

## Tentative Corps Outage Schedule for CY 2016

Start Date	End Date	Project	Unit #	Description
01-Jul-15	17-Nov-17	FP	2	Major rehab Based on Current schedule
11-Apr-16	02-Sep-16	GA	SJ3	Install new SJ3 Switchgear and cutover all circuits
25-Jul-16	02-Sep-16	GA	Swyd.	Cutover Garrison - Douglas Creek 115kv line to new switchyard
25-Jul-16	02-Sep-16	GA	5	Unit Maintenance, Cutover to new switchyard
22-Aug-16	26-Aug-16	BB	1	HDC Raw Water Unit Cooling Water Analysis
29-Aug-16	28-Feb-17	FR	5	C Bank Outage for Swyd Rehab Contract, Unit 5 Maintenance
29-Aug-16	28-Feb-17	FR	6	C Bank Outage for Swyd Rehab Contract, Unit 6 maint/Generator Relays/ Cavitation Repair
29-Aug-16	15-Sep-16	BB	5	Unit Maintenance
01-Sep-16	30-Oct-16	GA	Lines	Functional Testing of Transmission and Bus Relays
05-Sep-16	16-Sep-16	OA	5	Unit 5 Maintenance
06-Sep-16	15-Oct-16	GA	Swyd.	Cutover Garrison - Beulah 115kv line to new switchyard
06-Sep-16	15-Oct-16	GA	3	Cutover Unit 3 Permanent Tie Line
12-Sep-16	30-Sep-16	FP	4	Annual Maint.
19-Sep-16	29-Sep-16	OA	3	Unit Inspection
26-Sep-16	30-Sep-16	BB	6	Unit Inspection
26-Sep-16	29-Sep-16	GA	2	Unit Inspection
03-Oct-16	03-Oct-16	BB	1	PPCS RTU Replacement ( Approx 2 Units/Day )
03-Oct-16	03-Oct-16	BB	2	PPCS RTU Replacement ( Approx 2 Units/Day )
03-Oct-16	06-Oct-16	GA	1	Unit Inspection
03-Oct-16	14-Oct-16	FP	Swd#1	Functional Test KV7A And Doble
03-Oct-16	14-Oct-16	FP	Swd#1	115KV Insulator Replacement & 13.8kv Switch Maintenance
03-Oct-16	14-Oct-16	FP	1	Plant #1 outage for Power Tunnel Inspection (overlaps switchyard outage)
03-Oct-16	14-Oct-16	FP	2	Plant #1 outage for Power Tunnel Inspection (overlaps switchyard outage)
03-Oct-16	14-Oct-16	FP	3	Plant #1 outage for Power Tunnel Inspection (overlaps switchyard outage)
04-Oct-16	04-Oct-16	BB	3	PPCS RTU Replacement ( Approx 2 Units/Day )
04-Oct-16	04-Oct-16	BB	4	PPCS RTU Replacement ( Approx 2 Units/Day )
05-Oct-16	05-Oct-16	BB	5	PPCS RTU Replacement ( Approx 2 Units/Day )
05-Oct-16	05-Oct-16	BB	6	PPCS RTU Replacement ( Approx 2 Units/Day )
06-Oct-16	07-Oct-16	BB	7	PPCS RTU Replacement ( Approx 2 Units/Day )
06-Oct-16	07-Oct-16	BB	8	PPCS RTU Replacement ( Approx 2 Units/Day )
10-Oct-16	17-Nov-16	OA	7	Unit Maintenance/Generator Relay Installation
11-Oct-16	27-Oct-16	BB	7	Unit Maintenance
24-Oct-16	09-Nov-16	FP	5	Annual Maint.
03-Nov-16	03-Nov-16	GA	2	Black Start Exercise
14-Nov-16	18-Nov-16	BB	8	Unit Inspection
28-Nov-16	08-Dec-16	FR	3	Unit Maintenance

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01-Jul-15	17-Nov-17	FP	2	Major rehab Based on Current schedule
29-Aug-16	28-Feb-17	FR	5	C Bank Outage for Swyd Rehab Contract, Unit 5 Maintenance
29-Aug-16	28-Feb-17	FR	6	C Bank Outage for Swyd Rehab Contract, Unit 6 maint/Generator Relays/ Cavitation Repair
1st Quarter	of 2017	OA		Generator Step up bushings (1st Quarter of 2017)
09-Jan-17	16-Feb-17	GP	2	Unit 2 annual maintenance outage
09-Jan-17	31-Dec-17	BB	1-8	Intake Gate Gearbox Replacements (OUTAGES UNKNOWN)
17-Jan-17	02-Feb-17	FR	4	Unit Maintenance
06-Feb-17	09-Feb-17	FR	8	Unit inspection
13-Feb-17	16-Feb-17	FR	7	Unit inspection
20-Feb-17	06-Apr-17	GP	3	Unit 3 annual maintenance outage
21-Feb-17	08-Jun-17	FR	2	Unit inspection, Generator Relay Replacement, cavitation repair
27-Feb-17	17-Mar-17	FP	3	Annual Maint.
01-Mar-17	08-Jun-17	FR	1	A Bank Outage for Switchyard Rehab Contract; Unit 1 Inspection/ replace generator relays
01-Mar-17	08-Jun-17	FR	2	A Bank Outage for Switchyard Rehab Contract; Unit 1 Inspection/ replace generator relays
06-Mar-17	30-Mar-17	BB	3	Unit Inspection ( Electronic Governor Install / Exciter Replacement )
06-Mar-17	24-Mar-17	OA	2	Unit Inspection
27-Mar-17	06-Apr-17	OA	4	Unit Maintenance
27-Mar-17	28-Apr-17	FP	1	Annual Maint. Ext.
2nd Quarter	of 2017	BB		Plant Outage - Raw Water Strainer Installs
03-Apr-17	28-Apr-17	BB	4	Unit Maintenance ( Electronic Governor Install / Exciter Replacement )
03-Apr-17	06-Apr-17	GA	4	Unit Inspection
10-Apr-17	11-Apr-17	GP	1	Rolling outage to clean trash racks
10-Apr-17	28-Apr-17	OA	6	Unit Inspection
10-Apr-17	20-Apr-17	GA	2	Unit Maintenance, Governor & Brg Oil Change
12-Apr-17	13-Apr-17	GP	2	Rolling outage to clean trash racks
14-Apr-17	14-Apr-17	GP	3	Rolling outage to clean trash racks
24-Apr-17	27-Apr-17	GA	5	Unit Inspection
01-May-17	26-May-17	BB	1	Unit Inspection ( Electronic Governor Install / Exciter Replacement )
01-May-17	02-May-17	BB	1	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
03-May-17	04-May-17	BB	2	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
05-May-17	06-May-17	BB	3	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
07-May-17	08-May-17	BB	4	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
08-May-17	11-May-17	BB	1-8	No Scheduled Doble Testing - 2017 Time Slot Reserved
08-May-17	23-Jun-17	OA	1	Unit Maintenance/Generator Relay Installation
08-May-17	19-May-17	FP	Swd#1	KV7A (Insulator Replacement)
09-May-17	10-May-17	BB	5	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
11-May-17	12-May-17	BB	6	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
13-May-17	14-May-17	BB	7	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
15-May-17	16-May-17	BB	8	Unit Outages - Raw Water Strainer-Piping Units 1-8 ( 2 days ea ) (Actual Date TBD)
15-May-17	25-May-17	BB	1-8	Intake Gate Maintenance - Routine "C" Gates ( May be Moved ) NO Outages Required
30-May-17	22-Jun-17	BB	2	Unit Maintenance ( Electronic Governor Install / Exciter Replacement )
2nd Quarter	of 2017	BB		Intake Bulkhead Testing (2nd Quarter of 2017)
26-Jun-17	20-Jul-17	BB	5	Unit Inspection ( Electronic Governor Install / Exciter Replacement )
3rd Quarter	of 2017	QA		PLC Upgrade for PPCS (3rd Quarter of 2017)
3rd Quarter	of 2017	OA		Governor upgrade (3rd Quarter of 2017)
23-Jul-17	23-Jul-17	OA	4	Functional Test Transformer Bank 3 relays (8 HR double unit outage)
23-Jul-17	23-Jul-17	OA	5	Functional Test Transformer Bank 3 relays (8 HR double unit outage)
24-Jul-17	17-Aug-17	BB	6	Unit Maintenance ( Electronic Governor Install / Exciter Replacement )

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Start Date	End Date	Project	Unit #	Description
24-Jul-17	03-Aug-17	BB		Spillway Gate 1-8 Maintenance
24-Jul-17	24-Jul-17	OA	Auto bank	Functional Test Auto Transformer relays
09-Aug-17	09-Aug-17	BB	3	Black Start - NERC/WAPA ( Unit 3 )
09-Aug-17	09-Aug-17	BB	4	Black Start - NERC/WAPA ( Unit 3 )
21-Aug-17	14-Sep-17	BB	7	Unit Inspection ( Electronic Governor Install / Exciter Replacement )
28-Aug-17	28-Aug-17	GA	1	Doble Test GSU Transformers
29-Aug-17	29-Aug-17	GA	2	Doble Test GSU Transformers
30-Aug-17	30-Aug-17	GA	3	Doble Test GSU Transformers
31-Aug-17	31-Aug-17	GA	4	Doble Test GSU Transformers (1/2 day each)
31-Aug-17	31-Aug-17	GA	5	Doble Test GSU Transformers (1/2 day each)
01-Sep-17	30-Oct-17	GA	Lines	Functional Testing of Transmission and Bus Relays
11-Sep-17	14-Sep-17	FR	6	Unit inspection
11-Sep-17	28-Sep-17	OA	7	Unit Inspection
11-Sep-17	14-Sep-17	GA	3	Unit Inspection
11-Sep-17	29-Sep-17	FP	4	Annual Maint.
18-Sep-17	21-Sep-17	FR	5	Unit inspection
18-Sep-17	12-Oct-17	BB	8	Unit Maintenance ( Electronic Governor Install / Exciter Replacement )
18-Sep-17	28-Sep-17	GA	1	Unit Maintenance, Governor & Brg Oil Change
25-Sep-17	05-Oct-17	FR	8	Unit maintenance
02-Oct-17	19-Nov-17	OA	5	Unit Inspection/ Generator relay installation
02-Oct-17	20-Oct-17	FP	4	Plant #2 outage (Unit 4 and 5) Switchyard Switch and Insulator replacements
02-Oct-17	20-Oct-17	FP	5	Plant #2 outage (Unit 4 and 5) Switchyard Switch and Insulator replacements
16-Oct-17	26-Oct-17	FR	7	Unit maintenance
23-Oct-17	29-Nov-17	OA	3	Unit Maintenance/Generator Relay Install
30-Oct-17	17-Nov-17	FP	5	Annual Maint.
01-Nov-17	01-Nov-17	GA	1	Black Start Exercise Review
01-Nov-17	01-Nov-17	GA	2	Black Start Exercise Review
27-Nov-17	04-Jan-18	GP	3	Unit 3 annual maintenance outage, exciter replacement
27-Nov-17	07-Dec-17	FR	2	Unit Maintenance

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Start Date	End Date	Project	Unit #	Description
27-Nov-17	04-Jan-18	GP	3	Unit 3 annual maintenance outage, exciter replacement
01-Jan-18	31-Dec-18	BB	1-8	Intake Gate Gearbox Replacements (OUTAGES UNKNOWN)
08-Jan-18	15-Feb-18	GP	1	Unit 1 annual maintenance outage, exciter replacement
29-Jan-18	08-Feb-18	FR	1	Unit Maintenance
12-Feb-18	07-Jun-18	FR	3	B Bank Outage for Swyd Rehab Contract, Replace lightning arrestors, Unit 3 Inspect / Relay Replace
12-Feb-18	07-Jun-18	FR	4	B Bank Outage for Swyd Rehab Contract, Replace lightning arrestors, Unit 4 Inspect / Relay Replace / Cooling Coil Re
19-Feb-18	05-Apr-18	GP	2	Unit 2 annual maintenance outage, exciter replacement
26-Feb-18	15-Mar-18	BB	3	Unit Maintenance
26-Feb-18	15-Mar-18	BB	3	Unit Inspection
12-Mar-18	28-Mar-18	OA	6	Unit Maintenance
12-Mar-18	30-Mar-18	FP	1	Annual Maint.
26-Mar-18	30-Mar-18	BB	4	Unit Inspection
26-Mar-18	30-Mar-18	BB	4	Unit Maintenance
02-Apr-18	12-Apr-18	OA	4	Unit Inspection
02-Apr-18	12-Apr-18	GA	5	Unit Maintenance, Governor & Brg Oil Change
09-Apr-18	10-Apr-18	GP	1	Rolling outage to clean trash racks
09-Apr-18	26-Apr-18	BB	1	Unit Maintenance
09-Apr-18	26-Apr-18	BB	1	Unit Inspection
09-Apr-18	27-Apr-18	FP	3	Annual Maint.
11-Apr-18	12-Apr-18	GP	2	Rolling outage to clean trash racks
13-Apr-18	13-Apr-18	GP	3	Rolling outage to clean trash racks
16-Apr-18	03-May-18	OA	2	Unit Maintenance
16-Apr-18	19-Apr-18	GA	1	Unit Inspection
23-Apr-18	03-May-18	GA	3	Unit Maintenance
07-May-18	11-May-18	BB	2	Unit Inspection
07-May-18	11-May-18	BB	2	Unit Maintenance
07-May-18	11-May-18	FP	Swd#1	Doble and Funtional 34.5 KV Transformer 5
14-May-18	17-May-18	BB	1-8	No Scheduled Doble Testing - 2017 Time Slot Reserved
14-May-18	25-May-18	FP	2	Annual Maint.
17-May-18	31-May-18	BB	1-8	Intake Gate Maintenance - Routine "A" Gates ( May be moved ) NO Outages Required
11-Jun-18	22-Jun-18	FP	Swd#1	Bank #2 Switch and Insulator Replacement
3rd Quarter	of 2018	FR	1-8	Neutral Breakers (3rd Quarter 2018)
3rd Quarter	of 2018	QA		Exciters, generator step-up transformer bushings (3rd Quarter of 2018)
23-Jul-18	02-Aug-18	BB	1-8	Spillway Gate 1-8 Maintenance (NO Outages Required)
15-Aug-18	15-Aug-18	BB	3-4	Black Start - Tabletop (NO Outages Required)
27-Aug-18	31-Aug-18	BB	6	Unit Inspection
27-Aug-18	30-Aug-18	GA	SS	Doble Test Station Service
01-Sep-18	31-Oct-18	GA	Lines	Functional Testing of Transmission and Bus Relays
03-Sep-18	20-Sep-18	OA	7	Unit Maintenance
10-Sep-18	20-Sep-18	FR	5	Unit Maintenance
10-Sep-18	27-Sep-18	BB	5	Unit Maintenance
10-Sep-18	13-Sep-18	GA	2	Unit Inspection
17-Sep-18	27-Sep-18	GA	4	Unit Maintenance
17-Sep-18	05-Oct-18	FP	4	Annual Maint.
24-Sep-18	04-Oct-18	FR	6	Unit Maintenance
24-Sep-18	04-Oct-18	OA	3	Unit Inspection
08-Oct-18	25-Oct-18	OA	5	Unit Maintenance
09-Oct-18	25-Oct-18	BB	7	Unit Maintenance

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Start Date	End Date	Project	Unit #	Description
15-Oct-18	18-Oct-18	FR	7	Unit Inspection
15-Oct-18	16-Nov-18	FP	5	Annual Maint. Ext.
22-Oct-18	25-Oct-18	FR	8	Unit Inspection
29-Oct-18	08-Nov-18	OA	1	Unit Inspection
01-Nov-18	01-Nov-18	GA	1	Black Start Exercise
05-Nov-18	10-Nov-18	BB	8	Unit Inspection
03-Dec-18	10-Jan-19	GP	2	Unit 2 annual maintenance outage, digital governor install

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Start Date	End Date	Project	Unit #	Description
03-Dec-18	10-Jan-19	GP	2	Unit 2 annual maintenance outage, digital governor install
01-Jan-19	28-Mar-19	BB	1-8	Intake Gate Gearbox Replacementsb (OUTAGES UNKNOWN)
14-Jan-19	21-Feb-19	GP	3	Unit 3 annual maintenance outage, digital governor install
11-Feb-19	14-Feb-19	FR	2	Unit Inspection
25-Feb-19	11-Apr-19	GP	1	Unit 1 annual maintenance outage, digital governor install
25-Feb-19	07-Mar-19	FR	4	Unit Maintenance
04-Mar-19	22-Mar-19	OA	2	Unit Inspection
11-Mar-19	29-Mar-19	FP	1	Annual Maint.
18-Mar-19	21-Mar-19	FR	1	Unit Inspection
25-Mar-19	04-Apr-19	OA	4	Unit Maintenance
01-Apr-19	11-Apr-19	FR	3	Unit Maintenance
08-Apr-19	26-Apr-19	OA	6	Unit Inspection
08-Apr-19	11-Apr-19	GA	5	Unit Inspection
08-Apr-19	26-Apr-19	FP	3	Annual Maint.
15-Apr-19	16-Apr-19	GP	1	Rolling outage to clean trash racks
15-Apr-19	25-Apr-19	GA	1	Unit Maintenance
17-Apr-19	18-Apr-19	GP	2	Rolling outage to clean trash racks
19-Apr-19	19-Apr-19	GP	3	Rolling outage to clean trash racks
29-Apr-19	02-May-19	GA	4	Unit Inspection
06-May-19	07-May-19	FR	1	A Bank Annual Inspection
06-May-19	07-May-19	FR	2	A Bank Annual Inspection
06-May-19	21-Jun-19	OA	1	Unit Maintenance/Generator Relay Installation
06-May-19	24-May-19	FP	2	Annual Maint.
08-May-19	09-May-19	FR	3	B Bank Annual Inspection
08-May-19	09-May-19	FR	4	B Bank Annual Inspection
13-May-19	14-May-19	FR	5	C Bank Annual Inspection
13-May-19	14-May-19	FR	6	C Bank Annual Inspection
13-May-19	16-May-19	BB	1	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 1 / Trnsfrmr 2 / Line 1)
13-May-19	16-May-19	BB	2	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 1 / Trnsfrmr 2 / Line 1)
13-May-19	16-May-19	BB	3	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 1 / Trnsfrmr 2 / Line 1)
13-May-19	16-May-19	BB	4	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 1 / Trnsfrmr 2 / Line 1)
15-May-19	16-May-19	FR	7	D Bank Annual Inspection
15-May-19	16-May-19	FR	8	D Bank Annual Inspection
20-May-19	23-May-19	BB	5	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 3 / Trnsfrmr 4 / Line 2)
20-May-19	23-May-19	BB	6	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 3 / Trnsfrmr 4 / Line 2)
20-May-19	23-May-19	BB	7	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 3 / Trnsfrmr 4 / Line 2)
20-May-19	23-May-19	BB	8	Doble Test - Trnsfrmr-Line Relay Functional Test / 2 Trnsfmrs-1 Line per week (Trnsfrmr 3 / Trnsfrmr 4 / Line 2)
27-May-19	06-Jun-19	BB	1-8	Intake Gate Maintenance - Routine "B" Gates ( May be moved ) (NO Outages Required)
22-Jul-19	01-Aug-19	BB	1-8	Spillway Gate 1-8 Maintenance (NO Outages Required)
23-Jul-19	23-Jul-19	OA	4	Functional Test Transformer Bank 3 relays (8 HR double unit outage)
23-Jul-19	23-Jul-19	OA	5	Functional Test Transformer Bank 3 relays (8 HR double unit outage)
24-Jul-19	24-Jul-19	OA	Auto bank	Functional Test Auto Transformer relays
26-Aug-19	30-Aug-19	BB	5	Unit Inspection
01-Sep-19	01-Nov-19	GA	Lines	Functional Testing of Transmission and Bus Relays
09-Sep-19	12-Sep-19	FR	5	Unit Inspection
09-Sep-19	26-Sep-19	BB	6	Unit Maintenance
09-Sep-19	26-Sep-19	OA	7	Unit Inspection
09-Sep-19	11-Oct-19	FP	4	Annual Maint. Ext. and Doble Test Unit Transformer

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Start Date	End Date	Project	Unit #	Description
16-Sep-19	19-Sep-19	FR	6	Unit Inspection
16-Sep-19	19-Sep-19	GA	3	Unit Inspection
23-Sep-19	03-Oct-19	FR	7	Unit Maintenance
23-Sep-19	03-Oct-19	GA	2	Unit Maintenance
30-Sep-19	18-Nov-19	OA	5	Unit Inspection/ Generator relay installation
07-Oct-19	11-Oct-19	BB	7	Unit Inspection
21-Oct-19	31-Oct-19	FR	8	Unit Maintenance
21-Oct-19	07-Nov-19	BB	8	Unit Maintenance
21-Oct-19	27-Nov-19	OA	3	Unit Maintenance/Generator Relay Install
21-Oct-19	25-Oct-19	FP	Swd #2	Doble AT2 and Functional Test Swd #2
31-Oct-19	31-Oct-19	GA	2	Black Start Exercise
04-Nov-19	22-Nov-19	FP	5	Annual Maint. & Doble Test Unit Transformer

## Tentative Corps Outage Schedule for CY 2020-2035

Start Date	End Date	Project	Unit #	Description
FY20		BB	1-8	Reconditin draft-tube liner, cavitation repair, paint turbines
FY20		BB	1-8	Replace generator breakers
FY21		GP	1,2,3	Replace turbine generator oil
FY21		FR	1,2,3	Phase 1 Rehab Unit 1-3
FY21		OA	1-7	Turbine and discharge ring cavitation repair
FY21		FP	4 & 5	Generator rewind
FY22		OA	1	Unit circuit breaker replacement
FY22		GA	Units 1-5	Repaint penstock gates and lifting beams
FY22		GA	Unit 2	Repaint/repair interior of surge tanks
FY22		FP	Swd #2	Switchyard 2 rehab
FY22		FP	1-5	Generator cooling water system replacement
FY23		FR	4,5,6	Phase 2 Rehab Unit 4-6
FY23		FP	1-5	Rehab butterfly valves
FY26		FR	7,8	Phase 3 Rehab Unit 7-8
FY27		GP	1,2,3	Generator Rewind
FY31		GA	Units 1-5	Exciter Replacement
FY31		FP	1 & 3	Turbine replacement
FY33		GA	Units 1-5	Governor Replacements
FY35		OA	1-7	Turbine, generator, transformers replacement]