

Fiscal Year 2018 Columbia Generating Station Annual Operating Budget



Prepared 4/27/17

Table of Contents

	<u>Table</u>	<u>Page</u>
Summary		3
Key Assumptions/Qualifications		4
Memorandum of Agreement (MOA)	Table 1	5
Columbia Station Costs - Memorandum of Agreement Comparison	Table 2	6
Summary of Costs	Table 3	7
Summary of Full Time Equivalent Positions	Table 4	8
Projects Non-Labor	Table 5	9
Capital Projects Non-Labor Over \$1.25 Million	Table 5A	10
Expense Projects Non-Labor Over \$725 Thousand	Table 5B	10
Treasury Related Expenses	Table 6	11
Cost-to-Cash Reconciliation	Table 7	13
Statement of Funding Requirements	Table 8	14
Monthly Statement of Funding Requirements	Table 9	15

Summary

Energy Northwest's Columbia Generating Station (Columbia) is a 1,157 megawatt boiling water nuclear power station utilizing a General Electric nuclear steam supply system. The project is located on the Department of Energy's Hanford Reservation near Richland, Washington. The project began commercial operation in December 1984.

This Columbia Generating Station Fiscal Year 2018 Annual Operating Budget has been prepared by Energy Northwest pursuant to the requirements of Board of Directors Resolution No. 640, the Project Agreement, and the Net Billing Agreements. This document includes all capitalized and non-capitalized costs associated with the project for Fiscal Year 2018. In addition this document includes all funding requirements.

The total cost budget for Fiscal Year 2018 for Expense and Capital related costs are estimated at \$591,548,000 (Table 3), with associated total funding requirements of \$1,097,804,000 (Table 8). Using the Memorandum of Agreement basis for measuring Columbia's costs, budget requirements for Fiscal Year 2018 have been established at \$356,993,000 (Table 1) including escalation. In Fiscal Year 2018, Bonneville Power Administration will be directly paying the funding requirements on a monthly basis under the provisions of the Direct Pay Agreements. This will take the net billing requirements to zero, for the statements which are normally sent to participants in the project, and will be paid in accordance with the terms of the Net Billing Agreements. The Net Billing Agreements are still in place, but the direct cash payments from Bonneville Power Administration will simply take the participant payment amounts to zero. In the Direct Pay Agreements, Energy Northwest agreed to promptly bill each participant its share of the costs of the project under the Net Billing Agreements, if Bonneville fails to make a payment when due under the Direct Pay Agreements. Fiscal Year 2018 Capital costs will be funded by bond proceeds and are not included in the Fiscal Year 2018 direct pay requirements. Total direct pay requirements of \$585,425,000 (Table 8) will be the basis for billing directly to Bonneville Power Administration.

This budget is presented on a cost basis and includes a cost to cash reconciliation (Table 7) converting cost data to a cash basis. Cost and cash data are presented on white and green pages, respectively. The Columbia Generating Station's Annual Budget (Table 8) is required by the various project agreements.

Comparison of the Fiscal Year 2018 Budget to the Fiscal Year 2017 Long Range Plan for Fiscal Year 2018 is included (Table 1). Comparison of the Fiscal Year 2018 Budget is made to the original budget for Fiscal Year 2017, dated April 28, 2016.

Key Assumptions/Qualifications

This budget is based upon the following key assumptions and qualifications:

- Fiscal Year 2018 cost of power is based on net generation of 9,769 GWh.
- There is not a refueling outage planned for Fiscal Year 2018.
- Risk reserves consist of a total of \$9.2 million.
- Unknown NRC mandates are excluded.
- All assumptions associated with Nuclear Fuel are referenced in the Columbia Fuel Plan Section.
- Other Specific Inclusions:
 - Sales tax calculated at 8.6 percent for appropriate items
- All Fiscal Year 2018 Capital expenses are expected to be financed through a long-term bond issuance that is anticipated during calendar year 2017.
- Fuel Revenue of \$161 million is expected to be received in Fiscal Year 2018 from the Tennessee Valley Authority (TVA) related to the Depleted Uranium Enrichment Program. Under the TVA Agreement, TVA is obligated to pay prior to September 30, 2018.
- Note / Line of Credit draws for a portion of Operations and Maintenance and interest expense associated with the acceleration of the Regional Cooperation Debt initiative are anticipated throughout Fiscal Year 2018.

Table 1
Memorandum of Agreement (MOA) (1)
(Dollars in Thousands)

<u>Description</u>	<u>FY 2018 Budget</u>	<u>FY 2017 (2)</u>	
		<u>LRP for FY 2018 (2)</u>	<u>Variance</u>
Baseline	\$ 118,123	\$ 120,039	\$ (1,916)
Indirect Allocations O&M	72,440	73,392	(952)
Expense Projects	8,896	7,550	1,346
Risk Reserve	-	1,345	(1,345)
Operations & Maintenance Total	\$ 199,459	\$ 202,326	\$ (2,867)
Capital Projects	\$ 73,103	\$ 72,069	\$ 1,034
Indirect Allocations Capital	17,555	19,529	(1,974)
Risk Reserve	9,167	8,227	940
Capital Total	\$ 99,825	\$ 99,825	\$ -
Nuclear Fuel Related Costs	\$ 57,709	\$ 62,104	\$ (4,395)
Fuel Total	\$ 57,709	\$ 62,104	\$ (4,395)
Total	\$ 356,993	\$ 364,255	\$ (7,262)
Net Generation (GWh)	9,769	9,755	14
Cost of Power (\$/MWh)	\$ 36.54	\$ 37.34	\$ (0.80)

- (1) Columbia costs as defined by the Memorandum of Agreement between Energy Northwest and BPA. This measure includes operations and maintenance, capital additions and fuel related costs as well as an appropriate allocation of indirect costs (such as employee benefits, A&G, and information technology expenses).
- (2) Fiscal Year 2017 Long Range Plan for Fiscal Year 2018.

Table 2
Columbia Station Costs - Memorandum of Agreement Comparison (1)
(Dollars in Thousands)

<u>Description</u>	<u>FY 2018</u> <u>Budget</u>	<u>Original</u> <u>FY 2017</u> <u>Budget</u>	<u>Variance</u>
Controllable Costs			
Energy Northwest Labor	\$ 78,469	\$ 83,071	\$ (4,602)
Baseline Non-Labor	55,785	54,967	818
Incremental Outage	-	27,529	(27,529)
Expense Projects Non-Labor	6,867	30,982	(24,115)
Capital Projects Non-Labor	59,001	101,098	(42,097)
Indirect Allocations	89,995	90,035	(40)
Risk Reserve	9,167	8,793	374
Subtotal Controllable	\$ 299,284	\$ 396,475	\$ (97,525)
Nuclear Fuel Related Costs			
Nuclear Fuel Amortization	\$ 57,709	\$ 47,650	\$ 10,059
Subtotal Nuclear Fuel Related	\$ 57,709	\$ 47,650	\$ 10,059
Total	\$ 356,993	\$ 444,125	\$ (87,466)
Net Generation (GWh)	9,769	8,550	1,219
Cost of Power (\$/MWh)	\$ 36.54	\$ 51.94	\$ (15.40)

(1) Columbia Costs as defined by the Memorandum of Agreement between Energy Northwest and BPA. This cost measure includes operations and maintenance and capital additions, fuel related costs as well as an appropriate allocation of indirect costs (such as employee benefits, and corporate programs).

Table 3
Summary of Costs
(Dollars in Thousands)

<u>Description</u>	FY 2018 Budget	Original FY 2017 Budget	Variance
<u>Controllable Expense</u>			
Energy Northwest Labor	\$ 64,367	\$ 66,079	\$ (1,712)
Base Non-Labor	55,785	54,967	818
Expense Projects Non-Labor (1)	6,867	30,982	(24,115)
Incremental Outage	-	27,529	(27,529)
Indirect Allocations	72,440	70,864	1,576
Risk Reserve	-	2,455	(2,455)
Subtotal Controllable	\$ 199,459	\$ 252,876	\$ (53,417)
<u>Incremental</u>			
Nuclear Fuel Amortization	\$ 57,709	\$ 47,650	\$ 10,059
Generation Taxes	5,568	4,720	848
Subtotal Incremental	\$ 63,277	\$ 52,370	\$ 10,907
<u>Fixed</u>			
Treasury Related Expenses (2)	\$ 143,215	\$ 132,010	\$ 11,205
Decommissioning (3)	8,164	7,759	405
Depreciation	77,608	76,471	1,137
Subtotal Fixed	\$ 228,987	\$ 216,240	\$ 12,747
Total Operating Expense	\$ 491,723	\$ 521,486	\$ (29,763)
<u>Capital</u>			
Energy Northwest Labor	\$ 14,102	\$ 16,992	\$ (2,890)
Capital Projects Non-Labor (4)	59,001	101,098	(42,097)
Indirect Allocations	17,555	19,171	(1,616)
Capital Risk Reserve	9,167	6,338	2,829
Total Capital	\$ 99,825	\$ 143,599	\$ (43,774)
Total Expense and Capital	\$ 591,548	\$ 665,085	\$ (73,537)

(1) See Table 5B (page 10).

(2) See Table 6 (page 11).

(3) Includes ISFSI Decommissioning.

(4) See Table 5A (page 10).

Table 4
Summary of Full Time Equivalent (FTE) Positions*

Organization	Direct Charge	Corporate Allocation**	Laboratories Support	FY 2018 Budget	FY 2017 Budget	Variance
Chief Executive Officer	-	2	-	2	2	-
General Counsel	25	5	-	30	32	(2)
Chief Operating Officer/Chief Nuclear Officer***	798	-	-	798	843	(45)
General Manager Energy Services & Development****	49	-	19	68	72	(4)
Vice President Corporate Services/Chief Financial Officer/Chief Risk Offi	77	61	-	138	142	(4)
Total	949	68	19	1,036	1,091	(55)

* Includes project positions

* Includes employees supporting Capital Projects

* Excludes temporary positions

** Includes allocation of Corporate FTE Positions (95% in FY 2018 and FY 2017)

*** Includes employment "pipeline" for Operations and Security

**** Includes Environmental and Calibrations Laboratories support (19 FTE in FY 2018 and 20 FTE in FY 2017)

Table 5
Projects Non-Labor
(Dollars in Thousands)

<u>Description</u>	<u>FY 2018</u> <u>Budget</u>	<u>Original</u> <u>FY 2017</u> <u>Budget</u>	<u>Variance</u>
<u>Capital Projects</u>			
Plant Modifications	\$ 48,939	\$ 91,868	\$ (42,929)
Facilities Modifications	623	1,438	(815)
Information Technology	9,439	7,792	1,647
Subtotal Capital Projects	<u>\$ 59,001</u>	<u>\$ 101,098</u>	<u>\$ (42,097)</u>
<u>Expense Projects</u>			
Plant Modifications	\$ 5,935	\$ 30,107	\$ (24,172)
Facilities Modifications	932	875	57
Subtotal Expense Projects	<u>\$ 6,867</u>	<u>\$ 30,982</u>	<u>\$ (24,115)</u>
 Total	 <u>\$ 65,868</u>	 <u>\$ 132,080</u>	 <u>\$ (66,212)</u>

Table 5A
Capital Projects Non-Labor Over \$750 Thousand
(Dollars in Thousands)

<u>Plant Modifications and Information Technology</u>	FY 2018 Budget
Fukushima Project	\$ 7,940
Asset Suite Upgrade	5,000
Low Pressure Turbine Rotor Replacement	3,753
Reactor Recirculation Pump 1A/1B Replacement	2,857
Plant Fire Detection System	2,394
Main Turbine Valve Inspection	2,440
Reactor Water Clean-up Piping Replacement	1,954
Install Residual Heat Removal Flush Ports	1,528
Circulating Water Pump Motor 1C Replace/Refurbishment	1,410
Independent Spent Fuel Storage Installation Pad Expansion	1,362
Stack Monitor Upgrade	1,012
Replace Plant Process Computer	1,000
Shooting Range	1,000
Circulating Water Motor - Pump 1B Replace/Refurbishment	950
Electronic Work Packages	916
Residual Heat Removal Pump 2A Replace/Refurbishment	847
Replace Direct Current Motor Controllers	845
Residual Heat Removal Pump Motor 2C Replacement	813
Cyber Security Regulatory Program	800
All Other Projects < \$750 Thousand	20,180
Total Capital Projects Non-Labor	\$ 59,001

Table 5B
Expense Projects Non-Labor Over \$250 Thousand
(Dollars in Thousands)

<u>Plant Modifications & Major Maintenance(MM)</u>	FY 2018 Budget
Emergency Diesel Generator Maintenance	\$ 2,313
Calculation and Drawing Backlog Reduction	715
Plant Valve Project	451
Valve Program	315
In-Service Inspection Programs	279
All Other Projects < \$250 Thousand	2,794
Total Expense Projects Non-Labor	\$ 6,867

Table 6
Treasury Related Expenses
(Dollars in Thousands)

<u>Description</u>	Original		Variance
	FY 2018 Budget	FY 2017 Budget	
Interest Expense (1)	\$ 155,946	\$ 147,173	\$ 8,773
Build America Bond Subsidy (2)	(4,085)	(4,089)	4
Interest on Note (3)	6,388	2,453	3,935
Amortized Financing Cost (4)	(14,337)	(13,649)	(688)
Investment Income (5)	(1,444)	(429)	(1,015)
Treasury Svcs/Paying Agent Fees (6)	747	551	196
Total	\$ 143,215	\$ 132,010	\$ 11,205

Assumptions

- (1) Budget assumes approximately \$95.6 million in principal will be refunded in FY 2017 and approximately \$244.6 million during FY 2018.
- (2) Build America Bonds were expected to receive a subsidy from the Treasury for 35% of the interest payments. A reduction of approximately \$300K (7%) was implemented as part of the Congressional budget cuts surrounding the Sequestration events.
- (3) A portion of Columbia Operations and Maintenance and bond interest expenses will be funded by lines of credit that enable the acceleration of Bonneville federal debt repayments as part of the regional cooperation debt initiative.
- (4) The amortized financing costs are driven by the amortization of the premiums on bond issues.
- (5) Includes income on investment of monies held in the Interest and Principal Accounts and the Capital Fund which can be transferred periodically to the Revenue Fund.
Projected investment income earning rates are forecasted to average 0.75%.
- (6) Includes all non-interest costs of banking, debt and internal labor and overheads.

(Page left intentionally blank)

Table 7
Cost-to-Cash Reconciliation
(Dollars in Thousands)

Description	FY 2018 Total Cost	Non-Cash Items	Non-Cost Items	Deferred Cash Requirements	Prior Year Commitments	FY 2018 Total Cash
<u>Operating</u>						
Controllable - Expense	\$ 199,459	\$ -	\$ -	\$ -	\$ -	\$ 199,459
Controllable - Capital	99,825	-	11,909	-	-	111,734
Nuclear Fuel	57,709	(56,896)	25,245	-	-	26,058
Fuel Litigation	-	-	255	-	-	255
Spares/Inventory Growth	-	-	5,500	-	-	5,500
Generation Taxes	5,568	-	(116)	-	-	5,452
Subtotal Operating	\$ 362,561	\$ (56,896)	\$ 42,793	\$ -	\$ -	\$ 348,458
<u>Fixed Expenses</u>						
Treasury Related Expense						
Interest on Bonds	\$ 155,946	\$ -	\$ -	\$ -	\$ -	\$ 155,946
Build America Bond Subsidy	(4,085)	-	-	-	-	(4,085)
Interest on Note Payable	6,388	-	-	-	-	6,388
Payoff of Note Principal	-	-	405,000	-	-	405,000
Bond Retirement	-	-	181,705	-	-	181,705
Amortized Cost	(14,337)	14,337	-	-	-	-
Investment Income-Revenue Fund	(1,444)	-	-	1,303	-	(141)
Treasury Services	747	-	-	-	-	747
Decommissioning(1)	8,011	(8,011)	3,597	-	-	3,597
ISFSI Decommissioning	153	(153)	189	-	-	189
Depreciation	77,608	(77,608)	-	-	-	-
Subtotal Fixed Expenses	\$ 228,987	\$ (71,435)	\$ 590,491	\$ 1,303	\$ -	\$ 749,346
Total	\$ 591,548	\$ (128,331)	\$ 633,284	\$ 1,303	\$ -	\$ 1,097,804

(1) Decommissioning paid directly by the Bonneville Power Administration

Note: Controllable cost and cash is equal due to BPA decision to Direct Pay and the institution of contractor time & labor.

Table 8
Annual Budget
Statement of Funding Requirements (Revenue Fund)
(Dollars in Thousands)

<u>Description</u>	Original		Variance
	FY 2018	FY 2017	
	Budget	Budget	
<u>Operating</u>			
Controllable Expense	\$ 199,459	\$ 252,876	\$ (53,417)
Controllable Capital	111,734	147,328	(35,594)
Nuclear Fuel	26,058	73,587	(47,529)
Fuel Litigation	255	250	5
Spares/Inventory Growth	5,500	5,000	500
Generation Taxes	5,452	5,518	(66)
Subtotal Operating Requirements	\$ 348,458	\$ 484,559	\$ (136,101)
<u>Fixed</u>			
Treasury Related Expenses			
Interest on Bonds	\$ 155,946	\$ 147,173	\$ 8,773
Build America Bond Subsidy	(4,085)	(4,089)	4
Interest on Note	6,388	2,453	3,935
Payoff of Note Principal	405,000	251,000	154,000
Bond Retirement (1)	181,705	350	181,355
Investment Income-Revenue Fund	(141)	(158)	17
Treasury Services/Paying Agent Fees	747	551	196
Decommissioning Costs (2)	3,597	3,459	138
ISFSI Decommissioning Costs	189	175	14
Subtotal Fixed	\$ 749,346	\$ 400,914	\$ 348,432
Total Funding Requirements	\$ 1,097,804	\$ 885,473	\$ 212,331
<u>Funding Sources</u>			
Direct Pay from BPA / Net Billing (3)	\$ 585,425	\$ 662,326	\$ (76,901)
Note / Line of Credit Draws (4)	236,000	47,463	188,537
Bond Proceeds	111,682	147,225	(35,543)
Fuel Revenue	161,100	25,000	136,100
Bonneville Direct Funding Decommissioning	3,597	3,459	138
Total Funding Sources	\$ 1,097,804	\$ 885,473	\$ 212,331

(1) Approximately \$244.6 million of maturing July 2018 bonds are expected to be extended. The remaining \$181.7 million is expected to be paid off as scheduled.

(2) BPA directly funds the requirements for the Decommissioning Fund on behalf of Energy Northwest.

(3) Bonneville will direct pay the monthly funding requirements under the provisions of the Direct Pay Agreement.

(4) Draws against the existing Note / Line of Credit to continue through at least through June 2018.

Table 9
Monthly Statement of Funding Requirements
 (Dollars in Thousands)

Description	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FY 2018 Total
Beginning Balance	\$ 3,000	\$ 18,345	\$ 29,780	\$ 39,414	\$ 40,313	\$ 46,531	\$ 57,825	\$ 44,081	\$ 27,753	\$ 12,161	\$ 3,000	\$ 3,000	\$ 3,000
Disbursements													
Operating													
Controllable Expense	\$ 24,655	\$ 18,565	\$ 15,366	\$ 19,101	\$ 13,782	\$ 14,795	\$ 13,744	\$ 16,328	\$ 15,592	\$ 16,477	\$ 15,561	\$ 15,493	\$ 199,459
Controllable Capital	10,166	8,004	8,930	8,457	8,891	8,580	8,353	8,988	10,254	9,009	10,332	11,770	111,734
Nuclear Fuel In Process	390	390	2,359	17,964	390	390	390	390	1,003	1,003	1,003	386	26,058
Fuel Litigation	-	-	-	30	75	75	75	-	-	-	-	-	255
Spares/Inventory Growth	-	1,250	-	-	1,500	-	-	1,250	-	-	1,500	-	5,500
Generation Taxes	-	-	-	-	-	-	-	-	-	-	-	5,452	5,452
Subtotal Operating	\$ 35,211	\$ 28,209	\$ 26,655	\$ 45,552	\$ 24,638	\$ 23,840	\$ 22,562	\$ 26,956	\$ 26,849	\$ 26,489	\$ 28,396	\$ 33,101	\$ 348,458
Fixed													
Treasury Related Expenses													
Interest on Bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 76,954	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 78,992	\$ 155,946
BABs Subsidy	-	-	-	-	-	(2,043)	-	-	-	-	-	(2,042)	(4,085)
Interest on Note	2,500	-	-	-	-	-	3,000	-	-	-	-	888	6,388
Payoff of Note Principal	-	-	-	-	-	-	-	-	-	-	-	405,000	405,000
Bond Retirement (1)	-	-	-	-	-	-	-	-	-	-	-	181,705	181,705
Investment Income	(12)	(11)	(12)	(12)	(11)	(12)	(12)	(12)	(11)	(12)	(12)	(12)	(141)
Treasury Services	62	62	62	62	62	62	62	62	62	62	62	62	747
Decommissioning	-	-	3,597	-	-	-	-	-	-	-	-	-	3,597
ISFSI Decommissioning	189	-	-	-	-	-	-	-	-	-	-	-	189
Subtotal Fixed	\$ 2,739	\$ 51	\$ 3,647	\$ 50	\$ 51	\$ 74,961	\$ 3,050	\$ 50	\$ 51	\$ 50	\$ 50	\$ 664,593	\$ 749,346
Total Disbursements	\$ 37,950	\$ 28,260	\$ 30,302	\$ 45,602	\$ 24,689	\$ 98,801	\$ 25,612	\$ 27,006	\$ 26,900	\$ 26,539	\$ 28,446	\$ 697,694	\$ 1,097,804
Funding Sources													
BPA Direct Pay (2)	\$ 3,129	\$ 1,691	\$ 2,409	\$ 18,044	\$ 2,016	\$ 515	\$ 3,515	\$ 1,690	\$ 1,054	\$ 8,369	\$ 18,114	\$ 524,877	\$ 585,425
Note / Line of Credit Draws	40,000	30,000	25,000	20,000	20,000	101,000	-	-	-	-	-	-	236,000
Bond Proceeds	10,166	8,004	8,930	8,457	8,891	8,580	8,353	8,988	10,254	9,009	10,332	11,718	111,682
Fuel Revenue	-	-	-	-	-	-	-	-	-	-	-	161,100	161,100
BPA - Decommissioning	-	-	3,597	-	-	-	-	-	-	-	-	-	3,597
Total Funding Sources	\$ 53,295	\$ 39,695	\$ 39,936	\$ 46,501	\$ 30,907	\$ 110,095	\$ 11,868	\$ 10,678	\$ 11,308	\$ 17,378	\$ 28,446	\$ 697,695	\$ 1,097,804
Ending Balance	\$ 18,345	\$ 29,780	\$ 39,414	\$ 40,313	\$ 46,531	\$ 57,825	\$ 44,081	\$ 27,753	\$ 12,161	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000

(1) \$244,590,000 of 7/1/2018 maturing bonds are expected to be refunded. The remaining \$181,705,000 are expected to be paid off.
 (2) BPA is billed, through the Direct Pay Agreements, one month in advance for the following month's expenses.

(Page left intentionally blank)