



2016 BUDGET

Including:

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December 8, 2015

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OVERVIEW

TAB 1



To: Benton PUD Commissioners

From: Chad Bartram, General Manager *Chad*

Date: December 8, 2015

Re: 2016 Budget

Benton PUD's 2016 Budget was presented to the Commission at a public hearing on Monday, November 9, 2015. The Preliminary Budget was a first draft of the District's proposed expenditures for the coming year and included an assumed revenue increase of 3.9% effective April 1, 2016. Since then, District staff has identified reductions and deferrals totaling \$2.7 million. This consists of a reduction of \$585,000 to net power expense, \$702,000 to non-power operations and maintenance expense, and \$1.4 million to net capital.

Current 2016 projections indicate a need for a rate action ranging from 3.9% using the 50th percentile for net power costs and 4.9% using the 25th percentile. The assumed revenue increase has been updated since the 2016 Preliminary Budget to a 4.9% revenue increase effective September 1, 2016, for planning purposes only. District staff will continue to evaluate the need for a revenue increase throughout 2016 and evaluate issuing bonds to fund long term investments in capital. This action has the added benefit of providing greater rate stability for our customers in following years. Below are some key highlights of our 2016 Budget.

Strategic Implications to Our Budget

Our nation's energy grid, consisting of centralized power stations, transmission towers, substations, and distribution systems, has not changed for decades. Certainly, there have been improvements in generating technologies and reliability enhancements, but at a fundamental level, the energy grid and the utility business model have stayed the same. Yet, over the last couple of years, it is now evident that the utility business model is beginning to change in a very big way.

Technology is one driver of change. With incentives, solar panels and electric vehicles will likely reach price points that make them more affordable to the general public. Energy storage will follow. Energy efficiency improvements will continue to drive down energy use. Using new technologies, non-utility providers will begin to present options to customers which will further drive down energy use, thereby impacting the way utilities charge for their services.

Customer expectations are another major driver. According to the American Public Power Association (APPA), customer expectations are the most consequential change facing public power utilities. In the past, utilities have not necessarily been as customer-centric as other retail providers; but now, on-line retailers have set the bar higher by providing alerts, notifications, and information. Utility customers want that same high level of service.

We are also faced with proposed initiatives and regulations pertaining to carbon reduction. While Benton PUD's power resource portfolio has extremely low carbon-intensity, these efforts may impact BPA's and Benton PUD's market purchases, as well as Benton PUD's output from the Frederickson Combined Cycle Combustion Turbine.

At Benton PUD, we are committed to adapting to these new challenges while continuing to meet our traditional obligations of safe & reliable service, customer value, and low rates. Please see our 2016/2017 Strategic Plan for more detail.

Our 2016 Budget is summarized on the following pages.

Net Power Expenses

Power expenses currently represent over 60% of the District's expenditures. These expenses have continued to rise for nearly all Northwest utilities driven by three key factors: 1) increases in BPA wholesale rates, 2) reductions in revenues from the sale of excess power, and 3) state-wide mandates related to renewable energy targets.

In 2016, net power costs are expected to increase by \$4.7 million above the 2015 original budget. The BPA wholesale rate increase effective October 2015 was 7.1% for power and 4.4% for transmission with a total dollar impact of \$930,000 for 2015 and \$3.2 million for 2016. The 2016 budget will reflect a whole year of the BPA increase, as compared to 2015 which only includes three months of the increase. Further, the 2016 power expense budget has been negatively impacted by the extremely poor water year in 2015, which finished as the third worst water year on record. In 2015, BPA declared a "dry water strategy" which authorized additional water stored in Canada to flow downstream bringing Canadian reservoirs down below normal limits. This action resulted in the "taking" of water from future periods when those same reservoirs will need to be refilled. This action alone results in a negative impact to the 2016 budget of \$1.2 million.

Benton PUD shares the concerns expressed by a number of Northwest utilities regarding rising power costs. We continue to be actively involved in efforts to mitigate the impacts of legislation and rules that impact these costs. Further, we are an active participant in efforts to monitor and influence BPA budgets and rates.

The 2016 Budget has been prepared in compliance with the PUD's financial policies which call for conservative power supply planning assumptions that are consistent with prudent utility practices. The District employs a Monte Carlo analysis that projects 1,000 possible outcomes and selects the budget amount that represents a 75% probability that the net power budget will be achieved.

Staffing

Projected full-time equivalent staffing levels are expected to decrease in 2016 by slightly over one position from the 2015 budget. The Preliminary 2016 budget initially showed a temporary increase in positions related to short-term staffing needs; however, four and a half open positions were reduced to mitigate the impact of 2016 power costs which are much less controllable. Total 2016 salary, wage, and overtime expense are expected to increase by 1.9% from the 2015 budget. Included in the 2016 budget is a temporary overlap for the District's System Dispatcher position to ensure adequate time for training and knowledge transfer. This position is critical for ensuring safety of District employees in the field.

Our budget and staffing plan continues a positive trend in staffing efficiencies. In 2006, our customer per employee ratio was 277. In 2014, the ratio had improved to 333 customers per employee, an increase of 15%. The 2016 budget staffing ratio continues at the 333 customers per employee level due to the reduction since the 2016 preliminary budget was presented. The ratio in 2017 is anticipated to increase to 334 (actual ratios are typically higher than budget due to attrition). This greater efficiency level is a direct result of the efforts and skills of our employees and an indirect result of our investments in employee training, equipment, tools, and information systems.

Operations & Maintenance Expenses (excluding broadband)

Over the last several years, we have successfully managed our O&M costs despite cost pressures associated with a growing customer base, higher employee benefit cost escalation including mandatory pension increases, and new regulatory requirements. For the last several years, our O&M “cost per customer” metric has remained well below the benchmark figures published by the APPA.

Our 2016 Budget shows an overall O&M budget decrease of 0.7% from the 2015 Budget. This was achieved by identifying \$702,000 of reductions and deferrals since the 2016 Preliminary Budget, partly made up of labor savings from a reduction in staffing levels. Other items, such as reduced tree trimming were also incorporated since the 2016 Preliminary Budget. In addition, the District will see a reduction in software maintenance expense related to the implementation of a new utility wide software solution.

It is important to note that these reductions and deferrals come with risks. We will be evaluating our draft strategic plan to identify those actions that may need to be deferred or eliminated based on these resource constraints. Nonetheless, staff believes these recommended budget actions are acceptable in light of uncertainty associated with our power supply costs and the associated impacts on retail rates. As the year progresses, these deferrals must be subject to continued review to ensure that our risks do not grow higher than anticipated.

Broadband

Our overall broadband budget continues to reflect positive cash flows for the coming year. Net cash inflows from broadband, factoring in revenues, expenses, and capital expenditures, are expected to be \$0.3 million. This will make 2016 the sixth consecutive year that our broadband business has reflected a positive cash flow.

Positive cash flows are only part of the story. Through October 2015, Benton PUD broadband has connected over 66 cell sites within its service territory, thereby helping enable 4G LTE cell services for our customers. Additionally, with the help of a federal grant facilitated by NoaNet, we are now able to serve the southern most parts of our county with our “world-class speed” broadband network.

Capital Projects

The 2016 Net Capital Budget is set at \$14.3 million, down \$1.4 million from the 2016 Preliminary Budget after deferrals were identified. The District has budgeted \$10.6 million to increase the capacity and reliability of our transmission and distribution systems. This includes over \$0.8 million for substation projects to replace equipment that has reached the end of its useful life and to install or upgrade equipment with more advanced, reliable and safe technology. A \$1.6 million new transmission line is planned to be constructed in the southern part of the county to improve reliability for agricultural customers. Proactive replacement and rejuvenation of high voltage cable will continue to be a focus along with upgrades to distribution circuits to meet the District's standards for highly reliable service. Consistent with our strategic technology plan, the District has also budgeted \$342,000 for communications and automation equipment to begin the next phase of developing a smarter grid.

Continued investments in technology will help strengthen reliability and enable crews to respond to outages more quickly.

The capital plan also includes information systems projects identified in our Customer Engagement Strategy. We expect the implementation of these systems to occur over the next two years, which will enable a meter data management system, a customer web portal, a mobile app, payment kiosks, and prepay metering capability. We expect these options to be available to our customers in early 2017. Because we have chosen a vendor that specializes in the utility industry and provides an integrated solution, these additional customer offerings will be available for less money. We anticipate \$500,000 per year savings in licensing costs post implementation.

Rates and Revenues

Due to two of the best back-to-back water years on record in 2011 and 2012, the District was able to build up cash reserves and then use those reserves to avoid customer rate increases for over 3 ½ years. In September 2015, the District implemented an overall retail rate increase of 3.9% to address power cost increases that had occurred during that 3 ½ year period. Between Jan 2012 and Dec 2015, annual power costs will have increased by nearly \$12 million. Much of the \$12 million increase is attributed to BPA wholesale rate increases in both October 2013 and October 2015; however, only three months of the October 2015 (Oct-Dec 2015) BPA increase was included in the September 2015 Benton PUD retail rate action.

Power costs are anticipated to rise again by \$4.7 million in 2016. For planning purposes, an overall retail rate increase of 4.9% effective September 1, 2016 has been included in the 2016 Budget. As always, any rate action would require separate Commission approval. The majority of this increase is attributed to the full-year impact of the October 2015 BPA rate increase. District staff will present various options for the size and timing of a rate increase as we continue to evaluate forecasts to assess the revenue increase need.

In order to fund long term capital projects and spread the costs of those expenditures over periods where ratepayers benefit from the use of those assets, District staff is strongly considering a recommendation to issue \$15 million in bonds. As you are aware, the District's debt per customer is extremely low relative to our peers and is expected to remain below the median of PUDs even after the bond issue. A bond issue would mitigate rate actions in future years as well as promote ratepayer equity. Since there remains a great deal of uncertainty pertaining to future power costs and rate actions, we have not included this bond issue in our 2016 budget, but are reflecting the bond issue as we review our long-term forecast.

Even with the 2015 increase, our customers' retail rates remain below the median of benchmark Northwest utilities, and are significantly below other regions of the United States. Currently, the District's average retail bills are in the bottom third of comparable Northwest utilities.

Summary

A net loss of \$3.5 million is expected in 2015 due to the third worst water year on record. Nonetheless, debt service coverage remains at acceptable levels. Cash and investment reserves remain solid, but continue to decline. Our 2016 Budget reflects O&M reductions which are designed to mitigate the need for higher rate increases. We believe this budget will enable us to maintain both safety and reliability; however, some new initiative may be deferred to 2017 related to the deferral of filling open positions.

KEY ASSUMPTIONS

TAB 2

2016 BUDGET - KEY ASSUMPTIONS

REVENUES

- Retail revenues include a 4.9% increase effective September 1, 2016. The increase is for assumption purposes only and no decisions have been made for a rate action in 2016.
- Gross retail energy sales of \$124.7 million based on 203 aMW of retail load
- Sales for resale of \$20.2 million
- 616 new customer connections in 2016 load forecast, medium load growth (see Tab 8); of these, 525 are residential

POWER & TRANSMISSION COSTS *(see Tab 10, 2016 Power Supply Plan, Section 4, for more details)*

- **The District's net power cost is estimated using a "Risk Model or Probability of Occurrence Forecast."**
 - The purpose of the Risk Model is to define the distribution of possible outcomes taking into account changes in power cost variables.
 - The model is run 1,000 times to produce a probability curve of net power cost.
 - A conservative assumption of the 25th percentile of probability is used for budgeting purposes. Thus 75% of the model's net power cost outcomes were equal to or less than the budgeted net power cost.
 - The net power cost budget details are developed by choosing a single model result of occurrence at the 25th percentile of probability point and using its detail information.
- **Within the model, known variables were included as follows:**
 - The budget includes an overall increase of 7.1% in BPA power rates and 4.4% in BPA transmission rates effective October 1, 2015.
 - The budget includes the repayment of borrowed water from the Canadian reservoirs in CY 2015. The repayment results in a reduction of 6.4 aMW of Slice generation received from the Federal Hydro System in CY 2016.
 - Benton's share of the credit from BPA for the Residential Exchange Settlement is estimated at \$2.2 million for CY 2016.
 - The budget includes an irrigation mitigation benefit of \$3.7 million in CY 2016.
 - Conservation program costs for CY 2016 are \$2.0 million, offset by a \$1.9 million reimbursement from BPA. In 2015, conservation program costs are expected to be \$2.8 million, offset by a \$2.3 million reimbursement.
 - Cost Recovery Adjustment Clauses (CRACs) are assumed to not be required in CY 2016.
 - A \$0.5 million slice true-up credit is assumed for CY 2016.
 - Power cost assumptions include the Frederickson contract cost through the forecast period.
 - Power cost forecast includes the estimated cost to meet the requirements of the Energy Independence Act (EIA).
 - No carbon cap and trade impact included in power forecast.

2016 BUDGET - KEY ASSUMPTIONS

(CONTINUED)

INTERNAL DISTRICT COSTS

- Employee benefits and payroll taxes of \$5.5 million are based on total District labor of \$13.4 million. Employee benefit costs include the District's share of FICA, Medicare, and retirement, medical, dental, life and short-term disability insurance, personal leave, retirement, unemployment tax, and state industrial insurance (see Tab 5).

FINANCING

- No debt issuance is assumed in the 2016 Budget.

CAPITAL

- Capital is based on the District's five-year Capital Requirements Plan (see Tab 9).
 - Includes \$3.4 million for projected customer requested electrical line extensions and related distribution system improvements (616 new services).
 - Includes \$2.5 million for electrical distribution system upgrades and underground cable replacement (Five-Year Plan of Service projects).
 - Includes \$0.8 million for electrical substation improvements and replacements.
 - Includes \$1.6 million for other electric distribution maintenance and trouble orders.
 - Includes \$1.6 million for construction of a new transmission line to improve reliability.
 - Includes \$1.5 million for Information Technology operational and integration solutions, including the implementation of an integrated utility solution.
 - Includes \$0.8 million for Information Technology network reliability upgrades and security enhancements.
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ANNUAL BUDGET SUMMARY

TAB 3

COMPARATIVE OPERATING STATEMENT
Public Utility District No. 1 of Benton County
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
OPERATING REVENUES				
Energy Sales - Retail	\$124,696,449	\$118,159,760	\$6,536,689	5.5%
Energy Sales for Resale	19,521,942	12,289,802	7,232,140	58.8%
Transmission of Power for Others	686,424	500,000	186,424	37.3%
Broadband Revenue	2,080,716	2,282,900	(202,184)	-8.9%
Other Revenue	1,547,609	1,532,648	14,961	1.0%
TOTAL OPERATING REVENUES	148,533,140	134,765,110	13,768,030	10.2%
OPERATING EXPENSES				
Purchased Power	88,558,871	74,836,305	13,722,566	18.3%
Purchased Transmission and Ancillary Services	13,194,436	12,819,847	374,589	2.9%
Conservation	142,707	2,088,496	(1,945,789)	-93.2%
Total Power Supply	101,896,014	89,744,648	12,151,366	13.5%
Transmission Operation & Maintenance	110,000	44,638	65,362	146.4%
Distribution Operation & Maintenance	8,903,691	8,870,518	33,173	0.4%
Broadband Expense	842,971	824,571	18,400	2.2%
Customer Accounting, Collection and Information	3,988,689	4,277,604	(288,915)	-6.8%
Administrative & General	6,597,417	6,569,058	28,359	0.4%
Subtotal before Taxes & Depreciation	20,442,768	20,586,389	(143,621)	-0.7%
Taxes	12,870,000	12,648,000	222,000	1.8%
Depreciation & Amortization	13,168,389	13,379,649	(211,260)	-1.6%
Total Other Operating Expenses	46,481,157	46,614,038	(132,881)	-0.3%
TOTAL OPERATING EXPENSES	148,377,171	136,358,686	12,018,485	8.8%
OPERATING INCOME (LOSS)	155,969	(1,593,576)	1,749,545	-109.8%
NONOPERATING REVENUES & EXPENSES				
Interest Income	250,000	250,000	-	0.0%
Other Income	376,070	376,070	-	0.0%
Interest Expense	(2,501,574)	(2,662,177)	160,603	-6.0%
Debt Discount & Expense Amortization	419,669	430,968	(11,299)	-2.6%
TOTAL NONOPERATING REVENUES & EXPENSES	(1,455,835)	(1,605,139)	149,304	-9.3%
INCOME (LOSS) BEFORE CONTRIBUTIONS	(1,299,866)	(3,198,715)	1,898,849	-59.4%
CAPITAL CONTRIBUTIONS	1,285,098	2,116,201	(831,103)	-39.3%
CHANGE IN NET POSITION	(\$14,768)	(\$1,082,514)	1,067,746	-98.6%
NET POWER	81,687,648	\$76,954,846	\$4,732,802	6.2%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
CAPITAL REPORT
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Transmission Plant:				
Structures & Improvements	\$300,000	\$0	\$300,000	>100%
Towers & Fixtures	171,000	446	170,554	>100%
Poles & Fixtures	1,738,631	67,284	1,671,347	>100%
Overhead Conductor & Devices	72,562	217,694	(145,132)	-66.7%
Subtotal -Transmission Plant	2,282,193	285,424	1,996,769	>100%
Distribution Plant:				
Station Equipment	896,107	1,295,000	(398,893)	-30.8%
Poles, Towers & Fixtures	835,364	805,228	30,136	3.7%
Overhead Conductor & Devices	504,626	568,686	(64,060)	-11.3%
Underground Conduit	1,351,313	1,318,866	32,447	2.5%
Underground Conductor & Devices	2,020,063	2,068,018	(47,955)	-2.3%
Line Transformers	1,194,666	1,107,634	87,032	7.9%
Services-Overhead	57,642	50,267	7,375	14.7%
Services-Underground	916,322	754,958	161,364	21.4%
Meters	131,145	140,400	(9,255)	-6.6%
Installations On Customer Premises	11,709	11,000	709	6.4%
Scada System	364,055	507,000	(142,945)	-28.2%
Subtotal - Distribution Plant	8,283,012	8,627,057	(344,045)	-4.0%
General Plant:				
Structures & Improvements	205,500	206,150	(650)	-0.3%
Information Systems & Technology	2,300,970	2,060,557	240,413	11.7%
Transportation Equipment	-	188,000	(188,000)	-100.0%
Tools, Shop & Garage Equipment	6,900	33,000	(26,100)	-79.1%
Laboratory Equipment	73,000	-	73,000	>100%
Communication Equipment	5,582	165,750	(160,168)	-96.6%
SmartGrid Demonstration Project	-	7,176	(7,176)	-100.0%
Subtotal - General Plant	2,591,952	2,660,633	(68,681)	-2.6%
Total Broadband	924,936	1,596,604	(671,668)	-42.1%
Capitalized Allocations	1,300,798	1,312,101	(11,302)	-0.9%
Capitalized Interest	182,746	171,360	11,386	6.6%
Total Electric Plant	\$15,565,638	\$ 14,653,179	\$ 912,459	6.2%
Capital Contributions	(1,285,098)	(2,116,201)	831,103	-39.3%
Net Capital	\$14,280,540	\$ 12,536,978	\$ 1,743,562	13.9%

COMPARATIVE BUDGET by RESOURCE CODE
Public Utility District No. 1 of Benton County
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Allocated Costs:				
088 Payroll Taxes	\$1,010,513	\$991,992	\$18,521	1.9%
101 Employee Benefits	4,525,611	4,303,294	222,317	5.2%
Allocated Cost Total	5,536,124	5,295,286	240,838	4.5%
Payroll:				
010 District Overtime Labor	616,340	609,989	6,351	1.0%
011 All Other District Labor	12,778,114	12,533,963	244,151	1.9%
District Labor Total	13,394,454	13,143,952	250,502	1.9%
Power Cost:				
009 Purchased Power	98,922,032	86,029,289	12,892,743	15.0%
Power Cost Total	98,922,032	86,029,289	12,892,743	15.0%
System Costs:				
001 Contingency	(300,000)	(300,000)	-	0.0%
012 Materials & Supplies	2,470,748	1,941,572	529,176	27.3%
013 Store Expense - Non Labor	25,000	25,000	-	0.0%
014 Small Tools & Materials	102,850	97,550	5,300	5.4%
015 Transportation Expense-Gas&Oil	225,500	225,500	-	0.0%
016 Transportation Exp-Repair&Main	167,500	167,500	-	0.0%
017 Operation & Maintenance Exp	437,050	354,128	82,922	23.4%
018 Misc Construction Expense	95,600	100,600	(5,000)	-5.0%
019 Tree Trimming - Contract	465,000	595,000	(130,000)	-21.8%
020 Off-the-Dock Labor	690,000	1,083,582	(393,582)	-36.3%
021 Elec Construction Contracts	2,770,000	1,010,000	1,760,000	174.3%
023 Environmental	22,000	22,000	-	0.0%
System Cost Total	7,171,248	5,322,432	1,848,816	34.7%
General Expenditures:				
025 Maintenance of Software	582,800	843,000	(260,200)	-30.9%
026 Computer Hardware & Equip Exp	68,500	99,500	(31,000)	-31.2%
027 Personal Computer Software	28,750	24,300	4,450	18.3%
028 Personal Computer O&M Costs	183,050	167,850	15,200	9.1%
029 Personal Computer Supplies&Exp	12,500	12,500	-	0.0%
030 Customer Service Expenses	422,095	455,355	(33,260)	-7.3%
033 Office Supplies & Expenses	75,900	89,900	(14,000)	-15.6%
034 Insurance	496,900	522,500	(25,600)	-4.9%
037 Grounds Care	76,000	70,500	5,500	7.8%
038 Maint of Bldg & Improvements	199,700	196,000	3,700	1.9%
039 Maint of Equipment	45,800	45,800	-	0.0%
040 Rents	325,739	354,462	(28,723)	-8.1%
041 Insurance Damages & Other Reim	10,000	10,000	-	0.0%
042 Business Expense & Travel	303,900	339,000	(35,100)	-10.4%
043 Training Expense & Travel	237,780	274,158	(36,378)	-13.3%
044 Other General Expenses	767,398	839,677	(72,279)	-8.6%
045 Subscriptions & Publications	24,475	24,751	(276)	-1.1%
046 Treasurer Expenses	350,500	305,500	45,000	14.7%
General Expenditure Total	4,211,787	4,674,753	(462,966)	-9.9%
Utilities:				
050 Telephone & Answering Services	155,784	156,300	(516)	-0.3%
051 Water, Garbage, Irrigation & Other	72,600	72,600	-	0.0%
Utilities Total	228,384	228,900	(516)	-0.2%

COMPARATIVE BUDGET by RESOURCE CODE
Public Utility District No. 1 of Benton County
2016 Budget

		2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Outside Services:					
060	Audit Examination - State	85,500	77,500	8,000	10.3%
061	Professional Services	2,065,580	2,279,450	(213,870)	-9.4%
	Outside Services Total	2,151,080	2,356,950	(205,870)	-8.7%
Dues and Assessments:					
070	Civic & Service Organizations	18,965	18,950	15	0.1%
072	Industry Assoc Assessments	597,671	593,905	3,766	0.6%
	Dues and Assessments Total	616,636	612,855	3,781	0.6%
Taxes:					
080	Public Utility & Excise Tax	4,650,000	4,702,000	(52,000)	-1.1%
081	State Privilege Tax	2,554,000	2,416,000	138,000	5.7%
082	City Occupation Taxes	5,666,000	5,530,000	136,000	2.5%
	Taxes Total	12,870,000	12,648,000	222,000	1.8%
Other Employee Costs:					
104	Other Employee Costs	159,130	154,200	4,930	3.2%
	Other Employee Costs Total	159,130	154,200	4,930	3.2%
Energy Resources:					
112	Residential Conservation Exp	556,700	925,000	(368,300)	-39.8%
113	Commercial Conservation Exp	789,079	950,800	(161,721)	-17.0%
115	Irrigation Conservation Exp	220,000	227,000	(7,000)	-3.1%
117	Appliance Efficiency Program	20,000	50,000	(30,000)	-60.0%
	Energy Resources Total	1,585,779	2,152,800	(567,021)	-26.3%
Public Information:					
119	Public Information Expenses	283,400	279,400	4,000	1.4%
	Public Information Total	283,400	279,400	4,000	1.4%
Purchased Electric Plant & Equip:					
121	Substation Equip & Materials	199,700	715,500	(515,800)	-72.1%
122	Line Devices	535,450	477,838	57,612	12.1%
123	Transformers & Related Items	900,000	900,000	-	0.0%
124	Meters & Related Items	160,000	280,000	(120,000)	-42.9%
125	Land & Land Rights - Electric	-	120,000	(120,000)	-100.0%
126	SCADA Master Station Equipment	5,000	5,000	-	0.0%
127	SCADA Communications Equipment	90,570	311,000	(220,430)	-70.9%
128	SCADA Substation Equipment	8,000	23,000	(15,000)	-65.2%
129	SCADA Travel&NonDistrict Labor	2,000	2,000	-	0.0%
	Purchased Electric Plant and Equip Total	1,900,720	2,834,338	(933,618)	-32.9%
Purchased General Plant & Equip:					
131	Structures & Improvements	205,500	204,000	1,500	0.7%
132	Office Equipment	7,000	8,000	(1,000)	-12.5%
133	Transportation Equipment	-	188,000	(188,000)	-100.0%
134	Tools, Shop & Stores Equipment	11,900	39,200	(27,300)	-69.6%
135	Laboratory & Test Equipment	73,000	10,000	63,000	630.0%
136	Communication Equipment	275,000	110,000	165,000	150.0%
137	Capitalized Computer Software	110,000	598,000	(488,000)	-81.6%
138	Computer Equipment	470,000	226,000	244,000	108.0%
	Purchased General Plant & Equip Total	1,152,400	1,383,200	(230,800)	-16.7%

COMPARATIVE BUDGET by RESOURCE CODE

Public Utility District No. 1 of Benton County

2016 Budget

		2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Debt Service:					
150	Principal	2,920,000	3,150,000	(230,000)	-7.3%
151	Interest	1,849,581	1,987,499	(137,918)	-6.9%
	Debt Service Total	4,769,581	5,137,499	(367,918)	-7.2%
Other Misc. Expenditures:					
200	New Services Expenses	4,000	4,000	-	0.0%
201	New Product Expenses	3,500	3,500	-	0.0%
	Other Misc Expenditures Total	7,500	7,500	-	0.0%
	Grand Total	\$154,960,255	\$142,261,354	\$12,698,901	8.9%
Depreciation:					
301	Depreciation	\$13,608,389	\$13,755,649	-\$147,260	-1.1%
	Depreciation Total	\$13,608,389	\$13,755,649	-\$147,260	-1.1%

COMPARATIVE BROADBAND BUDGET
Public Utility District No. 1 of Benton County
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Revenue	\$2,080,716	\$2,282,900	(\$202,184)	-8.9%
Operating Expenses	(842,971)	(824,571)	(18,400)	-2.2%
Net Income (Loss)	1,237,745	1,458,329	(220,584)	-15.1%
Broadband Capital:				
Gross Capital Expenditures	(924,936)	(1,596,604)	671,668	-42.1%
Capital Contributions	10,000	966,403	(956,403)	-99.0%
Net Capital Expenditures	(914,936)	(630,201)	(284,735)	45.2%
Net Cash from Broadband	\$322,809	\$828,128	(\$505,319)	-61.0%

Summary does not include depreciation or internal interest

SUMMARY OF REVENUES

TAB 4

COMPARATIVE REVENUES
Public Utility District No. 1 of Benton County
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Retail Power Sales	\$124,696,449	\$118,159,760	\$6,536,689	5.5%
Wholesale Power Sales	20,208,366	12,789,802	7,418,564	58.0%
Broadband Revenues	2,080,716	2,282,900	(202,184)	-8.9%
Other Electric Revenue	1,547,609	1,532,648	14,961	1.0%
Interest Income/Other	626,070	626,070	-	0.0%
Capital Contributions:				
Electric Facilities	1,275,098	1,149,798	125,300	10.9%
Broadband Facilities	10,000	966,403	(956,403)	n/a
Total Revenue	\$150,444,308	\$137,507,381	\$12,936,927	9.4%

COMPARATIVE REVENUES
Public Utility District No. 1 of Benton County
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
<u>FINANCE AND BUSINESS SERVICES</u>				
515 Interest Income	\$250,000	\$250,000	\$0	0.0%
151 BAB's Subsidy	376,070	376,070	-	0.0%
560 Insurance/Claims Reimbursements	100,000	100,000	-	0.0%
TOTAL FINANCE & BUSINESS SERVICES	726,070	726,070	-	0.0%
<u>CUSTOMER PROGRAMS & SERVICES</u>				
530 Property Rental Revenue	10,000	10,000	-	0.0%
545 Other Electric Revenue	600,000	600,000	-	0.0%
TOTAL CUSTOMER PROGRAMS & SERVICES	610,000	610,000	-	0.0%
<u>ENGINEERING</u>				
510 Property Rental Revenue	35,000	35,000	-	0.0%
Use of Facilities Benton REA				
523 Pole Contact Revenue				
Pole Contact Fees	435,617	435,617	-	0.0%
Annual Cell Site Fee with Verizon Wireless	2,400	2,400	-	0.0%
525 Capital Contributions				
Angus Franklin Transmission	12,000	129,800	(117,800)	-90.8%
City of Richland - Vista Sub/Center Parkway	250,000	-	250,000	n/a
Misc. Customer Fees (Primary, Easterday, etc.)	1,025,098	1,019,998	5,100	0.5%
Total Engineering Revenue	1,760,115	1,622,815	137,300	8.5%
Broadband				
550 Products and Services Revenue				
Ethernet Revenue	1,523,071	1,626,858	(103,787)	-6.4%
TDM Revenue	69,372	146,284	(76,912)	-52.6%
Wireless Revenue	83,091	97,376	(14,285)	-14.7%
Internet Revenue	123,540	136,140	(12,600)	-9.3%
Other Revenue	281,642	276,242	5,400	2.0%
525 Capital Contributions				
Backhaul to Cell Sites	-	956,403	(956,403)	n/a
General	10,000	10,000	-	0.0%
Total Broadband Revenue	2,090,716	3,249,303	(1,158,587)	-35.7%
TOTAL ENGINEERING	3,850,831	4,872,118	(1,021,287)	-21.0%

COMPARATIVE REVENUES
Public Utility District No. 1 of Benton County
2016 Budget

OPERATIONS

Supt. of Transmission & Distribution

550	Products and Services Revenue				
	Pre-Notifier	39,562	38,427	1,135	3.0%
	Safety Coordinator	102,030	100,204	1,826	1.8%

Supt. of Operations

535	Microwave Site Rental	52,000	52,000	-	0.0%
	Rattlesnake Site Rental	40,000	40,000	-	0.0%
545	Other Electric Revenue				
	Windfarm Maintenance	99,000	99,000	-	0.0%
550	Products and Services Revenue				
	SCADA Lease	20,000	20,000	-	0.0%

TOTAL OPERATIONS

352,592 349,631 2,961 0.8%

POWER MANAGEMENT

505	Wholesale Power Sales Revenue	19,521,942	12,289,802	7,232,140	58.8%
510	Wholesale Transmission Sales Revenue	686,424	500,000	186,424	37.3%

TOTAL POWER MANAGEMENT

20,208,366 12,789,802 7,418,564 58.0%

NON-DEPARTMENTAL

501	Retail Energy Sales Total	119,265,449	112,854,760	6,410,689	5.7%
503	Bad Debt Expense	(235,000)	(225,000)	(10,000)	4.4%
502	City Occupation Taxes Collected	5,666,000	5,530,000	136,000	2.5%

TOTAL NON-DEPARTMENTAL

124,696,449 118,159,760 6,536,689 5.5%

GRAND TOTAL REVENUE

\$ 150,444,308 \$ 137,507,381 \$ 12,936,927 9.4%

LABOR STAFFING

TAB 5

Public Utility District No. 1 of Benton County

2016 Staffing Report

Full Time Equivalent Positions (FTEs)

Directorate	2016 Budget	2015 Budget	Increase/ (Decrease)	Planned Staffing 2017	Increase/ (Decrease)
Executive	10.25	10.00	0.25	10.25	-
Finance & Business Services	14.00	14.00	-	14.00	-
Engineering/Power Management	24.25	26.25	(2.00)	26.25	2.00
Operations	84.00	83.50	0.50	83.50	(0.50)
Customer Programs & Services	21.75	21.75	-	21.25	(0.50)
Authorized Positions	154.25	155.50	(1.25)	155.25	1.00

As shown above, there is a temporary FTE decrease in 2016 for deferrals of open positions and staffing levels in 2017 are currently planned to be back in line with the 2015 budget. More details are provided below regarding the staffing changes.

	Change in FTEs	(1.25)	1.00
EXECUTIVE	0.25	0.00	
<u>Dept. 02 - Human Resources</u>			
HR Coordinator - Full time from 0.75 FTE	0.25	0.00	
-The 0.25 FTE increase is for shared administrative support for the District's safety coordinator. This additional resource will allow the safety coordinator to be out in the field more and to provide critical safety training.			
OPERATIONS	0.50	(0.50)	
<u>Dept. 33 - Supervisor of Operations</u>			
Temporary System Dispatcher in Training	1.00	(1.00)	
-The temporary position is an overlap for a planned retirement. The system dispatcher position is critical for ensuring safety of District employees in the field. The overlap ensures adequate time for training and knowledge transfer.			
<u>Operations Labor Deferral</u>			
Deferral of 0.5 FTE for open positions throughout the year.	(0.50)	0.50	
CUSTOMER PROGRAMS & SERVICES	0.00	(0.50)	
<u>Dept. 44 - Customer Service</u>			
Temporary CSR Backfill for projects (2015 Budget included 0.5 FTE)	0.00	(0.50)	
-Position will be retained in 2016 to provide backfill for NISC Implementation			
ENGINEERING & POWER MANAGEMENT	(2.00)	2.00	
<u>Dept. 22 - Customer Engineering</u>			
Engineering Technician	(1.00)	1.00	
-Current open budgeted position but has been deferred until 2017. This position was previously a Compliance/Power Settlements Admin position.			
<u>Dept. 45 - Energy Programs</u>			
Supervisor of Energy Programs	(1.00)	1.00	
-Current open budgeted position but has been deferred until 2017			

Public Utility District No. 1 of Benton County
2016 Labor Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
District Labor				
Overtime Labor - Resource 010	\$616,340	\$609,989	\$6,351	1.0%
Regular Labor - Resource 011	12,363,066	12,243,000	120,066	1.0%
Regular Labor & Overtime	12,979,406	12,852,989	126,417	1.0%
Contingent/Part Time/Shared Positions	298,832	274,963	23,869	8.7%
Temporary 2016 Positions	116,216	16,000	100,216	>100%
Contingent /Part Time/Shared/Temporary	415,048	290,963	124,085	42.6%
Total Payroll	\$13,394,454	\$13,143,952	\$250,502	1.9%

2016 Labor Notes/Assumptions

- The 2016 labor budget includes a decrease of 1.25 positions.
- The 2016 budget includes bargaining unit step increases and a non-bargaining promotion pool.

Public Utility District No. 1 of Benton County
Payroll Taxes and Employee Benefits Allocations

Overview

The District allocates the cost of payroll taxes, employee benefits (including paid time off) over actual regular productive work hours. Overtime hours receive an allocation of those payroll taxes and benefits that directly relate to overtime. Payroll taxes and employee benefit costs are distributed to applicable general ledger accounts via resource codes 088 and 101, respectively, by applying a percentage rate to overtime and regular labor (resource codes 010 and 011, respectively). Calculation of the percentage rate is provided below.

	2016 Budget	2015 Budget	Increase/ (Decrease)
Labor Breakdown			
Labor charged to Expense	\$ 7,896,984	\$ 7,758,712	\$ 138,272
Labor charged to Capital	2,752,608	2,491,308	261,300
Labor charged to Warehouse & Equipment Maintenance	545,708	532,271	13,437
<i>Total Productive Labor</i>	11,195,300	10,782,291	413,009
Paid Leave - Includes Holidays and Personal Leave	\$ 1,582,814	\$ 1,751,672	\$ (168,858)
Total Regular Labor	\$12,778,114	\$12,533,963	\$244,151
Benefits/Taxes			
Social Security	\$ 816,369	\$ 801,562	\$ 14,807
Medicare	194,144	190,430	3,714
State Industrial	136,721	\$135,769	952
Unemployment	15,000	13,635	1,365
PERS	1,436,156	1,305,416	130,740
Deferred Compensation	249,056	245,157	3,899
VEBA Contribution (\$150 per employee/per month)	271,350	273,150	(1,800)
Medical Insurance	1,951,044	1,902,154	48,890
Dental Insurance	192,796	183,223	9,573
Vision Insurance	32,940	33,585	(645)
Life Insurance	62,548	58,205	4,343
STD Admin Fee	3,000	3,000	-
Total Benefits/Taxes	\$ 5,361,124	\$ 5,145,286	\$ 215,838
Leave			
Change PL Liability	175,000	150,000	25,000
Paid Time Off	1,582,814	1,751,672	(168,858)
Leave Subtotal	\$ 1,757,814	\$ 1,901,672	\$ (143,858)
Total Benefits/Taxes and Leave	\$ 7,118,938	\$ 7,046,958	\$ 71,980

Allocation Rate - Overtime - Allocation rate of 18.65% includes Social Security, Medicare, and PERS.

2016 Overtime	\$616,340
Allocation of Benefits/Taxes to Overtime Labor	114,947
OT Benefit Rate	18.65%

Allocation Rate - Regular Time

Total Regular Benefits/Taxes and Leave	
Total Benefits/Taxes and Leave	\$7,118,938
Less: Benefits/Taxes related to overtime	(114,947)
Total Regular Benefits/Taxes and Leave	\$7,003,991
Total Regular Productive Labor	11,195,300
2016 Allocation Rate - Regular Time	62.6%

**Public Utility District No. 1 of Benton County
2016 Payroll Taxes and Employee Benefits**

	2016 Budget	2015 Budget	Increase (Decrease)	% Change	Variance Explanation
Payroll Taxes - Resource 088					
Social Security	\$816,369	\$801,562	\$14,807	1.8%	Social Security base wage limit of \$118,500 projected for 2016, no increase from 2015.
Medicare	194,144	190,430	3,714	2.0%	
Total Payroll Taxes	\$1,010,514	\$991,992	\$18,522	1.9%	
Employee Benefits - Resource 101					
State Industrial	\$136,721	\$135,769	\$952	0.7%	This represents 80% of the total L&I charges with 20% of L&I premium is paid by the employee.
Unemployment	15,000	13,635	1,365	10.0%	The District does not pay unemployment tax but instead reimburses the State for benefits paid to former employees. Higher experience in 2014 and first half of 2015.
PERS	1,436,156	1,305,416	130,740	10.0%	According to the Collective Bargaining Agreement, the District provides a deferred compensation match of 2%, in addition there is a \$150 per month contribution to a VEBA account which is dependent on the employee's participation in a wellness program. As of 7/1/15, the employer PERS 2 rate was set at 11.18% (includes 0.18% admin fee). The 2016 projected rate is 11.18%. The combined rate for PERS and deferred compensation matching is 13.18%.
Def. Comp	249,056	245,157	3,899	1.6%	
VEBA	271,350	273,150	(1,800)	-0.7%	
Medical	1,951,044	1,902,154	48,890	2.6%	
Dental	192,796	183,223	9,573	5.2%	The 2016 budget assumes a 7% increase in medical insurance, a 9.3% increase in dental and no increase for vision insurance on 01/1/16. It also accounts for the change started 8/1/12 to tiered rates for employees and dependents.
Vision	32,940	33,585	(645)	-1.9%	
Life	62,548	58,205	4,343	7.5%	Life insurance is based on regular full time employees.
STD Admin Fee	3,000	3,000	-	0.0%	The District pays approximately \$250/month to Unum to administer the short-term disability plan.
Change in PL	175,000	150,000	25,000	16.7%	The change in PL Liability is due to wage escalation and employees earning more leave than is used or cashed out. The change can vary greatly from year to year based on employee turnover.
Total Employee Benefits	\$4,525,611	\$4,303,294	\$222,317	5.2%	
Total Payroll Taxes and Benefits	\$5,536,124	\$5,295,286	\$240,838	4.5%	

BUDGET BY DIRECTORATE

TAB 6

REVENUE AND EXPENSE SUMMARY BY DEPARTMENT
PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget

	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
REVENUE				
<i>Finance & Business Services</i>	\$726,070	\$726,070	\$0	0.0%
<i>Customer Programs & Services</i>	610,000	610,000	0	0.0%
<i>Engineering/Power Mgmt</i>	21,968,481	14,412,617	7,555,864	52.4%
<i>Broadband</i>	2,090,716	3,249,303	(1,158,587)	-35.7%
<i>Operations</i>	352,592	349,631	2,961	0.8%
<i>Non-Departmental</i>	124,696,449	118,159,760	6,536,689	5.5%
TOTAL REVENUE	\$150,444,308	\$137,507,381	\$12,936,927	9.4%
EXPENSES				
<i>Executive Administration ⁽¹⁾</i>	\$2,337,193	\$2,356,880	(\$19,687)	-0.8%
<i>Customer Programs & Services ⁽¹⁾</i>	1,782,334	1,813,951	(31,617)	-1.7%
<i>Finance & Business Services</i>	2,100,334	2,076,568	23,766	1.1%
<i>Engineering/Power Mgmt</i>	111,620,332	98,491,743	13,128,589	13.3%
<i>Operations</i>	14,244,357	14,741,427	(497,070)	-3.4%
<i>Non-Departmental</i>	36,484,094	36,536,434	(52,340)	-0.1%
TOTAL EXPENSES	168,568,644	\$156,017,003	\$12,551,641	8.0%

⁽¹⁾ Customer Programs and Services moved from Executive in 2015

EXECUTIVE

TAB 6

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
Summary of Expense by Directorate

Executive Administration

Department(s)		Totals
01	General Manager, Commission	1,587,468
02	Human Resources	241,275
12	Communications and Government	508,450
Grand Total Expenses Executive Administration		\$2,337,193

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
<u>Directorate: General Manager</u>					
General Manager					
	010 District Overtime Labor	2,000	0	2,000	n/a
	011 All Other District Labor	1,014,180	977,433	36,747	3.8%
	033 Office Supplies & Expenses	13,000	12,000	1,000	8.3%
	042 Business Expense & Travel	78,000	78,200	(200)	-0.3%
	043 Training Expense & Travel	6,000	7,000	(1,000)	-14.3%
	044 Other General Expenses	20,000	4,700	15,300	325.5%
	045 Subscriptions & Publications	10,650	9,711	939	9.7%
	061 Professional Services	85,000	95,000	(10,000)	-10.5%
	072 Industry Assoc Assessments	358,638	354,656	3,982	1.1%
01	Total General Manager, Commission	\$1,587,468	\$1,538,700	\$48,768	3.2%
Human Resources					
	011 All Other District Labor	56,000	10,000	46,000	460.0%
	033 Office Supplies & Expenses	3,000	3,000	0	0.0%
	042 Business Expense & Travel	28,000	49,000	(21,000)	-42.9%
	043 Training Expense & Travel	15,000	21,500	(6,500)	-30.2%
	044 Other General Expenses	30,500	29,200	1,300	4.5%
	045 Subscriptions & Publications	6,095	7,060	(965)	-13.7%
	061 Professional Services	51,580	94,700	(43,120)	-45.5%
	072 Industry Assoc Assessments	25,200	40,070	(14,870)	-37.1%
	104 Other Employee Costs	25,900	32,900	(7,000)	-21.3%
02	Total Human Resources	\$241,275	\$287,430	(\$46,155)	-16.1%
Communications and Government					
	033 Office Supplies & Expenses	400	400	0	0.0%
	042 Business Expense & Travel	26,000	26,000	0	0.0%
	044 Other General Expenses	5,500	4,000	1,500	37.5%
	045 Subscriptions & Publications	800	600	200	33.3%
	061 Professional Services	176,000	206,000	(30,000)	-14.6%
	070 Civic & Service Organizations	15,500	15,500	0	0.0%
	072 Industry Assoc Assessments	4,850	2,850	2,000	70.2%
	119 Public Information Expenses	279,400	275,400	4,000	1.5%
12	Total Communications and Government	\$508,450	\$530,750	(\$22,300)	-4.2%
Total Directorate: General Manager		\$2,337,193	\$2,356,880	(\$19,687)	-0.8%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 01 General Manager, Commission			
Resource	Description	Detail	Amount
010	District Overtime Labor		2,000
	Labor - OT	2,000	
011	All Other District Labor		1,014,180
	Labor - Leave	125,202	
	Labor - O&M - Admin_Gen	783,422	
	Labor - O&M - Cust_Acctg	105,556	
033	Office Supplies and Expenses		13,000
	Imaging & Preservation of Records	4,000	
	Misc Office	3,000	
	Off-Site Storage of Permanent Records	1,000	
	Records Mgmt - Shredding Services	5,000	
042	Business Expense and Travel		78,000
	Commission Travel	53,000	
	Manager	22,000	
	RM Software Users Group - Demory	1,000	
	WPUDA Annual Assistant's Meeting - Marshall	1,000	
	WPUDA Records Roundtable - Demory	1,000	
043	Training Expense & Travel		6,000
	AIIM/ARMA Conference - Demory	4,000	
	WAPRO Training - Cole/Demory	2,000	
044	Other General Expenses		20,000
	Election Costs	20,000	
045	Subscriptions & Publications		10,650
	Clearing Up - (Newsdata)	9,100	
	Executive Leadership	150	
	FortNightly (Annual Subscription)	300	
	Kiplinger Letter	100	
	Lois Law	1,000	
061	Professional Services		85,000
	Contract Attorney	75,000	
	Misc. Legal (Thompson Coburn, Gordon Thomas Honeywell)	10,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 01 General Manager, Commission			
Resource	Description	Detail	Amount
072	Industry Assoc. Assessment		358,638
	Administrative Professionals of TC - APTC - Marshall	50	
	AIIM Membership - Demory	135	
	APPA	45,277	
	ARMA Membership - includes Local Chapter - Cole/Demory	400	
	Benton/Franklin Council of Governments	6,500	
	IMA - Assoc.of Accountants & Financial Professionals in Business-Bartram Cert	250	
	Notary - Cole/Marshall	66	
	NW River Partners - PPC	37,275	
	NWPPA	30,000	
	PNUCC	10,500	
	Public Power Council (PPC)	67,720	
	TRIDEC	20,000	
	WAPRO Certified Public Records Officer Designation- Cole	100	
	Washington Association of Public Records Officers Membership - Cole/Demory	50	
	WFOA - Bartram	50	
	WPUDA	140,000	
	WSCPA - WA Society of CPA - Bartram	265	
TOTAL EXPENSE General Manager, Commission			\$1,587,468

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 02 Human Resources			
Resource	Description	Detail	Amount
011	All Other District Labor		56,000
	Labor - Promotion/Recruiting Pool	56,000	
033	Office Supplies and Expenses		3,000
	HR - Misc. Supplies and Expenses	3,000	
042	Business Expense and Travel		28,000
	CWPU/UIP Meetings	2,000	
	HR Mgr. - NWPPA Labor & Employee Relations Mtgs	3,000	
	HR Staff - HR System Analysis/Training	5,000	
	HR Staff - LERA/Arbitration Conference	4,000	
	HR Staff - Misc. Business Travel	3,000	
	HR Staff - Outsolve Annual Conference	3,000	
	HR Staff (2) - SHRM Annual Conference	7,000	
	Leadership Planning Workshop	500	
	Monthly Labor Management Meetings	500	
043	Training Expense & Travel		15,000
	District - Misc. Training (Policy, Leadership TC)	2,000	
	District - Misc. Training (Resources/Assessments)	2,000	
	District - NWPPA Frontline & Leadership	1,500	
	HR Staff - AMA Training	3,000	
	HR Staff - Misc. Training	3,000	
	HR Staff (3) - Professional Certifications	3,500	
044	Other General Expenses		30,500
	Affirmative Action Outreach - Job Fairs, Future Employees Day	2,500	
	DOT Quarterly Drug/Alcohol Testing	1,000	
	Driver Abstracts	1,000	
	Employee Recognition	2,500	
	Recruiting - Advertising	12,500	
	Recruiting - Assessments	3,500	
	Recruiting - Backgrounds	3,000	
	Recruiting - Interviewee Travel	3,000	
	Recruiting - Pre-Employment Physicals/Drug Screenings	1,500	
045	Subscriptions & Publications		6,095
	Labor Law Poster Updates	500	
	Misc. Employment & Regulatory Subscriptions	500	
	Salary Survey - Milliman Mgmt. & Professional Survey	900	
	Salary Survey - Milliman NW Benefits Survey	1,400	
	Salary Survey - Milliman NW Utilities Salary, Wage & Benefits	495	
	Salary Survey - Milliman WA Employers	600	
	Salary Survey - Misc.	1,700	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 02 Human Resources			
Resource	Description	Detail	Amount
061	Professional Services		51,580
	Affirmative Action Consultation	1,500	
	District - Misc. Training	6,000	
	District - Safety Training	5,000	
	District - Skill Testing (Kenexa)	500	
	District - Skill Testing Admin (Sylvan)	1,000	
	Driver Record Monitoring Service	2,880	
	Health & Safety Program/Trucking Consortium Administration	3,200	
	Legal Advice, Policy Review, Training	16,500	
	NWPPA Frontline Leadership (On-site)	15,000	
072	Industry Assoc. Assessment		25,200
	CWPU Membership Assessments	20,000	
	District - AMA Corporate Membership	2,200	
	District - Assoc. of WA Cities Membership	500	
	District - NWPPA Labor & Employee Relations Membership	650	
	District - WELCOA Membership	400	
	HR Staff - SHRM Professional Memberships (5)	950	
	HR Staff - World at Work Memberships (2)	500	
104	Other Employee Benefits		25,900
	Assessments - Fitness for Duty, ADA & Ergonomic	2,000	
	COBRA Administration	1,000	
	CWPU Wellness Program Screening	500	
	Employee Assistance Program (EAP) Mediation	2,200	
	Flex 125 Plan Administration	2,200	
	Local Wellness Activities/Events	6,000	
	Safety Program - Supplies & Administration	6,000	
	Tuition Reimbursement	6,000	
TOTAL EXPENSE Human Resources			\$241,275

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 12 Communications and Government			
Resource	Description	Detail	Amount
033	Office Supplies and Expenses		400
	Misc Office Supplies	400	
042	Business Expense and Travel		26,000
	APPA, NWPPA, WPUA, IABC - Henderson	8,000	
	APPA, Olympia, WPUA, NWPPA, PPC- Miller	18,000	
044	Other General Expenses		5,500
	Community Involvement	5,500	
045	Subscriptions & Publications		800
	Tri-City Herald (Kennewick, Prosser), PRB	800	
061	Professional Services		176,000
	AEQUUS Consulting	66,000	
	Customer Survey	40,000	
	Production, Graphics	40,000	
	Website Maintenance	10,000	
	Website Upgrade	20,000	
070	Civic & Service Organizations		15,500
	Tri-Cities Visitor & Convention Bureau	5,000	
	Tri-City Area Chamber of Commerce	10,500	
072	Industry Assoc. Assessment		4,850
	Association of Washington Business	1,000	
	International Association of Business Communicators - Henderson	350	
	Smart Grid Consumer Collaborative	2,500	
	Washington Business Alliance	1,000	
119	Public Information Expenses		279,400
	Misc	4,000	
	Print Advertising/On-Line Advertising	69,600	
	Printing (Newsletter, Brochures, Inserts, Postage, Direct Mail, etc)	105,800	
	Public Education	44,000	
	TV/Radio	56,000	
TOTAL EXPENSE Communications and Government			\$508,450

FINANCE & BUSINESS SERVICES

TAB 6

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
Summary of Expense by Directorate

Finance & Business Services

Department(s)		Totals
11	Finance and Business Services	671,065
14	General Accounting	498,930
16	Treasurer & Risk Management	900,205
17	Purchasing/Contracts	30,134
Grand Total Expenses Finance & Business Services		\$2,100,334

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
<u>Direcorate: Finance and Business Services</u>					
Director of Finance					
	010 District Overtime Labor	2,000	2,000	0	0.0%
	011 All Other District Labor	654,338	636,171	18,167	2.9%
	033 Office Supplies & Expenses	5,000	6,500	(1,500)	-23.1%
	042 Business Expense & Travel	3,000	3,000	0	0.0%
	043 Training Expense & Travel	5,500	5,500	0	0.0%
	045 Subscriptions & Publications	200	500	(300)	-60.0%
	072 Industry Assoc Assessments	1,027	1,047	(20)	-1.9%
11	Total Dir Finance and Admin	\$671,065	\$654,718	\$16,347	2.5%
General Accounting					
	010 District Overtime Labor	1,000	1,000	0	0.0%
	011 All Other District Labor	418,794	407,558	11,236	2.8%
	043 Training Expense & Travel	9,500	14,500	(5,000)	-34.5%
	045 Subscriptions & Publications	2,680	2,680	0	0.0%
	060 Audit Examination - State	65,500	62,500	3,000	4.8%
	072 Industry Assoc Assessments	1,456	1,232	224	18.2%
14	Total General Accounting	\$498,930	\$489,470	\$9,460	1.9%
Treasurer					
	034 Insurance	496,900	522,500	(25,600)	-4.9%
	041 Insurance Damages & Other Reim	10,000	10,000	0	0.0%
	042 Business Expense & Travel	4,500	4,500	0	0.0%
	043 Training Expense & Travel	4,100	4,000	100	2.5%
	045 Subscriptions & Publications	500	500	0	0.0%
	046 Treasurer Expenses	350,500	305,500	45,000	14.7%
	061 Professional Services	32,500	52,500	(20,000)	-38.1%
	072 Industry Assoc Assessments	1,205	1,120	85	7.6%
16	Total Treasurer	\$900,205	\$900,620	(\$415)	0.0%
Purchasing					
	033 Office Supplies & Expenses	13,000	13,000	0	0.0%
	042 Business Expense & Travel	8,000	12,000	(4,000)	-33.3%
	043 Training Expense & Travel	8,000	6,000	2,000	33.3%
	044 Other General Expenses	694	400	294	73.5%
	072 Industry Assoc Assessments	440	360	80	22.2%
17	Total Purchasing	\$30,134	\$31,760	(\$1,626)	-5.1%
Total Directorate: Finance and Business Services		\$2,100,334	\$2,076,568	\$23,766	1.1%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 11 Finance and Business Services			
Resource	Description	Detail	Amount
010	District Overtime Labor		2,000
	Labor - OT	2,000	
011	All Other District Labor		654,338
	Labor - Leave	78,521	
	Labor - O&M - Admin_Gen	488,171	
	Labor - O&M - Cust_Acctg	28,376	
	Labor - O&M - Distr	21,860	
	Labor - Power	37,410	
033	Office Supplies and Expenses		5,000
	Office Supplies	4,000	
	Warrant Stock & E-file fees for 1099s - Accounting	1,000	
042	Business Expense and Travel		3,000
	Rating Agency Meeting	1,000	
	TEA/BPA/Other	2,000	
043	Training Expense & Travel		5,500
	APPA/GFOA/Accounting/Auditing Standards Training - Director	3,000	
	Office Training - Administrative Assistant	1,500	
	WPUDA - Director	1,000	
045	Subscriptions & Publications		200
	Miscellaneous Publications	200	
072	Industry Assoc. Assessment		1,027
	AICPA (American Institute of CPA's) Membership	235	
	CMA License - IMA (Inst of Mgmt Accountants) - Meyer	250	
	CPA License - WA ST Board of Accountancy - Meyer	77	
	GFOA (Government Finance Officers Assoc) Membership	150	
	WFOA (Washington Finance Officers Association) Membership	50	
	WSCP (Wa State Board of CPA's) Membership	265	
TOTAL EXPENSE Finance and Business Services			\$671,065

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 14 General Accounting			
Resource	Description	Detail	Amount
010	District Overtime Labor		1,000
	Labor OT - O&M A&G	1,000	
011	All Other District Labor		418,794
	Labor - Leave	50,255	
	Labor - O&M - Admin_Gen	368,539	
043	Training Expense & Travel		9,500
	Training - Accounting Manager - Zirker	3,000	
	Training - AP & Payroll - Yuly, Newell	2,000	
	Training - Fin. Analysts/Specialist - Swanson, Herrington, Eby	3,000	
	WPUA Finance Meetings	1,500	
045	Subscriptions & Publications		2,680
	APA Basic Guide to Payroll	500	
	GASB Subscriptions	500	
	GFOA Fee - CAFR Excellence in Reporting program	580	
	Governmental GAAP (Various)	500	
	Keep Up to Date on A/P	350	
	Keep Up to Date on Payroll	250	
060	Audit Examination - State		65,500
	Financial Statement External Audit	49,500	
	State Auditor's Office	16,000	
072	Industry Assoc. Assessment		1,456
	AICPA (American Institute of CPAs) - Zirker, Herrington	470	
	APA (American Payroll Association) - Yuly	219	
	CPA License - Wash. State Board of Accountancy - Zirker, Herrington	154	
	Notary Licenses & Bonds - Eby	33	
	WFOA (Wa Finance Officers Assoc) Membership - Zirker	50	
	WSCPAs (Wash. Society of CPAs) - Zirker, Herrington	530	
TOTAL EXPENSE General Accounting			\$498,930

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 16 Treasurer & Risk Management

Resource	Description	Detail	Amount
034 Insurance			496,900
	Crime Policy	5,000	
	Fiduciary Liability Policy	16,800	
	Liability, Directors & Officers	18,600	
	Liability, Excess \$25 million, EIM	20,000	
	Liability, Excess General & Professional, AEGIS	111,000	
	Liability, General Assessment	120,000	
	Other Insurance Policies (Flood, Bonds, Fronting, etc)	2,000	
	Property, Excess, National Union Fire	115,000	
	Property, General Assessment	80,000	
	Railroad	3,500	
	Special Trips	4,000	
	Storage Tank Pollution Liability, WA. State	1,000	
041 Insurance Damages & Other Reim			10,000
	Direct Payment of Damages and other Reimbursements	10,000	
042 Business Expense and Travel			4,500
	BPA/I-937/TEA Meetings	1,500	
	PURMS	2,000	
	Rating Agency Meeting	1,000	
043 Training Expense & Travel			4,100
	Risk Management / Insurance	1,000	
	Training - Hough, Pryor	2,000	
	WFOA, WPTA, AGA, WPUA Finance Officers	1,100	
045 Subscriptions & Publications			500
	Subscription & Publications	500	
046 Treasurer Expenses			350,500
	Bank Service Fees	38,000	
	Credit Card Fees	270,000	
	Fiscal Agent Fees (US Bank)	1,500	
	Investment Custody Fees (BNY Mellon)	2,000	
	Line of Credit Fee	39,000	
061 Professional Services			32,500
	Bond Counsel - Foster Pepper, PLLC	2,500	
	Financial Advisor	7,500	
	Fitch Ratings	7,500	
	Retail Rate Design Consultant	10,000	
	Standard & Poors	5,000	
072 Industry Assoc. Assessment			1,205
	GFOA - White, Pryor	300	
	Risk Insurance Management Society	725	
	WFOA, WPTA	180	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

<hr/>			
Department	16	Treasurer & Risk Management	
Resource	Description	Detail	Amount
<hr/>			
TOTAL EXPENSE	Treasurer & Risk Management		\$900,205

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 17 Purchasing/Contracts			
Resource	Description	Detail	Amount
033	Office Supplies and Expenses		13,000
	Miscellaneous Office Supplies	1,000	
	Paper, Envelopes, Mailing Labels, Letterhead	12,000	
042	Business Expense and Travel		8,000
	Plant Tour - Okinite - MO, LL	4,000	
	Utility Purchasing Management Group - MO (Nashville September 2016)	4,000	
043	Training Expense & Travel		8,000
	Contracts & Purchasing Training State DES - LT, LL, MO	3,000	
	E & O - LL	2,000	
	ISM Seminar (Local) - LL, MO	500	
	L & I Training - MO, LT, LL	500	
	Public Works Contract Training - MO	2,000	
044	Other General Expenses		694
	A & E Notice (Annual)	45	
	Costco Membership	165	
	Notice to Vendors (Annual)	84	
	Small Works Administrative Fee	400	
072	Industry Assoc. Assessment		440
	ISM Membership Dues - LL, MO	360	
	NIGP Membership Dues - LL, MO	80	
TOTAL EXPENSE Purchasing/Contracts			\$30,134

ENGINEERING & POWER MANAGEMENT

TAB 6

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
Summary of Expense by Directorate

Engineering & Power Management

Department(s)		Totals
21	Engineering	7,601,351
22	Customer Engineering	733,845
45	Energy Programs	103,505
46	Broadband	1,674,473
51	Power Management	101,507,158
Grand Total Expenses Engineering & Power Management		\$111,620,332

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
<u>Directorate: Engineering & Power Management</u>					
Director of Engineering					
	010 District Overtime Labor	0	500	(500)	-100.0%
	011 All Other District Labor	713,053	707,145	5,908	0.8%
	012 Materials & Supplies	2,350,748	1,570,752	779,996	49.7%
	021 Elec Construction Contracts	2,430,000	710,000	1,720,000	242.3%
	033 Office Supplies & Expenses	4,000	4,500	(500)	-11.1%
	042 Business Expense & Travel	17,400	21,600	(4,200)	-19.4%
	043 Training Expense & Travel	12,500	10,500	2,000	19.0%
	045 Subscriptions & Publications	500	500	0	0.0%
	061 Professional Services	331,000	298,750	32,250	10.8%
	072 Industry Assoc Assessments	20,430	19,830	600	3.0%
	121 Substation Equip & Materials	199,700	715,500	(515,800)	-72.1%
	122 Line Devices	535,450	477,838	57,612	12.1%
	123 Transformers & Related Items	900,000	900,000	0	0.0%
	124 Meters & Related Items	0	150,000	(150,000)	-100.0%
	125 Land & Land Rights - Electric	0	120,000	(120,000)	-100.0%
	127 SCADA Communications Equipment	85,570	306,000	(220,430)	-72.0%
	128 SCADA Substation Equipment	0	15,000	(15,000)	-100.0%
	132 Office Equipment	1,000	1,000	0	0.0%
21	Total Director of Engineering	\$7,601,351	\$6,029,415	\$1,571,936	26.1%
Customer Engineering					
	010 District Overtime Labor	6,490	15,000	(8,510)	-56.7%
	011 All Other District Labor	635,605	621,103	14,502	2.3%
	014 Small Tools & Materials	1,050	1,050	0	0.0%
	017 Operation & Maintenance Exp	4,600	7,100	(2,500)	-35.2%
	018 Misc Construction Expense	18,100	23,100	(5,000)	-21.6%
	029 Personal Computer Supplies&Exp	3,500	3,500	0	0.0%
	033 Office Supplies & Expenses	1,000	1,000	0	0.0%
	040 Rents	16,000	16,000	0	0.0%
	042 Business Expense & Travel	12,500	14,400	(1,900)	-13.2%
	043 Training Expense & Travel	14,000	14,000	0	0.0%
	061 Professional Services	15,000	15,000	0	0.0%
	132 Office Equipment	1,000	2,000	(1,000)	-50.0%
	134 Tools, Shop & Stores Equipment	5,000	6,200	(1,200)	-19.4%
22	Total Customer Engineering	\$733,845	\$739,453	(\$5,608)	-0.8%
Broadband					
	012 Materials & Supplies	120,000	370,820	(250,820)	-67.6%
	017 Operation & Maintenance Exp	50,000	0	50,000	n/a
	020 Off-the-Dock Labor	435,000	893,582	(458,582)	-51.3%
	038 Maint of Bldg & Improvements	7,500	7,500	0	0.0%
	040 Rents	91,269	78,184	13,085	16.7%
	044 Other General Expenses	700,704	790,877	(90,173)	-11.4%
	136 Communication Equipment	270,000	105,000	165,000	157.1%
46	Total Broadband	\$1,674,473	\$2,245,963	(\$571,490)	-25.4%

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Power Management					
	009 Purchased Power	100,822,621	86,610,132	14,212,489	16.4%
	010 District Overtime Labor	1,000	1,000	0	0.0%
	011 All Other District Labor	257,697	251,568	6,129	2.4%
	033 Office Supplies & Expenses	1,500	3,000	(1,500)	-50.0%
	042 Business Expense & Travel	20,000	20,000	0	0.0%
	043 Training Expense & Travel	5,000	5,000	0	0.0%
	060 Audit Examination - State	20,000	15,000	5,000	33.3%
	061 Professional Services	201,000	223,000	(22,000)	-9.9%
	070 Civic & Service Organizations	140	125	15	12.0%
	072 Industry Assoc Assessments	178,200	164,200	14,000	8.5%
51	Total Power Management	\$101,507,158	\$87,293,025	\$14,214,133	16.3%
Energy Programs					
	009 Purchased Power	(1,900,589)	(580,843)	(1,319,746)	227.2%
	010 District Overtime Labor	2,000	2,000	0	0.0%
	011 All Other District Labor	385,330	495,295	(109,965)	-22.2%
	033 Office Supplies & Expenses	1,500	3,000	(1,500)	-50.0%
	042 Business Expense & Travel	8,000	8,000	0	0.0%
	043 Training Expense & Travel	11,000	11,000	0	0.0%
	045 Subscriptions & Publications	150	300	(150)	-50.0%
	061 Professional Services	10,000	90,000	(80,000)	-88.9%
	072 Industry Assoc Assessments	335	2,335	(2,000)	-85.7%
	112 Residential Conservation Exp	556,700	925,000	(368,300)	-39.8%
	113 Commercial Conservation Exp	789,079	950,800	(161,721)	-17.0%
	115 Irrigation Conservation Exp	220,000	227,000	(7,000)	-3.1%
	117 Appliance Efficiency Program	20,000	50,000	(30,000)	-60.0%
45	Total Energy Programs	\$103,505	\$2,183,887	(\$2,080,382)	-95.3%
Total Directorate: Engineering		\$111,620,332	\$98,491,743	\$13,128,589	13.3%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 21 Engineering			
Resource	Description	Detail	Amount
011	All Other District Labor		713,053
	Labor - Constr Ovhd - Elec	33,608	
	Labor - Distribution Plant	39,503	
	Labor - Leave	85,566	
	Labor - O&M - Admin_Gen	71,303	
	Labor - O&M - Broad	31,891	
	Labor - O&M - Distr	414,773	
	Labor - Power	36,409	
012	Materials & Supplies		2,350,748
	#09, GUM-1, GUM-4, Recond. 3/0, E. 19th Ave.	43,225	
	#31, RTA-1, extend OH from Reata Rd. south	13,965	
	#32, RTA-3, extend UG west along Sagebrush Rd.	99,750	
	#55, SSR-1, Sunset Rd. Feeder to North	76,475	
	#59, RTA-2, Reconductor #4, Badger Rd L767A to L25A	39,900	
	#60, RTA-2, Reconductor #4, Badger Rd L25A to L70R	102,410	
	#72, RTA-3, New Switch on Cottonwood Drive S/O Hailey Dr.	4,655	
	#83, Voltage Optimization - Kennewick Feeders	166,250	
	Distribution - Cable Replacement	150,000	
	Distribution - Customer Growth	927,658	
	Distribution - Inventory Issued for O&M (Non-capital)	100,000	
	Distribution - Repair & Replacements	168,960	
	Transmission - Repair & Replacements	7,500	
	Transmission - Sunheaven#2-Prior#4	450,000	
021	Construction Contracts Other EP		2,430,000
	Distribution - Cable Injection	375,000	
	Distribution - Cable Replacement	300,000	
	Distribution - Joint Use NESC Corrections	25,000	
	Substation - Center Parkway Improvements - Vista	250,000	
	Substation - Control House Footing & Assembly - Gum Street	30,000	
	Transmission - BPA Interconnection Agreement - Cottonwood	300,000	
	Transmission - Line Construction - Prior#4-Sunheaven#2	1,000,000	
	Transmission - Tower Upgrade - Franklin-Angus	150,000	
033	Office Supplies and Expenses		4,000
	Misc. Engineering Office Supplies	4,000	
042	Business Expense and Travel		17,400
	Cascade Users Conference - TF	1,500	
	Industry Trade Show - RD	2,000	
	NoaNet Board Meetings - RD	3,600	
	NWPPA Engineering & Operations Conference - DB, EE	3,000	
	Survallent User Conference - BS	2,500	
	Technical Training - EE	2,500	
	WECC Compliance User Group - BS	1,800	
	WPUDA System Design & Evaluation Committee	500	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 21 Engineering			
Resource	Description	Detail	Amount
043	Training Expense & Travel		12,500
	Technical Training - BS	1,500	
	Technical Training - DB	3,000	
	Technical Training - MC	2,500	
	Technical Training - RD	2,500	
	Technical Training - TF	3,000	
045	Subscriptions & Publications		500
	Subscriptions and Publications (IEEE, ANSI stds, etc.)	500	
061	Professional Services		331,000
	Distribution - Joint Use NESC Corrections	25,000	
	Distribution - Joint Use Pole Contact Evaluations	10,000	
	Distribution - Unanticipated Consulting Engineering Support	25,000	
	NERC/WECC Consulting - GDS #10-51-06	30,000	
	Substation - Power Quality Metering - River Stations	10,000	
	Substation - Protection Engineering - RAI #12-21-01	20,000	
	Transmission - Construction Support - Franklin-Angus Tower	21,000	
	Transmission - Construction Support - Sunheaven#2-Prior#4	20,000	
	Transmission - Line Design/ROW - Red Mountain-Reata	120,000	
	Transmission - Switching and Sectionalizing Study	50,000	
072	Industry Assoc. Assessment		20,430
	IEEE Membership - BJS, RTD, MDC, TF, EE, DB	1,200	
	Miscellaneous	100	
	Notary Renewals	450	
	PE Licenses & Renewals (5) \$116 every 2 yrs ea	580	
	Solar Electric Power Association (SEPA)	3,100	
	WSU Power Engineering Program	15,000	
121	Substation Equip,Material & Exp		199,700
	Battery Replacement - Nine Canyon	32,500	
	Breaker Replacement - Chevron	8,700	
	Feeder Relay Upgrade - Ely #1 & #2	24,000	
	Phillips Recloser P8R Addition	18,000	
	Power Quality Metering - Carma, Whitcomb, Irrigro	3,500	
	Substation Inventory Issued for O&M (Non-capital)	100,000	
	Substation Misc. Aux. Equip., Relays/Controls	13,000	
122	Line Devices		535,450
	Distribution - Customer Growth & System Improvement	173,096	
	Distribution - Inventory Issued for O&M (Non-capital)	50,000	
	Distribution - Plan of Service Projects	189,274	
	Distribution - Repair & Replacement	58,080	
	Transmission - Switch Additions - Sunheaven#2-Prior#4	35,000	
	Transmission - Switch Additions/Replacements	30,000	
123	Transformers & Related Items		900,000
	Transformers and Related Items	900,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 21 Engineering			
Resource	Description	Detail	Amount
127	SCADA Communications Equipment		85,570
	Distribution Automation - Line Recloser Comm.	32,000	
	Distribution Automation - Line Regulator Comm.	53,570	
132	Office Equipment		1,000
	Miscellaneous Office Furniture	1,000	
TOTAL EXPENSE Engineering			\$7,601,351

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 22 Customer Engineering			
Resource	Description	Detail	Amount
010	District Overtime Labor		6,490
	Labor OT - Customer Engineering	6,490	
011	All Other District Labor		635,605
	Labor - Constr Ovhd - Elec	172,289	
	Labor - Distribution Plant	215,608	
	Labor - Leave	82,625	
	Labor - O&M - Distr	165,083	
014	Shop Expense-Small Tools & Matl		1,050
	GPS Batteries - Replacement/Purchase	200	
	GPS Cables - Replacement/Purchase	200	
	Miscellaneous Tools, Equipment	500	
	Training/Instructional Manuals and Publications	150	
017	Operation & Maintenance Exp.		4,600
	Equipment Maintenance/Repair	500	
	Miscellaneous Form Printing	500	
	O&M Related Permit Fees	500	
	Pole Contact Make Ready Costs	1,000	
	Scanning Services	1,000	
	Unplanned O&M Expenses	500	
	WA State Ref. Network - Annual Mtnc for VRS Net (GPS Signals)	600	
018	Purchased Construction Expend		18,100
	New Permits (Crossing, Railroad, etc)	10,000	
	Professional Services supporting Construction Projects	5,000	
	Survey Supplies (Stakes, Flags, etc)	600	
	Title Reports for Construction Projects	2,500	
029	Personal Computer Supplies & Exp		3,500
	Printer / Plotter Paper	1,000	
	Printer Ink Cartridges	2,500	
033	Office Supplies and Expenses		1,000
	Labeling & Binding Supplies	1,000	
040	Rents		16,000
	Maintenance Crossing Permits (Railroad, DOT, etc)	8,000	
	Pole Contact Fee (us on their poles)	8,000	
042	Business Expense and Travel		12,500
	Design Software Research - JV	1,500	
	Design Software User Group - DD Tech	3,000	
	Hi-Line Wood Pole Design Conference - DD Tech	2,000	
	NWPPA E&O - JV, DD Tech	4,000	
	Trimble Dimensions GPS Conference - Eng Tech	2,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 22 Customer Engineering			
Resource	Description	Detail	Amount
043	Training Expense & Travel		14,000
	ESRI ArcGIS Technical Training - Eng Tech	1,500	
	NESC or other Advanced Tech Training - KK, RS	2,000	
	NWPPA Leadership Training - JV	3,000	
	NWPPA Staking Certification Courses - GW, DS	4,500	
	Technical Training Class - RPR	1,000	
	Training Admin Staff - RW, JW	2,000	
061	Professional Services		15,000
	Professional Services/Surveying for O&M Support	15,000	
132	Office Equipment		1,000
	Office Furniture	1,000	
134	Tools, Shop & Stores Equipment		5,000
	GPS, Staking or Other Related Tools and Equipment	5,000	
TOTAL EXPENSE Customer Engineering			\$733,845

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 45 Energy Programs			
Resource	Description	Detail	Amount
009	Purchased Power		-1,900,589
	EEl Reimbursement - Performance Payment	-349,393	
	EEl Reimbursement - Rebates	-1,511,196	
	PTCS Reimbursement	-40,000	
010	District Overtime Labor		2,000
	Labor OT - Homeshow/Fair/Demo	2,000	
011	All Other District Labor		385,330
	Labor - Conservation Program	256,310	
	Labor - Leave	39,217	
	Labor - O&M - Cust_Acctg	50,618	
	Labor - O&M - Cust_Acctg	39,185	
033	Office Supplies and Expenses		1,500
	Ladder, Anomoter, Blower Door, Camera, Protective Clothing	1,500	
042	Business Expense and Travel		8,000
	BPA Annual Conservation Meeting - Schumacher, Monson, Carsten, Fischer, B	3,000	
	BPA Conservation Meetings - Schumacher	3,000	
	Power Analyst - Dykes	2,000	
043	Training Expense & Travel		11,000
	Conservation - New Staffer	4,000	
	Misc. - Schumacher, Philipp, Monson, Carstens, Fischer, Dykes, Bergum	7,000	
045	Subscriptions & Publications		150
	Subscriptions and Publications- Home Energy Mag./Woods & Poole Data Proj	150	
061	Professional Services		10,000
	Professional Services for Conservation	10,000	
072	Industry Assoc. Assessment		335
	Home Builders Association Dues	335	
112	Residential Conservation Expen		556,700
	Residential Conservation Expense	456,700	
	Residential Low Income Pilot	100,000	
113	Commercial Conservation Expend		789,079
	Commercial Conservation Expense	500,000	
	Industrial Conservation Expense	289,079	
115	Irrigation Conservation Expend		220,000
	Irrigation Conservation Expense	220,000	
117	Appliance Efficiency Program		20,000
	Washers, Refrigerators, Dishwashers, Wtr Heaters, Showerheads etc.	20,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

<hr/>			
Department	45	Energy Programs	
Resource	Description	Detail	Amount
<hr/>			
TOTAL EXPENSE	Energy Programs		\$103,505

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 46 Broadband			
Resource	Description	Detail	Amount
012	Materials & Supplies		120,000
	Conduit and Misc.; New Developments	20,000	
	Fiber Backbone Upgrades	5,000	
	Fiber Backbone-Southridge Development	20,000	
	Fiber Backbone-Sunheaven to Prosser Loop Cost Share	20,000	
	Fiber Customer - Line Extension Policy	7,000	
	Fiber Customer - Multi Tenant & Small Business	20,000	
	Fiber Customer Connects	15,000	
	Fiber Laterals	13,000	
017	Operation & Maintenance Exp.		50,000
	NCS Contract 10-46-09 Engineering Services Supporting O&M	10,000	
	Paramount - After Hrs Emergency On-Site Maintenance -Fiber Restoration	40,000	
020	Off-the-Dock Labor		435,000
	Fiber Backbone Upgrades	20,000	
	Fiber BackboneSunheaven to Prosser Loop Cost Share	80,000	
	Fiber Customer - Line Extension Policy	28,000	
	Fiber Customer - Multi Tenant & Small Business	80,000	
	Fiber Customer Connects (Const Labor)	60,000	
	Fiber Laterals	37,000	
	Fibor Backbone-Southridge Development	80,000	
	Joint Use Audit Corrective Actions	50,000	
038	Maint of Bldg & Improvements		7,500
	Maintenance Expense (Nodes and Building)	7,500	
040	Rents		91,269
	BPA Dark Fiber Lease (BPA 01TX-10704/BPUD #01-41-05)	4,000	
	City of Richland 12-46-11 - Fiber Lease - 5 Towers	16,200	
	City of Richland 13-46-02 - Fiber Lease - 4 Towers	23,184	
	City of Richland 14-46-06 - Dark Fiber Lease	5,213	
	City of Richland 15-46-04 - Fiber Optic Cable Lease - GWW & Knight St.	3,519	
	City of Richland 15-46-07 - 2800 Polar Way Preferred Freezer	1,303	
	Energy NW - (2) Dark Fiber-Ashe Facility to POS 10-46-07, Line #1	3,050	
	Energy NW Facility - Misc Svcs.- Rack Units Contract 10-46-07, Line #2	1,800	
	Franklin PUD Dark Fiber Lease - Contract 13-46-04	15,480	
	Verizon Colocation Space and DC Power - Contract 10-46-12	17,520	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 46 Broadband			
Resource	Description	Detail	Amount
044	Other General Expenses		700,704
	Franklin PUD Recurring Transport Charges	2,200	
	NCS Contract 10-46-09, Line 06 - O&M Network Support	281,400	
	NCS Contract 10-46-09, Line 07 - Capital Labor (\$6,030 x 12)	72,360	
	NCS Contract 10-46-09, Line 07 - O&M Labor (\$4,020 x 12)	48,240	
	NCS Contract 10-46-09, Line 08 - Billing Admin (5% of Revenue)	109,528	
	NCS Contract 10-46-09, Line 10 - Outside Plant Management	60,000	
	NCS Contract 10-46-09, Line 11 - Estimating, Design & Const. Management	40,000	
	NoaNet Contract 10-46-10 - Westin Endpoint to APEL	19,440	
	NoaNet Contract 10-46-11 - APEL to Sequim Bay - Gigabit E (\$3,928 x 12)	47,136	
	NoaNet Contract 10-46-13 - Internet Access via Franklin POP (\$1,260 x 12 plus	16,200	
	NoaNet Contract 14-46-02 - CALEA Hosted Services	4,200	
136	Communication Equipment		270,000
	Broadband Electronics - Backbone Network	200,000	
	Fixed Wireless Upgrade to Exclusively Motorola Platform	30,000	
	Premise Electronics	40,000	
TOTAL EXPENSE Broadband			\$1,674,473

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 51 Power Management			
Resource	Description	Detail	Amount
009	Purchased Power		100,822,621
	Ancillary Services (includes TEA Scheduling & Risk Management)	1,414,627	
	BPA Ancillary Costs	1,694,758	
	BPA NERC/WEC fee adder	37,925	
	BPA Prepay Credit	-161,256	
	BPA Transmission	9,086,040	
	Frederickson CT Fixed Expense	7,659,461	
	Frederickson Variable Expense	5,593,167	
	GTA Delivery Charge	14,400	
	Irrigation Mitigation	-3,675,055	
	Load Shaping	-376,753	
	Non-Slice (Block)	-5,478,258	
	Other Purchases - Options Premium	600,000	
	Other Purchases - Power	11,933,387	
	Packwood	350,000	
	Renewable Energy Credit Purchases	402,690	
	Renewables (Nine Canyon, White Creek)	3,642,175	
	REP Refund (BPA)	-2,189,676	
	Slice True-up	-500,000	
	Tier 1 Composite Block	36,454,819	
	Tier 1 Composite Slice	34,304,170	
	Use of Facilities Benton REA (Sunheaven 2)	16,000	
010	District Overtime Labor		1,000
	Labor OT - Power	1,000	
011	All Other District Labor		257,697
	Labor - Conservation Program	14,223	
	Labor - Leave	30,924	
	Labor - Power	212,550	
033	Office Supplies and Expenses		1,500
	Office Supplies	1,500	
042	Business Expense and Travel		20,000
	BPA, PPC, TEA, SIG, JSOC, PNUCC - Johnson	20,000	
043	Training Expense & Travel		5,000
	NWPPA, APPA, BPA, AMA - Johnson, Dykes, Bergum	5,000	
060	Audit Examination - State		20,000
	I-937 SAO Audit Examination Fees	20,000	
061	Professional Services		201,000
	Power Contracting & Conservation, Legal	23,000	
	Slice Implementation Group Assessment via PPC	10,000	
	TEA Consulting	168,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 51 Power Management			
Resource	Description	Detail	Amount
070	Civic & Service Organizations		140
	Kiwanis - Bergum	140	
072	Industry Assoc. Assessment		178,200
	APPA - DEED Program	8,200	
	PPC Slice Assessment Cash Call	5,000	
	WECC Annual Assessment Fees	163,000	
	WECC WREGIS dues and fees	2,000	
TOTAL EXPENSE Power Management			\$101,507,158

OPERATIONS

TAB 6

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
Summary of Expense by Directorate

Operations

Department(s)		Totals
15	IT - Infrastructure	1,730,756
18	IT - Applications	2,520,483
31	Operations	956,883
32	Supt. Of Transmission & Distribution	4,284,267
33	Supt. Of Operations	664,114
34	Meter Shop	787,692
35	Transformer Shop	731,632
37	Automotive Shop	727,001
38	Supt. Of Support Services	1,025,046
39	Warehouse	142,650
42	Prosser Branch	673,833
Grand Total Expenses Operations		\$14,244,357

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
<u>Directorate: Operations</u>					
Director of Operations					
	010 District Overtime Labor	2,532	2,532	0	0.0%
	011 All Other District Labor	799,056	778,781	20,275	2.6%
	017 Operation & Maintenance Exp	2,500	2,500	0	0.0%
	027 Personal Computer Software	2,000	2,000	0	0.0%
	033 Office Supplies & Expenses	4,000	4,000	0	0.0%
	039 Maint of Equipment	1,000	1,000	0	0.0%
	042 Business Expense & Travel	7,100	3,600	3,500	97.2%
	043 Training Expense & Travel	4,000	6,778	(2,778)	-41.0%
	061 Professional Services	88,500	112,000	(23,500)	-21.0%
	072 Industry Assoc Assessments	1,065	1,015	50	4.9%
	104 Other Employee Costs	40,130	25,000	15,130	60.5%
	132 Office Equipment	5,000	5,000	0	0.0%
31	Total Operations	\$956,883	\$944,206	\$12,677	1.3%
Supt. of Transmission & Distribution					
	010 District Overtime Labor	429,401	416,895	12,506	3.0%
	011 All Other District Labor	2,494,366	2,460,357	34,009	1.4%
	014 Small Tools & Materials	69,700	66,400	3,300	5.0%
	017 Operation & Maintenance Exp	30,000	30,000	0	0.0%
	018 Misc Construction Expense	60,000	60,000	0	0.0%
	019 Tree Trimming - Contract	465,000	595,000	(130,000)	-21.8%
	020 Off-the-Dock Labor	255,000	190,000	65,000	34.2%
	021 Elec Construction Contracts	340,000	300,000	40,000	13.3%
	039 Maint of Equipment	15,000	15,000	0	0.0%
	042 Business Expense & Travel	9,100	9,100	0	0.0%
	043 Training Expense & Travel	31,500	26,500	5,000	18.9%
	050 Telephone & Answering Services	6,000	6,000	0	0.0%
	061 Professional Services	10,000	0	10,000	n/a
	104 Other Employee Costs	62,300	65,500	(3,200)	-4.9%
	134 Tools, Shop & Stores Equipment	6,900	33,000	(26,100)	-79.1%
32	Total Supt. of Transmission & Distribution	\$4,284,267	\$4,273,752	\$10,515	0.2%
Supt. of Operations					
	010 District Overtime Labor	17,489	15,000	2,489	16.6%
	011 All Other District Labor	247,571	144,192	103,379	71.7%
	017 Operation & Maintenance Exp	53,500	35,500	18,000	50.7%
	040 Rents	218,470	260,278	(41,808)	-16.1%
	042 Business Expense & Travel	1,200	1,200	0	0.0%
	043 Training Expense & Travel	18,000	18,000	0	0.0%
	045 Subscriptions & Publications	500	500	0	0.0%
	050 Telephone & Answering Services	97,384	98,000	(616)	-0.6%
	126 SCADA Master Station Equipment	5,000	5,000	0	0.0%
	128 SCADA Substation Equipment	3,000	3,000	0	0.0%
	129 SCADA Travel&NonDistrict Labor	2,000	2,000	0	0.0%
33	Total Supt. of Operations	\$664,114	\$582,670	\$81,444	14.0%

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	<u>2016 Budget</u>	<u>2015 Budget</u>	<u>Increase/ (Decrease)</u>	<u>% Change</u>
Meter Shop					
	010 District Overtime Labor	25,100	25,100	0	0.0%
	011 All Other District Labor	498,362	490,902	7,460	1.5%
	014 Small Tools & Materials	3,500	3,500	0	0.0%
	017 Operation & Maintenance Exp	6,600	8,100	(1,500)	-18.5%
	039 Maint of Equipment	15,300	15,300	0	0.0%
	042 Business Expense & Travel	2,500	2,500	0	0.0%
	043 Training Expense & Travel	8,830	8,830	0	0.0%
	045 Subscriptions & Publications	500	500	0	0.0%
	124 Meters & Related Items	160,000	130,000	30,000	23.1%
	127 SCADA Communications Equipment	5,000	5,000	0	0.0%
	128 SCADA Substation Equipment	5,000	5,000	0	0.0%
	135 Laboratory & Test Equipment	52,000	10,000	42,000	420.0%
	136 Communication Equipment	5,000	5,000	0	0.0%
34	Total Meter Shop	\$787,692	\$709,732	\$77,960	11.0%
Transformer Shop					
	010 District Overtime Labor	32,123	32,123	0	0.0%
	011 All Other District Labor	515,809	549,855	(34,046)	-6.2%
	014 Small Tools & Materials	9,000	8,000	1,000	12.5%
	017 Operation & Maintenance Exp	125,000	116,078	8,922	7.7%
	018 Misc Construction Expense	10,000	10,000	0	0.0%
	042 Business Expense & Travel	5,400	4,600	800	17.4%
	043 Training Expense & Travel	12,800	10,900	1,900	17.4%
	045 Subscriptions & Publications	500	500	0	0.0%
	135 Laboratory & Test Equipment	21,000	0	21,000	n/a
35	Total Transformer Shop	\$731,632	\$732,056	(\$424)	-0.1%
Automotive Shop					
	010 District Overtime Labor	5,235	5,235	0	0.0%
	011 All Other District Labor	311,866	306,038	5,828	1.9%
	014 Small Tools & Materials	6,600	6,600	0	0.0%
	015 Transportation Expense-Gas&Oil	225,000	225,000	0	0.0%
	016 Transportation Exp-Repair&Main	165,000	165,000	0	0.0%
	017 Operation & Maintenance Exp	300	300	0	0.0%
	039 Maint of Equipment	5,000	5,000	0	0.0%
	042 Business Expense & Travel	1,800	1,800	0	0.0%
	043 Training Expense & Travel	6,200	6,200	0	0.0%
37	Total Automotive Shop	\$727,001	\$721,173	\$5,828	0.8%

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Supt. of Suport Services					
	010 District Overtime Labor	15,590	15,590	0	0.0%
	011 All Other District Labor	438,256	430,830	7,426	1.7%
	014 Small Tools & Materials	3,000	3,000	0	0.0%
	017 Operation & Maintenance Exp	12,500	12,500	0	0.0%
	023 Environmental	22,000	22,000	0	0.0%
	027 Personal Computer Software	2,100	2,100	0	0.0%
	037 Grounds Care	60,000	60,000	0	0.0%
	038 Maint of Bldg & Improvements	173,500	173,500	0	0.0%
	039 Maint of Equipment	5,500	5,500	0	0.0%
	042 Business Expense & Travel	3,600	3,600	0	0.0%
	043 Training Expense & Travel	10,200	11,600	(1,400)	-12.1%
	045 Subscriptions & Publications	500	500	0	0.0%
	051 Water,Garbage,Irrigation&Other	60,000	60,000	0	0.0%
	061 Professional Services	11,000	11,000	0	0.0%
	104 Other Employee Costs	1,800	1,800	0	0.0%
	131 Structures & Improvements	205,500	204,000	1,500	0.7%
	133 Transportation Equipment	0	188,000	(188,000)	-100.0%
38	Total Supt. of Suport Services	\$1,025,046	\$1,205,520	(\$180,474)	-15.0%
Warehouse					
	013 Store Expense - Non Labor	25,000	25,000	0	0.0%
	014 Small Tools & Materials	4,000	4,000	0	0.0%
	017 Operation & Maintenance Exp	78,000	78,000	0	0.0%
	042 Business Expense & Travel	1,500	1,500	0	0.0%
	043 Training Expense & Travel	5,150	9,350	(4,200)	-44.9%
	104 Other Employee Costs	29,000	29,000	0	0.0%
39	Total Warehouse	\$142,650	\$146,850	(\$4,200)	-2.9%
Prosser Branch					
	010 District Overtime Labor	43,350	43,350	0	0.0%
	011 All Other District Labor	548,383	539,027	9,356	1.7%
	014 Small Tools & Materials	6,000	5,000	1,000	20.0%
	015 Transportation Expense-Gas&Oil	500	500	0	0.0%
	016 Transportation Exp-Repair&Main	2,500	2,500	0	0.0%
	017 Operation & Maintenance Exp	0	5,000	(5,000)	-100.0%
	018 Misc Construction Expense	7,500	7,500	0	0.0%
	030 Customer Service Expenses	9,250	9,250	0	0.0%
	033 Office Supplies & Expenses	2,500	2,500	0	0.0%
	037 Grounds Care	16,000	10,500	5,500	52.4%
	038 Maint of Bldg & Improvements	18,700	15,000	3,700	24.7%
	039 Maint of Equipment	1,000	1,000	0	0.0%
	042 Business Expense & Travel	2,000	2,000	0	0.0%
	043 Training Expense & Travel	3,000	3,000	0	0.0%
	044 Other General Expenses	0	250	(250)	-100.0%
	045 Subscriptions & Publications	200	200	0	0.0%
	051 Water,Garbage,Irrigation&Other	12,600	12,600	0	0.0%
	070 Civic & Service Organizations	350	350	0	0.0%
42	Total Prosser Branch	\$673,833	\$659,527	\$14,306	2.2%

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
IT - Infrastructure					
	010 District Overtime Labor	5,000	8,500	(3,500)	-41.2%
	011 All Other District Labor	526,906	507,837	19,069	3.8%
	025 Maintenance of Software	208,000	205,800	2,200	1.1%
	026 Computer Hardware & Equip Exp	68,500	99,500	(31,000)	-31.2%
	027 Personal Computer Software	17,150	9,700	7,450	76.8%
	028 Personal Computer O&M Costs	183,050	167,850	15,200	9.1%
	029 Personal Computer Supplies&Exp	9,000	9,000	0	0.0%
	033 Office Supplies & Expenses	9,500	14,500	(5,000)	-34.5%
	042 Business Expense & Travel	19,500	19,500	0	0.0%
	043 Training Expense & Travel	21,500	31,500	(10,000)	-31.7%
	045 Subscriptions & Publications	250	250	0	0.0%
	050 Telephone & Answering Services	52,400	52,300	100	0.2%
	061 Professional Services	80,000	120,000	(40,000)	-33.3%
	137 Capitalized Computer Software	60,000	129,000	(69,000)	-53.5%
	138 Computer Equipment	470,000	226,000	244,000	108.0%
15	Total IT - Infrastructure	\$1,730,756	\$1,601,237	\$129,519	8.1%
IT - Applications					
	010 District Overtime Labor	2,500	5,500	(3,000)	-54.5%
	011 All Other District Labor	996,908	957,114	39,794	4.2%
	017 Operation & Maintenance Exp	74,050	59,050	15,000	25.4%
	025 Maintenance of Software	374,800	637,200	(262,400)	-41.2%
	027 Personal Computer Software	7,500	10,500	(3,000)	-28.6%
	042 Business Expense & Travel	33,300	40,400	(7,100)	-17.6%
	043 Training Expense & Travel	17,000	33,500	(16,500)	-49.3%
	045 Subscriptions & Publications	250	250	0	0.0%
	061 Professional Services	964,000	951,500	12,500	1.3%
	072 Industry Assoc Assessments	175	690	(515)	-74.6%
	137 Capitalized Computer Software	50,000	469,000	(419,000)	-89.3%
18	Total IT - Applications	\$2,520,483	\$3,164,704	(\$644,221)	-20.4%
Total Directorate: Operations		\$14,244,357	\$14,741,427	(\$497,070)	-3.4%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 15 IT - Infrastructure

Resource	Description	Detail	Amount
010	District Overtime Labor		5,000
	Labor - OT	5,000	
011	All Other District Labor		526,906
	Labor - IT Systems	50,193	
	Labor - Leave	63,229	
	Labor - O&M - Admin_Gen	389,333	
	Labor - O&M - Distr	24,151	
025	Maintenance of Software		208,000
	Accellion (FTP Software)	8,000	
	Accelops	6,000	
	Acronis (desktop/server imaging)	5,500	
	Asure ID Badging Software	1,000	
	Botnet Filters	4,000	
	Brava Reader	500	
	Fax Server	1,300	
	Google Apps (Spam Blocker)	5,000	
	MaaS 360	3,400	
	Microcall (phone call logging)	1,100	
	Nessus (network analysis)	1,700	
	NetApp software renewal (Kennewick)	65,000	
	OEL for existing	3,500	
	Phone Q/A Software	3,000	
	Power Broker (desktop security)	1,500	
	Red Hat Linux Support	4,000	
	RSA (network authentication)	2,500	
	SANS Cyber Security Training	2,200	
	Solar Winds (network monitoring)	20,000	
	Third Tier Backup Software	5,000	
	Trackit (help desk ticket tracking)	3,500	
	Trend (Antivirus)	16,000	
	VMWare (server virtualization)	40,000	
	Wallboard	2,400	
	WinMagic (disk encryption)	1,900	
026	Computer Hardware & Equip Exp		68,500
	General PC needs (HD, Mouse, DVD burner, cables etc)	5,000	
	Mobile wireless in trucks	20,000	
	Records Scanners	2,000	
	Replacement desktop - 8	10,000	
	Replacement laptops - 2	5,000	
	Replacement Meter/Transformer Shop laptops - 4	20,000	
	Replacement monitors	2,500	
	Zero Clients - 5	4,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 15 IT - Infrastructure			
Resource	Description	Detail	Amount
027	Personal Computer Software		17,150
	Misc upgrades and software	5,000	
	MSDN (Kilgore, Fuher, Walsh, McMahon)	3,750	
	VDA	8,400	
028	Personal Computer O&M Costs		183,050
	Cisco SmartNets	100,000	
	Dell Extended Warranties	7,500	
	Fax - Engr	100	
	Fax - Executive	100	
	Fax - Finance/CS	100	
	Fax - IT	350	
	Fax - Operations	100	
	Fax - Prosser	100	
	GoTo Meeting	8,000	
	Multi Function Printing Maint - Engr	10,000	
	Multi Function Printing Maint - Executive	1,500	
	Multi Function Printing Maint - Finance/CS	12,000	
	Multi Function Printing Maint - Operations	8,000	
	Multi Function Printing Maint - Power Mgmt	5,000	
	Multi Function Printing Maint - Prosser	1,000	
	Printer Maintenance - Engr	2,200	
	Printer Maintenance - Executive	500	
	Printer Maintenance - Finance/CS	500	
	Printer Maintenance - IT	5,000	
	Printer Maintenance - Operations	2,000	
	Printer Maintenance - Power Mgmt	500	
	Printer Maintenance - Prosser	1,000	
	Records Scanner	1,000	
	Sun Maintenance	13,000	
	UPS Maintenance	3,500	
029	Personal Computer Supplies & Exp		9,000
	Engr (Toner, Printer Cartridges etc)	3,500	
	Executive (Toner, Printer Cartridges etc)	1,500	
	Finance/CS (Toner, Printer Cartridges etc)	800	
	IT (Toner, Printer Cartridges etc)	500	
	Operations (Toner, Printer Cartridges etc)	2,000	
	Power Mgmt (Toner, Printer Cartridges etc)	350	
	Prosser (Toner, Printer Cartridges etc)	350	
033	Office Supplies and Expenses		9,500
	Cisco Phones	9,500	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 15 IT - Infrastructure			
Resource	Description	Detail	Amount
042	Business Expense and Travel		19,500
	NetApp Conference (Darling)	4,000	
	NWPPA/BPA (Crum)	5,000	
	Security Conference (Homer)	3,000	
	TechMentor (IT Support Specialist)	3,750	
	VM World (Walsh)	3,750	
043	Training Expense & Travel		21,500
	IT Management Training (Supr IT Infrastructure)	2,500	
	Linux/Microsoft Training (System Administrator)	4,000	
	Security/Network Training (Network Engr)	5,500	
	Storage/VMWare Training (System Administrator)	6,000	
	Windows 10 (IT Support Specialist)	3,500	
045	Subscriptions & Publications		250
	Magazines and Books	250	
050	Telephone & Answering Services		52,400
	Aircard (IT) 2	2,000	
	Aircards - Ops - 20	11,000	
	Charter (Internet Service)	1,400	
	Commissioners - 3	2,000	
	Engr/Ops - 5	3,000	
	Frontier (includes all non-wireless services)	33,000	
061	Professional Services		80,000
	Consulting for Disaster Recovery	10,000	
	Consulting for NetApp	30,000	
	Consulting Wireless to Trucks	10,000	
	Exchange Support	5,000	
	Infrastructure Support	10,000	
	Phone System Support	15,000	
137	Capitalized Computer Software		60,000
	View Standard to View Enterprise 150 users	55,000	
	Windows Datacenter	5,000	
138	Computer Equipment		470,000
	2nd Fiber Path to Prosser	100,000	
	Hardware/Licenses for SCADA Network Redesign DR	5,000	
	Large Screen Monitors for Dispatch/Outage Mgmt	50,000	
	Multi Function Printers	10,000	
	NetApp Head Upgrade (Kennewick)	140,000	
	Network Security Traffic Analyzer - FireEye	50,000	
	Network Switches	10,000	
	UCS Blade Servers	30,000	
	UPS Upgrades	30,000	
	Voice Gateway router upgrade	20,000	
	Wireless Access Points for Operations	25,000	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

<hr/>			
Department	15	IT - Infrastructure	
Resource	Description	Detail	Amount
<hr/>			
TOTAL EXPENSE	IT - Infrastructure		\$1,730,756

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 18 IT - Applications			
Resource	Description	Detail	Amount
010	District Overtime Labor		2,500
	Labor - OT	2,500	
011	All Other District Labor		996,908
	Labor - IT Systems	444,600	
	Labor - Leave	119,629	
	Labor - O&M - Admin_Gen	275,903	
	Labor - O&M - Cust_Acctg	23,553	
	Labor - O&M - Distr	133,223	
017	Operation & Maintenance Exp.		74,050
	Benton Co Plat Imagery	900	
	Benton Co. Aerial Imagery (Orthophotos)	15,000	
	Sensus Flexnet Meter Reading Fee	58,150	
025	Maintenance of Software		374,800
	Alden	4,000	
	AutoCAD Network License	5,000	
	Cascade (asset management)	17,000	
	Crystal Server (DEV) Maintenance	100	
	Crystal Server (PROD) Maintenance with Report Viewer Cals	6,000	
	Embarcadero	1,200	
	ESRI (GIS)	30,000	
	Flipping Book Publisher	500	
	GL Group (distribution system analysis)	13,000	
	GPS	4,400	
	HireDesk	5,500	
	Infragistics	750	
	Kapish EasyLink	650	
	LogicNP Software - Shell MegaPack NET	150	
	Mobile GIS (Inspection)	22,000	
	Oracle (Database, SOA, Tuning/Diagnostics)	112,000	
	Osmose Ocalc Licenses (5)	2,300	
	Quest Toad (Pro version x1)	550	
	Roadrunner handheld rental fees	10,800	
	Schneider Electric	36,000	
	Sensus Alarm Manager	4,000	
	Sensus RNI	45,600	
	Survalent (SCADA)	20,000	
	Toad (Std version x3 for Analysts)	650	
	Toad DBA Suite	1,000	
	Toad for Data Analysts (1)	125	
	Toad for SQL server	225	
	Trapeze OCR Utility	1,500	
	TRIM	24,000	
	Vehicle Mgmt System Maintenance	2,500	
	Visual Studio (GIS development)	800	
	V-OPS Server Enterprise Edition	2,500	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 18 IT - Applications			
Resource	Description	Detail	Amount
027	Personal Computer Software		7,500
	Misc upgrades and software	7,500	
042	Business Expense and Travel		33,300
	AMI User Group (Analyst)	2,500	
	ESRI User Group (GIS Analyst)	1,800	
	IT Mgmt/Strategic Planning (Apps Manager)	5,000	
	IT Mgmt/Strategic Planning (IT Manager)	6,000	
	IUS User Group (Analysts - 4)	7,500	
	Northwest GIS User Group (Analysts - 2)	1,200	
	Oracle User Group (DBA)	4,000	
	Records Mgmt Conference (Analyst)	3,000	
	SCADA User Group (Analyst)	1,700	
	TRIM Summit (Analyst)	600	
043	Training Expense & Travel		17,000
	AppDev Training (Developers - 3)	2,000	
	Cyber Security/DR Training (IT Mgr)	5,000	
	Database Administration Training (DBA)	4,000	
	Web Development Training (Developer)	2,000	
	Web Service Training (Developers - 2)	4,000	
045	Subscriptions & Publications		250
	Magazines and Books	250	
061	Professional Services		964,000
	AMI Enhanced Support	84,000	
	Capital IUS Project Contingency	150,000	
	Consulting for CMEP conversion for use with IUS	35,000	
	Consulting for SmartVu Upgrade (SCADA)	25,000	
	Consulting to implement Epicor in conjunction with IUS	70,000	
	Implementation of IUS	450,000	
	PeopleSoftCC&B System Administration	10,000	
	Project Mgmt Resource for IUS	140,000	
072	Industry Assoc. Assessment		175
	ARMA (Scrimsher)	175	
137	Capitalized Computer Software		50,000
	Fuel System (PetroVend) replacement	50,000	
TOTAL EXPENSE IT - Applications			\$2,520,483

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 31 Operations			
Resource	Description	Detail	Amount
010	District Overtime Labor		2,532
	Labor - OT	2,532	
011	All Other District Labor		799,056
	Labor - Constr Ovhd - Elec	189,633	
	Labor - Equip Mtce	22,771	
	Labor - Inventory	14,263	
	Labor - Leave	95,887	
	Labor - O&M - Admin_Gen	85,470	
	Labor - O&M - Cust_Acctg	20,197	
	Labor - O&M - Cust_Acctg	19,818	
	Labor - O&M - Distr	351,017	
017	Operation & Maintenance Exp.		2,500
	O&M Expenses (588) and Coordinated Electrical Repair (587.11)	2,500	
027	Personal Computer Software		2,000
	Web Based Record Keeping Package for Safety Coordinator (588)	2,000	
033	Office Supplies and Expenses		4,000
	Office Supplies and Expense (588)	4,000	
039	Maint Equip Office		1,000
	Maint of Equipment (920)	1,000	
042	Business Expense and Travel		7,100
	E&O Committee Safety Coordinator (588)	3,000	
	EECSC/EUSAC Quarterly Safety Coordinator (588.00)	1,100	
	Travel for Director/Asst (588)	3,000	
043	Training Expense & Travel		4,000
	Training - Safety Coordinator (588)	1,000	
	Training Expense Director/Asst (588)	3,000	
061	Professional Services		88,500
	Communications Contracting (588)	50,000	
	L&I Consulting (DWH 588)	38,500	
072	Industry Assoc. Assessment		1,065
	Admin Professionals - Schlekewey	50	
	IEEE - Frost (Associate Level) (588)	185	
	IEEE - Hunter (588)	200	
	ISA - Cramer (588)	220	
	National Arbor Day Foundation - Cramer (588)	75	
	PE License - Hunter (588)	150	
	UDIG - Wood (588)	50	
	Utility Safety Ops Leadership Network - Frost (588)	135	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY

2016 Budget

By Department, Resource

Department 31 Operations			
Resource	Description	Detail	Amount
104	Other Employee Benefits		40,130
	CPR Rescue Dummy (588)	1,630	
	First Aid Training Supplies (588)	1,000	
	Other Dist. Expense (588)	2,000	
	Safety Awareness (920)	16,000	
	Safety Lens Reimbursement Program (588)	3,000	
	Safety Supplies (588)	1,000	
	Special Safety Sessions (588)	2,000	
	Vivid Learning - Electrical Worker Training/Admin Safety and Training	13,500	
132	Office Equipment		5,000
	Office Furniture (391.05)	5,000	
TOTAL EXPENSE Operations			\$956,883

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 32 Supt. Of Transmission & Distribution			
Resource	Description	Detail	Amount
010	District Overtime Labor		429,401
	Labor - OT	429,401	
011	All Other District Labor		2,494,366
	Labor - Capital TP	53,000	
	Labor - Distribution Plant	1,159,972	
	Labor - Leave	299,324	
	Labor - O&M - Cust_Acctg	48,383	
	Labor - O&M - Distr	933,687	
014	Shop Expense-Small Tools & Matl		69,700
	Huskie Streamline Presses (2) (588)	7,000	
	Phase Set (588)	1,700	
	Small Tools Expense (588)	61,000	
017	Operation & Maintenance Exp.		30,000
	Maintenance of Transmission (560)	10,000	
	Other Dist Exp (588)	20,000	
018	Purchased Construction Expend		60,000
	Other Dist Exp (361)	60,000	
019	Tree Trimming - Contract		465,000
	Herbicide (593.40)	1,000	
	Tree Replacement (588)	4,000	
	Tree Trimming-Contract (588)	460,000	
020	Off-the-Dock Labor		255,000
	Construction (361)	175,000	
	Meter Change Out (361)	65,000	
	Pole Stubbing (361)	15,000	
021	Construction Contracts Other EP		340,000
	Cable Gel (367.00)	200,000	
	Fire Guard (560)	50,000	
	Pole Testing (593.10)	90,000	
039	Maint Equip Office		15,000
	Maintenance of Tools (588)	15,000	
042	Business Expense and Travel		9,100
	Distributech (588)	2,000	
	E&O (2) (588)	2,500	
	Supt (588)	2,500	
	Tree Coordinator Business Exp (588)	2,100	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY

2016 Budget

By Department, Resource

Department 32 Supt. Of Transmission & Distribution			
Resource	Description	Detail	Amount
043	Training Expense & Travel		31,500
	NESC/Foreman (2) (588)	2,000	
	Training - Tree Coordinator, Lineman, Foremen, Upgrade Foremen (588)	15,500	
	Training Expense Apprentices (3) (588)	14,000	
050	Telephone & Answering Services		6,000
	Locates (584)	6,000	
061	Professional Services		10,000
	Meter Repair (588)	10,000	
104	Other Employee Benefits		62,300
	Fall Restraint - 4D Ring Belts (588)	19,000	
	FR Clothing - New Hires (588)	4,500	
	FR Clothing Current Employees Line, Meter, Transformer. (588)	32,800	
	Gloves (588)	3,500	
	Lineman Safety Trailer Demo (588)	2,500	
134	Tools, Shop & Stores Equipment		6,900
	Locator (394)	6,900	
TOTAL EXPENSE Supt. Of Transmission & Distribution			\$4,284,267

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department	33	Supt. Of Operations		
Resource	Description	Detail	Amount	
010	District Overtime Labor			17,489
	Labor - OT	17,489		
011	All Other District Labor			247,571
	Labor - Constr Ovhd - Elec	4,982		
	Labor - Distribution Plant	6,841		
	Labor - Leave	69,709		
	Labor - O&M - Cust_Acctg	6,701		
	Labor - O&M - Distr	159,338		
017	Operation & Maintenance Exp.			53,500
	Communication Expenses - Radios (588)	2,500		
	Doble Lease - Power Factor Test Set (592)	25,000		
	Doble Lease - Relay Test Set (592)	20,000		
	Microwave Site(935)/Umatilla Power Bill (935.01)	6,000		
040	Rents			218,470
	800 MHz Usage Fee - BCES (588)	35,000		
	Badger Mtn Site AMI Fee (935)	6,500		
	DNR Billing - Jump Off Joe (935.02)	35,970		
	Finley Lease - Phillips Substation (588)	50,000		
	Microwave Circuit Billing - BCES (920)	35,000		
	Prosser Tower Site (588)	2,500		
	Rattlesnake Site Fee (588-PO 20677)	50,000		
	Umatilla Ground Lease (935.01)	3,500		
042	Business Expense and Travel			1,200
	Dispatch and Dept Assistant (588)	1,200		
043	Training Expense & Travel			18,000
	Lead Dispatch (588)	2,000		
	Survallent Training (10) /Training for Back Up Dispatcher(s) (588)	14,000		
	Training for Dept Asst. (588)	2,000		
045	Subscriptions & Publications			500
	Subscriptions and Publications (588)	500		
050	Telephone & Answering Services			97,384
	Call Center (588)	95,000		
	Kelley's Paging Service (2) (588)	384		
	Microwave Site Comm/Misc Expenses (935)	2,000		
126	SCADA Master Station Equipment			5,000
	SCADA Master Station Equipment (592)	5,000		
128	SCADA Substation Equipment			3,000
	DAQ RTU Software Maintenance Agreement (592)	3,000		

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 33 Supt. Of Operations			
Resource	Description	Detail	Amount
129	SCADA Travel & NonDistrict Labor		2,000
	SCADA Travel & Non District Labor (588)	2,000	
TOTAL EXPENSE	Supt. Of Operations		\$664,114

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 34 Meter Shop			
Resource	Description	Detail	Amount
010	District Overtime Labor		25,100
	Labor - OT	25,100	
011	All Other District Labor		498,362
	Labor - Distribution Plant	110,972	
	Labor - Leave	59,803	
	Labor - O&M - Cust_Acctg	49,140	
	Labor - O&M - Distr	278,447	
014	Shop Expense-Small Tools & Matl		3,500
	Small Tool Expense (588)	3,500	
017	Operation & Maintenance Exp.		6,600
	Calibration of RFL and Weco Meter Test Boards (588)	1,300	
	O & M Expenses (597)	5,000	
	Support Package for RFL5800 (588)	300	
039	Maint Equip Office		15,300
	Other Dist Exp (597)	15,300	
042	Business Expense and Travel		2,500
	NW Meter Group and Hands On Relay Planning (588)	2,500	
043	Training Expense & Travel		8,830
	NW Meter School (588)	1,100	
	Power Quality (588)	2,000	
	Relay School (2) (588)	1,830	
	SEL-2032 Communication Processor Training (588)	1,900	
	Training - possibly Survalent (588)	2,000	
045	Subscriptions & Publications		500
	Subscriptions & Publications (588)	500	
124	Meters and Related Items		160,000
	Meters and Related Items, AMI Meters For Growth (370)	160,000	
127	SCADA Communications Equipment		5,000
	SCADA Radio (592)	5,000	
128	SCADA Substation Equipment		5,000
	SCADA Substation Equipment (592)	5,000	
135	Laboratory & Test Equipment		52,000
	Relay Test Set	52,000	
136	Communication Equipment		5,000
	800 MHz Radios (397)	5,000	
TOTAL EXPENSE Meter Shop			\$787,692

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 35 Transformer Shop			
Resource	Description	Detail	Amount
010	District Overtime Labor		32,123
	Labor - OT	32,123	
011	All Other District Labor		515,809
	Labor - Distribution Plant	119,494	
	Labor - Leave	67,254	
	Labor - O&M - Distr	329,061	
014	Shop Expense-Small Tools & Matl		9,000
	Small infrared (2) (395)	1,000	
	Small Tools (595)	8,000	
017	Operation & Maintenance Exp.		125,000
	Gloves, Mac's, Blankets, Rubber (592)	12,000	
	O&M Expense (592)	81,922	
	Oil Testing at Wind Farm (592)	8,688	
	SD Myer Oil Screening (592)	12,390	
	Sub-Station Sterilization (592)	10,000	
018	Purchased Construction Expend		10,000
	Dist Plant (361)	10,000	
042	Business Expense and Travel		5,400
	Cascade Conference for 1 (592)	1,500	
	Codes Update - 4 Station Electricians (588)	2,400	
	E&O (588)	1,500	
043	Training Expense & Travel		12,800
	Cooper Reg Workshop (588)	2,500	
	Doble Training onsite (588)	2,500	
	Pesticide License/Refresher (588)	300	
	Recloser Training (588)	2,500	
	Reinhausen Tap Changer Workshop (588)	2,500	
	Waukesha Tap Changer Training (588)	2,500	
045	Subscriptions & Publications		500
	Subscriptions	500	
135	Laboratory & Test Equipment		21,000
	Infrared Camera (395)	21,000	
TOTAL EXPENSE Transformer Shop			\$731,632

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 37 Automotive Shop			
Resource	Description	Detail	Amount
010	District Overtime Labor		5,235
	Labor - OT	5,235	
011	All Other District Labor		311,866
	Labor - Equip Mtce	274,442	
	Labor - Leave	37,424	
014	Shop Expense-Small Tools & Matl		6,600
	All Data (184.12)	2,100	
	General Tools (184.12)	3,000	
	Snap On Software Update (184.12)	1,500	
015	Transportation Expense-Gas & Oil		225,000
	Trans Exp Gas and Oil (184.11)	225,000	
016	Transportation Exp-Repair/Main		165,000
	Trans Exp Other (184.12)	165,000	
017	Operation & Maintenance Exp.		300
	O&M Expense (588)	300	
039	Maint Equip Office		5,000
	Bio Digester (Filtration System for Wash Bay) (598.10)	1,500	
	Maint Agrmts for Pressure Washer, Compressor and Water Filter (184.12)	2,500	
	Trans Exp Other (184.12)	1,000	
042	Business Expense and Travel		1,800
	Business Travel Expense for Foreman and Mechanics (588)	1,800	
043	Training Expense & Travel		6,200
	Altec Aerial Training (588)	1,900	
	Automotive Training Group (at CBC) (588)	1,100	
	Cummings Training	1,600	
	Vehicle Motor Maint for 1 (588)	1,600	
TOTAL EXPENSE Automotive Shop			\$727,001

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department	38	Supt. Of Support Services		
Resource	Description	Detail	Amount	
010	District Overtime Labor		15,590	
	Labor - OT	15,590		
011	All Other District Labor		438,256	
	Labor - Inventory	234,232		
	Labor - Leave	52,591		
	Labor - O&M - Admin_Gen	72,032		
	Labor - O&M - Distr	79,401		
014	Shop Expense-Small Tools & Matl		3,000	
	Small Tool Exp (588)	3,000		
017	Operation & Maintenance Exp.		12,500	
	O&M Expense	2,500		
	Pole Line Sterilization (598.10 and 571.20)	10,000		
023	Environmental		22,000	
	Hazardous Waste Disposal (588)	6,000		
	Transformer & Oil Disposal (588)	10,000		
	Universal Waste Disposal (588)	6,000		
027	Personal Computer Software		2,100	
	MSDS Online (588)	2,100		
037	Grounds Care		60,000	
	Admin Office (920)	20,000		
	General (A & G 920)	4,000		
	General (Other Dist Exp 588)	3,000		
	Operations (588)	20,000		
	Property Clean-up (588)	4,000		
	Substations (588)	6,000		
	Tree Replacement (598.10)	3,000		
038	Maint of Bldg & Improvements		173,500	
	Carpet Cleaning (admin 920)	5,000		
	Carpet Cleaning (operations 588)	4,500		
	Fire Extinguishers (588)	2,000		
	Floor Mats (admin 920)	3,000		
	Floor Mats (operations 588)	4,000		
	General Maintenance (admin 920)	22,000		
	General Maintenance (operations 588)	22,000		
	HVAC (admin 920)	15,000		
	HVAC (operations 588)	12,000		
	Janitorial Services (admin 920)	30,000		
	Janitorial Services (operations 588)	30,000		
	Painting Admin (935)	6,000		
	Painting Ops (598.10)	6,000		
	Security (598.10, and Radio Sites)	12,000		

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 38 Supt. Of Support Services			
Resource	Description	Detail	Amount
039	Maint Equip Office		5,500
	Maintenance (588)	5,500	
042	Business Expense and Travel		3,600
	Audit Disposal Facility (588)	1,500	
	Green House Gas Meeting (588)	500	
	Maint. Dept Business Travel Exp (588)	600	
	Supt of Support Svcs Business travel (including Fleet Mgrs quarterly) (588)	1,000	
043	Training Expense & Travel		10,200
	Hazwopper Training (588)	1,800	
	NWPPA Environmental Task Force (quarterly) (588)	2,200	
	PCB & XFR Oil Workshop (2) (588)	4,600	
	Pesticide License Renewal (588)	600	
	Washington Dept of Ecology (RCRA) (588)	1,000	
045	Subscriptions & Publications		500
	Subscriptions (588)	500	
051	Water,Garbage,Irrigation & Other		60,000
	Benton County Property Tax (935.00)	2,000	
	CID (920)	2,000	
	KID (920)	9,000	
	Water, Garbage, Irrigation, Other (920)	47,000	
061	Professional Services		11,000
	General (920)	4,000	
	Green House Gas (588)	3,000	
	Mech Engr Drawings (588)	4,000	
104	Other Employee Benefits		1,800
	Clothing/Shoes/Gloves (588)	1,800	
131	Structures & Improvements		205,500
	Administration/Executive Area Remodel (390)	6,500	
	Asphalt Sealer and Repair - Admin (390.00/391.00)	40,000	
	Customer Kiosk (390)	35,000	
	Honeywell Command Control - Prosser (390.02)	5,000	
	LED Light Retro Fit - Admin (390)	5,000	
	LED Parking Lot Retro Fit - Admin (390)	9,000	
	Replace Flooring in Map Room - Ops (390.01)	5,000	
	Replace HVAC Units 3, 4, & 9 - Admin (390)	100,000	
TOTAL EXPENSE Supt. Of Support Services			\$1,025,046

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 39 Warehouse			
Resource	Description	Detail	Amount
013	Store Expense - Non Labor		25,000
	Stores Exp Undistributed (163)	25,000	
014	Shop Expense-Small Tools & Matl		4,000
	Small Tools Expense (588)	4,000	
017	Operation & Maintenance Exp.		78,000
	Other Dist Exp (588)	30,400	
	Stores Exp Undistributed (163)	47,600	
042	Business Expense and Travel		1,500
	Bus. Travel Exp for Warehouse Foremen/Warehousemen/Dept Asst (588)	1,500	
043	Training Expense & Travel		5,150
	AMA (Admin Asst) (588)	2,000	
	Integrated Utility Solution (588)	2,000	
	Material Management (1) (588)	1,150	
104	Other Employee Benefits		29,000
	A&G (920)	4,300	
	Other Distribution Expense (588)	24,700	
TOTAL EXPENSE Warehouse			\$142,650

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 42 Prosser Branch			
Resource	Description	Detail	Amount
010	District Overtime Labor		43,350
	Labor - OT	43,350	
011	All Other District Labor		548,383
	Labor - Distribution Plant	94,696	
	Labor - Leave	65,806	
	Labor - O&M - Cust_Acctg	128,147	
	Labor - O&M - Distr	18,074	
	Labor - O&M - Distr	241,660	
014	Shop Expense-Small Tools & Matl		6,000
	Small Tools & Material (588)	6,000	
015	Transportation Expense-Gas & Oil		500
	Expense (184.11)	500	
016	Transportation Exp-Repair/Main		2,500
	Transportation Exp - Vehicle Maint Schedule. (184.12)	2,500	
018	Purchased Construction Expend		7,500
	Construction Expense (361)	7,500	
030	Customer Service Expenditures		9,250
	Armored Car Service (903)	6,500	
	Customer Service Expenditures (901)	2,750	
033	Office Supplies and Expenses		2,500
	Office Supplies & Expenses (588)	2,500	
037	Grounds Care		16,000
	Grounds Care (588)	10,500	
	Removal of bark to be replaced by rock (598.10)	5,500	
038	Maint of Bldg & Improvements		18,700
	Maintenance Expense (920)	15,000	
	Removal of parking island and patch asphalt (598.10)	3,700	
039	Maint Equip Office		1,000
	Equip Maintenance (588)	1,000	
042	Business Expense and Travel		2,000
	Business Expense & Travel (588)	2,000	
043	Training Expense & Travel		3,000
	CSR Credit and Collection (588)	1,500	
	NESC Training	1,500	
045	Subscriptions & Publications		200
	Subscriptions (588)	200	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 42 Prosser Branch			
Resource	Description	Detail	Amount
051	Water,Garbage,Irrigation & Other		12,600
	Prosser Utilities (588)	12,600	
070	Civic & Service Organizations		350
	Chamber Dues for Branch Manager (920)	350	
TOTAL EXPENSE Prosser Branch			\$673,833

CUSTOMER PROGRAMS & SERVICES

TAB 6

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
Summary of Expense by Directorate

Customer Programs & Services

Department(s)		Totals
43	Marketing & Key Accounts	229,238
44	Customer Service	1,553,096
Grand Total Expenses Customer Programs & Services		\$1,782,334

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Directorate: Customer Programs & Services					
Marketing & Key Accounts					
	011 All Other District Labor	177,063	170,868	6,195	3.6%
	033 Office Supplies & Expenses	2,500	2,500	0	0.0%
	042 Business Expense & Travel	4,500	4,500	0	0.0%
	043 Training Expense & Travel	6,000	6,000	0	0.0%
	044 Other General Expenses	10,000	10,000	0	0.0%
	045 Subscriptions & Publications	200	200	0	0.0%
	061 Professional Services	10,000	10,000	0	0.0%
	070 Civic & Service Organizations	2,975	2,975	0	0.0%
	072 Industry Assoc Assessments	4,500	4,500	0	0.0%
	119 Public Information Expenses	4,000	4,000	0	0.0%
	200 New Services Expenses	4,000	4,000	0	0.0%
	201 New Product Expenses	3,500	3,500	0	0.0%
43	Total Marketing & Key Accounts	\$229,238	\$223,043	\$6,195	2.8%
Customr Service					
	010 District Overtime Labor	23,530	18,664	4,866	26.1%
	011 All Other District Labor	1,088,571	1,091,889	(3,318)	-0.3%
	030 Customer Service Expenses	412,845	446,105	(33,260)	-7.5%
	033 Office Supplies & Expenses	15,000	20,000	(5,000)	-25.0%
	039 Maint of Equipment	3,000	3,000	0	0.0%
	042 Business Expense & Travel	7,000	8,000	(1,000)	-12.5%
	043 Training Expense & Travel	3,000	3,000	0	0.0%
	044 Other General Expenses	0	250	(250)	-100.0%
	072 Industry Assoc Assessments	150	0	150	n/a
44	Total Customer Service	\$1,553,096	\$1,590,908	(\$37,812)	-2.4%
Total Directorate: Customer Programs & Services		\$1,782,334	\$1,813,951	(\$31,617)	-1.7%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 43 Marketing & Key Accounts			
Resource	Description	Detail	Amount
011	All Other District Labor		177,063
	Labor - Leave	21,248	
	Labor - O&M - Cust_Acctg	104,672	
	Labor - O&M - Cust_Acctg	51,143	
033	Office Supplies and Expenses		2,500
	Office Supplies and Expenses	2,500	
042	Business Expense and Travel		4,500
	Customer Service/Key Accounts - McAloon	2,000	
	Customer Service/Key Accounts - Sparks	2,000	
	Miscellaneous Travel - McAloon, Sparks	500	
043	Training Expense & Travel		6,000
	APPA, Customer Service - Sparks	2,000	
	APPA, NISC - McAloon	4,000	
044	Other General Expenses		10,000
	Other General Expenses	10,000	
045	Subscriptions & Publications		200
	Subscriptions	200	
061	Professional Services		10,000
	Customer Portal, Customer Prepay Option, Customer Engagement	10,000	
070	Civic & Service Organizations		2,975
	Benton City Chamber of Commerce	100	
	Home Builders Association	375	
	Prosser Economic Development Association	2,500	
072	Industry Assoc. Assessment		4,500
	Columbia Snake River Irrigators Assoc.	4,500	
119	Public Information Expenses		4,000
	Events, Communications, Newsletters	4,000	
200	New Services Expenditures		4,000
	Demos	4,000	
201	New Product Expenditures		3,500
	Trade Shows, Events	3,500	
TOTAL EXPENSE Marketing & Key Accounts			\$229,238

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 44 Customer Service			
Resource	Description	Detail	Amount
010	District Overtime Labor		23,530
	Labor OT - O&M Customer Acctg.	23,530	
011	All Other District Labor		1,088,571
	Labor - IT Systems	57,217	
	Labor - Leave	138,600	
	Labor - O&M - Cust_Acctg	892,754	
030	Customer Service Expenditures		412,845
	CAC Application Processing Fees (Helping Hands/Disabled Discount Programs)	6,000	
	District Postage Costs	50,000	
	FIS - Electronic Bill Presentment and Payment Costs	41,208	
	FIS - Postage Costs	176,400	
	FIS - Printing & Inserting	102,000	
	Language Line Services	8,400	
	Loomis Vault Services	8,400	
	OUE - Identity Verifications and Adverse Action Letters	20,437	
033	Office Supplies and Expenses		15,000
	Misc Office Supplies	15,000	
039	Maint Equip Office		3,000
	Postage Meter & Mail Insert Machine Expenses	3,000	
042	Business Expense and Travel		7,000
	APPA Customer Service	1,500	
	CS Week	1,500	
	MIC Meeting - (2 attendees)	4,000	
043	Training Expense & Travel		3,000
	CSR Training - Pro Train	1,000	
	Leadership/Employee Development	2,000	
072	Industry Assoc. Assessment		150
	Leadership Tri-Cities Alumni Assoc - Holesworth	50	
	Notary	100	
TOTAL EXPENSE Customer Service			\$1,553,096

NON- DEPARTMENTAL

TAB 6

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
Summary of Expense by Directorate

Non-Departmental

Department(s)		Totals
98	Non-Departmental	36,484,094
Grand Total Expenses Non-Departmental		\$36,484,094

BUDGET ACTIVITY BY DEPARTMENT
2016 Budget Compared to 2015 Budget

<u>Department</u>	<u>Resource</u>	2016 Budget	2015 Budget	Increase/ (Decrease)	% Change
Non-Departmental					
	001 Contingency	(300,000)	(300,000)	0	0.0%
	080 Public Utility & Excise Tax	4,650,000	4,702,000	(52,000)	-1.1%
	081 State Privilege Tax	2,554,000	2,416,000	138,000	5.7%
	082 City Occupation Taxes	5,666,000	5,530,000	136,000	2.5%
	088 Payroll Taxes	1,010,513	991,992	18,521	1.9%
	101 Employee Benefits	4,525,611	4,303,294	222,317	5.2%
	150 Principal	2,920,000	3,150,000	(230,000)	-7.3%
	151 Interest	1,849,581	1,987,499	(137,918)	-6.9%
	301 Depreciation	13,608,389	13,755,649	(147,260)	-1.1%
98	Total Non-Departmental	\$36,484,094	\$36,536,434	(\$52,340)	-0.1%

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 98 Non-Departmental			
Resource	Description	Detail	Amount
001	Contingency		-300,000
	A&G	-200,000	
	Customer Acctg.	-50,000	
	Distribution	-50,000	
080	Gross Revenue - Utility Tax		4,650,000
	Other Excise Tax	60,000	
	Public Utility Tax	4,590,000	
081	State Privelege Tax		2,554,000
	Privilege Tax	2,554,000	
082	City Occupation Tax		5,666,000
	City Occupation Tax	5,666,000	
088	Payroll Taxes		1,010,513
	Medicare	194,144	
	Social Security	816,369	
101	Employee Benefits		4,525,611
	Change in PL	175,000	
	Deferred Compensation	249,056	
	Dental	192,796	
	Life Insurance	62,548	
	Medical	1,951,044	
	PERS	1,436,156	
	State Industrial	136,721	
	STD Admin Fee	3,000	
	Unemployment	15,000	
	VEBA Wellness (\$150 per employee per month)	271,350	
	Vision	32,940	
150	Principal		2,920,000
	Debt Service - Principal	2,920,000	
151	Debt Service Interest		1,849,581
	Amortization of Bond Expense	22,351	
	Amortization of Bond Premium	-442,020	
	BABs Subsidy for 2010 Bonds	-376,070	
	Bond Interest Expense	2,645,320	
	Capitalized Interest	182,746	
	Capitalized Interest - Move to Capital Acct	-182,746	

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
2016 Budget
By Department, Resource

Department 98 Non-Departmental			
Resource	Description	Detail	Amount
301	Depreciation		13,608,389
	Depr - Broadband	886,520	
	Depr - Distribution	8,156,363	
	Depr - General Plant	3,777,228	
	Depr - Generation	57,000	
	Depr - Transmission	291,278	
	Depr - Transportation Equipment	440,000	
TOTAL EXPENSE Non-Departmental			\$36,484,094

RESOURCE CODES

TAB 6

SYSTEM COSTS:

005 Construction Overhead Allocated

The allocation of overhead construction costs based on loaded construction payroll.

006 Warehouse & Small Tool Allocated

The allocation of expenses associated with the warehouse and purchasing functions based on inventory activity.

007 Transportation Expense Allocated

The allocation of expenses associated with the auto shop function to mileage.

008 Benefits & Payroll Taxes Allocated

The allocation of employee benefits and payroll taxes based on labor.

009 Purchased Power

Includes all expenses associated with the procurement of electric power and the associated transmission expense.

Some examples of power sources are included here:

- * The Energy Authority (TEA)
- * Bonneville Power Administration/Energy NW
- * Market purchases and contracts for purchase
- * Frederickson
- * Benton R.E.A.

010 District Overtime Labor

Includes all expenses for wages paid to District employees for overtime worked.

011 All Other District Labor

All expenses for wages, other than for overtime, including the following:

- * Regular Pay (includes temporary upgrades, etc.)
- * Standby Pay
- * Duty Pay
- * Vehicle Add Pay
- * Other pay not covered elsewhere

012 Materials & Supplies

Includes all materials and supplies used which are kept in the District's inventories, except substation power transformers and regulators.

013 Stores Expense - Non Labor

Includes charges for the following:

- * Cost of special forms for stores and purchasing use
- * Miscellaneous general use materials and supplies of very low value such as miscellaneous screws, bolts, nuts, batteries, rags, nails, etc.

014 Small Tools & Materials

Includes expenses for tools and tool items having a unit cost of less than **\$5,000**. Also includes such items as rope or chain used in conjunction with other tools even though purchased by the reel where the intent is to cut it into useable sizes.

Some examples of expenses included here are:

- | | |
|----------------------------|-------------------------------|
| * Klien Chicago Grips | * Drill bits and braces |
| * Hot sticks | * Pull grips and clamp sticks |
| * High voltage gloves | * Hoists-hotstick and lineman |
| * Shovels and handles | * Cadweld molds |
| * Rope & chain | * Signs - men working, etc. |
| * Endless slings | * Traffic cones |
| * Saw blades and files | * Ground clamps |
| * Glass range poles | * Hot line jumpers |
| * String measuring devices | * Line guards |
| * Extending level rod | * Miscellaneous test meters |
| * Magnetic strobe lights | * Electric drills and saws |
| * Travellers | * Various small hand tools |

015 Transportation Expense - Gas & Oil

Includes all expenses for gasoline, diesel fuel, propane and automotive oil and grease.

016 Transportation Expense - Repair & Maintenance

Includes all expenses for parts and labor purchased to repair and maintain all vehicles in good condition, including towing costs.

017 Operations & Maintenance Expense

Includes expenses pertinent to the operations and maintenance of the District's electrical systems.

Some examples of expenses included here are:

- * Materials and supplies generally purchased to operations or maintenance expense accounts rather than to inventory.
- * Special engineering supplies
- * Drafting film (Mylar, etc.)
- * White print material
- * Reduction services
- * Microfilming
- * Special forms unique to operations or maintenance
- * Equipment instructions, operating, maintenance and service manuals
- * Blueprint machine maintenance and paper costs
- * Pressure vacuum regulators and gauges
- * Rubber padding
- * Paving repairs (i.e. road crossings, etc.)
- * Wildlife protective boots
- * Posts with cable decals
- * Hi-Line road work
- * Fuse links and other small fuses including bayonet fuses for transformers
- * Miscellaneous materials and services for operations or maintenance of electric systems
- * Repairs to private property

Does not include materials and supplies normally purchased to District inventories or Off-the-Dock contract Labor budgeted separately.

018 Miscellaneous Construction Expense

Includes costs charged to jobs for items of expense that do not become a part of a unit of property.

Some examples of expenses included here are:

- * Benton County Engineer costs
- * Purchases of sand, gravel and concrete for construction
- * Rental costs necessary to job
- * Service charges necessary to job
- * Purchased labor other than bid by contract or quote (ex. payments to small contractor for road patching, trenching, blasting, digging pole holes, etc.)
- * Payments to machine shops for making parts
- * Purchased surveying costs incurred on specific jobs the construction of new transmission or distribution plant
- * Miscellaneous Engineering or service labor for specific jobs
- * Photography charged to jobs
- * Miscellaneous small charges not readily identifiable
- * Miscellaneous supplies for surveying such as stakes, flags etc.

019 Tree Trimming - Contract

Includes only those expenses for contracted tree trimming.

020 Off-the-Dock Labor

Includes only contracted Off-the-Dock labor.

021 Electric Construction Contracts

Includes contracts obtained by bid or quote to do a specific package of work such as build transmission or distribution line or a substation or part thereof.

Does not include contract costs for major maintenance of, or construction of, new general plant such as storage yards, service facilities and general office buildings. Such costs should be budgeted at items 038 - Maintenance of Buildings and Improvements or 131 - Structures and Improvements to differentiate them from electric plant costs.

022 Contract Temporary Labor

Includes contract labor on a temporary basis for existing labor positions. These are for people that are paid through a job agency and are not paid through the District's payroll system.

023 Environmental

Includes those costs associated with environmental compliance, waste minimization, handling, storage and disposal of hazardous material or dangerous waste.

Some examples of expenses included here are:

- * Fees paid to disposal firms
- * Transportation costs
- * Test kits
- * Testing of materials
- * Cleanup media
- * Drums

Does not include, cost to repair or replace real or personal property damaged by an environmental occurrence. Examples of these types of costs are blacktop replacement, concrete, gravel dirt or repairs to personal property.

GENERAL EXPENSES:

025 Maintenance of Software

026 Computer Hardware & Equipment Expense

027 Personal Computer Software

All personal computer software packages.

028 Personal Computer O & M Costs

Includes all expenses related to the operation and maintenance of hardware equipment.

Some examples of expenses included here are:

- * Replacement of cables
- * Switches
- * Connectors
- * Cards
- * Disk drives with like kind
- * Maintenance contracts
- * Phone line costs

029 Personal Computer Supplies & Expenses

Includes all purchases of plotter paper, forms, diskettes, tapes, cartridges, ribbons, pens, and miscellaneous supplies used on the computer.

030 Customer Service Expenses

Includes expenses attributable to Customer Service.

Some examples of costs included here are:

- * Armored Car dispatch
- * Payments to Collections Stations (drugstores, etc.)
- * Payments to Collection Agencies
- * Padlocks - (meter readers)
- * Special Forms (Cust. Accounting, Credit and Meter Reading)
- * All postage expense

033 Office Supplies & Expenses

Some examples of expenses included here are:

- * Small items of office equipment - less than **\$5,000** unit cost
- * Paper and envelopes
- * General use forms
- * Pencils, pens, erasers, rulers and misc. scales

034 Insurance

Includes the cost of insurance premiums including "Self-Insurance Assessments". It does not include the employee insurance premiums.

037 Grounds Care

Includes expenses for care of lawns and shrubbery at all office and substation locations.

038 Maintenance of Building & Improvements - General

Includes janitorial service, maintenance of buildings, and certain improvements to general property such as graveled and/or paved areas and fences.

Some examples of expenses included here are:

- * Janitorial Services
- * Painting and repairs to buildings and structures
- * Adding gravel to graveled areas
- * Patching paved areas
- * Repairs to heating, air conditioning, electrical and water systems.
- * Contracts for major repairs, including labor contract.

039 Maintenance of Equipment - Communication, Office Equipment, General Property & Other

Some examples of expenses that may be included here are:

- * Cost of Maintenance Agreements/Office equipment maintenance repair
- * Maintenance and repair of vehicle radios
- * Maintenance of telephones
- * Maintenance/repair of other general property not budgeted elsewhere, i.e., tools.

040 Rents

Includes all expenses for use of property and equipment not budgeted elsewhere.

Some examples of expenses included here are:

- * Poles contact rentals
- * Permits for railway crossings

041 Insurance Damages & Other Reimbursable

Costs paid to be reimbursed by insurance for damages to District property.

042 Business Expense & Travel

Includes all costs of meetings and travel that are for general business-related purposes.

Some examples of expenses included here are:

- * Chamber of Commerce
- * TRIDEC
- * Kiwanis
- * Rotary Club
- * NoaNet
- * CWPU
- * PURMS
- * Foreman's dinner
- * Travel costs related to the evaluation/investigation of products or equipment.

043 Training Expense & Travel

Includes all costs (travel, registration fees, materials, etc.) for meetings, conferences, and seminars that provide training or educational sessions or speakers in a learning or networking environment related to your work:

Some examples of expenses included here are:

- * Conferences of professional associations with break-out training sessions
- * Sessions offering continuing education credits or units
- * Vendor conferences
- * Meter school
- * APPA or NWPPA courses or seminars

044 Other General Expenses

Miscellaneous general expenses not budgeted elsewhere, including but not limited to:

- * Miscellaneous advertising for bids, rate studies, surplus property, call for bonds, etc.
- * Employee service pins and awards
- * Special survey costs

045 Subscriptions & Publications

Included here are all books, reference texts and manuals, newspapers, magazines and other general informational publications.

Some examples of expenses included here are:

- * Special manuals
- * Reference manuals and services (R.C.W.'s, National Public Employee Reports, etc.)
- * Directories
- * Computer Services
- * Westlaw Legal Service
- * Other miscellaneous publications such as:
 - Kiplinger Letter
 - Northwest Wage & Hours Subscription
 - N.A.D.A. Subscription
 - Electric Power & Light
 - Clearing Up
 - Energy Omnium

046 Treasurer Expenses

Bank fees, escrow fees, and other expenses directly related to the Treasurer.

UTILITIES:

050 Telephone & Answering Services

Includes all expenses for use of telephone lines and answering services except those for remote computer terminals.

Some examples of expenses included here are:

- * Frontier/Embarg - Prosser
- * Verizon NW - Kennewick
- * Kelley's Answering Service
- * City of Prosser - Emergency Answering Service
- * Washington State Central Stores - Scan lines
- * Asplund - Utilities Underground Location Center

051 Water, Garbage, Irrigation & Other

Includes expenses for water, garbage and irrigation assessments at all District locations.

Some examples of expenses included here are:

- * Kennewick Disposal - Garbage
- * City of Kennewick - Water and Sewer
- * City of Prosser - Water
- * Culligan - Water conditioning
- * Irrigation Districts - Annual Assessments
- * Special Assessments

OUTSIDE SERVICES:

060 Audit Examination - State

061 Professional Services

Includes expenses for all professional services not budgeted elsewhere.

Some examples of expenses included here are:

- * Engineering studies
- * Other attorney fees
- * District share of labor negotiations office
- * Arbitration costs
- * Purchased surveying costs not identified to other budget items. These would include surveying costs incurred in conjunction with feasibility studies and would not include survey cost for acquisition of land and land rights for general plant, or survey costs for power line design.

DUES & ASSESSMENTS:

070 Civic & Service Organizations

072 Industry Association Assessments

Includes all assessments paid for membership in various industry associations.

073 Other Assessments

Includes all other assessments not budgeted above or elsewhere in the budget.

TAXES:

080 State Public Utility Tax & Other Excise Taxes

081 State Privilege Tax

082 City Occupation Taxes

088 Payroll Taxes

EMPLOYEE BENEFITS:

101 Employee Benefits

104 Other Employee Costs

Includes expenses made for the benefit of employees.

Some examples of expenses included here are:

- * Purchase of tools supplied to employees
- * School Reimbursements
- * Medical exams

106 Vacation Accrual

CONSERVATION:

107 Residential Loans

108 Non Reimbursed Conservation Costs

Includes the commercial program, flow restrictors, outlet gaskets, etc.

109 Conservation Advertising

Includes all conservation advertising costs.

111 Inspection Services

Includes all inspection services and contract labor for the District's conservation programs.

112 Residential Conservation Expenses

Includes the Weatherization, Super Good Cents, Heat Pump, Water Heater and Duct Sealing Programs.

113 Commercial Conservation Expenses

Includes small and medium general service and multi-family residential common area lighting improvements and small and medium general service building and equipment improvements.

114 C&R Discount Reimbursable Expenses

Includes reimbursable program expenses for commercial customers.

115 Irrigation Conservation Expenses

Includes reimbursable program expenses only for the irrigation programs.

116 Energy Savings Plan Reimbursement Expense

Includes reimbursable program expenses only for the Energy Savings Plan (Industrial).

117 Appliance Efficiency Program

Includes reimbursable program expenses for showerheads, water heaters, etc.

PUBLIC INFORMATION:

119 Public Information Expenses

Includes safety and promotional expenses sponsored by the District, such as radio spots, demonstrations and newspaper ads.

PURCHASED ELECTRIC PLANT & EQUIPMENT:

120 Substation Transformers & Regulators

Purchase of substation power transformers and regulators only.

121 Substation Equipment & Materials

Since substations as such are actually large pieces of electric equipment, it is intended that all expenses incurred for the construction of substations including work in progress purchases, which are not specifically budgeted elsewhere, shall be collected here.

Some examples of expenses included here are:

- * Miscellaneous purchased labor
- * Fencing materials or installed fencing
- * Materials used in construction of substations such as gravel, concrete, bar stock, wiring and other materials not budgeted elsewhere.

Does not include power transformers and regulators, substation demand meters and other metering devices for substations, labor contracted to build substations per bid or quote and Off-the-Dock labor.

122 Line Devices

Includes all expenses for protective and operational line equipment for transmission and distribution systems other than those line items included in substations.

Some examples of expenses included here are:

- * Switches - line type only, except regulator bypass switches
- * Cutouts
- * Lightning arrestors (not included in the substation inventories)

123 Transformers & Related Items

Include only those items included in the distribution lines.

Some examples of expenses included here are:

- * Distribution transformers
- * Fiberglass enclosures
- * Transformer vaults and pads (flat and with box)
- * Miscellaneous low value installation materials unique to installation of the above items.

124 Meters & Related Items

All meters and metering devices purchased by the District including substation metering, and related items.

Some examples of expenses included here are:

- * Single phase demand and no demand meters
- * Three phase demand and no demand meters
- * Current transformers - including substation type
- * Potential transformers - including substation type
- * Demand registers - including substation type

- * kW demand registers
- * Compensators
- * Enclosures
- * Test switches - meter maintenance
- * Miscellaneous materials used only in the installation of metering devices

125 Land & Land Rights - Electric

Includes all expenses associated with the acquisition of land and land rights for construction of electric plant.

Some examples of expenses included here are:

- * Purchase price
- * Taxes and escrow fees
- * Survey and legal costs associated with the purchase of the land or land rights
- * Other costs deemed necessary to obtain the property or rights

126 SCADA Master Station Equipment

Computers, monitors, printers, furniture, UPS, spare equipment, vendor support, remodeling costs

127 SCADA Communications Equipment

Master radio, repeater radio, RTU radios, antennas, coax cables, spares and test equipment

128 SCADA Substation Equipment

RTU transducers, cable, auxiliary relays, control modifications, enclosures, RTU test equipment

129 SCADA Travel & Non-District Labor

Consists of vendor training costs, travel expenses, consultants, BPA - metering modifications, contract labor

PURCHASED GENERAL PLANT & EQUIPMENT:

130 Land & Land Rights - General

Includes all expenses for the acquisition of land and land rights for the construction of office and operations facilities.

Some examples of expenses included here are:

- * Purchase price
- * Taxes and escrow fees
- * Survey and legal costs associated with the purchase of the property or rights.
- * Other costs deemed necessary to obtain the property or rights.

131 Structures & Improvements

Include expenses for the construction of buildings and the improvement of lands, buildings or other structures.

Some examples of expenses included here are:

- * Site improvement costs, such as grading, graveling, paving and landscaping.
- * Costs to build buildings or structures
- * Improvements to buildings or structures
- * Surveying costs associated with development of improvement

132 Office Equipment

Includes all expenses for office furniture and equipment with a value of \$5,000 or more.

133 Transportation Equipment

Includes all expenses for motor driven or towed vehicles including any ancillary or auxiliary equipment attached to the vehicle with a value of \$5,000 or more.

The term vehicle includes:

- * Automobiles
- * Trucks
- * Trailers
- * Backhoes
- * Forklifts

134 Tools, Shop & Stores Equipment

Includes the cost of tools and equipment with a value of \$5,000 or more and purchased to accounts 393.00 - Stores Equipment or 394.00 - Tools, Shop and Garage Equipment.

Some items included here are:

- * Stores cabinets and bins
- * Work benches
- * Shelving
- * Tools for use in the Auto Shop, Meter Shop, Transformer Shop, Warehouse, Line Crews, and equipment used by same, but not specialized calibration and test equipment included at 135 below.

135 Laboratory & Test Equipment

Includes the cost of specialized tools and equipment purchased to account 395.00 - Laboratory Equipment having a unit value of \$5,000 or more.

Tools and equipment included here are of a type used to calibrate and/or test other tools or equipment items of electric plant such as meters, transformers, etc.

136 Communication Equipment

Includes the expense of all types of communication equipment purchased to account 397.00 - Communications Equipment, having a value of \$5,000 or more.

Some items included here are:

- * The telephone system
- * Portable and mobile radios
- * Radio base stations

Not included here is communication equipment for linking information systems equipment together.

137 Capitalized Computer Software

138 Computer Equipment

Personal computers will be identified as a personal computer system and will normally include items such as keyboards, monitors, printers, modems, digitizers, plotters, etc.

All auxiliary equipment, such as that specified above, will be identified to a personal computer. If the total cost of the computer together with the auxiliary equipment identified to it costs or will cost \$5,000 or more, this will constitute a capital purchase and the items will be capitalized in account 391.00.

Items added after initial purchase of a computer will be capitalized with the computer for which they are acquired. This will include replacing a floppy disk drive with a hard drive, network cards, etc.

139 Miscellaneous General Plant

Includes the cost of equipment purchased to account 398.00 Miscellaneous Equipment, having a value of \$5,000 or more. Equipment included here is usually not necessary to the operation of the business.

Some examples of expenses included here are:

- * Cameras
- * Other miscellaneous items

140 Generation Plant & Equipment

DEBT SERVICE:

150 Principal

Includes payment made to retire debt.

151 Interest

153 Provision for Bond Reserve

Includes monies set aside in special deposits or investments to insure payment of bond debts.

OTHER MISCELLANEOUS EXPENSES:

301 Depreciation Expense

302 Amortized Conservation

303 WCEF Expense

This is the expense for the one-time credit that residential customers will receive on their bill and the payment to the Housing Authority for weatherization.

304 Grant Expense

PRODUCTS & SERVICES EXPENSES:

200 New Services Expenses

Expenses related to providing services that the District offers customers. **These are services not related to the sale or delivery of energy.**

Some examples of expenses included here are:

- * Postage for Mail Service for other companies
- * Supplies for Glove Testing provided other utilities
- * Supplies for Maintenance of Substations belonging to other utilities
- * Home and Building Inspection expenses (non-Public Purpose)
- * Advertising and Marketing expense including fees associated with “Home Shows” etc.

201 New Product Expenses

Expenses incurred in obtaining, selling, merchandising, and advertising products to consumers.

Some examples of expenses included here are:

- * Purchase cost of light bulbs, appliances, surge suppressors, etc.
- * Display booths
- * Advertising and Marketing expense including fees associated with Home Show, Fair, etc.

202 Mutual Aid & Other Reimbursable Expenses

Non-labor expenses incurred by the District in providing mutual aid or maintenance and repair work to other utilities except for Maintenance of Substations (see 200).

Some examples of expenses included here are:

- * Travel expenses
- * Fuel
- * Other miscellaneous costs

ADDITIONS & USAGE OF INVENTORY: (for use in controlling the growth of Inventory)

- 994 Reel Deposits**
- 996 CT Inventory**
- 997 Substation Inventory**
- 998 Fiber Optic Inventory**
- 999 Non-Exempt Inventory**

REVENUE:

- 501 Retail Energy Sales**
- 502 City Occupation Taxes**
- 503 Bad Debt Expense**
- 505 Wholesale Power Sales Revenue**
- 510 Wholesale Transmission & Wheeling Sales**
- 515 Interest and Investment Income**
- 520 Electric Services Installation Revenue**
- 523 Pole Contact Rent Revenue**
 - * Pole Contact Rental
 - * Pole Contact Application Fees
- 525 Capital Contributions**
- 530 Property Rental Revenue**
 - * Rent of Electric Property
 - * Auditorium Rent
- 535 Microwave Site Rental**

545 Other Electric Revenue

- * NSF check charges
- * Electric account service charge
- * Collection of write-offs

546 Miscellaneous Non-Electric Revenue

547 WCEF Settlement Revenue

This is the Washington Consumer Energy Fund settlement. A portion of the settlement will be given to the Housing Authority for weatherization. The remaining funds will be given back to residential customers as a one-time credit on their bill.

548 Grant Revenue

549 SWIFT Grant Revenue

550 Products & Services Revenue

- * Substation Maintenance and Repair for other Utilities
- * Meter Shop Revenue
- * Glove Testing
- * Mail Service
- * Sale of Products (light bulbs, surge suppressors, etc.)
- * Energy Service Revenue (building inspection fees, etc.)
- * Block Heater Rental

560 Insurance Claim Revenue

570 Reserves (Gain or Loss)

FINANCIAL PLAN

TAB 7

COMPARATIVE OPERATING STATEMENT
Public Utility District No. 1 of Benton County
2016 Budget

	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue*
Revenue Action Budget Assumption (September 1)			4.9%	4.9%
<i>For planning purposes only, any future rate action would require Commission approval</i>				
OPERATING REVENUES				
Energy Sales - Retail	\$117,641,940	\$116,994,548	\$124,696,449	\$124,696,449
Energy Sales for Resale	23,325,872	16,347,107	19,521,942	19,521,942
Transmission of Power for Others	632,528	587,022	686,424	686,424
Broadband Revenue	2,191,287	2,050,000	2,080,716	2,080,716
Other Electric Revenue	1,472,425	1,532,648	1,547,609	1,547,609
TOTAL OPERATING REVENUES	145,264,052	137,511,324	148,533,140	148,533,140
OPERATING EXPENSES				
Purchased Power	84,714,618	81,102,865	88,558,871	88,558,871
Purchased Transmission & Ancillary Services	12,925,752	12,907,459	13,194,436	13,194,436
Conservation	89,940	459,748	142,707	142,707
Total Power Supply	97,730,310	94,470,072	101,896,014	101,896,014
Transmission Operation & Maintenance	81,220	44,638	110,000	110,000
Distribution Operation & Maintenance	8,596,798	9,123,618	8,903,691	8,903,691
Broadband Expense	982,869	974,395	842,971	842,971
Customer Accounting, Collections & Information	3,853,026	4,175,104	3,988,689	3,988,689
Administrative & General	7,034,220	6,548,667	6,597,417	6,597,417
Subtotal before Taxes & Depreciation	20,548,134	20,866,422	20,442,769	20,442,768
Taxes	12,394,110	12,498,883	12,870,000	12,870,000
Depreciation & Amortization	12,894,915	13,499,649	13,168,389	13,168,389
Total Other Operating Expenses	45,837,158	46,864,954	46,481,158	46,481,157
TOTAL OPERATING EXPENSES	143,567,468	141,335,026	148,377,171	148,377,171
OPERATING INCOME (LOSS)	1,696,584	(3,823,702)	155,969	155,970
NONOPERATING REVENUES & EXPENSES				
Interest Income	204,120	250,000	250,000	250,000
Unrealized Gain/(Loss) on Investments	173,722	-	-	-
Other Income (includes BABs subsidy)	321,433	376,070	376,070	376,070
Interest Expense	(2,844,753)	(2,657,558)	(2,501,574)	(3,009,741)
Debt Premium/Discount & Expense Amortization	445,518	430,967	419,669	419,669
Cost of Issuance Expense				(250,000)
TOTAL NONOPERATING REVENUES & EXPENSES	(1,699,960)	(1,600,521)	(1,455,835)	(2,214,002)
NET INCOME (LOSS) BEFORE CONTRIBUTIONS	(3,376)	(5,424,223)	(1,299,866)	(2,058,032)
CAPITAL CONTRIBUTIONS	3,834,420	1,909,798	1,285,098	1,285,098
CHANGE IN NET ASSETS	\$3,831,044	(\$3,514,425)	(\$14,768)	(\$772,934)
CAPITAL REQUIREMENTS PLAN (Gross)	\$12,960,156	\$12,816,889	\$15,565,638	\$15,565,638
UNRESTRICTED RESERVES (End of Year)	\$48,493,040	\$42,113,544	\$36,659,534	\$51,028,409

*District staff will continue to evaluate the need for a revenue increase throughout 2016 and evaluate issuing bonds to fund long term investments in capital. A bond issue has the added benefit of providing greater rate stability for our customers in following years.

Liquidity Measures
Public Utility District No. 1 of Benton County
2016 Budget

Unrestricted Reserves	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue
BEGINNING BALANCE	\$47,557,426	\$48,493,040	\$42,113,544	\$42,113,544
Revenues (excluding sales for resale)	122,004,927	121,203,266	128,950,844	128,950,844
Capital Contributions	3,834,420	1,909,798	1,285,098	1,285,098
Operating Expenses*	(107,148,512)	(110,901,249)	(115,000,416)	(115,000,416)
Amortization of White Creek	578,400	578,400	578,400	578,400
Debt Service and LOC	(5,993,332)	(4,818,944)	(5,623,787)	(6,004,912)
Gross Capital	(12,960,156)	(12,816,889)	(15,565,638)	(15,565,638)
BPA Prepay	438,742	438,742	438,742	438,742
Capitalized Interest	181,124	171,360	182,746	182,746
Bond Call - 2005 Series Bonds		(1,900,000)		
Bond Reserve Fund Transfer		(943,980)		
Potential Timing Difference of Capital Expenditures		700,000	(700,000)	(700,000)
Cost of Issuance Expense				(250,000)
New Bond Proceeds				15,000,000
ENDING BALANCE	\$48,493,040	\$42,113,544	\$36,659,534	\$51,028,409

* Operating expenses include gross power expense and exclude depreciation

Days Cash on Hand	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue
Unrestricted Reserves	\$48,493,040	\$42,113,544	\$36,659,534	\$51,028,409
Gross Power Expense	97,730,310	94,470,072	101,896,014	101,896,014
Non-Power Operating Expenses	45,837,158	46,864,954	46,481,157	46,481,157
Depreciation	(12,894,915)	(13,499,649)	(13,168,389)	(13,168,389)
Amortization of White Creek/BPA Prepay	(1,017,142)	(1,017,142)	(1,017,142)	(1,017,142)
Operating Expenses (cash basis)	\$129,655,412	\$126,818,235	\$134,191,640	\$134,191,640
DAYS CASH ON HAND	136	121	100	139

Days Liquidity on Hand	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue
Unrestricted Reserves + \$10M LOC	\$58,493,040	\$52,113,544	\$46,659,534	\$61,028,409
Operating Expenses (cash basis)	\$129,655,412	\$126,818,235	\$134,191,640	\$134,191,640
DAYS LIQUIDITY ON HAND	165	150	127	166

Debt Measures
Public Utility District No. 1 of Benton County
2016 Budget

Debt Service Coverage	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue
Change in Net Assets	\$3,831,044	(\$3,514,425)	(\$14,768)	(\$772,934)
Depreciation	12,894,915	13,499,649	13,168,389	13,168,389
Amortization of White Creek	578,400	578,400	578,400	578,400
Amortization of BPA Prepay	438,742	438,742	438,742	438,742
Interest Expense	2,399,234	2,226,591	2,081,905	2,590,072
Funds Available for Debt Service (FADS)	<u>\$20,142,335</u>	<u>\$13,228,957</u>	<u>\$16,252,669</u>	<u>\$16,002,669</u>
Debt Service	\$5,966,784	\$4,779,944	\$5,584,787	\$5,965,912
DSC with capital contributions (Target = 2.0)	3.38	2.77	2.91	2.68
DSC without capital contributions (Target = 1.75)	2.73	2.37	2.68	2.47

Fixed Charge Coverage	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue
Change in Net Assets	\$3,831,044	(\$3,514,425)	(\$14,768)	(\$772,934)
Depreciation	12,894,915	13,499,649	13,168,389	13,168,389
Amortization of White Creek	578,400	578,400	578,400	578,400
Amortization of BPA Prepay	438,742	438,742	438,742	438,742
Interest Expense	2,399,234	2,226,591	2,081,905	2,590,072
Frederickson Fixed Costs	6,492,620	6,948,951	7,659,461	7,659,461
36% of BPA Power & Transmission	22,334,497	23,643,884	24,903,404	24,903,404
Adjusted FADS	<u>\$48,969,453</u>	<u>\$43,821,792</u>	<u>\$48,815,533</u>	<u>\$48,565,533</u>
Debt Service	\$5,966,784	\$4,779,944	\$5,584,787	\$5,965,912
Frederickson Fixed Costs	6,492,620	6,948,951	7,659,461	7,659,461
36% of BPA Power & Transmission	22,334,497	23,643,884	24,903,404	24,903,404
Debt Service & Fixed Charges	<u>\$34,793,902</u>	<u>\$35,372,779</u>	<u>\$38,147,652</u>	<u>\$38,528,777</u>
FCC Ratio (Target = 1.3)	1.41	1.24	1.28	1.26

Debt Ratio	2014 Actual	2015 Forecast	2016 Budget	2016 Budget with Bond Issue
Revenue Bonds Outstanding	\$53,600,000	\$49,735,000	\$46,815,000	\$62,060,000
Capitalization (bonds + net assets)	\$184,311,077	\$176,931,652	\$173,996,885	\$188,483,718
Debt Ratio	29%	28%	27%	33%

2016 BUDGET

FINANCIAL PLAN - KEY ASSUMPTIONS

The Financial Plan for 2016 is based on these key assumptions:

GENERAL

- Conservative assumptions have been used in the development of the financial plan in accordance with the District's Financial Policies and prudent utility practice.
- The financial plan is based on accrued revenues and costs. To derive end-of-year cash balances, amounts are adjusted to remove non-cash items, to add non-cost cash items and to account for timing differences between accrued cost and cash.

REVENUES

- The 2016 Budget reflects a 4.9% revenue increase effective September 1, 2016 for planning purposes only to address the increases in power supply costs. Prior to September 1, the District will consider actual 2015 results and updated power supply forecasts to determine if any rate action is necessary.
- Retail energy sales are based on the medium case of the Retail Energy Load Ten-Year Forecast, 2015-2024, approved by the Commission on May 26, 2015 (see Tab 8).
- Sales for Resale are consistent with the 2016 Power Supply Plan.

POWER & TRANSMISSION COSTS *(see Tab 10, 2016 Power Supply Plan, Section 4, for more details)*

- **The District's net power cost is estimated using a "Risk Model or Probability of Occurrence Forecast."**
 - The purpose of the Risk Model is to define the distribution of possible outcomes taking into account changes in power cost variables.
 - The model is run 1,000 times to produce a probability curve of net power cost.
 - A conservative assumption of the 25th percentile of probability is used for budgeting purposes. Thus 75% of the model's net power cost outcomes were equal to or less than the budgeted net power cost.
 - The net power cost budget details are developed by choosing a single model result of occurrence at the 25th percentile of probability point and using its detail information.
- **Within the model, known variables were included as follows:**
 - The financial plan includes the following projected BPA rate increases to be applied to Benton PUD's specific contract terms:
 - FY 2015-2016 - Power 7.1%; Transmission 4.4%
 - The budget includes the repayment of borrowed water from the Canadian reservoirs in CY 2015. The repayment results in a reduction of 6.4 aMW of Slice generation received from the Federal Hydro System in CY 2016.
 - Benton's share of the credit from BPA for the Residential Exchange Settlement is estimated at \$2.2 million.
 - The forecast includes an irrigation mitigation annual benefit of \$3.7 million.
 - Net conservation program costs after reimbursement from BPA are expected to be \$0.1 million in 2016.

FINANCIAL PLAN - KEY ASSUMPTIONS

(CONTINUED)

POWER & TRANSMISSION COSTS *(continued)*

- No Cost Recovery Adjustment Clause (CRAC) is assumed.
- A \$0.5 million slice true-up credit is assumed.
- Power cost assumptions include the Frederickson contract cost through the forecast period.
- Power cost forecast assumes the EIA cost cap is not triggered.
- No carbon cap and trade impact included in power forecast.

FINANCING

- No debt issuance is assumed in this forecast.
- Short-term borrowing may be used, if needed, to maintain cash flow requirements, but none is projected.

CAPITAL

- Capital is based on the District's five-year Capital Requirement Plan (see Tab 9).

PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY, WASHINGTON
2015 - 2019 Retail Revenue and Kilowatt Hours (kWh) Forecast
(Medium Case, May 2015 Forecast)

Forecast - 2015 Medium Case		
	Revenues	kWh
Residential	\$51,989,004	673,953,191
Small Gen. Service	8,339,843	122,653,199
Medium Gen. Service	12,023,900	183,135,445
Large Gen. Service	13,500,946	227,957,295
Large Industrial	3,100,525	67,855,184
Small Ag Irrigation	991,040	16,436,128
Large Ag. Irrigation	21,277,808	451,116,864
Street Lighting	196,314	2,667,332
Security Lighting	249,258	1,357,244
Unmetered Accounts	174,664	3,003,165
TOTAL 2015	\$111,843,303	1,750,135,047
Forecast - 2016 Medium Case		
	Revenues	kWh
Residential	\$55,615,841	701,613,529
Small Gen. Service	8,660,012	126,016,948
Medium Gen. Service	11,913,652	181,994,357
Large Gen. Service	13,514,134	226,673,862
Large Industrial	3,408,185	70,046,068
Small Ag Irrigation	987,072	15,445,778
Large Ag. Irrigation	22,592,911	445,767,427
Street Lighting	203,510	2,697,877
Security Lighting	264,999	1,321,954
Unmetered Accounts	188,437	2,981,603
TOTAL 2016	\$117,348,754	1,774,559,403
Forecast - 2017 Medium Case		
	Revenues	kWh
Residential	\$55,818,301	703,115,699
Small Gen. Service	8,659,520	125,807,143
Medium Gen. Service	11,925,219	182,065,924
Large Gen. Service	13,466,127	225,842,540
Large Industrial	3,398,895	69,854,685
Small Ag Irrigation	979,814	15,319,606
Large Ag. Irrigation	22,574,233	445,371,038
Street Lighting	203,510	2,660,269
Security Lighting	264,999	1,329,387
Unmetered Accounts	188,778	2,986,999
TOTAL 2017	\$117,479,396	1,774,353,290
Forecast - 2018 Medium Case		
	Revenues	kWh
Residential	\$56,145,298	706,438,133
Small Gen. Service	8,687,525	126,061,467
Medium Gen. Service	11,990,682	182,986,812
Large Gen. Service	13,494,453	226,298,594
Large Industrial	3,398,895	69,854,685
Small Ag Irrigation	975,009	15,236,068
Large Ag. Irrigation	22,612,812	446,189,754
Street Lighting	203,510	2,630,179
Security Lighting	264,999	1,340,586
Unmetered Accounts	189,643	3,000,673
TOTAL 2018	\$117,962,827	1,780,036,951
Forecast - 2019 Medium Case		
	Revenues	kWh
Residential	\$56,522,417	710,481,307
Small Gen. Service	8,717,925	126,353,235
Medium Gen. Service	12,055,101	183,890,612
Large Gen. Service	13,519,562	226,700,382
Large Industrial	3,398,895	69,854,685
Small Ag Irrigation	970,209	15,152,611
Large Ag. Irrigation	22,651,595	447,012,805
Street Lighting	203,510	2,599,959
Security Lighting	264,999	1,351,926
Unmetered Accounts	190,516	3,014,501
TOTAL 2019	\$118,494,729	1,786,412,021

Total kWh for 2015-2019

	Actual (January - Oct. 2015)												
Total kWh 2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	81,753,251	70,842,807	51,195,817	43,964,172	38,845,198	48,995,659	62,750,008	58,699,674	48,136,350	37,850,154	52,982,362	77,937,739	673,953,191
Small Gen. Service	11,273,647	10,444,066	8,399,963	8,630,563	9,005,788	10,616,996	12,060,700	11,955,370	10,809,845	9,065,197	9,468,967	10,922,097	122,653,199
Medium Gen. Service	15,719,991	15,058,182	13,124,396	13,611,242	14,078,883	15,970,931	16,957,563	16,576,440	15,990,572	15,576,154	14,933,501	15,537,591	183,135,445
Large Gen. Service	17,888,911	17,212,717	16,213,065	17,278,183	17,939,803	19,595,384	20,935,183	20,741,663	21,305,140	20,558,020	20,038,105	18,251,121	227,957,295
Large Industrial	5,597,495	5,394,485	5,337,365	5,784,330	5,632,340	5,678,570	4,981,620	6,171,695	5,623,820	5,598,540	5,877,062	6,177,862	67,855,184
Small Ag Irrigation	0	9	648,290	1,481,286	2,159,616	2,668,782	3,213,086	3,002,663	2,075,784	1,172,302	14,298	12	16,436,128
Large Ag Irrigation	214,532	210,554	14,636,633	39,362,242	61,259,905	103,842,869	98,850,190	67,471,445	37,832,472	24,467,386	2,689,945	278,691	451,116,864
Street Lighting	225,624	225,624	225,624	225,672	225,672	225,672	224,880	224,880	224,928	225,024	209,499	204,233	2,667,332
Security Lighting	114,451	114,408	114,073	113,696	113,531	113,488	113,488	113,445	113,402	113,359	110,147	109,756	1,357,244
Unmetered Accounts	249,106	249,106	249,106	248,919	248,919	248,919	248,919	254,930	254,845	255,749	247,322	247,325	3,003,165
TOTAL Retail kWh SALES:	133,037,008	119,751,958	110,144,332	130,700,305	149,509,655	207,957,270	220,335,637	185,212,205	142,367,158	114,881,885	106,571,207	129,666,427	1,750,135,047
Total kWh 2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	90,185,658	83,334,031	59,459,959	48,855,901	40,917,218	43,255,751	51,239,805	61,073,291	52,002,979	39,475,171	53,344,021	78,469,743	701,613,529
Small Gen. Service	12,036,114	11,533,529	9,226,098	9,077,518	9,428,852	10,064,618	11,013,433	12,428,181	11,579,520	9,158,251	9,506,009	10,964,823	126,016,948
Medium Gen. Service	16,280,666	15,539,844	13,222,758	13,591,696	13,722,388	14,641,110	15,438,397	17,179,393	16,733,978	14,982,378	15,026,941	15,634,811	181,994,357
Large Gen. Service	18,189,444	17,996,411	16,560,671	17,477,118	17,674,408	18,055,023	19,116,056	21,169,597	21,172,430	20,920,282	20,065,943	18,276,477	226,673,862
Large Industrial	6,267,361	5,639,009	6,057,598	6,045,321	5,991,577	5,855,683	5,940,870	6,153,266	4,118,971	6,227,336	5,727,953	6,021,122	70,046,068
Small Ag Irrigation	65	3	437,305	1,189,782	2,247,035	2,433,069	3,142,539	2,986,268	2,039,083	956,360	14,259	12	15,445,778
Large Ag Irrigation	335,796	501,325	11,562,068	32,933,371	67,628,649	79,741,334	103,711,723	78,869,741	41,252,015	26,249,407	2,702,051	279,947	445,767,427
Street Lighting	250,354	250,354	240,652	228,834	224,970	222,882	222,917	219,706	214,732	212,184	207,756	202,535	2,697,877
Security Lighting	108,663	108,690	108,710	108,674	108,541	108,475	108,571	112,543	112,356	112,546	112,292	111,894	1,321,954
Unmetered Accounts	246,369	246,747	248,192	248,192	248,830	248,832	248,832	249,121	249,121	249,121	249,121	249,125	2,981,603
TOTAL Retail kWh SALES:	143,900,490	135,149,943	117,124,012	129,756,406	158,192,468	174,626,776	210,183,143	200,441,107	149,475,186	118,543,036	106,956,347	130,210,490	1,774,559,403
Total kWh 2017	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	90,378,747	83,512,451	59,587,264	48,960,503	41,004,823	43,348,363	51,349,510	61,204,050	52,114,319	39,559,688	53,458,232	78,637,749	703,115,699
Small Gen. Service	12,016,075	11,514,327	9,210,738	9,062,404	9,413,174	10,047,861	10,995,097	12,407,489	11,560,241	9,143,004	9,490,183	10,946,568	125,807,143
Medium Gen. Service	16,287,068	15,545,955	13,227,957	13,597,040	13,727,784	14,646,867	15,444,467	17,186,148	16,740,558	14,988,269	15,032,850	15,640,959	182,065,924
Large Gen. Service	18,122,735	17,930,410	16,499,935	17,413,021	17,609,587	17,988,806	19,045,948	21,091,958	21,094,781	20,843,558	19,992,352	18,209,448	225,842,540
Large Industrial	6,250,237	5,623,602	6,041,047	6,028,804	5,975,207	5,839,684	5,924,638	6,136,454	4,107,717	6,210,321	5,712,303	6,004,671	69,854,685
Small Ag Irrigation	64	3	433,733	1,180,063	2,228,679	2,413,194	3,116,869	2,961,874	2,022,426	948,548	14,142	12	15,319,606
Large Ag Irrigation	335,511	500,886	11,551,595	32,903,739	67,567,935	79,669,750	103,619,217	78,800,092	41,216,405	26,226,516	2,699,690	279,702	445,371,038
Street Lighting	246,865	246,865	237,298	225,644	221,834	219,775	219,809	216,643	211,739	209,226	204,860	199,711	2,660,269
Security Lighting	109,274	109,301	109,321	109,285	109,151	109,085	109,181	113,176	112,987	113,179	112,924	112,523	1,329,387
Unmetered Accounts	246,815	247,194	248,641	248,641	249,281	249,283	249,283	249,572	249,572	249,572	249,572	249,575	2,986,999
TOTAL Retail kWh SALES:	143,993,390	135,230,993	117,147,530	129,729,144	158,107,435	174,532,667	210,074,020	200,367,457	149,430,745	118,491,881	106,967,108	130,280,920	1,774,353,290
Total kWh 2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	90,805,814	83,907,072	59,868,832	49,191,856	41,198,583	43,553,197	51,592,152	61,493,258	52,360,575	39,746,620	53,710,838	79,009,336	706,438,133
Small Gen. Service	12,040,366	11,537,604	9,229,357	9,080,724	9,432,183	10,068,174	11,017,324	12,432,572	11,583,611	9,161,487	9,509,367	10,968,697	126,061,467
Medium Gen. Service	16,369,448	15,624,586	13,294,864	13,665,814	13,797,219	14,720,951	15,522,585	17,273,076	16,825,232	15,064,080	15,108,886	15,720,071	182,986,812
Large Gen. Service	18,159,331	17,966,618	16,533,255	17,448,184	17,645,147	18,025,132	19,084,408	21,134,550	21,137,378	20,885,648	20,032,723	18,246,220	226,298,594
Large Industrial	6,250,237	5,623,602	6,041,047	6,028,804	5,975,207	5,839,684	5,924,638	6,136,454	4,107,717	6,210,321	5,712,303	6,004,671	69,854,685
Small Ag Irrigation	64	3	431,368	1,173,628	2,216,526	2,400,035	3,099,873	2,945,723	2,011,398	943,375	14,065	12	15,236,068
Large Ag Irrigation	336,100	501,792	11,573,226	32,964,941	67,693,335	79,817,602	103,810,283	78,943,948	41,289,956	26,273,796	2,704,567	280,208	446,189,754
Street Lighting	244,072	244,072	234,614	223,092	219,325	217,289	217,323	214,193	209,344	206,860	202,543	197,452	2,630,179
Security Lighting	110,195	110,221	110,242	110,206	110,070	110,004	110,101	114,129	113,939	114,132	113,875	113,471	1,340,586
Unmetered Accounts	247,944	248,325	249,779	249,779	250,422	250,424	250,424	250,715	250,715	250,715	250,715	250,718	3,000,673
TOTAL Retail kWh SALES:	144,563,571	135,763,896	117,566,585	130,137,028	158,538,018	175,002,490	210,629,111	200,938,617	149,889,865	118,857,033	107,359,882	130,790,856	1,780,036,951
Total kWh 2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	91,325,525	84,387,300	60,211,481	49,473,397	41,434,376	43,802,466	51,887,431	61,845,204	52,660,251	39,974,102	54,018,242	79,461,532	710,481,307
Small Gen. Service	12,068,233	11,564,308	9,250,719	9,101,742	9,454,014	10,091,476	11,042,824	12,461,347	11,610,421	9,182,691	9,531,377	10,994,084	126,353,235
Medium Gen. Service	16,450,299	15,701,758	13,360,530	13,733,312	13,865,366	14,793,660	15,599,254	17,358,390	16,908,334	15,138,483	15,183,511	15,797,715	183,890,612
Large Gen. Service	18,191,573	17,998,517	16,562,609	17,479,163	17,676,475	18,057,135	19,118,292	21,172,074	21,174,907	20,922,730	20,068,291	18,278,615	226,700,382
Large Industrial	6,250,237	5,623,602	6,041,047	6,028,804	5,975,207	5,839,684	5,924,638	6,136,454	4,107,717	6,210,321	5,712,303	6,004,671	69,854,685
Small Ag Irrigation	63	3	429,005	1,167,199	2,204,385	2,386,888	3,082,893	2,929,587	2,000,380	938,208	13,988	12	15,152,611
Large Ag Irrigation	336,692	502,702	11,594,972	33,026,468	67,819,400	79,966,236	104,002,360	79,088,566	41,363,898	26,321,325	2,709,469	280,717	447,012,805
Street Lighting	241,268	241,268											

Total Revenue for 2015-2019

	Actual (January - Oct. 2015)												
Total Revenue 2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	\$6,011,799	\$5,257,049	\$3,935,851	\$3,445,671	\$3,098,299	\$3,792,061	\$4,725,969	\$4,451,809	\$3,829,564	\$3,219,906	\$4,245,540	\$5,975,487	\$51,989,004
Small Gen. Service	756,188	700,073	581,466	595,653	619,222	718,251	806,738	794,096	733,188	630,212	656,456	748,300	8,339,843
Medium Gen. Service	1,069,280	1,025,333	915,321	890,224	855,805	978,680	1,032,218	1,007,841	1,052,988	1,103,168	1,025,454	1,067,588	12,023,900
Large Gen. Service	1,096,208	1,060,622	1,016,152	1,000,780	993,352	1,087,029	1,150,261	1,140,220	1,287,879	1,291,609	1,241,297	1,135,537	13,500,946
Large Industrial	269,480	259,704	257,004	239,971	235,154	238,447	216,218	254,368	274,787	270,657	286,653	298,082	3,100,525
Small Ag Irrigation	0	140	123,883	76,966	106,747	128,484	150,960	142,089	162,864	97,899	1,007	1	991,040
Large Ag. Irrigation	8,673	25,447	2,402,016	1,755,116	2,673,293	4,259,727	4,055,467	2,877,190	1,795,498	1,202,388	205,099	17,894	21,277,808
Street Lighting	17,156	17,160	17,161	17,163	17,163	17,163	17,163	17,101	17,885	7,280	16,959	16,959	196,314
Security Lighting	20,386	20,356	20,316	20,322	20,287	20,183	20,216	20,213	21,187	21,627	22,083	22,083	249,258
Unmetered Accounts	14,090	14,090	14,090	14,079	14,079	14,079	14,079	14,086	15,283	15,447	15,631	15,631	174,664
TOTAL REVENUE:	\$9,263,260	\$8,379,974	\$9,283,260	\$8,055,945	\$8,633,401	\$11,254,104	\$12,189,289	\$10,719,014	\$9,191,123	\$7,860,193	\$7,716,177	\$9,297,563	\$111,843,303
Total Revenue 2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	\$6,813,272	\$6,278,442	\$4,712,649	\$3,965,502	\$3,445,831	\$3,584,492	\$4,153,581	\$4,826,928	\$4,184,816	\$3,351,429	\$4,278,508	\$6,020,392	\$55,615,841
Small Gen. Service	817,014	778,667	644,581	633,007	657,187	693,657	754,520	841,578	787,083	640,988	659,750	751,979	8,660,012
Medium Gen. Service	1,140,407	1,054,463	914,330	817,089	837,536	881,392	934,819	1,022,650	1,156,641	1,047,394	1,032,260	1,074,671	11,913,652
Large Gen. Service	1,181,591	1,107,722	1,040,736	961,116	989,198	997,736	1,062,688	1,148,440	1,331,947	1,312,625	1,243,120	1,137,216	13,514,134
Large Industrial	298,881	274,154	291,640	293,292	290,943	286,628	288,317	294,947	220,874	298,577	279,396	290,537	3,408,185
Small Ag Irrigation	5	0	138,001	68,037	114,430	122,552	153,566	146,731	160,165	82,580	1,004	1	987,072
Large Ag. Irrigation	16,595	34,138	2,155,187	1,656,301	3,195,181	3,757,665	4,682,420	3,617,985	1,993,085	1,260,367	206,012	17,976	22,592,911
Street Lighting	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	203,510
Security Lighting	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	264,999
Unmetered Accounts	15,571	15,594	15,686	15,686	15,726	15,726	15,726	15,744	15,744	15,744	15,744	15,745	188,437
TOTAL REVENUE:	\$10,322,377	\$9,582,222	\$9,951,851	\$8,449,073	\$9,585,075	\$10,378,891	\$12,084,679	\$11,954,045	\$9,889,397	\$8,048,747	\$7,754,837	\$9,347,560	\$117,348,754
Total Revenue 2017	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	\$6,834,900	\$6,298,255	\$4,729,790	\$3,980,822	\$3,460,276	\$3,599,017	\$4,169,557	\$4,844,353	\$4,200,647	\$3,365,714	\$4,294,559	\$6,040,409	\$55,818,301
Small Gen. Service	816,831	778,435	644,687	633,095	657,275	693,645	754,445	841,362	786,921	641,109	659,800	751,916	8,659,520
Medium Gen. Service	1,141,439	1,055,405	915,273	817,976	838,449	882,302	935,770	1,023,638	1,157,664	1,048,393	1,033,231	1,075,679	11,925,219
Large Gen. Service	1,177,389	1,103,778	1,037,051	957,718	985,701	994,202	1,058,923	1,144,361	1,327,189	1,307,944	1,238,691	1,133,179	13,466,127
Large Industrial	298,066	273,407	290,845	292,492	290,150	285,846	287,531	294,143	220,272	297,763	278,635	289,745	3,398,895
Small Ag Irrigation	5	0	137,679	67,481	113,495	121,551	152,312	145,533	158,857	81,905	996	1	979,814
Large Ag. Irrigation	16,581	34,110	2,154,604	1,654,823	3,192,324	3,754,301	4,678,254	3,614,799	1,991,368	1,259,275	205,834	17,960	22,574,233
Street Lighting	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	203,510
Security Lighting	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	264,999
Unmetered Accounts	15,599	15,623	15,714	15,714	15,755	15,755	15,755	15,773	15,773	15,773	15,773	15,773	188,778
TOTAL REVENUE:	\$10,339,852	\$9,598,054	\$9,964,686	\$8,459,165	\$9,592,466	\$10,385,662	\$12,091,590	\$11,963,004	\$9,897,733	\$8,056,919	\$7,766,562	\$9,363,704	\$117,479,396
Total Revenue 2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	\$6,872,535	\$6,332,858	\$4,757,486	\$4,004,815	\$3,481,984	\$3,621,221	\$4,194,630	\$4,872,620	\$4,225,709	\$3,387,007	\$4,320,080	\$6,074,354	\$56,145,298
Small Gen. Service	819,370	780,811	646,879	635,236	659,494	695,909	756,862	843,956	789,378	643,300	662,000	754,332	8,687,525
Medium Gen. Service	1,147,649	1,061,137	920,340	822,535	843,127	887,186	940,940	1,029,253	1,163,944	1,054,134	1,038,880	1,081,557	11,990,682
Large Gen. Service	1,179,863	1,106,093	1,039,242	959,745	987,787	996,301	1,061,158	1,146,769	1,329,961	1,310,683	1,241,287	1,135,565	13,494,453
Large Industrial	298,066	273,407	290,845	292,492	290,150	285,846	287,531	294,143	220,272	297,763	278,635	289,745	3,398,895
Small Ag Irrigation	4	0	137,466	67,114	112,876	120,888	151,481	144,739	157,990	81,459	990	1	975,009
Large Ag. Irrigation	16,610	34,168	2,155,808	1,657,876	3,198,225	3,761,250	4,686,858	3,621,378	1,994,914	1,261,530	206,202	17,993	22,612,812
Street Lighting	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	203,510
Security Lighting	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	264,999
Unmetered Accounts	15,670	15,694	15,786	15,786	15,827	15,827	15,827	15,845	15,845	15,845	15,845	15,845	189,643
TOTAL REVENUE:	\$10,388,809	\$9,643,212	\$10,002,893	\$8,494,642	\$9,628,511	\$10,423,471	\$12,134,328	\$12,007,745	\$9,937,056	\$8,090,763	\$7,802,962	\$9,408,434	\$117,962,827
Total Revenue 2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential	\$6,916,577	\$6,373,380	\$4,789,429	\$4,032,308	\$3,506,636	\$3,646,532	\$4,223,372	\$4,905,247	\$4,254,493	\$3,411,143	\$4,349,417	\$6,113,882	\$56,522,417
Small Gen. Service	822,136	783,405	649,247	637,550	661,893	698,364	759,487	846,785	792,054	645,667	664,381	756,956	8,717,925
Medium Gen. Service	1,153,757	1,066,777	925,326	827,025	847,732	891,993	946,028	1,034,778	1,170,122	1,059,784	1,044,438	1,087,341	12,055,101
Large Gen. Service	1,182,055	1,108,145	1,041,185	961,543	989,637	998,163	1,063,140	1,148,904	1,332,416	1,313,108	1,243,587	1,137,679	13,519,562
Large Industrial	298,066	273,407	290,845	292,492	290,150	285,846	287,531	294,143	220,272	297,763	278,635	289,745	3,398,895
Small Ag Irrigation	4	0	137,253	66,746	112,258	120,226	150,652	143,946	157,125	81,013	985	1	970,209
Large Ag. Irrigation	16,640	34,227	2,157,018	1,660,946	3,204,157	3,768,237	4,695,508	3,627,992	1,998,478	1,263,796	206,572	18,026	22,651,595
Street Lighting	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	16,959	203,510
Security Lighting	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	264,999
Unmetered Accounts	15,742	15,766	15,859	15,859	15,900	15,900	15,900	15,918	15,918	15,918	15,918	15,918	190,516
TOTAL REVENUE:	\$10,444,020	\$9,694,149	\$10,045,204	\$8,533,511	\$9,667,405	\$10,464,303	\$12,180,658	\$12,056,756	\$9,979,920	\$8,127,235	\$7,842,975	\$9,458,592	\$118,494,729

RETAIL ENERGY SALES FORECAST

TAB 8

**PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY
RETAIL ENERGY LOAD TEN-YEAR FORECAST 2015 - 2024**

May 2015

EXECUTIVE SUMMARY

The 2015 Retail Energy Load Ten-Year Forecast Medium Case Scenario predicts a five year Average Annual Rate of Growth (AARG) of 0.29%. By the year 2024, this would result in an increase of **10 aMW** over the 2014 load of 208 aMW at the BPA Points of Delivery (POD). The Ten-Year Low, Medium and High Retail Energy Forecasts are each stand-alone load forecasts as described in the Modeling Assumptions below.

2015 RETAIL ENERGY LOAD FORECAST			
	LOW CASE	MEDIUM CASE	HIGH CASE
2015-2019 (5 YEAR) % AARG	0.05%	0.29%	0.53%
2015-2024 (10 YEAR) % AARG	0.30%	0.53%	0.77%
2019 % change over 2014 Actuals	0.25%	1.46%	2.69%
2024 % change over 2014 Actuals	3.0 %	5.45%	8.01%

2015 WHOLESALE ENERGY LOAD FORECAST @ BPA POINT OF DELIVERY			
(2014 Actual = 208)	LOW CASE	MEDIUM CASE	HIGH CASE
2019 POD aMW	208	210	213
2019 aMW change over 2014	0	2	5
2024 POD aMW	213	218	223
2024 aMW change over 2014	5	10	15

MEDIUM CASE RETAIL ENERGY LOAD BY SECTOR (MWh)			
	2014 ACTUAL	2019 FORECAST	2024 FORECAST
RESIDENTIAL	696,804	710,481	757,735
SMALL GENERAL SERVICE	124,285	126,353	128,237
MEDIUM GENERAL SERVICE	182,044	183,891	188,011
LARGE GENERAL SERVICE	226,679	226,700	238,741
INDUSTRIAL	71,869	69,855	70,046
SMALL IRRIGATION	17,209	15,153	14,734
LARGE IRRIGATION	455,435	447,013	452,219
STREET LIGHTS	2,721	2,600	2,461
YARD LIGHTS	1,297	1,352	1,414
UNMETERED	2,981	3,015	3,094
TOTAL	1,781,322	1,786,412	1,856,692

MEDIUM CASE YEAR-END CUSTOMER COUNT BY SECTOR			
	2014 ACTUAL	2019 FORECAST	2024 FORECAST
RESIDENTIAL	41,758	44,390	46,925
SMALL GENERAL SERVICE	4,741	5,081	5,397
MEDIUM GENERAL SERVICE	754	828	899
LARGE GENERAL SERVICE	148	161	174
INDUSTRIAL	3	3	3
SMALL IRRIGATION	563	539	512
LARGE IRRIGATION	225	258	293
STREET LIGHTS	9	9	9
YARD LIGHTS	1,493	1,527	1,561
UNMETERED	359	360	362
TOTAL	50,052	53,155	56,134

OVERVIEW

Benton PUD saw an increase in actual energy sales (4.98%) for the year 2014 compared to 2013 primarily due to a large irrigation customer's increased load and overall weather conditions. All rate classes with the exception of large industrial (due to market conditions) and street lights (due to a significant conservation project) showed increased energy sales in 2014.

The retail load forecast for 2015 shows an overall decrease of 0.77% over 2014, after factoring in conservation.

Included at the end of this report are six figures:

- **Figure 1 – Load Forecast Summary – Conservation Included** shows a summary of the number of customers, energy sales, and peak demand for the three cases.
- **Figures 2 - 4 - MWh Sales – Historical and Forecasted (including Conservation)** show the energy sales by sector for the low, medium and high forecast cases.
- **Figure 5 – Use Per Customer in KWh** shows the average use per customer in kWh (including conservation) for all classes.
- **Figure 6 – Weather Normalized Historical Actuals and Forecasted (including Conservation)** show weather normalized historical actuals by sector with the medium forecast case.

MODELING ASSUMPTIONS

Overview

The econometric load forecast model is a long-term monthly load model that forecasts total energy usage by customer load class, number of customers by customer load class, and system peak demand. The model uses historical data to estimate relationships between energy consumption and economic variables and utilizes a 3rd party econometric forecast to project future energy consumption.

Model Inputs – Historical Load

Benton PUD has provided historical monthly load and customer data separated into customer load classes: residential, small general service, medium general service, large general service, large industrial, small irrigation, large irrigation, street lights, security lights, and unmetered. In addition, Benton PUD provided historical conservation achievements for each of these rate classes as well estimated future conservation achievements. Historical total system peak demand was also provided.

Model Inputs – Econometric Forecast

TEA subscribes to Woods & Poole Economic Forecasts, which are updated annually; most recently in April 2015. The Woods & Poole Economics, Inc. database contains more than 900 economic and demographic variables for every county in the United States for every year from 1970 to 2040.

This comprehensive database includes detailed population data by age, sex, and race; employment and earnings by major industry; personal income by source of income; retail sales by kind of business; and data on the number of households, their size, and their income. The Woods & Poole projection for each county in the United States is done simultaneously so that changes in one county will affect growth or decline in other counties. The specific economic projection technique used by Woods & Poole to generate the employment, earnings, and income estimates for each county in the United States generally follow a standard economic “export-base” approach.

The model utilizes 4 variables for the Benton County region: total population, total employment, total number of households, and total retail sales including eating and drinking places sales. Values for the City of Richland and West Richland are gathered by various sources such as Washington State Office of Financial Management's (OFM) website and Google Public Data Explorer, and backed out of the Benton County data to more accurately represent Benton PUD's service territory.

According to Woods & Poole, the long-term outlook for the United States economy is one of steady and modest growth through the year 2050. Although periodic business cycles, such as the 2008-09 recession, will interrupt and change the growth trajectory, the nation's employment and income are expected to rise every year from 2015 to 2050.

Model Inputs – Weather

The model normalizes historical load using weather data from the Pasco, WA weather station. Heating degree days represent days where customers demand heating services and cooling degree days represent days where customers demand cooling services. For the purposes of this forecast, heating and cooling degree days have been calculated using a 65 degree base.

Precipitation is also used to normalize the small irrigation and large irrigation load schedules. The normalized weather variables are based off a 10-year time period average and represent “normal” weather.

Conservation

In addition to natural energy saving effects due to economic conditions, Benton PUD has made additional efforts to help their customers conserve energy. In order to account for these extra efforts in the model, an outside consultant prepared a Conservation Potential Assessment detailing both historical conservation savings and forecasted savings. In the model, the cumulative value of the historical conservation is added back to the base load before modeling with economic variables. The forecasted cumulative savings are then subtracted from the result.

Methodology

The relationship between the normalized historical load data and the econometric variables is determined by partial least squares regression. This is a typical approach when constructing predictive models with factors that are highly correlated, as is the case when dealing with econometric factors. Partial least squares regression tends to outperform multiple linear regression when there are a large number of variables because it avoids over-fitting the data. The

established relationship between load data and econometric variables is then used with the Woods & Poole Economic projections to create an energy consumption forecast.

Peak Forecast

To calculate a monthly peak forecast, a peak load factor was calculated using the historical relationship between total monthly load and the monthly peak demand. The calculated peak load factor was then applied to the monthly load forecast to generate peak demands for every month.

High and Low Growth Scenarios

The model calculates high and low growth scenarios by increasing and decreasing the Woods & Poole economic forecasts by 30%.

RESIDENTIAL SALES

The area has historically experienced strong residential growth and over the past few years has had an average of over 500 new customers per year. In 2014, this category grew by 437 customers. Energy sales however decreased 0.16% in 2014 compared to 2013. For 2015, Residential energy sales are forecasted to increase 0.53% when compared to 2014.

The 2014 residential year-end customer count was 41,758. The 2015 medium forecast shows an increase of 527 customers to 42,285 and rises to 46,925 by the year 2024. For the high case, the residential customer count reaches 48,724 by the year 2024. The low case has slower growth and reaches 45,538 in 2024.

Currently, 62 net metered customers use solar generation. It is projected that 8 new customers per year beginning in 2015 will participate in a solar program in the future. The estimated load reduction is about .05 aMWs, approximately 445 MWhs annually.

GENERAL SERVICE SALES

Customers with peak demand less than 50 KW are classified as Small General Service (SGS). Medium General Service (MGS) customers have peak demand between 50 KW and 300 KW and the Large General Service (LGS) class is for customers with peak demand greater than 300 kW. As a customer's usage changes with time, it is possible for them to be reclassified into another customer class.

For 2014, the Small General Service and Medium General Service rate classes' energy sales increased an average of 1.9% compared to 2013. For 2015, the forecast for the Small and Medium General Service classes are up 1.40% and 0.06% respectively compared to 2014.

For 2014, energy sales for the Large General Service class were up 3.4% compared to 2013. For 2015, the energy usage for this class is projected to increase by 2.91% compared to 2014.

LARGE INDUSTRIAL SALES

Large Industrial sales historically show strong fluctuations as plants are taken on and off line and the market demands for product. In 2014 loads were similar to 2013. It is assumed that the 2015 large industrial load will be similar to 2014. No new large loads are assumed to come on line during the forecast period.

Large conservation projects included in the forecast in the industrial sector account for load decreases over the ten year forecast period.

IRRIGATION SALES

The Large Irrigation class tends to show strong yearly fluctuations due to weather and crop rotation. The 2014 actual energy sales increased 17.6% compared to 2013. This increase was significantly affected by a long hot dry summer as well as new Easterday Large Irrigation connections. The 2015 shows a decrease of 0.83% compared to 2014 because the forecast is developed using 20 year average weather.

In 2014, the Small Irrigation sector experienced an increase of 13.1% compared to 2013. There have been volatile swings in usage for this class from year to year. Small Irrigation is forecasted to decline slightly for the next several years as small irrigation customer properties become housing developments.

STREET AND SECURITY LIGHTING

This category consists of street and security lights. Street lighting load is projected to decrease at a rate of 1% annually. Security lighting load is forecasted to grow at a rate of 0.84% per year.

WHOLESALE LOADS

The annual retail energy sales forecast is converted to wholesale loads by using the District's average distribution losses over the previous three years (3.4%). Distribution losses are the difference between monthly retail loads and loads at the BPA meter. The annual wholesale loads at the District's POD are shown in **Figure 1**.

CONSERVATION EFFECTS ON LOAD FORECAST

As a result of Benton PUD's continued commitment to conservation over the past 25 years, the 10 year load forecast has some of the utility's future potential conservation built in through its modeling techniques. Regression programs analyze historical trends and can recognize historical conservation energy savings and will forecast conservation programs as continuing into the future. The current commission-adopted ten-year conservation plan is included in the load forecast.

Several Large General Service and Large Irrigation customers utilize Time of Use rates and have so for many years. The forecasted effect of conservation on these Time of Use rate customers going forward is considered to be consistent with the historic conservation efforts for this rate group. Benton PUD does not currently have any Interruptible Demand customers or Direct Control Load Management customers.

LOAD FORECAST UNCERTAINTIES

While every effort is made to have the most accurate forecast possible, the unknown is always a factor when looking ten years into the future. In an effort to mitigate the unknown, three forecasts are studied with the Medium Forecast being the most expected for current economic conditions and average weather.

TEN YEAR FORECAST TO 2024

The following pages (Figures 1-6) provide per year information on the load forecasts, customer numbers and our weather normalized historical actuals compared to the Medium Load forecast for the next ten years for the various rate classes.

2015 LOAD FORECAST SUMMARY - CONSERVATION INCLUDED

FIGURE 1

YEAR	NUMBER OF CUSTOMERS			TOTAL RETAIL MWH SALES			TOTAL WHOLESALE aMW @ POD			PEAK SYSTEM DEMAND		
	LOW CASE	MEDIUM CASE	HIGH CASE	LOW CASE	MEDIUM CASE	HIGH CASE	LOW CASE	MEDIUM CASE	HIGH CASE	LOW CASE IN MW	MEDIUM CASE IN MW	HIGH CASE IN MW
1978	25,033	25,033	25,033	1,101,956	1,101,956	1,101,956						
1979	28,824	28,824	28,824	1,295,068	1,295,068	1,295,068						
1980	29,847	29,847	29,847	1,302,433	1,302,433	1,302,433						
1981	30,812	30,812	30,812	1,279,140	1,279,140	1,279,140						
1982	30,925	30,925	30,925	1,317,164	1,317,164	1,317,164						
1983	31,105	31,105	31,105	1,226,998	1,226,998	1,226,998						
1984	31,749	31,749	31,749	1,303,745	1,303,745	1,303,745						
1985	31,787	31,787	31,787	1,336,371	1,336,371	1,336,371						
1986	32,126	32,126	32,126	1,210,770	1,210,770	1,210,770						
1987	32,009	32,009	32,009	1,229,468	1,229,468	1,229,468	145	145	145	252	252	252
1988	31,778	31,778	31,778	1,277,468	1,277,468	1,277,468	148	148	148	280	280	280
1989	32,003	32,003	32,003	1,329,330	1,329,330	1,329,330	157	157	157	342	342	342
1990	32,586	32,586	32,586	1,344,937	1,344,937	1,344,937	157	157	157	319	319	319
1991	33,253	33,253	33,253	1,383,109	1,383,109	1,383,109	162	162	162	332	332	332
1992	34,106	34,106	34,106	1,296,465	1,296,465	1,296,465	155	155	155	289	289	289
1993	35,204	35,204	35,204	1,360,027	1,360,027	1,360,027	161	161	161	309	309	309
1994	36,440	36,440	36,440	1,386,172	1,386,172	1,386,172	165	165	165	327	327	327
1995	37,754	37,754	37,754	1,371,627	1,371,627	1,371,627	161	161	161	326	326	326
1996	38,721	38,721	38,721	1,631,801	1,631,801	1,631,801	197	197	197	378	378	378
1997	39,409	39,409	39,409	1,625,470	1,625,470	1,625,470	193	193	193	343	343	343
1998	39,886	39,886	39,886	1,663,565	1,663,565	1,663,565	200	200	200	385	385	385
1999	40,782	40,782	40,782	1,722,387	1,722,387	1,722,387	204	204	204	387	387	387
2000	41,896	41,896	41,896	1,779,257	1,779,257	1,779,257	211	211	211	396	396	396
2001	42,491	42,491	42,491	1,570,008	1,570,008	1,570,008	188	188	188	352	352	352
2002	42,455	42,455	42,455	1,587,678	1,587,678	1,587,678	187	187	187	374	374	374
2003	43,459	43,459	43,459	1,580,829	1,580,743	1,580,829	187	187	187	384	384	384
2004	44,262	44,262	44,262	1,597,054	1,597,054	1,597,054	188	188	188	382	382	382
2005	44,628	44,628	44,628	1,602,508	1,602,508	1,602,508	187	187	187	366	366	366
2006	45,302	45,302	45,302	1,555,710	1,555,710	1,555,710	183	183	183	373	373	373
2007	45,930	45,930	45,930	1,607,194	1,607,194	1,607,194	190	190	190	374	374	374
2008	46,903	46,903	46,903	1,639,858	1,639,858	1,639,858	195	195	195	397	397	397
2009	47,328	47,328	47,328	1,726,341	1,726,341	1,726,341	204	204	204	401	401	401
2010	47,937	47,937	47,937	1,592,802	1,592,802	1,592,802	189	189	189	391	391	391
2011	48,455	48,455	48,455	1,648,362	1,648,362	1,648,362	195	195	195	380	380	380
2012	49,059	49,059	49,059	1,645,277	1,645,277	1,645,277	194	194	194	404	404	404
2013	49,816	49,816	49,816	1,696,774	1,696,774	1,696,774	203	203	203	422	422	422
2014	50,052	50,052	50,052	1,781,322	1,781,322	1,781,322	208	208	208	430	430	430
2015	50,414	50,682	50,950	1,763,540	1,767,685	1,771,850	208	208	209	424	425	426
2016	50,844	51,298	51,755	1,766,160	1,774,559	1,783,027	207	208	209	425	426	428
2017	51,273	51,916	52,567	1,761,617	1,774,353	1,787,158	207	209	210	424	426	428
2018	51,699	52,533	53,382	1,763,096	1,780,037	1,797,264	207	209	212	424	427	429
2019	52,127	53,155	54,209	1,765,112	1,786,412	1,808,169	208	210	213	424	427	431
2020	52,542	53,766	55,027	1,778,202	1,804,029	1,830,528	209	212	215	426	430	435
2021	52,943	54,358	55,826	1,782,774	1,812,843	1,843,898	210	213	217	426	431	437
2022	53,343	54,950	56,625	1,794,687	1,829,068	1,864,751	211	215	219	428	434	440
2023	53,743	55,542	57,425	1,801,785	1,840,567	1,880,878	212	217	221	429	436	443
2024	54,143	56,134	58,224	1,813,568	1,856,692	1,901,755	213	218	223	431	438	446
AV RATE 2015-2019	0.82%	1.21%	1.61%	-0.18%	0.06%	0.30%	-0.01%	0.23%	0.48%	-0.29%	-0.12%	0.05%
AV RATE 2015-2024	0.79%	1.15%	1.52%	0.18%	0.42%	0.66%	0.24%	0.48%	0.72%	0.02%	0.20%	0.37%

MWH SALES - HISTORICAL AND FORECASTED (INCLUDING CONSERVATION)

LOW CASE

FIGURE 2

	RESIDENTIAL MWH SALES	SMALL GEN SERVICE MWH SALES	MEDIUM GEN SERVICE MWH SALES	LARGE GEN SERVICE MWH SALES	LARGE INDUSTRIAL MWH SALES	SMALL IRRIGATION MWH SALES	LARGE IRRIGATION MWH SALES	STREET LIGHTS MWH SALES	SECURITY LIGHTS MWH SALES	UNMETERED ACCOUNTS MWH SALES	TOTAL SALES MWH	TOTAL SALES AMW	ANNUAL CHANGE %	TOTAL WHOLESALE PURCHASES (MWH)
1978	483,284	177,879		240,088			196,119	2,572	2,014		1,101,956	125.794	6.9%	
1979	587,227	213,209		264,387			225,395	2,865	1,985		1,295,068	147.839	17.5%	
1980	576,712	242,957		275,389			202,392	2,994	1,989		1,302,433	148.680	0.6%	
1981	544,530	227,064		295,398			207,086	3,121	1,941		1,279,140	146.021	-1.8%	
1982	577,008	234,710		284,460			216,297	2,807	1,881		1,317,164	150.361	3.0%	
1983	533,309	229,175		268,946		18,000	173,885	2,176	1,508		1,226,998	140.068	-6.8%	
1984	556,082	232,965		277,479		17,928	216,255	1,827	1,209		1,303,745	148.829	6.3%	
1985	598,273	245,722		252,732		19,680	216,960	1,861	1,142		1,336,371	152.554	2.5%	
1986	529,370	246,631		202,993		18,390	210,402	1,868	1,115		1,210,770	138.216	-9.4%	1,259,880
1987	515,415	249,282		210,091		18,934	232,748	1,940	1,057		1,229,468	140.350	1.5%	1,269,750
1988	515,195	257,372		255,267		18,178	228,434	1,974	1,047		1,277,468	145.830	3.9%	1,299,055
1989	527,558	274,505		267,207		17,503	239,477	2,043	1,038		1,329,330	151.750	4.1%	1,378,668
1990	526,795	280,149		264,523		18,955	251,332	2,142	1,041		1,344,937	153.532	1.2%	1,373,201
1991	567,905	297,524		252,275		18,051	244,020	2,286	1,048		1,383,109	157.889	2.8%	1,417,507
1992	545,379	233,836		152,934	110,028	17,244	233,587	2,387	1,069		1,296,465	147.998	-6.3%	1,353,604
1993	618,806	240,245		173,246	79,377	16,080	228,669	2,549	1,054		1,360,027	155.254	4.9%	1,411,949
1994	579,791	247,999		179,934	81,910	17,539	275,296	2,645	1,058		1,386,172	158.239	1.9%	1,448,980
1995	581,264	256,772		179,302	87,168	15,056	248,188	2,828	1,048		1,371,627	156.578	-1.0%	1,408,419
1996	634,055	113,990	164,425	193,835	216,822	16,487	288,386	2,747	1,054		1,631,801	186.279	19.0%	1,726,013
1997	607,521	112,911	157,948	198,919	234,250	15,027	294,766	3,073	1,056		1,625,470	185.556	-0.4%	1,693,442
1998	597,308	112,122	157,127	227,245	228,849	16,353	320,281	3,200	1,080		1,663,565	189.905	2.3%	1,752,960
1999	594,533	110,185	156,838	235,729	219,623	17,179	383,215	3,355	1,090		1,722,387	196.620	3.5%	1,784,799
2000	636,952	115,604	167,304	247,522	220,913	16,917	368,836	3,503	1,068	637	1,779,257	203.112	3.3%	1,845,623
2001	617,752	113,104	166,300	220,952	70,897	15,987	359,731	3,547	1,086	651	1,570,008	179.225	-11.8%	1,645,055
2002	622,196	113,127	164,197	219,625	80,551	16,119	366,431	3,593	1,055	784	1,587,678	181.242	1.1%	1,639,425
2003	604,610	113,253	170,005	225,884	58,054	15,873	385,995	3,807	1,094	2,254	1,580,829	180.460	-0.4%	1,635,151
2004	621,386	115,574	167,622	240,192	69,479	15,071	360,292	3,957	1,091	2,390	1,597,054	182.312	1.0%	1,645,733
2005	622,639	114,710	164,043	242,555	53,286	15,724	381,927	4,067	1,066	2,492	1,602,508	182.935	0.3%	1,642,315
2006	632,213	112,705	160,440	236,908	37,456	14,305	353,743	4,084	1,025	2,833	1,555,710	177.592	-2.9%	1,602,479
2007	644,392	115,049	165,186	223,317	49,045	15,849	386,402	4,084	1,025	2,846	1,607,194	183.470	3.3%	1,666,081
2008	666,418	115,616	169,571	224,958	47,760	16,043	391,389	4,218	1,038	2,848	1,639,858	187.198	2.0%	1,703,918
2009	721,719	121,580	175,265	233,410	38,909	16,884	410,386	4,268	1,045	2,875	1,726,341	197.071	5.3%	1,783,319
2010	654,775	113,483	170,868	218,686	55,365	14,446	356,875	4,339	1,068	2,896	1,592,802	181.827	-7.7%	1,657,050
2011	687,953	118,338	175,463	209,669	65,411	14,607	367,393	5,532	1,087	2,909	1,648,362	188.169	3.5%	1,705,880
2012	668,018	119,421	175,999	217,377	70,575	15,165	370,573	4,136	1,084	2,928	1,645,277	187.817	-0.2%	1,699,694
2013	697,887	122,928	177,250	219,315	69,803	15,211	387,408	2,751	1,257	2,964	1,696,774	193.696	3.1%	1,775,927
2014	696,804	124,285	182,044	226,679	71,869	17,209	455,435	2,721	1,297	2,981	1,781,322	203.347	5.0%	1,826,420
2015	693,778	125,309	180,465	226,108	71,869	15,513	443,490	2,716	1,314	2,978	1,763,540	201.317	-1.0%	1,818,011
2016	695,383	125,577	181,189	226,168	70,046	15,497	445,273	2,723	1,318	2,987	1,766,160	201.066	-0.1%	1,820,702
2017	693,757	125,139	180,846	225,080	69,855	15,396	444,625	2,628	1,314	2,978	1,761,617	201.098	0.0%	1,816,020
2018	693,926	125,160	181,344	225,275	69,855	15,339	445,189	2,628	1,314	3,066	1,763,096	201.267	0.1%	1,817,551
2019	694,773	125,213	181,817	225,413	69,855	15,282	445,752	2,628	1,314	3,066	1,765,112	201.497	0.1%	1,819,637
2020	702,990	125,533	182,805	226,991	70,046	15,268	447,542	2,547	1,405	3,074	1,778,202	202.436	0.5%	1,833,166
2021	709,061	125,067	182,281	227,494	69,855	15,163	446,846	2,540	1,402	3,066	1,782,774	203.513	0.5%	1,837,918
2022	716,907	125,177	182,345	230,923	69,855	15,100	447,371	2,540	1,402	3,066	1,794,687	204.873	0.7%	1,850,248
2023	720,436	125,288	182,730	233,622	69,855	15,037	447,897	2,453	1,402	3,066	1,801,785	205.683	0.4%	1,857,594
2024	725,940	125,946	183,822	236,120	70,046	15,015	449,652	2,460	1,405	3,162	1,813,568	206.463	0.4%	1,869,770
AV RATE 2015-2019	-0.06%	0.15%	-0.02%	-0.11%	-0.57%	-2.35%	-0.43%	-0.69%	0.26%	0.56%	-0.18%	-0.18%		-0.07%
AV RATE 2015-2024	0.41%	0.13%	0.10%	0.41%	-0.26%	-1.35%	-0.13%	-1.01%	0.81%	0.59%	0.18%	0.15%		0.23%

MWH SALES - HISTORICAL AND FORECASTED (INCLUDING CONSERVATION)

MEDIUM CASE

FIGURE 3

	RESIDENTIAL MWH SALES	SMALL GEN SERVICE MWH SALES	MEDIUM GEN SERVICE MWH SALES	LARGE GEN SERVICE MWH SALES	LARGE INDUSTRIAL MWH SALES	SMALL IRRIGATION MWH SALES	LARGE IRRIGATION MWH SALES	STREET LIGHTS MWH SALES	SECURITY LIGHTS MWH SALES	UNMETERED ACCOUNTS MWH SALES	TOTAL SALES MWH	TOTAL SALES AMW	ANNUAL CHANGE %	TOTAL WHOLESALE PURCHASES (MWH)
1978	483,284	177,879		240,088			196,119	2,572	2,014		1,101,956	125.794	6.9%	
1979	587,227	213,209		264,387			225,395	2,865	1,985		1,295,068	147.839	17.5%	
1980	576,712	242,957		275,389			202,392	2,994	1,989		1,302,433	148.680	0.6%	
1981	544,530	227,064		295,398			207,086	3,121	1,941		1,279,140	146.021	-1.8%	
1982	577,008	234,710		284,460			216,297	2,807	1,881		1,317,164	150.361	3.0%	
1983	533,309	229,175		268,946		18,000	173,885	2,176	1,508		1,226,998	140.068	-6.8%	
1984	556,082	232,965		277,479		17,928	216,255	1,827	1,209		1,303,745	148.829	6.3%	
1985	598,273	245,722		252,732		19,680	216,960	1,861	1,142		1,336,371	152.554	2.5%	
1986	529,370	246,631		202,993		18,390	210,402	1,868	1,115		1,210,770	138.216	-9.4%	1,259,880
1987	515,415	249,282		210,091		18,934	232,748	1,940	1,057		1,229,468	140.350	1.5%	1,269,750
1988	515,195	257,372		255,267		18,178	228,434	1,974	1,047		1,277,468	145.830	3.9%	1,299,055
1989	527,558	274,505		267,207		17,503	239,477	2,043	1,038		1,329,330	151.750	4.1%	1,378,668
1990	526,795	280,149		264,523		18,955	251,332	2,142	1,041		1,344,937	153.532	1.2%	1,373,201
1991	567,905	297,524		252,275		18,051	244,020	2,286	1,048		1,383,109	157.889	2.8%	1,417,507
1992	545,379	233,836		152,934	110,028	17,244	233,587	2,387	1,069		1,296,465	147.998	-6.3%	1,353,604
1993	618,806	240,245		173,246	79,377	16,080	228,669	2,549	1,054		1,360,027	155.254	4.9%	1,411,949
1994	579,791	247,999		179,934	81,910	17,539	275,296	2,645	1,058		1,386,172	158.239	1.9%	1,448,980
1995	581,264	256,772		179,302	87,168	15,056	248,188	2,828	1,048		1,371,627	156.578	-1.0%	1,408,419
1996	634,055	113,990	164,425	193,835	216,822	16,487	288,386	2,747	1,054		1,631,801	186.279	19.0%	1,726,013
1997	607,521	112,911	157,948	198,919	234,250	15,027	294,766	3,073	1,056		1,625,470	185.556	-0.4%	1,693,442
1998	597,308	112,122	157,127	227,245	228,849	16,353	320,281	3,200	1,080		1,663,565	189.905	2.3%	1,752,960
1999	594,533	110,185	156,838	235,729	219,623	17,179	383,215	3,355	1,090		1,722,387	196.620	3.5%	1,784,799
2000	636,952	115,604	167,304	247,522	220,913	16,917	368,836	3,503	1,068	637	1,779,257	203.112	3.3%	1,845,623
2001	617,752	113,104	166,300	220,952	70,897	15,987	359,731	3,547	1,086	651	1,570,008	179.225	-11.8%	1,645,055
2002	622,196	113,127	164,197	219,625	80,551	16,119	366,431	3,593	1,055	784	1,587,678	181.242	1.1%	1,639,425
2003	604,610	113,253	170,005	225,798	58,054	15,873	385,995	3,807	1,094	2,254	1,580,743	180.450	-0.4%	1,635,151
2004	621,386	115,574	167,622	240,192	69,479	15,071	360,292	3,957	1,091	2,390	1,597,054	182.312	1.0%	1,645,733
2005	622,639	114,710	164,043	242,555	53,286	15,724	381,927	4,067	1,066	2,492	1,602,508	182.935	0.3%	1,642,315
2006	632,213	112,705	160,440	236,908	37,456	14,305	353,743	4,084	1,025	2,833	1,555,710	177.592	-2.9%	1,602,479
2007	644,392	115,049	165,186	223,317	49,045	15,849	386,402	4,084	1,025	2,846	1,607,194	183.470	3.3%	1,666,081
2008	666,418	115,616	169,571	224,958	47,760	16,043	391,389	4,218	1,038	2,848	1,639,858	187.198	2.0%	1,703,918
2009	721,719	121,580	175,265	233,410	38,909	16,884	410,386	4,268	1,045	2,875	1,726,341	197.071	5.3%	1,783,319
2010	654,775	113,483	170,868	218,686	55,365	14,446	356,875	4,339	1,068	2,896	1,592,802	181.827	-7.7%	1,657,050
2011	687,953	118,338	175,463	209,669	65,411	14,607	367,393	5,532	1,087	2,909	1,648,362	188.169	3.5%	1,705,880
2012	668,018	119,421	175,999	217,377	70,575	15,165	370,573	4,136	1,084	2,928	1,645,277	187.817	-0.2%	1,699,694
2013	697,887	122,928	177,250	219,315	69,803	15,211	387,408	2,751	1,257	2,964	1,696,774	193.696	3.1%	1,775,927
2014	696,804	124,285	182,044	226,679	71,869	17,209	455,435	2,721	1,297	2,981	1,781,322	203.347	5.0%	1,826,420
2015	696,857	125,526	180,863	226,359	71,869	15,488	443,735	2,721	1,307	2,960	1,767,685	201.791	-0.77%	1,829,554
2016	701,614	126,017	181,994	226,674	70,046	15,446	445,767	2,698	1,322	2,982	1,774,559	202.022	0.11%	1,836,669
2017	703,116	125,807	182,066	225,843	69,855	15,320	445,371	2,660	1,329	2,987	1,774,353	202.552	0.26%	1,836,456
2018	706,438	126,061	182,987	226,299	69,855	15,236	446,190	2,630	1,341	3,001	1,780,037	203.201	0.32%	1,842,338
2019	710,481	126,353	183,891	226,700	69,855	15,153	447,013	2,600	1,352	3,015	1,786,412	203.928	0.36%	1,848,936
2020	722,008	126,925	185,330	228,554	70,046	15,112	449,073	2,576	1,367	3,037	1,804,029	205.377	0.7%	1,867,170
2021	731,213	126,679	185,215	229,316	69,855	14,976	448,631	2,541	1,375	3,043	1,812,843	206.946	0.8%	1,876,292
2022	742,245	127,013	185,694	233,009	69,855	14,882	449,415	2,512	1,387	3,057	1,829,068	208.798	0.9%	1,893,086
2023	748,959	127,348	186,494	235,973	69,855	14,788	450,199	2,483	1,399	3,072	1,840,567	210.110	0.6%	1,904,986
2024	757,735	128,237	188,011	238,741	70,046	14,734	452,219	2,461	1,414	3,094	1,856,692	211.372	0.6%	1,921,676
AV RATE 2015-2019	0.39%	0.33%	0.20%	0.00%	-0.57%	-2.51%	-0.37%	-0.91%	0.83%	0.22%	0.06%	0.06%		0.25%
AV RATE 2015-2024	0.84%	0.31%	0.32%	0.52%	-0.26%	-1.54%	-0.07%	-1.00%	0.87%	0.37%	0.42%	0.39%		0.51%

MWH SALES - HISTORICAL AND FORECASTED (INCLUDING CONSERVATION)

HIGH CASE

FIGURE 4

	RESIDENTIAL MWH SALES	SMALL GEN SERVICE MWH SALES	MEDIUM GEN SERVICE MWH SALES	LARGE GEN SERVICE MWH SALES	LARGE INDUSTRIAL MWH SALES	SMALL IRRIGATION MWH SALES	LARGE IRRIGATION MWH SALES	STREET LIGHTS MWH SALES	SECURITY LIGHTS MWH SALES	UNMETERED ACCOUNTS MWH SALES	TOTAL SALES MWH	TOTAL SALES AMW	ANNUAL CHANGE %	TOTAL WHOLESALE PURCHASES (MWh)
1978	483,284	177,879		240,088			196,119	2,572	2,014		1,101,956	125.794	6.9%	
1979	587,227	213,209		264,387			225,395	2,865	1,985		1,295,068	147.839	17.5%	
1980	576,712	242,957		275,389			202,392	2,994	1,989		1,302,433	148.680	0.6%	
1981	544,530	227,064		295,398			207,086	3,121	1,941		1,279,140	146.021	-1.8%	
1982	577,008	234,710		284,460			216,297	2,807	1,881		1,317,164	150.361	3.0%	
1983	533,309	229,175		268,946		18,000	173,885	2,176	1,508		1,226,998	140.068	-6.8%	
1984	556,082	232,965		277,479		17,928	216,255	1,827	1,209		1,303,745	148.829	6.3%	
1985	598,273	245,722		252,732		19,680	216,960	1,861	1,142		1,336,371	152.554	2.5%	
1986	529,370	246,631		202,993		18,390	210,402	1,868	1,115		1,210,770	138.216	-9.4%	1,259,880
1987	515,415	249,282		210,091		18,934	232,748	1,940	1,057		1,229,468	140.350	1.5%	1,269,750
1988	515,195	257,372		255,267		18,178	228,434	1,974	1,047		1,277,468	145.830	3.9%	1,299,055
1989	527,558	274,505		267,207		17,503	239,477	2,043	1,038		1,329,330	151.750	4.1%	1,378,668
1990	526,795	280,149		264,523		18,955	251,332	2,142	1,041		1,344,937	153.532	1.2%	1,373,201
1991	567,905	297,524		252,275		18,051	244,020	2,286	1,048		1,383,109	157.889	2.8%	1,417,507
1992	545,379	233,836		152,934	110,028	17,244	233,587	2,387	1,069		1,296,465	147.998	-6.3%	1,353,604
1993	618,806	240,245		173,246	79,377	16,080	228,669	2,549	1,054		1,360,027	155.254	4.9%	1,411,949
1994	579,791	247,999		179,934	81,910	17,539	275,296	2,645	1,058		1,386,172	158.239	1.9%	1,448,980
1995	581,264	256,772		179,302	87,168	15,056	248,188	2,828	1,048		1,371,627	156.578	-1.0%	1,408,419
1996	634,055	113,990	164,425	193,835	216,822	16,487	288,386	2,747	1,054		1,631,801	186.279	19.0%	1,726,013
1997	607,521	112,911	157,948	198,919	234,250	15,027	294,766	3,073	1,056		1,625,470	185.556	-0.4%	1,693,442
1998	597,308	112,122	157,127	227,245	228,849	16,353	320,281	3,200	1,080		1,663,565	189.905	2.3%	1,752,960
1999	594,533	110,185	156,838	235,729	219,623	17,179	383,215	3,355	1,090		1,722,387	196.620	3.5%	1,784,799
2000	636,952	115,604	167,304	247,522	220,913	16,917	368,836	3,503	1,068	637	1,779,257	203.112	3.3%	1,845,623
2001	617,752	113,104	166,300	220,952	70,897	15,987	359,731	3,547	1,086	651	1,570,008	179.225	-11.8%	1,645,055
2002	622,196	113,127	164,197	219,625	80,551	16,119	366,431	3,593	1,055	784	1,587,678	181.242	1.1%	1,639,425
2003	604,610	113,253	170,005	225,884	58,054	15,873	385,995	3,807	1,094	2,254	1,580,829	180.460	-0.4%	1,635,151
2004	621,386	115,574	167,622	240,192	69,479	15,071	360,292	3,957	1,091	2,390	1,597,054	182.312	1.0%	1,645,733
2005	622,639	114,710	164,043	242,555	53,286	15,724	381,927	4,067	1,066	2,492	1,602,508	182.935	0.3%	1,642,315
2006	632,213	112,705	160,440	236,908	37,456	14,305	353,743	4,084	1,025	2,833	1,555,710	177.592	-2.9%	1,602,479
2007	644,392	115,049	165,186	223,317	49,045	15,849	386,402	4,084	1,025	2,846	1,607,194	183.470	3.3%	1,666,081
2008	666,418	115,616	169,571	224,958	47,760	16,043	391,389	4,218	1,038	2,848	1,639,858	187.198	2.0%	1,703,918
2009	721,719	121,580	175,265	233,410	38,909	16,884	410,386	4,268	1,045	2,875	1,726,341	197.071	5.3%	1,783,319
2010	654,775	113,483	170,868	218,686	55,365	14,446	356,875	4,339	1,068	2,896	1,592,802	181.827	-7.7%	1,657,050
2011	687,953	118,338	175,463	209,669	65,411	14,607	367,393	5,532	1,087	2,909	1,648,362	188.169	3.5%	1,705,880
2012	668,018	119,421	175,999	217,377	70,575	15,165	370,573	4,136	1,084	2,928	1,645,277	187.817	-0.2%	1,699,694
2013	697,887	122,928	177,250	219,315	69,803	15,211	387,408	2,751	1,257	2,964	1,696,774	193.696	3.1%	1,775,927
2014	696,804	124,285	182,044	226,679	71,869	17,209	455,435	2,721	1,297	2,981	1,781,322	203.347	5.0%	1,826,420
2015	699,936	125,743	181,260	226,610	71,869	15,463	443,980	2,721	1,307	2,960	1,771,850	202.266	-0.5%	1,826,612
2016	707,874	126,459	182,804	227,183	70,046	15,395	446,265	2,698	1,322	2,982	1,783,027	202.986	0.4%	1,838,159
2017	712,564	126,483	183,299	226,614	69,855	15,242	446,125	2,660	1,329	2,987	1,787,158	204.013	0.5%	1,842,455
2018	719,127	126,977	184,655	227,339	69,855	15,131	447,208	2,630	1,341	3,001	1,797,264	205.167	0.6%	1,852,915
2019	726,485	127,517	186,007	228,017	69,855	15,020	448,302	2,600	1,352	3,015	1,808,169	206.412	0.6%	1,864,201
2020	741,469	128,353	187,922	230,160	70,046	14,951	450,647	2,576	1,367	3,037	1,830,528	208.393	1.0%	1,887,324
2021	754,030	128,344	188,246	231,203	69,855	14,782	450,480	2,541	1,375	3,043	1,843,898	210.491	1.0%	1,901,181
2022	768,470	128,920	189,172	235,182	69,855	14,654	451,543	2,512	1,387	3,057	1,864,751	212.871	1.1%	1,922,764
2023	778,593	129,495	190,419	238,430	69,855	14,525	452,607	2,483	1,399	3,072	1,880,878	214.712	0.9%	1,939,455
2024	790,868	130,633	192,396	241,492	70,046	14,437	454,914	2,461	1,414	3,094	1,901,755	216.502	0.8%	1,961,043
AV RATE 2015-2019	0.84%	0.51%	0.43%	0.12%	-0.57%	-2.68%	-0.32%	-0.91%	0.83%	0.22%	0.30%	0.30%		0.41%
AV RATE 2015-2024	1.27%	0.50%	0.55%	0.64%	-0.26%	-1.74%	-0.01%	-1.00%	0.87%	0.37%	0.66%	0.63%		0.71%

USE PER CUSTOMERS IN KWH - HISTORICAL AND FORECASTED INCLUDING CONSERVATION

MEDIUM CASE

Figure 5

	RESIDENTIAL USE PER CUSTOMER	SMALL GEN USE PER CUSTOMER	MEDIUM GEN USE PER CUSTOMER	LARGE GEN USE PER CUSTOMER	LARGE IND USE PER CUSTOMER	SMALL IRR USE PER CUSTOMER	LARGE IRR USE PER CUSTOMER	STREET LIGHT USE PER CUSTOMER	SECURITY USE PER CUSTOMER	UNMETERED USE PER ACCOUNT	OVERALL USE PER CUSTOMER
1978	22,336	86,223						321,545	1,520		44,020
1979	23,285	93,759						318,341	1,501		44,930
1980	22,141	98,204						332,686	1,510		43,637
1981	20,229	88,112						346,819	1,484		41,514
1982	21,383	89,074						311,930	1,451		42,592
1983	19,613	86,027						167,363	1,219		39,447
1984	20,576	85,586				23,968	5,545,000	203,052	1,003		41,064
1985	22,140	88,708				26,416	5,424,011	206,805	951		42,041
1986	19,373	87,957				24,262	5,131,762	207,530	937		37,688
1987	18,957	88,273				24,945	5,676,782	242,501	890		38,410
1988	19,144	89,303				24,631	5,571,552	329,070	873		40,200
1989	19,563	90,626				24,075	5,986,918	340,512	841		41,538
1990	19,205	89,878				25,966	6,130,056	357,015	825		41,273
1991	20,308	92,947				24,761	5,951,718	381,051	799		41,594
1992	18,968	71,972				23,851	5,561,586	477,479	801		38,013
1993	20,831	71,289			39,688,450	22,302	5,317,895	424,914	777		38,633
1994	18,868	71,223		2,499,086	81,910,000	24,125	5,857,358	440,841	768		38,040
1995	18,311	67,893		2,456,193	87,168,300	21,633	4,682,798	471,348	749		36,331
1996	19,499	29,265	1,358,884	2,584,468	108,411,121	26,765	5,243,384	457,773	735		42,143
1997	18,427	30,741	315,897	2,688,090	117,124,800	22,596	5,082,165	512,175	722		41,246
1998	17,887	30,685	298,153	2,612,012	76,282,867	24,852	4,852,749	533,367	724		41,708
1999	17,480	29,250	274,673	2,430,201	73,207,570	26,388	5,178,586	479,271	714		42,234
2000	18,207	29,934	284,530	2,426,689	73,637,600	26,269	4,610,455	500,431	699	6,569	42,468
2001	17,724	28,787	248,952	1,545,119	23,632,237	23,933	2,587,995	506,783	525	59,191	36,949
2002	17,644	28,517	265,262	2,014,909	26,850,190	25,069	3,777,644	399,277	752	2,284	37,397
2003	16,764	27,690	274,201	1,998,214	19,351,268	24,725	4,020,780	422,990	744	6,421	36,373
2004	16,878	27,822	264,389	1,968,784	23,159,528	24,037	3,753,041	439,687	753	6,788	36,082
2005	16,721	27,788	261,631	1,971,996	17,761,932	25,403	3,978,407	508,368	743	7,059	35,908
2006	16,724	26,632	250,296	1,865,415	12,485,305	23,762	3,502,406	453,740	716	8,003	34,341
2007	16,831	26,607	248,399	1,704,706	16,348,383	26,024	3,512,746	453,740	712	8,041	34,992
2008	17,046	26,010	248,274	1,704,225	15,920,098	26,086	3,156,362	468,669	719	8,046	34,963
2009	18,304	27,114	247,899	1,728,966	12,969,692	27,678	3,085,607	474,203	715	8,099	36,476
2010	16,380	25,062	235,680	1,619,899	18,454,887	24,320	2,745,195	482,159	723	7,999	33,227
2011	17,015	25,861	234,891	1,487,012	21,803,603	25,491	2,587,273	614,671	734	8,288	34,018
2012	16,311	25,671	237,195	1,520,121	23,525,055	27,324	2,273,457	459,597	731	8,270	33,537
2013	16,792	26,105	236,333	1,502,161	23,267,593	27,018	1,777,101	305,647	838	8,301	34,061
2014	16,724	25,741	239,681	1,504,273	23,657,100	25,352	1,749,526	308,703	840	8,301	33,775
2015	16,480	26,054	235,422	1,455,872	23,956,495	27,649	1,941,947	302,280	871	8,268	34,740
2016	16,389	25,806	232,432	1,432,478	23,348,689	27,834	1,891,517	299,764	877	8,327	34,456
2017	16,225	25,421	228,224	1,402,786	23,284,895	27,866	1,832,174	295,585	878	8,320	34,043
2018	16,107	25,139	225,191	1,382,084	23,284,895	27,986	1,782,383	292,242	881	8,358	33,751
2019	16,005	24,870	222,224	1,361,730	23,284,895	28,104	1,735,410	288,884	885	8,377	33,476
2020	16,077	24,667	220,042	1,351,462	23,348,689	28,321	1,696,217	286,272	891	8,435	33,423
2021	16,101	24,322	216,267	1,335,184	23,284,895	28,360	1,650,895	282,280	893	8,437	33,221
2022	16,165	24,095	213,298	1,337,286	23,284,895	28,478	1,612,250	279,071	896	8,469	33,159
2023	16,134	23,874	210,767	1,334,422	23,284,895	28,598	1,575,499	275,861	900	8,495	33,012
2024	16,148	23,761	209,115	1,331,052	23,348,689	28,805	1,544,726	273,399	906	8,548	32,951
AV RATE 2015-2019	-0.87%	-0.69%	-1.50%	-1.97%	-0.32%	2.08%	-0.16%	-1.32%	1.04%	0.18%	-0.18%
AV RATE 2015-2024	-0.35%	-0.80%	-1.35%	-1.22%	-0.13%	1.28%	-1.24%	-1.21%	0.76%	0.29%	-0.25%

**MWH SALES - WEATHER NORMALIZED HISTORICAL ACTUALS AND FORECASTED (INCLUDING CONSERVATION)
MEDIUM CASE**

FIGURE 6

	RESIDENTIAL MWH SALES	SMALL GEN SERVICE MWH SALES	MEDIUM GEN SERVICE MWH SALES	LARGE GEN SERVICE MWH SALES	LARGE INDUSTRIAL MWH SALES	SMALL IRRIGATION MWH SALES	LARGE IRRIGATION MWH SALES	STREET LIGHTS MWH SALES	SECURITY LIGHTS MWH SALES	UNMETERED ACCOUNTS MWH SALES	TOTAL SALES MWH	TOTAL SALES AMW	ANNUAL CHANGE %
2000	593,396	111,106	161,820	225,807	220,913	16,021	367,127	3,503	1,068	637	1,701,398	193.693	
2001	616,795	113,296	164,418	223,271	70,897	15,961	369,125	3,547	1,086	651	1,579,046	180.256	-6.9%
2002	621,816	115,244	167,140	221,701	80,551	15,804	369,157	3,593	1,055	784	1,596,845	182.288	1.1%
2003	623,134	114,690	166,562	232,165	58,054	16,685	385,624	3,807	1,094	2,254	1,604,067	183.113	0.5%
2004	637,653	114,228	166,424	232,308	69,479	15,348	366,460	3,957	1,091	2,390	1,609,337	183.212	0.1%
2005	632,072	116,023	169,165	226,985	53,286	15,659	371,090	4,067	1,066	2,492	1,591,905	181.724	-0.8%
2006	645,659	113,605	165,808	233,133	37,456	15,022	361,780	4,084	1,025	2,833	1,580,405	180.412	-0.7%
2007	658,705	116,261	169,937	227,844	49,045	16,047	380,802	4,151	1,028	2,846	1,626,668	185.693	2.9%
2008	665,128	117,442	171,182	223,375	47,760	16,018	379,966	4,218	1,036	2,848	1,628,972	185.448	-0.1%
2009	707,664	120,798	173,453	238,140	38,909	16,761	401,936	4,268	1,045	2,875	1,705,850	194.732	5.0%
2010	668,337	115,384	170,177	222,450	55,365	14,635	362,693	4,339	1,068	2,896	1,617,345	184.628	-5.2%
2011	668,206	117,188	172,695	219,290	65,411	14,660	359,852	5,532	1,087	2,909	1,626,831	185.711	0.6%
2012	677,847	117,929	174,013	218,161	70,575	14,385	362,908	4,136	1,084	2,928	1,643,967	187.155	0.8%
2013	689,097	121,945	178,101	220,644	69,803	15,480	419,411	2,751	1,257	2,964	1,721,453	196.513	5.0%
2014	693,201	123,790	180,746	219,960	71,869	16,716	447,465	2,721	1,297	2,981	1,760,743	200.998	2.3%
2015	696,857	125,526	180,863	219,351	71,869	15,488	443,735	2,721	1,307	2,960	1,767,685	201.791	0.39%
2016	701,614	126,017	181,994	219,647	70,046	15,446	445,767	2,698	1,322	2,982	1,774,559	202.022	0.39%
2017	703,116	125,807	182,066	218,835	69,855	15,320	445,371	2,660	1,329	2,987	1,774,353	202.552	-0.01%
2018	706,438	126,061	182,987	219,291	69,855	15,236	446,190	2,630	1,341	3,001	1,780,037	203.201	0.32%
2019	710,481	126,353	183,891	219,692	69,855	15,153	447,013	2,600	1,352	3,015	1,786,412	203.928	0.36%
2020	722,008	126,925	185,330	221,527	70,046	15,112	449,073	2,576	1,367	3,037	1,804,029	205.377	0.99%
2021	731,213	126,679	185,215	222,308	69,855	14,976	448,631	2,541	1,375	3,043	1,812,843	206.946	0.49%
2022	742,245	127,013	185,694	226,001	69,855	14,882	449,415	2,512	1,387	3,057	1,829,068	208.798	0.90%
2023	748,959	127,348	186,494	228,965	69,855	14,788	450,199	2,483	1,399	3,072	1,840,567	210.110	0.63%
2024	757,735	128,237	188,011	231,714	70,046	14,734	452,219	2,461	1,414	3,094	1,856,692	211.372	0.88%
AV RATE 2015-2019	0.49%	0.41%	0.35%	-0.02%	-0.57%	-1.94%	-0.02%	-0.90%	0.84%	0.23%	0.29%	0.29%	
AV RATE 2015-2024	0.89%	0.35%	0.39%	0.52%	-0.26%	-1.25%	0.11%	-1.00%	0.87%	0.38%	0.53%	0.50%	

CAPITAL REQUIREMENTS PLAN

TAB 9

Capital Requirements Plan - Combined Summary - 2016 Budget

12/8/2015

Capital Category	Year (amounts in constant year dollars)					
	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Transmission (Table 1)	\$ 285,424	\$ 310,000	\$ 2,282,193	\$ 2,220,690	\$ 3,466,210	\$ 55,000
Distribution (Table 2)	8,784,233	8,587,701	8,283,012	9,987,891	8,632,564	9,331,602
Broadband (Table 3)	1,596,604	973,000	924,936	610,000	410,000	410,000
General Plant (Table 4)	447,900	447,900	290,982	1,361,000	690,000	825,000
Information Technology (Table 5)	2,055,557	998,021	2,300,970	1,016,506	1,000,000	1,000,000
Capitalized Allocations	1,312,101	1,312,101	1,300,798	1,326,814	1,353,351	1,380,418
Capitalized Interest	171,360	171,360	182,746	165,229	155,521	130,020
Gross Capital	14,653,179	12,800,083	15,565,638	16,688,130	15,707,646	13,132,039
Capital Contributions (Table 6)	(2,116,201)	(2,042,798)	(1,285,098)	(1,040,223)	(1,045,375)	(1,050,551)
Net Capital	\$ 12,536,978	\$10,757,285	\$14,280,540	\$15,647,906	\$14,662,271	\$ 12,081,488

**Capital Requirements Plan
Transmission (Table 1)**

12/8/2015

Project Description	Project	Comments	Accounting Codes		Year (amounts in constant year dollars)					
			Dept	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
BPA Interconnection - Cottonwood	121357	Joint w/ COR near Reata & Leslie Rd.	21	353		-	300,000			
BPA Interconnection - Southridge	121359	At BPA Franklin-Badger tower 12/3	21	353			-	600,000		
Franklin to Angus Tower Evaluation/Upgrade	123848	CIAC - Contract #95-23-01 with BPA (421.44)	21	354		90,000	175,000			
Transmission Line - Red Mountain to Reata	124479	Reata tie - w/City of Richland - 6 mi.	21	355			120,000	1,200,000		
Transmission Line - Mabton to Riverfront		Prosser tie - split 50/50 w/Benton REA - 10.2 mi.	21	355				120,000	1,200,000	-
Transmission Line - Sunheaven#2 to Prior #4	124255	River System (TRIP-A) - 8.5 mi., 397.5 ACSR	21	355	148,750	165,000	1,633,250			
Transmission Line - Phillips to Spaw	121360	River System (TRIP-E,F) - 15.8 mi., 397.5 ACSR	21	355				245,690	2,211,210	
Switch Upgrade/Additions		\$20k per switch	21	356	80,000	40,000	40,000	40,000	40,000	40,000
Poles & Fixtures, Misc repairs		Replace Poles/Davit Arms	21	355	50,000	15,000	13,943	15,000	15,000	15,000
Overhead Conductor & Devices			21	356	6,674	-				
Transmission (Table 1)					\$ 285,424	\$ 310,000	\$ 2,282,193	\$ 2,220,690	\$ 3,466,210	\$ 55,000

**Capital Requirements Plan
Distribution (Table 2)**

12/8/2015

Project Description	Project	Comments	Accounting Codes		Year (amounts in constant year dollars)					
			Dept	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
SUBSTATIONS	Tnode	Plan of Service - Substation Projects								
Cap Bank - 2,400 kVAR - Carma	S01-119133		21	362	180,000		180,000			
Cap Bank - 900 kVAR - Whitcomb	S01		21	362	85,000		85,000			
Cap Bank - 1,800 kVAR - Irrigro	S01		21	362	150,000			150,000		
Cap Bank - 2,400 kVAR Prior #3	S01	Only needed if operating BC187 as normal open	21	362					180,000	
Cap Bank - 2,400 kVAR Prior #2	S01	Only needed if operating BC187 as normal open	21	362					180,000	
Cap Bank - 2,400 kVAR Prior #1	S01	Only needed if operating BC187 as normal open	21	362						180,000
Power Quality Metering - Existing Cap Subs	124005	H2F#1, Berrian, Spaw	21	362		25,000				
Power Quality Metering - Future Cap Subs	tbd	Carma, Whitcomb, Irrigro	21	362			25,000			
Power Xfmr - Prior #1	S02-120597	Install DN 62 (new River Spare), remove DN 13	21	362	59,000	40,574				
Power Xfmr - Hedges Oil Processing	122612	Install DN 43 at Hedges after oil processing	21	362		29,603				
Power Xfmr - Prior #4 Failure	122476	Remove DN 21 (failed), install DN 13	21	362		91,890				
Power Xfmr - Prior #4 Replacement Unit	tbd	Install new unit, remove DN 13 (scrapping DN 21)	21	362		400,000				
Power Xfmr LTC Retrofit - Ely Bay #1 UTT-B	S03-121842		21	362	335,000	321,284				
Power Xfmr LTC Retrofit - Riverfront TLH-21	S03		21	362				300,000		
Diff. Relay for Circuit Switcher - Kennewick #3	S06-121892	Improve sub xfmr protection	21	362	75,000	75,000				
Diff. Relay for Circuit Switcher - Angus #3	S06-124284	Improve sub xfmr protection	21	362	75,000	75,000				
Diff. Relay for Circuit Switcher - Highlands #3	S06	Improve sub xfmr protection	21	362			75,000			
Circuit Switcher Addition - Kennewick #1	S05-121863	Improve sub xfmr protection	21	362	275,000	189,937				
Circuit Switcher Addition - Highlands #1 & #2	S05	Improve sub xfmr protection	21	362				400,000		
Circuit Switcher Addition - Prosser #1 & #2	S05	Improve sub xfmr protection	21	362					400,000	
Benton City Substation Upgrade	S13	Ckt Swr, Pwr Xfmr w/LTC, Relays	21	362					1,300,000	
Hedges Substation Upgrade	S31	Ckt Swr, Pwr Xfmr w/LTC, Relays	21	362						1,100,000
Breaker Replacement - Chevron	S28-122019	Replace oil breaker w/ unit from Kenn #1	21	362	25,000		35,000			
Feeder Position Addition - Phillips P8R	S30	Bus and switches in 2015, recloser in 2016	21	362	50,000	25,000	25,000			
Breaker Retrofit - Ely #2	S28-123817	Air-breaker retrofit (E5-E8)	21	362	125,000	100,000				
Metalclad/Breaker/Relay Replacement - Highlands #3	S28	Air-breaker & metal-clad replacement (H7-H9)	21	362				300,000		
Breaker Retrofit & Relay Upgrade - Gum Street	S28	Air-breaker retrofit & relay upgrade (G1-G4)	21	362					125,000	
Breaker Retrofit & Relay Upgrade - Vista #2	S28	Air-breaker retrofit (V5 & V8) & relay upgrade (V5-V8)	21	362					125,000	
Breaker Replacement & Relay Upgrade - Angus #1, #2, #3	S28	Breaker replacement with reclosers (A1-A9)	21	362						250,000
Transformer Relay Upgrade - Mobile	tbd	Replace TPU and DPU relays	21	362		15,000				
Feeder Relay Upgrade - Ely #1	tbd	Replace electro-mechanical relays (E1-E4)	21	362			25,000			
Feeder Relay Upgrade - Ely #2	tbd	Replace electro-mechanical relays (E5-E8)	21	362			25,000			
Feeder Relay Upgrade - Vista #1	tbd	Replace electro-mechanical relays (V1-V4)	21	362				25,000		
Feeder Relay Upgrade - Riverfront	tbd	Replace electro-mechanical relays (RF1-RF4)	21	362				25,000		
Feeder Relay Upgrade - Orchard View	tbd	Replace DPU relays (O1-O4)	21	362					25,000	
Feeder Relay Upgrade - Hedges	tbd	Replace Form 4C controls (H1-H4)	21	362						25,000
Feeder Relay Upgrade - Cold Creek	tbd	Replace Form 4C control (C1)	21	362		10,000				-
Control House Addition & Batteries - Ely	S09-123819		21	362	115,000	135,000				
Control House Addition & Batteries - Gum Street	S09-n/a		21	362				135,000		
Battery Replacement - Vista	123851		21	362		10,000				
Battery Replacement - Nine Canyon	123818		21	362			50,000			
Substation Misc. Aux. Equip., Relays/Controls	S10		21	362	25,000	25,000	25,000	25,000	25,000	25,000

**Capital Requirements Plan
Distribution (Table 2)**

12/8/2015

Project Description	Project	Comments	Accounting Codes		Year (amounts in constant year dollars)					
			Dept	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Vista Substation - Center Parkway Improvements	n/a	Add brick wall fence for Center Pkwy project	21	362			250,000			
New Substation - Cottonwood	S27	Joint w/City of Richland, near Leslie & Reata	21	362			-	2,000,000		
New Substation - Southridge			21	362						2,000,000
Project Subtotal					1,574,000	1,568,288	800,000	3,360,000	2,360,000	3,580,000
SCADA	TNode	Supervisory Control & Data Acquisition								
Ethernet radio upgrade (All Subs)			21	380	25,000	169,000				
Distribution recloser SCADA comm.		SCADA System (total of 22 @ \$4k ea)	21	380	64,000		64,000			
Distribution regulators SCADA comm.		SCADA System (total of 120 @ \$4k ea)	21	380	228,000		228,000			
Distribution capacitor bank SCADA comm. & control		SCADA System (total of 100 @ \$7k ea)	21	380	140,000			140,000		
Substation RTU and communications upgrades			21	380	50,000	50,000	50,000	50,000	50,000	50,000
SCADA Enhancements for Voltage Optimization			21	380	135,000	27,000				
Distribution Automation for Voltage Optimization		Future substation TBD	21	380					50,000	
ICCP Data Exchange w/BPA		Survallent SCADA software module & BPA labor	21	380				-	200,000	
Project Subtotal					642,000	246,000	342,000	190,000	300,000	50,000
DIST_5_YR_PLAN	TNode	Plan of Service - Distribution Projects								
ORV-3, recon. 3/0 at 5 corners	26-118872	West Kennewick - Badger Canyon	21	Alloc. Below		119,184				
RTA-1, new OH circuits over I-82	52-116394	West Kennewick - Badger Canyon	21	Alloc. Below		300,000				
SSR-3, recon. #4, Badger Rd. to L767A	57-118866	Benton City	21	Alloc. Below		419,831				
RVF-3, recon. North River Rd.	35-114353	Prosser	21	Alloc. Below	238,000	252,874				
RTA-2, recon. #4, Badger Rd. L767A to L25A	59-118867	West Kennewick - Badger Canyon	21	Alloc. Below	221,000	133,918	133,918			
RTA-2, recon. #4, Badger Rd. L25A to L70R	60-118868	West Kennewick - Badger Canyon	21	Alloc. Below	142,000	-	295,245			
RTA-4, Upgrade L747V from 250kVA to 333kVA	71-121121	West Kennewick - Badger Canyon	21	Alloc. Below	80,000	80,000				
RTA-4, New Switch Manzanita Ct & Bermuda	73-121122	West Kennewick - Badger Canyon	21	Alloc. Below	22,000	22,000				
SSR-1, Sunset Rd. feeder to north	55-121123	Benton City	21	Alloc. Below	120,000	30,000	180,299			
SSR-3, relocate and recon. OH line	36-121124	Benton City	21	Alloc. Below	260,000	-	-	260,000		
GUM-1, GUM-4, recon. 3/0, E. 19th Ave.	09-121125	East Kennewick	21	Alloc. Below	130,000	-	130,000			
HED-2, New Switch Haney Rd. N/O Gamefarm Rd.	76-121127	East Kennewick - completed in 2014	21	Alloc. Below	12,000	-				
HED-1, New Switch between Lechelt Rd. & L792A	77-121129	East Kennewick - completed in 2014	21	Alloc. Below	12,000	-				
HED-2, Upgrade L393V from 167kVA to 250kVA	78-121130	East Kennewick	21	Alloc. Below	80,000	80,000				
BEC-1, New Switch Babs Ave. E/O 2nd St	74-121131	Benton City	21	Alloc. Below	12,000	12,000				
PRO-4, New 167 kVA Regulator on OIE E/O Heinzerling Rd.	75-121134	Prosser	21	Alloc. Below	75,000	75,000				
PRO-4, Reliability and Sectionalizing	82	Prosser	21	Alloc. Below	45,000	45,000				
VIS-1 to VIS-6, UG tie across W. Quinault Ave.	38-107840	West Kennewick	21	Alloc. Below			-	100,000		
RTA-1, Upgrade L685V from 167kVA to 250kVA	70	West Kennewick - Badger Canyon	21	Alloc. Below			-	75,000		
RTA-2, Recon. Badger Rd. Between L766A & L80R	79	West Kennewick - Badger Canyon	21	Alloc. Below			-	125,000		
RTA-2, Recon. Badger Rd. Between L80R & L50A	80	West Kennewick - Badger Canyon	21	Alloc. Below			-	200,000		
RTA-3, New Switch on Cottonwood Drive S/O Hailey Dr.	72	West Kennewick - Badger Canyon	21	Alloc. Below			12,000			
RTA-1, extend OH from Reata Rd. south	31	West Kennewick - Badger Canyon	21	Alloc. Below			46,000			
RTA-3, extend UG west along Sagebrush Rd.	32	West Kennewick - Badger Canyon	21	Alloc. Below			205,000			
ZEH-4, new OH tie to GUM-4 at Game Farm Rd.	41	East Kennewick	21	Alloc. Below			-	106,000		
PHI-8, new feeder north to Cochrane	81	East Kennewick	21	Alloc. Below			-	210,000		
GUM-4, recon. #4, Game Farm Rd.	13	East Kennewick	21	Alloc. Below			-	200,000		
GUM-4, recon. #4, S. Oak St.	12	East Kennewick	21	Alloc. Below			-	135,000		

Capital Requirements Plan
Distribution (Table 2)

12/8/2015

Project Description	Project	Comments	Accounting Codes		Year (amounts in constant year dollars)					
			Dept	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
GUM-4, dbl. cir. on 36th, recon. 3/0 on Oak St.	10	East Kennewick	21	Alloc. Below				-	144,000	
GUM-4, HED-3, recon. 3/0, Bowles Rd.	11	East Kennewick	21	Alloc. Below				-	261,000	
GUM-4, new OH tie HED-3, Game Farm to Terrill	14	East Kennewick	21	Alloc. Below				-	91,000	
BEC-3, new feeder to east to tie with SSR-1	58	Benton City	21	Alloc. Below				-	170,000	
HED-3, recon. #4, Terril Rd.	19	East Kennewick	21	Alloc. Below				-	156,000	
KEN-8, convert OH to UG across fairgrounds	22	East Kennewick	21	Alloc. Below				-	160,000	
ZEH-1, new OH line and UG tie with E7	39	West Kennewick	21	Alloc. Below				-		134,000
HED-4, recon. #6, Bernath Rd.	21	East Kennewick	21	Alloc. Below						216,000
HED-4, recon. 3/0, Perkins Rd.	20	East Kennewick	21	Alloc. Below						380,000
ZEH-3, recon. 1/0 to serve GUM-3	54	East Kennewick	21	Alloc. Below						80,000
ELY-8, recon. 3/0, near Ely St.	56	East Kennewick	21	Alloc. Below						36,000
HIG-4, recon. 3/0, W. 10th Ave.	15	West Kennewick	21	Alloc. Below						85,000
Voltage Optimization - Kennewick	83-118112	Distribution efficiency project for conservation	21	Alloc. Below	324,000	-	465,440			
Voltage Optimization - Future	83	Distribution efficiency project for conservation	21	Alloc. Below					450,000	
System Improvements - Planning Criteria	00		21	Alloc. Below					-	200,000
Project Subtotal					1,773,000	1,569,807	1,467,902	1,411,000	1,432,000	1,131,000
CUSTOMER GROWTH										
NO_PROJECT_TREE	No TNode	Services (Set Xfmr and Run Secondary)	21	Alloc. Below	1,404,000	1,755,000	1,540,000	1,545,000	1,542,500	1,555,000
DIST_BSE_GROWTH	TNode	Distribution Line Extension	21	Alloc. Below	1,090,800	1,400,000	1,414,000	1,428,140	1,442,421	1,456,846
DIST_IRR_FACLT	TNode	Distribution Irrigation Facilities	21	Alloc. Below	80,000	160,000	80,000	80,000	80,000	80,000
SERVICE_POLES	TNode	Service Poles	21	Alloc. Below	20,000	20,000	20,000	20,000	20,000	20,000
CUST_LIGHTING	TNode	Customer Lighting	21	372	11,000					
DIST_SYS_IMPROV	TNode	Unanticipated System Improvements	21	Alloc. Below	205,030	205,030	207,080	209,151	211,243	213,355
Line Voltage Regulators/Reclosers			21	Alloc. Below	100,000	100,000	100,000	100,000	100,000	100,001
Project Subtotal					2,910,830	3,640,030	3,361,080	3,382,291	3,396,164	3,425,202
REPAIR & REPLACEMENT - OTHER										
DIST_OTH_MAINT	TNode	Distribution Other Maintenance	21	Alloc. Below	265,000	200,000	265,000	265,000	265,000	265,000
DIST_POLE_REINF	TNode	Distribution Pole Reinforcement	21	Alloc. Below	-	-	-	-	-	-
DIST_POLE_REPLC	TNode	Distribution Pole Replacement	21	Alloc. Below	40,000	40,000	40,000	40,000	40,000	40,000
TROUBLE_ORDERS	TNode	Trouble Orders	21	Alloc. Below	190,000	100,000	190,000	190,000	190,000	190,000
NESC_COMPLIANCE	TNode	NESC Compliance Corrections (excluding joint use)	n/a	Alloc. Below			15,000	15,000	15,000	15,000
JU_CORRECTIONS	TNode	NESC Compliance Corrections - joint use only	n/a	Alloc. Below			150,000	150,000	150,000	150,000
Project Subtotal					495,000	340,000	660,000	660,000	660,000	660,000
REPAIR & REPLACEMENT - CABLE										
DIST_CBL_INJECT	TNode	Underground Distribution Cable Injection	21	Alloc. Below	400,000	400,000	500,000	350,000	-	-
DIST_CBL_REPLACE	TNode	Underground Distribution Cable Replacement	21	Alloc. Below	667,000	350,000	500,000	500,000	350,000	350,000
Project Subtotal					1,067,000	750,000	1,000,000	850,000	350,000	350,000

Capital Requirements Plan
Distribution (Table 2)

12/8/2015

Project Description	Project	Comments	Accounting Codes		Year (amounts in constant year dollars)					
			Dept	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
DISTRIBUTION PLANT - TOTAL FROM ABOVE										
Agrium (Chevron & Phillips) property acquisition		Land & Land Rights	21	360.00						
Cottonwood and Southridge Substation sites		Land & Land Rights	n/a	360.00	120,000	300,000				
		Structures & Improvements	n/a	361.00						
SUBSTATIONS		Station Equipment	n/a	362.00	1,574,000	1,568,288	800,000	3,360,000	2,360,000	3,580,000
ALLOCATIONS FROM ABOVE:		Poles, Towers & Fixtures	n/a	364.00	735,591	701,372	784,756	774,455	768,994	723,302
CUSTOMER GROWTH		O.H. Cond. & Dev.	n/a	365.00	491,385	450,266	474,055	462,949	462,145	408,836
REPAIR & REPLACEMENT - OTHER		Underground Conduit	n/a	366.00	1,268,571	1,214,274	1,269,448	1,196,449	977,168	933,944
REPAIR & REPLACEMENT - CABLE		U.G. Cond. & Dev.	n/a	367.00	1,921,613	1,846,744	1,923,472	1,833,391	1,588,720	1,496,504
DIST_5_YR_PLAN		Line Transformers	n/a	368.10	1,034,324	1,111,475	1,122,291	1,116,141	1,117,414	1,075,352
		Services - Overhead	n/a	369.10	47,873	51,049	54,150	54,078	54,322	53,107
		Services - Underground	n/a	369.20	746,473	924,657	860,810	865,828	869,401	875,155
METERS		Meters	n/a	370.00	140,400	140,400	123,200	123,600	123,400	124,400
CUST_LIGHTING		Security Lighting (Installations on Cust. Premise)	n/a	372.00	11,000	11,000	11,000	11,000	11,000	11,000
STREET_LIGHTING		Street Lighting	n/a	373.00	-	-	-	-	-	-
SCADA (Project Subtotal from above)		SCADA System	n/a	380.00	642,000	246,000	342,000	190,000	300,000	50,000
Project Subtotal					8,733,230	8,565,525	7,765,182	9,987,891	8,632,564	9,331,602
COST COLLECTION										
AMI - New TGB on Badger Mountain			21	397.00	150,000					
PNW Smart Grid Demo	22598	Reimbursed 50% by Battelle	21	397.90	7,176	7,176				
Project Subtotal					157,176	7,176	-	-	-	-
PROFESSIONAL SERVICES										
Contract Engineering Work - Capital					75,000	15,000	-	-	-	-
Internal costs - indirect capital		Overheads, labor, misc supplies			(181,173)	-	517,830			
Project Subtotal					(106,173)	15,000	517,830	-	-	-
Distribution (Table 2)					\$ 8,784,233	\$ 8,587,701	\$ 8,283,012	\$ 9,987,891	\$ 8,632,564	\$ 9,331,602

New Customer Growth: All Classes Medium Case
2015 Load Forecast - Resolution No. 2317, May 26, 2015

702 702 616 618 617 622

**Capital Requirements Plan
Broadband (Table 3)**

12/8/2015

Project Description	Project Mgr.	Comments	Accounting Codes			Year (amounts in constant year dollars)					
			Dept	Resource	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Fiber Backbone	Nall	Future Backbone Upgrades	46	12 & 20	397.30	\$ 75,000	75,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
		Sunheaven to Prosser Loop Cost Share						100,000			
		Southridge Development						100,000			
Project Subtotal						75,000	75,000	225,000	25,000	25,000	25,000
Fiber Laterals	Nall	Strategic Lateral Extensions	46	12 & 20	397.30	75,000	75,000	50,000	50,000	50,000	50,000
	Nall	Cell Sites	46	12 & 20	397.30	1,019,403	438,000				
Project Subtotal						1,094,403	513,000	50,000	50,000	50,000	50,000
Fiber Customer Connects		Line Extension Policy				75,000	75,000	35,000	75,000	75,000	75,000
	Nall	Multi Tenant and Small Business	46	12 & 20	397.20			100,000			
Project Subtotal						75,000	75,000	135,000	75,000	75,000	75,000
Premise Electronics						55,000	40,000	40,000	40,000	40,000	40,000
	Nall	Fiber Premise	46	136	397.25		-				
	Nall	Wireless Premise	46	136	397.55		-				
Project Subtotal						55,000	40,000	40,000	40,000	40,000	40,000
Electronics	Nall	Broadband Electronics	46	136	397.40	50,000	25,000	200,000	200,000	-	-
	Nall	Fixed Wireless - Upgrade to Motorola	46	136	397.50			30,000			
Project Subtotal						50,000	25,000	230,000	200,000	-	-
Fiber Conduit	Nall	New Developments	46	12 & 20	397.20	20,000	20,000	20,000	20,000	20,000	20,000
Project Subtotal						20,000	20,000	20,000	20,000	20,000	20,000
Labor & Benefits	Nall	NoaNet NCS Svcs	Engr	11 & 40		150,000	200,000	175,000	175,000	175,000	175,000
		District Internal				77,201	25,000	49,936	25,000	25,000	25,000
Project Subtotal						227,201	225,000	224,936	200,000	200,000	200,000
Broadband (Table 3)						\$ 1,596,604	\$ 973,000	\$ 924,936	\$ 610,000	\$ 410,000	\$ 410,000

Capital Requirements Plan

12/8/2015

General Plant (Table 4)

General Plant includes land, structures, tools, office, transportation, stores, lab, and communications equipment

Project Description	Project Mgr.	Comments	Accounting Codes			Year (amounts in constant year dollars)					
			Dept	Resource	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Director of Operations	Hunter	Office Furniture	31	132	391.05	\$ 5,000	\$ 5,000				
		Projected Capital Equip - Ops	31						5,000	5,000	5,000
Project Subtotal						5,000	5,000	-	5,000	5,000	5,000
Supt of Trans and Dist	Wood	Battery Hand Presses 2@\$5000/ea	32	134	394	10,000	10,000				
	Wood	Battery Portable Pump	32	134	394	5,000	5,000				
	Wood	Phase Tracker AP30	32	134	394	18,000	18,000				
	Wood	Locator	32	134	584			6,900			
	Wood	Underground Cable Puller	32	134	584						170,000
	Wood	Projected Capital Equip - Line	32						45,000	45,000	10,000
Project Subtotal						33,000	33,000	6,900	45,000	45,000	180,000
Meter Shop	Hunter/Colby	Meter Test Standard	34	135	397	10,000	10,000				
	Hunter/Colby	800 MHz Radio Upgrade	34	135	397	5,750	5,750	5,000			
	Hollenbeck	Relay Test Set	34	135	395			52,000			
		CT Verification	34	135	395				35,000		
		Projected Capital Equip - Meter	34							10,000	10,000
Project Subtotal						15,750	15,750	57,000	35,000	10,000	10,000
Transformer Shop	Burnet/Gaston	Infrared	35	135	395			21,000			
Transformer Shop	Burnet/Gaston	Projected Capital Equip - Xfr Shop	35						10,000	10,000	10,000
Project Subtotal						-	-	21,000	10,000	10,000	10,000
Auto Shop	Splatts/Bennett		37	134	394			-			
		Projected Capital Equip - Auto Shop	37	134					10,000	10,000	10,000
Project Subtotal						-	-	-	10,000	10,000	10,000
Supt of Support Services	Splattstoesser	Swamp Coolers (4) in Ops	38	131	390.01	24,000	24,000				
	Splattstoesser	Wall covering Admin	38	131	390	20,000	20,000				
	Splattstoesser	Kiosk	38	131	390	35,000	35,000				
	Splattstoesser	Power Mgmt Remodel	38	131	390	38,000	38,000				
	Splattstoesser	Asphalt	38	131	390	40,000	40,000				
	Splattstoesser	LED wall packs (ops)	38	131	390	12,000	12,000				
	Splattstoesser	Reversible circulating fans/Cust Svc	38	131	390	8,000	8,000				
	Splattstoesser	200 amp panel and dry XFR (admin)	38	131	390	7,000	7,000				
	Splattstoesser	New Compressors for HVAC #1	38	131	390	10,000	10,000				
		Indirect District costs			390	12,150	12,150				
	Splattstoesser	Kiosk (Admin)	38	131	390.01			35,000			
	Splattstoesser	Honeywell Command Cntrl (Prosser)	38	131	390.02			5,000			
	Splattstoesser	Administration/Executive Area Remodel (390)						6,500			
	Splattstoesser	LED Light Retro Fit (Admin)	38	131	390			5,000			
	Splattstoesser	Asphalt Sealer and Repair (Ops)	38	131	390.01			40,000			
	Splattstoesser	LED Parking Lot Retro Fit (Admin)	38	131	390			9,000			
	Splattstoesser	Replace HVAC Units 3, 4, & 9 (Admin)	38	131	390			100,000			

Capital Requirements Plan

12/8/2015

General Plant (Table 4)

General Plant includes land, structures, tools, office, transportation, stores, lab, and communications equipment

Project Description	Project Mgr.	Comments	Accounting Codes			Year (amounts in constant year dollars)					
			Dept	Resource	FERC	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
	Splattstoesser	Replace Flooring in Map Rm (Ops)	38	131	390.01			5,000			
	Splattstoesser	Projected Structures and Improvements	38	131					200,000	200,000	200,000
Project Subtotal						206,150	206,150	205,500	200,000	200,000	200,000
Supt of Support Services	Splattstoesser	Replace Veh160/Safety Coord	38	133	392	36,000	36,000				
	Splattstoesser	Replace Veh 126/Foreman Truck	38	133	392	70,000	70,000				
	Splattstoesser	Replace #142/Cab and Chassis	38	133	392	51,000	51,000				
	Splattstoesser	Remove bucket on #142 and remount onto new cab and chassis	38	133	392	31,000	31,000				
Supt of Support Services	Splattstoesser	Bucket Truck (replace 149)	38	133	392				240,000		
	Splattstoesser	1/2 ton 4x4 Locator (replace 179)	38	133	392				38,000		
	Splattstoesser	Replacement of Palfinger Truck	38	133	392				480,000		
	Splattstoesser	Projected Transportation Equipment	38	133					270,000	400,000	400,000
Project Subtotal						188,000	188,000	-	1,028,000	400,000	400,000
Supt of Support Services	Splatts/Seeger	Projected Capital Stores Equipment	39	134					10,000	10,000	10,000
Project Subtotal						-	-	-	10,000	10,000	10,000
Prosser Branch	Sullivan	LED Lighting	42	131	390.02				18,000		
	Sullivan	Replace 2 AC units	42	131	390.02				20,000		
	Sullivan	Projected Structures and Improvements									
Project Subtotal								-			
		Labor & Ovhd's for General Plant						582			
Project Subtotal						-	-	582	18,000	-	-
		Engr - GPS Equipment Replacement	22	138	391						
Project Subtotal						-	-	-	-	-	-
General Plant (Table 4)						\$ 447,900	\$ 447,900	\$ 290,982	\$ 1,361,000	\$ 690,000	\$ 825,000

Capital Requirements Plan
Information Technology Department(s) (Table 5)

12/8/2015

Budget Category	Accounting Codes			Detail Description	Year (amounts in constant year dollars)					
	Dept	Product	FERC		Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Integrated Utility Solution (Financials, HRMS, CIS, MDMS, Customer Engagement)										
	18	137	391	Meter Data Management System (MDM)	300,000	-				
	18	138	391	Kiosks and Prepay Integration Expenses (061)	75,000	-				
	18	61	391	Implementation Consulting for MDMS	300,000	-				
	18	61	391	Project Management for MDM	80,000	-				
	18	61	391	Project Management for Integrated Utility Solution		15,000	140,000	100,000		
	18	61	391	Implementation of Integrated Utility Solution		-	450,000	50,000		
	18	61	391	Consulting for CMEP conversion for use with Integrated Utility Solution (Sensus)			35,000			
	18	61	391	Contingency for IUS Project			150,000			
	18	137	391	Epicor HRMS software		30,000				
	18	61	391	Consulting to implement Epicor in conjunction with Integrated Utility Solution			70,000			
Project Subtotal					755,000	45,000	845,000	150,000	-	-
Payroll/HR										
	18	137	391	PeopleSoft HRMS Upgrade	35,000	-				
	18	61	391	Capitalized contract DBA labor	15,000	-				
Project Subtotal					50,000	-	-	-	-	-
Application Infrastructure										
	18	137	391	Data Warehouse Tools (ETL)				140,000		
	18	137	391	Business Intelligence application					100,000	
	18	137	391	Advanced Data Compression for Oracle (may be required for MDMS solution)	72,000	-				
	18	61	391	Consulting for DR plan and build out for MS SQL Server		40,000				
	18	137	391	Oracle RAC Node One for DB Maintenance	62,000	-				
Project Subtotal					134,000	40,000	-	140,000	100,000	-
Document Management System (DMS)										
	18	61	391	Consulting for DMS Upgrade (TRIM)	25,000	25,000			25,000	
	18	61	391	Consulting for DMS Document Workflow				25,000		
Project Subtotal					25,000	25,000	-	25,000	25,000	-

Capital Requirements Plan
Information Technology Department(s) (Table 5)

12/8/2015

	Accounting Codes				Year (amounts in constant year dollars)					
Budget Category	Dept	Product	FERC	Detail Description	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Geographic Information System (GIS)										
	18	61	391	GIS System Upgrade Consulting	20,000	-				
	18	61	391	Mobile Inspection Upgrade Consulting	15,000	-	-			
	15	138	391	Large Screen Monitors for Dispatch/Out	-	-	50,000			
Project Subtotal					35,000	-	50,000	-	-	-
Advanced Metering Infrastructure (AMI)										
	18	61	391	AMI RNI Upgrade Consulting		189,475				
	18	137	391	AMI RNI Upgrade Software		45,000				
	18	61	391	AMI Upgrade/Hosting	225,000	-			225,000	
Project Subtotal					225,000	234,475	-	-	225,000	-
Engineering Analysis (SynerGEE)										
	18	137	391	Replacement Engineering Analysis software	-	-	-	20,000		
	18	61	391	Consulting and integration of Engineering Analysis software				10,000		
	18	61	391	Consulting for DataPrep upgrade (part of GIS upgrade)		6,000				
Project Subtotal					-	6,000	-	30,000	-	-
Misc IS Capital										
	18	137	391	Fuel System (PetroVend) replacement			50,000			
	18	61	391	Crystal Reports Server Consulting	10,000	10,000				
	12	61	391	Website Upgrade/Redesign	45,000	45,000	20,000			
Project Subtotal					55,000	55,000	70,000	-	-	-
SCADA (Survalent)										
	15	138	391	Hardware/licenses for network redesign; disaster recovery, virtualization, server upgrade, database replication, web server and test environment	15,000	15,000	5,000			
	18	137	391	SmartVU Upgrade (Worldview replacement)			25,000			
Project Subtotal					15,000	15,000	30,000	-	-	-
Network Infrastructure										
	15	137	391	MS Office upgrade						75,000
	15	137	391	Windows Datacenter Server	8,000	8,000	5,000	5,000		
	15	137	391	VDA License				10,000	10,000	
	15	137	391	View Standard to View Enterprise 150 users			55,000			

Capital Requirements Plan
Information Technology Department(s) (Table 5)

12/8/2015

Budget Category	Accounting Codes			Detail Description	Year (amounts in constant year dollars)					
	Dept	Product	FERC		Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Email System										
	15	137	391	Exchange Server upgrade						20,000
	15	137	391	Exchange Std CALS						20,000
	15	61	391	Consulting for Exchange upgrade						10,000
Business Continuity										
	15	137	391	Comm Vault backup Software to replace BEX Tier 3	55,000	55,000				
	15	138	391	VM Server (Prosser DR site) UCS Blade servers	30,000	30,000	30,000		20,000	
	15	138	391	DMZ Upgrade Host Servers	25,000	25,000				
	15	138	391	UCS Blade Server for VDI for Prosser D	10,000	10,000				
	15	138	391	NetApp Head Upgrade - Kennewick			140,000		80,000	80,000
	15	138	391	SSD Upgrade for UCS Blades	10,000	10,000				
	15	61	391	NetApp Head Upgrade Consulting			30,000		10,000	10,000
	15	138	391	Load Balancer (F5) Qty 2				84,000		
	15	61	391	Load Balancer Install Consulting				16,000		
	15	138	391	UCS Fabric Interconnect port licenses	16,000	16,000				
Storage Area Network (SAN)										
	15	137	391	Quest Foglight Storage Monitoring	21,000	21,000				
Network Printing										
	15	138	391	MFPs (HR & Library)	30,000	30,000	10,000	10,000		
Misc Networking										
	15	138	391	UPS upgrade			30,000		20,000	
	15	138	391	Network Switches	20,000	20,000	10,000	10,000	10,000	10,000
	15	138	391	Network Switch Access Layer 1G	45,000	45,000				
	15	137	391	2nd Fiber Path to Prosser			100,000			
	15	138	391	Wireless Access Points for Operations	25,000	-	25,000			
	15	138	391	Voice Gateway router upgrade			20,000			
	15	61	391	Vehicle Wireless Consulting	10,000	10,000	10,000			
				Adjust to annual minimum of \$100k					-	
Project Subtotal					305,000	280,000	465,000	135,000	150,000	225,000
Network Security										
	15	137	391	Intrusion Detection System Replacement	40,000	40,000				
	15	138	391	Network Security traffic analyzer - FireEye			50,000			
	15	137	391	Data Loss Prevention				50,000		
	15	137	391	Cisco Identity Services Engine Upgrade	5,000	5,000				
				Adjust to annual minimum of \$50k	5,000	5,000	-	-	50,000	50,000
Project Subtotal					50,000	50,000	50,000	50,000	50,000	50,000
Projects Subtotal less non-IS internal labor					1,649,000	750,475	1,510,000	530,000	550,000	275,000

Capital Requirements Plan
Information Technology Department(s) (Table 5)

12/8/2015

Budget Category	Accounting Codes			Detail Description	Year (amounts in constant year dollars)					
	Dept	Product	FERC		Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Internal Labor										
	18	11	391	AMI - capitalized IT labor		28,800			28,800	
	18	11	391	DMS - Capital IT Applications labor	30,000	30,000				
	18	11	391	Digital Signature Capital IT Applications Labor	30,000	-				
	18	11	391	MDM/Cust Exp Capital IT Applications	58,500	-				
	44	11	391	Customer Service MDMS backfill labor	24,541					
	18	11	391	HRMS Capital IT Applications Labor	46,800	-				
	01	11	391	HRMS Capital - HR Labor	28,000	-				
	15	11	391	Network/Security Capital IT Infrastructure Labor	20,833	20,833	20,833	20,833	20,833	20,833
	15	11	391	Storage/Infrastructure Capital IT Infrastructure Labor	13,889	13,889	20,000			
	18	11	391	GIS System Upgrade - Capital IT Applications Labor	15,000	15,000				
	18	11	391	Integrated Utility Solution Capital IT Applications Labor (4.5FTE*\$45/hr)		32,400	421,200	234,000		
	15	11	391	Integrated Utility Solution Capital IT Infrastructure Labor (.10FTE*\$45)		2,880	9,360			
	18	11	391	SCADA Upgrade Applications Labor			23,400			
	44	11	391	Customer Service Integrated Utility Solution backfill labor		19,205	57,217			
	18	11	391	Data Warehouse Implementation Labor IT Applications (2FTE*\$45/hr)				93,600		
	15	11	391	Data Warehouse Implementation Labor IT Infrastructure (.10FTE*\$45/hr)				4,680		
	98	008	391	Payroll Taxes & Benefits @ 44% of Cap Labor	138,994	84,539	238,960	133,393	43,105	30,433
	XX	11	391	Unallocated Capital Labor						
Labor, Overhead and Allocations Subtotal					406,557	247,546	790,970	486,506	92,738	51,266
Projects Subtotal					2,055,557	998,021	2,300,970	1,016,506	642,738	326,266
Adjustment to annual minimum of: \$1,000,000					(1,055,557)		(1,300,970)	(16,506)	357,262	673,734
IT Department Total					\$2,055,557	\$998,021	\$2,300,970	\$1,016,506	\$1,000,000	\$1,000,000

Capital Requirements Plan
Capital Contributions (Table 6)

12/8/2015

		Year (amounts in constant year dollars)					
Project Description	Details	Original Budget 2015	Amended Budget 2015	2016	2017	2018	2019
Electric	Angus Franklin (thru Dec 2015)	\$ 129,800	\$ 129,800				
	Electric Other/Base Growth	1,019,998	1,019,998	1,025,098	1,030,223	1,035,375	1,040,551
	City of Richland - Vista Sub/Center Pkwy		133,000	250,000			
	Ely Community Solar Project		375,000				
Broadband	Broadband Other/Base Growth	10,000	10,000	10,000	10,000	10,000	10,000
	Fiber Backhaul to Cell Sites	956,403	375,000				
Total		\$ 2,116,201	\$ 2,042,798	\$ 1,285,098	\$ 1,040,223	\$ 1,045,375	\$ 1,050,551

Capital Plan Project Descriptions
Public Utility District No.1 of Benton County
2016 Budget

Description		Amount
Capital Projects: Transmission		
BPA Interconnection - Cottonwood	Joint w/ COR near Reata & Leslie Rd.	\$300,000
Franklin to Angus Tower Evaluation/Upgrade	CIAC - Contract #95-23-01 with BPA (421.44)	175,000
Transmission Line - Red Mountain to Reata	Reata tie - w/City of Richland - 6 mi.	120,000
Transmission Line - Sunheaven#2 to Prior #4	River System (TRIP-A) - 8.5 mi., 397.5 ACSR	1,633,250
Switch Upgrade/Additions.Poles & Fixtures Misc Repairs		53,943
Total Transmission System Capital		2,282,193
Capital Projects: Distribution		
Substation Projects		
Cap Bank -	2,400 kVAR - Carma, 900 kVAR - Whitcomb, 900 kVAR - Whitcomb	265,000
Vista Substation - Center Parkway Improvements	Add brick wall fence for Center Pkwy project	250,000
Feeder Relay Upgrade and Position	Ely #1 & #2 and Phillips P*R	75,000
Power Quality Metering, Chevron Breaker Repl., Misc Repairs		160,000
Battery Replacement 9 Canyon		50,000
Distribution Lines - Cable Replacement, Other Maintenance, Pole Replacement, Trouble Orders & Cable Gel		1,495,000
Distribution Lines - Growth	Distribution facilities to support customer driven system growth	3,361,080
SCADA Projects	Substation RTU's, recloser Comm. & SCADA Comm.	342,000
NESC Compliance		165,000
Distribution Plan of Service Projects		
RTA-2, recond. #4, Badger Rd. L767A to L25A	West Kennewick - Badger Canyon	133,918
RTA-2, recond. #4, Badger Rd. L25A to L70R	West Kennewick - Badger Canyon	295,245
SSR-1, Sunset Rd. feeder to north	Benton City	180,299
GUM-1, GUM-4, recond. 3/0, E. 19th Ave.	East Kennewick	130,000
RTA-3, New Switch on Cottonwood Drive S/O Hailey Dr.	West Kennewick - Badger Canyon	12,000
RTA-1, extend OH from Reata Rd. south	West Kennewick - Badger Canyon	46,000
RTA-3, extend UG west along Sagebrush Rd.	West Kennewick - Badger Canyon	205,000
Voltage Optimization - Kennewick	Distribution efficiency project for conservation	465,440
Misc Distribution - SCADA, Meters Growth, District Labor & Overheads and Street & Security Lighting		652,030
Total Distribution System Capital		8,283,012

Capital Plan Project Descriptions
Public Utility District No.1 of Benton County
2016 Budget

Description		Amount
Capital Projects: Broadband		
Fiber Backbone	Sunheaven to Prosser Loop Cost Share, Southridge Development and Future upgrades	225,000
Fiber Laterals	Cell Sites, other growth opportunities	50,000
Fiber Customer Connects	Individuals, Business & Multi Tenant	155,000
Electronics, Wireless and Fiber Conduit	Broadband Electronics, Fiber Premise & Wireless Premise, Growth	270,000
NoaNet NCS Services & BPUD Internal Costs		224,936
Total Broadband System Capital		924,936
Capital Projects: General Plant		
Locator		6,900
Meter Shop	800 MHz Radio Upgrade / Relay Test Set	57,000
Transformer Shop	Infrared Detector	21,000
Support Services	Buildings and Facilities - Maintenance and Improvements	206,082
Total General Plant Capital		290,982
Capital Projects: Information Systems		
Integrated Utility Solutions	Project Manager, Consulting & Implementation	845,000
Fuel System	Replace with FuelFocus software to integrates into vehicle Mgmt system	50,000
Large Monitors & replace MFP at Operations	Dispatch & Outage Mgmt.	60,000
Website Redesign		20,000
Network Infrastructure	View Enterprise for VDI & upgrade Windows Datacenter Server	60,000
SCADA	Hardware/licenses	30,000
Security	Network Security traffic analyzer - FireEye	50,000
Business Continuity		200,000
Network Infrastructure	NetApp Upgrade and VM Server (Prosser DR site)	195,000
Capitalized labor & benefits	Integrated Utility Solutions IT & CS	698,932
Capitalized labor & benefits	Network Security, Storage & SCADA	92,039
Total Information Systems Capital		2,300,971
Capitalized Interest	Cost of money used during construction projects	182,746
Capitalized Allocations	Internal costs applicable to capital but not charged to specific projects	1,300,798
Total Capital Projects		\$15,565,638

POWER SUPPLY PLAN

TAB 10

Public Utility District No. 1 of Benton County

Power Supply Plan

2016

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EXECUTIVE SUMMARY

The Power Supply Plan is prepared annually to determine the District's energy requirements and resources and to establish the power supply budget for the upcoming year. Looking five years out, the Power Supply Plan is developed using information from several sources, including the District's Retail Energy Sales Forecast, the current BPA Block/Slice Agreement (which contains load-specific information and requirements for each fiscal year), updated BPA power and transmission rates, the District's load to resource balance, forward market prices, historical and forecasted weather data, Washington State renewable energy and CO₂ emissions performance requirements.

The District purchases energy from several sources. More than 85% is purchased from the Bonneville Power Administration. The District also purchases 50 MW of capacity from a combined cycle natural-gas-fired combustion turbine project near Tacoma, Washington, 6 aMW of renewable energy from wind projects in Eastern Washington, and a 14% (1 aMW) share of the output from the Packwood Hydroelectric Project. Given these resources and the District's expected load, energy is expected to be sufficient, on average, for the next five years.

Power Management staff worked with The Energy Authority (TEA) to develop a list of power supply assumptions for 2016-2020, which were reviewed by the Benton PUD Risk Management Committee prior to inclusion in this updated plan. The power supply assumptions are covered in detail in the Power Supply Plan. Fundamental assumptions of the District's power supply budget are as follows:

- Based on the District's updated retail load forecast from June 2015 – included in Section I
- BPA rate escalation assumptions: (BPA fiscal year is October 1 through September 30)
 - FY2018: 6% increase in Power and Transmission Rates
- District's Rate Period High Water Mark (RHWM) is 199.617 aMW in FY2016
- BPA purchases are limited to the lower of the District's load forecast or the RHWM
 - In FY2016 and beyond, the RHWM is expected to be the limiting factor as the District's load is expected to grow beyond its high water mark.

The District uses Monte Carlo analysis to set its annual power supply budget. Specifically, the stochastic model simulates the distribution of annual power cost by generating a thousand scenarios of Slice generation, load, and power and gas prices. Using these results, the District sets its 2016 budget at the 25th percentile (i.e., the probability of meeting budget is 75%) net power cost, and the 50th percentile for forecasting years beyond 2016. The table below shows net power costs using the 5th, 25th, and 50th percentiles of slice generation scenarios for 2016-2020.

Percentile	2016	2017	2018	2019	2020
5%	\$84,222,073	\$85,216,558	\$88,437,796	\$92,151,038	\$96,466,730
25%	\$81,687,648	\$82,670,659	\$86,065,822	\$89,582,397	\$93,433,222
50%	\$79,927,469	\$80,996,759	\$83,955,050	\$87,343,852	\$91,242,517

SECTION I: RETAIL LOAD FORECAST

The District load forecast used for the power supply budget extends five years into the future. It is updated annually to include the fifth year and to make any necessary adjustments to the prompt four years. This information is taken from the Retail Load Forecast, dated June 19, 2015. The annual wholesale load forecast is shaped monthly based on observed actuals. The monthly load forecast is then split between heavy load hours (HLH) and light load hours (LLH). The five year load forecast is shown below in **Table 1**.

Year	HLH Load (MWh)	LLH Load (MWh)	Total Wholesale Load (aMW)	HLH Load (aMW)	LLH Load (aMW)
Jan-16	87,503	61,436	148,939	219	179
Feb-16	83,265	56,616	139,881	208	191
Mar-16	75,070	46,126	121,196	174	148
Apr-16	83,578	50,671	134,248	201	167
May-16	97,451	66,196	163,647	244	192
Jun-16	111,160	69,482	180,642	267	229
Jul-16	132,377	85,122	217,499	331	247
Aug-16	128,901	78,625	207,526	298	252
Sep-16	95,357	59,503	154,860	238	186
Oct-16	76,169	46,588	122,757	183	142
Nov-16	64,737	45,969	110,706	162	143
Dec-16	80,067	54,701	134,768	192	167
Jan-17	87,560	61,475	149,035	219	179
Feb-17	83,315	56,650	139,965	217	197
Mar-17	75,085	46,135	121,221	174	148
Apr-17	83,560	50,660	134,221	209	158
May-17	97,398	66,161	163,559	234	202
Jun-17	111,100	69,445	180,545	267	228
Jul-17	132,309	85,078	217,386	331	247
Aug-17	128,853	78,596	207,449	298	252
Sep-17	95,328	59,485	154,813	238	186
Oct-17	76,135	46,568	122,703	183	142
Nov-17	64,743	45,974	110,717	162	143
Dec-17	80,110	54,731	134,841	200	159
Jan-18	87,906	61,719	149,625	211	188
Feb-18	83,643	56,873	140,517	218	197
Mar-18	75,354	46,300	121,654	174	148
Apr-18	83,823	50,819	134,642	210	159
May-18	97,663	66,341	164,004	235	202
Jun-18	111,398	69,632	181,030	268	229
Jul-18	132,658	85,302	217,960	332	248
Aug-18	129,221	78,820	208,041	299	253
Sep-18	95,622	59,668	155,291	249	178
Oct-18	76,371	46,711	123,082	177	150
Nov-18	64,981	46,142	111,123	162	144
Dec-18	80,424	54,945	135,369	201	160
Jan-19	88,308	62,001	150,309	212	189
Feb-19	84,023	57,132	141,154	219	198
Mar-19	75,660	46,488	122,148	182	142
Apr-19	84,116	50,997	135,113	202	168
May-19	97,952	66,537	164,489	235	203
Jun-19	111,724	69,835	181,559	279	218
Jul-19	133,039	85,548	218,587	320	261
Aug-19	129,628	79,068	208,696	300	253
Sep-19	95,949	59,872	155,821	250	178
Oct-19	76,630	46,870	123,500	177	150
Nov-19	65,250	46,333	111,583	163	145
Dec-19	80,786	55,192	135,978	202	160
Jan-20	89,423	62,784	152,206	215	191
Feb-20	85,076	57,848	142,924	213	195
Mar-20	76,511	47,011	123,523	184	143
Apr-20	84,928	51,489	136,417	204	169
May-20	98,749	67,078	165,826	247	195
Jun-20	112,615	70,392	183,006	271	232
Jul-20	134,084	86,219	220,303	322	263
Aug-20	130,749	79,752	210,501	314	243
Sep-20	96,848	60,433	157,281	242	189
Oct-20	77,347	47,309	124,656	179	152
Nov-20	65,996	46,863	112,858	172	139
Dec-20	81,789	55,877	137,666	197	170

TABLE 1 - FIVE YEAR LOAD FORECAST

SECTION II: DISTRICT RESOURCES

The District sources its power requirements through purchases from BPA, as well as from several non-federal sources of power. This section describes the District's current and expected resources over the five year period, 2016-2020.

BPA RESOURCES

The District's Power Sales Agreement with BPA is the single largest source of power to the District. The Slice/Block Product provides for the combined purchase of two distinct power services for the District based on the actual generation shape of the Federal Columbia River Power System (FCRPS). As a Block purchaser, the District receives Firm Requirements Power on a flat monthly block basis. As a Slice purchaser, the District accepts the risk of fluctuations in actual federal system output and accepts responsibility for managing its percentage share of the federal system output to serve its load. There is no guarantee that the amount of Slice output made available, combined with Firm Requirements Power made available under the Block Product, shall be sufficient to meet the District's load obligations, be it hourly, daily, weekly, monthly, or annually. As part of the agreement, the District agrees to follow its load with its own resources and purchases beyond what the BPA products serve.

Under the Slice Product, the District will receive 1.36985% of the FCRPS output (Slice customers in aggregate are purchasing approximately 27% of the FCRPS) in FY2016. This allocation is adjusted down slightly from its initial Slice percentage of 1.38126% by the Slice Percentage Adjustment Ratio (SPAR) of 0.99174. Slice must be paired with the Tier 1 Block Product to meet additional demand up to the Rate Period High Water Mark (RHW) of 199.617 aMW FY2016 and beyond. Tier 1 Block is distributed as a fixed annual amount, which is shaped to monthly load according to BPA Block Shaping Factors. The Tier 1 Block amounts and the block shaping factors are shown in **Table 2** and **Table 3**. The majority of the cost of BPA power to the District is captured by the Composite Customer Charge, which is based on the District's FY2016 Tier 1 Cost Allocator (TOCA) of 2.85858%.

For planning purposes, the District's Slice/Block peak capacity is 340 MW. The peak capacity was developed using actual District generation during the July 2014 peak event as the baseline.

Month	2016	2017	2018	2019	2020
(aMW unless otherwise noted)					
January	107.3	108.4	107.0	108.4	107.0
February	86.0	90.0	88.9	90.0	85.8
March	79.4	80.2	79.0	80.1	79.0
April	88.2	89.1	88.0	89.1	87.9
May	107.3	108.4	107.0	108.4	107.0
June	129.8	131.2	129.4	131.2	129.4
July	152.4	154.0	152.0	154.0	152.0
August	131.7	133.1	131.3	133.1	131.3
September	90.7	91.7	90.5	91.7	90.5
October	80.1	79.0	80.1	79.0	80.1
November	87.7	86.6	87.9	86.7	87.9
December	99.8	98.5	99.8	98.5	99.8
Block Total (aMW)	103.4	104.2	103.4	104.2	103.1
Block Total (MWh)	907,891	912,728	905,799	912,715	905,957

TABLE 2 - TIER 1 BLOCK AMOUNTS

Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Block Shaping Percentage	6.5%	6.9%	8.1%	8.8%	6.6%	6.5%	7.0%	8.8%	10.3%	12.5%	10.8%	7.2%

TABLE 3 - MONTHLY BLOCK SHAPING PERCENTAGES

NON-BPA RESOURCES

In addition to open market purchases, Benton PUD has five non-BPA resources: Frederickson 1 Generating Station, Nine Canyon Wind Project, LL&P Wind Energy, Inc. at White Creek, White Creek Wind I Project, and the Packwood Hydroelectric Project.

FREDERICKSON 1 GENERATING STATION

Benton PUD entered into an agreement for the purchase of 50 MW of contract capacity at a 7.1 MMBtu per megawatt hour heat rate from the Frederickson 1 Generating Station combined cycle combustion turbine (CCCT) plant located near Tacoma, WA. Each day, the District has the right, but not the obligation, to purchase output from Frederickson. The decision to buy from Frederickson is based on a comparison of the spot price of power to the variable cost of generation. The plant, which reached commercial operation in September 2002, will need 8,520 MMBtu of gas per day for the District's share of its 24x7 operation and 5,680 MMBtu of gas per day for HLH operation. (There is an additional charge of approximately \$5,000 for each start-up that is charged for HLH only operation.) Benton PUD, along with Grays Harbor PUD and Franklin PUD, are purchasing contract capacity under separate but substantially similar agreements. Together, the three PUDs have contract rights to 125 MW of the plant's total 249 MW capacity. Up to 40% of the plant capacity may be displaced regardless of the dispatch decisions of other purchasers; however, the heat rate may increase to a maximum of 7.952 MMBtu. **Table 4** shows the District's fixed costs for Frederickson.

The power purchase agreement is set up as a tolling arrangement. The District will purchase and deliver gas to the fuel receipt point just across the Canadian border at Huntingdon. The plant is responsible to transport the gas from Huntingdon, and to burn the gas and deliver power to the point of delivery on the BPA grid at the South Tacoma substation. TEA has been appointed the District's agent for fuel management services for this plant.

Benton PUD is actively monitoring both federal and state regulatory policies regarding Green House Gas emissions to determine the physical and financial implications each policy could have on economically dispatching the Frederickson 1 Generating Station.

Year	Annual Fixed Cost	Annual Volumetric Cost	Total Annual Cost	YOY Increase
2016	\$7,659,461	\$823,513	\$8,482,974	0.00%
2017	\$7,728,310	\$885,133	\$8,613,443	1.54%
2018	\$7,798,991	\$528,953	\$8,327,944	-3.31%
2019	\$7,871,559	\$933,312	\$8,804,871	5.73%
2020	\$7,946,066	\$1,529,530	\$9,475,596	7.62%

TABLE 4 - FREDERICKSON FIXED COSTS

NINE CANYON WIND PROJECT

The Nine Canyon Wind Project is situated on dry land wheat farms approximately eight miles southeast of Kennewick, WA in the Horse Heaven Hills. The District began purchasing renewable energy from Phase I of the project in 2002, when a Power Purchase Agreement was signed with Energy Northwest for 3 MW of generating capacity for a commitment continuing through June 30, 2023. This purchase produces about 1 aMW of energy, at \$60.14 per MWh, with a 2.5% annual cost escalation. On October 30, 2006, the District signed an Amended and Restated Agreement with Energy Northwest, and the other purchasers, which extended the term of the Agreement through July 1, 2030 (with rights to extend the agreement in additional five-year terms).

In 2008, the District contracted to purchase an additional 6 MW (approximately 2 aMW) of energy from Phase III of the project. The cost of Phase III is \$80.48 per MWh also with 2.5% annual cost escalators. Although Nine Canyon Wind provides an intermittent source of energy, there is no material difference in the amount of energy the District receives from month to month.

The average cost of Phase I and Phase III is \$73.70 per MWh in 2016.

Table 5 shows the annual cost of output purchased from each phase. **Figure 1** shows Benton PUD's share of the actual daily generation from the wind project for the period of September, 2012 through August 2015.

Nine Canyon Wind Project is a renewable energy source with Environmental Attributes that qualify under the State of Washington's Energy Independence Act (EIA) and will help the District meet its renewable energy requirement under this Act.

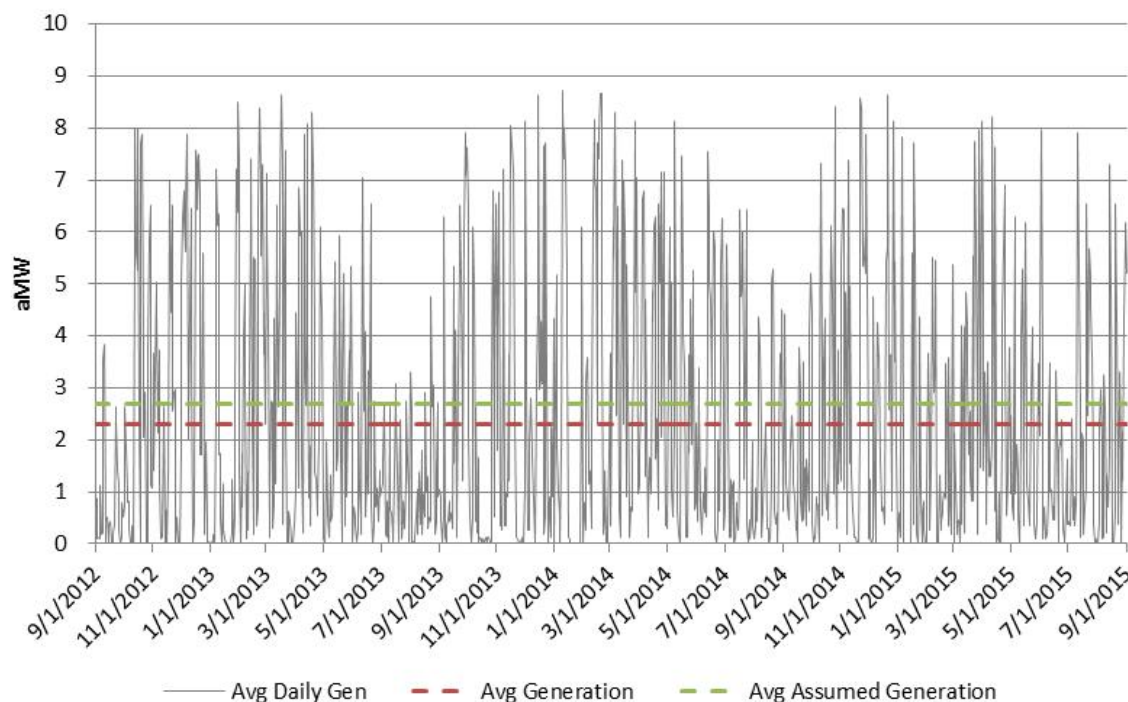


FIGURE 1- BPUD SHARE OF NINE CANYON WIND PROJECT GENERATION

Year	Phase I Cost (\$/MWh)	Phase III Cost (\$/MWh)	Total Cost Per MWh			Phase I Annual Cost	Phase III Annual Cost	Total Annual Cost
			Including Transmission	Phase I Cost per Month	Phase III Cost per Month			
2016	\$60.14	\$80.48	\$73.70	\$43,902	\$117,503	\$526,821	\$1,410,035	\$1,936,856
2017	\$61.64	\$82.49	\$75.54	\$44,999	\$120,440	\$539,992	\$1,445,286	\$1,985,278
2018	\$63.18	\$84.56	\$77.43	\$46,124	\$123,452	\$553,492	\$1,481,418	\$2,034,910
2019	\$64.76	\$86.67	\$79.37	\$47,277	\$126,538	\$567,329	\$1,518,454	\$2,085,782
2020	\$66.38	\$88.84	\$81.35	\$48,459	\$129,701	\$581,512	\$1,556,415	\$2,137,927

TABLE 5 - NINE CANYON WIND COSTS

LL&P WIND ENERGY, INC. AT WHITE CREEK

In 2007 Benton PUD entered into a 20-year contract with Lakeview Light & Power (LL&P Wind Energy, Inc.) to purchase 3 MW of capacity from the White Creek Wind Project located near Goldendale, WA. This purchase produces approximately 1 aMW of power. The cost of the renewable energy is \$59.70 per MWh in 2015. Costs escalate by 2% each year of the contract. **Table 6** shows a breakdown of the project's fixed cost assumptions through 2020.

White Creek Wind Project is a renewable energy source with Environmental Attributes that qualify under the State of Washington's EIA and will help the District meet its renewable energy requirement under this Act.

Year	Cost Per MWh	Cost Per Month	Annual Cost	YoY Increase
2016	\$60.89	\$44,571	\$533,396	2%
2017	\$62.11	\$45,340	\$544,084	2%
2018	\$63.35	\$46,246	\$556,466	2%
2019	\$64.62	\$47,173	\$566,071	2%
2020	\$65.91	\$48,246	\$577,372	2%

TABLE 6 - LL&P WIND ENERGY, INC. AT WHITE CREEK COSTS

WHITE CREEK WIND I

Benton PUD signed an agreement to purchase 6 MW from the White Creek Wind I Project capacity for a period of 19 years, with the option to purchase part of the project in 2017. This purchase produces approximately 2 aMW of energy. Benton PUD paid Klickitat PUD (one of the owners) a lump sum for the capital component. The total generation cost is \$55.95 per MWh in 2015. Capital costs are fixed, and O&M costs escalate between 2-4% each year through 2020. **Table 7** below shows a breakdown of the fixed cost assumptions for this project. **Figure 2** shows the District's share of the actual daily generation from both White Creek Wind purchase agreements for the period September 2012 through August 2015.

White Creek Wind Project is a renewable energy source with Environmental Attributes that qualify under the State of Washington's EIA and will help the District meet its renewable energy requirement under this Act.

Year	Capital Cost per MWh	O&M Cost per MWh	Total Cost per MWh	Monthly Capital Cost	Monthly O&M Cost	Annual O&M Cost	Annual Capital Cost	Total Annual Cost
2016	\$57.95	\$24.87	\$82.82	\$48,200	\$36,409	\$436,906	\$578,400	\$1,015,306
2017	\$58.95	\$25.94	\$84.88	\$48,200	\$37,865	\$454,382	\$578,400	\$1,032,782
2018	\$59.99	\$26.97	\$86.96	\$48,200	\$39,380	\$472,557	\$578,400	\$1,050,957
2019	\$61.07	\$28.05	\$89.12	\$48,200	\$40,955	\$491,460	\$578,400	\$1,069,860
2020	\$62.19	\$29.09	\$91.28	\$48,200	\$42,593	\$511,118	\$578,400	\$1,089,518

TABLE 7 - WHITE CREEK WIND I COSTS

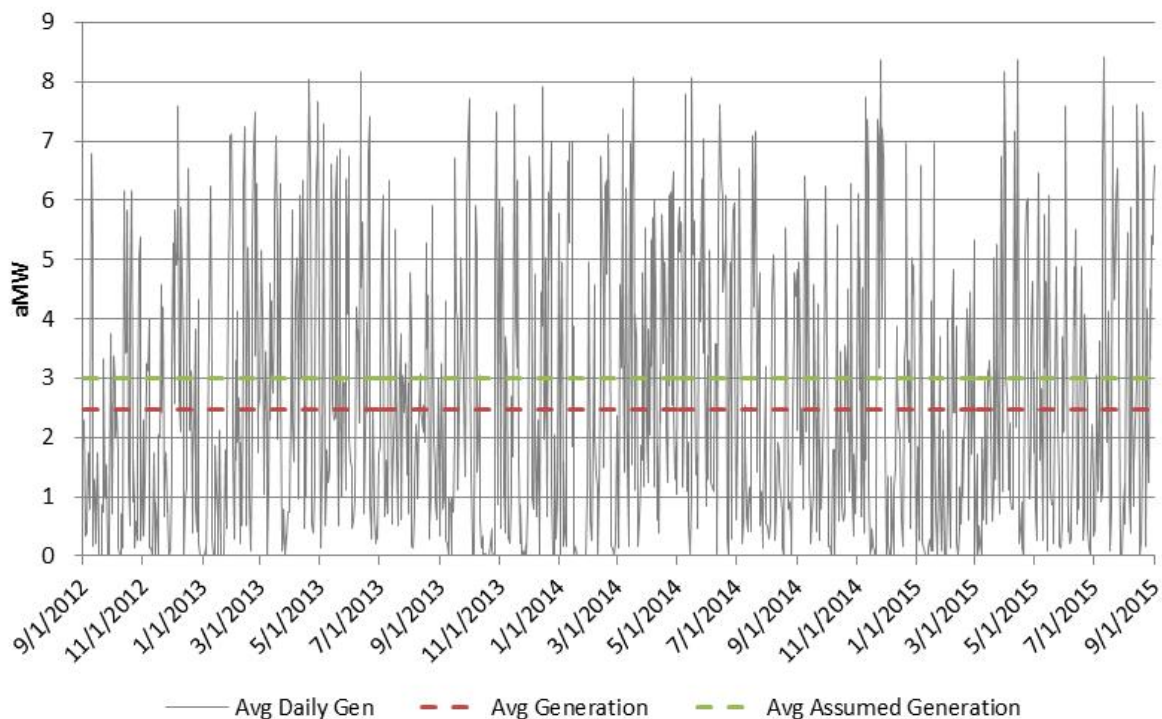


FIGURE 2 – BPUD SHARE OF WHITE CREEK WIND GENERATION (LL&P AND WCW I)

PACKWOOD LAKE HYDROELECTRIC PROJECT

The Packwood Lake Hydroelectric Project (Packwood) is a hydroelectric generating facility with a nameplate capacity of 26.125 MW that is owned and operated by Energy Northwest, a State of Washington Joint Operating Agency (JOA). The project is located 5 miles east of Packwood, WA in Gifford Pinchot National Forest. Project participants include Benton PUD, Clallam PUD, Clark County PUD, Ferry County PUD, Franklin PUD, Kittitas PUD, Klickitat PUD, Lewis PUD, Mason PUD No. 3, Skamania PUD, Snohomish PUD, and Wahkiakum PUD.

Benton PUD owns a 14% share of the output from the Packwood Hydroelectric Project, equating to approximately 3.66 MW of generation capacity. The expected average output from Packwood is approximately 1 aMW. **Table 8** shows the fixed cost assumptions for the District’s share of the Packwood Hydroelectric Project.

This project does not qualify as a renewable resource under State of Washington’s EIA.

Year	Annual Cost	Cost per Month	Cost per MWh
2016	\$350,000	\$29,167	\$39.95
2017	\$378,000	\$31,500	\$43.15
2018	\$378,000	\$31,500	\$43.15
2019	\$378,000	\$31,500	\$43.15
2020	\$378,000	\$31,500	\$43.15

TABLE 8 - PACKWOOD HYDROELECTRIC PROJECT FIXED COSTS

TRANSMISSION ISSUES

The District has a Point to Point Transmission agreement with BPA Transmission Services. The firm annual demand is 423 MW. Fixed costs for Long-Term Point to Point Transmission are budgeted at \$9.1M in 2016. The District is expecting a 6% increase in transmission rates in FY2018. The District is projected to be long transmission for most hours of the year in 2016, as can be seen in **Figure 3** and **Table 9**. Net sales of surplus transmission are projected to be \$500,000 per year in 2016-2020.

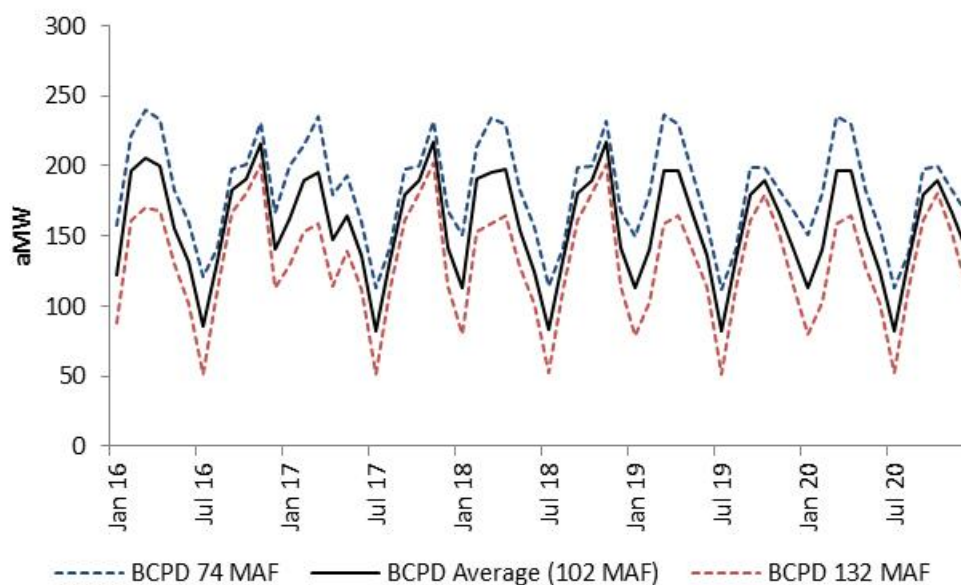


FIGURE 3 - BENTON PUD 2016-2020 LONG-TERM HLH FIRM TRANSMISSION SURPLUS, NET OF LOAD & RESOURCES

Resource Availability	BPA	Nine Canyon	White Creek	Packwood	Frederickson
2016-2020 Average	242	3	3	1	23
Min	171	2	1	0	0
Median	239	3	3	1	0
LTF Transmission Rights	407	9	6	0	0

TABLE 9 - BENTON PUD TRANSMISSION SNAPSHOT (AMW)

SECTION III: LOAD/RESOURCE BALANCE

This section examines the District's ability to meet its load with current resources under several Slice generation scenarios, with and without Frederickson included as a resource. The goal is to identify any capacity issues and the likelihood that they will occur.

MONTHLY LOAD/RESOURCE BALANCE: 2016

The following portion of the analysis examines the District's monthly load/resource balance under 25th and 50th percentile Slice generation scenarios. Each scenario assumes expected loads. The District's load/resource balance is examined including Frederickson (when it is economically prudent to dispatch in order to meet load), and excluding Frederickson altogether. The net positions shown, are the District's hedged net positions (i.e., net of forward purchases and sales).

EXPECTED SLICE GENERATION SCENARIO

The figures below show the District's load/resource balance under an expected (50th percentile) Slice generation scenario with expected loads. **Figure 4** shows the expected FCRPS generation under a 50th percentile scenario.

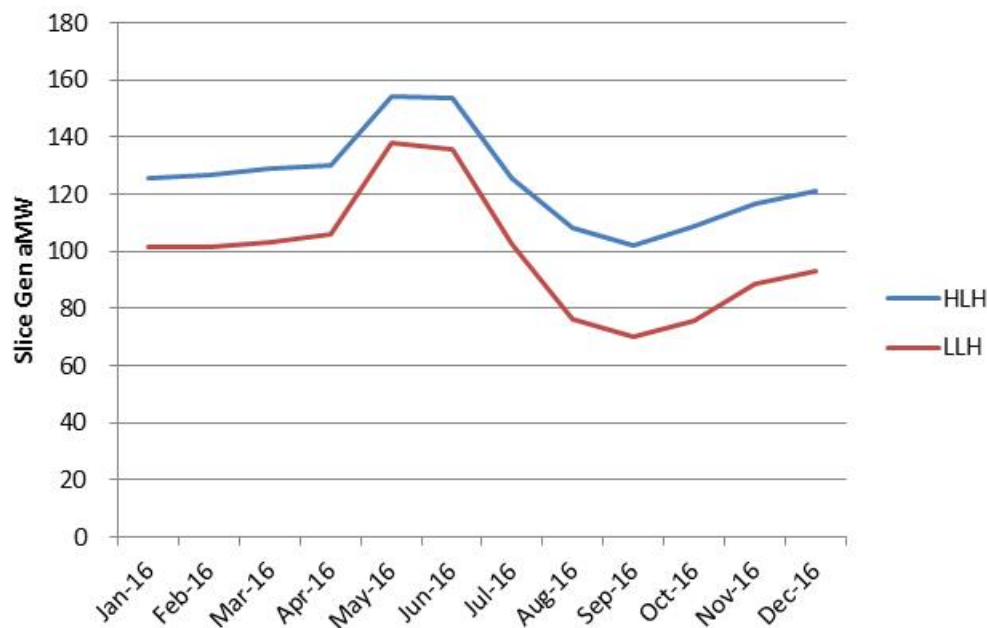


FIGURE 4 - EXPECTED MONTHLY SLICE GENERATION, 2016

Figure 5 shows the District's hedged load/resource balance, given expected loads and with Frederickson economically dispatched in 2016. With Frederickson, the District has sufficient resources in 2016, except in February and July through September when a modest HLH deficit is expected, and a slight all hours deficit in August and September. **Figure 6** excludes Frederickson as a resource, leading to greater HLH deficits in the June-August period.

Note, that due to the Frederickson delta hedging program there are times when including Frederickson in the load/resource balance may result in a position that is more deficit than without it. This is caused by a mismatch in the timing of when the hedges are executed and when the load/resource is being reported. For example, the delta hedging program may signal a buy-back of a hedge sale for one month but due to liquidity the buy-back has not been executed, however the underlying position may show not generation or that month. Thus, until the buy-back of the hedge is executed the position will be negative.

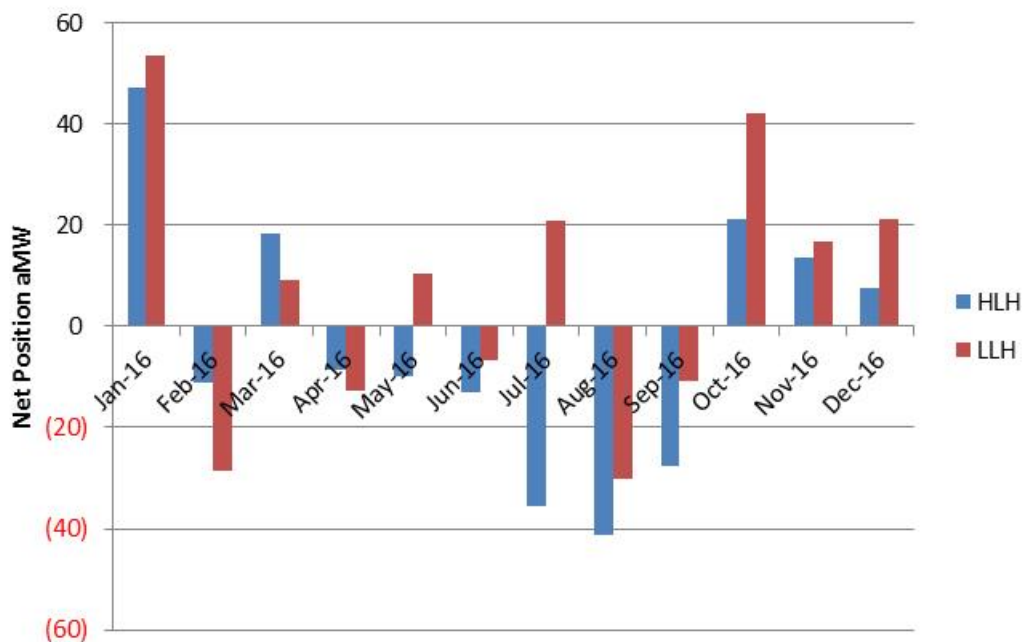


FIGURE 5 – HEDGED PORTFOLIO NET POSITION, 50TH PERCENTILE SLICE, EXPECTED LOAD, FREDERICKSON ECONOMICALLY DISPATCHED

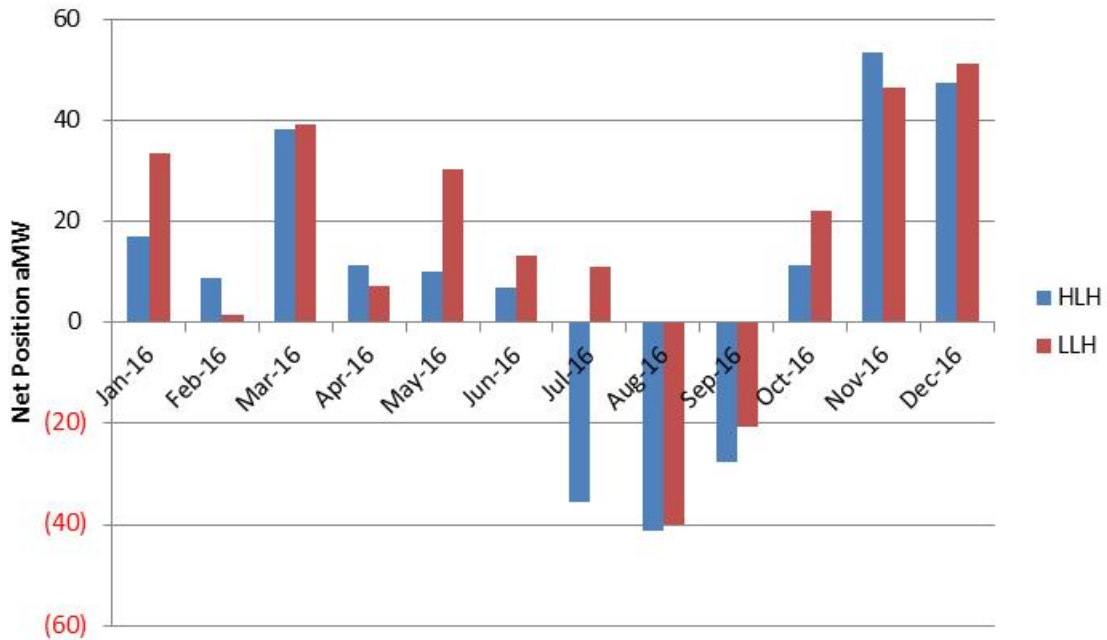


FIGURE 6 - HEDGED PORTFOLIO NET POSITION, 50TH PERCENTILE SLICE, EXPECTED LOAD, FREDERICKSON EXCLUDED

25TH PERCENTILE SLICE GENERATION SCENARIO

The following section examines the District's load/resource balance under a 25th percentile (i.e., there is a 75% likelihood that Slice generation will be greater) Slice generation scenario, given expected loads.

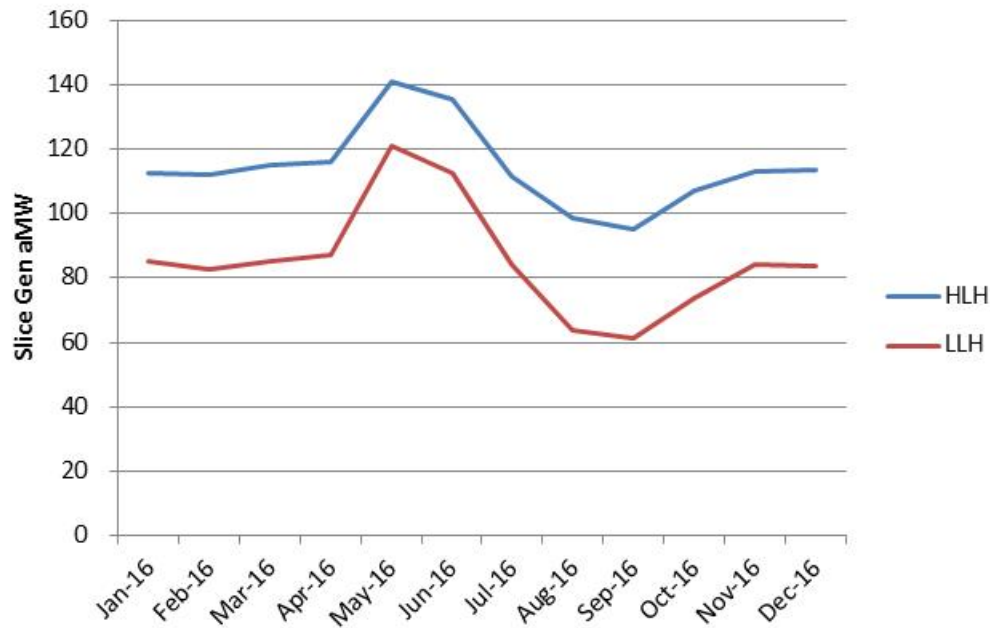


FIGURE 7 – 25TH PERCENTILE SLICE GENERATION, 2016

Figure 8 shows the District’s hedged load/resource balance, given expected load and the 25th percentile of slice. **Figure 9** excludes Frederickson as a resource, resulting in a greater capacity shortfall in all three months.

Note, that due to the Frederickson delta hedging program there are times when including Frederickson in the load/resource balance may result in a position that is more deficit than without it (for example calendar year 2016 below). This is caused by a mismatch in the timing of when the hedges are executed and when the load/resource is being reported. For example, the delta hedging program may signal a buy-back of a hedge sale for one month but due to liquidity the buy-back has not been executed, however the underlying position may show not generation or that month. Thus, until the buy-back of the hedge is executed the position will be negative.

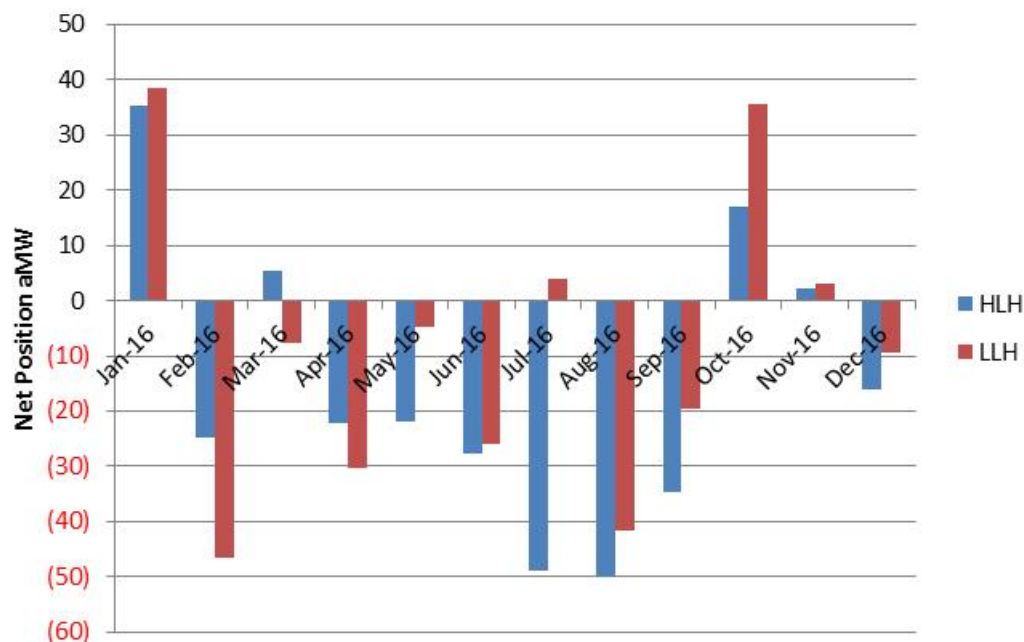


FIGURE 8 - HEDGED PORTFOLIO NET POSITION, 25TH PERCENTILE SLICE, EXPECTED LOAD, FREDERICKSON ECONOMICALLY DISPATCHED

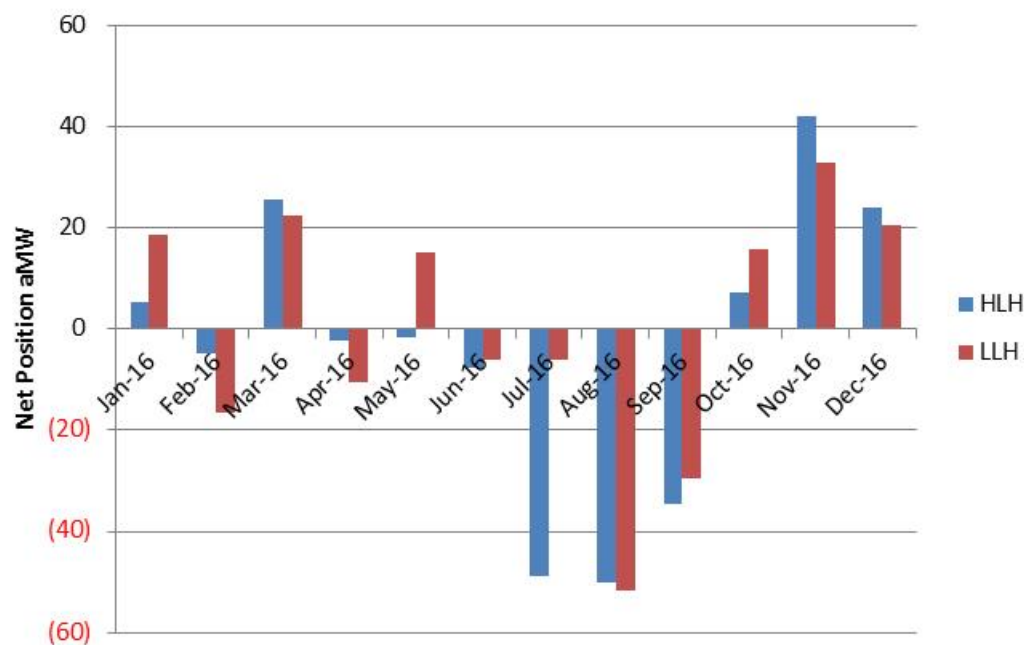


FIGURE 9 - HEDGED PORTFOLIO NET POSITION, 25TH PERCENTILE SLICE, EXPECTED LOAD, FREDERICKSON EXCLUDED

CAPACITY STUDY

The purpose of this study is to analyze the District's load/resource balance under extreme load conditions. For the peak period studies, two peak periods were analyzed:

1. Winter peaking during chum salmon spawning
2. Summer peak post runoff

This capacity analysis attempts to estimate the Slice system capability and loads during extreme events. To the benefit of this study, region-wide summer and winter events closely matching the hypothetical weather events were observed in the summer of 2014 and winter of 2014, respectively. The Slice system was also constrained in both events. In 2014, the region experienced a below-average water year in addition to the start of a major project to refurbish many of the aging turbines along the FCRPS, limiting both the fuel (water) available to run through the turbines and capacity of the power system. The limited capacity carried through to 2014 and despite it concluding as a slightly-above water year, the event occurred during a period when the major forecasting services were projecting a severely below-average, 25th percentile water. We believe that the actual system generation is representative of the capability of the Slice system, irrespective of water year or capacity conditions. Therefore, the actual Slice system generation from those two weather events was used to determine the District's peaking capability in this study.

The District currently has a peak generation capability of roughly 340MW during the summer peak hour and about 295MW for the winter peak hour. This estimate excludes wind resources, which cannot be relied upon to generate electricity on demand. Compared to the highest peak summer and winter demand observed in the last 5 years of 431MW and 342MW, respectively, the District's demand will exceed its supply during certain periods.

Figure 10 displays a theoretical net position of the daily winter three day peak demand that was calculated by applying District's estimated peak generation capability to the hypothetical loads discussed above. Figure 15 shows the same chart but for the summer. The Risk Management Committee (RMC) manages these deficits utilizing a combination of physical and financial forward purchases and call option products.

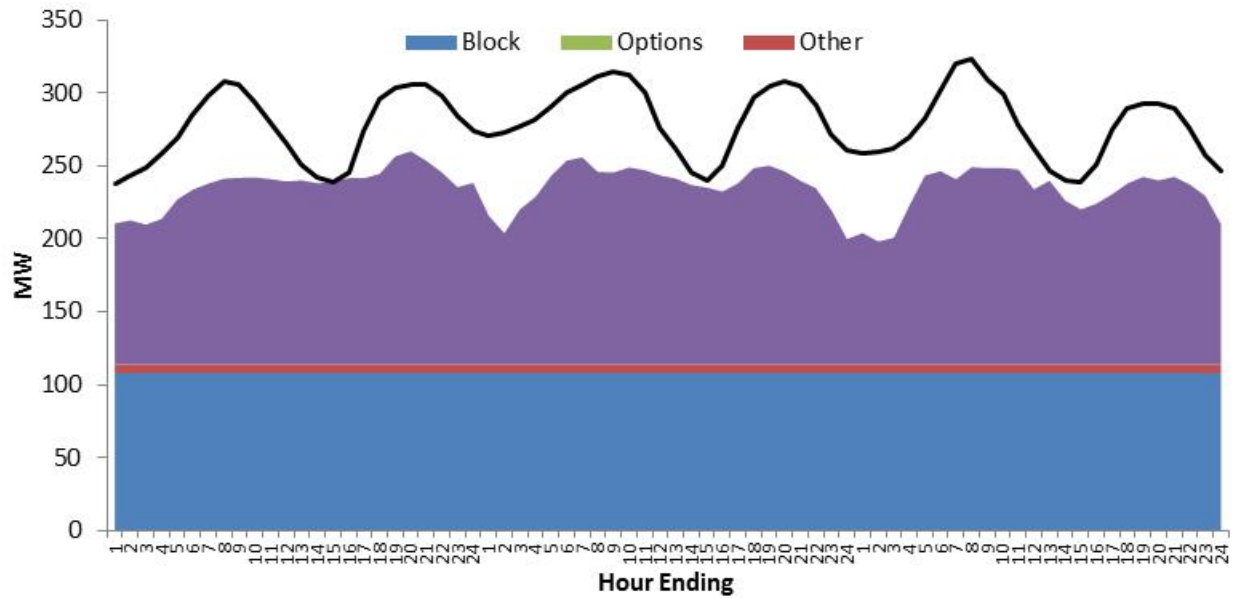


FIGURE 10: WINTER THREE DAY EXTREME LOAD/RESOURCE BALANCE

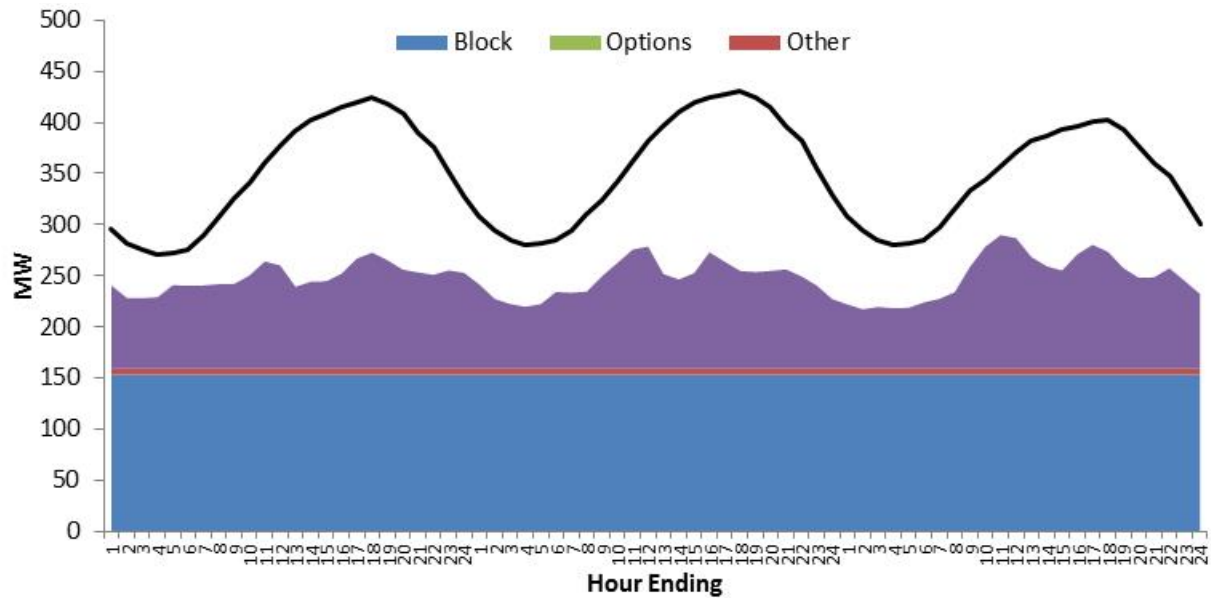


FIGURE 11: SUMMER THREE DAY EXTREME LOAD/RESOURCE BALANCE

Below **Figure 12** illustrates the relationship between hourly peak load and daily average temperature for August 2005 through September 2015. Included are the estimates of summer and winter peaking capacity discussed above. Historical weather data is provided from TEA's Weather Database. Average temperature is defined as the average of the daily high temperature and the daily low temperature.

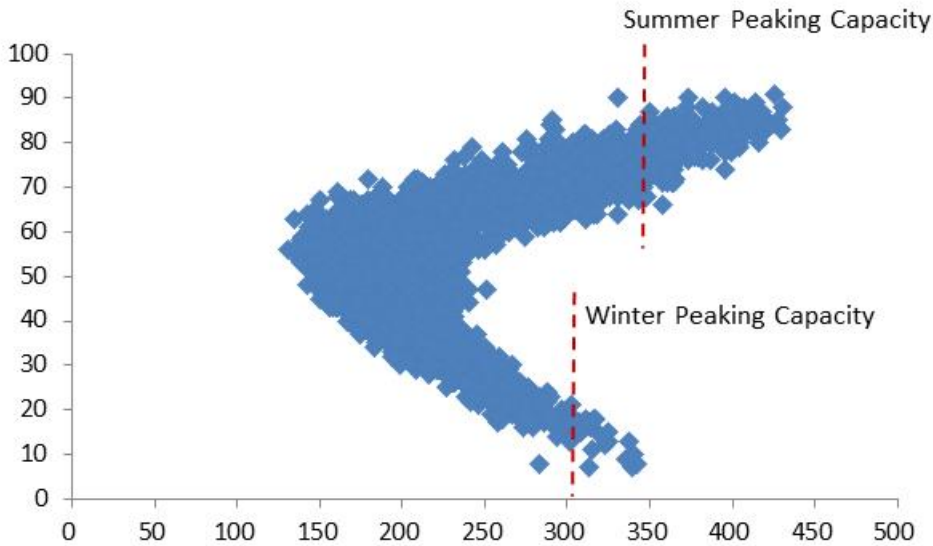


FIGURE 102: DAILY AVERAGE TEMPERATURE VS. DAILY PEAK HOURLY LOAD BETWEEN SEPTEMBER 2005 AND AUGUST 2015

The capacity analysis shows that the District is generally well supplied. Throughout the year the District carries a surplus, on average. As noted previously in the monthly load/resource balance analysis, the District faces the greatest risk of deficit capacity in the summer, while generally maintaining adequate capacity the remainder of the year.

ANNUAL LOAD/RESOURCE BALANCE: 2016-2020

The following section examines the District's average load/resource balance on an annual basis from 2016-2020. **Figure 13** and **Figure 14** show that, on average, the District has sufficient energy to meet its load for the next five years. Despite having surplus energy on average, the District will be deficit energy at times due to low Slice generation, high demand, or some combination of the two.

Note, that due to the Frederickson delta hedging program there are times when including Frederickson in the load/resource balance may result in a position that is more deficit than without it (for example calendar year 2016 below). This is caused by a mismatch in the timing of when the hedges are executed and when the load/resource is being reported. For example, the delta hedging program may signal a buy-back of a hedge sale for one month but due to liquidity the buy-back has not been executed, however the underlying position may show not generation or that month. Thus, until the buy-back of the hedge is executed the position will be negative.

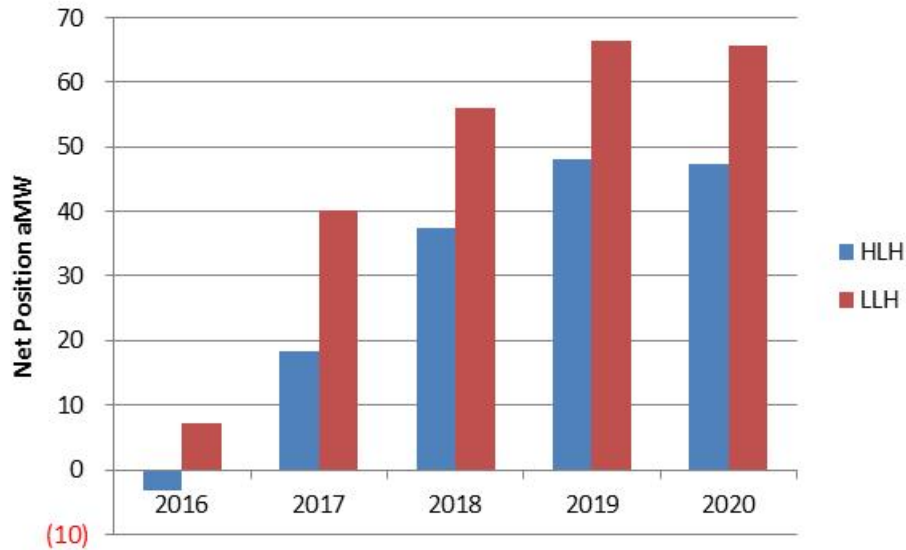


FIGURE 113 – 2016-2020 ANNUAL NET POSITION, 50TH PERCENTILE SLICE, EXPECTED LOAD, FREDERICKSON ECONOMICALLY DISPATCHED

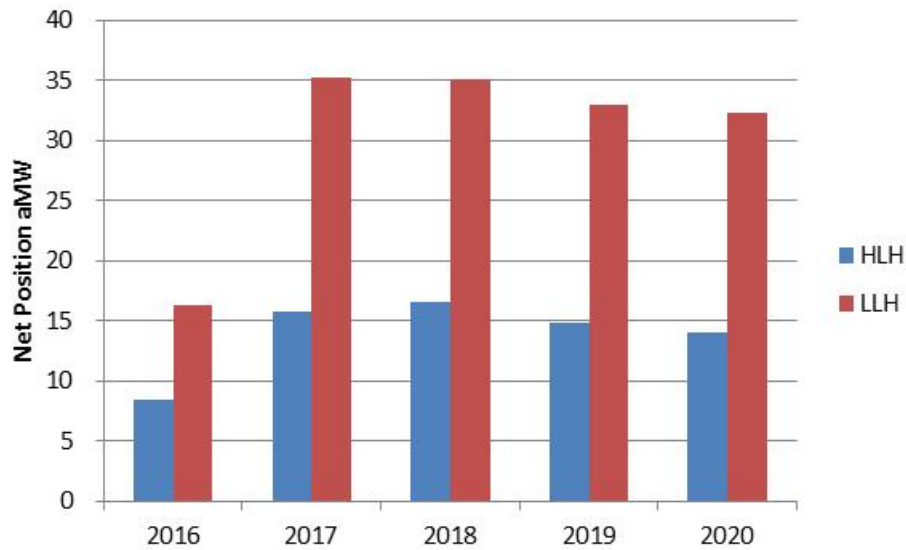


FIGURE 124 – 2016-2020 ANNUAL NET POSITION, 50TH PERCENTILE SLICE, EXPECTED LOAD, FREDERICKSON EXCLUDED

RENEWABLE LOAD/RESOURCE BALANCE: 2016-2020

The District has three resources that qualify as renewable energy sources under EIA. In order to comply with the EIA the District must meet the following targets with qualifying renewable energy, or RECs:

- At least three percent of its two year average load through December 31, 2015.

- At least nine percent of its two year average load by January 1, 2016, and each year thereafter through December 31, 2019
- At least fifteen percent of its two year average load by January 1, 2020, and each year thereafter

As can be seen in **Table 10**, it's anticipated that the District will have sufficient renewable resources to meet EIA requirements through the end of 2019. Starting in 2020 the District becomes short RECs as RPS requirements increase to 15%.

In addition to the District's qualifying renewable resources, the District also entered into an agreement to purchase approximately 33,000 Bio-Fuel RECs per year beginning 2016 through 2025. The District also issued an RFP to purchase standalone RECs for delivery beginning 2015 through 2024. On September 18, 2013, the Washington Department of Commerce issued an opinion that Biofuel's proposed landfill gas plant would be a renewable distributed-generation (DG) facility under the state's Energy Independence Act, passed as Initiative 937 in 2006. The law counts DG and the associated RECs as double.

Year	Load (aMW)	RPS	RPS	White Creek	Nine Canyon	BPA REC	Bio-Fuel REC	Idaho Wind	Total RECs	REC Balance
2016	198.7	9%	18	3.0	2.7	1.1	7.6	3.5	17.9	0.0
2017	200.2	9%	18	3.0	2.7	1.1	7.6	3.5	17.9	(0.1)
2018	201.2	9%	18	3.0	2.7	1.1	7.6	3.5	17.9	(0.2)
2019	202.0	9%	18	3.0	2.7	1.1	7.6	3.5	17.9	(0.3)
2020	202.8	15%	30	3.0	2.7	1.1	7.6	3.5	17.9	(12.5)

TABLE 10 - RENEWABLE LOAD/RESOURCE NET POSITION

Year	Annual Bio-Fuel REC Purchases	Annual Idaho Wind Partners
2016	66,000	31,000
2017	66,000	31,000
2018	66,000	31,000
2019	66,000	31,000
2020	66,000	31,000

TABLE 11 - REC PURCHASES

SECTION IV: BUDGETING

FINANCIAL MODEL ASSUMPTIONS

This section outlines the major cost and revenue assumptions made in the Financial Model and used in the development of the District's budget.

FIXED COST ASSUMPTIONS

The following assumptions were developed by Benton PUD Power Management staff and The Energy Authority (TEA), and reviewed by Benton PUD Risk Management Committee. Assumptions

are for the five year period, FY 2016-2020. Assumptions are updated at least annually. Note: fiscal year (FY) refers to the BPA fiscal year which runs from October 1 through September 30.

BPA FIXED COSTS, RATES & ESCALATION ASSUMPTIONS

- **BPA Composite Charge:** This charge is designed to collect revenue for BPA based on the majority of its costs. It is based on the District's Tier One Cost Allocator (TOCA) and the BPA Composite rate. TOCA is calculated as the lesser of the District's Net Requirements (NR) and Rate Period High Water Mark (RHW), divided by the sum of all of BPA's customer's RHW. The RHW is 199.6 aMW in FY2016. The NR is 208.02 aMW for FY2016. The RHW is the limiting factor in FY2016-2020 when accounting for expected future load growth. The FY2016 TOCA is 2.85858% and the Composite Charge is \$2,062,767/TOCA %/month, a 5.2% increase from FY2015. The Composite Charge is forecast to increase by 6% in FY2018 to \$2,186,533/TOCA %/month.
- **Non-Slice Charge:** This charge is actually a credit. It is designed to return to customers certain BPA credits, primarily their wholesale sales revenues. It is based on the District's Non-Slice TOCA (NSTOCA) and the Non-Slice BPA Rate. The NSTOCA is the difference between the District's TOCA and its Slice percentage (1.36985%). In FY2016, NSTOCA is 1.48873%. The Non-Slice Rate is \$(306,652)/NSTOCA %/month in FY2016, a 1.7% decrease from the FY2015. This charge is not expected to change in FY2018.
- **BPA Cost Recovery Adjustment Charge (CRAC):** BPA rates have the provision for an adjustment to the base rates if BPA is projecting end of year reserve levels lower than certain thresholds. The likelihood of a CRAC triggering in FY2016 is near 0%. Therefore, no CRAC is included in the District's 2016 budget.
- **Slice True-Up:** Energy Northwest's long term debt was restructured during FY2014, resulting in a substantial Slice True-Up credit of \$2.1 million for FY2014. While the refinancing is not expected to change the overall cost of the debt, it back-end loaded the debt such that Slice costs are expected to be lower in the near term and higher in the long term. The Slice True-Up credit estimate for 2015 is \$1.9 million. BPA does not project any future refinancing opportunities in 2016. In addition, BPA set rates for FY16-17 at \$20M less than their final budgets. If BPA spends to their budget levels, a slice true-up charge of \$275k is possible. Since BPA has a track record of underspending their budgets, a true-up credit of \$500k is budgeted in 2016 and no slice true-up is budgeted for FY17-20.
- **Load Shaping Charge:** Under the TRM, the Load Shaping Charge only applies to load following and block products. The Composite and Non-Slice Rates assume that customers receive monthly diurnal BPA power based on the monthly diurnal critical water shape of the FBS, which is how power is provided under the Slice product. Since the District takes the block product, it is subject to the load shaping charge. In some months, its block energy will be greater than its share of critical FBS and some months it will be less. The monthly diurnal difference will be multiplied by the BPA load shaping rate to determine the load shaping charge. The load shaping rate is BPA's rate case estimate of the Mid-C market.

The charge is a credit of \$376,753 in 2016, about a \$32,630 decrease from the previous year. A pattern of larger credits in the even years followed by smaller credits in the odd years will continue due to the CGS outage falling in the odd years. The size of the FBS is smaller due to the outage, but the District is still able to purchase its total RHW or NR.

- **Long-Term Point-to-Point Transmission Cost:** Fixed at \$9,086,040 in 2016. Long-term PTP rates are expected to increase by 6% in FY2018.
- **Load Regulation Cost:** \$220,400 in FY2016. The escalation assumption is 6% in FY2018.
- **Operating Reserves – Spinning:** \$676,000 in 2016. The escalation assumption is 6% in FY2018. Spinning Reserves are 3% of total transmission schedules for generation and load.
- **Operating Reserves – Supplemental:** \$619,000 in FY2016. The escalation assumption is 6% in FY2018. Supplemental Reserves are 3% of total transmission schedules for generation and load.
- **Energy Imbalance/UAI:** \$100,000 per year.
- **GTA Wheeling Credit, Net:** \$1,200 per year.
- **Low Voltage Delivery Power Factor Charge:** \$29,269 per year.
- **Short-Term Firm/Non-Firm Transmission Costs:** This captures the cost of transmission from White Creek Wind to Rock Creek Substation. The cost is \$49,400 in 2015, and decreases by approximately 0.3% per year through 2017.
- **REP Refund:** The customer specific T1 refund is calculated as the District's TOCA multiplied by the T1 Customer Refund Amount (\$38,268,808). The refund amounts to the District in 2016-2019 are shown in **Table 12**. Note the credit ends in FY2019.

Fiscal Year	Scaled TOCA	Amount	BPUD TOCA Refund	02 Refund	Refund Amount	Monthly Credit
2016	2.9177%	\$38,268,808	\$1,116,569	\$1,074,609	\$2,191,178	(\$182,598)
2017	2.9020%	\$38,268,808	\$1,110,561	\$1,074,609	\$2,185,170	(\$182,097)
2018	2.8296%	\$38,268,809	\$1,082,854	\$1,074,609	\$2,157,463	(\$179,789)
2019	2.8296%	\$38,268,809	\$1,082,854	\$1,074,609	\$2,157,463	(\$179,789)
2020	0.0000%	\$0	\$0	\$0	\$0	\$0

TABLE 12 - REP REFUND AMOUNTS

- **Irrigation Mitigation Credit:** This credit is received each year from May through September. It is computed based on the energy values in Ex. D and a rate of \$11.77 per MWh resulting in \$3,675,055 in 2016. **Table 13** displays the monthly credit that the District receives.

May	June	July	August	September
(\$531,154)	(\$752,433)	(\$890,036)	(\$628,430)	(\$320,340)

TABLE 13 - IRRIGATION MITIGATION CREDIT AMOUNTS

- **Net Cost of Conservation:**

Conservation	2016	2017	2018	2019	2020
BPA EEI Allocation	(\$1,900,589)	(\$1,000,000)	(\$2,520,717)	(\$1,379,283)	(\$2,610,952)
Cost of Conservation	\$2,043,296	\$1,926,713	\$2,720,717	\$2,810,952	\$2,810,952
Net Cost of Conservation	\$142,707	\$926,713	\$200,000	\$1,431,669	\$200,000

TABLE 14 - ANNUAL CONSERVATION COST (CREDIT), NET

- **NERC Reliability Compliance Cost Support:** In accordance with the District's Internal Compliance Program, the 2016 Budget includes cost support for meeting NERC Reliability Compliance requirements.

- **BPA Prepay Credit:** The District entered into an agreement with BPA to prepay its future power costs for the remainder of the RD Slice contract beginning May 2012 and ending September 2028. In return, the District receives a discount on its monthly BPA power bill of 13,348/mo for the remainder of the term. The discount received from BPA outweighs the cost of funding the bonds that paid for the prepayment.

OTHER COSTS

- **Benton PUD Internal Costs/NERC/WECC Assessment Fee:** \$816,612 per year in 2016, increasing to \$849,436 in 2020. A WECC Peak Assessment adder is included each year ranging from \$37,926 starting in 2016 to \$39,132 in 2020.
- **The Energy Authority (TEA)** provides power, fuel, and risk management services to the District. The fee that TEA charges the District for these services is broken into two components:
 - Ongoing services where the level of effort is reasonably predictable. Examples of the types of services include scheduling, tagging, trading, month-end settlement, and risk management reporting and RMC meeting attendance. \$117,886 per month will be charged for Scheduling and Risk Management Services in 2016. The fixed price is assumed to increase by 3% annually. There is a legacy PRM credit of \$4,500/mo that expires in Jun-17.
 - A fixed monthly charge for consulting services equal to \$14,000 per month during 2016 or \$168,000 per year with a year-end true-up to actual.
 - Under- or over-collections of consulting dollars are reflected in the subsequent year consulting services budget.
 - Consulting expenditures are for non-recurring work items, and/or work items where the level of effort is more difficult to predict. Consulting charges are billed at TEA's hourly billing rates multiplied by actual hours worked. The consulting charge also includes charges for third-party vendors such as attorneys and some consulting work that is contracted through TEA in support of the District's and possibly others' power and risk management requirements.

NON BPA RESOURCE COSTS

- **Hedging costs:** \$600,000 per year is budgeted for option premiums.
- **Frederickson:** Fixed costs escalate by approximately 0.9% per year, and variable O&M by 3% per year. There is no escalation in the capacity charge per the Frederickson contract.
- **White Creek Wind 1:** \$1,015,306 in 2016. Costs escalate by approximately 1.6% in subsequent years.
- **LL&P Wind:** \$533,396 in 2016. Costs escalate by 2% per year.
- **Nine Canyon Wind Phases 1 & 3:** \$1,936,856 in 2016 including transmission costs, escalates by about 2.5% per year through 2030.
- **Packwood:** \$350,000 in 2016. In 2017, costs increase by 8% to \$378,000 and remain fixed through 2020.

FIVE YEAR BUDGET PROPOSAL

The District uses Monte Carlo analysis to set its annual budget. The Stochastic Model allows the District to review the possible range of future financial outcomes by subjecting the portfolio to thousands of randomly generated Slice generation, price and load scenarios. The District selects the 25th percentile net power cost from the Stochastic Model outputs as its annual budget in year 1, and the 50th percentile net power cost as the budget in years 2-5. **Table 15** shows the summary power cost information associated with the District's budget for 2016-2020. **Section V** explains the Stochastic Model in more detail, as well as provides further results related to budgeting.

Benton PUD						
Financial Model						
	2016	2017	2018	2019	2020	
I. FIXED COSTS						
BPA COSTS						
Tier 1						
Composite	\$ 70,758,989	\$ 71,820,373	\$ 75,004,528	\$ 76,129,596	\$ 79,504,800	
Non-Slice	\$ (5,478,258)	\$ (5,478,258)	\$ (5,478,258)	\$ (5,478,258)	\$ (5,478,258)	
Slice True-up/CRAC	\$ (500,000)	\$ -	\$ -	\$ -	\$ -	
Load Shaping	\$ (376,753)	\$ (191,216)	\$ (352,953)	\$ (184,552)	\$ (349,430)	
Other BPA						
REP Refund	\$ (2,189,676)	\$ (2,178,243)	\$ (2,157,463)	\$ (1,618,097)	\$ -	
BPA Power Prepay Credit	\$ (161,256)	\$ (161,256)	\$ (161,256)	\$ (161,256)	\$ (161,256)	
Irrigation Mitigation	\$ (3,675,055)	\$ (3,675,055)	\$ (3,675,055)	\$ (3,675,055)	\$ (3,675,055)	
Conservation	\$ (1,900,589)	\$ (1,000,000)	\$ (2,520,717)	\$ (1,379,283)	\$ (2,610,952)	
Transmission						
Long-Term PTP	\$ 9,086,040	\$ 9,222,331	\$ 9,631,202	\$ 9,775,670	\$ 10,209,075	
Short-Term PTP	\$ 49,152	\$ 49,004	\$ 48,874	\$ 48,757	\$ 48,702	
Load Regulation	\$ 220,400	\$ 223,026	\$ 234,345	\$ 238,017	\$ 251,754	
Operating Reserves -- Spinning	\$ 676,141	\$ 711,003	\$ 738,936	\$ 758,899	\$ 818,750	
Operating Reserves -- Supplemental	\$ 619,796	\$ 651,752	\$ 677,358	\$ 695,658	\$ 750,521	
Energy Imbalance UAI	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	
GTA Delivery Charge	\$ 14,400	\$ 14,400	\$ 14,400	\$ 14,400	\$ 14,400	
Low Voltage Delivery, Power Factor Charges	\$ 29,269	\$ 29,269	\$ 29,269	\$ 29,269	\$ 29,269	
PTP Resales	\$ (686,424)	\$ (686,424)	\$ (686,424)	\$ (686,424)	\$ (686,424)	
NON BPA RESOURCE COSTS						
Frederickson	\$ 7,659,461	\$ 7,728,310	\$ 7,798,991	\$ 7,871,559	\$ 7,946,066	
White Creek	\$ 1,550,164	\$ 1,576,866	\$ 1,605,903	\$ 1,635,931	\$ 1,668,471	
Nine Canyon	\$ 2,092,011	\$ 2,145,088	\$ 2,199,514	\$ 2,255,325	\$ 2,307,469	
Packwood	\$ 350,000	\$ 378,000	\$ 378,000	\$ 378,000	\$ 378,000	
OTHER POWER COSTS						
Internal Costs and WECC fees	\$ 816,612	\$ 825,605	\$ 833,470	\$ 841,413	\$ 849,436	
TEA Scheduling & Risk Management	\$ 1,414,627	\$ 1,488,558	\$ 1,554,770	\$ 1,599,793	\$ 1,646,167	
TEA Consulting	\$ 168,000	\$ 168,000	\$ 168,000	\$ 168,000	\$ 168,000	
Cost of Conservation	\$ 2,043,296	\$ 1,926,713	\$ 2,720,717	\$ 2,810,952	\$ 2,810,952	
Option Premium	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	
REC PPAs	\$ 402,690	\$ 417,210	\$ 432,390	\$ 540,900	\$ 557,400	
II. VARIABLE COSTS						
RESOURCE VARIABLE COSTS						
Frederickson						
Volumetric Charges	\$ 823,513	\$ 885,133	\$ 528,953	\$ 933,312	\$ 1,529,530	
Spot Gas	\$ (1,551,842)	\$ (189,055)	\$ 1,938,924	\$ 4,038,904	\$ 6,792,267	
Forward Gas Purchases	\$ 6,321,496	\$ 3,686,992	\$ -	\$ -	\$ -	
Forward Gas Sales	\$ (626,080)	\$ -	\$ -	\$ -	\$ -	
Forward Power Purchases	\$ 736,988	\$ -	\$ -	\$ -	\$ -	
Forward Power Sales	\$ (8,551,078)	\$ (5,302,505)	\$ -	\$ -	\$ -	
Spot Power HLH	\$ 1,308,631	\$ 247,846	\$ (1,881,686)	\$ (3,449,957)	\$ (5,855,120)	
Spot Power LLH	\$ 563,274	\$ (74,783)	\$ (1,087,320)	\$ (2,200,540)	\$ (3,834,256)	
BALANCING MARKET						
HLH Sales	\$ (6,959,663)	\$ (10,193,711)	\$ (9,882,277)	\$ (10,423,799)	\$ (11,282,551)	
HLH Purchases	\$ 6,658,070	\$ 8,229,939	\$ 7,555,874	\$ 8,294,522	\$ 9,393,861	
LLH Sales	\$ (4,606,432)	\$ (7,385,253)	\$ (6,690,302)	\$ (7,442,387)	\$ (8,149,364)	
LLH Purchases	\$ 3,923,869	\$ 4,387,102	\$ 3,734,340	\$ 4,284,583	\$ 4,950,293	
REC Sales	\$ -	\$ -	\$ -	\$ -	\$ -	
FORWARD MARKET						
Sales HLH	\$ (293,832)	\$ -	\$ -	\$ -	\$ -	
Sales LLH	\$ (356,762)	\$ -	\$ -	\$ -	\$ -	
Purchases HLH	\$ 614,460	\$ -	\$ -	\$ -	\$ -	
Purchases LLH	\$ -	\$ -	\$ -	\$ -	\$ -	
Option Value HLH	\$ -	\$ -	\$ -	\$ -	\$ -	
Option Value LLH	\$ -	\$ -	\$ -	\$ -	\$ -	
NET POWER COST	\$ 81,687,648	\$ 80,996,759	\$ 83,955,050	\$ 87,343,852	\$ 91,242,517	

TABLE 15 - FIVE YEAR BUDGET PROPOSAL

2016 VS. 2015 BUDGET VARIANCE

The 2016 net power supply budget increased approximately 6.9% relative to 2015. **Table 16** summarizes the major year over year changes. **Table 17** shows the change in the cost per MWh from BPA. **Table 18** compares the detailed 2016 power supply budget to the 2015 budget.

Power Supply Summary	2015 Budget	2016 Budget	% Change
BPA Purchased Power	\$56,093	\$58,755	4.7%
Other Purchased Power	\$19,152	\$29,555	54.3%
Net Conservation	\$2,088	\$143	-93.2%
Purchased Transmission and Ancillary Services	\$12,410	\$12,818	3.3%
Gross Power Supply	\$89,745	\$101,270	12.8%
Net Power Supply	\$76,955	\$81,688	6.1%

TABLE 16 - POWER SUPPLY BUDGET VARIANCE SUMMARY (\$ THOUSANDS)

BPA Power & Transmission	2015 Budget	2016 Budget	% Change
BPA Power & Transmission Expense	\$67,247,359	\$69,673,189	3.6%
MWh from BPA	1,909,658	1,873,476	-1.9%
Cost per MWh from BPA	\$35.21	\$37.19	5.6%

TABLE 17 - COST PER MWH FROM BPA

As seen in Table 16, sales for resale are up 53.1% over 2015. About \$8M of sales and offsetting purchases were added in 2016 to account for the amount of additional transactions that result from within month sales/purchases and other market activity.

However, the net of all market sales, purchases, and Frederickson variable costs is down from \$5.5M in 2015 to \$2.0M in 2016. This is due to less slice generation due to the drought in 2015 and much lower market prices (\$24/MWh in 2016 vs \$33/MWh in 2015 for HLH).

Benton PUD Financial Model	2015 Budget	2016 Budget	\$ Change	% Change
I. FIXED COSTS				
BPA COSTS				
Tier 1				
Composite	\$ 68,060,715	\$ 70,758,989	\$ 2,698,274	4.0%
Non-Slice	\$ (5,326,363)	\$ (5,478,258)	\$ (151,895)	2.9%
Slice True-up/CRAC	\$ (1,200,000)	\$ (500,000)	\$ 700,000	-58.3%
Load Shaping	\$ (409,383)	\$ (376,753)	\$ 32,630	-8.0%
Other BPA				
REP Refund	\$ (2,157,455)	\$ (2,189,676)	\$ (32,221)	1.5%
BPA Power Prepay Credit	\$ (161,256)	\$ (161,256)	\$ -	0.0%
Irrigation Mitigation	\$ (3,122,392)	\$ (3,675,055)	\$ (552,663)	17.7%
Conservation	\$ (580,843)	\$ (1,900,589)	\$ (1,319,746)	227.2%
Transmission				
Long-Term PTP	\$ 8,966,145	\$ 9,086,040	\$ 119,895	1.3%
Short-Term PTP	\$ 49,305	\$ 49,152	\$ (153)	-0.3%
Load Regulation	\$ 216,776	\$ 220,400	\$ 3,624	1.7%
Operating Reserves -- Spinning	\$ 622,454	\$ 676,141	\$ 53,687	8.6%
Operating Reserves -- Supplemental	\$ 570,296	\$ 619,796	\$ 49,500	8.7%
Energy Imbalance UAI	\$ 100,000	\$ 100,000	\$ -	0.0%
GTA Delivery Charge	\$ (190,752)	\$ 14,400	\$ 205,152	-107.5%
Low Voltage Delivery, Power Factor Charges	\$ 29,269	\$ 29,269	\$ -	0.0%
PTP Resales	\$ (500,000)	\$ (686,424)	\$ (186,424)	37.3%
NON BPA RESOURCE COSTS				
Frederickson	\$ 7,592,394	\$ 7,659,461	\$ 67,067	0.9%
White Creek	\$ 1,483,049	\$ 1,550,164	\$ 67,115	4.5%
Nine Canyon	\$ 2,040,252	\$ 2,092,011	\$ 51,759	2.5%
Packwood	\$ 350,000	\$ 350,000	\$ -	0.0%
OTHER POWER COSTS				
Internal Costs and WECC fees	\$ 894,020	\$ 816,612	\$ (77,408)	-8.7%
TEA Scheduling & Risk Management	\$ 1,394,335	\$ 1,414,627	\$ 20,292	1.5%
TEA Consulting	\$ 168,000	\$ 168,000	\$ -	0.0%
Cost of Conservation	\$ 2,669,339	\$ 2,043,296	\$ (626,043)	-23.5%
Option Premium	\$ 600,000	\$ 600,000	\$ -	0.0%
REC PPAs	\$ 300,000	\$ 402,690	\$ 102,690	34.2%
II. VARIABLE COSTS				
RESOURCE VARIABLE COSTS				
Frederickson				
Volumetric Charges	\$ 718,603	\$ 823,513	\$ 104,910	14.6%
Spot Gas	\$ 1,623,606	\$ (1,551,842)	\$ (3,175,448)	-195.6%
Forward Gas Purchases	\$ 2,592,560	\$ 6,321,496	\$ 3,728,936	143.8%
Forward Gas Sales	\$ -	\$ (626,080)	\$ (626,080)	NA
Forward Power Purchases	\$ -	\$ 736,988	\$ 736,988	NA
Forward Power Sales	\$ (3,220,416)	\$ (8,551,078)	\$ (5,330,662)	165.5%
Spot Power HLH	\$ (1,283,507)	\$ 1,308,631	\$ 2,592,138	-202.0%
Spot Power LLH	\$ (801,772)	\$ 563,274	\$ 1,365,046	-170.3%
BALANCING MARKET				
HLH Sales	\$ (1,620,251)	\$ (6,959,663)	\$ (5,339,412)	329.5%
HLH Purchases	\$ 1,766,692	\$ 6,658,070	\$ 4,891,378	276.9%
LLH Sales	\$ (1,396,444)	\$ (4,606,432)	\$ (3,209,988)	229.9%
LLH Purchases	\$ 85,282	\$ 3,923,869	\$ 3,838,587	4501.1%
REC Sales	\$ -	\$ -	\$ -	0.0%
FORWARD MARKET				
Sales HLH	\$ (1,615,704)	\$ (293,832)	\$ 1,321,872	-81.8%
Sales LLH	\$ (878,093)	\$ (356,762)	\$ 521,331	-59.4%
Purchases HLH	\$ -	\$ 614,460	\$ 614,460	NA
Purchases LLH	\$ -	\$ -	\$ -	NA
Option Value HLH	\$ (846,179)	\$ -	\$ 846,179	-100.0%
Option Value LLH	\$ (627,434)	\$ -	\$ 627,434	-100.0%
NET POWER COST	\$ 76,954,848	\$ 81,687,648	\$ 4,732,800	6.2%

TABLE 18 - 2015 VS. 2016 BUDGET VARIANCE DETAIL

Budget Item		Notes												
1.	Composite Charge	5.2% rate increase in final BP16 rates												
2.	Non-Slice Charge	Slight rate decrease in final BP16												
3.	Load Shaping Charge	Monthly diurnal final BP16 rates caused the small increase.												
4.	Conservation Credit	Conservation Credit increased \$1.3M from 2015 budget												
5.	Long-Term PTP	3.1% rate increase in final BP16 rates.												
6.	Cost of Conservation	Cost of Conservation down \$626k from 2015 budget – Net Cost of Conservation (\$143k) in 2016, inclusive of conservation credits, down \$1.9M from 2015 budget.												
7.	Frederickson	Frederickson operation is expected to contribute \$300k toward fixed charges from operations. Fixed costs are projected to increase by 1% in Jul-16.												
8.	Balancing Market	The Slice generation assumption in the 2016 budget relative to 2015 is higher. <table><tr><th>Year</th><th>2016</th><th>2017</th></tr><tr><td>2015</td><td>8,979</td><td>7,203</td></tr><tr><td>2016</td><td>9,701</td><td>7,961</td></tr><tr><td>Delta</td><td>722</td><td>758</td></tr></table>	Year	2016	2017	2015	8,979	7,203	2016	9,701	7,961	Delta	722	758
Year	2016	2017												
2015	8,979	7,203												
2016	9,701	7,961												
Delta	722	758												
9.	Forward Market	The District hedged 20% less budgeted Slice in 2015 relative to 2016 <table><tr><th>Year</th><th>% Hedged (vs. budget surplus)</th><th>HLH Hedge Price</th><th>LLH Hedge Price</th></tr><tr><td>2015</td><td>45.9%</td><td>\$32.84</td><td>\$23.03</td></tr><tr><td>2016</td><td>25.8%</td><td>\$23.85</td><td>\$14.99</td></tr></table>	Year	% Hedged (vs. budget surplus)	HLH Hedge Price	LLH Hedge Price	2015	45.9%	\$32.84	\$23.03	2016	25.8%	\$23.85	\$14.99
Year	% Hedged (vs. budget surplus)	HLH Hedge Price	LLH Hedge Price											
2015	45.9%	\$32.84	\$23.03											
2016	25.8%	\$23.85	\$14.99											

2016 PURCHASED MWHS BY MONTH

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Purchased MWHS												
BPA												
Slice HLH	47,038	46,764	51,649	50,434	60,522	60,317	46,886	45,302	40,466	46,651	49,254	56,462
Slice LLH	30,571	25,886	28,010	28,295	45,619	37,596	30,654	22,201	21,195	26,570	30,098	36,217
Block HLH	42,914	34,405	34,280	36,685	42,914	53,979	60,957	56,880	36,282	33,320	35,095	41,522
Block LLH	36,906	25,460	24,678	26,808	36,906	39,446	52,423	41,080	29,025	26,272	28,164	32,739
Total BPA Purchases	157,429	132,515	138,617	142,222	185,960	191,339	190,921	165,464	126,967	132,812	142,611	166,940
Other Power												
Frederickson HLH	20,000	-	-	-	-	-	20,000	21,600	20,000	20,800	-	-
Frederickson LLH	17,200	-	-	-	-	-	17,200	15,600	16,000	16,400	-	-
White Creek Wind HLH	1,200	1,200	1,296	1,248	1,200	1,248	1,200	1,296	1,200	1,248	1,200	1,248
White Creek Wind LLH	1,032	888	933	912	1,032	912	1,032	936	960	984	963	984
Nine Canyon Wind HLH	1,134	1,059	1,329	1,125	1,089	1,097	984	1,025	942	1,089	1,133	1,182
Nine Canyon Wind LLH	975	784	956	822	936	801	846	740	754	859	909	932
Packwood HLH	410	393	406	373	341	336	306	312	271	264	236	228
Packwood LLH	479	412	433	423	479	423	479	434	445	457	447	457
Balancing Market HLH	-	378	-	-	-	-	17,667	19,262	11,585	-	-	-
Balancing Market LLH	-	3,778	-	1,608	-	-	636	14,242	8,007	-	-	-
Total Other Power Purchases	42,430	8,893	5,353	6,511	5,076	4,817	60,350	75,447	60,164	42,100	4,888	5,031
TOTAL PURCHASES	199,859	141,408	143,970	148,733	191,037	196,156	251,270	240,911	187,132	174,912	147,499	171,971
Less												
Sales for Resale												
Balancing Market HLH	3,784	-	12,601	1,090	3,340	442	-	-	-	4,960	20,784	19,069
Balancing Market LLH	7,429	-	8,156	-	9,087	1,318	-	-	-	7,547	13,735	15,596
Swaps HLH - Slice	-	-	-	4,160	4,000	4,160	(6,000)	(6,480)	(6,000)	-	-	-
Swaps LLH - Slice	-	-	-	7,600	8,600	7,600	-	-	-	-	-	-
Swaps HLH - Thermal	8,000	8,000	8,640	8,320	8,000	8,320	20,000	21,600	20,000	16,640	16,000	16,640
Swaps LLH - Thermal	10,320	8,880	9,330	6,080	6,880	6,080	13,760	12,480	12,800	9,840	9,630	9,840
Options HLH (delta volume)	-	-	-	-	-	-	-	-	-	-	-	-
Options LLH (delta volume)	-	-	-	-	-	-	-	-	-	-	-	-
Total Sales for Resale	29,532	16,880	38,728	27,250	39,907	27,920	27,760	27,600	26,800	38,988	60,150	61,145
Losses/Imbalance												
Losses HLH	1,409	935	1,287	1,037	1,275	1,216	1,623	1,656	1,388	1,443	1,397	1,506
Losses LLH	1,099	592	729	598	1,088	779	948	1,010	883	1,005	877	1,032
Total Losses	2,508	1,527	2,016	1,634	2,363	1,994	2,571	2,665	2,272	2,448	2,274	2,537
TOTAL SALES/LOSSES	32,040	18,407	40,744	28,884	42,270	29,914	30,331	30,265	29,072	41,436	62,423	63,682
NET PURCHASES	167,819	123,001	103,226	119,848	148,767	166,242	220,939	210,646	158,060	133,477	85,076	108,288
WA \$/MWh Slice Sales for Resale												
HLH	\$ 26.82	\$ -	\$ 21.43	\$ 22.97	\$ 21.88	\$ 23.36	\$ -	\$ -	\$ -	\$ 23.07	\$ 24.09	\$ 28.60
LLH	\$ 23.77	\$ -	\$ 19.15	\$ 14.99	\$ 14.50	\$ 14.37	\$ -	\$ -	\$ -	\$ 20.39	\$ 20.35	\$ 23.28
ALL	\$ 25.41	\$ -	\$ 20.48	\$ 19.60	\$ 18.47	\$ 19.57	\$ -	\$ -	\$ -	\$ 21.89	\$ 22.42	\$ 26.26

SECTION V: MONTE CARLO ANALYSIS

STOCHASTIC MODEL OVERVIEW/ASSUMPTIONS

The District faces a number of unknown variables that have a significant impact on its bottom line. Some variables, such as customer demand for energy, can be reasonably forecasted based on historical trends. Other variables (such as energy and natural gas prices, as well as hydro generation) cannot be accurately forecasted. This is fundamental to the concept of risk management; if it were possible to consistently forecast prices and the weather, there would be little to no risk for the District to manage.

Uncertainty about these key variables translates into uncertainty about the District's financial well-being. The District aims to manage its power supply portfolio so that the cost of supplying power (net power cost) is as low as possible. However, variability in supply, demand and price can result in dramatic changes in net power cost and gross margins from year to year. Extreme conditions could threaten the financial viability of the PUD. The District, therefore, sets a conservative budget, maintains financial reserves and actively hedges its portfolio to guard against negative outcomes.

The purpose of the Stochastic Model is to define the distribution of possible outcomes. Specifically, the model generates the distribution of annual power cost by simulating thousands of scenarios of Slice generation, load, and power and gas prices. Once this has been accomplished, the modeled results can be used in a variety of ways. For example, the results can be used to quantify the likelihood of meeting budget at a given time, or to identify the variables that the District faces the greatest exposure to and perform sensitivity analysis. Furthermore, by highlighting possible unforeseen risks, the District is able to identify and test hedging strategies using the Stochastic Model. After hedges have been put in place their effectiveness can be tracked, by comparing the current portfolio's net power cost distribution with an unhedged portfolio's net power cost distribution.

STOCHASTIC MODEL RESULTS – NET POWER COST: 2016-2020

Table 19 shows the District’s annual net power cost for 2016-2020 at different probabilities of occurrence. **Figure 20 - Figure 24** show the distribution of net power cost for 2016-2020, with the budget in each year plotted for reference.

Percentile	2016	2017	2018	2019	2020
5%	\$84,222,073	\$85,216,558	\$88,437,796	\$92,151,038	\$96,466,730
10%	\$83,463,959	\$84,151,942	\$87,595,284	\$91,233,077	\$95,270,570
15%	\$82,729,959	\$83,539,598	\$86,863,644	\$90,512,608	\$94,519,837
20%	\$82,187,829	\$83,130,784	\$86,499,480	\$90,060,624	\$93,970,399
25%	\$81,687,648	\$82,670,659	\$86,065,822	\$89,582,397	\$93,433,222
30%	\$81,292,601	\$82,313,996	\$85,563,285	\$89,075,413	\$93,036,958
35%	\$80,918,625	\$81,975,732	\$85,102,642	\$88,638,789	\$92,521,575
40%	\$80,585,042	\$81,674,002	\$84,792,031	\$88,212,766	\$92,099,965
45%	\$80,332,110	\$81,293,875	\$84,341,976	\$87,838,768	\$91,677,972
50%	\$79,926,847	\$80,996,759	\$83,955,050	\$87,343,852	\$91,242,517
55%	\$79,547,665	\$80,589,772	\$83,527,176	\$86,993,117	\$90,807,304
60%	\$79,252,030	\$80,312,110	\$83,091,400	\$86,620,675	\$90,451,401
65%	\$79,023,485	\$79,989,498	\$82,711,934	\$86,208,231	\$90,117,890
70%	\$78,695,097	\$79,676,257	\$82,214,910	\$85,761,239	\$89,701,724
75%	\$78,291,125	\$79,326,342	\$81,790,549	\$85,396,928	\$89,180,545
80%	\$78,001,905	\$78,865,745	\$81,186,097	\$84,700,376	\$88,476,622
85%	\$77,546,457	\$78,340,539	\$80,299,996	\$83,668,343	\$87,596,181
90%	\$76,999,410	\$77,593,797	\$79,489,230	\$82,695,294	\$86,423,198
95%	\$76,226,394	\$76,505,750	\$77,981,755	\$80,830,587	\$85,175,196

TABLE 19 - ANNUAL NET POWER COST PERCENTILES

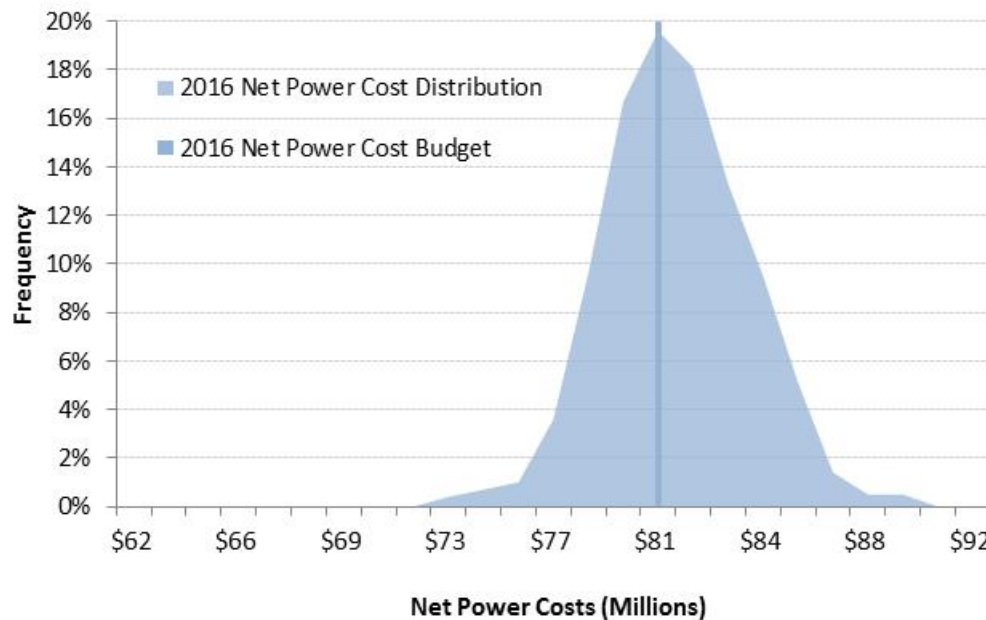


FIGURE 13 - 2016 NET POWER COST DISTRIBUTION

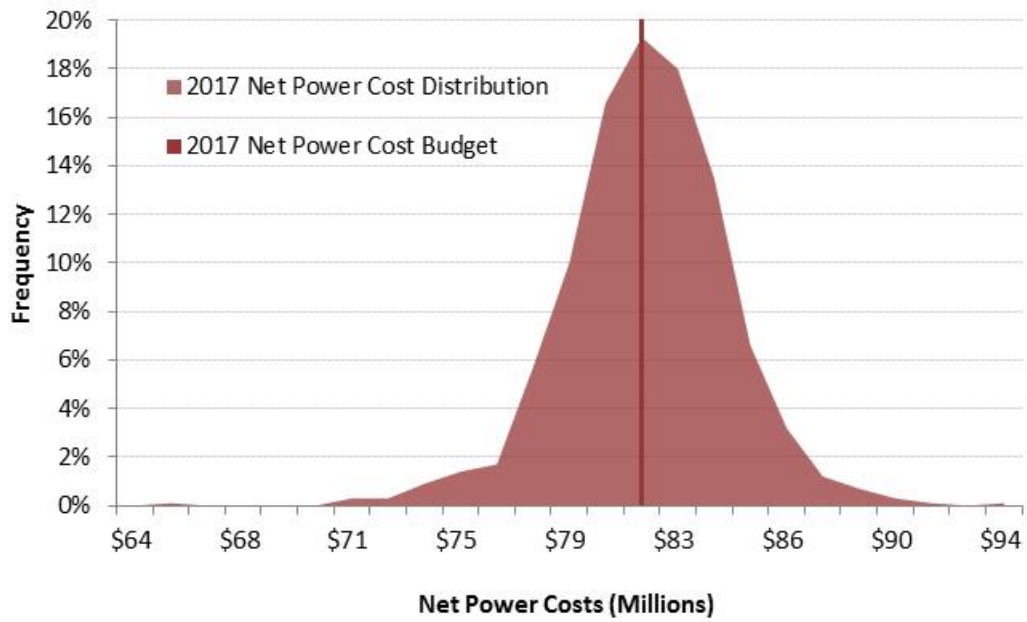


FIGURE 14 - 2017 NET POWER COST DISTRIBUTION

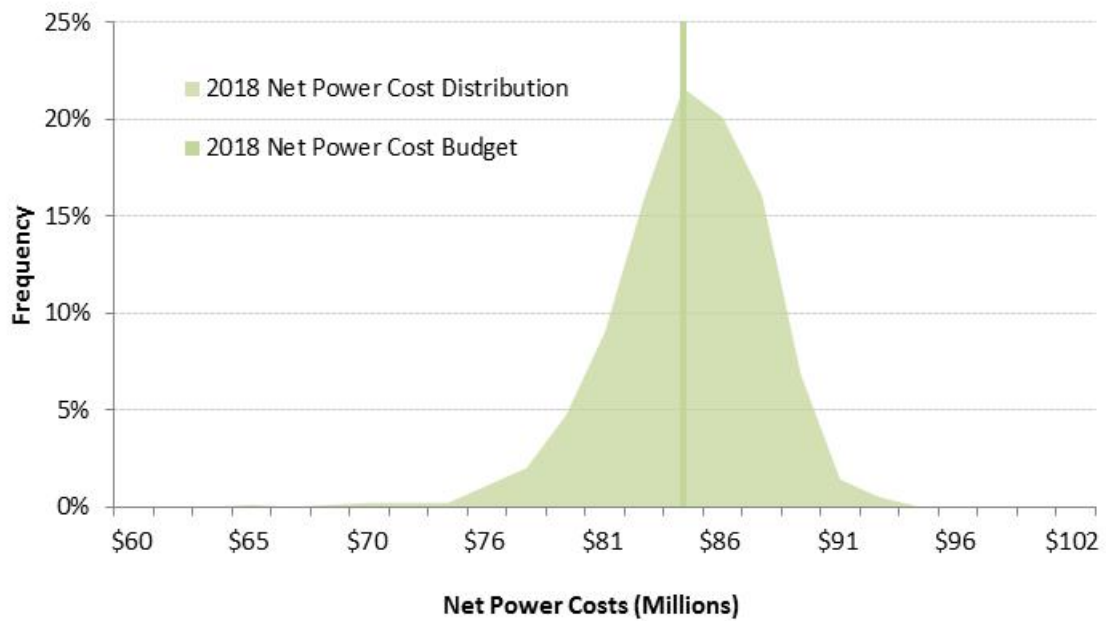


FIGURE 15 - 2018 NET POWER COST DISTRIBUTION

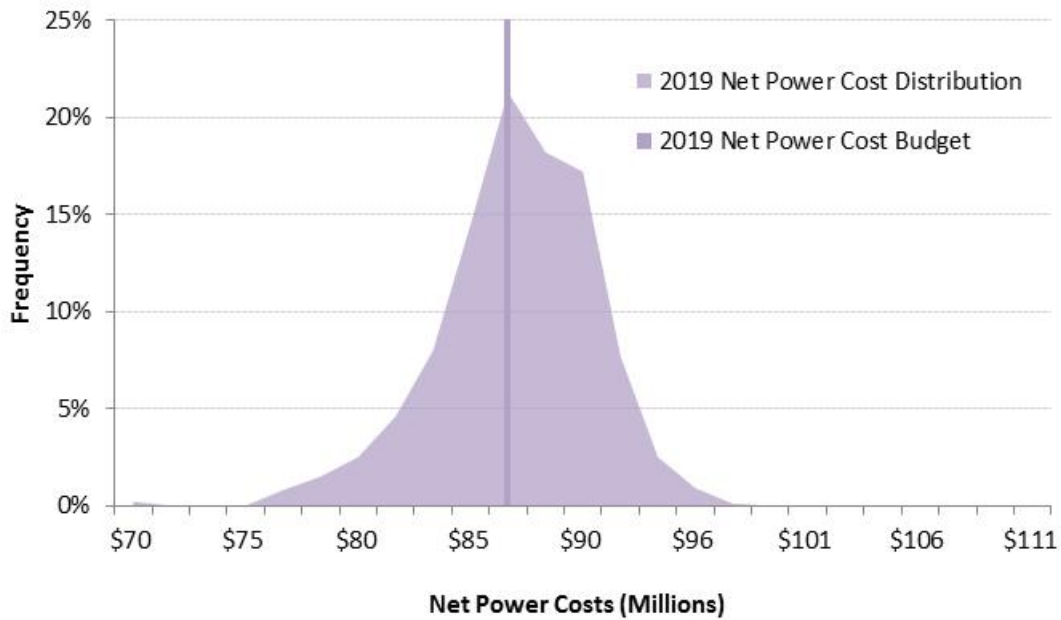


FIGURE 16 - 2019 NET POWER COST DISTRIBUTION

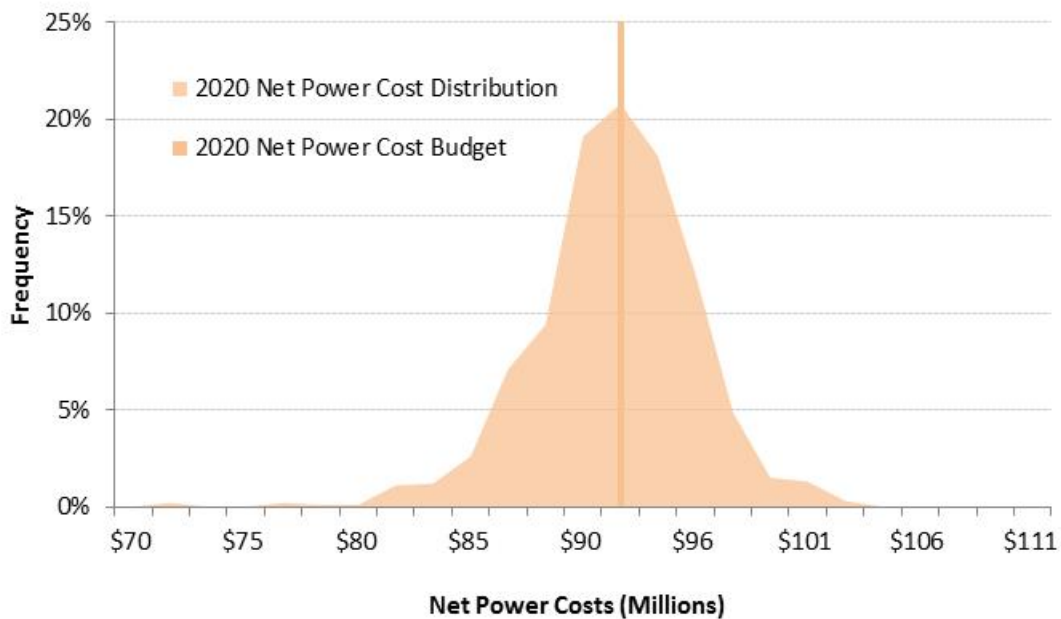


FIGURE 17 - 2020 NET POWER COST DISTRIBUTION

FINANCIAL RESERVES ANALYSIS

An additional risk management technique the District employs is to maintain financial reserves as a cushion for years when power costs exceed budget. One of the requirements of the District's Financial Reserves Policy is to include, along with other amounts, an amount equal to the difference between the 5th and 25th percentile net power cost outcomes in a given year. **Table 20** shows the reserve levels required to comply with policy in 2016-2020.

Percentile	2016	2017	2018	2019	2020
5%	\$84,222,073	\$85,216,558	\$88,437,796	\$92,151,038	\$96,466,730
25%	\$81,687,648	\$82,670,659	\$86,065,822	\$89,582,397	\$93,433,222
Reserve Level	\$2,534,425	\$2,545,899	\$2,371,974	\$2,568,641	\$3,033,508

TABLE 20 - FINANCIAL RESERVE AMOUNTS: 2016-2020

STOCHASTIC OUTPUTS

The District is exposed to a number of unknown variables that ultimately have a significant impact on its bottom line. The Stochastic Model generates the range of outcomes, thereby making it possible to drill down on poor financial outcomes in order to determine what scenarios are most detrimental to the District. This section examines the stochastic outputs from the Stochastic Model that were used in the budgeting and financial reserves sections above. **Figure 25** shows the various components of the Stochastic Model and how each flows through to produce the financial metrics important to the District.

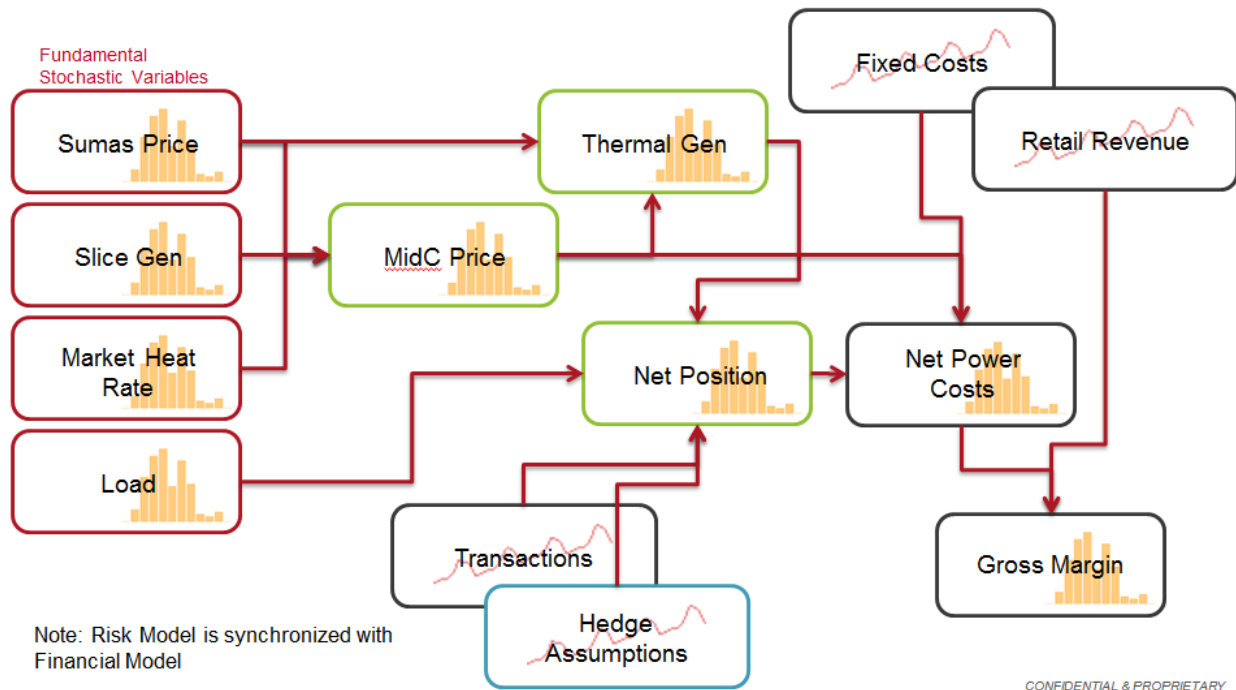


FIGURE 18 - RISK MODEL COMPONENTS FLOW-CHART

LOADS

The Load Model is based on the District's load forecast. Monthly load volatility is derived by analyzing historical loads and is used to parameterize the model. The Load Model also accounts for interactions between load and other variables in the Stochastic Model. For example, if there is found to be a correlation between price and the District's load, the model will be parameterized to capture that relationship. The load scenarios generated by the model are used in conjunction with

the Slice generation scenarios to arrive at the District's net position in each iteration. **Figure 26** shows the 10th and 90th percentile (i.e., 90% and 10% likelihood of greater loads) HLH load outputs relative to the HLH load forecast used to develop the 2016 budget. **Figure 27** shows the 10th and 90th percentile LLH load outputs relative to the LLH load forecast used to develop the 2016 budget.

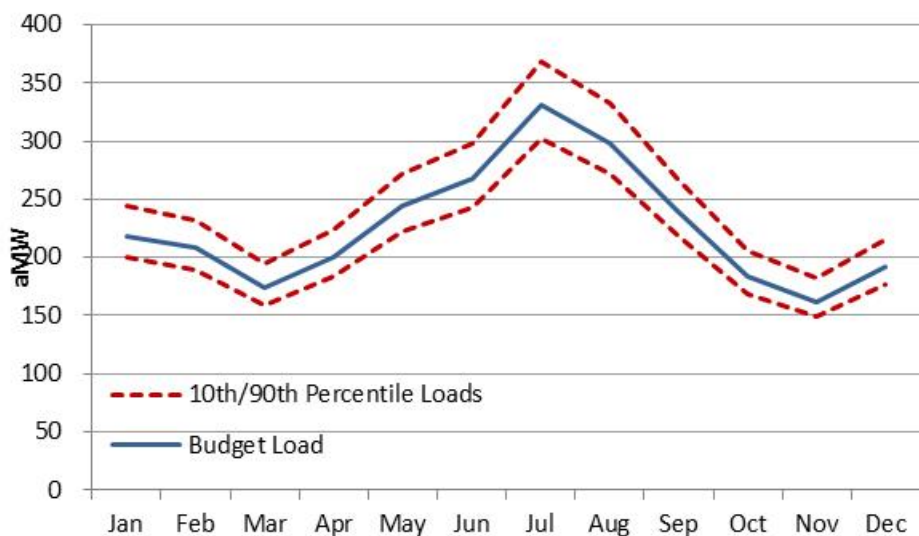


FIGURE 19 - STOCHASTIC MODEL OUTPUT: 2016 HLH LOADS

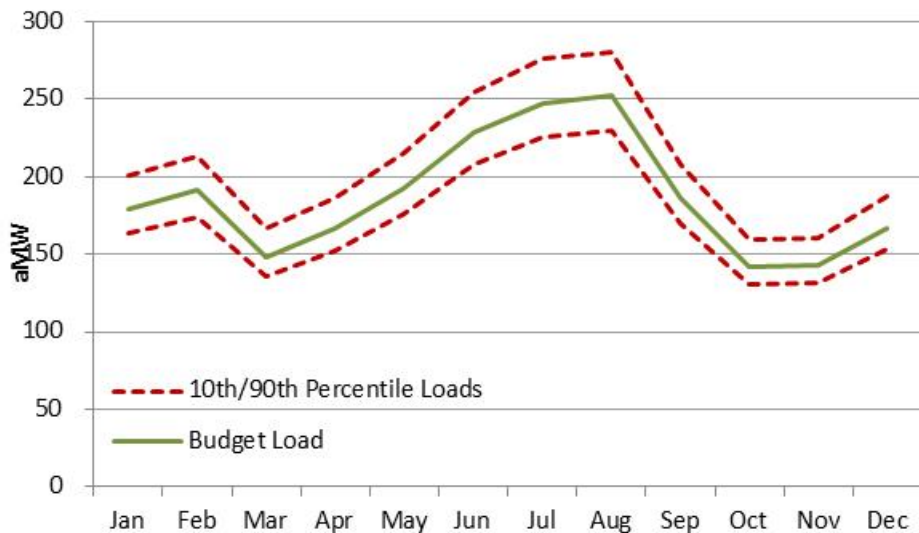


FIGURE 20 - STOCHASTIC MODEL OUTPUT: 2016 LLH LOADS

SLICE

One of the major components of the Stochastic Model is the Slice Model. Each run of the Model generates a new Slice generation scenario. Slice scenarios are parameterized based on 70 years of historical Slice generation to ensure the modeled outputs behave realistically. The Slice Model breaks down generation into five primary components:

1. Variable hydro generation:
 - a. Big federal projects (4,000-16,000 MW)
 - b. Smaller hydro independents (150-900 MW)
2. CGS (1,100 MW)
3. Miscellaneous generation (60-100 MW)
4. System obligations (0-1,000 MW)
5. HLH/LLH allocations based on observed historical shaping capabilities

Stochastic model slice outputs are shown in **Figure 28** below along with the District's budget Slice assumption.

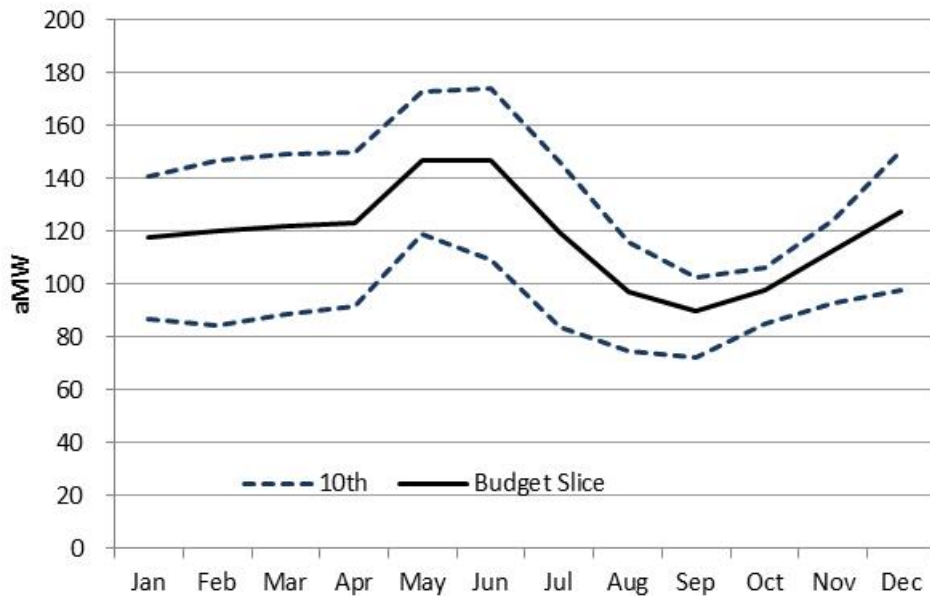


FIGURE 21 - STOCHASTIC MODEL OUTPUT: 2016 SLICE GENERATION

GAS PRICES

Natural gas plants are the marginal source of generation in the Northwest; therefore, gas prices are a key driver of power price in the region. The Gas Price Model results in a distribution around forward prices based on historical volatility. Gas prices from the model are used with heat rates to arrive at simulated power prices – this process is expanded upon in the next section. **Figure 29** shows the average gas price distribution from the Stochastic Model relative to the gas price assumed in the 2016 budget.

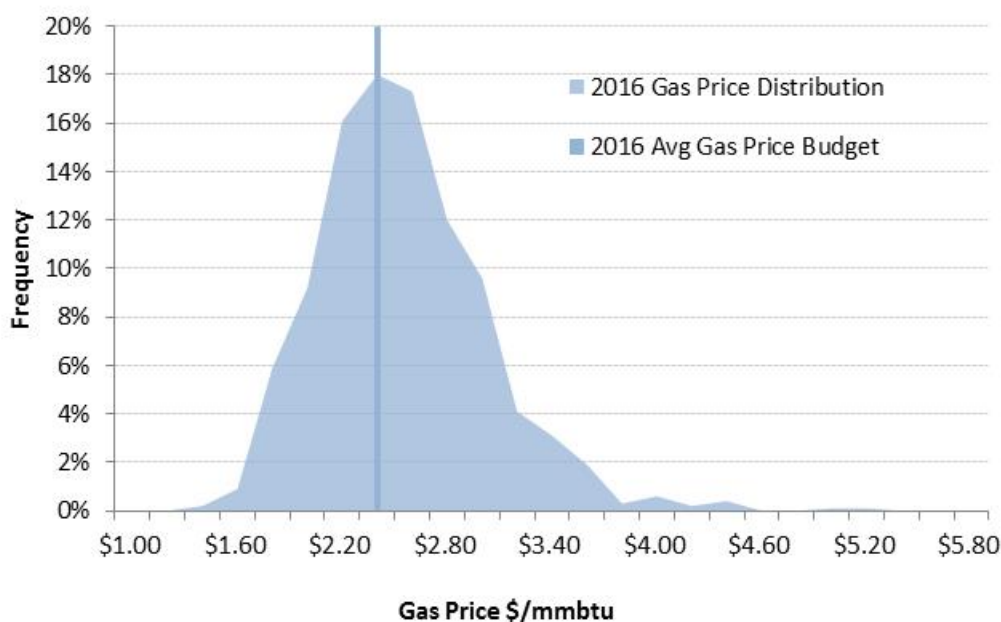


FIGURE 22 - STOCHASTIC MODEL OUTPUT: 2016 GAS PRICE DISTRIBUTION

HEAT RATE

Heat Rate is a measure of a power plant's efficiency in converting fuel to electricity, expressed as the number of British thermal units (Btu) required to generate a kilowatt hour (kWh) of electricity. In the stochastic model gas prices are generated and parameterized based on historical volatility. Market heat rates are then derived using Aurora XMP power forecasting software, by correlating market heat rates with Slice generation and WECC transmission constraints. This accounts for the fact that the effect of high gas prices can be partially offset by robust hydro generation and vice versa. Market heat rates generated by Aurora are fed into the Model and applied to simulated gas prices to arrive at simulated market power prices. **Figure 30** and **Figure 31** show the average HLH and LLH heat rate distribution from the stochastic model relative to the 2016 HLH and LLH heat rate budget assumption.

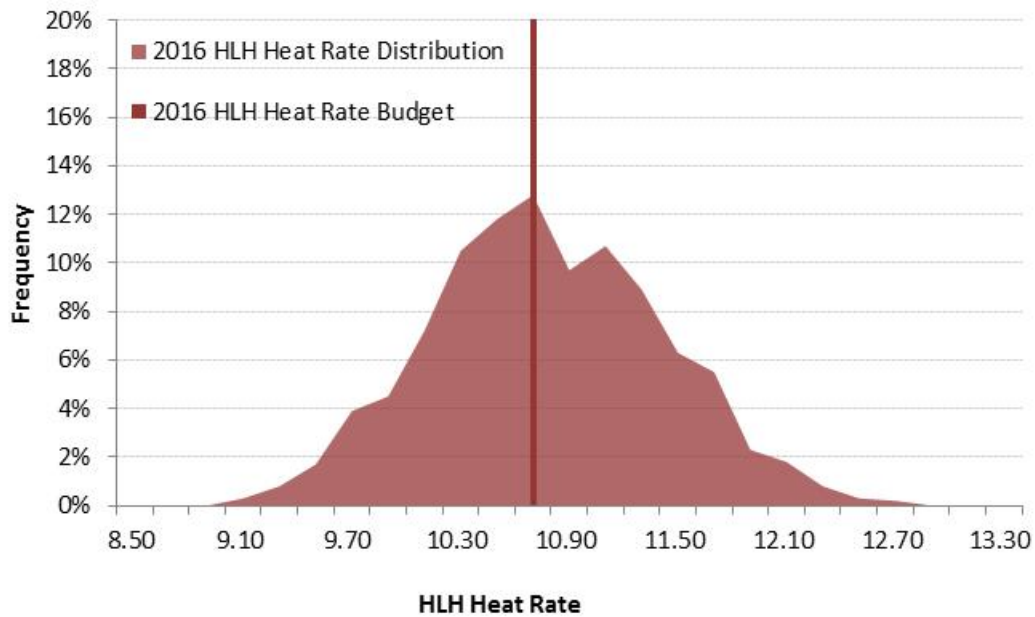


FIGURE 23 - STOCHASTIC MODEL OUTPUT: 2016 HLH HEAT RATE DISTRIBUTION

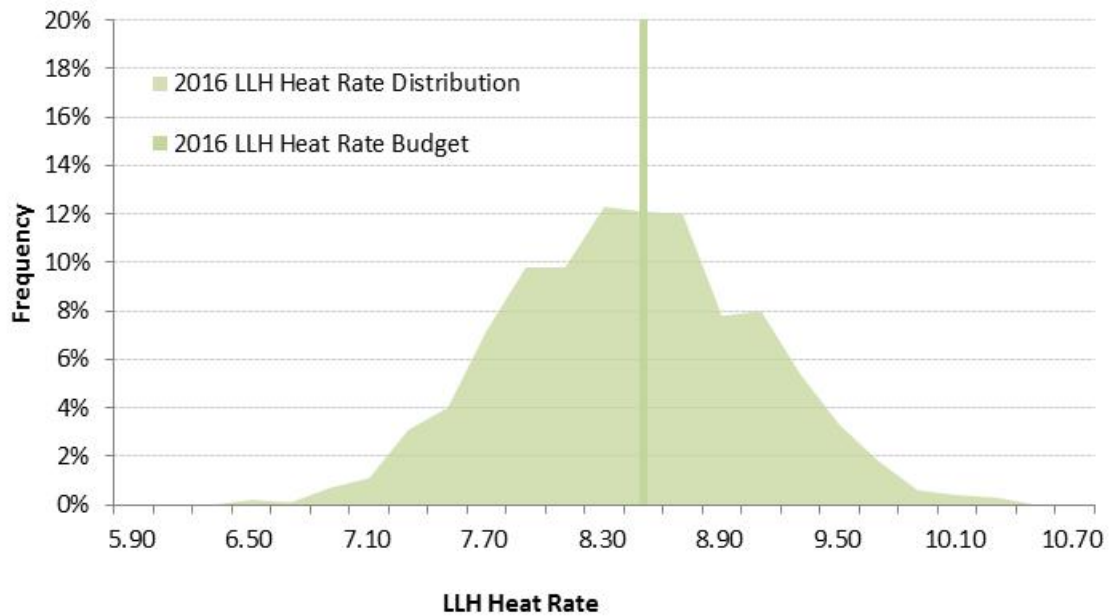


FIGURE 24 - STOCHASTIC MODEL OUTPUT: 2016 LLH HEAT RATE DISTRIBUTION

PRICE

Power prices are a function of gas price and market heat rate in the Stochastic Model. The Price Model has been parameterized so that prices behave realistically relative to gas price and Slice generation outputs in each iteration. Simulated power prices of each iteration are used to calculate the cash flows from buying and selling, deficit and surplus power. **Figure 32** and **Figure 33** show the average HLH and LLH power price distribution from the stochastic model relative to the 2016 HLH and LLH budget price assumptions.

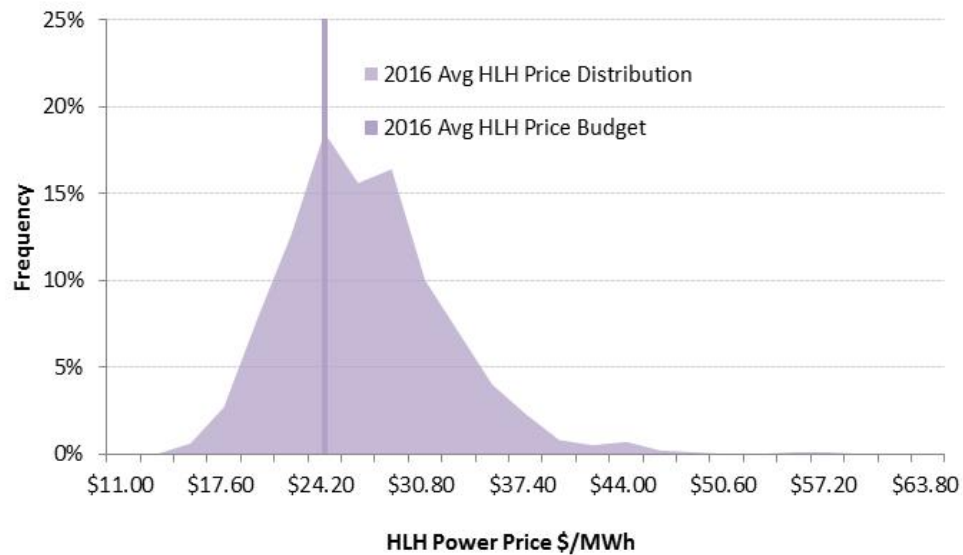


FIGURE 25 - STOCHASTIC MODEL OUTPUT: 2016 HLH POWER PRICE DISTRIBUTION

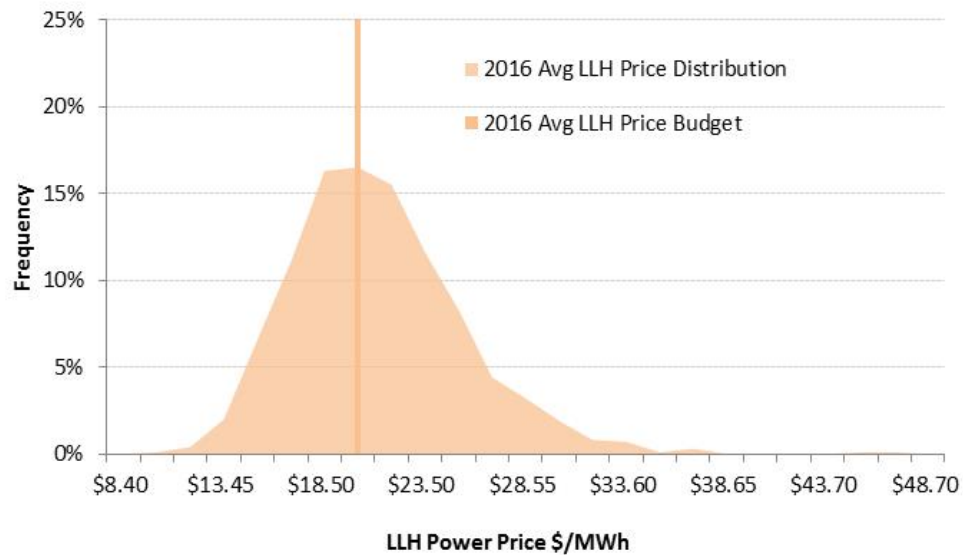


FIGURE 26 - STOCHASTIC MODEL OUTPUT: 2016 LLH POWER PRICE DISTRIBUTION