

1 Q. Please provide a copy of Hydro's most recent work management performance
2 measurements and their values for both hydraulic and thermal production assets for 2016-
3 2018.

4

5

6 A. Work Order Management Reports for Hydraulic Generation were created as a part of
7 Hydro's ongoing effort to increase visibility on reliability drivers. The reports consist of:

8

9 • Work Order by Priority: Provides the total number of work orders not completed by
10 priority ranking. It also shows the aged distribution of the work orders. Please refer
11 to PUB-NLH-014, Attachment 1.

12

13 • Work Order by Backlog Status Code: Provides the total number of work orders,
14 listed by priority, for each Work Order Status code. Please refer to PUB-NLH-014,
15 Attachment 2.

16

17 • Work Order Cancellations: Provides the total number of cancelled work orders for
18 Preventive Maintenance, Corrective Maintenance, and Non-Maintenance activities.
19 Please refer to PUB-NLH-014, Attachment 3.

20

21 Work management performance measures for Holyrood thermal assets are tracked in the
22 Hydro Integrated Annual Work Plan Tracking Reports. This report uses data pulled from
23 regional annual work plans to track all critical tasks required to be completed by year end.
24 These tasks consist of Preventive and Corrective Maintenance tasks, as well as
25 improvement or capital work planned for the year. This report includes tables and graphs
26 that show planned vs actual work completed and highlights any deficiencies.

27

28 Please refer to PUB-NLH-014, Attachment 4, PUB-NLH-014, Attachment 5, and PUB-NLH-
29 014, Attachment 6, for 2016, 2017 and 2018 reports respectively. These attachments are

- 1 excerpts taken from year end Integrated Annual Work Plan Tracking Reports for Holyrood
- 2 thermal assets.



Work Order By Priority Summary Report

Business Unit:

Priority: 1,2,3

WO Sub Code: NULL

Planning Center: BDE,GFL

Section: NULL

Planner: NULL

Priority 1 - (Emergency 24 Hours)		Priority 2 - (Urgent 7 to 14 Days)	
Planned not started	0	Planned not started	0
Open less than 30 days	0	Open less than 30 days	2
Open between 30 and 60 days	1	Open between 30 and 60 days	2
Open greater than 60 days	0	Open greater than 60 days	0
Total count	1	Total count	4
Total number of open days	35	Total number of open days	97

Priority 3 - (Planned 30 to 60 Days)		Priority 4 - (Required)	
Planned not started	107	Planned not started	0
Open less than 60 days	243	Open less than 365 days	0
Open between 60 and 90 days	80	Open between 365 and 730 days	0
Open greater than 90 days	546	Open greater than 730 days	0
Total count	976	Total count	0
Total number of open days	233,913	Total number of open days	0



Work Order By Backlog Code Summary Report

Business Unit:
 Priority: 1,2,3
 Backlog Type: Planned/Unplanned

Planning Center: BDE,GFL
 WO Sub Code: NULL
 Section: NULL
 Planner: NULL

Priority 1 - (Emergency 24 Hours)

01-WR Waiting Review
 02-WR Incomplete Information
 03-WR Approval for Assets
 04-WR Approval for Planning
 05-In 5 Year Plan
 06-WR Placed on Hold
 10-In Planning

Total Unplanned Backlog

0

Priority 2 - (Urgent 7 to 14 Days)

01-WR Waiting Review
 02-WR Incomplete Information
 03-WR Approval for Assets
 04-WR Approval for Planning
 05-In 5 Year Plan
 06-WR Placed on Hold
 10-In Planning

Total Unplanned Backlog

1

Priority 3 - (Planned 30 to 60 Days)

01-WR Waiting Review
 02-WR Incomplete Information
 03-WR Approval for Assets
 04-WR Approval for Planning
 05-In 5 Year Plan
 06-WR Placed on Hold
 10-In Planning

Total Unplanned Backlog

479

Priority 4 - (Required)

01-WR Waiting Review
 02-WR Incomplete Information
 03-WR Approval for Assets
 04-WR Approval for Planning
 05-In 5 Year Plan
 06-WR Placed on Hold
 10-In Planning

Total Unplanned Backlog

0

11-WO Waiting for Approval
 12-WO Waiting for Re-Approval
 13-Waiting CIAC Approval
 14-WO Approved
 15-Outside Serv. Req.,Not ID'd
 20-Eng./Tech. Services Required
 30-Waiting for Materials
 31-Mat'l. Avail. Locally
 32-Mat'l. Shipped To Remote Site
 33-Mat'l. At Remote Site
 34-Contingency Plan
 35-Waiting - Plant Condition
 39-WO for 2 Years Hence
 40-WO for Next Year
 41-Waiting CATV Response
 42-WO on Hold
 43-Waiting External Resources
 44-WO Waiting to be Scheduled
 45-Weekly Schedule
 46-Daily Schedule
 48-WO in Progress

Total Planned Backlog

1

11-WO Waiting for Approval
 12-WO Waiting for Re-Approval
 13-Waiting CIAC Approval
 14-WO Approved
 15-Outside Serv. Req., Not ID'd
 20-Eng./Tech. Services Required
 30-Waiting for Materials
 31-Mat'l. Avail. Locally
 32-Mat'l. Shipped To Remote Site
 33-Mat'l. At Remote Site
 34-Contingency Plan
 35-Waiting - Plant Condition
 39-WO for 2 Years Hence
 40-WO for Next Year
 41-Waiting CATV Response
 42-WO on Hold
 43-Waiting External Resources
 44-WO Waiting to be Scheduled
 45-Weekly Schedule
 46-Daily Schedule
 48-WO in Progress

Total Planned Backlog

3

11-WO Waiting for Approval
 12-WO Waiting for Re-Approval
 13-Waiting CIAC Approval
 14-WO Approved
 15-Outside Serv. Req., Not ID'd
 20-Eng./Tech. Services Required
 30-Waiting for Materials
 31-Mat'l. Avail. Locally
 32-Mat'l. Shipped To Remote Site
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 34-Contingency Plan
 35-Waiting - Plant Condition
 39-WO for 2 Years Hence
 40-WO for Next Year
 41-Waiting CATV Response
 42-WO on Hold
 43-Waiting External Resources
 44-WO Waiting to be Scheduled
 45-Weekly Schedule
 46-Daily Schedule
 48-WO in Progress

Total Planned Backlog

497

11-WO Waiting for Approval
 12-WO Waiting for Re-Approval
 13-Waiting CIAC Approval
 14-WO Approved
 15-Outside Serv. Req.,Not ID'd
 20-Eng./Tech. Services Required
 30-Waiting for Materials
 31-Mat'l. Avail. Locally
 32-Mat'l. Shipped To Remote Site
 33-Mat'l. At Remote Site
 34-Contingency Plan
 35-Waiting - Plant Condition
 39-WO for 2 Years Hence
 40-WO for Next Year
 41-Waiting CATV Response
 42-WO on Hold
 43-Waiting External Resources
 44-WO Waiting to be Scheduled
 45-Weekly Schedule
 46-Daily Schedule
 48-WO in Progress

Total Planned Backlog

0



3/14/2019

Cancelled Work Order Summary Report

Business Unit:

Priority: 1,2,3

WO Sub Code: NULL

Planning Center: BDE,GFL

Section: NULL

Planner: NULL

Work Order Issue Date Range: 1/1/2016
12/31/2018

Priority 1 - (Emergency 24 Hours)

CM Total Work Orders	48
PM Total Work Orders	0
Non-Maintenance Total Work Orders	0
Project Total Work Orders	0
Capital Total Work Orders	0
Emergency Total Work Orders	0
Standing Total Work Orders	0
Total Number of Orders	48

Priority 2 - (Urgent 7 to 14 Days)

CM Total Work Orders	45
PM Total Work Orders	0
Non-Maintenance Total Work Orders	0
Project Total Work Orders	0
Capital Total Work Orders	0
Emergency Total Work Orders	0
Standing Total Work Orders	0
Total Number of Orders	45

Priority 3 - (Planned 30 to 60 Days)

CM Total Work Orders	188
PM Total Work Orders	742
Non-Maintenance Total Work Orders	21
Project Total Work Orders	0
Capital Total Work Orders	10
Emergency Total Work Orders	0
Standing Total Work Orders	0
Total Number of Orders	961

Priority 4 - (Required)

CM Total Work Orders	0
PM Total Work Orders	0
Non-Maintenance Total Work Orders	0
Project Total Work Orders	0
Capital Total Work Orders	0
Emergency Total Work Orders	0
Standing Total Work Orders	0
Total Number of Orders	0

5. Thermal Generation (Holyrood)

5.1 Summary

HIGHLIGHTS:

- Unit 1- Planned Outage successful: Dec 17/2016 to Dec. 19/2016 - Air heater Wash and Corrective Hot File work
- Unit 2- Planned outage successful: Dec 07/2016 to Dec. 08/2016 – Air heater Wash and Main Steam Inlet Flange Repair work
- Unit 3 – Planned Outage Successful: Dec 02/2016 to Dec 05/2016 - Air heater Wash and Corrective Hot File work

SCHEDULE:

Unit 3:

- All identified repair work for Unit 3 has been completed. Unit 3 was synchronized to the grid on **August 12, 2016**. Loading as per ECC requirements.

Unit 2:

- All identified repair work for Unit 2 has been completed. Unit 2 was synchronized to the grid on **September 15, 2016**. Loading as per ECC requirements.

Unit 1:

- All identified repair work for Unit 1 has been completed. Unit 1 was synchronized to the grid on **November 2, 2016**. Loading as per ECC requirements.
 - a. November 22, 2016.

FINANCIAL IMPACT:

1. None to report.

AWP IMPACT:

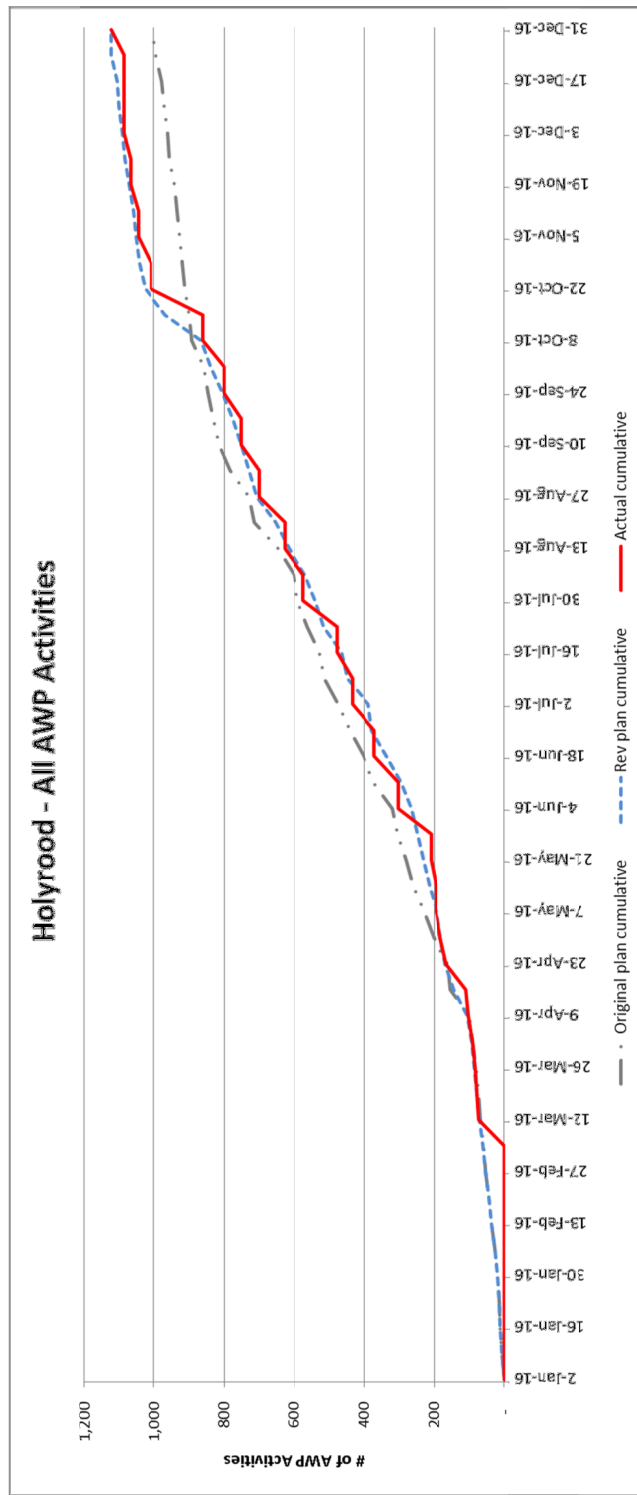
1. All required Winter Readiness and Annual Work Plan activities completed by year end.

RECOVERY PLAN:

- N/A

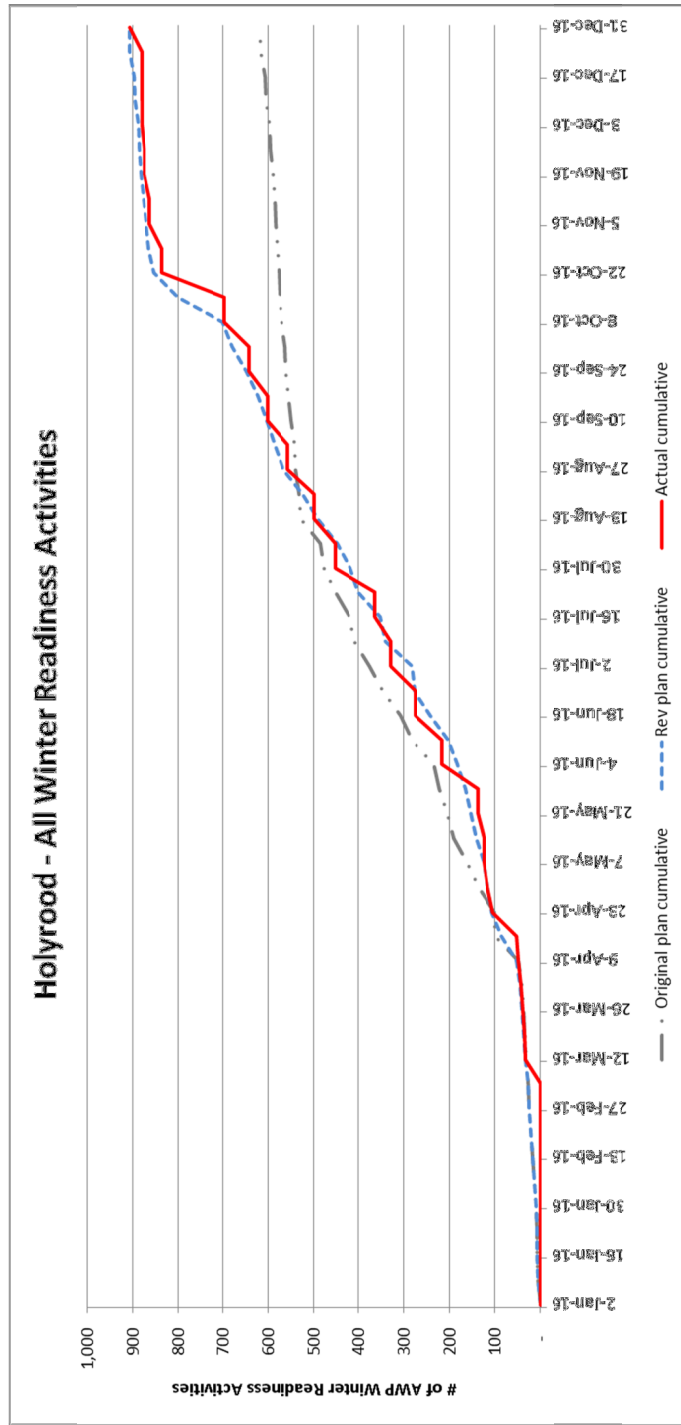
5.2 Thermal Generation – Total AWP Activities

	9-Jul-16	16-Jul-16	9-Jan-16	16-Jan-16	23-Jan-16	30-Jan-16	6-Feb-16	13-Feb-16	20-Feb-16	27-Feb-16	5-Mar-16	12-Mar-16	19-Mar-16	26-Mar-16	2-Apr-16	9-Apr-16	16-Apr-16	23-Apr-16	30-Apr-16	7-May-16	14-May-16	21-May-16	28-May-16	4-Jun-16	11-Jun-16	18-Jun-16	25-Jun-16	2-Jul-16
Original plan	-	6	6	5	4	5	7	9	7	10	8	8	6	8	8	11	53	7	41	28	32	19	23	15	53	29	41	34
Rev plan	-	6	6	5	4	5	7	10	7	10	9	8	7	8	9	12	37	25	15	11	21	17	17	18	27	43	40	10
Actual	-	-	-	-	-	-	-	-	-	-	73	4	7	6	6	11	9	56	17	12	-	14	-	93	-	66	-	64
Original plan cumulative	-	6	12	17	21	26	33	42	49	59	67	73	79	85	93	104	157	164	205	223	255	274	291	318	347	388	422	456
Rev plan cumulative	-	6	12	17	21	26	33	43	50	60	69	77	84	92	101	113	150	175	190	201	212	229	246	262	289	316	343	371
Actual cumulative	-	-	-	-	-	-	-	-	-	-	73	77	83	90	101	110	166	183	195	209	214	231	248	266	293	316	336	369
Original plan	38	14	34	29	11	46	67	74	73	78	81	84	86	88	90	91	92	93	94	95	96	97	98	99	100	101	102	103
Rev plan	62	16	52	23	31	46	39	52	52	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
Actual	-	44	-	98	-	53	-	73	-	73	-	52	48	62	62	149	-	35	35	35	35	35	35	35	35	35	35	35
Original plan cumulative	513	527	561	590	601	647	714	729	783	814	832	846	858	867	869	901	912	919	927	933	942	955	961	971	978	985	995	1,004
Rev plan cumulative	448	464	516	539	570	616	655	707	729	752	775	804	839	867	869	901	1,027	1,043	1,052	1,061	1,072	1,085	1,093	1,101	1,107	1,123	1,123	1,123
Actual cumulative	432	476	476	574	574	627	627	627	700	700	752	752	799	861	861	1,010	1,010	1,046	1,046	1,046	1,067	1,067	1,088	1,088	1,088	1,088	1,088	1,123



5.3 Thermal Generation – Winter Readiness Activities

	2-Jan-16	9-Jan-16	16-Jan-16	23-Jan-16	30-Jan-16	6-Feb-16	13-Feb-16	20-Feb-16	27-Feb-16	5-Mar-16	12-Mar-16	19-Mar-16	26-Mar-16	2-Apr-16	9-Apr-16	16-Apr-16	23-Apr-16	30-Apr-16	7-May-16	14-May-16	21-May-16	28-May-16	4-Jun-16	11-Jun-16	18-Jun-16	25-Jun-16	2-Jul-16
Original plan		5	2	1	1	4	5	3	4	2	4	3	3	3	8	50	3	35	25	19	15	16	12	49	26	38	29
Rev plan		5	2	1	1	4	5	3	4	2	5	5	3	3	8	32	22	10	7	18	12	12	16	20	40	34	7
Actual		-	-	-	-	-	-	-	-	-	32	3	4	3	7	4	52	12	8	-	14	-	78	-	58	-	54
Original plan cumulative		5	7	8	9	13	18	21	25	27	31	34	37	40	48	98	101	136	161	190	205	221	233	282	308	346	375
Rev plan cumulative		5	7	8	9	13	18	21	25	27	32	37	40	44	53	85	107	117	124	142	154	166	182	202	242	276	283
Actual cumulative		-	-	-	-	-	-	-	-	-	32	35	39	42	49	53	105	117	125	125	139	139	217	217	275	275	329
	9-Jul-16	16-Jul-16	23-Jul-16	30-Jul-16	6-Aug-16	13-Aug-16	20-Aug-16	27-Aug-16	3-Sep-16	10-Sep-16	17-Sep-16	24-Sep-16	1-Oct-16	8-Oct-16	15-Oct-16	22-Oct-16	29-Oct-16	5-Nov-16	12-Nov-16	19-Nov-16	26-Nov-16	3-Dec-16	10-Dec-16	17-Dec-16	24-Dec-16	31-Dec-16	
Original plan	34	11	32	25	8	43	4	7	3	8	5	5	3	8	3	3	4	4	4	5	2	2	7	3	9	9	3
Rev plan	57	13	48	18	28	43	34	43	19	18	20	24	32	22	98	53	12	5	6	7	4	2	7	2	9	9	3
Actual	-	35	-	88	-	45	-	59	-	45	-	41	-	53	-	139	-	28	-	11	-	7	-	-	-	-	26
Original plan cumulative	409	420	452	477	485	528	532	539	542	550	555	560	563	571	574	577	580	584	587	591	596	598	605	608	617	620	
Rev plan cumulative	340	353	401	419	447	490	524	567	586	604	624	648	680	702	800	853	865	870	883	887	889	896	896	898	907	907	
Actual cumulative	329	364	364	453	453	498	498	557	557	602	602	644	644	697	697	835	835	864	864	874	874	881	881	881	881	907	



5. Thermal Generation (Holyrood)

5.1 Summary – Thermal Generation

ISSUES/HIGHLIGHTS:

- 100% of the Winter Readiness activities for 2017 have been completed.
- 99.9% of 2017 Annual Work Plan activities pertaining to Operations & Maintenance have been completed.
 - There were only two (2) activities that were originally planned for 2017 that were not completed; both being resin replacements for equipment in the Water Treatment Plant. Plant staff determined that the resin was not depleted and did not require replacement in 2017 and thus resulting in zero impact on operational effectiveness.

SCHEDULE:

1. Unit 2 Boiler Cleaning Outage – April 9/17 – April 23/17 – (Complete)
2. Unit 2 Forced Outage – May 1- June 02/17 (Completed May 30/17)
3. Unit 3 Spring Outage May 31/17 – July 16/17 Complete
4. Total Plant Outage – July 30/17 to Aug 18/17 (Complete)
5. Unit 1 Annual Outage - June 26/17 to Sept 15/17 (Complete)
6. Unit 2 Annual Outage – July 31/17 to Nov 2/17 (Complete)

FINANCIAL IMPACT:

- None

AWP IMPACT:

- All major unit outage work has been completed and plant forces are executing the planned online preventative maintenance program along with the corrective maintenance program throughout the operating season.

RECOVERY PLAN:

- Further analysis is required to determine root cause for the derating of each unit. Engineering Services are leading this effort and are developing a detailed plan and schedule identifying each action item, responsible party and execution dates.

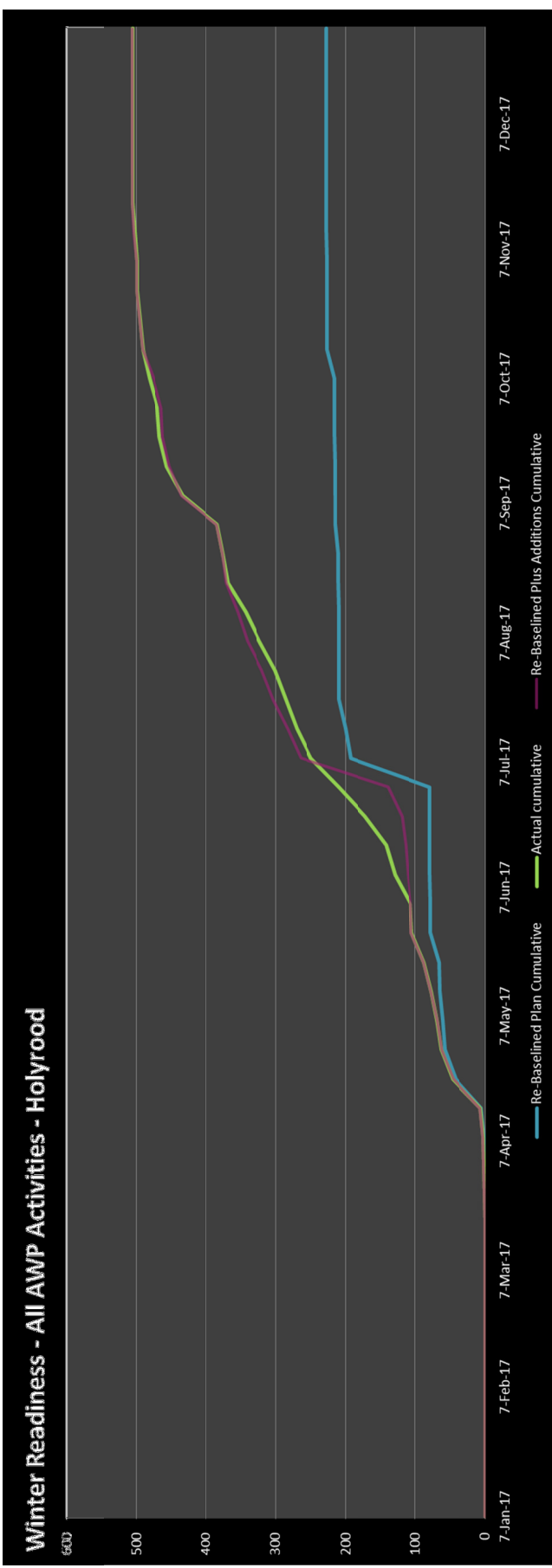
5.2 Thermal Generation – Total AWP Activities

All AWP Activities - Holyrood		7-Jan-17	14-Jan-17	21-Jan-17	28-Jan-17	4-Feb-17	11-Feb-17	18-Feb-17	25-Feb-17	2-Sep-17	9-Sep-17	16-Sep-17	23-Sep-17	30-Sep-17	7-Oct-17	14-Oct-17	21-Oct-17	28-Oct-17	4-Nov-17	11-Nov-17	18-Nov-17	25-Nov-17	2-Dec-17	9-Dec-17	16-Dec-17	23-Dec-17	30-Dec-17
Re-Baselined Plan (20170527)	3	16	6	4	4	8	11	12	8	18	9	17	8	25	11	20	45	27	11	13	6	21	28	9	11	35	20
Re-Baseline Plus Additions	3	16	6	4	4	9	11	12	8	18	9	17	10	25	11	20	48	28	18	31	25	36	34	24	28	59	56
Actual	3	16	6	4	4	9	11	12	8	18	9	17	10	25	11	20	48	30	18	37	25	36	15	55	40	61	84
Re-Baselined Plan Cumulative	3	19	25	29	29	37	48	60	68	86	95	112	120	145	156	176	221	248	259	272	278	299	327	336	347	382	402
Re-Baselined Plus Additions Cumulative	3	19	25	29	29	38	49	61	69	87	96	113	123	148	159	179	227	255	273	304	329	365	399	423	451	510	566
Projected Cumulative																											
Actual cumulative	3	19	25	29	29	38	49	61	69	87	96	113	123	148	159	179	227	257	275	312	337	373	388	443	483	544	628
All AWP Activities - Holyrood		8-Jul-17	15-Jul-17	22-Jul-17	29-Jul-17	5-Aug-17	12-Aug-17	19-Aug-17	26-Aug-17	2-Sep-17	9-Sep-17	16-Sep-17	23-Sep-17	30-Sep-17	7-Oct-17	14-Oct-17	21-Oct-17	28-Oct-17	4-Nov-17	11-Nov-17	18-Nov-17	25-Nov-17	2-Dec-17	9-Dec-17	16-Dec-17	23-Dec-17	30-Dec-17
Re-Baselined Plan (20170527)	124	18	18	7	9	9	13	7	12	21	6	16	14	9	25	21	11	8	7	12	10	11	19	6	7	6	55
Re-Baseline Plus Additions	149	45	35	36	40	36	30	23	23	48	63	39	26	13	36	28	18	22	14	20	15	12	23	7	8	7	56
Actual	74	51	32	39	43	48	45	20	20	36	69	56	31	16	24	16	20	27	17	20	15	11	13	16	9	5	32
Re-Baselined Plan Cumulative	526	544	562	569	578	591	598	598	610	631	637	653	667	676	701	722	733	741	748	760	770	781	800	806	813	819	874
Re-Baselined Plus Additions Cumulative	715	760	795	831	871	907	937	960	960	1008	1071	1110	1136	1149	1185	1213	1231	1253	1267	1287	1302	1314	1337	1344	1352	1359	1415
Projected Cumulative																											
Actual cumulative	702	753	785	824	867	915	960	980	980	1016	1085	1141	1172	1188	1212	1228	1248	1275	1292	1312	1327	1338	1351	1367	1376	1381	1413

5.3 Thermal Generation – Winter Readiness Activities

Winter Readiness - All AWP Activities - Holyrood		7-Jan-17	14-Jan-17	21-Jan-17	28-Jan-17	4-Feb-17	11-Feb-17	18-Feb-17	25-Feb-17	4-Mar-17	11-Mar-17	18-Mar-17	25-Mar-17	1-Apr-17	8-Apr-17	15-Apr-17	22-Apr-17	29-Apr-17	6-May-17	13-May-17	20-May-17	27-May-17	3-Jun-17	10-Jun-17	17-Jun-17	24-Jun-17	1-Jul-17	
Re-Baselined Plan (20170527)		0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	36	16	3	4	1	13	0	0	1	0	0	
Re-Baseline Plus Additions		0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	39	17	6	9	10	18	1	4	3	6	19	
Actual		0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	39	17	6	9	10	18	2	22	12	30	37	
Re-Baselined Plan Cumulative		0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	42	58	61	65	66	79	79	80	80	80	80	
Re-Baselined Plus Additions Cumulative		0	0	0	0	0	0	0	0	0	0	0	1	2	3	7	46	63	69	78	88	106	107	111	114	120	139	
Projected Cumulative		0	0	0	0	0	0	0	0	0	0	0	1	2	3	7	46	63	69	78	88	106	108	130	142	172	209	
Actual cumulative		0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	7	46	63	69	78	88	106	108	130	142	172	209

Winter Readiness - All AWP Activities - Holyrood		8-Jul-17	15-Jul-17	22-Jul-17	29-Jul-17	5-Aug-17	12-Aug-17	19-Aug-17	26-Aug-17	2-Sep-17	9-Sep-17	16-Sep-17	23-Sep-17	30-Sep-17	7-Oct-17	14-Oct-17	21-Oct-17	28-Oct-17	4-Nov-17	11-Nov-17	18-Nov-17	25-Nov-17	2-Dec-17	9-Dec-17	16-Dec-17	23-Dec-17	30-Dec-17
Re-Baselined Plan (20170527)		113	7	10	0	0	0	0	1	4	0	0	1	0	0	10	0	0	0	0	1	0	0	0	0	0	0
Re-Baseline Plus Additions		125	19	21	16	21	13	17	5	9	50	18	10	2	11	16	4	4	0	4	4	2	0	0	0	0	0
Actual		40	21	15	16	23	20	24	8	8	50	23	10	3	12	9	4	4	0	4	3	0	0	0	0	0	0
Re-Baselined Plan Cumulative		193	200	210	210	210	210	211	211	215	215	215	216	216	216	226	226	226	226	227	227	227	227	227	227	227	227
Re-Baselined Plus Additions Cumulative		264	283	304	320	341	354	371	376	385	435	453	463	465	476	492	496	500	500	504	506	506	506	506	506	506	506
Projected Cumulative		249	270	285	301	324	344	368	376	384	434	457	467	470	482	491	495	499	499	503	506	506	506	506	506	506	506
Actual cumulative		249	270	285	301	324	344	368	376	384	434	457	467	470	482	491	495	499	499	503	506	506	506	506	506	506	506



5. Thermal Generation (Holyrood)

5.1 Summary – Thermal Generation

Issues/Highlights:

- Unit 3 is in operating mode. Outage activities were completed as required.
- Unit 2 is in operating mode. Outage activities were completed as required.
- Unit 1 is in operating mode. Outage activities were completed as required.

Schedule:

1. Unit 3 annual maintenance outage – April 2, 2018 to June 29, 2018 (complete)
2. Unit 2 annual maintenance outage – June 1, 2018 to September 14, 2018 (complete)
3. Unit 1 annual maintenance outage – July 27, 2018 to October 19, 2018 (complete)
4. Holyrood Total Plant Outage (TPO) – July 27, 2018 to August 17, 2018 (complete)
5. Unit 3 synchronous condenser operation – June 1, 2018 to November 2, 2018 (complete)

Financial Impact:

- No financial impacts to report at this time.

Annual Work Plan (AWP) Impact:

- The following projects are currently in red on the Capital Annual Work Plan Activities (**24 of 30**):
 - **OWS #3 Probe Installation (Complete)**
 - 1400 kVA Excitation Transformer
 - 1500 kVA Auxiliary Board Transformer
 - DC Lube Oil Motor (250 VDC)
 - **OWS #5 Probe Installation (Run cable from PH to control room) (Complete)**
 - **Replacement of Domestic Water Piping (Control Room, Shops, Contractor Washrooms) (Complete)**
- The replacement of the 1400 kVA excitation transformer was not order by Engineering Services project team in time to meet end of year deadline.
- The replacement of the 1500 kVA auxiliary board transformer was not order by Engineering Services project team in time to meet end of year deadline.
- The replacement of the DC lube oil pump motor the lead time was underestimated by Engineering Services project team and the DC lube oil pump motor is not ordered yet.

Capital Winter Readiness Activities (13 of 16):

- The three (3) deficiency are (see comments above):
 - 1400 kVA Excitation Transformer
 - 1500 kVA Auxiliary Board Transformer
 - DC Lube Oil Motor (250 VDC)

All Annual Work Plan Activities (978 of 984):

- The four (4) deficiencies are (see comments above):
 - **OWS #3 Probe Installation (Complete)**
 - **OWS #5 Probe Installation (Run cable from PH to control room) (Complete)**
 - 1400 kVA Excitation Transformer
 - 1500 kVA Auxiliary Board Transformer
 - DC Lube Oil Motor (250 VDC)
 - **Replacement of Domestic Water Piping (Control Room, Shops, Contractor Washrooms) (Complete)**

All Winter Readiness Activities (464 of 467):

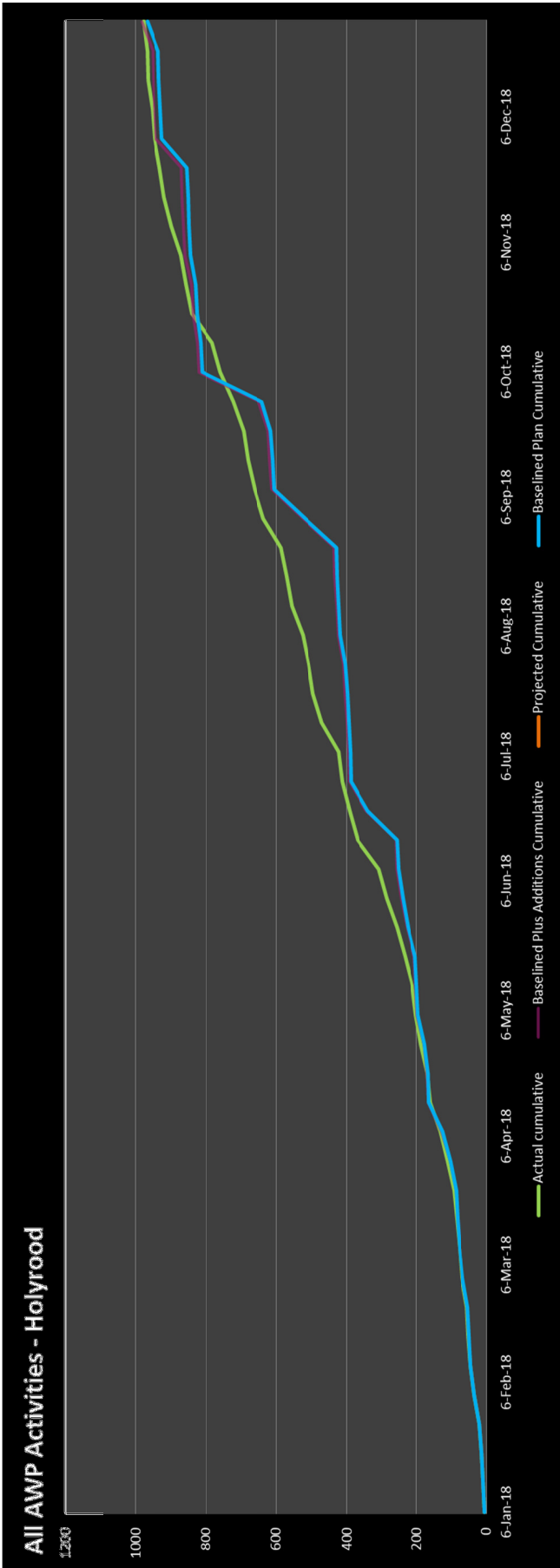
- The three (3) deficiencies are (see comments above):
 - 1400 kVA Excitation Transformer
 - 1500 kVA Auxiliary Board Transformer
 - DC Lube Oil Motor (250 VDC)

Recovery Plan:

Jobs outlined above that have had their end dates changed will be completed as per the outlined schedule above. There are no risks or recovery plans required at this time.

5.2 Thermal Generation – Total AWP Activities

All AWP Activities - Holyrood		6-Jan-18	13-Jan-18	20-Jan-18	27-Jan-18	3-Feb-18	10-Feb-18	17-Feb-18	24-Feb-18	1-Sep-18	8-Sep-18	15-Sep-18	22-Sep-18	29-Sep-18	6-Oct-18	13-Oct-18	20-Oct-18	27-Oct-18	3-Nov-18	10-Nov-18	17-Nov-18	24-Nov-18	1-Dec-18	8-Dec-18	15-Dec-18	22-Dec-18	29-Dec-18	
Baselined Plan (20180403)		5	5	3	7	14	10	6	4	14	8	6	5	17	23	38	3	10	19	3	4	21	21	16	12	3	84	47
Baseline Plus Additions		5	5	3	7	14	10	6	4	14	8	6	5	17	25	38	3	10	20	4	4	21	21	16	12	3	85	47
Actual		5	5	3	7	14	11	6	4	14	8	7	8	20	21	28	8	20	14	11	21	21	30	23	60	23	21	
Baselined Plan Cumulative		5	10	13	20	34	44	50	54	68	76	82	87	104	127	165	168	178	197	200	204	225	241	253	256	340	387	
Baselined Plus Additions Cumulative		5	10	13	20	34	44	50	54	68	76	82	87	104	129	167	170	180	200	204	208	229	245	257	260	345	392	
Projected Cumulative																												
Actual cumulative		5	10	13	20	34	45	51	55	69	77	84	92	112	133	161	169	189	203	214	235	256	286	309	369	392	413	
All AWP Activities - Holyrood		7-Jul-18	14-Jul-18	21-Jul-18	28-Jul-18	4-Aug-18	11-Aug-18	18-Aug-18	25-Aug-18	1-Sep-18	8-Sep-18	15-Sep-18	22-Sep-18	29-Sep-18	6-Oct-18	13-Oct-18	20-Oct-18	27-Oct-18	3-Nov-18	10-Nov-18	17-Nov-18	24-Nov-18	1-Dec-18	8-Dec-18	15-Dec-18	22-Dec-18	29-Dec-18	
Baselined Plan (20180403)		3	4	5	5	15	4	4	3	88	88	5	5	25	171	3	12	3	16	3	3	3	72	4	3	3	31	
Baseline Plus Additions		3	4	6	5	15	4	5	3	89	88	5	5	26	171	4	12	4	20	4	3	3	72	4	3	3	31	
Actual		10	47	25	14	17	31	14	16	51	24	18	14	29	37	23	57	17	16	27	19	13	15	7	12	2	10	
Baselined Plan Cumulative		390	394	399	404	419	423	427	430	518	606	611	616	641	812	815	827	830	846	849	852	855	927	931	934	937	968	
Baselined Plus Additions Cumulative		395	399	405	410	425	429	434	437	526	614	619	624	650	821	825	837	841	861	865	868	871	943	947	950	953	984	
Projected Cumulative																												
Actual cumulative		423	470	495	509	526	557	571	587	638	662	680	694	723	760	783	840	857	873	900	919	932	947	954	966	968	978	



5.3 Thermal Generation – Winter Readiness Activities

Winter Readiness - All AWP Activities - Holyrood		6-Jan-18	7-Jul-18	13-Jan-18	20-Jan-18	27-Jan-18	3-Feb-18	10-Feb-18	17-Feb-18	24-Feb-18	3-Mar-18	10-Mar-18	17-Mar-18	24-Mar-18	31-Mar-18	7-Apr-18	14-Apr-18	21-Apr-18	28-Apr-18	5-May-18	12-May-18	19-May-18	26-May-18	2-Jun-18	9-Jun-18	16-Jun-18	23-Jun-18	30-Jun-18		
Baselined Plan (20180403)		0	0	0	0	0	0	4	0	0	0	1	1	1	0	17	21	0	0	0	0	0	0	0	18	0	9	0	59	3
Baseline Plus Additions		0	0	0	0	0	0	4	0	0	0	1	1	1	0	17	21	0	0	0	0	0	0	0	18	0	9	0	60	3
Actual		0	0	0	0	0	0	5	0	0	0	1	1	1	0	13	20	1	11	4	5	10	15	15	25	16	27	5	5	
Baselined Plan Cumulative		0	0	0	0	0	0	4	4	4	4	5	6	7	7	24	45	45	45	45	45	45	45	63	63	72	72	131	134	
Baselined Plus Additions Cumulative		0	0	0	0	0	0	4	4	4	4	5	6	7	7	24	45	45	45	45	45	45	45	63	63	72	72	132	135	
Projected Cumulative		0	0	0	0	0	0	5	5	5	5	6	7	8	8	21	41	42	53	57	62	62	72	87	112	128	155	160	165	
Actual cumulative		0	0	0	0	0	0	5	5	5	5	6	7	8	8	21	41	42	53	57	62	62	72	87	112	128	155	160	165	

Winter Readiness - All AWP Activities - Holyrood		7-Jul-18	14-Jul-18	21-Jul-18	28-Jul-18	4-Aug-18	11-Aug-18	18-Aug-18	25-Aug-18	1-Sep-18	8-Sep-18	15-Sep-18	22-Sep-18	29-Sep-18	6-Oct-18	13-Oct-18	20-Oct-18	27-Oct-18	3-Nov-18	10-Nov-18	17-Nov-18	24-Nov-18	1-Dec-18	8-Dec-18	15-Dec-18	22-Dec-18	29-Dec-18	
Baselined Plan (20180403)		0	0	1	0	0	1	0	0	26	85	2	2	0	134	0	5	0	0	0	0	0	0	68	0	0	0	0
Baseline Plus Additions		0	0	2	0	0	1	0	0	27	85	2	2	1	134	0	5	1	4	0	0	0	68	0	0	0	0	
Actual		2	18	9	6	11	23	10	10	30	19	4	8	22	23	19	31	1	8	18	9	8	10	0	0	0	0	
Baselined Plan Cumulative		134	134	135	135	135	136	136	136	162	247	249	251	251	385	385	390	390	390	390	390	390	390	458	458	458	458	
Baselined Plus Additions Cumulative		135	135	137	137	137	138	138	138	165	250	252	254	255	389	389	394	395	399	399	399	399	467	467	467	467	467	
Projected Cumulative		167	185	194	200	211	234	244	254	284	303	307	315	337	360	379	410	411	419	437	446	454	464	464	464	464	464	
Actual cumulative		167	185	194	200	211	234	244	254	284	303	307	315	337	360	379	410	411	419	437	446	454	464	464	464	464	464	

