

Columbia Generating Station

Scott Oxenford, Vice President Nuclear Generation/CNO Brent Ridge, Asset Manager/Controller March 25, 2009

Columbia Generating Station (CGS) Focus Areas

- ▼ Equipment Reliability
- × Human Performance
- ▼ Dose Reduction



CGS Fiscal Performance Initiatives

- **×** Efficiency Improvements
- **×** Benchmarking
- Long Range Plan Adherence

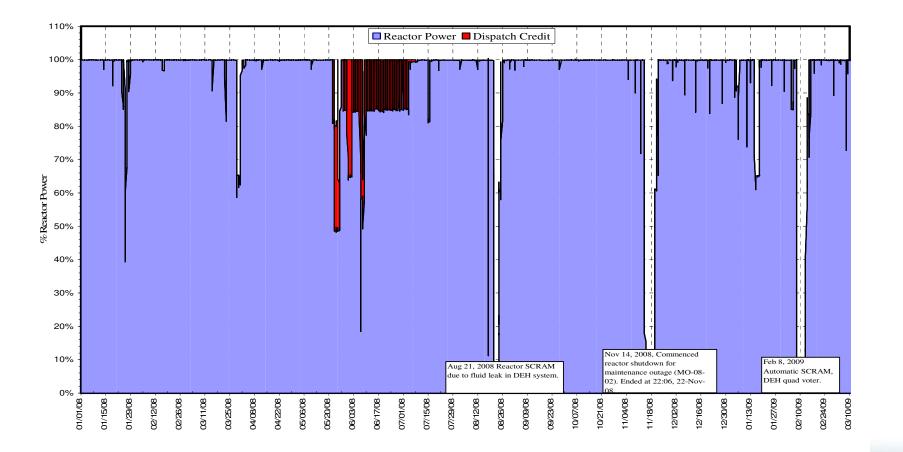


Objectives

- Continue to Invest in Long-Term Plant Safety and Reliability while Continuing to Ensure Affordable, Reliable Power for the Region
- Improved Long Range Plan that meets the needs of the Plant and the Region
- Continue to Improve Cost Predictability
- Continue to Improve the Efficiency of Work Execution



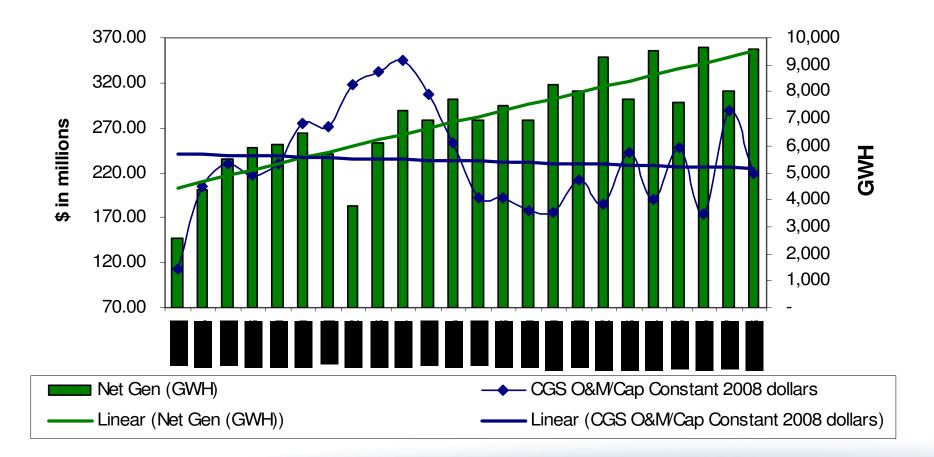
Power History





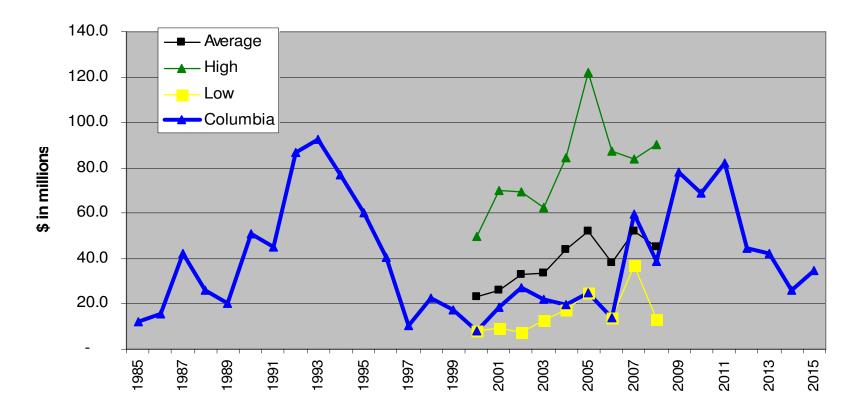
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CGS O&M and Capital Costs Versus Net Generation – Constant 2008\$





Capital Costs – Single Large Nuclear Stations EUCG Data 2000 – 2008 Vs CGS Historical and FY10 LRP – Constant 2008\$





Key Assumptions

- Cost of Power is based on Net Generation of 9,258 GWh
- Fuel Costs are based on Fiscal Year 2010
 10-Year Plan
- ▼ Finance Capital Projects (\$73.7 Million)
- **Budget for known Security Projects**
- ➤ No Forced Outage Budget



Key Assumptions

Labor Escalation of \$2.1 Million25 Average Monthly Open Headcount



Potential Risks

Escalation
 NRC security Related Mandates
 Reduction of Risk Reserve



Budget Highlights

▼ Budget is \$317.7 Million

- The same as forecast in the Fiscal Year 2009 Long Range Plan
- Industry Cost of Power Planned for \$34.32/MWh
- ▼ Risk Reserves Total \$4.7 Million
- ▼ Projects Total \$86.4 Million



Budget Versus Prior Year Long Range Plan (LRP) (Dollars in Thousands)

		FY-2009	
	FY-2010	LRP for	
Budget Line Item	Budget	FY-2010	Variance
Baseline	\$117,361	\$117,499	(\$138)
Baseline A & G	62,800	66,855	(4,055)
Incremental Outage	954	1,552	(598)
Expense Projects	16,666	15,853	813
Capital Projects	69,732	63,920	5,812
Risk Reserve	4,793	7,777	(2,984)
Nuclear Fuel	45,404	44,257	1,147
Columbia Costs	\$317,710	\$317,713	(\$3)
Net Generation	9,258	9,258	0
Cost of Power	\$34.32	\$34.32	(\$0.00)



CGS Fiscal Year 2010 – Fiscal Year 2009 Comparison (Dollars in Thousands)

Original **FY-2010 FY 2009 Budget Line Item** Budget Variance Budget Controllable Costs **Energy NW Labor*** \$70,127 \$68,860 \$1,267 **Baseline Non-Labor** 49.610 2,204 51.814 **Incremental Outage Non-Labor** 880 33,911 (33,031)13,167 59,937 **Projects - Expense Non-Labor** (46,770)**Projects - Capital Non-Labor** 60,478 68,139 (7.661)**Corporate/EBS Allocations** 71,047 68,257 2,790 **Risk Reserve** 4,793 8,171 (3,378) Subtotal Controllable \$272,306 (\$84,579) \$356,885 Fuel Related Costs **Fuel Amortization** \$36,415 \$32.723 \$3,692 Spent Fuel Fee 8,989 7,860 1,129 \$40,583 Subtotal Fuel Related Costs \$45,404 \$4,821 **Columbia Costs** \$317,710 \$397,468 (\$79,758) 9,258 8,239 1,019 Net Generation (GWh) Cost of Power (\$/MWh) \$34.32 \$48.24 (\$13.92)

*Includes escalation @ 3.075%



CGS Budgeted Positions (Full Time Equivalents)

		Original	
	FY 2010	FY 2009	
Organization	Budget	Budget(1)	Variance
VP Technical Services	281	275	6
CEO	1	1	-
VP Operational Support	276	254	22
VP Nuclear Generation	457	454	3
VP Energy Business Services (2)	23	24	(1)
VP Corporate Services/CFO	38	38	-
Total	1,076	1,046	30

Includes "Project" positions with job durations of up to five years. It also includes FTE's for transition of new employees taking positions of retiring employees.

(1) FY 2009 FTEs have been reclassed for comparison purposes

(2) Includes Environmental & Cal Lab support (19 Full Time Equivalent Postions).



Baseline Non-Labor

(Dollars in Thousands)

Fiscal Year 2010 Non-Labor Fiscal Year 2000 Non Labor (assoluted)	\$51,814 \$50,022
Fiscal Year 2009 Non-Labor (escalated) Variance	<u>\$50,932</u> \$882
Major Changes:	
Radwaste Disposal	\$1,188
NRC Fees	352
INPO Fees	322
Chemicals/Gases	277
Overtime Reduction	(848)
Other Net Reductions	(409)



O&M Plant Projects Over \$500 Thousand (Dollars in Thousands)

Spent Fuel Pool Cleanup	\$4,250
Electrical Wiring Diagram Drawings	1,061
Valve Programs	943
Probabilistic Safety Analysis	880
Alternate Decay Heat Removal	800
Emergency Diesel Generator Maintenance	645
Turbine Building Outage Facility	553
In Service Inspection/Non-Destructive Eval	523



Capital Plant Projects Over \$1 Million (Dollars in Thousands)

Condenser Replacement	\$33,330
Plant License Extension	3,002
Passport Upgrade	2,982
Cooling Tower Fill Replacement	2,410
Plant Fire Detection System Upgrade	2,337
Radio Obsolescence	1,836
Cyber Security	1,417
Simulator Hardware Upgrade	1,268



Nuclear Fuel Costs

(Dollars in Thousands)

	FY-2010	FY-2008
Fuel Amortization	\$36,415	\$35,873
Spent Fuel Fee	8,989	9,036
Total Nuclear Fuel	\$45,404	\$44,909



Long Range Plan

× Assumptions:

- **78** day Outage in Fiscal Year 2011
- Headcount Reduction of 30 in Fiscal Year 2012 and 25 in Fiscal Year 2014
- Maintain the same Capital Investment in the Out-Years as was in Last Year's Plan
- Maintain the same Bottom Line in each of the Out-Years as was in Last Year's Plan



Long Range Plan

× Assumptions

3.5% escalation per year except for the condenser costs (already escalated) and the Corporate Allocations (3.5% for all except medical benefits which is at 9.0% in Fiscal Year 2011 and Fiscal Year 2012 and 7% thereafter)



Long Range Plan

Outage Casts (Incremental) Admin / General (A&G) O&M includes escalation O&M Projects 18.80 39.000 900 20.000 900 15.50 900 16.50 OAM Projects 64.879 66.266 60.02 73.834 74.528 9,800 42,176 84.664 88.667 82.550 97.101 Data M Projects 566 550 550 550 600	Calendar Year	20	09 20	10	20	11	20)12	20	13	20)14	20	15	20	16	20	17	20	18	20
Direct and Indirect O&M Costs s 117,361 \$ 117,377 \$ 111,345 \$ 110,287 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 111,346 \$ 110,387 \$ 110,387 \$ 111,346 \$ 110,387 \$ 110,387 \$ 110,387 \$ 111,346 \$ 110,387 \$ 111,346 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 \$ 110,387 110,387 110,387	Item Description		FY10		FY11		FY12		FY13		FY14		FY15								
Baseline costs \$ 117,321 \$ 117,327 \$ 114,373 \$ 112,374 \$ 112,914 \$ 110,228 \$ 109,178 \$ 109,508 \$ 109,513 \$ 108,10 Outage Costs (incremental) G6,266 66,062 73,824 74,533 76,745 84,664 88,467 92,550 97,10 30,945 Cost M Projects 5569 550 550 6600 6600 6600 6600 6600 6600 6000 6000 73,824 74,533 76,745 84,664 88,467 92,550 37,10 8,021 40,400 8,079 33,454 500 <td></td> <td>Π</td> <td>BPA</td> <td>Rat</td> <td>e Period</td> <td></td> <td>BPA</td> <td>Ra</td> <td>te Period</td> <td></td> <td>BPA</td> <td>Rat</td> <td>te Period</td> <td></td> <td>BPA I</td> <td>Rat</td> <td>e Period</td> <td></td> <td>BPA I</td> <td>Rate</td> <td>e Period</td>		Π	BPA	Rat	e Period		BPA	Ra	te Period		BPA	Rat	te Period		BPA I	Rat	e Period		BPA I	Rate	e Period
Outage Costs (Incremental) 880 39,000 900 20,000 900 20,000 900 16,500 190,600 16,500 1000 16,500 1000 100 16,500 100 16,500 100 100 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 100	Direct and Indirect O&M Costs																				
Admin / General (A&G) Q&M includes escalation OAM Projects 64,879 66,266 69,062 74,224 74,539 76,745 84,664 88,467 92,550 97,10 OAM Projects 13,660 46,734 9,075 41,528 9,800 42,176 8,021 40,400 8,079 39,45 Facilities OAM Projects 412 155 155 475 425 575 2285 155 1,600 OAM Risk Reserve 739 1,533 830 2,000 750 1,000 500	Baseline costs	\$	117,361	\$	116,373	\$	117,537	\$	114,345	\$	112,914	\$	110,928	\$	109,178	\$	109,598	\$	109,513	\$	108,102
OAM Projects 13.680 46.724 9.075 41.528 9.800 42.176 8.021 40.400 8.079 39.45 Facilities OAM Projects 569 550 550 550 600 75 226 575 226 575 226 575 285 500 1.000	Outage Costs (Incremental)		880		39,000		900		20,000		900		20,000		900		16,500		900		16,500
Facilities O&M Projects 559 550 550 600	Admin / General (A&G) O&M includes escalation		64,879		66,266		69,062		73,824		74,539		76,745		84,664		88,467		92,550		97,104
Information Technology Q&M Projects 412 155 155 475 475 225 575 2265 155 1,600 Q&M Risk Reserve 793 1,593 830 2,000 750 1,600 500 1,600 50	O&M Projects		13,680		46,734		9,075		41,528		9,800		42,176		8,021		40,400		8,079		39,451
O&M Risk Reserve 793 1,595 830 2,000 750 1,600 500 1,600 500 75 Outage Risk Reserve 1,095 - 1,095 - 1,094 - 1,085 - 1,000 500 6,500 500	Facilities O&M Projects		569		550		550		550		600		600		600		600		-		600
Outage Risk Reserve Baseproj Contingency 1,005 1,004 1,005 1,005 1,000 1,000 1,000 Subtotal Direct & Indirect O&M Costs \$ 196,574 \$ 277,078 \$ 196,609 \$ 253,859 \$ 204,938 \$ 253,859 \$ 204,938 \$ 253,859 \$ 211,697 \$ 265,600 Subtotal Direct & Indirect O&M Costs \$ 196,574 \$ 279,281 \$ 207,932 \$ 217,957 \$ 227,573 46,419 37,747 61,143 Subtotal Direct & Indirect O&M Costs \$ 196,574 \$ 279,281 \$ 200,992 \$ 8,527 \$ 19,864 \$ 7,690 \$ 20,425 \$ 7,324 \$ 247,74 Moveable Capital A Downtown Capital Projects \$ 15,550 \$ 29,747 \$ 12,729 \$ 20,992 \$ 8,527 \$ 19,864 \$ 7,690 \$ 20,425 \$ 7,324 \$ 247,44 Moveable Capital A Downtown Capital Projects \$ 1,568 \$ 5,700 9,911 5,590 5,500 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,000 \$ 1,020 \$ 1,053 \$ 1,020 <td>Information Technology O&M Projects</td> <td></td> <td>412</td> <td></td> <td>155</td> <td></td> <td>155</td> <td></td> <td>475</td> <td></td> <td>475</td> <td></td> <td>225</td> <td></td> <td>575</td> <td></td> <td>285</td> <td></td> <td>155</td> <td></td> <td>1,600</td>	Information Technology O&M Projects		412		155		155		475		475		225		575		285		155		1,600
Basepoi Contingency - - - - 500 <th< td=""><td>O&M Risk Reserve</td><td></td><td>793</td><td></td><td>1,593</td><td></td><td>830</td><td></td><td>2,000</td><td></td><td>750</td><td></td><td>1,600</td><td></td><td>500</td><td></td><td>1,600</td><td></td><td>500</td><td></td><td>750</td></th<>	O&M Risk Reserve		793		1,593		830		2,000		750		1,600		500		1,600		500		750
Basepoi Contingency - - - - 500 <th< td=""><td>Outage Risk Reserve</td><td></td><td>-</td><td></td><td>1.095</td><td></td><td>-</td><td></td><td>1.084</td><td></td><td>-</td><td></td><td>1.085</td><td></td><td></td><td></td><td>1.000</td><td></td><td></td><td></td><td>1.000</td></th<>	Outage Risk Reserve		-		1.095		-		1.084		-		1.085				1.000				1.000
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Escalation on Direct & Indirect - - - - - - 19,622 19,622 19,579 33,242 27,573 46,419 37,747 61,14 Subtolal Direct & Indirect O&M Costs \$ 198,674 \$ 207,836 \$ 273,928 \$ 219,057 \$ 28,7101 \$ 232,571 \$ 305,368 \$ 249,444 \$ 326,757 Capital Costs * 198,674 \$ 207,836 \$ 273,928 \$ 219,657 \$ 294,444 \$ 326,757 Moreable Capital Projects \$ 1,556 \$ 29,747 \$ 12,729 \$ 0,931 5,900 1,500 1,300		\$	198.574	\$	272.078	\$	198.609	\$	254.306	\$	200,478	\$	253.859	\$	204.938	\$	258,950	\$	211.697	\$	265.607
Subtotal Direct & Indirect O&M Costs \$ 198,574 \$ 279,281 \$ 207,392 \$ 219,057 \$ 287,101 \$ 325,251 \$ 305,369 \$ 249,444 \$ 325,757 Capital Costs PHC Capital Projects \$ 15,550 \$ 29,747 \$ 12,729 \$ 20,992 \$ 8,527 \$ 19,864 \$ 7,690 \$ 20,425 \$ 7,324 \$ 24,747 Moxeable Capital & Downtown Capital Projects \$ 15,550 \$ 29,747 \$ 12,729 \$ 20,992 \$ 8,527 \$ 19,864 \$ 7,690 \$ 20,425 \$ 7,324 \$ 24,747 Moxeable Capital Projects 1,568 \$ 20,927 \$ 10,000 1,300 <td>Escalation on Direct & Indirect</td> <td>1 ·</td> <td>-</td> <td>· ·</td> <td></td> <td></td> <td></td> <td>Ċ</td> <td></td> <td></td> <td></td> <td>Ľ</td> <td></td> <td></td> <td>27.573</td> <td></td> <td></td> <td></td> <td>,</td> <td>·</td> <td>61,149</td>	Escalation on Direct & Indirect	1 ·	-	· ·				Ċ				Ľ			27.573				,	·	61,149
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Facilities Capital Projects Information Technology Capital Projects Admin / General (A&G) Cap includes escalation Capital Risk Resere Main Condenser Replacement includes escalation Subtotal Capital Costs 1,568 5,700 9,911 5,990 5,500 1,500 2,250 2,750 1,750 1,750 Subtotal Capital Costs 6,167 10,000 8,000 8,100 3,500 6,157 5,815 5,987 9,356 6,38 Subtotal Capital Costs 5,73732 \$ 89,421 \$ 49,154 \$ 46,290 \$ 22,471 \$ 40,011 2,509 1,750 1,750 6,33 Subtotal Capital Costs \$ 73,732 \$ 99,421 \$ 44,529 \$ 22,471 \$ 40,011 25,087 \$ 3,73 Subtotal Capital Costs \$ 73,732 \$ 99,110 \$ 51,483 \$ 50,442 \$ 32,244 \$ 44,269 \$ 22,471 \$ 40,011 \$ 25,087 \$ 3,73 Subtotal Capital Costs \$ 73,732 \$ 91,130 \$ 51,483 \$ 50,442 \$ 32,244 \$ 44,269 \$ 26,820 \$ 49,231 \$ 31,926 \$ 57,967 Fuel Related Costs \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$		Ť		1		-		-		Ť		Ľ		-		-		Ť		*	1,300
Information Technology Capital Projects 12,744 6,020 5,008 6,016 7,384 6,157 5,815 5,987 9,356 6,38 Admin / General (A&G) Cap includes escalation 6,167 10,000 8,000 8,100 3,500 6,150 3,500 6,150 3,500 6,30 Main Condenser Replacement includes escalation 4,000 6,054 3,746 3,892 2,251 3,274 1,916 3,399 1,857 3,73 Subtotal Capital Costs 5,73,732 \$ 8,9421 \$ 449,154 \$ 46,200 \$ 28,462 \$ 38,245 \$ 22,271 \$ 40,011 \$ 25,087 \$ 44,200 Subtotal Capital Costs \$ 73,732 \$ 91,130 \$ 51,483 \$ 50,442 \$ 38,245 \$ 22,471 \$ 40,011 \$ 25,087 \$ 44,200 Subtotal Capital Costs \$ 73,732 \$ 91,130 \$ 51,483 \$ 50,442 \$ 32,144 \$ 44,209 \$ 26,820 \$ 49,231 \$ 31,926 \$ 57,965 Subtotal Capital Costs \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$ 66,9471 \$ 64,500 Subtotal													,								1,750
Admin / General (A&G) Cap includes escalation 6,167 10,000 8,000 8,100 3,500 6,150 3,500 6,150 3,500 6,300 Capital Risk Reserve 4,000 6,054 3,746 3,892 2,251 3,274 1,916 3,399 1,857 3,73 Subtotal Capital Costs 3,2831 30,600 8,460 - <			,		-,				- ,		- /		,				,				6,380
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Main Condenser Replacement includes escalation 32,831 30,600 8,460 -																					
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Escalation on Capital Costs 1,709 2,329 4,152 3,682 6,024 4,349 9,220 6,839 13,75 Subtotal Capital Costs \$ 73,732 \$ 91,130 \$ 51,483 \$ 50,442 \$ 32,144 \$ 44,269 \$ 26,820 \$ 49,231 \$ 31,926 \$ 57,960 Fuel Related Costs Nuclear Fuel Amortization \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,507 Subtotal Fuel Related Costs \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,500 Subtotal Fuel Related Costs \$ 35,428 \$ 52,473 \$ 46,361 \$ 58,925 \$ 54,293 \$ 70,812 \$ 65,265 \$ 79,671 \$ 73,102 Total Unescalated Budget \$ 317,710 \$ 396,927 \$ 300,236 \$ 346,957 \$ 287,865 \$ 346,397 \$ 298,221 \$ 36,4155 \$ 316,455 \$ 382,911 Total Unescalated Budget \$ 317,710 \$ 306,226 \$ 311,722 \$ 37,773 \$ 310,126 \$ 385,663 \$ 30,0144 \$ 419,865 \$ 36,		¢		\$		\$		\$	46 290	¢	28 462	¢	38 245	\$	22 471	\$	40 011	\$	25 087	\$	44 207
Subtotal Capital Costs \$ 73,732 \$ 91,130 \$ 51,483 \$ 50,442 \$ 32,144 \$ 44,269 \$ 26,820 \$ 49,231 \$ 31,926 \$ 57,967 Fuel Related Costs Nuclear Fuel Amortization \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,500 Subtotal Fuel Related Costs \$ 30,926 \$ 52,473 \$ 46,611 \$ 58,925 \$ 54,293 \$ 70,812 \$ 65,265 \$ 69,471 \$ 64,500 8,680 9,078 8,280 9,0783		Ť	-	۳,		Ψ		Ψ		۳,		Ľ		٣		٣		Ψ		Ψ	
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Nuclear Fuel Amortization Spent Fuel Fee \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,500 Subtoal Fuel Fee \$ 30,910 \$ 35,428 \$ 52,473 \$ 46,601 \$ 56,985 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,500 \$ 64,500 \$ 8,280 9,078		Ť	. 0, . 02	Ť	01,100	Ŷ	01,100	Ť		Ť	02 ,	Ť	,200	Ť		Ť	.0,201	Ŷ	01,020	Ť	01,000
Nuclear Fuel Amortization Spent Fuel Fee \$ 36,415 \$ 28,414 \$ 43,555 \$ 38,081 \$ 49,847 \$ 46,013 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,500 Subtoal Fuel Fee \$ 30,910 \$ 35,428 \$ 52,473 \$ 46,601 \$ 56,985 \$ 61,734 \$ 56,985 \$ 69,471 \$ 64,500 \$ 64,500 \$ 8,280 9,078	Fuel Belated Costs	1																			
Spent Fuel Fee 8,989 7,014 8,918 8,280 9,078 8,280 9,078 8,280 9,078 8,280 10,200 8,600 Subtotal Fuel Related Costs 45,404 \$ 35,428 \$ 52,473 \$ 46,361 \$ 58,925 \$ 54,293 \$ 70,812 \$ 65,265 \$ 79,671 \$ 73,10 Total Unescalated Budget Total Escalation Total Costs - Industry basis Dutage Days \$ 317,710 \$ 396,927 \$ 300,236 \$ 346,957 \$ 287,865 \$ 346,397 \$ 298,221 \$ 36,4226 \$ 316,455 \$ 382,91 Total Costs - Industry basis Dutage Days \$ 317,710 \$ 405,839 \$ 311,722 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 36,041 \$ 457,82 9,258 7,182 9,383 8,455 9,383 8,507 9,383 8,558 9,383 8,559 31 - 29 2 2		\$	36 415	\$	28 414	\$	43 555	\$	38 081	\$	49 847	\$	46 013	\$	61 734	\$	56 985	\$	69 471	\$	64,502
Subtotal Fuel Related Costs \$ 45,404 \$ 35,428 \$ 52,473 \$ 46,361 \$ 58,925 \$ 54,293 \$ 70,812 \$ 65,265 \$ 79,671 \$ 73,10 Total Unescalated Budget Total Escalation Total Costs - Industry basis Outage Days \$ 317,710 \$ 396,927 \$ 300,236 \$ 346,957 \$ 287,865 \$ 346,397 \$ 298,221 \$ 36,4226 \$ 316,455 \$ 382,911 Total Costs - Industry basis Outage Days \$ 317,710 \$ 405,839 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 300,144 \$ 419,865 \$ 36,937 \$ 298,221 \$ 363,014 \$ 41,586 74,900 0utage Days \$ 317,710 \$ 405,839 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 36,041 \$ 457,822 9,258 7,182 9,383 8,455 9,383 8,507 9,383 8,558 9,383 8,592 31 - 29 2 2		Ť		1		-		-		Ť		Ľ		-	- , -	-		Ť		*	8,600
Total Unescalated Budget \$ 317,710 \$ 396,927 \$ 300,236 \$ 346,957 \$ 287,865 \$ 346,397 \$ 298,221 \$ 36,4226 \$ 316,455 \$ 382,91 Total Escalation - 8,912 11,556 23,774 22,261 39,266 31,923 55,639 44,586 74,90 Total Costs - Industry basis 5 317,710 \$ 405,839 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 36,041 \$ 457,822 Outage Days - 78 - 33 - 31 - 29 - 2		\$		\$		\$		\$		\$	- ,	ŝ	-,	\$		\$		\$		\$	- /
Total Escalation - 8,912 11,556 23,774 22,261 39,266 31,923 55,639 44,586 74,90 Total Costs - Industry basis \$ 317,710 \$ 405,889 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 361,041 \$ 457,82 Total Net Generation (Gwh) 0.0tage Days 7,80 - 33 - 31 - 29 - 21		Ť		Ť	00, 120	Ŧ	02,0	Ť		Ť	00,020	Ť	0.,200	Ť		Ť	00,200	Ψ		Ť	
Total Escalation - 8,912 11,556 23,774 22,261 39,266 31,923 55,639 44,586 74,90 Total Costs - Industry basis \$ 317,710 \$ 405,889 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 361,041 \$ 457,82 Total Net Generation (Gwh) 0.0tage Days 7,80 - 33 - 31 - 29 - 21		1																			
Total Escalation - 8,912 11,556 23,774 22,261 39,266 31,923 55,639 44,586 74,90 Total Costs - Industry basis \$ 317,710 \$ 405,889 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 36,1041 \$ 457,82 Total Net Generation (Gwh) 0.0tage Days 7.182 9,383 8,455 9,383 8,507 9,383 8,558 9,383 8,599 2	Total Unescalated Budget	\$	317,710	\$	396,927	\$	300,236	\$	346,957	\$	287,865	\$	346,397	\$	298,221	\$	364,226	\$	316,455	\$	382,916
Total Costs - Industry basis \$ 317,710 \$ 405,839 \$ 311,792 \$ 370,731 \$ 310,126 \$ 385,663 \$ 330,144 \$ 419,865 \$ 361,041 \$ 457,822 Total Net Generation (Gwh) Outage Days 9,258 7,182 9,383 8,455 9,383 8,507 9,383 8,558 9,383 8,592 2	Total Escalation	1			8,912		11,556	ľ	23,774		22,261	1	39,266		31,923		55,639		44,586		74,906
Total Net Generation (Gwh) 9,258 7,182 9,383 8,455 9,383 8,507 9,383 8,558 9,383 8,59 Outage Days - 78 - 33 - 31 - 29 - 2	Total Costs - Industry basis	\$	317,710	\$	405,839	\$		\$		\$	310,126	\$	385,663	\$	330,144	\$	419,865	\$		\$	
Outage Days - 78 - 33 - 31 - 29 - 2	Total Net Generation (Gwh)	F	9,258	i i i	7,182		9,383	Ť.	8,455	Ė	9,383	ŕ	8,507		9,383		8,558		9,383		8,598
		1	-		, -		-	1	-,		-	L	- ,		-				-		27
Cost of Power (Cents per kWh, constant FY10\$) 3.432 5.527 3.200 4.103 3.068 4.072 3.178 4.256 3.373 4.45		1						1	50			L	5.								
	Cost of Power (Cents per kWh, constant FY10\$)	t	3.432		5.527		3.200	t	4.103		3.068	t	4.072		3.178		4.256		3.373		4.454
	Cost of Power (Cents per kWh, escalated)	t						t				t	-	-		-					5.325

Key Assumption/Qualifications

Escalation Rate = 3.5% starting FY11 Exception Medical Benefits @ 9% in FY11 and FY12, and 7% thereafter



CGS O&M LRP Compared to IPR (Dollars in Thousands)

Calendar Year	2009 2	010 20	011 2	012 2	2013 2	2014
Fiscal Year	FY10	FY11	FY12	FY13	FY14	FY15
Item Description	BPA	Rate Period	BPA	A Rate Period	BPA	Rate Period
Operations & Maintenance	\$215,685					
Escalation on O&M	\$0	\$9,498				
Subtotal Operations & Maintenance	\$215,685	\$282,214	\$228,420	\$286,143	\$232,089	\$300,349
Nuclear Fuel	\$3,446	\$52,337	\$60,407	\$89,887	\$59,542	\$88,380
Total CGS O&M in EN FY	\$219,131	\$334,551	\$288,827	\$376,030	\$291,631	\$388,729
Total CGS O&M in BPA FY	\$247,986	\$323,120	\$310,628	\$354,930	\$315,906	
Decommissioning NEIL Insurance	\$8,911 \$1,748	\$9,882 \$1,809	\$10,983 \$1,872	\$12,229 \$1,937	\$13,636 \$2,005	
Total CGS O&M in BPA FY with Decom & Ins	\$258,645	\$334,811	\$323,483	\$369,096	\$331,547	
Integrated Program Review O&M	\$258,549	\$353,309	\$305,399	\$355,899	\$323,000	
Decommissioning NEIL Insurance	\$8,911 \$1,748	\$9,882 \$1,809	\$10,983 \$1,872	\$12,229 \$1,937	\$13,636 \$2,005	
Total Integrated Program Review	\$269,208	\$365,000	\$318,254	\$370,065	\$338,641	



CGS Capital Debt Service Energy Northwest Fiscal Years (Dollars in Thousands)

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Principal	\$1,875	\$1,970	\$2,075	\$2,185	\$2,295	\$2,420	\$2,550	\$2,685	\$2,825	\$2,970
-										
Interest	\$9,910	\$13,038	\$17,930	\$21,240	\$23,647	\$25,132	\$27,219	\$28,426	\$30,746	\$32,195
Total	\$11,785	\$15,008	\$20,005	\$23,425	\$25,942	\$27,552	\$29,769	\$31,111	\$33,571	\$35,165



Energy Northwest Cash in BPA Fiscal Years (Dollars in Thousands)

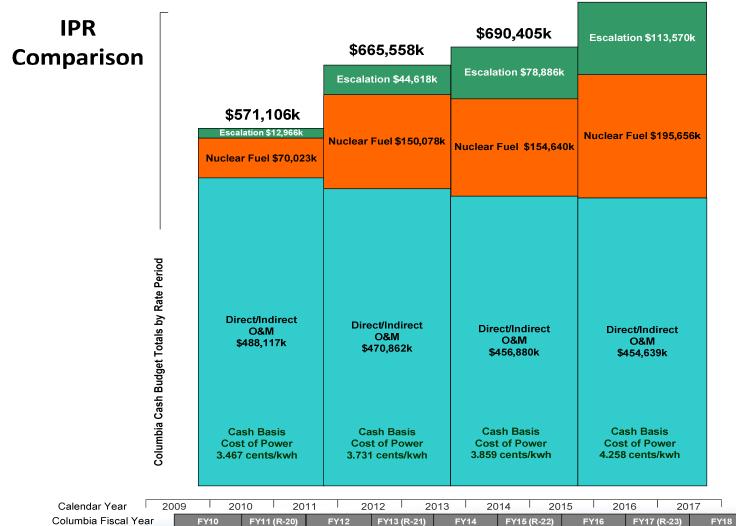
FY10 budget LRP	EN FY10	EN FY11	EN FY12	FY09 Estimate	EN FY10	EN FY11	EN FY12	Delta
<u>EN FYs</u>				<u>EN FYs</u>				
Operations & Maintenance	\$215,685	\$272,716	\$214,547	Operations & Maintenance	\$220,243	\$285,088	\$206,623	(\$9,006)
Nuclear Fuel	3,446	52,337	60,407	Nuclear Fuel	3,445	80,666	59,747	(\$27,668)
Escalation	0	9,498	13,873	Escalation	0	9,498	13,873	\$0
Total	\$219,131	\$334,551	\$288,827	Total	\$223,688	\$375,252	\$280,243	(\$36,674)
BPA FYs	BPA FY10	BPA FY11	TOTAL	BPA FYs	BPA FY10	BPA FY11	TOTAL	
Operations & Maintenance	\$229,943	\$258,174	\$488.117	Operations & Maintenance	\$236,454	\$265,472	\$501,926	(\$13,810)
Nuclear Fuel	φ <u>2</u> 29,943 15,669	φ <u>2</u> 30,174 54,355	70,023	Nuclear Fuel	¢230,434 22,750	φ205,472 75,436	98,187	(\$28,163)
Escalation	2,375	10,592	12,966	Escalation	2,375	10,592	12,966	\$0
Total Net Billed Impact to	\$247,986	\$323,120	\$571,106	Total Net Billed Impact to	\$261,579	\$351,500	\$613,079	(\$41,973)
BPA Rate Case				BPA Rate Case				
Generation			16,471	Generation			16,378	
Cost of Power (Cash Basis)			3.467	Cost of Power (Cash Basis)			3.794	

Note: Operations & Maintenance includes direct & indirect O&M costs, spent fuel disposal, spares/inventory escalation, generation tax and fuel revenue



BPA Rate Case FY16/FY17

\$763,863k





BPA Rate Case FY10/FY11 BPA Rate Case FY12/FY13 BPA Rate Case FY14/FY15 BPA Rate Case FY16/FY17

\$829,559k

IPR Rate Case \$748,616k Escalation \$113,570k \$715,957k With Debt Service Escalation \$78,886k Escalation \$44,618k Capital/Debt Service \$65,696k Capital/Debt Service Capital/Debt Service \$50.399k \$58,211k \$608,223k Escalation \$12,966k Capital/Debt Service \$37,117k Nuclear Fuel \$195,656k Nuclear Fuel \$150,078k Nuclear Fuel \$154,640k Nuclear Fuel \$70,023k Columbia Cash Budget Totals by Rate Period Direct/Indirect Direct/Indirect Direct/Indirect **Direct/Indirect** M&O O&M O&M O&M \$488,117k \$470,862k \$456,880k \$454,639k Cash Basis **Cash Basis** Cash Basis **Cash Basis Cost of Power** Cost of Power **Cost of Power Cost of Power** 3.693 cents/kwh 3.999 cents/kwh 4.170 cents/kwh 4.609 cents/kwh Calendar Year 2009 2010 2011 2012 2013 2014 2015 2016 2017 Columbia Fiscal Year FY10 FY11 (R-20) FY12 FY13 (R-21) FY14 FY15 (R-22) FY16 FY17 (R-23) FY18



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Columbia Generating Station FY10/FY11 Rate Case Period

Current efforts to lower costs during the rate period:

- Fuel purchases, costs reduced and moved to FY10
- Outage duration reduced from 88 days to 78 days
- FY10/FY11 Risk Reserves reduced

Ongoing efforts to reduce costs:

 Review of Operations & Maintenance (O&M) budgets for additional reductions

\$613,079k



