



**ENERGY
NORTHWEST**

Columbia Generating Station

Scott Oxenford, Vice President Nuclear Generation/CNO
Brent Ridge, Asset Manager/Controller
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Columbia Generating Station (CGS) Focus Areas

- ✦ Equipment Reliability
- ✦ Human Performance
- ✦ Dose Reduction

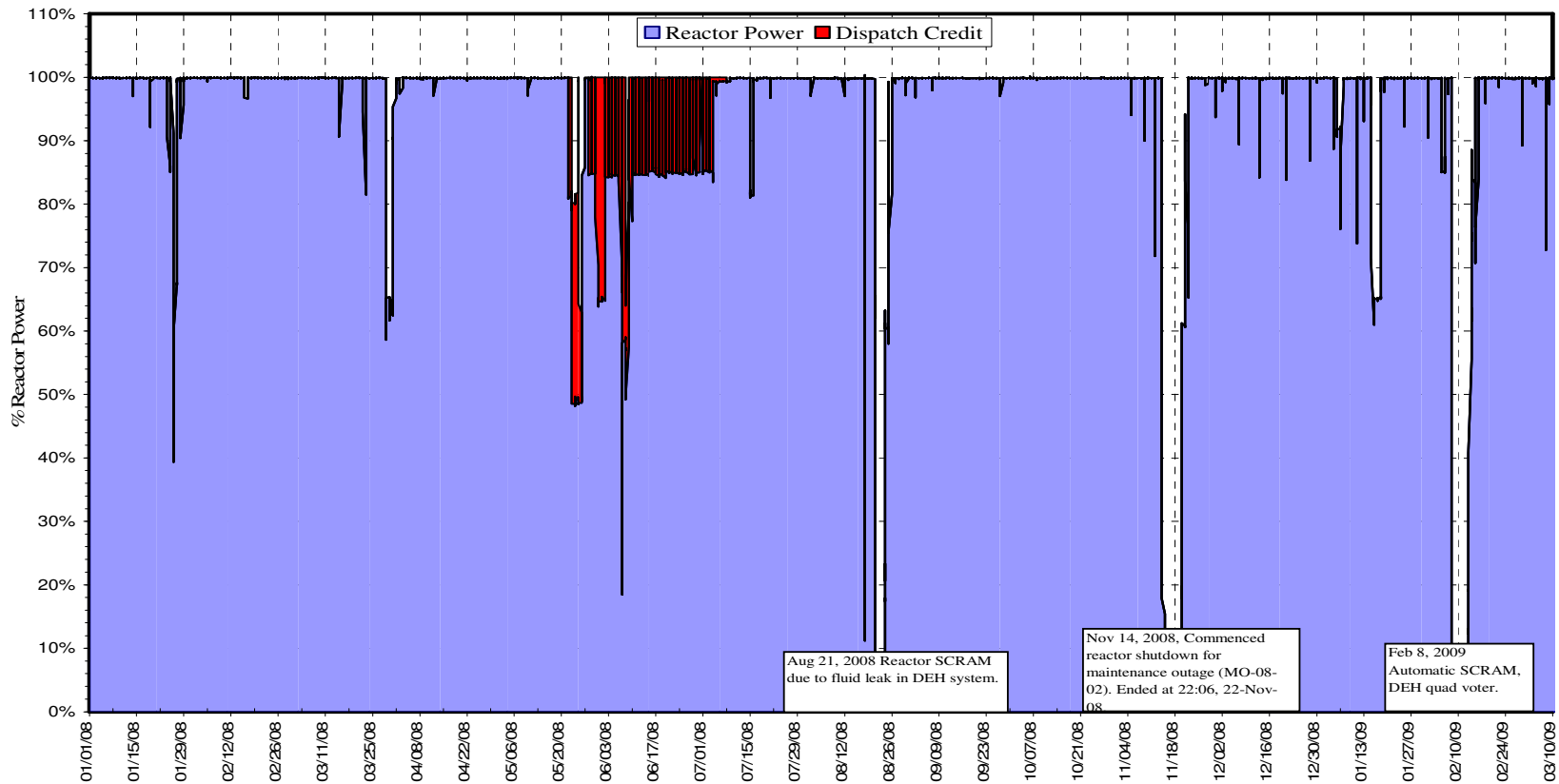
CGS Fiscal Performance Initiatives

- ✦ Efficiency Improvements
- ✦ Benchmarking
- ✦ Long Range Plan Adherence

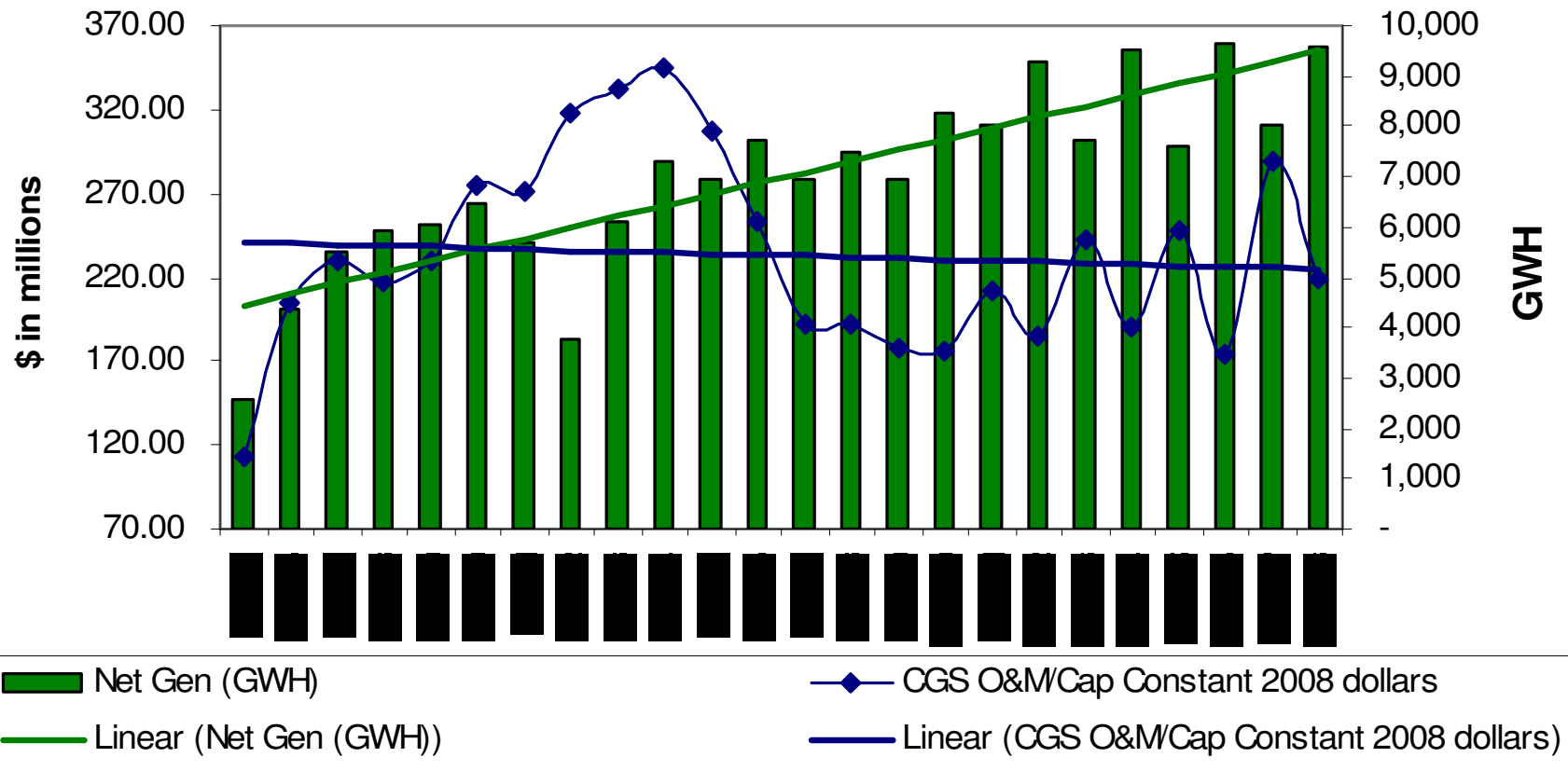
Objectives

- ✦ 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

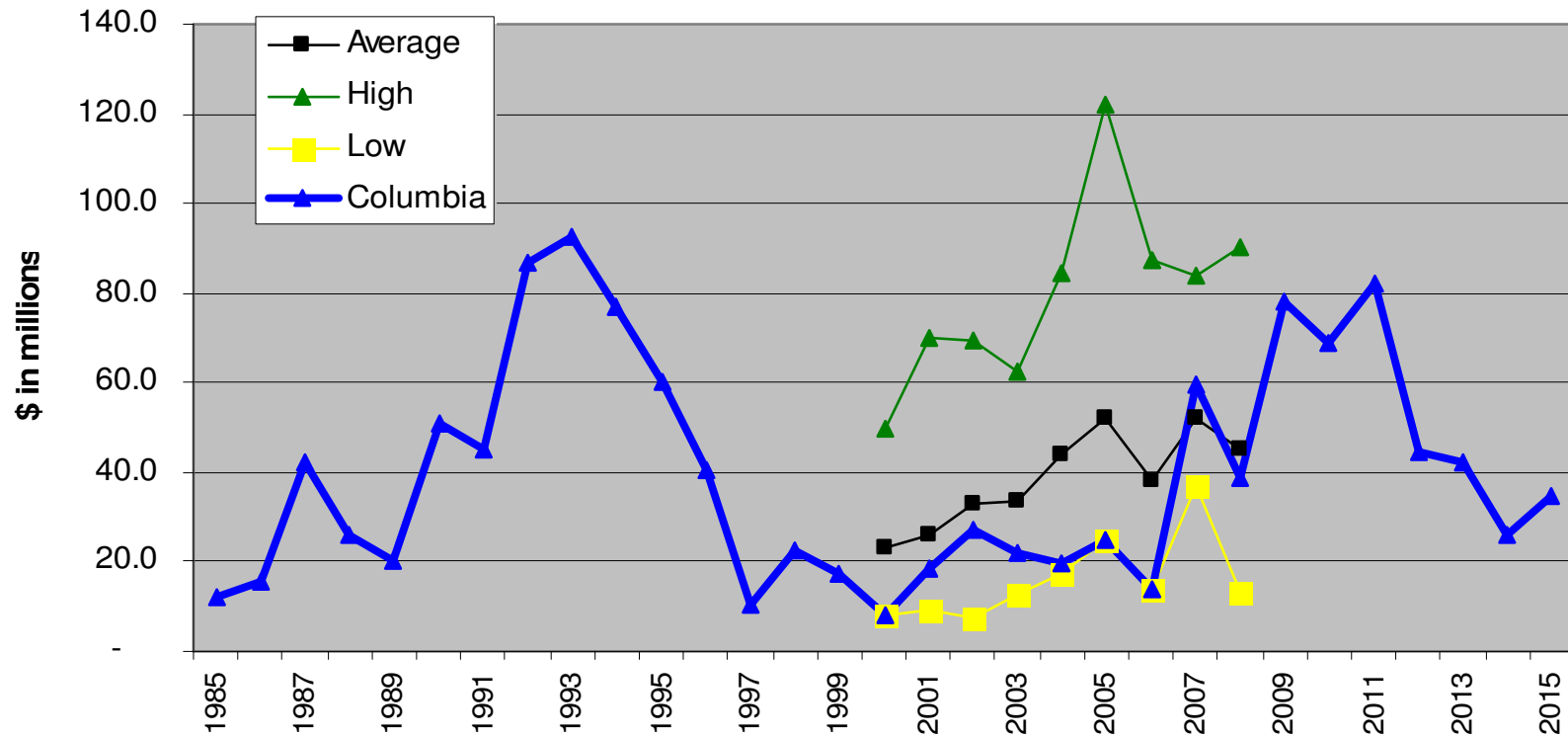


CGS O&M and Capital Costs Versus Net Generation – Constant 2008\$



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 Million
- ✦ 25 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)

<u>Budget Line Item</u>	<u>FY-2010 Budget</u>	<u>FY-2009 LRP for FY-2010</u>	<u>Variance</u>
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	<u>\$317,710</u>	<u>\$317,713</u>	<u>(\$3)</u>
Net Generation	<u>9,258</u>	<u>9,258</u>	<u>0</u>
Cost of Power	<u>\$34.32</u>	<u>\$34.32</u>	<u>(\$0.00)</u>

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

<u>Budget Line Item</u>	<u>FY-2010 Budget</u>	<u>Original FY 2009 Budget</u>	<u>Variance</u>
Controllable Costs			
Energy NW Labor*	\$70,127	\$68,860	\$1,267
Baseline Non-Labor	51,814	49,610	2,204
Incremental Outage Non-Labor	880	33,911	(33,031)
Projects - Expense Non-Labor	13,167	59,937	(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	<u>\$272,306</u>	<u>\$356,885</u>	<u>(\$84,579)</u>
Fuel Related Costs			
Fuel Amortization	\$36,415	\$32,723	\$3,692
Spent Fuel Fee	8,989	7,860	1,129
Subtotal Fuel Related Costs	<u>\$45,404</u>	<u>\$40,583</u>	<u>\$4,821</u>
Columbia Costs	<u>\$317,710</u>	<u>\$397,468</u>	<u>(\$79,758)</u>
Net Generation (GWh)	<u>9,258</u>	<u>8,239</u>	<u>1,019</u>
Cost of Power (\$/MWh)	<u>\$34.32</u>	<u>\$48.24</u>	<u>(\$13.92)</u>

*Includes escalation @ 3.075%

CGS Budgeted Positions (Full Time Equivalents)

<u>Organization</u>	FY 2010 <u>Budget</u>	Original FY 2009 <u>Budget(1)</u>	<u>Variance</u>
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	<u>1,076</u>	<u>1,046</u>	<u>30</u>

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 reclassified 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	\$51,814
Fiscal Year 2009 Non-Labor (escalated)	\$50,932
Variance	\$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	<u>8,989</u>	<u>9,036</u>
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

Item Description	Calendar Year										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	
	BPA Rate Period		BPA Rate Period		BPA Rate Period		BPA Rate Period		BPA Rate Period		
Direct and Indirect O&M Costs											
Baseline costs	\$ 117,361	\$ 116,373	\$ 117,537	\$ 114,345	\$ 112,914	\$ 110,928	\$ 109,178	\$ 109,598	\$ 109,513	\$ 108,102	
Outage Costs (Incremental)	880	39,000	900	20,000	900	20,000	900	16,500	900	16,500	
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	
O&M Projects	13,680	46,734	9,075	41,528	9,800	42,176	8,021	40,400	8,079	39,451	
Facilities O&M Projects	569	550	550	550	600	600	600	600	-	600	
Information Technology O&M Projects	412	155	155	475	475	225	575	285	155	1,600	
O&M Risk Reserve	793	1,593	830	2,000	750	1,600	500	1,600	500	750	
Outage Risk Reserve	-	1,095	-	1,084	-	1,085	-	1,000	-	1,000	
Baseproj Contingency	-	312	500	500	500	500	500	500	-	500	
Subtotal Direct & Indirect O&M Costs	\$ 198,574	\$ 272,078	\$ 198,609	\$ 254,306	\$ 200,478	\$ 253,859	\$ 204,938	\$ 258,950	\$ 211,697	\$ 265,607	
Escalation on Direct & Indirect	-	7,203	9,227	19,622	18,579	33,242	27,573	46,419	37,747	61,149	
Subtotal Direct & Indirect O&M Costs	\$ 198,574	\$ 279,281	\$ 207,836	\$ 273,928	\$ 219,057	\$ 287,101	\$ 232,511	\$ 305,369	\$ 249,444	\$ 326,756	
Capital Costs											
PHC Capital Projects	\$ 15,550	\$ 29,747	\$ 12,729	\$ 20,992	\$ 8,527	\$ 19,864	\$ 7,690	\$ 20,425	\$ 7,324	\$ 24,741	
Moveable Capital & Downtown Capital Projects	872	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	
Facilities Capital Projects	1,568	5,700	9,911	5,990	5,500	1,500	2,250	2,750	1,750	1,750	
Information Technology Capital Projects	12,744	6,020	5,008	6,016	7,384	6,157	5,815	5,987	9,356	6,380	
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	3,736	
Main Condenser Replacement includes escalation	32,831	30,600	8,460	-	-	-	-	-	-	-	
Subtotal Capital Costs	\$ 73,732	\$ 89,421	\$ 49,154	\$ 46,290	\$ 28,462	\$ 38,245	\$ 22,471	\$ 40,011	\$ 25,087	\$ 44,207	
Escalation on Capital Costs	-	1,709	2,329	4,152	3,682	6,024	4,349	9,220	6,839	13,756	
Subtotal Capital Costs	\$ 73,732	\$ 91,130	\$ 51,483	\$ 50,442	\$ 32,144	\$ 44,269	\$ 26,820	\$ 49,231	\$ 31,926	\$ 57,963	
Fuel Related Costs											
Nuclear Fuel Amortization	\$ 36,415	\$ 28,414	\$ 43,555	\$ 38,081	\$ 49,847	\$ 46,013	\$ 61,734	\$ 56,985	\$ 69,471	\$ 64,502	
Spent Fuel Fee	8,989	7,014	8,918	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	\$ 73,102	
Total Unescalated Budget	\$ 317,710	\$ 396,927	\$ 300,236	\$ 346,957	\$ 287,865	\$ 346,397	\$ 298,221	\$ 364,226	\$ 316,455	\$ 382,916	
Total Escalation	-	8,912	11,556	23,774	22,261	39,266	31,923	55,639	44,586	74,906	
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)	9,258	7,182	9,383	8,455	9,383	8,507	9,383	8,558	9,383	8,598	
Outage Days	-	78	-	33	-	31	-	29	-	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	4.454	
Cost of Power (Cents per kWh, escalated)	3.432	5.651	3.323	4.385	3.305	4.534	3.519	4.906	3.848	5.325	

Key Assumption/Qualifications

Escalation Rate = 3.5% starting FY 11
 Exception Medical Benefits @ 9% in FY11 and FY12, and 7% thereafter

CGS O&M LRP Compared to IPR

(Dollars in Thousands)

Calendar Year	2009	2010	2011	2012	2013	2014
Fiscal Year	FY10	FY11	FY12	FY13	FY14	FY15
Item Description	BPA Rate Period		BPA Rate Period		BPA Rate Period	
Operations & Maintenance	\$215,685	\$272,716	\$214,547	\$259,157	\$203,180	\$254,084
Escalation on O&M	\$0	\$9,498	\$13,873	\$26,986	\$28,909	\$46,265
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	\$8,911	\$9,882	\$10,983	\$12,229	\$13,636	
NEIL Insurance	\$1,748	\$1,809	\$1,872	\$1,937	\$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	\$8,911	\$9,882	\$10,983	\$12,229	\$13,636	
NEIL Insurance	\$1,748	\$1,809	\$1,872	\$1,937	\$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	<u>EN FY10</u>	<u>EN FY11</u>	<u>EN FY12</u>
EN FYs			
Operations & Maintenance	\$215,685	\$272,716	\$214,547
Nuclear Fuel	3,446	52,337	60,407
Escalation	0	9,498	13,873
Total	\$219,131	\$334,551	\$288,827

BPA FYs	<u>BPA FY10</u>	<u>BPA FY11</u>	<u>TOTAL</u>
Operations & Maintenance	\$229,943	\$258,174	\$488,117
Nuclear Fuel	15,669	54,355	70,023
Escalation	2,375	10,592	12,966
Total Net Billed Impact to	\$247,986	\$323,120	\$571,106
BPA Rate Case			
Generation			16,471
Cost of Power (Cash Basis)			3,467

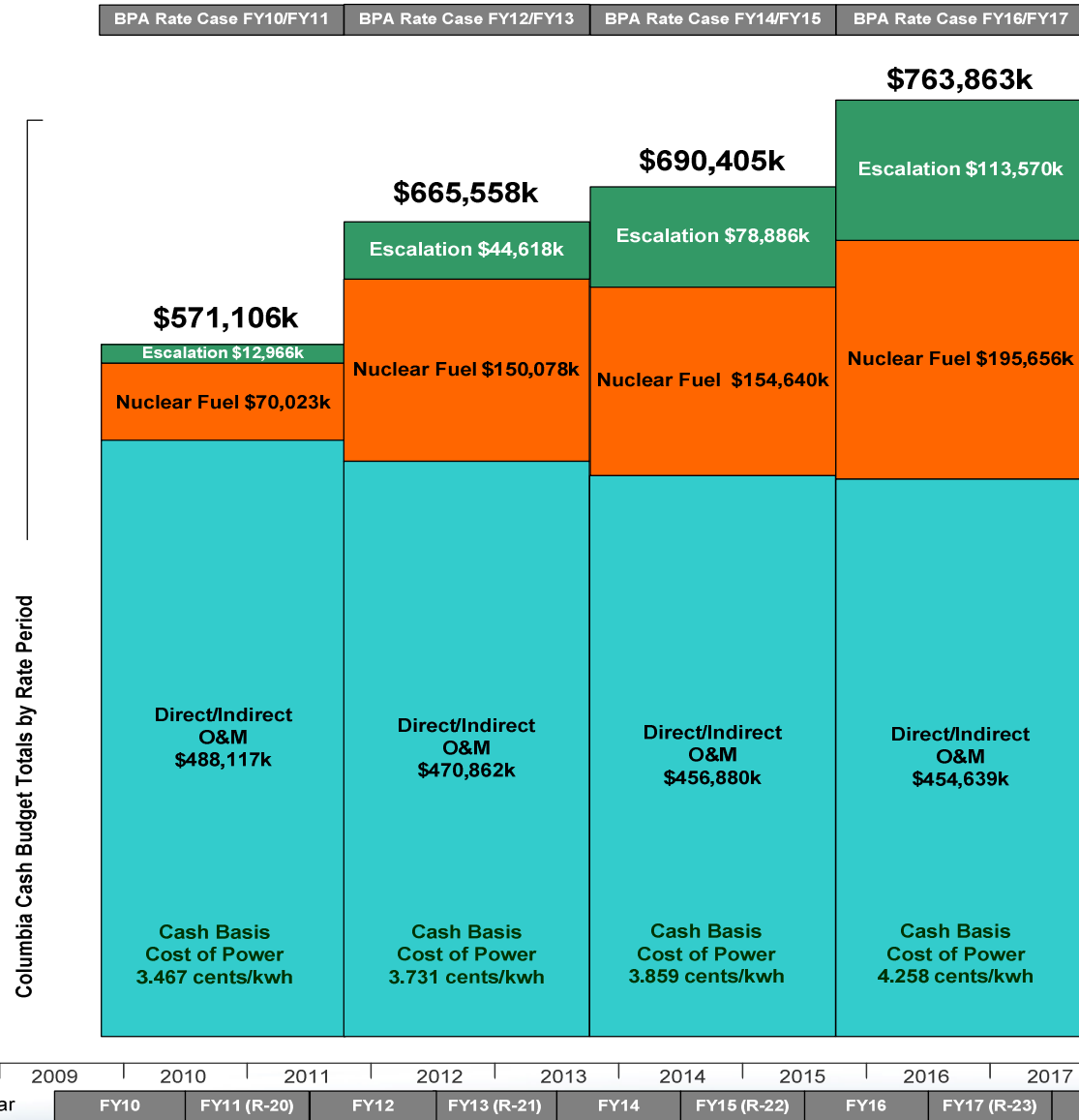
FY09 Estimate	<u>EN FY10</u>	<u>EN FY11</u>	<u>EN FY12</u>	Delta
EN FYs				
Operations & Maintenance	\$220,243	\$285,088	\$206,623	(\$9,006)
Nuclear Fuel	3,445	80,666	59,747	(\$27,668)
Escalation	0	9,498	13,873	\$0
Total	\$223,688	\$375,252	\$280,243	(\$36,674)

BPA FYs	<u>BPA FY10</u>	<u>BPA FY11</u>	<u>TOTAL</u>	
Operations & Maintenance	\$236,454	\$265,472	\$501,926	(\$13,810)
Nuclear Fuel	22,750	75,436	98,187	(\$28,163)
Escalation	2,375	10,592	12,966	\$0
Total Net Billed Impact to	\$261,579	\$351,500	\$613,079	(\$41,973)
BPA Rate Case				
Generation			16,378	
Cost of Power (Cash Basis)			3,794	

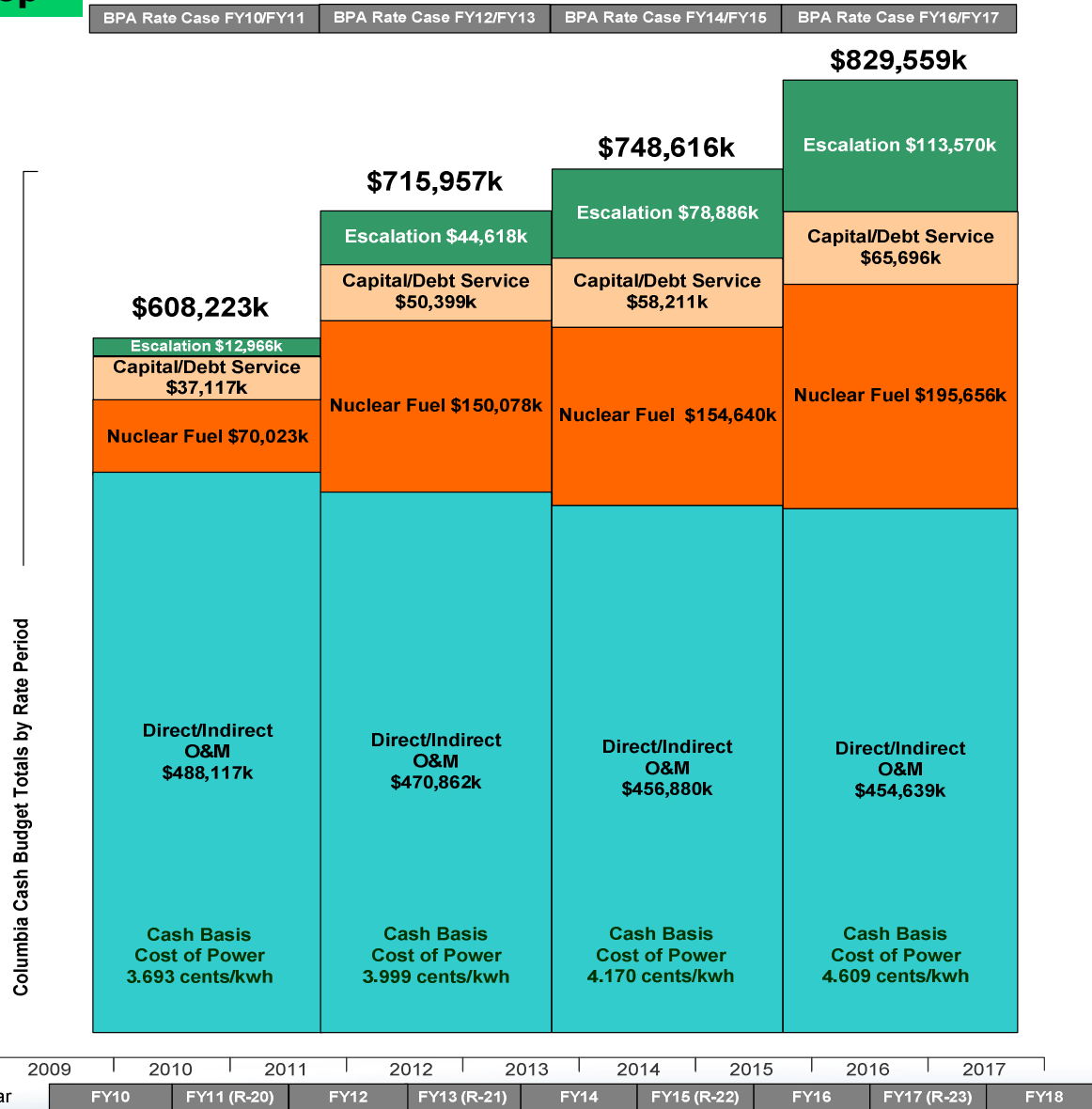
Note: Operations & Maintenance includes direct & indirect O&M costs, spent fuel disposal, spares/inventory escalation, generation tax and fuel revenue

Fiscal Year 2010 Budget Workshop

IPR Comparison



IPR Rate Case With Debt Service



**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

