System	Duplex Basket Suction Strainer	Duplex Basket Suction Strainer	Strainer Basket	Not in Stock - Not Critical	N/A	N/A	10	10	10	1	1	32	Not critical to unit operation.
Units 1 & 2 Fuel Oil System	Fuel Oil Heaters	Fuel Oil Heaters	Whole Heater	Not in Stock - Not Critical	N/A	N/A	10	1	10	1	10	32	Not critical to unit operation.
Units 1 & 2 H.P. Feedwater System	Boiler Feed		Pressure Transmitter - Unit 2	Not in Stock - Not Critical	N/A	N/A	10	10	10	1	1	32	Not critical to unit operation.

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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update - September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Circulating Water and Screen Wash System	CW Discharge Valves		CW Butterfly Valve Actuator	In Stock			10	10	10	1	5	36	
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Network Interface Modules	In Stock			10	10	10	1	10	41	
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Master Fuel Trip Relays	In Stock			10	10	5	1	10	36	Tier 1 Critical Spare - Addition to Inventory process in progress
Combustion Air & Gas Instruments	Burner Management	Burner Automation	DCS Control Processor	In Stock			10	10	10	1	10	41	
Combustion Air & Gas Instruments	Burner Management	Elevation Oil Flow Transmitter	Meter & Transmitter	In Stock			10	10	10	1	1	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Combustion Air & Gas Instruments	Burner Management	Elevation Air Dampers	Positioner	In Stock			10	1	10	1	10	32	
Condenser Air Extraction System	Vacuum Breakers		6" Flange Vacuum Breaker	In Stock			10	10	10	1	5	36	
Generator	Synchronous Condensor	Thrust Bearing	See Parts List & Estimate by Supplier - #U3-1	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Generator	Exciter	Bridges	See OEM Parts List -# U3- 2	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Generator	Exciter	Channels	See Above	In Stock			10	1	10	1	10	32	
Generator	Stator	PT Cubicle	Potential Transformer (PT)	In Stock			10	1	10	5	10	36	Tier 2 Critical Spare - Additional Engineering Required
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Light Oil / Air Supply Solenoid Valve	In Stock			10	10	5	1	10	36	
Ignitor Light Oil and Air Supply		Igniter Control Box	Purge Solenoid Valve	In Stock			10	10	5	1	10	36	
Ignitor Light Oil and Air Supply		Igniter Control Box	Pneumatic Actuator	In Stock			10	10	5	1	10	36	
Ignitor Light Oil and Air Supply		Igniter Control Box	Ignition Transformer	In Stock			10	10	5	1	10	36	
Ignitor Light Oil and Air Supply		Igniter Control Box	Relay	In Stock			10	10	5	1	10	36	
Ignitor Light Oil and Air Supply		Igniter Control Box	Sunspot - Scanner	In Stock			10	10	5	1	10	36	
Ignitor Light Oil and Air Supply		Igniter Control Box	Snap Action Switch	In Stock			10	10	10	1	10	41	Tier 1 Critical Spare - Addition to Inventory process in progress
Ignitor Light Oil and Air Supply		Igniter Control Box	1/4" Light Oil Air Ball Valves	In Stock			10	10	5	1	5	31	Tier 1 Critical Spare - Addition to Inventory process in progress
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Level Transmitter LP Heater #1	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Relay	In Stock			10	10	10	1	10	41	Tier 1 Critical Spare - Addition to Inventory process in progress
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Conductivity Probe	In Stock			10	10	5	1	10	36	
L.P. Feedwater System	Deaerator System	Deaerator	Gauge Glasses	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Deaerator System	Level Control	Level Transmitter	In Stock			10	10	10	1	1	32	
L.P. Feedwater System	Ammonia System		Bulk Chemical Tote Tank	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Condensate Polishers (Units 1, 2, 3)	Control Valves	8" Valve	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves - #2 - LP Heater	20" Dia	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	L.P. Heaters	NRV Valves - #1 LP Heater	24" Dia	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	NRV Valves (2)	14" Dia on DA	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Deaerator System	Safety Valves	6" Valves	In Stock			10	1	10	1	10	32	
L.P. Feedwater System	Polisher Bypass Valve		Parts to Repair	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Condensate Polishers (Units 1, 2, 3)	Valves	3" Valves	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Condensate Polishers (Units 1, 2, 3)	Valves	2" Valves	In Stock			10	10	10	1	10	41	
Powerhouse and Switchyard Single Line	258V DC System	Field Breaker	Field Breaker	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Governor	Governor	See Hitachi Parts List # U3-5 for Governor Drive Assembly	In Stock			10	10	10	1	10	41	Tier 2 Critical Spare - Addition to Inventory process in progress

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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update - September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Turbine Generator System Stage 2	Governor	Electrical Trip Test Device	Solenoid Trip - See Hitachi OEM Parts list #U3-8	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Turbine Lube Oil System	DC Lube (Flushing) Oil Pump Same for AC Pump	See Hitachi Parts List #U3-11 for pump - 2 Recommended Parts	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Turbine Lube Oil System	DC Lube (Flushing) Oil Pump	Auto Start Pressure Switch	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Turbine Lube Oil System	DC Lube (Flushing) Oil Pump	Motor	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Main Steam Chest Assembly	Control Valve - Upper	See OEM list & Quote see list #U3-12	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Main Steam Chest Assembly	Control Valve - Lower	See OEM list & Quote see list #U3-13	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Main Steam Chest Assembly	Stop Valves	See 2 OEM lists & Quotes List #U3-14	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Reheat Steam Chest Assembly	Reheat/ICV Valves	See 4 OEM lists & Quotes - List #U3-15	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Steam Seal Regulator		Pressure Transmitter - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Main Steam Control Valve - Actuator - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Main Steam Control Valve - Body - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Main Steam Control Valve - Positioner - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Aux Steam Control Valve - Actuator - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Aux Steam Control Valve - Body - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Dump Control Valve - Actuator - Repair Kit - Unit 3	In Stock			10	1	10	1	10	32	
Turbine Generator System Stage 2	Steam Seal Regulator		Dump Control Valve - Body - Repair Kit - Unit 3	In Stock			10	1	10	1	10	32	
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Series 8500 size 95 w/ 95" @ 100% width wheel	In Stock			10	1	10	1	10	32	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Series 8500size 95 w/ 95" @ 100%width Shaft	In Stock			10	1	10	1	10	32	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Drive side bearing	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Opposite side bearing	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		2 - Temperature probes installed in bearings	In Stock			10	1	10	1	10	32	
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Falk Steelflex coupling	In Stock			10	1	10	1	10	32	
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		outlet damper	In Stock			10	1	10	1	10	32	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		variable inlet vanes	In Stock			10	1	10	1	10	32	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Inlet Silencer	In Stock			10	1	10	1	10	32	Repair materials in stock

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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015	
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking
Unit 3 Air & Flue Gas	Rotary Air Heaters	Gearbox	Gearbox	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit 3 Air & Flue Gas	O2 Analyzers		Analyzer - In Stock	In Stock			10	1	10	1	10	32	
Unit 3 Air & Flue Gas	O2 Analyzers		Probe - In Stock	In Stock			10	1	10	1	10	32	
Unit 3 Fuel Oil System		Main Fuel Oil Trip Valve	4" Type ET Class 300	In Stock			10	1	10	1	10	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System		Combustion Control Valves	1 1/2" flanged valve w/ actuator	In Stock			10	1	10	1	10	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System		Atomizing Steam Valve	2" Typw ED Class 300	In Stock			10	1	10	1	10	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System		Level Fuel Oil Trip Valves (3)	2-1/2" Flanged (?) Ball Valve cw/ Actuator	In Stock			10	1	10	1	10	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System		Header Pressure Control Valve	1-1/2" - Welded Flanged	In Stock			10	1	10	1	10	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System		Fuel Oil Pumps	Pump	In Stock			10	10	10	1	10	41	
Unit 3 Fuel Oil System		Main Fuel Oil Recirculation Valve	1" Welded Flange Valve w/ Actuator	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System		Level Fuel Oil Recirculation Valves	3/4" Welded Valve w/ Actuator	In Stock			10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System	Burners	Oil Valve	1/2" Ball Valve	In Stock			10	1	10	1	10	32	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 Fuel Oil System	Burners	Steam Valve	1" Valve	In Stock			10	1	10	1	10	32	
Unit 3 Fuel Oil System	Burners	Scavenge Valve	1" Valve	In Stock			10	1	10	1	10	32	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Rotating Assembly	In Stock			10	1	10	1	10	32	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Volute casing for rotating assembly	In Stock			10	1	10	1	10	32	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Throttle bushing (2 req'd)	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Sleeve bearing (2 req'd)	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Balance bushing	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Thrust bearing	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Gaskets	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	6" - EHT valve 1500lb - Welded	In Stock			10	10	10	1	10	41	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 10A5411X022 - Seal Ring	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 13A5599X052 - O-Ring	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 26A52990X52 - Seat Ring Retainer	In Stock			10	10	10	1	10	41	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 27A2798X042 - Seat Ring, O-Ring	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 42B3570X012 - Cage, Eq%	In Stock			10	10	10	1	10	41	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 36A5442X0K2 - Plug/Stem Bal	In Stock			10	10	10	1	10	41	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	2 - 26A5314X012 - Gasket	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1J872906332 - Upper Wiper	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1J873435072 - Packing Box Ring	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1R290601012 - Packing Set	In Stock			10	10	5	1	10	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1H7441X0022 - Bushing Seal	In Stock			10	10	5	1	10	36	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 2R6376X0082 - Diaphragm	In Stock			10	10	5	1	10	36	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - R667X000802 - Repair Kit	In Stock			10	10	5	1	10	36	Tier 1 Critical Spare - Addition to Inventory process in progress
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	All HP Heaters	Conductivity Probe	In Stock			10	10	10	1	10	41	
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Aquarian Alarm Module	In Stock			10	10	10	1	10	41	

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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update - September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Level Transmitter	In Stock			10	10	10	1	1	32	
Unit 3 H.P. Feedwater System	H.P. Heaters	Motorized Bypass Valves	10" Dia	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	H.P. Heaters	NRV Valves - #6 HP Heater	6" Dia	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	H.P. Heaters	NRV Valves - #5 HP Heater	8" Dia	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	H.P. Heaters	NRV Valves - #4 HP Heater	10" Dia	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	Boiler Feed	Motorized Discharge Valves	8" Dia Valve	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	Steam Drum	Level Control Transmitters	Transmitter	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	LL Control Valve	Valve	In Stock			10	10	10	1	5	36	
Unit 3 H.P. Feedwater System	Boiler Feed	Suction Line Safety Valve	1/2" Dia	In Stock			10	1	10	1	10	32	
Unit 3 H.P. Feedwater System	Boiler Feed	DA Recirculation Block Valve	Actuator	In Stock			10	10	10	1	10	41	
Generator	Stator	PT Cubicle	Fuse	In Stock			10	1	10	5	10	36	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Aquarian Alarm Modules	In Stock			10	10	10	1	10	41	
L.P. Feedwater System	Deaerator System	Level Control	Level Switch	In stock			10	10	10	1	10	41	
Turbine Generator System Stage 2	Turbine Lube Oil System	Auxiliary Oil Pump	See Hitachi Parts List #U3-10 for Pump - 3 recommended Parts	In Stock			10	1	10	1	10	32	
Unit 3 Air & Flue Gas	Rotary Air Heaters	Pneumatic Drive System	Air Drive Motor	In Stock			10	1	10	1	10	32	
Circulating Water and Screen Wash System	CW Discharge Valves		36" Butterfly Valve	Common Spare	N/A	N/A	10	10	10	1	5	36	Common with Units 1 & 2
Ignitor Light Oil and Air Supply	Light Oil	Trip Valve	1" Ball Valve	Common Spare	N/A	N/A	10	10	10	1	5	36	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Relay	Common Spare	N/A	N/A	10	10	5	1	5	31	Common with Units 1 & 2
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Solenoid	Common Spare	N/A	N/A	10	10	10	1	10	41	Common with Units 1 & 2
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Solenoid	Duplicate	N/A	N/A	10	10	10	1	10	41	Duplicate
L.P. Feedwater System	Deaerator System	Level Control	Solenoid	Duplicate	N/A	N/A	10	10	10	1	10	41	Duplicate
Generator	Seal Oil System	Seals	Regulator	Not in Stock - on Order	\$53,085.00	Oct-15	10	1	10	5	10	36	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Governor	Governor	See Hitachi Parts List # U3-18 for Speed Governr Asembly	Not in Stock - on Order	\$4,895.00	Oct-15	10	10	10	1	10	41	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Governor		See Hitachi Parts List #U3-6 for Load Limit Handwheel Assembly	Not in Stock - on Order	\$2,590.00	Oct-15	10	10	10	1	10	41	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Governor		See Hitachi Parts List #U3-7 for Speed Load Charger Assembly	Not in Stock - on Order	\$4,015.00	Oct-15	10	10	10	1	10	41	Tier 2 Critical Spare - Addition to Inventory process in progress
Turbine Generator System Stage 2	Turbine Lube Oil System	Shaft Driven Oil Pump	See Hitachi Parts List #U3-9 for Pump - 6 recommended Parts	Not in Stock - on Order	\$17,650.00	Nov-15	10	1	10	1	10	32	Tier 2 Critical Spare - Addition to Inventory process in progress

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Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality						Status Update - September 30, 2015
System	Sub System	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers	Ranking	
Generator	Stator	Stand Off Insulators		Not in Stock - on Order	Capital Spare	Capital Spare	10	1	10	5	10	36	Tier 2 Critical Spare - Additional Engineering Required
Generator	Rotor		Rotor	Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Rotor	Rotor Poles		Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator		Stator and Brush Rigging Assembly	Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator		Stator and Brush Rigging Assembly	Not in Stock	N/A	N/A	10	1	10	1	10	32	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator	Stator Poles		Not in Stock	N/A	N/A	10	1	10	5	10	36	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Powerhouse and Switchyard Single Line	258V DC System	Rectifying Transformer	Rectifying Transformer	Not in Stock	N/A	N/A	10	1	10	1	10	32	Capital Project in 2016
Powerhouse and Switchyard Single Line	258V DC System	Charger	Breaker	Not in Stock	N/A	N/A	10	1	10	1	10	32	Capital Project in 2016
Powerhouse and Switchyard Single Line	258V DC System		Charger	Not in Stock	N/A	N/A	10	1	10	1	10	32	Capital Project in 2016
Turbine Generator System Stage 2	Governor	Mechanical Overspeed Trip Device	See Emergency Governor OEM Parts List #U3-17	Not in Stock	N/A	N/A	10	1	10	1	10	32	Not practical to have in stock as device requires calibration prior to replacement.
Main Steam & Reheat Steam; Turbine Drains	Vacuum Unloading Device		See OEM Pats List # U3-4	Not in Stock - Not Critical	N/A	N/A	10	10	10	1	10	41	Not critical to unit operation.
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		2 - Independent bearing pedestals	Not in Stock - Not Critical	N/A	N/A	10	1	10	1	10	32	Not critical to unit operation.
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		2 - bearing sole plates	Not in Stock - Not Critical	N/A	N/A	10	1	10	1	10	32	Not critical to unit operation.
Unit 3 H.P. Feedwater System	Boiler Feed	DA Recirculation Block Valve	4" Gate Valve	Not in Stock - Not Critical	N/A	N/A	10	10	10	1	10	41	Not critical to unit operation.

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Asset				Define Spares Parts	Price Spare Parts			Spare Part Criticality				Status Update - September 30, 2015		
System	Asset			Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec		# of suppliers	Ranking
Station Board SB34 (ST34)				breaker PSM3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB1 (UB1-2)				UB1-5 relay	In Stock			10	1	5	5	10	31	
Unit Board UB1 (UB1-2)				UB1-6 relay	In Stock			10	1	5	5	10	31	
Unit Board UB1 (UB1-2)				UB1-7 relay	In Stock			10	1	5	5	10	31	
Unit Board UB1 (UB1-2)				UB1-8 relay	In Stock			10	1	5	5	10	31	
Unit Board UB1 (UB1-2)				UB1-10 relay	In Stock			10	1	5	5	10	31	
Unit Board UB2 (UB2-1)				UB2-5 relay	In Stock			10	1	5	5	10	31	
Unit Board UB2 (UB2-1)				UB2-6 relay	In Stock			10	1	5	5	10	31	
Unit Board UB2 (UB2-1)				UB2-7 relay	In Stock			10	1	5	5	10	31	
Unit Board UB2 (UB2-1)				UB2-8 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				BFE3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				BFW3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				FDE3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				FDW3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				CEN3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				CES3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				CWE3 relay	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)				CWW3 relay	In Stock			10	1	5	5	10	31	
Station Board SB12 (SSB1)				Feeder to Station Board - breaker SSB-1 & Relays	In Stock			10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB12 (SSB1)				SSB-1 Relay	In Stock			10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB12 (SSB1)				SSB-1 Relay	In Stock			10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB12 (SSB1)				SSB-1 Relay	In Stock			10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB12 (SSB1)				SSB-3 Relay	In Stock			10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Relays	In Stock			10	1	5	5	10	31	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	In Stock			10	1	5	5	10	31	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Feeder to Power Centre - breaker C1	Not in Stock - on Order	15,000.00	Nov-15	10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)		Feeder to MCC C1 - breaker C2	Not in Stock - on Order	15,000.00	Nov-15	10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB34 (ST34)				Feeder to transformer SAT34 - breaker SAT34 & relays	Not in Stock - on Order	28,900.00	Sep-15	10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		Feeder to Station Board - breaker SAB34	Not in Stock - on Order	15,000.00	Nov-15	10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		Feeder to Station Board - breaker ATB12	Not in Stock - on Order	15,000.00	Nov-15	10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		WAM34	Not in Stock - on Order	15,000.00	Nov-15	10	1	5	5	10	31	Tier 2 Critical Spare - Addition to Inventory process in progress
Unit Board UB1 (UB1-2)				UB1-4 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB1 (UB1-2)				UB1-9 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB1 (UB1-2)				UB1-11 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Relays	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB2 (UB2-1)				UB2-3 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB2 (UB2-1)				UB2-4 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB2 (UB2-1)				UB2-9 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.



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System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015	
	Asset	Asset	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking
Unit Board UB2 (UB2-1)				UB2-10 relay	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Relays	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	Common Spare - In Stock			10	1	5	5	10	31	Shares spare with all other P&B Golds devices.
Station Board SB12 (SSB1)				Feeder to Station Board - breaker SSB-2	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Station Board SB12 (SSB1)				Feeder to transformer ATC - breaker SSB-3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Station Board SB12 (SSB1)				SSB-3 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Station Board SB12 (SSB1)				Feeder to Station Board - breaker SSB-4	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Station Board SB12 (SSB1)				SSB-4 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Station Board SB12 (SSB1)				SSB-4 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)		Feeder to MCC E1 - breaker C4	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)		Feeder to MCC C12 - breaker C7	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Feeder to Power Centre - breaker C14	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Feeder to Power Centre - breaker C15	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C5	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C6	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C8	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C9	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C10	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C11	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.

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System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015	
	Asset	Asset	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C12	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C13	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12 (Alternate Feeds Diesel Generator D1, Diesel Bus Tie, Tie Breaker to Transfer Bus C15)	Circuit Breaker to Bus - breaker C16	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12 (Alternate Feeds Diesel Generator D1, Diesel Bus Tie, Tie Breaker to Transfer Bus C15)	Circuit Breaker to Bus - breaker C17	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12	Feeder to MCC - breaker C18	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12 (Alternate Feeds Diesel Generator D1, Diesel Bus Tie, Tie Breaker to Transfer Bus C15)	Circuit Breaker to Bus - breaker C19	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Station Board SB34 (ST34)				Feeder to Station Board - breaker ST34 & relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Station Board SB34 (ST34)				breaker ST34 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)				breaker ST34 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)				Feeder to Station Board - breaker TB12 & relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Station Board SB34 (ST34)				breaker TB12 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with MAVS devices - replaced by ABB SYN5201-0271
Station Board SB34 (ST34)				breaker TB12 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Station Board SB34 (ST34)				breaker TB12 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)				breaker TB12 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)				breaker SAT34 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)				breaker SAT34 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)				breaker PSM3 & relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			Circuit Breaker TB3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			TB3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			TB3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			TB3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			TB3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C

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System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015	
	Asset			Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking
	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)												
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		Feeder to Boiler Area MCC BAB3 - breaker SDB-34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		GPB34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		AC34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		CWP34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		LDP34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		WTP34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)		Feeder to Diesel Bus DB34 - Breaker DB34	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)	Diesel Bus DB34 (Alternate Feeds Diesel Generator D2, Diesel Bus Tie)	Feeder to Diesel Bus - D2	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)	Diesel Bus DB34 (Alternate Feeds Diesel Generator D2, Diesel Bus Tie)	Feeder to Diesel Bus - DBT	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)				Circuit Breaker UB1-1	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1.
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)				UB1-1 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with MAVS devices - replaced by ABB SYNS201-0271
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)				UB1-1 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)				UB1-1 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Unit Board UB1 (UB1-2)				Feeder to Unit Board UB1 - breaker UB1-2	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A
Unit Board UB1 (UB1-2)				UB1-2 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Unit Board UB1 (UB1-2)				UB1-2 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE HFA devices
Unit Board UB1 (UB1-2)				UB1-2 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE HFA devices
Unit Board UB1 (UB1-2)				Feeder to transformer ATA - breaker UB1-3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				UB1-3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Unit Board UB1 (UB1-2)				UB1-3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Unit Board UB1 (UB1-2)				breaker UB1-4	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				breaker UB1-5	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				breaker UB1-6	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				breaker UB1-7	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A

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System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015	
	Asset	Asset	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking
Unit Board UB1 (UB1-2)				breaker UB1-8	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				breaker UB1-9	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				breaker UB1-10	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)				breaker UB1-11	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Feeder to Power Centre A - A1	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Feeder to Power Centre A - A9	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		Feeder to transformer LT-A - breaker A3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		Feeder to MCC A1 - breaker A4	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		A5	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		A6	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		A7	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)				Circuit Breaker UB2-12	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1.
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)				UB2-12 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with MAVS devices - replaced by ABB SYN5201-0271
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)				UB2-12 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)				UB2-12 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)				UB2-12 Relay	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Unit Board UB2 (UB2-1)				Feeder to Unit Board - breaker UB2-1 & relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker SSB-1.
Unit Board UB2 (UB2-1)				UB2-1 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Unit Board UB2 (UB2-1)				UB2-1 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE HFA devices
Unit Board UB2 (UB2-1)				UB2-1 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE HFA devices
Unit Board UB2 (UB2-1)				Feeder to Transformer ATB, breaker UB2-2	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-2 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Unit Board UB2 (UB2-1)				UB2-2 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IACS1 and ICA53 devices - replaced by SEL-551C
Unit Board UB2 (UB2-1)				UB2-3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A

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System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015	
	Asset	Asset	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking
Unit Board UB2 (UB2-1)				UB2-4	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-5	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-6	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-7	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-8	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-9	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)				UB2-10	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Spares spare with CGE IAC51 and ICA53 devices
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Spares spare with CGE IAC51 and ICA53 devices
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Feeder to Power Centre B - breaker B1	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Feeder to transformer LT-B - breaker B4	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Feeder to MCC B1 - breaker B5	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		B2	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		B6	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		B7	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		B8	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other CGE AK breakers.
Unit Board UB3 (UT3)				Feeder to Unit Board - breaker UT3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to Station Board - breaker 5SB-1.
Unit Board UB3 (UT3)				UT3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C
Unit Board UB3 (UT3)				UT3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Unit Board UB3 (UT3)				UT3 relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Unit Board UB3 (UT3)				Feeder to transformer UAT3 - breaker UAT3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB3 (UT3)				UAT3 Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Unit Board UB3 (UT3)				UAT3 Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C
Unit Board UB3 (UT3)				BFE3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A
Unit Board UB3 (UT3)				BFW3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A

2015-16 Winter Readiness Planning Report

System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015		
	Asset	Asset	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking	
Unit Board UB3 (UT3)				FDE3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	
Unit Board UB3 (UT3)				FDW3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	
Unit Board UB3 (UT3)				CEN3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	
Unit Board UB3 (UT3)				CES3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	
Unit Board UB3 (UT3)				CWE3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	
Unit Board UB3 (UT3)				CWW3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Feeder to Aux Board - breaker UAB-3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Feeder to transformer LDP-3 - breaker LDP-3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Feeder to MCC BAB3 - breaker BAB-3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		AOP3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		TAB3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		AC12	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Tie Breaker to Station Board - breaker ATB3	Common Spare - Not in Stock	N/A	N/A	10	1	5	5	10	31	Shares spare re-build kit/critical spares kit with other FP breakers.	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3			Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Relays	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12	Essential Services MCC E1 (C18)	Motor Control Centre Unit	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Water Treatment and Aux Boiler MCC C5 (C4)	MCC	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Common Services MCC C1 (C2)	MCC	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Waste Water Treatment Plant MCC C12 (C7)	MCC	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical	
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)			Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)	Diesel Bus DB34	Essential Services MCC ES834	MCC	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical

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System	Asset			Define Spares Parts	Price Spare Parts			Spare Part Criticality					Status Update - September 30, 2015		
	Asset	Asset	Asset	Defined Spares Parts	Stock Status	Cost	Delivery	Asset Criticality	PM / CM	Lead Time	Tech Spec	# of suppliers		Ranking	
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)	Lighting Transformer LT-A (A3)	Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)	Turbine & Boiler Area MCC A1 (A4)	MCC	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical	
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)	Turbine & Boiler Area MCC A1 (A4)	HP Heater MCC A1-1 (A1-1)	MCC	Not in Stock - Not Critical	N/A	N/A	10	1	5	5	10	31	Not critical
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)	Turbine & Boiler Area MCC B1 (B5)	MCC	Not in Stock - Not Critical	n/a	n/a	10	1	5	5	10	31	Not critical	
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)	Turbine & Boiler Area MCC B1 (B5)	HP Heater MCC B1-1	MCC	Not in Stock - Not Critical	n/a	n/a	10	1	5	5	10	31	Not critical
Unit Board UB3 (UT3)				UAT3 Relays	Not in Stock - Not Critical	n/a	n/a	10	1	5	5	10	31	Not critical	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)	Lighting Distribution Transformer (LDP-3)	Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)	Boiler Area MCC (BAB3)	MCC	Not in Stock - Not Critical	n/a	n/a	10	1	5	5	10	31	Not critical	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)	Boiler Area MCC (BAB3)	HP Heater MCC HPH3	MCC	Not in Stock - Not Critical	7,500.00		10	1	5	5	10	31	Not critical
Unit Board UB1 (UB1-2)	UB1-3 (Aux Transformer ATA)			Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)			Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)	LT Transformer LT-B (B4)	Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)			Transformer	Not in Stock - Not Critical	N/A	N/A	10	1	10	5	1	27	Not critical	

## **APPENDIX F**

### Critical Spares Status Listing – Combustion Turbines



## 2015-16 Winter Readiness Planning Report

Recommended Component	September 2015 update		
	Updated Stock Status	Expected Delivery Date	Exposure for winter 2015/2016 based on current plan
High Energy Ignition Unit, Gas Generator, Prime Mover Systems	In Stock	N/A	Med
Fire Fuel Shutoff Valve (LF-8), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Bearing (494047), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Bearing (494056), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Vibration Transducer, Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Jacking Oil Pump, Main Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Fuel Filter, Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Oil Filter Unit - Complete (B.108506), Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Filter (494064), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Proximity Switch, Clutch, Prime Mover Systems	In Stock	N/A	Low
Altair Quick Shutoff Valve (AV-LF-1), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Fuel Valve (FC-LF-1), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Supplemental Fuel AC Pump (P&MLF-5), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Fuel Recirculation Solenoid Valve (LF-7), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Fuel Regulator (LF-4), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Jacking Oil Permissive Pressure Switch, Main Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Clutch Control Solenoid Valve (LO-6), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Clutch Control Solenoid Valve (LO-6), Main Lube Oil System, Auxiliary Systems, HWD GT	In Stock	N/A	Low
Valve (181536), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Primary Ratchet Ring, Clutch, Prime Mover Systems; A side	In Stock	N/A	Low
Primary Ratchet Ring, Clutch, Prime Mover Systems; B side	In Stock	N/A	Low
Secondary Ratchet Ring, Clutch, Prime Mover Systems; A side	In Stock	N/A	Low
Secondary Ratchet Ring, Clutch, Prime Mover Systems; B side	In Stock	N/A	Low

## 2015-16 Winter Readiness Planning Report

Ring that the Primary Pawl and spring are installed	In Stock	N/A	Low
Primary Pawl Spring, Clutch, Prime Mover Systems	In Stock	N/A	Low
Primary Pawl, Clutch, Prime Mover Systems	In Stock	N/A	Low
Secondary Pawl, Clutch, Prime Mover Systems	In Stock	N/A	Low
Limit Switch, Snow Door Assembly, Exhaust, Prime Mover Systems, SVL GT	In Stock	N/A	Low
Proximity Switch, Snow Door Assembly, Exhaust, Prime Mover Systems, HWD GT	In Stock	N/A	Low
NC Solenoid Valve (SV-CA-2), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
NO Solenoid Valve (SV-CA-1), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
Starter Control Valve (CA-17), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
3-Way Thermostatic Valve (GL-2), MLO/Glycol Cooling System, Auxiliary Systems	In Stock	N/A	Low
Thermocouple (181398N1), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Speed Pickup (181487), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Vibration Pickup (181571), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Thermocouple (181397), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Thermocouple (181398N2), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Probe (181414N1), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Probe (181414N2), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low

## 2015-16 Winter Readiness Planning Report

Thermocouple (184847), Power Turbine Model CT2, Prime Mover Systems	In Stock	N/A	Low
Motor Operated Tank Shutoff Valve (LF-38), Liquid Fuel System, Auxiliary Systems, HWD GT	In Stock	N/A	Med
Final Fuel Filter (F-LF-1), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Heater Filter Coalescer, Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Prefilter, Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Supplemental Fuel Filter (F-LF-5), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
High Efficiency Farr HP-100 Filter (2'x2'x2"), Filter Box - Curtiss Wright, Prime Mover Systems	In Stock	N/A	Low
Filter (F-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Unloading Filter, Liquid Fuel System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Duplex 25u Filter (F-LO-1), Main Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Filter/Coalescer Heater (HTR-LF-1), Liquid Fuel System, Auxiliary Systems, HWD GT	In Stock	N/A	Low
P3 Pressure Transducer (PT-P3-1), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Common Drain Clutch A Thermocouple (TC-LO-3), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Fuel Supply Thermocouple (TC-LF-1), Liquid Fuel System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Alternator Bearing Drain Oil Thermocouple (TC-LO-3), Main Lube Oil System, Auxiliary Systems, HWD GT	In Stock	N/A	Low
Alternator Cooling Air Temperature Thermocouple (TC-A-1), Alternator Cooling System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Common Drain Clutch B Thermocouple (TC-LO-11), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Compressor Start-Stop Pressure Switch (PS-CA-1), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
Compressor Start-Stop Pressure Switch (PS-CA-2), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low

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Oil Drain Alternator Clutch Bearing 1 Thermocouple (TC-LO-4), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 2 Thermocouple (TC-LO-5), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 3 Thermocouple (TC-LO-6), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 4 Thermocouple (TC-LO-7), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 5 Thermocouple (TC-LO-8), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 6 Thermocouple (TC-LO-9), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Exciter Bearing 7 Thermocouple (TC-LO-10), Main Lube Oil System, Auxiliary Systems, SVL GT	In Stock	N/A	Low
Oil Drain Thermocouple (TC-LO-2), Main Lube Oil System, Auxiliary Systems, HWD GT	In Stock	N/A	Low
Oil Supply Thermocouple (TC-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Oil Supply Thermocouple (TC-LO-1), Main Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Anti-Icing Hot Air Valve - Complete (810-501-0747), Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Gas Generator Permissive Start Pressure Switch, Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
Starter Overpressure Pressure Switch (PS-CA-3), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
Pressure Regulating Valve (LO-8), Main Lube Oil System, Auxiliary Systems	In Stock	N/A	Low
Inlet Temperature Thermocouple, Gas Generator Enclosure with Septum Doors, Prime Mover Systems	In Stock	N/A	Low

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Resistance Temperature Detector Probe, Gas Generator Enclosure with Septum Doors, Prime Mover Systems	In Stock	N/A	Low
NC Solenoid Valve (SV-CA-3), Gas Generator Air Starter System, Auxiliary Systems	In Stock	N/A	Low
Fuel Temperature Sensor (TS-LF-1), Liquid Fuel System, Auxiliary Systems	In Stock	N/A	Low
Liquid Fuel Burner - Complete (BDC.3026), Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Oil Pump - Complete, Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Outer Oil Pump Drive Assembly (47-1-1-006409), Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Outer Starter Drive Assembly (BDA.1153), Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Scavenge Pump Assembly (47-1-1-006418), Gas Generator, Prime Mover Systems	In Stock	N/A	Low
HP Compressor Magnetic Pickup, Gas Generator, Prime Mover Systems	In Stock	N/A	Low
LP Compressor Magnetic Pickup, Gas Generator, Prime Mover Systems	In Stock	N/A	Low
Inertial Filter Element, Filter Box - Curtiss Wright, Prime Mover Systems	In Stock	N/A	Low

## 2015-16 Winter Readiness Planning Report

September 2015 update				
Recommended Component	Risk Score	Updated Stock Status	Expected Delivery Date	Exposure for winter 2015/2016 based on current plan
Heater Control Temperature Switch (TS-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	Medium	On order	October 31 2015	Low
Heater Control Temperature Switch (TS-LO-1), Main Lube Oil System, Auxiliary Systems	Medium	On order	October 31 2015	Low
Final Fuel Filter Differential Pressure Switch (PSD-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	On order	October 31 2015	Low
Low Trip Pressure Switch (PS-LO-7), Main Lube Oil System, Auxiliary Systems	High	On Order	October 31 2015	Low
Start Permissive Pressure Switch (PS-LO-6), Main Lube Oil System, Auxiliary Systems, SVL GT	High	On Order	October 31 2015	Low
Pressure Switch, Permissive Start - Low Pressure Alarm (PS-LF-2), Liquid Fuel System, Auxiliary Systems	High	On Order	October 31 2015	Low
Pressure Switch, Trip - Low Fuel Pressure (PS-LF-3), Liquid Fuel System, Auxiliary Systems	High	On Order	October 31 2015	Low
Low Oil Pressure Switch (PS-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	High	On Order	October 31 2015	Low
Filter Differential Pressure Switch (PSD-LO-1), Main Lube Oil System, Auxiliary Systems	Medium	On Order	October 31 2015	Low
Filter Upstream Pressure Switch (PS-GGLO-3), Gas Generator Lube Oil System, Auxiliary Systems	High	On Order	October 31 2015	Low
Pre-filter Differential Pressure Switch (PSD-LF-2), Liquid Fuel System, Auxiliary Systems, HWD GT	Medium	On Order	October 31 2015	Low

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AC Pump Discharge Fuel Pressure Switch (PS-LF-4), Liquid Fuel System, Auxiliary Systems, HWD GT	Medium	On Order	October 31 2015	Low
Low Oil Pressure Switch (PS-GGLO-2), Gas Generator Lube Oil System, Auxiliary Systems	High	On Order	October 31 2015	Low
Pressure Switch (PS-HO-1), Liquid Fuel System, Auxiliary Systems	Medium	On Order	October 31 2015	Low

## 2015-16 Winter Readiness Planning Report

Recommended Component	Risk Score	Spare Cost >\$50,000	September 2015 update		
			Updated Stock Status	Expected Delivery Date	Exposure for winter 2015/2016 based on current plan
Fuel Pump Servo Valve (SV-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	N	In-kind part unavailable - reengineering required	TBD	Low
DC Pump Start Pressure Switch (PS-LO-1), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	N	In-kind part unavailable - reengineering required	TBD	Low
DC Pump Start Pressure Switch (PS-LO-2), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	N	In-kind part unavailable - reengineering required	TBD	Low
DC Pump Start Pressure Switch (PS-LO-3), Main Lube Oil System, Auxiliary Systems, HWD GT	Medium	N	In-kind part unavailable - reengineering required	TBD	Low
Oil to Clutch A Pressure Transducer (PT-LO-1), Main Lube Oil System, Auxiliary Systems, SVL GT	High	N	In-kind part unavailable - reengineering required	TBD	Low
Oil to Clutch B Pressure Transducer (PT-LO-2), Main Lube Oil System, Auxiliary Systems, SVL GT	High	N	In-kind part unavailable - reengineering required	TBD	Low
Fuel Pressure Transducer (PT-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	N	In-kind part unavailable - reengineering required	TBD	Low
Low Liquid Level Alarm Switch (LL-GL-1), MLO/Glycol Cooling System, Auxiliary Systems	Medium	N	In-kind part unavailable - reengineering required	TBD	Low
Level Switch (LS-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	High	N	In-kind part unavailable - reengineering required	TBD	Low
Inlet Pressure Transducer, Gas Generator Enclosure with Septum Doors, Prime Mover Systems	Medium	N	In-kind part unavailable - reengineering required	TBD	Low



## 2015-16 Winter Readiness Planning Report

Recommended Component	Risk Score	Spare Cost >\$50,000	Comments	September 2015 update		
				Updated Stock Status	Expected Delivery Date	Exposure for winter 2015/2016 based on current plan
Combustion Chamber, Gas Generator, Prime Mover Systems	Medium	Y	1 set to refurbish	Procurement in progress	December, 2015	Low
Lower Fuel Pump Assembly, Gas Generator, Prime Mover Systems	Medium	Y		Procurement in progress	December, 2015	Low
Outer Fuel Pump Drive Assembly (BDA.7591), Gas Generator, Prime Mover Systems	Medium	N		Procurement in progress	December, 2015	Low
Upper Fuel Pump Assembly, Gas Generator, Prime Mover Systems	Medium	Y		Procurement in progress	December, 2015	Low
Exciter Bearing, 63MVA 50MW Generator, Power Generation Systems	High	N		On Order	December, 2015	Low
Rotor Bearing, 63MVA 50MW Generator, Power Generation Systems	High	N		On Order	December, 2015	Low
Bearing (181413 or 181332), Power Turbine Model CT2, Prime Mover Systems	Medium	N		On Order	December, 2015	Low

## **APPENDIX G**

### Critical Spares Status Listing – Hydraulic Generation

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - INTAKE STRUCTURE NO. 1 - TRANSMITTER,PRESS 0-6MH20	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 1 - TRANSMITTER,PRESS 0-375	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 2 - TRANSMITTER,PRESS 0-375	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 3 - TRANSMITTER,PRESS 0-375	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 4 - TRANSMITTER,PRESS 0-375	In Stock	MEDIUM	NO	
BDE - TURBINE - Turbine Carbon Seal (Units 1 to 4)	In Stock	HIGH	NO	
BDE - TURBINE - Turbine Carobn Seal (Units 5 & 6)	In Stock	HIGH	NO	
BDE - WICKET GATES AND LINKAGES - Shear Pins	In Stock	MEDIUM	NO	
BDE - WICKET GATES AND LINKAGES - PACKING,V TYPE 2-EASY	In Stock	MEDIUM	NO	
BDE - WICKET GATES AND LINKAGES - PIN,ECCENTRIC	In Stock	MEDIUM	NO	
BDE - WICKET GATES AND LINKAGES - RING,PISTON SERVO MOTOR 18"OD	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 13.8KV	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 1000:	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,PT 14400KV	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 30332313	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 800:5	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - CT 50/51	In Stock	HIGH	NO	
BDE - GATE HOIST - BAY D'ESPOIR - ST - Remote I/O Adapter	In Stock	MEDIUM	NO	
BDE - HEADCOVER ASSEMBLY - UNIT 1 - BUSHING,UPPER HEAD COVER P003	In Stock	HIGH	NO	
BDE - HEADCOVER ASSEMBLY - UNIT 1 - BUSHING,UPPER WICKET	In Stock	HIGH	NO	
BDE - RUNNER - UNIT 1 - BOLT,SHAFT TO RUNNER	In Stock	HIGH	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,ANALOG QUANTUM	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,CPU MODICON	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,DISCRETE IN	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,DISCRETE OUT	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,ETHERNET QUANTUM	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,GPS QUANTUM	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,HOT STANDBY	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,INTERFACE PLC	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,RACK FILLER	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - MODULE,RELAY OUT	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - POWER SUPPLY, 125-24 VDC	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - POWER SUPPLY,125 VDC	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - POWER SUPPLY,125VDC 8A	In Stock	MEDIUM	NO	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - PLC,Model Quantum- Modicon - POWER SUPPLY,24 VDC	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - REMOTE I/O HEAD,MODICON	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - ADAPTER,REMOTE I/O	In Stock	MEDIUM	NO	
BDE - PLC,Model Quantum- Modicon - BACKPLANE,10 SLOT MODICON	In Stock	MEDIUM	NO	
BDE - STATION SERVICE - BDE PH1 - ACB	In Stock	HIGH	NO	
BDE - STATION SERVICE - BDE PH1 - Trip Unit - Breker control device	In Stock	HIGH	NO	
BDE - ROTOR SHAFT - Rotating Ring	In Stock	HIGH	TBD	
BDE - STATOR ASSEMBLY - BAR,COPPER 1/2"X2"X10'	In Stock	HIGH	NO	
BDE - STATOR ASSEMBLY - BAR,ROTOR CONNECTION	In Stock	HIGH	NO	
BDE - STATOR ASSEMBLY - BAR,ROTOR CONNECTION	In Stock	HIGH	NO	
BDE - STATOR ASSEMBLY - BAR,STATOR	In Stock	HIGH	TBD	
BDE - STATOR ASSEMBLY - BAR,STATOR	In Stock	HIGH	TBD	
BDE - SPILLWAY #1-SALMON RIVE - Lift gearboxes/nuts	In Stock	HIGH	NO	
BDE - INTAKE GATE - BACKPLANE,6 SLOT MODICON	In Stock	MEDIUM	NO	
BDE - DISCONNECT SWITCH 29-1 - Complete Unit	In Stock	HIGH	YES	
BDE - Generator SLIPRING/BRUSH RIGGING - Carbon Brushes	In Stock	MEDIUM	NO	
BDE - Generator SLIPRING/BRUSH RIGGING - Brush Holders	In Stock	MEDIUM	NO	
BDE - Generator SLIPRING/BRUSH RIGGING - Slip Ring	In Stock	HIGH	YES	
BDE - TURBINE GUIDE BEARING - Bearing	In Stock	HIGH	YES	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE200130R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE205011R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE205012R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE205014R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300661R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300686R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300690R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300698R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300766R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE305043R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE305069R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE30598R1	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE401481RD001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - COIL,ABB HIER464920P1	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - MAINBOARD,ABB HIER465176R22	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - POWER SUPPLY,TRACO HIER46651-	In Stock	HIGH	NO	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - EXCITATION CONTROLS - POWER SUPPLY,TRACO HIER46651-	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - RESISTOR,FIELD DISCHARGE	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - SHUNT,ABB UXAB269330R909	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - VARISTOR,ABB 3ACD5245A003	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - BREAKER,ABB HIER466757P2331 (entire unit)	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - SHUNT,ABB UXAB269350R909	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - CONTACT,ABB UXAB239Z60R002	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - CONTACT,ABB UXAB239299R0003	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - CONTACT,ABB UXAB269399R032	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - ARC-CHUTE,ABB UXAB269399R012	In Stock	HIGH	NO	
BDE - GENERATOR - CREEP DETECTOR ASSY,129 VCD	In Stock	HIGH	NO	
BDE - GENERATOR - PLATES,BRAKE (24 PER SET)	In Stock	HIGH	NO	
BDE - GENERATOR - SWITCH,WOODWARD 8935-139	In Stock	HIGH	NO	
BDE - Exciter POWER ELECTRONICS - Pulse Transformers	In Stock	MEDIUM	NO	
BDE - Exciter POWER ELECTRONICS - BRIDGE,ABB S00772	In Stock	HIGH	NO	
BDE - Exciter POWER ELECTRONICS - FUSE,ABB 6,6URD32TTF0800	In Stock	MEDIUM	NO	
BDE - Exciter POWER ELECTRONICS - FAN ASSY,ABB 500773	In Stock	HIGH	NO	
BDE - Exciter POWER ELECTRONICS - THYRISTOR,ABB 5STP27F1200	In Stock	HIGH	NO	
BDE - RECTIFYING TRANSFORMER - Full Unit	In Stock	HIGH	YES	
BDE - SURFACE AIR COOLERS - SAC Unit	In Stock	MEDIUM	TBD	
BDE - SURFACE AIR COOLERS - Tubes	In Stock	MEDIUM	NO	
BDE - THRUST/GUIDE BEARING COOLERS - Cooler	In Stock	HIGH	YES	
BDE - ROTOR POLES - Pole	In Stock	HIGH	TBD	
BDE - STATOR WINDINGS - UNIT 1 - CONNECTOR,STATOR CU	In Stock	HIGH	NO	
BDE - STATOR WINDINGS - UNIT 1 to 4 - Coils	In Stock	HIGH	TBD	
BDE - THRUST/GUIDE BEARING ASSEMBLY - Springs	In Stock	HIGH	NO	
BDE - THRUST/GUIDE BEARING ASSEMBLY - Oil	In Stock	MEDIUM	NO	
BDE - THRUST/GUIDE BEARING ASSEMBLY - TRANSMITTER,DIFF	In Stock	MEDIUM	NO	
BDE - GOVERNOR - BEARING,DASHPOT LINK	In Stock	HIGH	NO	
BDE - GOVERNOR - BRACKET,WOODWARD 11002-57	In Stock	HIGH	NO	
BDE - GOVERNOR - BRACKET,WOODWARD 91588	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING,PILOT VALVE	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING,SNAP ACTION	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING,WW 11002-65	In Stock	HIGH	NO	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - GOVERNOR - BUSHING, DASHPOT - SMALL	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING, DASHPOT - LARGE	In Stock	HIGH	NO	
BDE - GOVERNOR - CABLE,AIRCRAFT 1/4 187083	In Stock	HIGH	NO	
BDE - GOVERNOR - CLIP,WW 11002-16	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,DASHPOT	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,PARTIAL SHUTDOWN RESET	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,SHUTDOWN SOLENOID	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,SHUTDOWN SOLENOID 65SD	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,WW 202132	In Stock	HIGH	NO	
BDE - GOVERNOR - CONTACT,CONTACTOR-TYPE DG-	In Stock	HIGH	NO	
BDE - GOVERNOR - DASHPOT,WW 161314	In Stock	HIGH	NO	
BDE - GOVERNOR - DIODE,WW 202891	In Stock	HIGH	NO	
BDE - GOVERNOR - DISC,RELIEF VALVE	In Stock	HIGH	NO	
BDE - GOVERNOR - DISC,UNLOADER	In Stock	HIGH	NO	
BDE - GOVERNOR - GASKET KIT,WOODWARD 8926-137	In Stock	HIGH	NO	
BDE - GOVERNOR - GASKET,WOODWARD 1327-816	In Stock	HIGH	NO	
BDE - GOVERNOR - GASKET,WOODWARD 206317	In Stock	HIGH	NO	
BDE - GOVERNOR - LEVER,CONNECTING LOWER	In Stock	HIGH	NO	
BDE - GOVERNOR - LEVER,LOWER FLOATING	In Stock	HIGH	NO	
BDE - GOVERNOR - LEVER,UPPER FLOATING	In Stock	HIGH	NO	
BDE - GOVERNOR - LINK,WOODWARD 070346	In Stock	HIGH	NO	
BDE - GOVERNOR - LOCKWASHER,BEARING	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR ASSY,C/W SHAFT & GEAR	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR ASSY,GATE LIMIT	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR,GOVERNOR SPEED 28 VOLT	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR,SYNCHRONIZING	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR, VIBRATING OIL	In Stock	HIGH	NO	
BDE - GOVERNOR - FILTER,HYD 932633Q	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,BALLARM	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,DASHPOT	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,LOWER DRIVE	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,PIVOT	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,WOODWARD 11002-71	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,WOODWARD 11002-75	In Stock	HIGH	NO	
BDE - GOVERNOR - PLUNGER,SNAP ACTION	In Stock	HIGH	NO	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - GOVERNOR - POTENTIOMETER,1250OH 0.24A	In Stock	HIGH	NO	
BDE - GOVERNOR - PUMP,OIL IMO A3DB-275	In Stock	HIGH	NO	
BDE - GOVERNOR - RETAINER,SWITCH	In Stock	HIGH	NO	
BDE - GOVERNOR - RING,SNAP (PILOT SERVO PLUG)	In Stock	HIGH	NO	
BDE - GOVERNOR - ROTOR,BALL HEAD MOTOR	In Stock	HIGH	NO	
BDE - GOVERNOR - SOLENOID,125 V DC	In Stock	HIGH	NO	
BDE - GOVERNOR - SOLENOID,125VDC 211E	In Stock	HIGH	NO	
BDE - GOVERNOR - SPRING,PILOT VALVE LINK	In Stock	HIGH	NO	
BDE - GOVERNOR - SPRING,RELIEF	In Stock	HIGH	NO	
BDE - GOVERNOR - SPRING,UNLOADER	In Stock	HIGH	NO	
BDE - GOVERNOR - STATOR,BALL HEAD MOTOR	In Stock	HIGH	NO	
BDE - GOVERNOR - SWITCH,PRESS OIL ALARM	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING,SPEED SIGNAL	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN,DOWEL - SPEED SWITCH	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - PLATE,MOUNTING - MERCURY	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - RING,ROTOR	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN,ROCKER ARM	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING,WW 1800125	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING,WW 111006	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING,PMG P/N Z995205	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN,BALLARM	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - BUSHING,URETHANE UPPER D	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BUSHING,URETHANE LOWER D	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BALLARM,SPEED SWITCH	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN,TAPERED	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - SPRING,SPEED SWITCH	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - STATOR,P.M.G.	In Stock	HIGH	NO	
BDE - GUIDE BEARING SEGMENTS - bearing segments,	In Stock	HIGH	YES	
BDE - THRUST BEARING SEGMENTS - bearing segments,	In Stock	HIGH	YES	
BDE - UNIT 7 GOVERNOR - FILTER,HYD 932633Q	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,BALLARM	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,DASHPOT	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,LOWER DRIVE	In Stock	HIGH	N/A	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - UNIT 7 GOVERNOR - PIN,PIVOT	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,ROCKER ARM	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,WOODWARD 11002-71	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,WOODWARD 11002-75	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PLUNGER,SNAP ACTION	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - POTENTIOMETER,1250OH 0.24A	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PUMP,OIL IMO A3DB-275	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - RETAINER,SWITCH	In Stock	MEDIUM	N/A	
BDE - UNIT 7 GOVERNOR - RING,SNAP (PILOT SERVO PLUG)	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - ROTOR,BALL HEAD MOTOR	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SENSOR,LOAD GOVERNOR	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SOLENOID,125 V DC	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SOLENOID,125VDC 211E	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SPRING,PILOT VALVE LINK	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - STATOR,BALL HEAD MOTOR	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SWITCH,PRESS OIL ALARM	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - STATOR,PERMANENT MAGNET	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SPRING,SPEED SWITCH	In Stock	HIGH	N/A	
BDE - UNIT 7 TURBINE - Carbon Seal	In Stock	HIGH	N/A	
BDE - UNIT 7 TURBINE - wicket gate	In Stock	HIGH	N/A	
BDE - UNIT 7 TURBINE - turbine bearing	In Stock	HIGH	N/A	
BDE - Unit 7 DRAFT TUBE-TURBINE - Water Level Probe	In Stock	MEDIUM	N/A	
BDE - Unit 7 HEADCOVER ASSEMBLY - BOTTOM RING P001 bushing	In Stock	HIGH	N/A	
BDE - Unit 7 HEADCOVER ASSEMBLY - BUSHING,LOWER HEAD COVER P001	In Stock	HIGH	N/A	
BDE - Unit 7 HEADCOVER ASSEMBLY - PACKING,V-TYPE 3/8 EASY	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - Linkage	In Stock	HIGH	N/A	
BDE - Unit 7 OPERATING RING - BUSHING,LINK PIN	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - CAP,SHEARPIN	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,ECCENTRIC P005	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,LINK P006	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,ROD SHEARPIN	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,UPPER DRIVE	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - LEVER,WICKET GATE	In Stock	HIGH	N/A	
BDE - Unit 7 ROTOR ASSEMBLY - POLE	In Stock	HIGH	N/A	
BDE - Unit 7 RUNNER - TURBINE - CARBON SEAL	In Stock	HIGH	N/A	



## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - Unit 7 SERVOMOTOR # 1 - Piston Ring	In Stock	HIGH	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - PACKING,SERVOMOTOR	In Stock	MEDIUM	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - PACKING,V TYPE 2-EASY	In Stock	MEDIUM	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - PACKING,V-TYPE 9"X8"ID	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,DIGITAL I/O	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,I/O ANALOG	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,MEASURING ABB	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,POWER SYSTEM STABI	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - CAPACITOR,20 MF +-10% 150 V	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - COMPONENT, INTEG CCT	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - INTEG CCT	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - CONTACT,ISOLATING	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - MODULE,ABB DCS500B200361	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - PANEL,CONTROL	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - POWER SUPPLY,ABB 3BHE013940R00	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - RELAY,GROUND VOLTAGE	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - Main Moving Contacts	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - Main Fixed Contacts	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - COIL,SHUNT CLOSING	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - COIL,SHUNT OPENING	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - Charging Motor	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1	In Stock	HIGH	N/A	
BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING	In Stock	MEDIUM	N/A	
BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0	In Stock	MEDIUM	N/A	
BDE - Unit 7 Control Board - BOARD,CONTROL	In Stock	MEDIUM	N/A	
BDE - UNIT 7 HYDRAULIC GENERATOR - coolers	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - BEARING,SPEED SIGNAL	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - RING,ROTOR	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - PIN,ROCKER ARM	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - BEARING,WW 1800125	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - BEARING,WW 111006	In Stock	MEDIUM	N/A	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - Unit 7 PMG - BEARING,PMG P/N Z995205	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - PIN,BALLARM	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - BUSHING,URETHANE UPPER D	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - BUSHING,URETHANE LOWER D	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - BALLARM,SPEED SWITCH	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - PIN,TAPERED	In Stock	MEDIUM	N/A	
BDE - Unit 7 PMG - SPRING,SPEED SWITCH	In Stock	HIGH	N/A	
BDE - Unit 7 PMG - STATOR,P.M.G.	In Stock	HIGH	N/A	
BDE - Unit 7 VIBRATION MONITORING - PICK-UP,NON-CONTACT	In Stock	MEDIUM	N/A	
BDE - Unit 7 VIBRATION MONITORING - PICK-UP,SPEED SENSING	In Stock	MEDIUM	N/A	
BDE - Unit 7 VIBRATION MONITORING - POWER SUPPLY,IRD PCB 29128	In Stock	HIGH	N/A	
BDE - Unit 7 GENERATOR COOLING WATER SYSTEM - TRANSMITTER,DIFF	In Stock	MEDIUM	N/A	
BDE - Unit 7 WICKET GATES - GATE, WICKET	In Stock	HIGH	N/A	
BDE - Unit 7 SLIPRING/BRUSH RIGGING - Collector rings	In Stock	HIGH	N/A	
BDE - Unit 7 SLIPRING/BRUSH RIGGING - Brushes	In Stock	MEDIUM	N/A	
BDE - Unit 7 SURFACE AIR COOLERS - Tubes	In Stock	MEDIUM	N/A	
BDE - Unit 7 THRUST/GUIDE BEARING COOLERS - Coolers	In Stock	HIGH	YES	New Ordered
BDE - Unit 7 NEUTRAL GROUND TRANSFORMER - transformer	In Stock	MEDIUM	N/A	
BDE - Unit 7 ROTOR - Pole	In Stock	HIGH	N/A	
BDE - Unit 7 STATOR WINDINGS - Stator Bars	In Stock	HIGH	N/A	
BDE - Unit 7 STATOR WINDINGS - Wedges	In Stock	HIGH	N/A	
BDE - Unit 7 TURBINE GUIDE BEARING - bearing	In Stock	HIGH	YES	New Ordered
BDE - Unit 7 GENERATOR GUIDE BEARING - segments	In Stock	HIGH	N/A	
BDE - Unit 7 THRUST BEARING - Thrust Pads	In Stock	HIGH	N/A	
BDE - Unit 7 THRUST BEARING - Rotating Ring	In Stock	HIGH	N/A	
BDE - PANEL STATION SERVICE - PH #2 - ACB	In Stock	HIGH	YES	
CAT - ACCUMULATOR TANK - COIL AUTO AIR CHARGING SOLND	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE DEFLECTOR FDBK AMP	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE FEEDBACK 20'	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE FEEDBACK 200'	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE FEEDBACK 50'	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE,NEEDLE FDBK AMP,	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE PROPORTIONAL VLV	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE90 DEG.5' ZVPU,	In Stock	HIGH	N/A	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
CAT - Governor Control System - Power Supply	In Stock	MEDIUM	N/A	
CAT - Governor Control System - Power Supply 24V	In Stock	MEDIUM	N/A	
CAT - Governor - JOINT,UNIVERSAL SSG #1787058	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Tip	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Shuttle Valve	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CONNECTOR, MINIATURE CHAIN	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Casing guide U/S	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Casing guide D/S	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Needle seat	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - BUSHING NOZZLE 374527007/P001	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CABLE AIRCRAFT,	In Stock	MEDIUM	N/A	
CAT - NEEDLE VALVE ASS (6) - CABLE AIRCRAFT 20,	In Stock	MEDIUM	N/A	
CAT - NEEDLE VALVE ASS (6) - CHAIN,DBS FCS-A1-15	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CONTROL DEVICE,NEEDLE	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CONNECTOR, MINIATURE CHAIN	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Amplifer/proportional	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - seal piston ring	In Stock	MEDIUM	N/A	
CAT - NEEDLE VALVE ASS (6) - Seal	In Stock	MEDIUM	N/A	
CAT - Electronic Governor - BUSHING CABLE PROP VLV,	In Stock	HIGH	N/A	
CAT - Electronic Governor - CONNECTOR,MLDT ROD BALL	In Stock	HIGH	N/A	
CAT - Electronic Governor - CONVERTER,SERIAL/ETHERNET	In Stock	HIGH	N/A	
CAT - Electronic Governor - HOLDER,CIRCUIT BREAKER	In Stock	HIGH	N/A	
CAT - Electronic Governor - INTERFACE,ETHERNET VERSA	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,GE AMPLIFIER	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,GE PT INTERFACE	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,PLUG-IN DIODE	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,VERSAMAX 16 PT	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,VERSAMAX 32 PT	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,VERSAMAX 4 AO	In Stock	HIGH	N/A	
CAT - Electronic Governor - PC,ATLAS VX WORKS	In Stock	HIGH	N/A	
CAT - Electronic Governor - VERSAMAX powersupply	In Stock	HIGH	N/A	
CAT - Electronic Governor - PROBE,SPEED ZVPU	In Stock	HIGH	N/A	
CAT - Electronic Governor - RELAY,14 PIN PLUG 24VDC	In Stock	HIGH	N/A	
CAT - Electronic Governor - LVDT deflector	In Stock	HIGH	N/A	
CAT - Electronic Governor - Pos.Xducer	In Stock	HIGH	N/A	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
CAT - Electronic Governor - POs.Xducer	In Stock	HIGH	N/A	
CAT - Electronic Governor - Deflector proportional	In Stock	HIGH	N/A	
CAT - Electronic Governor - Rod vdeflector	In Stock	HIGH	N/A	
CAT - Electronic Governor - PC, Atlas 2	In Stock	HIGH	N/A	
CAT - Electronic Governor - Guide Ball Slide	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - ELEMENT,FILTER SM 10	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - ELEMENT,FILTER SM 25	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - DEFLECTOR,SERVOMOTOR	In Stock	HIGH	YES	New Ordered
CAT - Governor Hydraulics - PLUG,C/V 010168-390-163	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - PLUG,C/V 021002-281-208	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - PLUG,ESCHER WYSS	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - Deflector valve	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - Piston seal 725X8 X3/8	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - Piston seal 9X8X1/2	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - Seal	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - Pressure Switch	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - OIL,TURBINE 46 (205L)	In Stock	MEDIUM	N/A	
CAT - POWER TUNNEL (ROCKCUT) - Seal, Adit Door	In Stock	HIGH	N/A	
CAT - ROTOR - GENERATOR - Pole	In Stock	HIGH	N/A	
CAT - Turbine - Runner	In Stock	HIGH	N/A	
CAT - GENERATOR - MODULE,TYP 1CD 108 M 2-02 vibro-meter	In Stock	MEDIUM	N/A	
CAT - GENERATOR - OVERCURRENT relay	In Stock	MEDIUM	N/A	
CAT - GENERATOR - RELAY,TIME DELAY .6 - 1.0	In Stock	MEDIUM	N/A	
CAT - GENERATOR - rotating ring	In Stock	HIGH	N/A	
CAT - GENERATOR - INSLTR,SLIP RING	In Stock	MEDIUM	N/A	
CAT - GENERATOR - Brake ring	In Stock	HIGH	N/A	
CAT - GENERATOR - Brake valve	In Stock	HIGH	N/A	
CAT - GENERATOR - Brake Solenoid	In Stock	HIGH	N/A	
CAT - Isolated Phase Bus - PT fuse	In Stock	MEDIUM	N/A	
CAT - STATION SERVICE SYSTEM - COIL,CLOSING 129 V DC	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Arc Chute	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Trip Coil	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Main Drawout Contact	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Contact Moving Arc	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Contat Stationary Arc	In Stock	HIGH	N/A	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
CAT - STATION SERVICE SYSTEM - Undervoltage Coil	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Contact 1600Amp	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - CT 400-800	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - CT 800-1600	In Stock	HIGH	N/A	
CAT - SURFACE AIR COOLERS - Surface Air Cooler	In Stock	HIGH	N/A	
CAT - Generator Bearing - Cooler	In Stock	HIGH	YES	New Ordered
CAT - Stator Assembly - BAR STATOR BOTTOM,	In Stock	HIGH	N/A	
CAT - Stator Assembly - BAR STATOR TOP,	In Stock	HIGH	N/A	
CAT - Stator Assembly - CAP STATOR WINDING END,	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 105	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 107	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 108	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 109	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Assembly - Wedge	In Stock	HIGH	N/A	
CAT - Stator Assembly - Wedge	In Stock	HIGH	N/A	
CAT - Stator Assembly - Connector	In Stock	HIGH	N/A	
CAT - Stator Assembly - Slider	In Stock	HIGH	N/A	
CAT - Stator Assembly - Slider	In Stock	HIGH	N/A	
CAT - Stator Assembly - Slider	In Stock	HIGH	N/A	
CAT - Exciter # 1 - COIL,SHUNT CLOSING	In Stock	HIGH	N/A	
CAT - Exciter # 1 - COIL,SHUNT OPENING	In Stock	HIGH	N/A	
CAT - Exciter # 1 - CONTACT,ISOLATING	In Stock	HIGH	N/A	
CAT - Exciter # 1 - MODULE,THYRISTOR BRIDGE	In Stock	HIGH	N/A	
CAT - Exciter # 1 - SUPPLY,110-220 VOLT	In Stock	HIGH	N/A	
CAT - Exciter # 1 - Breaker	In Stock	HIGH	N/A	
CAT - Exciter # 1 - Arc Chute	In Stock	HIGH	N/A	
CAT - Exciter # 1 - Control Board	In Stock	HIGH	N/A	
CAT - Exciter # 1 - I/O ANALOG BOARD CONTROL,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - DIGITAL I/O BOARD,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - PANEL,CONTROL	In Stock	HIGH	N/A	
CAT - Exciter # 1 - BOARD POWER SYSTEM STABI,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - BOARD MEASURING,	In Stock	HIGH	N/A	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
CAT - Exciter # 1 - MOTOR,CHARGING	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CONTROL BOARD,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB HIER319619R2,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB KX9170A V1,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN 2010B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UNC001D-E,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UNS0026A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD\ ABB UN0014B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0016A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0025A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0026A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0027A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0031A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN004A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0079A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0083A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0089A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0091A-P,CARD ABB UN0093A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0503A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Unitrol Card	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Thyristor	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Transformer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Field Voltage Transducer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Shunt Voltage Transducer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Analog Input Transducer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Fuse 600Amp	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0510C-9,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0516A,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0900B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0901B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN1001C-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN1004A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - COIL,SHUNT CLOSING	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - COIL,125 VOLT 60HZ	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD\ ABB UN1004A-P,	In Stock	HIGH	N/A	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
CAT - EXCITER NO. 2 - CARD ABB UN1024C-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB 1WX 174-2,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD BBC UN0077AP,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD,BBC UN2001F-P	In Stock	HIGH	N/A	
CAT - BREAKERS BY BROWN BOVERI, 600V - spare field breaker in used spare exciter	In Stock	HIGH	N/A	
CAT - Slipring/brush Rigging Assembly - Ring, Collector Assembly	In Stock	HIGH	N/A	
CAT - Slipring/brush Rigging Assembly - Brushes	In Stock	MEDIUM	N/A	
CAT - Slipring/brush Rigging Assembly - Brush Holder	In Stock	HIGH	N/A	
CAT - Slipring/brush Rigging Assembly - Insulator	In Stock	HIGH	N/A	
CAT - Governor Pumps - Pump	In Stock	HIGH	N/A	
CAT - Governor Pumps - INSERT,CURVED JAW SPIDER	In Stock	HIGH	N/A	
CAT - Rotor Poles - Entire Pole	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 105	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 107	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 108	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 109	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - THRUST BEARING - thrust pads	In Stock	HIGH	N/A	
CAT - Turbine Guide Bearing - Bearing	In Stock	HIGH	N/A	
CAT - Guide Bearing Segments - Bearing	In Stock	HIGH	N/A	
CAT - Thrust Bearing Segements - Segments	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - PUMP UNLOADER,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COILDASHPOT,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL OIL PUMP UNLOADER SOLND. ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL PARTIAL SHUTDOWN RESET ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL SHUTDOWN SOLENOID 65SD ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL RESET SOLENOID ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - WOODWARD 1447- 634,motor	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - WOODWARD 1447-640,MOTOR	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - GATE LIMIT,ROD,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - UNLOADER PISTON,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - filter	In Stock	HIGH	N/A	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
HLK - GOVERNOR ACCUMULATOR TANK - SWITCH PRESS OIL ALARM,	In Stock	HIGH	N/A	
HLK - GOVERNOR ACCUMULATOR TANK - Air admission solenoid	In Stock	HIGH	N/A	
HLK - GOVERNOR SPEED GENERATOR - GEAR,WOODWARD 1447-640	In Stock	HIGH	N/A	
HLK - GOVERNOR SPEED GENERATOR - gear drive	In Stock	HIGH	N/A	
HLK - MECHANICAL GOVERNOR CONTROLS - Motor limit	In Stock	HIGH	N/A	
HLK - MECHANICAL GOVERNOR CONTROLS - Motor speeder	In Stock	HIGH	N/A	
HLK - MECHANICAL GOVERNOR CONTROLS - Unloader timing valve	In Stock	HIGH	N/A	
HLK - OPERATING RING - Bearing pads	In Stock	HIGH	N/A	
HLK - SERVOMOTOR #1 - servomotor repair kit	In Stock	HIGH	N/A	
HLK - SERVOMOTOR ASSEMBLY - shear pins	In Stock	HIGH	N/A	
HLK - Rotor Assembly - HLK Generator - Rotor pole	In Stock	HIGH	N/A	
HLK - TURBINE - Carbon seal,	In Stock	HIGH	N/A	
HLK - TURBINE - BEARING SEGMENT TURBINE,	In Stock	HIGH	N/A	
HLK - TURBINE - PLATE BEARING,	In Stock	HIGH	N/A	
HLK - TURBINE - SEAL TURBINE,	In Stock	HIGH	N/A	
HLK - TURBINE - Wicket gate lever	In Stock	HIGH	N/A	
HLK - TURBINE - Friction hub	In Stock	HIGH	N/A	
HLK - TURBINE - Friction hub	In Stock	HIGH	N/A	
HLK - TURBINE - Packing box	In Stock	HIGH	N/A	
HLK - TURBINE - link thin	In Stock	HIGH	N/A	
HLK - TURBINE - link thick	In Stock	HIGH	N/A	
HLK - TURBINE - wicket gate seal	In Stock	HIGH	N/A	
HLK - TURBINE - Dowel	In Stock	HIGH	N/A	
HLK - TURBINE - Link pin	In Stock	HIGH	N/A	
HLK - TURBINE - Eccentric pin	In Stock	HIGH	N/A	
HLK - WICKET GATES - wicket gate	In Stock	HIGH	N/A	
HLK - GENERATOR - brake shoes	In Stock	HIGH	N/A	
HLK - GENERATOR - SOLENOID,GENERATOR AIR VALVE,	In Stock	HIGH	N/A	
HLK - GENERATOR - Generator air valve	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - SEAL TURBINE,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - SEALWICKET GATE,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - BUSHING 60X75 MM,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - BUSHING GATE STEM - LOWER,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - BUSHING GATE STEM - UPPER,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - Bushing upper	In Stock	HIGH	N/A	



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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
HLK - INTAKE HEADGATE AND HOIST EQUIP - Pressure druk	In Stock	MEDIUM	N/A	
HLK - STATION SERVICE SWITCHGEAR - Breaker (EATON)	In Stock	HIGH	N/A	
HLK - Thrust/Guide Bearing Coolers - Hi pressure lift pump	In Stock	HIGH	N/A	
HLK - ISOLATED PHASE BUS - PT fuse	In Stock	HIGH	N/A	
HLK - STATOR ASSEMBLY - Stator connection caps	In Stock	HIGH	N/A	
HLK - STATOR ASSEMBLY - Stator bars	In Stock	HIGH	N/A	
HLK - EXCITATION - Bridge (entire module)	In Stock	HIGH	N/A	
HLK - Slipring /Brush Rigging - Carbon brush	In Stock	MEDIUM	N/A	
HLK - Slipring /Brush Rigging - Brush holder	In Stock	HIGH	N/A	
HLK - Rotor - Pole	In Stock	HIGH	N/A	
HLK - STATOR WINDINGS - UNIT 1 - robel bars	In Stock	HIGH	N/A	
HLK - TURBINE GUIDE BEARING - BEARING, Segment TURBINE	In Stock	HIGH	N/A	
HLK - GUIDE BEARING SEGMENTS (SET) - BEARING,SEGMENT	In Stock	HIGH	N/A	
HLK - HD-1N - HINDS LAKE INTAKE - TRANSMITTER,PRESS 0-375	In Stock	MEDIUM	N/A	
HLK - THRUST BEARING SEGMENTS (SET) - Thrust Bearing Segments	In Stock	HIGH	N/A	
HLK - UPPER GUIDE BEARING SEGMENTS - Upper Guide Bearing Segments	In Stock	HIGH	N/A	
HLK - IN FRAZIL ICE SYS - INTAKE - TRANSMITTER,TEMPERATURE	In Stock	MEDIUM	N/A	
HLK - GOVERNOR SPEED GENERATOR - Speed switch bracket	In Stock	HIGH	NO	
GCL - Governor Control System - Pressure Switch	In Stock	MEDIUM	N/A	
GCL - Governor Control System - POWER SUPPLY,18-32VDC	In Stock	MEDIUM	N/A	
GCL - Governor Control System - TRANSMITTER,PRESS 0-2000	In Stock	MEDIUM	N/A	
GCL - Governor Control System - TRANSMITTER,TEMP 4-20 MA	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Filter, Element NS-7	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Joint, Shaft Parker	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Pump, Vane Vick	In Stock	HIGH	N/A	
GCL - Governor Hydraulic System - Seal, Polypak "U" Cup	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Valve, Relief	In Stock	HIGH	N/A	
GCL - Governor Hydraulic System - Valve, Check 1 6000 psi	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Valve, Proportional	In Stock	HIGH	N/A	
GCL - Operating Ring - Washer, Ring Seal	In Stock	MEDIUM	N/A	
GCL - Operating Ring - BUSHING,GE 226043126X015	In Stock	MEDIUM	N/A	
GCL - Servomotor - Rod, Seal H254-918	In Stock	MEDIUM	N/A	
GCL - Servomotor - Rod, Seal H092-730	In Stock	MEDIUM	N/A	
GCL - Servomotor Assembly - Ring, Piston GE	In Stock	HIGH	N/A	
GCL - Speed Signal Generator - Pickup, Zero Velocity	In Stock	HIGH	N/A	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
GCL - Turbine Assembly - Packing Ring, Segment	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Pad, Stop GE	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Seal, Inflatable	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Transmitter, Pressure GE	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Transmitter, Pressure -5TO55	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Transmitter, Pressure 0-90 PSIG	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Transmitter, Diff Pressure	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Ring, Rotating GE	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Ring, Sealing C/W Spring	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Ring, Wear	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Valve, Check Wafer 12"D	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Bushing, GE 226043126X015	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Gate, Wicket GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Level, Gate GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Lever, Shear GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Liner, Gate Operating	In Stock	HIGH	N/A	
GCL - Wicket Gates - Link, GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Pin, Eccentric	In Stock	HIGH	N/A	
GCL - Wicket Gates - Pin, Shear GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Pin, Taper GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Plate, Retaining GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Plate, Top GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Shim, Laminum	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Sleeve, BRS 210mm	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Spacer	In Stock	MEDIUM	N/A	
GCL - Generator - Top Stator Bars (36)	In Stock	HIGH	N/A	
GCL - Generator - Bottom Stator Bars (18)	In Stock	HIGH	N/A	
GCL - Generator - Guide Bearing, GE	In Stock	HIGH	N/A	
GCL - Generator - Converter, RTD Temperature	In Stock	HIGH	N/A	
GCL - Generator - Converter, RTD Universal	In Stock	HIGH	N/A	
GCL - Generator - Creep Detector ASSY, 129 V	In Stock	HIGH	N/A	
GCL - Generator - Device, Surge Suppresion	In Stock	MEDIUM	N/A	
GCL - Generator - Fuse, TEMP Limiter	In Stock	MEDIUM	N/A	
GCL - Generator - Fuse, Voltage XFMR	In Stock	MEDIUM	N/A	
GCL - Generator - Jumper, Pole ASM #1	In Stock	HIGH	N/A	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
GCL - Generator - Jumper Pole ASM #2	In Stock	HIGH	N/A	
GCL - Generator - Jumper Pole ASM #3	In Stock	HIGH	N/A	
GCL - Generator - Jumper Pole ASM #4	In Stock	HIGH	N/A	
GCL - Generator - Level, Indicator Magnetic	In Stock	HIGH	N/A	
GCL - Generator - Oil, Turbine 46 (205L)	In Stock	MEDIUM	N/A	
GCL - Generator - Packing, V-Type GE	In Stock	MEDIUM	N/A	
GCL - Generator - Pin, Taper 25MM x 90MM	In Stock	MEDIUM	N/A	
GCL - Generator - Plate, Brake GE	In Stock	HIGH	N/A	
GCL - Generator - Plate, Locating Pivoted	In Stock	HIGH	N/A	
GCL - Generator - Pole, Wound GE	In Stock	HIGH	N/A	
GCL - Generator - Probe, 741 GE	In Stock	HIGH	N/A	
GCL - Generator - RTD, 12.5" -50-550 DEG	In Stock	HIGH	N/A	
GCL - Generator - RTD, 17" -50-550 DEG C	In Stock	HIGH	N/A	
GCL - Transmitter, PFM	In Stock	MEDIUM	N/A	
GCL - Transmitter, Temp 4-20 MA	In Stock	MEDIUM	N/A	
GCL - Switch, Press 200 PSI 15A	In Stock	MEDIUM	N/A	
GCL - Switch, 20-160 ABB 104-324-46	In Stock	MEDIUM	N/A	
GCL - Thermometer, ADJ 0-55	In Stock	MEDIUM	N/A	
GCL - Transducer, Balluff Track	In Stock	HIGH	N/A	
GCL - Shim, GE 007	In Stock	MEDIUM	N/A	
GCL - Shim, GE 008	In Stock	MEDIUM	N/A	
GCL - Shoe, brake GE 6201B6815L005	In Stock	HIGH	N/A	
GCL - Spring, GE	In Stock	MEDIUM	N/A	
GCL - Valve, Purge GE	In Stock	HIGH	N/A	
GCL - Washer, Brake Plate	In Stock	MEDIUM	N/A	
GCL - Washer, GE 105000100	In Stock	MEDIUM	N/A	
GCL - Ring Assy, Collector	In Stock	HIGH	N/A	
GCL - Stick, Joint Horz	In Stock	MEDIUM	N/A	
GCL - Stick, Joint Vert	In Stock	MEDIUM	N/A	
GCL - Switch, Press Actuated	In Stock	MEDIUM	N/A	
GCL - Switch, Press Gran 20W	In Stock	MEDIUM	N/A	
GCL - Seal, Top Guide Bearing	In Stock	MEDIUM	N/A	
GCL - Runner - Seal, 770mm x 730mm x 25mm	In Stock	MEDIUM	N/A	
GCL - Surface Air Coolers - Cooler, Surface Air	In Stock	HIGH	N/A	
GCL - Thrust/Guide Bearing Coolers - Coil, Cooling GE	In Stock	HIGH	YES	

## 2015-16 Winter Readiness Planning Report

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - RECTIFYING TRANSFORMER - Insulating Fluid	In Stock	MEDIUM	NO	
BDE - ISOLATED PHASE BUS - Surge Capacitor	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - Field Flashing Resistor	In Stock	HIGH	NO	
BDE - UNIT 7 GOVERNOR - Unloader/Relief Valve	In Stock	HIGH	NO	

<b>Critical Spare Component</b>	<b>Stock Status</b>	<b>Risk Score</b>	<b>Lead Time</b>	<b>Spare Cost &gt;\$50,000</b>	<b>Status Update September 2015</b>	<b>Expected Delivery Date</b>
CAT - ACCUMULATOR TANK - Air Admission Valve	In Stock	HIGH	TBD	NO	on order	30-Nov-15
HLK - CIRCUIT BREAKER - Primary disconnect	Not in Stock	HIGH	TBD	NO	Set-up in Inventory . 0 quantity	30-Nov-15
HLK - CIRCUIT BREAKER - Charging motor	Not in Stock	HIGH	TBD	NO	Set-up in Inventory . 0 quantity	30-Nov-15
HLK - CIRCUIT BREAKER - Motor brush kit	Not in Stock	HIGH	TBD	NO	Set-up in Inventory . 0 quantity	30-Nov-15
HLK - CIRCUIT BREAKER - Spring release coil	Not in Stock	HIGH	TBD	NO	Set-up in Inventory . 0 quantity	30-Nov-15
HLK - CIRCUIT BREAKER - Shunt trip coil	Not in Stock	HIGH	TBD	NO	Set-up in Inventory . 0 quantity	30-Nov-15
HLK - CIRCUIT BREAKER - Anti-pump relay	Not in Stock	HIGH	TBD	NO	Set-up in Inventory . 0 quantity	30-Nov-15

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Critical Spare Component	Stock Status	Risk Score	Lead Time	Spare Cost >\$50,000	Comments	Status Update September 2015	Expected Delivery Date
HLK - GOVERNOR HYDRAULIC SYSTEM - Main valve	Not in Stock	HIGH	6 weeks	NO		Consulted with supplier, likelihood of failure is very low.	29-Feb-16
HLK - STATION SERVICE SWITCHGEAR - Breaker (Federal Pioneer)	Not in Stock	HIGH	TBD	TBD	Discontinued breaker model.	Consulting with supplier. Engineering required	late 2016.
HLK - EXCITER FIELD BREAKER - Entire unit	Not in Stock	HIGH	TBD	TBD		Consulting with supplier	31-Aug-16
GCL - 13.8 kv bus duct - Insulators	Not in Stock	HIGH	TBD	NO		Consulting with supplier. Temporary measures can be taken in the event of a failure to keep the unit online	31-Oct-16
HLK - SURFACE AIR COOLERS - Cooler	Not in Stock	MEDIUM	TBD	TBD		Engineering Required	Q4 2020
BDE - TURBINE GUIDE BEARING - oil cooler	Not in Stock	HIGH	TBD	NO		In Stock	N/A
CAT - Governor Hydraulics - Cooler	Not in Stock	HIGH	TBD	NO		In Stock	N/A
CAT - EXCITATION TRF - Transformer CORE	Not in Stock	HIGH	TBD	TBD		Not available. Consulting with suppliers for a spare transformer. Likely >\$50k. Currently in the capital plan for 2018	30-Nov-18
HLK - RECTIFYING TRANSFORMER - Core	Not in Stock	HIGH	TBD	TBD		Not available. Consulting with suppliers for a spare transformer. Likely >\$50k. Currently in the capital plan for 2018	30-Nov-18
HLK - STN SERVICE TRANSFORMER (SST-1) - Entire unit	Not in Stock	HIGH	TBD	TBD		Not available. Consulting with suppliers for a spare transformer. Likely >\$50k. Currently in the capital plan for 2018	30-Nov-18
BDE - Unit 7 STATOR WINDINGS - Circuit Ring Jumpers	Not in Stock	HIGH	TBD	NO		Removed from critical spares list.	N/A
BDE - Unit 7 13.8 KV DISCONNECTS - contacts	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
BDE - Unit 7 13.8 KV DISCONNECTS - jaws	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
BDE - Unit 7 DISCONNECT SWITCHES - contacts	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
BDE - Unit 7 DISCONNECT SWITCHES - jaws	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
BDE - Unit 7 GATE HOIST - brake shoes	Not in Stock	HIGH	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
BDE - Unit 7 GATE HOIST - Brake Solenoid	Not in Stock	HIGH	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
CAT - Disconnect - contacts	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
CAT - Disconnect - jaws	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
HLK - UNIT DISCONNECTS - Contacts	Not in Stock	MEDIUM	TBD	NO		Removed from critical spares list. Can temporarily bypass.	N/A
CAT - BRAKING JET ASSEMBLY - Control Valve	Not in Stock	HIGH	TBD	TBD		Supplier Rep visited site and is evaluating replacement options and preparing a quote. Current equipment is obsolete.	30-Apr-16

<b>Recommended Component</b>	<b>Stock Status</b>	<b>Risk Score</b>	<b>Lead Time</b>	<b>Spare Cost &gt;\$50,000</b>	<b>Status Update February 2015</b>	<b>Expected Delivery Date</b>
BDE - Unit 7 RECTIFYING TRANSFORMER - Full Unit	Not in Stock	MEDIUM	20 weeks	YES	Added to the capital plan	1-Nov-17
HLK - CIRCUIT BREAKER - VCP-WG, 4000A vacuum breaker	Not in Stock	MEDIUM	18wks	YES	In Capital Plan for 2018 purchase	Early Q4 in 2018
HLK - Thrust/Guide Bearing Coolers - Cooler	Not in Stock	MEDIUM	18wks	YES	In Capital Plan for 2020 purchase	Q4 in 2020
HLK - UPPER GUIDE BEARING COOLERS - Cooler	Not in Stock	MEDIUM	TBD	TBD	In Capital Plan for 2020 purchase	Q4 in 2020
HLK - Slipring /Brush Rigging - Slipring	Not in Stock	MEDIUM	TBD	NO	In Capital Plan for 2017 purchase	Early Q4 in 2017