

# Columbia Generating Station Long-range Planning

### What is Long-range Planning?

The act or process of making or carrying out plans involving or taking into account a long period of time. Long-range planning for our purposes is the process of allocating budget to work that maintains or enhances the value of Columbia Generating Station or reduces the long term costs of operation. It's also a forecast of how we plan to spend projected resources within the organization. The budget and the long-range plan provide us with milestones and financial limitations within which we must operate.

The long-range projects plan contains less certainty for each year into the future. Our level of confidence is high for the current fiscal year, less so for the next, and even less for the one after that. Implementation of the Three-phased approach to projects is beginning to help us understand future fiscal years in more detail. The LRP is created through is a business planning process that develops and executes multi-year plans that support safe, reliable and cost-effective operation of Columbia.

The LRP is actually a series of documents that identifies costs and projects for the next ten years. The top tier document provides an overview of expenses and cost of power. The second tier documents are the long range plans maintained by PRC, ITPRC, and FPRC. These plans have the details for each Capital and O&M project by fiscal year. The details from the individual projects are combined and used to input to the BPA forecast plan.

### Why is the LRP IMPORTANT?

The goal of the LRP is to maximize the value of the station as a regional asset until the end of the plant's operating license. To reach that goal the plant must operate in a reliable, cost responsible manner. Long-range planning supports equipment reliability, replacement of obsolete systems and components, station business initiatives, and the resource planning to support the resulting work. BPA uses the data from the LRP in establishing their rate cases for the region. An accurate LRP is necessary to be able to predict the future cost of power from Columbia.

### Our Goal:

The development, implementation and maintenance of a predictable, reliable and fiscally responsible Long-range Plan (LRP) utilizing a phased approach to project execution Discovery and consideration of plant projects is done on a continuing basis. During the year, projects are evaluated and ranked as they are reviewed. In the fall of each year the various approval committees take their project lists and apply a "cut-line" based on a risk assessment of the work and the fiscal year budget in the budget plan. An effort is made to ensure that scoping and estimating projects are included to ensure that large or complex projects have adequate support in the



We use work management process to initiate work activities. Anyone may initiate an activity for evaluation. The Plant Project Review Committee (PRC) design review group reviews the activity for feasibility. If the project is practical, then it goes to the PRC for review. Projects over \$250k get a business case to further evaluate options and returns on investment.

The PRC is composed of members from Operations, Maintenance, Outage Management, Engineering and Asset Management. They approve a ranking and funding for the project. The project then goes on the list for the appropriate fiscal year to compete with other projects. Projects are selected in priority by ranking.

Each year, Sr. Management reviews and approves the project list for the next fiscal year. They review and approve changes to the Long-range Plan with a focus on completing critical work. The Executive Board approves the fiscal year project list with the annual budget.

Calendar Year	2010	2011	20	12	20	13	20	14	20	15	20	16	20	17	20	18	20	19	
Item Description	FY11		FY12		FY13		FY14		FY15		FY16		FY17		FY18		FY19		FY20
	BPA Ra	te	BPA F	Rate	e Period		BPA	Rat	e Period		BPA F	Rat	e Period		BPA F	Rate	e Period		
Direct and Indirect O&M Costs																			
Baseline costs	\$ 119,91	7 \$	121,651	\$	116,347	\$	114,966	\$	114,810	\$	112,999	\$	113,434	\$	113,346	\$	111,885	\$	116,969
Outage Costs (Incremental)	38,70	4	932		20,700		932		20,700		932		17,078		932		17,078		518
Admin / General (A&G) O&M includes escalation	60,64	8	69,062		72,466		73,699		76,745		84,664		88,467		92,550		97,104		103,524
O&M Projects	50,04	3	9,392		42,981		10,143		43,652		8,302		41,814		8,362		40,832		8,358
Facilities O&M Projects	75	2	569		569		621		621		621		621		-		621		-
Information Technology O&M Projects	75	2	160		492		492		233		595		295		160		1,656		160
O&M Risk Reserve	1,59	3	859		2,070		776		1,656		518		1,656		518		776		518
Outage Risk Reserve	1,09	5	-		1,122		-		1,123				1,035		-		1,035		-
Baseproj Contingency	31	2	518		518		518		518		518		518		-		518		-
Subtotal Direct & Indirect O&M Costs	\$ 273,81	6\$	203,143	\$	257,265	\$	202,147	\$	260,058	\$	209,149	\$	264,918	\$	215,868	\$	271,505	\$	230,047
Escalation on Direct & Indirect	-		4,693		13,163		13,963		27,043		23,363		40,451		33,576		55,251		45,913
Subtotal Direct & Indirect O&M Costs	\$ 273,81	6\$	207,836	\$	270,428	\$	216,110	\$	287,101	\$	232,512	\$	305,369	\$	249,444	\$	326,756	\$	275,960
Capital Costs																			
PHC Capital Projects	\$ 38,21	2 \$	13,175	\$	21,727	\$	8,825	\$	20,559	\$	7,959	\$	21,140	\$	7,580	\$	25,607	\$	11,211
Moveable Capital & Downtown Capital Projects	1,72	0	1,346		1,346		1,346		1,346		1,346		1,346		1,346		1,346		1,346
Facilities Capital Projects	29	9	10,258		6,200		5,693		1,553		2,329		2,846		1,811		1,811		1,811
Information Technology Capital Projects	5,94	3	5,183		6,227		7,642		6,185		5,915		6,022		9,587		6,435		6,624
Admin / General (A&G) Cap includes escalation	7.31	4	8.000		8,100		3,500		6.365		3.623		6.365		3.623		6.521		3.623
Capital Risk Reserve	2,23	7	3,877		4,028		2,330		3,389		1,983		3,518		1,922		3,867		2,070
Main Condenser Replacement includes escalation	40.87	0	8.460		-		-		-		-		-		-		-		-
Subtotal Capital Costs	\$ 96,59	5 \$	50,299	\$	47.628	\$	29.336	\$	39,397	\$	23,155	\$	41.237	\$	25.869	\$	45.587	\$	26.685
Escalation on Capital Costs	-		1,184	·	2,813		2,809	Ľ	4,872	Ľ	3,665	Ľ	7,994	Ľ	6,057	•	12,376	Ľ	8,369
Subtotal Capital Costs	\$ 96,59	5\$	51,483	\$	50,441	\$	32,145	\$	44,269	\$	26,820	\$	49,231	\$	31,926	\$	57,963	\$	35,054
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Fuel Related Costs																			
Nuclear Fuel Amortization	\$ 30.58	3 \$	43.555	\$	38.081	\$	49.847	\$	46.013	\$	61.734	\$	56.985	\$	69.471	\$	64.502	\$	74.224
Spent Fuel Fee	7,08	5	8,918	·	8,280	Ľ	9,078	Ċ	8,280	Ľ	9,078	Ľ	8,280	Ľ	10,200	•	8,600	Ľ	8,900
Subtotal Fuel Related Costs	\$ 37,66	8 \$	52,473	\$	46,361	\$	58,925	\$	54,293	\$	70,812	\$	65,265	\$	79,671	\$	73,102	\$	83,124
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Total Unescalated Budget	\$ 408,07	9   \$	305,915	\$	351,254	\$	290,408	\$	353,748	\$	303,116	\$	371,420	\$	321,408	\$	390,194	\$	339,856
Total Escalation	-		5,877		15,977		16,771		31,915		27,028		48,445		39,633		67,627		54,282
Total Costs - Industry basis	\$ 408,07	9 \$	311,792	\$	367,231	\$	307,179	\$	385,663	\$	330,144	\$	419,865	\$	361,041	\$	457,821	\$	394,138
Total Net Generation (Gwh)	7,39	5	9,383		8,313		9,383	I	8,507		9,383		8,558		9,383		8,598	ł	9,383
Outage Days	7	8	-		40		-		31		-		29		-		27		-
Cost of Power (Cents per kWh, constant FY11\$)	5.51	8	3.260		4.225		3.095		4.158		3.230		4.340		3.425		4.538		3.622
Cost of Power (Cents per kWh, escalated)	5.51	8	3.323		4.418		3.274		4.534		3.519		4.906		3.848		5.325		4.201

**Key Assumption/Qualifications** Escalation Rate = 3.5% starting FY 11 Exception Flex Benefits @ 9% in FY11 and FY12, and 7% thereafter Net generation calculations includes benefits of new condenser Fuel Amortization updated 08-08-07 Condenser materials costed in FY09/10/11/12

## **Project Review Committee Project Determination**

The Project Review Committee (PRC) uses the project ranking form shown below to determine a score for each project with a total cost above \$50,000, or that require a wide cross section of resources to execute. The Project Manager (PM) determines the initial ranking based on the type of problem and the multiplier which weighs the ranking with the perceived urgency needed to address the problem. When the PRC reviews the project, they can agree to the suggested ranking or change the ranking of a project. The total project score is the sum of the ranking value and the urgency multiplier.

		PROJECT RANKING	FORM			
ub-		AR NUMBER: Screened By:				
lank		Subject:				
	(	SAFETY	RANKING		MULTIPLIER	TOTAL
		Nuclear Safety (preferably based on high PSA significance)	5	х		
		Safety concern that could lead to an accident or injury	5	х		
₫	$\left  \right\rangle$	Fire Safety (5 ranking for essential systems that support Post-Fire Safe Shutdown and 3 ranking for non-essential fire systems)	5 3	x		
		Regulatory Commitment	4	x		
		Radiological Safety/ALARA	4	х		
		Reactivity Management Event and Precursor	4	x		
		Design Issue corrected to maintain full Qual.(Low PSA Significance	2	Х		
			PANKING			τοται
		Maintenance Rule (a)(1) Corrective Action	5	x	MOLTIPLICK	
		System Health Red or Yellow Corrective Action "Road to Green"	5	x		
		Root Cause CAPRS	5	x		_
-		Obsolete Critical Equipment with No Spares	5	x		_
		Supports Critical Equipment PM	4	x		_
<b>~</b>		Repeat Unexpected Corrective Maintenance	4	x		
		Temporary Modification Change Closure	4	x		
		Chronic Problem	4	x		_
		Operator Work Around / Challenges	4	x		_
		Program/Component Health Red or Yellow Corrective Action "Road to Green"	4	x		
	>	Obsolete Critical Equipment with Spares	4	×		
		Other Obsolete Equipment	3	×		
6		Security Equipment	3	X		
`//		Supports Corrective Work Requests	3	x		
L	1	Rework Elimination	3	x		
		Control Room Deficiencies	3	×		
		Emergency Preparedness Improvements	3	x		
		Control Room Distraction	2	x		
		Others (i.e., Cost vs. Benefit)	1	x		
	6	PRODUCTION (SHORT TERM)	RANKING		MULTIPLIER	ΙΟΙΑΙ
		Forced outage reduction	5	X		
		Prevent power reduction > 20%	5	X		
н.	1	Improved thermal efficiency	4	X		
	)	Reduced outage length	4	X		
		Abandoned Equipment	2	Х		
		Others (i.e., Cost vs. Benefit)	1	X		
		RANKING x MULTIPLIER = PHC Total Ranking Score:				
		How long has this condition existed? Years				
		is this a generic industry issue?				
		Is there an OE to reference				

The Information Technology Project Review Committee uses a similar process that takes into account technology concerns and issues with the difficulty in implementing new software.

Projects may be re-ranked based on changes in plant conditions or station initiatives. When this happens, the project manager does an evaluation to determine the new ranking and takes it back to the PRC for approval of the revised ranking.

For funding purposes the ranking list is broken up into 4 sections based on the priority of the ranking criteria. A project that is ranked in the "Safety" category gets a sub-score of "4". Material Condition Improvements are broken up into a "3" and a "2", and Short Term Production issues are given a "1".

As an example, lets look at upgrades to the Reactor Manual Control System. We can no longer obtain parts and this system is critical to managing reactor power. This makes it a "Reactivity Management Event" issue since it deals with moving Control Rods. The issue isn't an immediate threat to reactor safety, but needs time to be corrected. The PM thinks we need to aggressively work on this issue.

Reactivity Management Event = 4 Aggressive Completion Needed = 4 Safety Related Sub-rank = 4 Project ranking = 16 - 4

Multiplier	Description
5	Short term implication or limited options that correct existing or imminent condition; threatens health or safety of the public / plant personnel; results in plant shutdown; or delays startup or return to service.
4	Aggressive completion necessary to prevent future condition, or hinders response to accident/transient. Add 0.2 for each additional applicable category: Operations Aggregate Index; Radiation Reduction; Obsolete Component, Deficiency Greater Than Two Years Old
3	Items which help to improve or maintain operation are economically justified but not urgent to resolve. Add 0.2 for each additional applicable category: Operations Aggregate Index; Radiation Reduction; Obsolete Component, Deficiency Greater Than Two Years Old
2	Management discretion items, which may include intangible benefits such as improvement in employee morale and plant appearance. Add 0.2 for each additional applicable category: Operations Aggregate Index; Radiation Reduction; Obsolete Component, Deficiency Greater Than Two Years Old
1	Items which could potentially add value but show little short-term benefit.

FY11/FY12 P	roject Review	Committee	Preliminary	Project List
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				F	Y11 (R20)				FY12		
Project	Title	Rank	Phase	\$ENL	\$NENL	\$Total	Phase	\$ENL	\$NENL	\$Total	
	Moveable Capital	25 - 5			1000	1,000.0			1000	1,000.0	
00505004	Downtown Building Upgrades	25 - 5		000.0	300	300.0		000.0	300	300.0	
00595001	Penlace Main Transformer M4	25-4		360.0	1/5.0	535.0		200.0	3,980.0	4,180.0	
00613001	Replace Main Transformer M4	25 - 3	2	100.0	1 1 4 0 0	200.0		100.0	150.0	250.0	
402501	Peedwater Heater Level Controller, Positioners, Transmitters	21-3	3	150.0	1,140.0	1,290.0				0.0	
49350	Replace Main Generator Rotor	20 - 4	3	175.0	6,000.0	6,100.0				0.0	
01262501	CW P 1A 1P 1C Pamova Poplace & Pofurbish Pump	20-4	2	175.0	422.0	400.0	2	00.0	402.0	505.2	
01203001	DEW P 14 18 Pomovo Poplaco, Pofurbich Pump	20-4	3	02.2	423.0	303.2		02.2	423.0	0.0	
01203901	COND P 2A 2B 2C Remove Replace Refurbish number	20-4	3	22.0	200.5	2.0				0.0	
00820801	Plant Fire Detection System Ungrade	20-4	3	61.1	2 0 1 9 2	2 080 3	3	75.2	1 660 4	1 735 6	
00020001	Critical Sparse	20 - 4	3	50.0	450.0	2,000.0		1.5.2	1,000.4	1,735.0	
01164001	Modify NS4 Logic to Close MSIVs at Level 1	20-4	3	59.3	608.0	756.3				0.0	
00000501	Vekagewa Beserdere	20-4	2	30.0	120.0	130.0				0.0	
01042401	Poplage TD N1	20-3	3	40.0	1 400 4	1.09.0				0.0	
01043401	HPCS Voltage Regulator Replacement	20-3	3	10.0	1,400.1	1,423.0				0.0	
00100301	HPCS Vollage Regulator Replacement	20-3	3	0.0	200.0	250.0				0.0	
40004004	Applies Governor Replacement	20-3	3	0.0	0.00	0.000			400.0	0.0	
18204301	On Line Noble Chem Application	10.8 - 3	3	20.0	3,870.0	3,890.0		1.0	400.0	400.0	
01/34101	Iviain Transformers Unline Dissolved Gas Monitor	16.8 - 3	3	7.5	167.0	1/4.5	3	4.9	111.4	116.3	
01613301	TSW Pump Swap Logic	16.8 - 3	2,3	16.0	66.0	82.0			L	0.0	
00100101	CFD Filter Replacement	16 - 5		25.4	116.9	142.3		25.4	116.9	142.3	
00100201	LPRM Procurement	16 - 5	3	181.8	900.0	1,081.8	-			0.0	
00104201	Control Rod Blade Procurement	16 - 5	3	30.0	1,100.0	1,130.0				0.0	
01264001	COND-M-P/1A,B,C Motor Remove, Replace, Refurbish	16 - 5	3	38.0	469.8	507.8				0.0	
00119101	Replace Process Rad Monitors	16 - 4	3	26.0	300.0	326.0	3	29.4	184.0	213.4	
00131401	Plant License Extension/Renewal	16 - 4	3	0.0	4,137.0	4,137.0	3	0.0	1,764.0	1,764.0	
00448701	Scram Discharge Volume Instrument Mods.	16 - 4	3		1,000.0	1,000.0			ļ	0.0	
01378501	Reactor Manual Control Syst Upgrade	16 - 4	1	75.0	150.0	225.0	2	150.0	2,500.0	2,650.0	
00608601	Main Condenser Replacement	16 - 4	3	0.0	30,600.0	30,600.0		0.0	8,460.0	8,460.0	
01096101	Upgrade transformer yard oil collection	16 - 4	3	70.0	494.0	564.0				0.0	
01479301	Dose Reduction (Formerly Stellite Reduction Components)	16 - 4	3	300.0	900.0	1,200.0	3	50.0	250.0	300.0	
00131701	Shield DW Travel Paths	16 - 4		149.6		149.6				0.0	
00709201	Main Condenser Waterbox Drains on West Side	16 - 4	3	0	70.1	70.1				0.0	
19203501	ECCS Strainers - GSI 191 Impact	16 - 4	3	146.0	512.0	658.0	3	41.6	2.4	44.0	
17774501	LPCS-P-1 Remove, Replace, & Refurbish Pump	16 - 3	3	75.0	340.0	415.0				0.0	
01177701	RHR-P-2A, 2B, 2C Remove, Replace, Refurbish Pump	16 - 3				0.0	3	75.0	340.0	415.0	
01159301	COND-P-1A, 1B,1C Remove, Replace, & Refurbish Pump	16 - 3	3	12.0	200.0	212.0				0.0	
00332101	Digtial Fault Recorder (Replaces Oscillograph)	16 - 3	3	9.6	65.0	74.6				0.0	
00291401	Replace Seal Steam Pressure controllers	16 - 3	3		463.0	463.0				0.0	
00482501	Replace Moisture Seperator Reheater Tube Bundles	16 - 3	1	30.0	200.0	230.0	2	100.0	500.0	600.0	
00612801	Replace Main Power Transformers	16 - 3	1	10.0	100.0	110.0	2	75.0	4.000.0	4.075.0	
01264101	COND-M-P/2A, B, C Motor Remove, Replace, Refurbish (wa	16 - 3	3	41.2	229.0	270.2				0.0	
00992101	Replace the CAS/SA Compressors	16 - 3	3	25.0	100.0	125.0	2	25.0	200.0	225.0	
01206601	TSC Power Source (Management Discretion)	16 - 3		0.0	0.0	0.0	2	35.4	60.0	95.4	
01286001	Install Permanent Platforms in Plant	16 2	2	25.0	762 5	797 5	0	25.0	762 5	797 6	
0120000	Modify CW Pining to Support Draindown/Temp TSW	16 2		20.0	1 300.0	1 325 0	· ·	20.0	102.5	101.0	
00365504	Stack Monitor Ungrade	16 2	0	20.0 60.0	404.7	1,020.0	0	EAE	520 P	502.4	
00305501	Main Steam Pressure Switches are Obsolete	16 2	2	03.8	404.7	406.0	3	04.0	030.0	093.1	
17705001	Replace DG 2 with Spare Generator	16 2	2	190.0	405.0	675.0	-		-	0.0	
00574104	Replace the Main Generator Voltage Pegulator	16 2	4	40.0	-190.0	40.0	2	150.0	1 000 0	1 150 0	
00156101	Removal of RSCS Rod Blocks from DMCS	16 3	2	40.0	52.0	40.0	2	100.0	1,000.0	1,150.0	
00230101	Remote Vibration Monitoring Non-critical Fans	16-2		10.0	55.0	03.0	2	200.0	80.0	280.0	
01264501	CW-M-P/1A 1B 1C Remove Replace & Refurbish Motor	16-2	2	122.0	264.0	386.0	2	122.0	264.0	386.0	
00415504	PHP M D/2A 2B 2C Demove Deplace, & Relational Motor	16 2	0	17.0	204.0	200.0		144.0	2.04.0	0.0	
17720404	PCIC Turbine Speed Control Ungrade	16 2	3	17.9	200.0	308.4	-	50.0	105.0	10/ 0	
01200404	Perloament of Whole Pedey Contamination Maniferr	10-3		40.0	400.0	120.0	2	59.2	125.0	184.2	
19539504	DEL Equipment Incentive Bourgert, Contract #200004	16 1	3	10.0	120.0	130.0	3	10.0	140.0	130.0	
10028501	Den Equipment incentive Payment, Contract #320931	10-1				0.0	3	EG 0	110.0	F6.0	
00005404	Inceptate Coulling Dreakers on Transformers	10 - 1				0.0	$\frac{2}{2}$	0.00		0.00	
00220404	Dy Building 606' Office Structure	15-4	-	45.0	000.0	0.0	<u> </u>	0.00		0.00	
00229101	Inst Duilding 606 Office Structure	15-4	3	15.0	228.0	243.0				0.0	
00185301	Deplace SM Chiller & Values SM V 0004 (0004 (0004)	15-3	3	89.0	417.0	506.0				0.0	
00/43501	Replace SW Uniller A valves SW-V-822A/823A/224A	15-3	3	0.0	255.6	255.6			0.0	U.0	
010/1401	Upgrade Trip Logic for CBP LOW Suction Pressure Trip	15-3	3	0.0	561.8	561.8		3	0.0	561.8	
010/2801	Upgrade trip logic RFT ni exn temp	15-3	3	6.4	336.9	343.3				0.0	
007 19201		15-2		10.0	4,200.0	4,210.0				0.0	
00278301	KHK-FUV-64A, B, C	15-1		0.0	0.0	0.0	2	90.0	0.0	90.0	
00148501	Seal Oil Skid Filter Replacement	15 - 1	3		260.0	260.0	-	10.5		0.0	
00614401	Evaporator Steam Supply Control	15 - 1	1	25.0		25.0	2	43.0	4 0 0 0 1	43.0	
01/09501	Retire/Replace TDAS and PPC	12.8 -3	1	-	100.0	100.0	2		1,000.0	1,000.0	
00985301	Replace REA-FN-1A Online Modifications	12.8-1	3	0.0	71.0	71.0					
00128301	Install RFT BS Low point drain	12 - 3	3	42.4	8.0	50.4	1			0.0	

Currently above budget cut-line for execution in FV11 and/or FV12

Below this point projects will be moved to next available slot for planning/ execution

### Project lists are for EXAMPLE ONLY and may differ from the approved project lists.

**Legend** \$ENL- Internal Labor \$NENL- Non Labor Costs Phase– Scope/Design or Installation

FY11/FY12	<b>Project Review</b>	Committee	Preliminary	<b>Project List</b>
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				F	Y11 (R20)		FY12				
Project	Title	Rank	Phase	\$ENL	\$NENĹ	\$Total	Phase	\$ENL	\$NENL	\$Total	
00165301	Vibration Instrumentation for TG and RFW Obsolete	12 - 3	3	8.8	407.2	416.0				0.0	
00263801	Replace Pneumatic Relays	12 - 3	3	25.2	16.6	41.8				0.0	
00301701	Replace Gen RF Monitor	12 - 3	3	12.0	70.0	82.0				0.0	
00533101	Main Generator Lead Box Seal Repair	12 - 3	3	20.0	300.0	320.0				0.0	
00804401	Seismic System Replacement	12 - 3	3	50.0	230.0	280.0				0.0	
00908001	Replace TSW-PC-20 - Design Only	12 - 3	2	1.8	12.0	13.8				0.0	
00953401	Install Pole-top Disconnects for E-TR-B (Safety)	12 - 3	2,3	59.4	87.9	147.3				0.0	
00966401	Differential Protection to Distribution Transformers	12 - 3	1	6.0	0.0	6.0	2	30.0	55.0	85.0	
01641101	FPC-CP-1 Upgrade Timers and Controllers	12 - 3		0.0	0.0	0.0		93.0	0.0	93.0	
00124501	Replace Heat Exchanger RCC-HX-1A,B,C	12 - 2		0.0	0.0	0.0	2	15.0	80.0	95.0	
00572701	HD Tank Discharge Pipe Support Design	12 - 2		0.0	0.0	0.0	2	25.0	100.0	125.0	
00792301	Replace ASD Fortress Display - Design Only	12 - 2		0.0	0.0	0.0	2	50.0	0.0	50.0	
18097901	MT-CRA-2 Load Cell Displays	11 - 4					2	64.0		64.0	
01071801	Upgrade failure logic on AR-V-1 to reduce SPV potential	10 - 1				0.0	3	72.0	50.0	122.0	
01043701 Replace SW Piping Downstream SW-RO-2A		9 - 2	3	6.4	139	145.4		0.0	0.0	0.0	
00628701 SRM/IRM Replacement		9 - 2		0.0		0.0	2	50.0	360.0	410.0	
01691401	01691401 Digital Backbone for Power Block				0.0	0.0	1	10.0	150.0	160.0	
00847201	Install Voltage and Frequency Transducers on 115V and 230	08 - 3	3	48.0	5.0	53.0			0.0	0.0	
00848601	E-GEN-1 Install Torsional Vibration Monitoring Equipment	08 - 3		0.0	0.0	0.0	2	32.0	0.0	32.0	
01710201	Replace RRC-FT-14A-D & 24A-D	06 - 2	2	16.0	80.0	96.0	3	15.2	40.0	55.2	
00705201	E-EXC-1, Replace Main Generator Exciter	PHC	1	50.0	0.0	50.0	2	150.0	3,000.0	3,150.0	
00909701	E-GEN-1, Replace Main Generator Lead Bushings	PHC	1	50.0		50.0	2	50.0	150.0	200.0	
01264901	LPCS-M-P/1 Remove, Replace, & Refurbish Motor	16 - 3	3	17.9	288.5	306.4				0.0	
01403601	Replace Transformer TR-N2	PHC		0.0	0.0	0.0	1	15.0	75.0	90.0	
01678001	Replace Transformer TR-S	<b>∕</b> PHC \				0.0	1	15.0	75.0	90.0	
01544601	TIP System Upgrade	/ PHC	1	30.0		30.0	2	100.0		100.0	
01794101	Chemistry Lab Upgrades	PHC	1	100.0	0.0	100.0	2	100.0	650.0	750.0	
01795801	795801 Adopt NFPA 805			0.0	0.0	0.0	3	300.0	1,000.0	1,300.0	
01792801	SCC Upgrade/Refurb	V PHC	3	20.0	55.0	75.0				0.0	
17633001	Replace Video Capture	VEHC/	1			0.0	2	48.0		48.0	
	Capital Budgets (w/o Condenser funding) /					43,151.0				22,150.0	
	Capital Budget (including Condenser project) /					73,751.0				30,750.0	
	Capital Totals (includes Condenser project)			3,666.2	73,060.8	76,727.0		3,181.0	36,187.2	39,927.0	

Project lists are for EXAMPLE ONLY and may differ from the approved project lists.

Projects waiting for priority ranking by the approval committees. These ay move up the list based on their importance to the station, or they may be assigned to future fiscal years.

The overall goal of the station is to discover as much as possible about what needs to be done; make reasonable decisions about how soon the problems need to be addressed, and take into account our ability to complete the work safely, on time and within budget. With the conclusion of refueling outage 21 in FY13, all of the critical pumps and motors will have been replaced or refurbished to new condition. We anticipate having major pump and motor work every 15-20 years based on current industry experience. This means that beginning sometime around FY19 or FY20, we will see a budget increase to accommodate another round of motor and pump work. Good long-range planning should allow us to coordinate this work to ensure a minimal impact on the station's budget.

Equipment obsolescence is probably the other big issue. Most of the technology used in the plant was conceived in the late 1970s. Many of the original vendors of plant equipment no longer exist, or no longer manufacture parts and supplies. As we continue to operate, systems will need to be replaced as they reach the end of their useful lives. Where possible, we will anticipate and carefully plan for these upgrades in an effort to mitigate associated costs.

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Project         Title         Rank         Phase         EX.         NENL         STotal         Nence         Stotal					FY1	1 (R20)		Í			
T3:32401         Minor Mode (commery Quark Kills)         25         3         350.0         350.0         350.0         300.0         350.0         300.0         350.0         300.0         350.0         300.0         350.0         300.0         350.0         300.0         350.0         300.0         350.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0         250.0 <th< th=""><th>Project</th><th>Title</th><th>Rank</th><th>Phase</th><th>\$ENL</th><th>\$NENL</th><th>\$Total</th><th>Phase</th><th>\$ENL</th><th>\$NENL</th><th>\$Total</th></th<>	Project	Title	Rank	Phase	\$ENL	\$NENL	\$Total	Phase	\$ENL	\$NENL	\$Total
0024601         Vessel Services         25 - 5         3         150.0         62.00         25.00         25.00         25.00         25.00         25.5         150.00         6.00         14.00         20.00         6.00         14.00         20.00         6.00         14.00         20.00         6.00         14.00         20.00         6.00         14.00         20.00         6.00         14.00         20.00         6.00         14.00         20.00         6.00         14.00         20.00         15.00         15.00         25.60         28.64         6.00         14.00         20.00         15.00         25.75         10.00         15.00         25.75         10.0         18.00         10.00         15.00         25.75         10.0         16.50         16.50         10.0         17.00         12.4         30.00         34.60         10.0         15.00         12.750         0.0         11.00         11.00         11.00         11.00         11.00         11.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.0<	01302401	Minor Mods (formerly Quick Kills)	25 - 5	3	· ·	350.0	350.0	3		350.0	350.0
01368601       Quitage Temp Power       25 - 5       100.0       1.00.0       1.20.0       0.0         013827801       Parting and Upkeep       25 - 5       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       200.0       60.0       140.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0       100.0 <td< td=""><td>00246501</td><td>Vessel Services</td><td>25 - 5</td><td>3</td><td>150.0</td><td>6,100.0</td><td>6,250.0</td><td>2</td><td>50.0</td><td>215.0</td><td>265.0</td></td<>	00246501	Vessel Services	25 - 5	3	150.0	6,100.0	6,250.0	2	50.0	215.0	265.0
1822701         Painting and Upkeep         25 - 5         60.0         140.0         200.0         60.0         140.0         200.0           00130301         Emergency Disel Cenerator Maint (DC-1DC-2DC-3)         20 - 4         3         450.0         3000.0         3450.0         2         12         18.7         30.00         3450.0         2         12         18.7         30.00         3450.0         2         12         18.7         30.00         19.4         34.50         210.0         284.0         10.0         16.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0 <td< td=""><td>01356601</td><td>Outage Temp Power</td><td>25 - 5</td><td></td><td>100.0</td><td>1,100.0</td><td>1,200.0</td><td></td><td></td><td></td><td>0.0</td></td<>	01356601	Outage Temp Power	25 - 5		100.0	1,100.0	1,200.0				0.0
01833701         Landiti 018-11 Remediation Support         20-4         95.5         10.0         69.5         2         200           00103001         Terrestrot Maint (Dc-1/DC-2/DC-3         3         45.0         21.000.0         3450.0         2         120         18.7         30.0           00101001         Stote Teshing/Inspection         20-4         3         45.0         21.00         17.6         51.00.0         52.7         0         0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0	18267801	Painting and Upkeep	25 - 5		60.0	140.0	200.0		60.0	140.0	200.0
00103011         Energency Desel Generator Maint (DG-1/DG-2/DG-3)         20-4         3         450.0         30000         3450.0         2         12         18.7         50.0           00101401         March Generator Maintenance         20-4         3         450.0         3000.0         3         124.8         396.2         1061.0         3         124.8         396.2         1061.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         200.0         250.0         2         50.0         200.0         250.0         2         50.0         200.0         250.0         2         50.0         200.0         250.0         2         50.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0 <t< td=""><td>01833701</td><td>Landfill 618-11 Remediation Support</td><td>20 - 4</td><td></td><td>59.5</td><td>10.0</td><td>69.5</td><td></td><td></td><td></td><td>0.0</td></t<>	01833701	Landfill 618-11 Remediation Support	20 - 4		59.5	10.0	69.5				0.0
00101101         Main Generator Maintenance         20 - 4         3         4500         30000         34500         2         12         18.7         30.0           00110101         Computer Elect Winng Diagram Drawings         20 - 4         3         124.8         9382.1         1061.0         100.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         105.0         100.0         105.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.	00103501	Emergency Diesel Generator Maint (DG-1/DG-2/DG-3	20 - 4	3	15.0	140.0	155.0	2	260	385	645.0
00101401         Subber TestingInspection         20 - 4         3         45.0         219.0         284.0         10.0         10.0           0144001         Complete Elect Winney         20 - 4         3         124.8         306.2         106.1         3         124.8         306.2         106.0         185.0         195.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0         110.0 <td< td=""><td>00104101</td><td>Main Generator Maintenance</td><td>20 - 4</td><td>3</td><td>450.0</td><td>3.000.0</td><td>3.450.0</td><td>2</td><td>12</td><td>18.7</td><td>30.7</td></td<>	00104101	Main Generator Maintenance	20 - 4	3	450.0	3.000.0	3.450.0	2	12	18.7	30.7
01440101         Complete Elect Wring Diagram Drawings         20 - 4         31         124.8         996.2         106110         31         124.8         996.2         106110         31         124.8         996.2         106110         31         124.8         996.2         106110         31         124.8         996.2         106110         31         124.8         996.2         106110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         100110         1001100         1001100         1001100         1001100         10011000         10011000         10	00101401	Snubber Testing/Inspection	20 - 4	3	45.0	219.0	264.0		10.0		10.0
Display         20-4         0.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0         185.0	01440101	Complete Elect Wiring Diagram Drawings	20 - 4	3	124.8	936.2	1 061 0	3	124.8	936.2	1 061 0
07178601         RCS Chemical Decontamination         20-4         3         7750         51000         5220         10000         10000           01201501         Dyer Regen Skid Removal         17.6-3         1         32.0         125.0         175.0         2         0           0071201501         Durine Building Outage Facility         16.8-3         2         75         119.3         119.3         141.0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <td>00595002</td> <td>ISESI Campaigns</td> <td>20 - 4</td> <td></td> <td>0.0</td> <td>165.0</td> <td>165.0</td> <td></td> <td>0.0</td> <td>165.0</td> <td>165.0</td>	00595002	ISESI Campaigns	20 - 4		0.0	165.0	165.0		0.0	165.0	165.0
01210100       Proper Regen Skid Removal       17 6-3       13200       1125.0       157.0       2       141.0         10522011       Control Room Emergency Chiller Deactivation       16.8-3       125.0       0.00       75.6       3       26.0       5.0       31.0         101000011       HCU Maintemance       16.5       3       1251.0       0.00       75.6       3       26.0       5.0       31.0         101000011       HVI RE Addy Current Support       16.5       3       100.0       150.0       250.0       250.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0       280.0	00718501	RCS Chemical Decontamination	20 - 4	3	175.0	5 100 0	5 275 0		0.0		0.0
1632631         Turkine Building Outage Facility         168.3         2         1703         1103         1103         1103         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1013         1014         1014         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1111         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011         1011	01201501	Drver Regen Skid Removal	17.6-3	1	32.0	125.0	157.0	2			0.0
007971201         Control Room Energency Chiller Deactivation         16.8         2         7.6         10.0         7.6         3         2.6.0         5.0         31           001100001         HCU Martanance         16         5         3         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.251.0         0.0         1.250.0         2         5.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0         280.0	01592501	Turbine Building Outage Facility	16.8-3		02.0	110.0	110.3			141.0	141 0
Contraction         Contract Control         Contro         Control         Control <td>01332301</td> <td>Control Room Emergency Chiller Deactivation</td> <td>16.8-3</td> <td>2</td> <td>75.0</td> <td>0.0</td> <td>75.0</td> <td>3</td> <td>26.0</td> <td>5.0</td> <td>31.0</td>	01332301	Control Room Emergency Chiller Deactivation	16.8-3	2	75.0	0.0	75.0	3	26.0	5.0	31.0
D0100001         PM HTR Edity Current Support         10         0         150.0         0.0         150.0         20.0         21.0         20.0         21.0         20.0         21.0         20.0         21.0         21.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         22.0         <	00101201		16 5	2	1 251 0	0.0	1 251 0	5	20.0	0.0	0.0
Concent Prime         Concent Prim         Concent Prime         Concent P	00100001	EW HTP Eddy Current Support	16 5	3	1,231.0	345.0	364.0	2	10.0	210.0	220.0
Optimized Text         Optimization         Optimizatio	00100901	MOV Maintenance & Testing	10-5	3	100.0	150.0	304.0	2	10.0	210.0	220.0
00101101         ICRD RepairRefutivisin         16 - 5         3         42.6         1067.1         2113         0.0           00101201         CRD RepairRefutivisin         16 - 5         3         10.0         304.0         1.210.0         1.260.0         1.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0 <td>00101001</td> <td></td> <td>10-5</td> <td>3</td> <td>100.0</td> <td>100.0</td> <td>200.0</td> <td>2</td> <td>5.0</td> <td>200.0</td> <td>205.0</td>	00101001		10-5	3	100.0	100.0	200.0	2	5.0	200.0	205.0
OD 101 (PMD Fight Area         OB 0 - 3         Sol 0         I_2000         I_2000           00110301 (Relief Valve Rebuild) - Testing         16 - 5         3         10.0         30.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0 <td< td=""><td>00101101</td><td>CDD Deneir/Defurbieb</td><td>10-5</td><td>3</td><td>42.0</td><td>100.7</td><td>211.0</td><td></td><td></td><td></td><td>0.0</td></td<>	00101101	CDD Deneir/Defurbieb	10-5	3	42.0	100.7	211.0				0.0
OUT 1031         Inspect TV/GV/RFVSVIV         16 - 5         3         10.0         3.14.0         1.0         2.53         2.53           0011501         INSINDE         16 - 5         3         16 - 5         3         16 - 5         3         17.0         2.370.3         2230.9         53.0           00110101         INNUE         16 - 5         3         2.00.0         1.900.0         2         155         100.2         2.155         100.2         2.155         100.2         2.155         100.2         2.155         100.2         2.00.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	00101201	CRD Repair/Returbish	10-5	3	50.0	1,210.0	1,260.0		4.0	05.5	0.0
U0101501         Inspect IVRSVRSVSIV         16 - 5         3         165.0         2,450.0         2,400.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         2,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0         0,000.0	00101301		16-5	3	10.0	304.0	314.0		1.0	25.5	26.5
U01011011         ISINDE         16 - 5         3         370.3         4.349.0         4.719.3         2         370.3         233.0         243.0         983.6           00110701         Annual Transformer Yard         16 - 5         3         400.0         1,500.0         1,900.0         2         155         100         255.1         100         255.1         100         255.1         100         255.1         100         255.1         100         255.1         100         255.1         100         255.1         100         255.1         100         255.1         100         100.1         100         100         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0	00101501	Inspect IV/GV/RSVs/IV	16 - 5	3	165.0	2,435.0	2,600.0	3	0.0	0.0	0.0
00101701         Annual Transformer Yard         16 - 5         3         28.8         1,293.8         2         41.7         88.6         1300           0011080         FAC Pipe Min. Wall Inspection         16 - 5         3         50.00         750.0         1000         255.         100         255.           00102201         Condenser Eddy Current Support         16 - 5         3         50.0         70.00         750.0         0.0         0.0           00102201         Bypass Valve Inspection         Ispace Support         16 - 5         3         10.0         100.0         110.0         0.0         0.0           00102201         Bypass Valve Inspection         Ispace A         Rebuild MSRVs         16 - 5         3         12.0         60.00         612.0         0         0.0           00102301         Bian Turbine Inspection         16 - 5         3         388.5         689.3         10.67.8         2         11.7         40.0         16.0         10.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0	00101601	ISI/NDE	16 - 5	3	370.3	4,349.0	4,/19.3	2	370.3	223.0	593.3
00101801       FAC Pipe Min. Wall Inspection       16 - 5       3       400.0       1,500.0       1,900.0       2       155       100       250.0         00102101       MSR Inspection/Test       16 - 5       3       50.0       700.0       750.0       0       0.0         00102201       Condenser Eddy Current Support       16 - 5       3       50.0       750.0       2       0.0       0.0       0.0         00102401       Wetwell Inspection- Cleaning       16 - 5       3       262.0       88.0       350.0       2       115       40       155.0         0102201       Main Turbine Inspection       16 - 5       3       262.0       88.0       350.0       2       0       0       0.0         00102901       Main Turbine Inspection       16 - 5       3       160.4       531.0       727.4       2       148.9       62.6       211.7         00103901       Diversent Maint       16 - 5       3       50.0       49.68.2       5018.2       2       19.0       259.0       278.1         00130301       Diversent Maint       16 - 4       3       20.0       18.2       200.2       201.1       27.18       200.0       201.127.0       18.2	00101701	Annual Transformer Yard	16 - 5	3	28.8	1,265.0	1,293.8	2	41.7	88.6	130.3
00102101         MSR Inspection/Test         16 - 5         3         50.0         750.0         750.0         00           00102201         Condensez Eddy Current Support         16 - 5         3         750.0         750.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         00.0         <	00101801	FAC Pipe Min. Wall Inspection	16 - 5	3	400.0	1,500.0	1,900.0	2	155	100	255.0
00102201         Condenser Eddy Current Support         16 - 5         3         75.0         975.0         1,050.0         0.0         0.0           00102201         Dypass Vake Inspection         16 - 5         3         50.0         650.0         700.0         2         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0<	00102101	MSR Inspection/Test	16 - 5	3	50.0	700.0	750.0				0.0
00102301         Bypass Valve Inspection         16 - 5         3         50.0         700.0         2         0.0         0.0         0.0           00102401         Wetwell Inspection - Cleaning         16 - 5         3         10.0         100.0         110.0         0.0           00102501         Plant HVAC Program         16 - 5         3         126.0         0.0.0         4.50.0         2         0.0         0.0         0.0           00102501         Main Turbine Inspection         16 - 5         3         126.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	00102201	Condenser Eddy Current Support	16 - 5	3	75.0	975.0	1,050.0				0.0
00102401         Wetwell Inspection- Cleaning         16 - 5         3         10.0         110.0         0.0           00102501         Plant HVAC Program         16 - 5         3         262.0         88.0         350.0         2         115         40         155.1           00102501         Test, Replace & Rebuild MSRVs         16 - 5         3         12.0         600.0         612.0         0         0         0.0           00103401         Eddy Current Test Ht Exch         16 - 5         3         860.0         3,450.0         4,968.2         5,018.2         2         70.1         177.6         247.1           00103301         Enhanced AOV Program         16 - 4         3         20.7         160.0         180.7         1.734.8         0.0         101.1         1.8         200.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0	00102301	Bypass Valve Inspection	16 - 5	3	50.0	650.0	700.0	2	0.0	0.0	0.0
00102501         Plant HVAC Program         16 - 5         3         262.0         88.0         350.0         2         115         40         155.0           00102201         Test, Replace & Rebuild MSRVs         16 - 5         3         16.0         610.0         612.0         0         0.0           00102901         Main Turbine Inspection         16 - 5         3         600.0         3,450.0         4,050.0         2         0         0.0           00103901         Eddy Current Test Ht Exch         16 - 5         3         388.5         669.3         1,057.6         2         7.01         177.6         247.7           00529901         BOP Valve Inspection and Repair         16 - 4         3         20.0         180.7         180.7         2         1.8         200         218.0           00128071         Disassemble and Inspect MSIVs         16 - 4         30.0         300.0         300.0         300.0         300.0         100.0         100.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0	00102401	Wetwell Inspection- Cleaning	16 - 5	3	10.0	100.0	110.0				0.0
00102701         Test, Replace & Rebuild MSRVs         16 - 5         3         12.0         60.00         612.0         0.0           00102901         Main Turbine Inspection         16 - 5         3         600.0         3,450.0         4,050.0         2         0         0         0.0           00103401         Edy Current Test Ht Exch         16 - 5         3         885.5         669.3         1,057.6         2         7.0.1         177.6         247.7           0052901         BOP Valve Inspection and Repair         16 - 4         3         20.7         160.0         160.7         2         1.8         200         278.8           00103301         Enhanced AOV Program         16 - 4         3         20.7         160.0         160.7         2         1.8         200         201.1           00128701         Disassemble and Inspect MSIVs         16 - 4         30.0         300.0         300.0         300.0         100.0         100.0         200.0         212.1         1047302         Dose Reduction (Formerly Stellite Reduction Componel         6 - 4         30.0         30.0         30.0         30.0         30.0         30.0         30.0         30.0         30.0         30.0         100.0         200.0	00102501	Plant HVAC Program	16 - 5	3	262.0	88.0	350.0	2	115	40	155.0
00102901         Main Turbine Inspection         16 - 5         3         600.0         3.450.0         4.050.0         2         0         0         0.0           00103401         Eddy Current Test Ht Exch         16 - 5         3         388.5         669.3         1.057.8         2         7.01         177.6         247.1           00103901         EDP Valve Inspection and Repair         16 - 5         3         50.0         4.968.2         5.018.2         2         19.0         255.0         278.1           00103301         Enhanced AOV Program         16 - 4         3         20.7         160.0         180.7         2         1.8         200         201.3           00128701         Disassemble and Inspect MSIVs         16 - 4         154.1         158.07         1.734.8         0.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         100.0         111.0         115.00         111.0 <td< td=""><td>00102701</td><td>Test, Replace &amp; Rebuild MSRVs</td><td>16 - 5</td><td>3</td><td>12.0</td><td>600.0</td><td>612.0</td><td></td><td></td><td></td><td>0.0</td></td<>	00102701	Test, Replace & Rebuild MSRVs	16 - 5	3	12.0	600.0	612.0				0.0
00103401       Edy Current Test Ht Exch       16 - 5       3       196.4       531.0       727.4       2       148.9       62.5       211.         00103901       CIg Twr & CW Prevent Maint       16 - 5       3       388.5       669.3       1,057.8       2       70.1       177.6       247.         0052901       BOP Valve Inspection and Repair       16 - 4       3       20.7       160.0       180.7       2       1.8       200       201.1         00128701       Disassemble and Inspect MSIVs       16 - 4       164.1       158.0       180.7       2       1.8       200       201.1         0171501       Buried Piping Integrity Program       16 - 4       50.0       82.0       132.0       50.0       162.0       212.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0 <td< td=""><td>00102901</td><td>Main Turbine Inspection</td><td>16 - 5</td><td>3</td><td>600.0</td><td>3,450.0</td><td>4,050.0</td><td>2</td><td>0</td><td>0</td><td>0.0</td></td<>	00102901	Main Turbine Inspection	16 - 5	3	600.0	3,450.0	4,050.0	2	0	0	0.0
00103901         Clg Twr & CW Prevent Maint         16 - 5         3         388.5         669.3         1.057.8         2         70.1         177.6         247.7           00529901         BOP Valve Inspection and Repair         16 - 4         3         20.0         4.968.2         5.018.2         2         19.0         259.0         278.0           00103301         Enhanced AOV Program         16 - 4         3         20.7         180.0         180.7         2         1.8         200         201.1           00128701         Disassemble and Inspect MSIVs         16 - 4         154.1         1,580.7         1,734.8         0.0           01771501         Buried Piping Integrity Program         16 - 4         3         0.0         300.0         3         100.0         100.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0 <td>00103401</td> <td>Eddy Current Test Ht Exch</td> <td>16 - 5</td> <td>3</td> <td>196.4</td> <td>531.0</td> <td>727.4</td> <td>2</td> <td>148.9</td> <td>62.5</td> <td>211.4</td>	00103401	Eddy Current Test Ht Exch	16 - 5	3	196.4	531.0	727.4	2	148.9	62.5	211.4
00529901       BOP Valve Inspection and Repair       16 - 5       3       50.0       4,968.2       5,018.2       2       19.0       259.0       278.4         00103301       Enhanced AOV Program       16 - 4       3       20.7       160.0       180.7       2       1.8       200       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       201.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0	00103901	Clg Twr & CW Prevent Maint	16 - 5	3	388.5	669.3	1,057.8	2	70.1	177.6	247.7
00103301         Enhanced AOV Program         16 - 4         3         20.7         160.0         180.7         2         1.8         200         201.1           00128701         Disassemble and Inspect MSIVs         16 - 4         154.1         1,580.7         1,734.8         0.0           01771501         Buried Piping Integrity Program         16 - 4         3         0.0         300.0         300.0         300.0         100.0         100.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0	00529901	BOP Valve Inspection and Repair	16 - 5	3	50.0	4,968.2	5,018.2	2	19.0	259.0	278.0
00128701         Disassemble and Inspect MSIVs         16 - 4         154.1         1,580.7         1,734.8         0.0           01771501         Buried Piping Integrity Program         16 - 4         50.0         82.0         132.0         50.0         162.0         212.0           01479302         Dose Reduction (Formerly Stellite Reduction Compone         16 - 4         30.0         300.0         3         100.0         100.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         23.4.0         24.0         0.0         200.0         23.7         128.6         152.7         0024801         Alternate Decay Heat Removal System         15 - 3         30.00	00103301	Enhanced AOV Program	16 - 4	3	20.7	160.0	180.7	2	1.8	200	201.8
01771501         Buried Piping Integrity Program         16 - 4         50.0         82.0         132.0         50.0         162.0         212.1           01479302         Dose Reduction (Formerly Stellite Reduction Compone         16 - 4         3         0.0         300.0         3         100.0         100.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0	00128701	Disassemble and Inspect MSIVs	16 - 4		154.1	1,580.7	1,734.8				0.0
01479302         Dose Reduction (Formerly Stellite Reduction Compone         16 - 4         3         0.0         300.0         3         100.0         100.0         200.0           01519001         Decontaminate Scaffolding         16 - 4         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0         200.0 <td>01771501</td> <td>Buried Piping Integrity Program</td> <td>16 - 4</td> <td></td> <td>50.0</td> <td>82.0</td> <td>132.0</td> <td></td> <td>50.0</td> <td>162.0</td> <td>212.0</td>	01771501	Buried Piping Integrity Program	16 - 4		50.0	82.0	132.0		50.0	162.0	212.0
01519001       Decontaminate Scaffolding       16 - 4       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0       200.0	01479302	Dose Reduction (Formerly Stellite Reduction Compone	16 - 4	3	0.0	300.0	300.0	3	100.0	100.0	200.0
00288701         Overhaul TR-M1, 2, 3, 4         16 - 3         0.0         3         35.4         448.3         483.           01225001         RRC-VMP-1 Upgrade         16 - 3         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0 <td< td=""><td>01519001</td><td>Decontaminate Scaffolding</td><td>16 - 4</td><td></td><td></td><td>200.0</td><td>200.0</td><td></td><td></td><td>200.0</td><td>200.0</td></td<>	01519001	Decontaminate Scaffolding	16 - 4			200.0	200.0			200.0	200.0
01225001       RRC-VMP-1 Upgrade       16 - 3       0.0       0.0         01318401       Protective Coatings       16 - 3       12       135       147.0       12       60       72.0         00873901       CRA-FN-4A/4B Fuses and Overloads (also AR8744)       16 - 3       3       0.0       0.0       0.0       2       34.0       34.0         01821101       Clean COND-HX-7       16 - 3       2       24.0       24.0       0.0       0.0       0.0       2       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.	00288701	Overhaul TR-M1, 2, 3, 4	16 - 3				0.0	3	35.4	448.3	483.7
01318401       Protective Coatings       16 - 3       12       135       147.0       12       60       72.1         00873901       CRA-FN-4A/4B Fuses and Overloads (also AR8744)       16 - 3       3       0.0       0.0       0.0       2       34.0       34.0         01821101       Clean COND-HX-7       16 - 3       2       24.0       24.0       0.0       0.0         00102801       Check Valve Reliability       15 - 3       3       30.0       1,285.0       1,317.0       2       23.7       128.6       152.2         00924801       Alternate Decay Heat Removal System       15 - 3       3       300.0       2,800.0       3       300.0       4,000.0       4,300.1         00781401       PSA Upgrade-Scope & Capability       15 - 2       295.2       426.0       72.2       0.0       0.0         00451101       Resolve Design Deficiencies with Circuit Breaker Coor       15 - 1       3       3.1       81.6       84.7       0.0       0.0         0181501       PER 204-1269, Evaluate Vendor Recommended shaft       15 - 1       3       3.1       81.6       84.7       0.0         01418401       DG3 Minimum Voltage Permissive       12.8 - 3       0.0       0.0       2	01225001	RRC-VMP-1 Upgrade	16 - 3				0.0				0.0
00873901       CRA-FN-4A/4B Fuses and Overloads (also AR8744)       16 - 3       3       0.0       0.0       2       34.0       34.1         01821101       Clean COND-HX-7       16 - 3       2       24.0       24.0       0.0         00102801       Check Valve Reliability       15 - 3       3       32.0       1,285.0       1,317.0       2       23.7       128.6       152.3         00924801       Alternate Decay Heat Removal System       15 - 3       3       30.0       2,500.0       2,800.0       3       300.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0       4,000.0	01318401	Protective Coatings	16 - 3		12	135	147.0		12	60	72.0
01821101       Clean COND-HX-7       16 - 3       2       24.0       24.0       0.0         00102801       Check Valve Reliability       15 - 3       3       32.0       1,285.0       1,317.0       2       23.7       128.6       152.7         00924801       Alternate Decay Heat Removal System       15 - 3       3       300.0       2,500.0       2,800.0       3       300.0       4,000.0       4,300.0         00781401       PSA Upgrade-Scope & Capability       15 - 2       295.2       426.0       721.2       0.0         00451101       Resolve Design Deficiencies with Circuit Breaker Coor 15 - 1       3       10.0       50.0       60.0       0.0         01081501       PER 204-1269, Evaluate Vendor Recommended shaft       15 - 1       3       3.1       81.6       84.7       0.0         01184801       DG3 Minimum Voltage Permissive       12.8 - 3       0.0       0.0       2       84.0       84.1         18581701       PWC-TK-1 Interior Coatings Repair       12.8 - 3       0.0       0.0       2       43.2       43.2         00687901       Manway for ROA-V-1       12 - 3       3       18.0       7.0       25.0       0.0       0.0         00887901       Margin	00873901	CRA-FN-4A/4B Fuses and Overloads (also AR8744)	16 - 3	3	0.0	0.0	0.0	2	34.0		34.0
00102801         Check Valve Reliability         15 - 3         3         32.0         1,285.0         1,317.0         2         23.7         128.6         152.7           00924801         Alternate Decay Heat Removal System         15 - 3         3         300.0         2,500.0         2,800.0         3         300.0         4,000.0         4,300.0           00781401         PSA Upgrade-Scope & Capability         15 - 2         295.2         426.0         721.2         0.1           00451101         Resolve Design Deficiencies with Circuit Breaker Coor         15 - 1         3         10.0         50.0         60.0         0.1           01045101         PER 204-1269, Evaluate Vendor Recommended shaft         15 - 1         3         3.1         81.6         84.7         0.1           01184801         DG3 Minimum Voltage Permissive         12.8 - 3         0.0         0.0         2         84.0         84.1           18581701         PWC-TK-1 Interior Coatings Repair         12.4 - 3         10.8         20.0         30.8         0.0         150.0         150.0           00643201         DG1 and DG2 K2 Relays         12 - 3         10.8         20.0         30.8         0.0         0.0         0.0         0.0         0.0 <t< td=""><td>01821101</td><td>Clean COND-HX-7</td><td>16 - 3</td><td>2</td><td>24.0</td><td></td><td>24.0</td><td></td><td></td><td></td><td>0.0</td></t<>	01821101	Clean COND-HX-7	16 - 3	2	24.0		24.0				0.0
00924801         Alternate Decay Heat Removal System         15 - 3         3         300.0         2,500.0         2,800.0         3         300.0         4,000.0         4,300.0           00781401         PSA Upgrade-Scope & Capability         15 - 2         295.2         426.0         721.2         0.1           00451101         Resolve Design Deficiencies with Circuit Breaker Coor         15 - 1         3         10.0         50.0         60.0         0.1           0181501         PER 204-1269, Evaluate Vendor Recommended shaft         15 - 1         3         3.1         81.6         84.7         0.1           01184801         DG3 Minimum Voltage Permissive         12.8 - 3         0.0         0.0         2         84.0         84.4           18581701         PWC-TK-1 Interior Coatings Repair         12.8 - 3         0.0         0.0         0.0         150.0         150.0           00419601         Replace/Relocated RFT-CP-TTE1A         12 - 4         3         10.8         20.0         30.8         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	00102801	Check Valve Reliability	15 - 3	3	32.0	1,285.0	1,317.0	2	23.7	128.6	152.3
00781401       PSA Upgrade-Scope & Capability       15 - 2       295.2       426.0       721.2       0.0         00451101       Resolve Design Deficiencies with Circuit Breaker Coor       15 - 1       3       10.0       50.0       60.0       0.0         01081501       PER 204-1269, Evaluate Vendor Recommended shaft       15 - 1       3       3.1       81.6       84.7       0.0         0184801       DG3 Minimum Voltage Permissive       12.8 - 3       0.0       0.0       2       84.0       84.4         18581701       PWC-TK-1 Interior Coatings Repair       12.8 - 3       0.0       0.0       0.0       3       0.0       150.0       150.0         00419601       Replace/Relocated RFT-CP-TTE1A       12 - 4       3       10.8       20.0       30.8       0.0       0.0       2       43.2       43.2         00623201       DG1 and DG2 K2 Relays       12 - 3       3       18.0       7.0       25.0       0.0       0.0         00822901       Manway for ROA-V-1       12 - 3       3       18.0       7.0       25.0       0.0       0.0         01327301       Install Main Generator Air Test Referenced Chamber       09 - 2       3       12.0       12.0       0.0       0.0	00924801	Alternate Decay Heat Removal System	15 - 3	3	300.0	2,500.0	2,800.0	3	300.0	4,000.0	4,300.0
Ou451101         Resolve Design Deficiencies with Circuit Breaker Coor         15 - 1         3         10.0         50.0         60.0         0.1           01081501         PER 204-1269, Evaluate Vendor Recommended shaft         15 - 1         3         3.1         81.6         84.7         0.1           01184801         DG3 Minimum Voltage Permissive         12.8 - 3         0.0         2         84.0         84.1           18581701         PWC-TK-1         Interior Coatings Repair         12.8 - 3         0.0         0.0         3         0.0         150.0           00419601         Replace/Relocated RFT-CP-TTE1A         12 - 4         3         10.8         20.0         30.8         0.0         0.0         2         43.2         43.2           00623201         DG1 and DG2 K2 Relays         12 - 3         3         18.0         7.0         25.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.	00781401	PSA Upgrade-Scope & Capability	15 - 2		295.2	426.0	721.2				0.0
O1081501         PER 204-1269, Evaluate Vendor Recommended shaft         15 - 1         3         3.1         81.6         84.7         0.0           01184801         DG3 Minimum Voltage Permissive         12.8 - 3         0.0         0.0         2         84.0         84.1           18581701         PWC-TK-1 Interior Coatings Repair         12.8 - 3         0.0         0.0         0.0         3         0.0         150.0           00419601         Replace/Relocated RFT-CP-TTE1A         12 - 4         3         10.8         20.0         30.8         0.1           00623201         DG1 and DG2 K2 Relays         12 - 3         0.0         0.0         2         43.2         43.2           00687901         Manway for ROA-V-1         12 - 3         3         36.0         20.0         56.0         0.1           01327301         Install Main Generator Air Test Referenced Chamber         09 - 2         3         12.0         12.0         0.0         0.0         3.2.0         16.0         48.1           00970101         Bypass switch for SOP-RHR-SDC-BYPASS         08 - 3         0.0         3.2.0         16.0         48.1           00773201         Deactivate COND-V-79/80 A/B/C/D/E/F         06 - 3         0.0         3.2.2 <t< td=""><td>00451101</td><td>Resolve Design Deficiencies with Circuit Breaker Coor</td><td>15 - 1</td><td>3</td><td>10.0</td><td>50.0</td><td>60.0</td><td></td><td></td><td></td><td>0.0</td></t<>	00451101	Resolve Design Deficiencies with Circuit Breaker Coor	15 - 1	3	10.0	50.0	60.0				0.0
01184801       DG3 Minimum Voltage Permissive       12.8 - 3       0.0       0.0       2       84.0       84.1         18581701       PWC-TK-1 Interior Coatings Repair       12.8 - 3       0.0       0.0       0.0       3       0.0       150.0       150.0         00419601       Replace/Relocated RFT-CP-TTE1A       12 - 4       3       10.8       20.0       30.8       0.0       0.0         00623201       DG1 and DG2 K2 Relays       12 - 3       0.0       0.0       2       43.2       43.2         00687901       Manway for ROA-V-1       12 - 3       3       18.0       7.0       25.0       0.0         00822901       Margin Restoration on RCC-V-40       12 - 3       3       36.0       20.0       56.0       0.0         01327301       Install Main Generator Air Test Referenced Chamber       09 - 2       3       12.0       12.0       0.0         00970101       Bypass switch for SOP-RHR-SDC-BYPASS       08 - 3       0.0       3       3.2       6.2       9.4         00773201       Deactivate COND-V-79/80 A/B/C/D/E/F       06 - 3       0.0       3       3.2       6.2       9.4         0&& M Totals       6       6,383.0       48,822.0       55,205.0	01081501	PER 204-1269. Evaluate Vendor Recommended shaft	15 - 1	3	3.1	81.6	84.7				0.0
18581701       PWC-TK-1 Interior Coatings Repair       12.8 - 3       0.0       0.0       0.0       3       0.0       150.0         00419601       Replace/Relocated RFT-CP-TTE1A       12 - 4       3       10.8       20.0       30.8       0.0         00623201       DG1 and DG2 K2 Relays       12 - 3       0.0       0.0       2       43.2       43.3         00687901       Manway for ROA-V-1       12 - 3       3       18.0       7.0       25.0       0.0         00822901       Margin Restoration on RCC-V-40       12 - 3       3       36.0       20.0       56.0       0.1         01327301       Install Main Generator Air Test Referenced Chamber       09 - 2       3       12.0       12.0       0.0         00970101       Bypass switch for SOP-RHR-SDC-BYPASS       08 - 3       0.0       3       3.2.0       16.0       48.1         00773201       Deactivate COND-V-79/80 A/B/C/D/E/F       06 - 3       0.0       3       3.2.0       12.9       9.293.2       11.491.3         0&&M Totals       6,383.0       48,822.0       55,205.0       2,198.1       9,293.2       11.491.3	01184801	DG3 Minimum Voltage Permissive	12.8 - 3				0.0	2	84.0		84.0
Odd19601         Replace/Relocated RFT-CP-TTE1A         12 - 4         3         10.8         20.0         30.8         0.0           00623201         DG1 and DG2 K2 Relays         12 - 3         10.8         20.0         30.8         0.0         0.0           00687901         Manway for ROA-V-1         12 - 3         3         18.0         7.0         25.0         0.0           00822901         Margin Restoration on RCC-V-40         12 - 3         3         36.0         20.0         56.0         0.0           01327301         Install Main Generator Air Test Referenced Chamber         09 - 2         3         12.0         12.0         0.0           00970101         Bypass switch for SOP-RHR-SDC-BYPASS         08 - 3         0.0         3         32.0         16.0         48.4           00773201         Deactivate COND-V-79/80 A/B/C/D/E/F         06 - 3         0.0         3         3.2         6.2         9.4           0&M Budgets         6,383.0         48,822.0         55,205.0         2,198.1         9,293.2         11,491.3	18581701	PWC-TK-1 Interior Coatings Repair	128-3		0.0	0.0	0.0	3	0.0	150.0	150.0
Ou623201         DG1 and DG2 K2 Relays         12 - 3         0.01         0.02         43.2         43.2           00623201         DG1 manual DG2 K2 Relays         12 - 3         0.02         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         43.2         <	00419601	Replace/Relocated RFT-CP-TTF1A	12 - 4	3	10.8	20.0	30.8	Ĵ	0.0	.00.0	0.0
00687901       Manway for ROA-V-1       12 - 3       3       18.0       7.0       25.0       0.1         0082901       Margin Restoration on RCC-V-40       12 - 3       3       36.0       20.0       56.0       0.1         01327301       Install Main Generator Air Test Referenced Chamber       09 - 2       3       12.0       12.0       0.1         00970101       Bypass switch for SOP-RHR-SDC-BYPASS       08 - 3       0.0       3       32.0       16.0       48.1         00773201       Deactivate COND-V-79/80       A/B/C/D/E/F       06 - 3       0.0       3       3.2       6.2       9.4         O&M Totals       6,383.0       48,822.0       55,205.0       2,198.1       9,293.2       11,491.1	00623201	DG1 and DG2 K2 Relays	12 - 3		10.0	20.0	0.0	2	43.2		43.2
00822901       Margin Restoration on RCC-V-40       12 - 3       3       36.0       20.0       56.0       0.1         01327301       Install Main Generator Air Test Referenced Chamber       09 - 2       3       12.0       12.0       0.1         00970101       Bypass switch for SOP-RHR-SDC-BYPASS       08 - 3       0.0       3       32.0       16.0       48.1         00773201       Deactivate COND-V-79/80       A/B/C/D/E/F       06 - 3       0.0       3       3.2       6.2       9.4         08       Margin Restoration on RCC-V-40       13.500       14.0       14.0       14.0       14.0         00970101       Bypass switch for SOP-RHR-SDC-BYPASS       08 - 3       0.0       3       32.0       16.0       48.1         00773201       Deactivate COND-V-79/80       A/B/C/D/E/F       06 - 3       0.0       3       3.2       6.2       9.4         08       Margin Restoration and the state of the sta	00687901	Manway for ROA-V-1	12 - 3	3	18.0	7.0	25.0	2	-10.2		0.0
01327301       Install Main Generator Air Test Referenced Chamber       09 - 2       3       12.0       12.0       0.0         00970101       Bypass switch for SOP-RHR-SDC-BYPASS       08 - 3       0.0       3       32.0       16.0       48.1         00773201       Deactivate COND-V-79/80       A/B/C/D/E/F       06 - 3       0.0       3       3.2       6.2       9.2         O&M Budgets       6,383.0       48,822.0       55,205.0       2,198.1       9,293.2       11,491.1	00822001	Margin Restoration on RCC-V-40	12 - 3	3	36.0	20.0	56.0				0.0
Objective         Description         Description <thdescription< th=""> <thdescription< th="">         &lt;</thdescription<></thdescription<>	01327301	Install Main Generator Air Test Referenced Chamber	09-2	3	50.0	12.0	12.0				0.0
Observer	00070101	Bypass switch for SOP_RHR_SDC_RVPASS	08-3	5		12.0	0.0	3	32.0	16.0	48.0
O&M Totals         6,383.0         48,822.0         55,205.0         2,198.1         9,293.2         11,491.1           O&M Budgets         46,734.0         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         13,500         14,500         14,500         14,500         14,500         14,500         14,500         14,500         14,500         14,500	00773201		06-3				0.0	3	32.0	6.2	40.0 Q /
O&M Totals         6,383.0         48,822.0         55,205.0         2,198.1         9,293.2         11,491.3           O&M Budgets         46,734.0         46,734.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0         13,500.0	00110201		00-0				0.0	5	5.2	0.2	5.4
0,000.0140,022.0100,200.01 2,190.1 9,293.211,491.0 0.8M Budgets 46.734.0 13.500					6 383 0	18 822 0	55 205 0		2 108 1	0 203 2	11 401 2
		O&M Budgets			0,000.0	10,022.0	46 734 0		2,130.1	0,200.2	13 500 0

These FY11 projects are below the approved budget line and may not get done. In FY10, all of the FY11 major maintenance projects will have their budgets challenged in an attempt to reduce

Legend

rem SENL- Internal Labor SNENL- Non Labor Costs Phase– Scope/Design or Installation

Project lists are for EXAMPLE ONLY and may differ from the approved project lists.

## **Proposed Significant Outage Projects**

FY10	FY11	FY12 FY13		FY14	FY15
Projects Generator Rotor Replacemen Plant License Extension/Ren Keep-fill Pump Upgrades Main Condenser Replaceme Cooling Tower Fill Replaceme Plant Fire Detection System PDIS System Replacement CW-P-1A, 1B, 1C Remove, F Pump Dose Reduction (Stellite Rec Simulator I/O Hardware Upg Feedwater Heater Level Con Transmitters On Line Noble Chem Applica RCS Chemical Decontamina Emergency Diesel Generator Spent Fuel Pool Cleanup PSA Upgrade-Scope & Capa Alternate Decay Heat Remov Complete Elect Wiring Diagra	nt newal nt uent Upgrade Replace, & Refurbish duction Components) rade ntroller, Positioners, ation tion r Maint (DG-1/DG-2/DG-3) ability val System am Drawings ver	Projects ISFSI Expansion (Pad & CW-P-1X Remove, Repl Plant Fire Detection Syst Plant License Extension/ Replace Moisture Sepera Bundles Replace the Main Gener Retire/Replace TDAS an E-EXC-1, Replace Main Chemistry Lab Upgrades Perimeter Security Upgra Upgrade CAS Equipmen Upgrade SCC Equipmen HP Remote Monitoring Information Technolog PeopleSoft Financials Up eSOMS Life Cycle Maint Video Capture System Plant Logging System Re	Security) ace, & Refurbish Pump tem Upgrade Renewal ator Reheater Tube ator Voltage Regulator d PPC Generator Exciter ade – remote cameras t t t <b>y Projects</b> ograde enance eplacement placement	Projects Replace Main Power Tr Replace Reactor Manua Replace SRM/IRM Instr TMU-P-1A (Repair/Refut FP-P-2A (Repair/Refut MCR Halon Suppressin TSW Small Bore Piping Replace BRE Cameras SW-P-1B Pump Overha FP-P-2A Pump Overha TMU-P-1A Pump Overha TMU-P-1A Pump Overha Information Technolog Primavera Lifecycle Up PeopleSoft HCM Upgra Proximity Card System Network Infrastructure I	ransformer (1 of 4) al Control System ruments urbish) bish Pump) ig System i Replacement aul ul haul <b>gy Projects</b> grade ide Upgrade Jpgrade
Information Technology Pr Cyber Security Radio Obsolescence	ojects R-2	20	R		R-22

Horn Rapids Sirens PassPort Upgrade

## **Proposed Significant Outage Projects**

	FY16	FY17	FY18	FY19
	Projects Rewind Main Generator Replace Main Power Tr Replace TSW Heat Exc Replace Area Radiation Replace Diesel Generat HPCS-P-2 Refurbish Pu COND-P-1A Refurbish I COND-P-2A Refurbish I COND-P-2A Refurbish I Information Technolog eSOMS Lifecycle Upgra Security Radios PassPort Upgrade SharePoint Lifecycle Ma	ansformer (2 of 4) hangers Monitoring for Speed Governors imp Pump & Motor Pump & Motor <b>gy Projects</b> ide	Projects Meteorlogical Towers/W CW-P-1B Pump Overha TMU-P-1C Pump Overh CRD-P-1B Motor Overh Information Technolog Telecom Infrastructure Workstation Upgrades PeopleSoft Financials L IT Infrastructure Upgrad HP Access Control Upg	lonitoring System aul haul g <b>y Projects</b> Jpgrade le irade
R-	22	F	R-23	

**R-24**