
ANNUAL

TACOMA POWER

2016

**FINANCIAL
REPORT**



Public Utility Board

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CITY OF TACOMA

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES

TACOMA POWER

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FINANCIAL DATA

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REPORT OF INDEPENDENT AUDITORS

The Chair and Members of the Public Utility Board
City of Tacoma, Washington Department of Public Utilities, Power Division
Tacoma, Washington

Report on the Financial Statements

We have audited the accompanying financial statements of City of Tacoma, Washington Department of Public Utilities, Power Division (the Division), which comprise the statements of net position as of December 31, 2016 and 2015, and the related statements of revenue, expenses, and changes in net position, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

REPORT OF INDEPENDENT AUDITORS (continued)

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Division as of December 31, 2016 and 2015, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the accompanying management's discussion and analysis on pages 5 through 13, schedule of proportionate share of net pension liability, and schedule of the city of Tacoma's contributions employer contributions on page 46 be presented to supplement the basic financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements taken as a whole. The statistical data presented on pages 47 through 64, and the superintendent's report presented on pages 65 through 82 are presented for purposes of additional analysis, and are not a required part of the financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and, accordingly, we express no opinion on it.



Tacoma, Washington
April 19, 2017

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following discussion and analysis of Tacoma Power's financial performance provides an overview of the financial activities for the years ended December 31, 2016 and 2015. This discussion and analysis is designed to assist the reader in focusing on the significant financial issues, provide an overview of the Utility's financial activities, and identify changes in the Utility's financial position. We encourage readers to consider the information presented here in conjunction with the financial statements and notes taken as a whole.

The management of the Finance Department of the City of Tacoma is responsible for preparing the accompanying financial statements and for their integrity. The statements were prepared in accordance with generally accepted accounting principles (GAAP) in the United States of America applied on a consistent basis and include amounts that are based on management's best estimates and judgment.

The basic financial statements, presented on a comparative basis for the years ended December 31, 2016 and 2015, include the Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position and Statements of Cash Flows. The Statements of Net Position present information on all of the Utility's assets, deferred outflows of resources, liabilities, and deferred inflows of resources, with the difference being reported as net position. The Statements of Revenues, Expenses and Changes in Net Position report all of the revenues and expenses during the time periods indicated. The Statements of Cash Flows provide information on cash receipts and disbursements during the year and report changes in cash resulting from operating, non-capital financing, capital and related financing, and investing activities.

The Notes to Financial Statements provide additional disclosures that are essential to a full understanding of the data provided in the financial statements. They are an integral part of the Utility's presentation of financial position, results of operations and changes in cash flows.

The Division adopted GASB Statement No. 72, *Fair Value Measurement and Application*, during fiscal year 2016. The statement provides guidance for determining fair value to certain investments and disclosures related to all fair value measurements, and requires accounting for investments at fair value (See note 3).

Financial Highlights

- Tacoma Power reported a decrease in total net position of \$3.9 million (150.6%) in 2016, compared to a decrease of \$1.6 million (106.6%) in 2015.
- Operating revenues increased \$8.0 million (1.9%) in 2016. Operating revenues in 2015 decreased \$30.6 million (6.9%).

- Utility Plant in Service increased \$143.1 million (7.7%) in 2016 and \$43.2 million (2.4%) in 2015.
- Construction work in progress decreased \$61.5 million (70.0%) in 2016 and increased \$33.2 million (60.5%) in 2015.

Overview of Financial Statements

Tacoma Power reported net operating income of \$30.4, \$34.1 and \$68.1 million in 2016, 2015 and 2014 respectively. Operating revenues increased \$8.0 million during 2016 and operating expenses increased \$11.6 million. For 2015, operating revenues decreased \$30.6 million and operating expenses increased \$3.4 million compared to 2014. Tacoma Power reported a decrease in net position of \$3.9 million in 2016 compared to a decrease of \$1.6 million in 2015 and an increase of \$23.7 million in 2014.

The following tables highlight Tacoma Power's past three years' operating results and megawatt-hours billed.

OPERATING RESULTS

(in thousands)

Category	2016	2015	2014	16/15 Increase (Decrease)	15/14 Increase (Decrease)
Operating Revenues	\$ 418,614	\$ 410,626	\$ 441,246	\$ 7,988	\$ (30,620)
Operating Expenses	388,220	376,576	373,173	11,644	3,403
Net Operating Income	30,394	34,050	68,073	(3,656)	(34,023)
Net Non-Operating Expenses	(12,716)	(20,036)	(25,138)	7,320	5,102
Capital Contributions	5,162	5,708	4,120	(546)	1,588
BABs and CREBs subsidies	3,684	3,676	3,668	8	8
Transfers Out	(30,462)	(24,969)	(26,999)	(5,493)	2,030
Change in Net Position (Net Income)	\$ (3,938)	\$ (1,571)	\$ 23,724	\$ (2,367)	\$ (25,295)

MEGAWATT-HOURS BILLED

(in thousands)

Type of Customer	2016	2015	2014	16/15 Increase (Decrease)	15/14 Increase (Decrease)
Residential	1,856	1,801	1,891	55	(90)
Commercial/General/Industrial	2,715	2,791	2,869	(76)	(78)
Wholesale	2,731	1,918	2,843	813	(925)
Total	7,302	6,510	7,603	792	(1093)

Net Position

Net position may serve over time as a useful indicator of an entity's financial position. The following analysis highlights net position for the last three years.

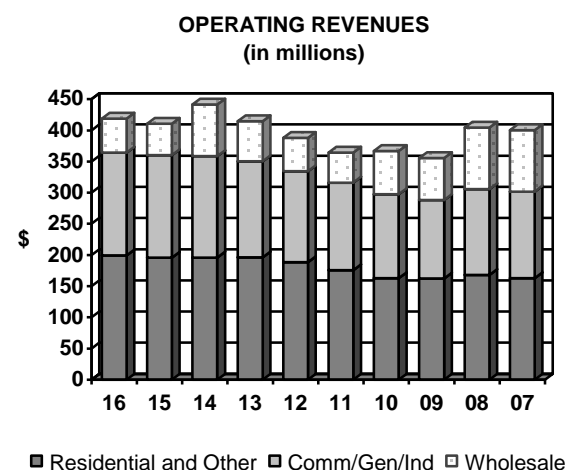
Statements of Net Position (in thousands)

<u>Description</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>16/15 Increase (Decrease)</u>	<u>15/14 Increase (Decrease)</u>
Net Utility and Non-Utility Plant	\$ 1,033,591	\$ 1,002,993	\$ 979,067	\$ 30,598	\$ 23,926
Current Assets, Other Assets and Special Funds	384,884	392,482	525,770	(7,598)	(133,288)
Total Assets	1,418,475	1,395,475	1,504,837	23,000	(109,362)
Deferred Outflows	39,469	10,977	8,026	28,492	2,951
Total Assets and Deferred Outflows	\$ 1,457,944	\$ 1,406,452	\$ 1,512,863	\$ 51,492	\$ (106,411)
Net Position:					
Net Investment in Capital					
Assets	\$ 581,629	\$ 594,626	\$ 499,659	\$ (12,997)	\$ 94,967
Restricted	15,225	21,028	34,666	(5,803)	(13,638)
Unrestricted	225,142	210,279	288,478	14,863	(78,199)
Total Net Position	821,996	825,933	822,803	(3,937)	3,130
Long-Term Debt	457,602	441,928	530,581	15,674	(88,653)
Other Liabilities	128,058	86,555	111,479	41,503	(24,924)
Total Liabilities	585,660	528,483	642,060	57,177	(113,577)
Deferred Inflows	50,288	52,036	48,000	(1,748)	4,036
Total Net Position, Liabilities and Deferred Inflows	\$ 1,457,944	\$ 1,406,452	\$ 1,512,863	\$ 51,492	\$ (106,411)

Revenues

2016 Compared to 2015

Operating revenues totaled \$418.6 million in 2016 compared to \$410.6 million in 2015, an increase of \$8.0 million (1.9%). Revenues from residential customers increased \$4.9 million (3.3%). Wholesale revenues increased \$4.1 million (8.2%) as compared to 2015. The majority of the increase was due to higher volume. Streamflows were up 116% over 2015, and were 113% of average for 2016. Generation was up 27%, while purchases were down, which left more to sell.



In 2016 residential sales accounted for 41.4% of electric revenues, commercial, general and industrial revenues accounted for 44.0% and wholesale power revenues accounted for 14.6%.

2015 Compared to 2014

Operating revenues totaled \$410.6 million in 2015 compared to \$441.2 million in 2014, a decrease of \$30.6 million (6.9%). Revenues from general customers increased \$1.3 million (1.2%). There was a rate increase of 3.8% effective 2015, which was partially offset by a decrease of 62,000 MWh billed. Wholesale revenues in 2015 decreased \$32.4 million as compared to 2014. Streamflows in 2015 were 79% of 2014 streamflows, resulting in lower generation and therefore lower sales.

In 2015 residential sales accounted for 41.4% of electric revenues, commercial, general, and industrial revenues accounted for 44.8% and wholesale power revenues accounted for 13.8%.

Expenses

2016 Compared to 2015

Total operating expenses increased \$11.6 million or 3.1% compared to 2015.

GASB 68, *Accounting and Financial Reporting for Pensions*, resulted in an increase in expense of \$10.0 million in 2016. This expense was allocated across the Power sections as follows: Admin & General \$2.9 million, Distribution \$2.9 million, Maintenance \$1.4 million, Generation \$1.0 million, Telecommunications \$0.8 million, Other \$0.7 million, and Transmission \$0.4 million.

Purchased power increased \$0.5 million (0.4%). The increase was primarily due to increased contract costs and renewable energy credits purchased offset by increased credits and decreased purchased power.

Transmission expense increased \$6.1 million (28.0%) and distribution expense increased \$10.3 million (101.5%). In 2015 Tacoma Power conducted a review of expenses and determined that a large amount of costs that were assigned to administration and general expense should be reclassified to non-administrative groups. The increases in transmission and distribution expenses are primarily due to reclassifying these expenses effective January 1, 2016.

Generation expense increased \$5.1 million (35.7%), maintenance expense increased \$4.6 million (16.7%) and other production expenses increased \$3.7 million (24.3%) primarily due to the reclassification of expenses previously mentioned.

Administration and general expenses decreased \$17.5 million (29.9%) primarily due to the reclassification of expenses previously mentioned.

2015 Compared to 2014

Total operating expenses increased \$3.4 million or 0.9% compared to 2014.

Purchased power increased \$4.9 million (4.1%). Bonneville Power Administration (BPA) purchases increased \$8.1 million. The Slice and Block portions of the BPA contract increased \$3.1 million and credits for the Energy Conservation Agreement (ECA) decreased \$5.0 million. Purchases from Priest Rapids increased \$1.6 million. Part of the contract includes a credit for a portion of the proceeds of sale of the output from the project. Credits were less in 2015 than in 2014. Purchases from Grand Coulee Project Hydroelectric Authority increased \$0.3 million due increased operating costs that were passed on to Tacoma Power. Other portfolio purchases decreased \$5.5 million primarily due to lower volume. Temperatures for most of the year were higher than normal and streamflows were lower.

Telecommunications expense increased \$5.7 million primarily due to an updated cost allocation between Power and Click! Previously, allocated costs were approximately 75% Click! and 25% Power. The cost allocation has been updated to reflect shared costs of approximately 94% to Click! and 6% to Power. This change was effective January 1, 2015.

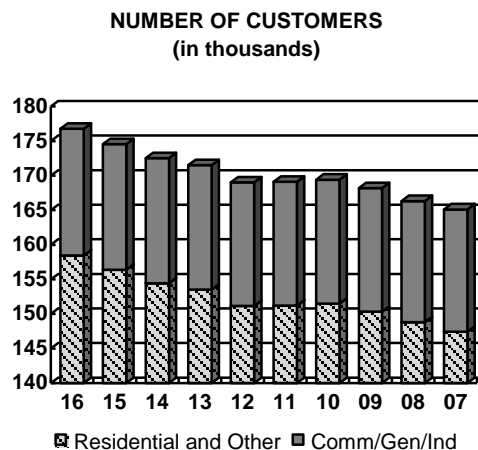
Maintenance expense decreased \$5.6 million (16.8%). Generation maintenance increased \$0.5 million primarily due to a mechanical overhaul at Wynoochee. Distribution maintenance decreased \$2.6 million and Transmission maintenance expense decreased \$3.5 million. This is mostly due to the updated cost allocation between Power and Click.

Distribution operations expense decreased \$3.6 million (26.4%) primarily due to the updated cost allocation between Power and Click! and the implementation of GASB 68, resulting in a \$1.3 million decrease in pension expense.

Generation operations expense increased \$1.9 million (15.7%). Natural Resources costs increased \$1.3 million due to testing and operations of new fish related facilities and to hiring new personnel. Contributions to the Fleet Replacement Fund increased \$0.7 million.

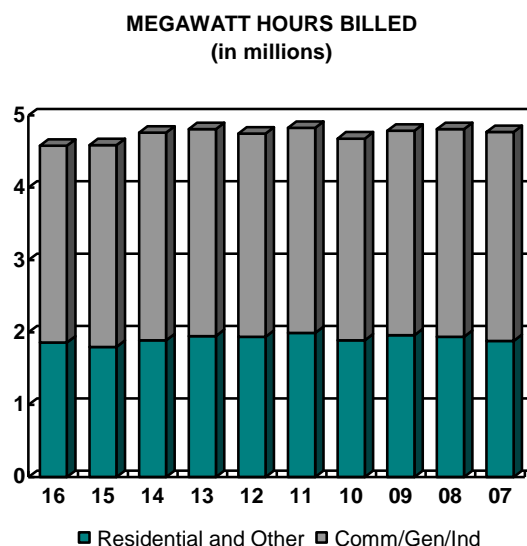
Customer Counts

Tacoma Power's overall customer growth during the past 10 years has been relatively steady averaging between less than 1% and 3% per year. The customer count for 2016 is 176,784 compared to 174,562 in 2015 and 172,531 in 2014.



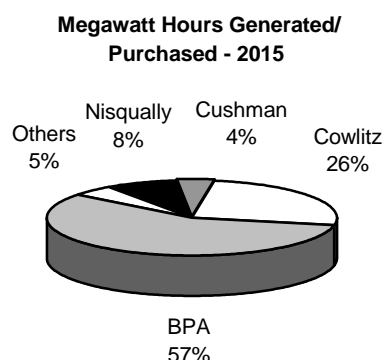
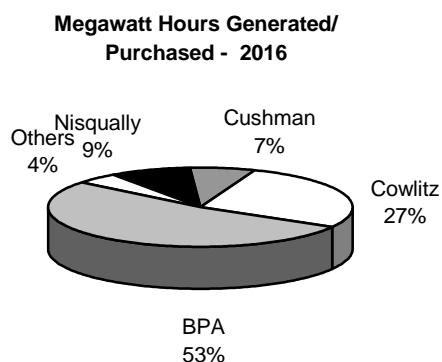
Megawatt-hours Billed

Megawatt-hours billed to residential and other customers increased 3.3% in 2016, while commercial / general / industrial billings decreased 2.5%. Wholesale power billed in 2016 was 2,731,076 megawatt-hours compared to 1,917,685 in 2015, an increase of 813,391 megawatt-hours or 42.4%. During 2016 hydro generation increased 735,503 megawatt-hours compared to the previous year. Streamflows into Tacoma Power's system were 113% of average in 2016 compared to 97% of average in 2015.



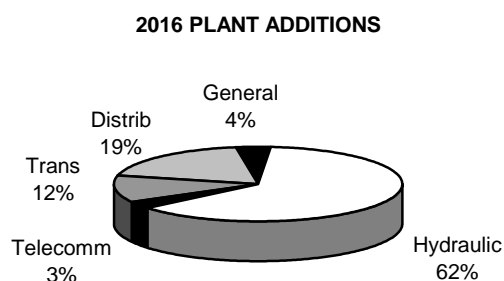
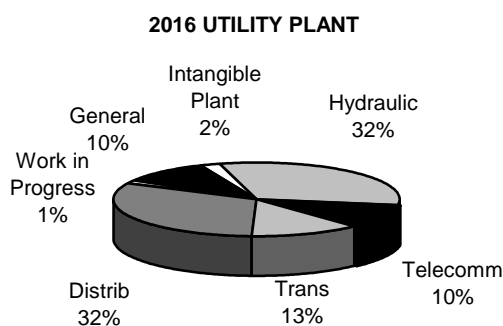
Sources of Power

Tacoma Power's total resources for power supply to serve its retail and wholesale customers for the last two years are shown in the following graphs.

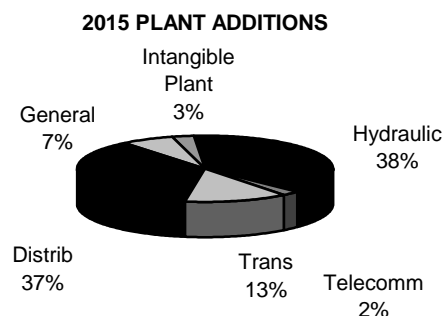
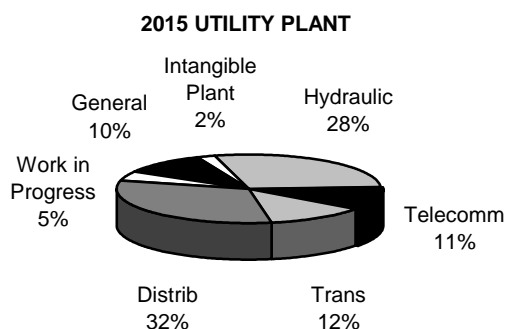


Utility Plant and Plant Additions

Tacoma Power has \$2.0 billion invested in its utility plant assets on a cost basis. The largest portion is for the generation (hydroelectric) business unit followed by the combined distribution and transmission business unit. The following graphs show the allocation of plant additions and total investment in plant.



Additions to Hydraulic plant in 2016 were \$89.2 million, which included the Cowlitz Falls Downstream Fish Passage and the Cushman License Implementation. Distribution plant additions were \$27.2 million, which included addition and replacement programs for new services, pole replacements, and road related additions and replacements. Transmission plant additions were \$16.5 million, which included system reliability improvements and substation additions and replacements.



Additions to Hydraulic plant in 2015 were \$18.2 million, which included the Cushman fish hatcheries, Wynoochee modernization, and a hydro exciter replacement program. Distribution plant additions were \$17.3 million, which included addition and replacement programs for new services, pole replacements, and road related additions and replacements. Transmission plant additions were \$6.1 million, which included system reliability improvements and substation additions and replacements.

The following table summarizes Tacoma Power's capital assets, net of accumulated depreciation, for the years ended December 31, 2016 through 2014.

Capital Assets, Net of Accumulated Depreciation
(in thousands)

<u>Net Utility Plant</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>16/15 Increase (Decrease)</u>	<u>15/14 Increase (Decrease)</u>
Intangible Plant	\$ 32,030	\$ 29,404	\$ 29,510	\$ 2,626	\$ (106)
Hydraulic Plant	441,163	359,992	349,472	81,171	10,520
Transmission Facilities	125,357	118,765	122,213	6,592	(3,448)
Distribution Facilities	290,766	284,826	288,242	5,940	(3,416)
General Plant	77,081	78,190	81,443	(1,109)	(3,253)
Telecommunications Plant	40,600	43,682	53,216	(3,082)	(9,534)
Construction Work in Progress	26,412	87,952	54,789	(61,540)	33,163
Total Net Utility Plant	<u>\$ 1,033,409</u>	<u>\$ 1,002,811</u>	<u>\$ 978,885</u>	<u>\$ 30,598</u>	<u>\$ 23,926</u>

Additional information on Tacoma Power's capital assets can be found in Note 4 of the financial statements and also in the supplementary Statistical Data.

Debt Administration

At December 31, 2016 Tacoma Power had outstanding revenue bonds of \$371.1 million, a decrease of \$14.7 million compared to 2015. No new revenue bonds were issued in 2016. On March 10, 2016 and August 16, 2016 Tacoma Power took draws of \$15 million respectively on the line of credit agreement with Wells Fargo bringing the total drawn to \$80.3 million. No draws have been taken on the 3-year line of credit agreement with Key Bank.

At December 31, 2015 Tacoma Power had outstanding revenue bonds of \$385.8 million, a decrease of \$154.3 million compared to 2014. In July 2015, Tacoma Power called \$122.1 million of Series 2005 B Electric System Revenue Bonds. No new revenue bonds were issued in 2015. On May 15, 2015 Tacoma Power entered into a 3-year line of credit agreement with Wells Fargo in the amount of \$100 million, of which draws were taken in the amount of \$50.3 million.

Also, on May 1, 2015 Tacoma Power entered into a 3-year line of credit agreement with Key Bank in the amount of \$50 million, of which no draws were taken.

All bonds are rated Aa3 by Moody's Investors Service, AA by Standard and Poor's and AA- by Fitch, Inc.

Additional information on Tacoma Power's long-term debt can be found in Note 5 of the financial statements.

Debt Service Coverage

Tacoma Power is required by its bond covenants to maintain a debt service coverage ratio of 1.25. In 2016, principal and interest were covered 2.94 times compared to 2.54 times in 2015 and 2.26 times in 2014.

Summary

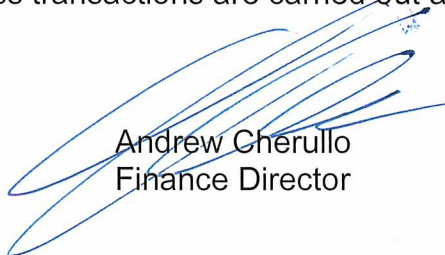
The management of the Finance Department of the City of Tacoma is responsible for preparing the accompanying financial statements and for their integrity. We prepared the financial statements according to GAAP in the United States of America, and they fairly portray Tacoma Power's financial position and operating results. The Notes to Financial Statements are an integral part of the basic financial statements and provide additional financial information.

The financial statements have been audited by Moss Adams LLP. We have made available to them all pertinent information necessary to complete the audit.

Management considers and takes appropriate action on audit recommendations. Management has established and maintains a system of controls which includes organizational, administrative and accounting processes. These controls provide reasonable assurance that records and reports are complete and reliable, that assets are used appropriately and that business transactions are carried out as authorized.



William A. Gaines
Director of Utilities/CEO



Andrew Cherullo
Finance Director

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CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER
STATEMENTS OF NET POSITION

ASSETS AND DEFERRED OUTFLOWS	DECEMBER 31,	
	2016	2015
UTILITY PLANT		
In Service, at Original Cost	\$2,004,204,782	\$1,861,142,589
Less - Accumulated Depreciation	(997,207,625)	(946,283,353)
Total	1,006,997,157	914,859,236
Construction Work in Progress	26,411,907	87,951,638
Net Utility Plant	1,033,409,064	1,002,810,874
NON-UTILITY PROPERTY	182,051	182,051
SPECIAL FUNDS		
Construction Funds	13,387,867	41,412,285
Debt Service Funds	22,180,111	24,549,803
Special Bond Reserve Funds	4,981,885	4,984,302
Wynoochee Reserve Funds	2,557,943	2,534,915
Total Special Funds	43,107,806	73,481,305
CURRENT ASSETS		
Operating Funds Cash and Equity in		
Pooled Investments	214,474,287	193,804,373
Accounts Receivable	30,021,427	30,667,987
(Net of Allowance for Doubtful Accounts of \$2,174,162 in 2016 and \$1,080,447 in 2015)		
Accrued Unbilled Revenue	28,587,295	29,427,771
Materials and Supplies	7,468,481	6,318,431
Interfund Receivables	2,226,220	1,484,313
Prepayments and Other	6,384,609	5,757,216
Total Current Assets	289,162,319	267,460,091
OTHER ASSETS		
Regulatory Asset - Conservation		
(Net of Amortization of \$25,121,809 in 2016 and \$18,629,468 in 2015)	50,071,005	46,293,923
Net Pension Asset	-	3,823,476
Conservation Loans Receivable	2,542,470	1,423,037
Total Other Assets	52,613,475	51,540,436
Total Assets	1,418,474,715	1,395,474,757
DEFERRED OUTFLOWS OF RESOURCES		
Deferred Outflow for Pensions.....	39,469,454	9,077,586
Unamortized Loss on Refunding Bonds	-	1,899,931
Total Deferred Outflows	39,469,454	10,977,517
TOTAL ASSETS AND DEFERRED OUTFLOWS.....	\$1,457,944,169	\$1,406,452,274

The accompanying notes are an integral part of these financial statements.

NET POSITION, LIABILITIES AND DEFERRED INFLOWS	DECEMBER 31,	
	2016	2015
NET POSITION		
Net Investment in Capital Assets	\$581,629,142	\$594,626,313
Restricted for:		
Wynoochee Reserve Funds	2,557,943	2,534,915
Debt Service Funds	12,667,207	14,669,173
Net Pension Asset	-	3,823,476
Unrestricted	225,141,401	210,279,420
Total Net Position	<u>821,995,693</u>	<u>825,933,297</u>
LONG-TERM DEBT		
Revenue Bonds	377,351,726	391,678,130
Revolving Line of Credit	80,250,000	50,250,000
Total Long-Term Debt	<u>457,601,726</u>	<u>441,928,130</u>
CURRENT LIABILITIES		
Current Portion of Long-Term Debt	12,730,000	14,735,000
Taxes and Other Payables	27,457,682	20,356,768
Purchased Power Payable	12,639,142	12,013,478
Salaries, Wages and Compensated Absences Payable ..	2,912,713	2,487,419
Interest Payable	9,512,905	9,880,630
Customers' Deposits	2,772,395	3,108,808
Interfund Payables	2,140,909	1,324,441
Total Current Liabilities	<u>70,165,746</u>	<u>63,906,544</u>
LONG-TERM LIABILITIES		
Long Term Accrued Compensated Absences	9,681,941	9,522,650
Net Pension Liability	34,177,293	-
Other Long Term Liabilities	14,033,787	13,125,264
Total Long Term Liabilities	<u>57,893,021</u>	<u>22,647,914</u>
Total Liabilities	<u>585,660,493</u>	<u>528,482,588</u>
DEFERRED INFLOWS OF RESOURCES		
Deferred Inflow for Pensions	2,287,983	4,036,389
Rate Stabilization	48,000,000	48,000,000
Total Deferred Inflows	<u>50,287,983</u>	<u>52,036,389</u>
TOTAL NET POSITION, LIABILITIES AND DEFERRED INFLOWS..	<u><u>\$1,457,944,169</u></u>	<u><u>\$1,406,452,274</u></u>

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CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

	YEAR ENDED DECEMBER 31,	
	2016	2015
OPERATING REVENUES		
Sales of Electric Energy	\$374,249,290	\$366,263,055
Other Operating Revenue	17,690,192	17,106,442
Click! Network Operating Revenue	26,674,906	27,256,718
Total Operating Revenue	418,614,388	410,626,215
OPERATING EXPENSES		
Operations		
Purchased and Interchanged Power	126,835,928	126,315,151
Generation	19,270,201	14,197,116
Transmission	28,075,318	21,928,763
Distribution	20,477,257	10,163,887
Other	18,677,827	15,025,954
Maintenance	32,342,896	27,705,373
Telecommunications Expense	26,059,166	25,304,001
Administrative and General	41,051,795	58,560,459
Depreciation	55,702,297	57,381,578
Taxes	19,727,313	19,993,833
Total Operating Expenses	388,219,998	376,576,115
Net Operating Income	30,394,390	34,050,100
NON-OPERATING REVENUES (EXPENSES)		
Interest Income	2,405,144	1,796,071
Contribution to Family Need	(480,000)	(480,000)
Other	1,555,659	(1,923,329)
Interest on Long-Term Debt (Net of AFUDC).....	(15,893,207)	(19,225,735)
Loss on Defeasance or Refunding of Debt and		
Amortization of Debt Premium	(303,527)	(202,938)
Total Non-Operating Expenses.....	(12,715,931)	(20,035,931)
Net Income Before Capital Contributions		
and Transfers	17,678,459	14,014,169
Capital Contributions		
Cash	4,741,136	5,183,295
Donated Fixed Assets	421,334	524,713
BABs and CREBs Interest Subsidies	3,683,746	3,675,836
Transfers		
City of Tacoma Gross Earnings Tax	(30,460,098)	(25,481,823)
Transfers to/(from) Other Funds	(2,181)	512,401
CHANGE IN NET POSITION	(3,937,604)	(1,571,409)
TOTAL NET POSITION - BEGINNING OF YEAR	825,933,297	822,803,061
ACCUMULATED ADJUSTMENT FOR CHANGE IN		
ACCOUNTING PRINCIPLE	-	4,701,645
NET POSITION, BEGINNING OF YEAR, AS ADJUSTED	825,933,297	827,504,706
TOTAL NET POSITION - END OF YEAR	\$821,995,693	\$825,933,297

The accompanying notes are an integral part of these financial statements.

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

STATEMENTS OF CASH FLOWS

	YEAR TO DATE	
	December 31, 2016	December 31, 2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash from Customers	\$ 420,101,423	\$ 414,491,290
Cash Paid to Suppliers	(193,431,153)	(206,195,837)
Cash Paid to Employees	(111,575,956)	(106,153,040)
Taxes Paid	(19,155,309)	(19,876,260)
Conservation Loans	(1,119,433)	454,432
Net Cash from Operating Activities	94,819,572	82,720,585
CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES		
Transfer Out for Gross Earnings Tax	(30,460,098)	(25,481,823)
Transfer to/from Other Funds	(2,181)	512,401
Transfer to Family Need Fund	(480,000)	(480,000)
Net Cash from Non-Capital Financing Activities..	(30,942,279)	(25,449,422)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Capital Expenditures	(82,126,418)	(77,374,831)
Proceeds from Issuance of Long-Term Debt	30,000,000	50,250,000
Debt Issuance Costs	-	(114,250)
Principal Payments on Long-Term Debt	(14,735,000)	(32,115,000)
Payments for Early Extinguishment of Debt	-	(122,135,000)
Interest Paid	(20,013,668)	(26,065,944)
BABs and CREBs Interest Subsidies	3,683,746	3,675,836
Contributions in Aid of Construction	4,741,136	5,183,295
Other Long-Term Liabilities	908,523	763,091
Net Cash from Capital and Related Financing Activities	(77,541,681)	(197,932,803)
CASH FLOWS FROM INVESTING ACTIVITIES		
Interest Received	2,405,144	1,796,071
Other Non-Op Revenues and Deductions	1,555,659	2,081,901
Net Cash from Investing Activities	3,960,803	3,877,972
Net Change in Cash and Equity in Pooled Investments	(9,703,585)	(136,783,668)
Cash and Equity in Pooled Investments at January 1..	267,285,678	404,069,346
Cash and Equity in Pooled Investments at December 31	<u>\$257,582,093</u>	<u>\$267,285,678</u>

The accompanying notes are an integral part of these financial statements.

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

STATEMENTS OF CASH FLOWS

	December 31, 2016	December 31, 2015
Reconciliation of Net Operating Income to Net Cash Provided by Operating Activities:		
Net Operating Income	\$30,394,390	\$34,050,100
Adjustments to reconcile net operating income to net cash provided by operating activities:		
Depreciation	55,702,297	57,381,578
Amortization of Regulatory Assets	6,492,341	5,566,247
Pension (Credits) Expenses	5,860,495	(4,163,028)
Cash provided from changes in operating assets and liabilities:		
Accounts Receivable and Accrued Unbilled Revenue..	1,487,036	3,865,072
Conservation Loans Receivable	(1,119,433)	454,432
Interfund Receivables	(741,907)	1,025,123
Materials and Supplies, and Other	(1,777,443)	(1,322,513)
Taxes and Other Payables	7,100,914	(871,453)
Purchased Power Payable	625,664	453,294
Salaries, Wages and Compensated Absences Payable..	425,294	(3,120,542)
Long Term Accrued Compensated Absences	159,291	97,628
Customers' Deposits	(336,413)	211,540
Regulatory Asset - Conservation	(10,269,422)	(9,260,924)
Interfund Payables	816,468	(1,645,969)
Total Adjustments	64,425,182	48,670,485
Net Cash from Operating Activities	<u>\$94,819,572</u>	<u>\$82,720,585</u>
 Reconciliation of Cash and Equity in Pooled Investments to Balance Sheet:		
Cash and Equity in Pooled Investments in Special Funds	\$43,107,806	\$73,481,305
Cash and Equity in Pooled Investments in Operating Funds	214,474,287	193,804,373
Cash and Equity in Pooled Investments at December 31	<u>\$257,582,093</u>	<u>\$267,285,678</u>

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**CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER**

**NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2016 AND 2015**

NOTE 1 OPERATIONS

OPERATIONS OF TACOMA POWER - The Light Division, doing business as Tacoma Power (Tacoma Power or the Division), is a division of the City of Tacoma, Washington (the City), Department of Public Utilities (the Department) and is included as an enterprise fund in the Comprehensive Annual Financial Report (CAFR) of the City. The Department consists of Tacoma Power, Tacoma Water and Tacoma Rail and is governed by a five-member Public Utility Board (the Board) appointed by the City Council. Certain matters relating to utility operations, such as system expansion, issuance of bonds and setting of utility rates and charges, are initiated and executed by the Board, but also require formal City Council approval. Tacoma Power owns and operates the City's electrical generation and distribution facilities and telecommunication infrastructure. Tacoma Power serves approximately of 176,784 retail customers and has 838 employees. Tacoma Power is organized into six business units: Generation, Power Management, Transmission and Distribution, Rates, Planning and Analysis, Click! Network, and Utility Technology Services.

GENERATION operates four hydroelectric generating projects (Cowlitz, Cushman, Nisqually and Wynoochee) and the associated recreational facilities, fish hatcheries and other project lands.

POWER MANAGEMENT manages the power supply portfolio, markets bulk and ancillary power supply services, schedules and dispatches division-owned generation and contract power supplies and performs power trading and risk management activities. Revenues and the cost of electric power purchases vary from year to year depending on the electric wholesale power market, which is affected by several factors including the availability of water for hydroelectric generation, marginal fuel prices and the demand for power in other areas of the country.

TRANSMISSION AND DISTRIBUTION plans, constructs, operates and maintains the transmission and distribution systems including substations, the underground network system, supervisory control and data acquisition (SCADA) systems, revenue metering facilities and all overhead transmission and distribution systems. Electricity use by retail customers varies from year to year primarily because of weather conditions, customer growth, the economy in Tacoma Power's service area, conservation efforts, appliance efficiency and other technology.

RATES, PLANNING AND ANALYSIS plans for and manages the retail rate process, financial planning, analysis and modeling, budget strategies, the capital program and risk management.

CLICK! NETWORK plans, constructs, operates and maintains a hybrid fiber coaxial (HFC) telecommunications network that supports the operation of Tacoma Power's electrical transmission and distribution system, provides retail cable TV and wholesale high-speed Internet services to residential and business customers, and data transport services to retail customers.

UTILITY TECHNOLOGY SERVICES (UTS) maintains communication networks, operational and informational technology systems, and related equipment and infrastructure to optimize utility operations and improve reliability and service quality. This includes a Project Management Office that establishes and leads Tacoma Public Utilities Information Systems project governance process and implements project portfolio management tools. UTS is responsible for all matters related to Tacoma Power's compliance with North American Electric Reliability Corporation (NERC) Reliability Standards, maintains overall responsibility for the NERC Reliability Standards and manages Tacoma Power's Internal Reliability and Compliance Project.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING AND PRESENTATION - The financial statements of the Division are prepared under the accrual basis of accounting in accordance with generally accepted accounting principles (GAAP) issued by the Governmental Accounting Standards Board (GASB) applicable to governmental entities that use proprietary fund accounting. The financial statements use a flow of economic resources measurement focus to determine financial position and the change in financial position. The accounting principles used are similar to those applicable to businesses in the private sector and are maintained on the accrual basis of accounting. Revenues are recognized when earned, and costs and expenses are recognized when incurred.

The Division follows the provisions set forth in regulatory accounting guidance. In general, regulatory accounting permits an entity with cost-based rates to defer certain costs or income that would otherwise be recognized when incurred to the extent that the rate-regulated entity is recovering or expects to recover such amounts in rates charged to its customers.

The Division accounts are maintained substantially in accordance with the uniform system of accounts prescribed by the Federal Energy Regulatory Commission and the Division of Audits of the State Auditor's Office.

CASH, SPECIAL FUNDS AND EQUITY IN POOLED INVESTMENTS - The Division's fund cash balances are a "deposit" with the City Treasurer's Tacoma Investment Pool (TIP) for the purpose of maximizing interest earnings through pooled investment activities. Cash and equity in pooled investments in the TIP are reported at fair value and changes in unrealized gains and losses are recorded in the Statements of Revenues, Expenses and Changes in Net Position. Interest earned on such pooled investments is allocated daily to the participating funds based on each fund's daily equity in the TIP.

The TIP operates like a demand deposit account in that all City departments, including the Division, have fund balances which are their equity in the TIP. Accordingly, balances are considered to be cash equivalents.

The City of Tacoma Investment Policy permits legal investments as authorized by state law including Certificates of Deposit with qualified public depositories (as defined in Chapter 39.58 of the Revised Code of Washington (RCW)), obligations of the U.S. Treasury, Government Sponsored Agencies and Instrumentalities, bonds issued by Washington State and its Local Governments with an A or better rating, general obligation bonds issue by any State or Local Government with an A or better rating, Bankers' Acceptances, Commercial Paper, Repurchase and Reverse Repurchase agreements, and the Washington State Local Government Investment Pool (LGIP). Daily liquidity requirement to meet the City's daily obligations is maintained by investing a portion of the City's Investment Pool in the LGIP and in certificates of deposit with East West Bank and Opus Bank.

The Division's equity in that portion of the City of Tacoma Investment Pool held in qualified public depositories at December 31, 2016 and 2015 is entirely covered by the Federal Deposit Insurance Corporation (FDIC) and the Washington State Public Deposit Protection Commission (WSPDPC).

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, longer term investments have greater exposure to changes in market interest rates. The City of Tacoma investment policy allows for authorized investments up to 60 months to maturity. One way the City manages its exposure to interest rate risk is by timing cash flows from maturities so that portions of the portfolio are maturing over time to provide cash flow and liquidity needed for operations.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Credit risk is generally the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Repurchase agreements and commercial paper are protected by the FDIC insurance up to \$250,000.

All deposits not covered by the FDIC are covered by the WSPDPC. The WSPDPC is a statutory authority established under RCW 39.58. It constitutes a fully insured or fully collateralized pool. The WA State Treasures LGIP is authorized by RCW 43.250. The LGIP is operated like a 2A7 fund and is collateralized by short-term legal investments.

SPECIAL FUNDS - In accordance with bond resolutions, agreements and laws, separate restricted funds have been established. These funds consist of cash and investments in pooled investments with restrictions externally imposed and legally enforceable, established by the City Council. Generally, restricted assets include bond construction, reserve and debt service funds and customer deposits.

RECEIVABLES AND UNBILLED REVENUES - Accounts receivable consist of amounts owed by private individuals and organizations for goods delivered or services rendered in the regular course of business operations. Receivables are shown net of allowances for doubtful accounts. The Division accrues an estimated amount for services that have been provided but not billed as of December 31st.

ALLOWANCE FOR DOUBTFUL ACCOUNTS - A reserve has been established for uncollectible accounts receivable based on historical write-off trends and knowledge of specific circumstances that indicate collection of an account may be unlikely. Generally accounts receivable are considered past due after 30 days.

INTERFUND TRANSACTIONS - Unsettled transactions between funds at year end are recorded as due to or due from other funds.

MATERIALS AND SUPPLIES - Materials and supplies consist primarily of items for maintenance and construction of Division assets and are valued at the lower of average cost or fair market value.

BOND PREMIUM AND LOSS ON REFUNDING - Bond premiums are amortized over the life of the bonds using a straight-line basis. Losses on refunding are amortized on a straight-line basis over the applicable bond period.

REGULATORY ASSET CONSERVATION - The Division has deferred conservation costs to be charged to future periods matching the time when the revenues and expenses are included in rates. Conservation assets represent installation of savings measures at the properties of its customers. The deferred balance is reduced as costs are recovered and are amortized as other operating expense on the statements of revenues, expenses and changes in net position.

UTILITY PLANT AND DEPRECIATION - Utility plant is stated at original cost, which includes both direct costs of construction or acquisition and indirect costs. The cost of maintenance and repairs is charged to expense as incurred, while the cost of replacements and betterments is capitalized. Assets are capitalized when costs exceed \$5,000 and the useful life exceeds one year.

Depreciation is recorded using a straight-line composite method based on FERC recommended economic asset lives from 2 to 62 years for related operating assets placed in service at the beginning of the year. The original cost of property together with removal cost, less salvage, is charged to accumulated depreciation at such time as property is retired and removed from service.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

The economic lives for plant in service are as follows:

Intangible Plant	2-37 years
Hydraulic Production Plant	62 years
Transmission Plant	29 years
Distribution Plant	27 years
Regional Transmission	5-27 years
General Plant	19 years
Telecommunications Plant	5-19 years

CONSTRUCTION WORK IN PROGRESS – Capitalizable costs incurred on projects which are not in service or ready for use are held in construction in progress. When the asset is ready for service, related costs are transferred to capital assets. Upon determining that a project will be abandoned, the related costs are charged to expense.

ASSET VALUATION - The Division periodically reviews the carrying amount of its long-lived assets for impairment. An asset is considered impaired when estimated future cash flows are less than the carrying amount of the asset. In the event the carrying amount of such asset is not deemed recoverable, the asset is adjusted to its estimated fair value. Fair value is generally determined based on discounted future cash flows.

ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION (AFUDC) - AFUDC represents the cost of borrowed funds used for the construction of utility plant, net of interest earned on unspent construction funds. Capitalized AFUDC is shown as part of the cost of utility plant and as a reduction of interest income and expense.

INTANGIBLE ASSETS - In accordance with GASB No. 51, "Accounting and Financial Reporting for Intangible Assets", land use rights such as easements and right-of-ways are recorded as intangible assets.

CAPITAL CONTRIBUTIONS - In accordance with GASB No. 33, "Accounting and Financial Reporting for Nonexchange Transactions", capital grants and capital contributions are recorded as capital contributions.

COMPENSATED ABSENCES - The City has two different policies for compensated absences. The City's original policy allows employees to accrue vacation based on the number of years worked with a maximum accrual equal to the amount earned in a two-year period. These employees also accrue one day of sick leave per month without any ceiling on the maximum accrued. The City implemented a new policy in 1998 allowing employees to earn PTO (personal time off) without distinction between vacation and sick leave. Employees who worked for the City prior to the change could choose to stay with the original policy or opt to convert to the new policy. The amount of PTO earned is based on years of service. The maximum accrual for PTO is 960 hours, and upon termination, employees are entitled to compensation for unused PTO at 100%. Vacation pay and PTO are recorded as a liability and expense in the year earned.

Employees in the original policy accumulate sick leave at the rate of one day per month with no maximum accumulation specified. Employees receive 25% of the value at retirement or 10% upon termination for any other reason. In the event of death, beneficiaries receive 25% of the value. Sick leave pay is recorded as a liability and an expense in the year earned.

The accrued liability is computed at 100% vacation and PTO while sick leave is accrued at 10%, which is considered the amount vested or 25% if the employee meets retirement criteria. Based on historical information, 10% of compensated absences are considered short term.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

RATE STABILIZATION ACCOUNT - The Division has established a rate stabilization account to reduce significant year-to-year variations in rates. Amounts deposited into the account are excluded from the statement of revenues, expenses and changes in net position in accordance with regulated operations. Revenue will be recognized in subsequent periods when it is withdrawn in accordance with rate decisions.

OPERATING REVENUE - Service rates are authorized by the Tacoma City Council. Revenues are recognized as earned and include an estimate of revenue earned but not billed to customers as of year-end. Utility revenues are derived primarily from the sale and transmission of electricity. Utility revenue from power sales and power transmission is recognized when power is delivered to and received by the customer.

NON-OPERATING REVENUES AND EXPENSES – These are items that do not qualify as operating defined above.

TAXES – The City charges the Division a Gross Earnings Tax at the rate of 7.5% on electrical revenues and broadband revenues and 8.0% on cable television revenues. On Tacoma cable television revenues only, the City also charges the Division a franchise fee of 5.0% and a Public, Educational and Government access television (P.E.G.) fee of 1.0%. In addition, the Division pays a 3.8734% public utility tax to the State on a certain portion of revenues identified as utility revenues. The Division also pays business and occupation tax to the State at the rate of 1.5% on certain other non-utility revenues including cable television revenues, as well as 0.484% for Wholesaling and Broadcasting and 0.471% for Retailing. The Division is exempt from payment of federal income tax.

NET POSITION – The Statement of Net Position reports all financial and capital resources. The difference between assets and liabilities is net position. There are three components of net position: net investment in capital assets, restricted and unrestricted.

Net investment in capital assets consists of capital assets, less accumulated depreciation, reduced by the outstanding balances of any bonds, loans or other borrowings, less outstanding construction funds, that are attributable to the acquisition, construction, or improvements of those assets.

Net position components are restricted when constraints placed on net position use are either (1) externally imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments or (2) imposed by law through constitutional provisions or enabling legislation.

Unrestricted net position components are those that are not “net investment in capital assets” or “restricted”.

ARBITRAGE REBATE REQUIREMENT – The Division is subject to the Internal Revenue Code (“IRC”), Section 148(f), related to its tax-exempt revenue bonds. The IRC requires that earnings on gross proceeds of any revenue bonds that are in excess of the amount prescribed will be surrendered to the Internal Revenue Service. As such, the Division would record such a rebate as a liability. The Division had no liability in the current or prior year.

SHARED SERVICES – The Division receives certain services from other departments and agencies of the City, including those normally considered to be general and administrative. The Division is charged for services received from other City departments and agencies.

USE OF ESTIMATES - The preparation of the financial statements in conformity with GAAP in the United States of America requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. The Division used estimates in determining reported unbilled revenues, allowance for doubtful accounts, accrued compensated absences, depreciation, Other Post Employment Benefits (OPEB), pension, self-insurance liabilities and other contingencies. Actual results may differ from these estimates.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

FAMILY NEED - The Family Need program is Tacoma Power's low income bill assistance program. Contributions are received from customers, employees and Tacoma Power. The Family Need program is administered by the Metropolitan Development Council and Pierce County Community Services which identify and certify the eligibility of Tacoma Power customers for the program.

SIGNIFICANT RISKS AND UNCERTAINTIES - The Division is subject to certain business risks that could have a material impact on future operations and financial performance.

These risks include, but are not limited to, water conditions, weather and natural disaster-related disruptions, collective bargaining labor disputes, fish and other endangered species act issues, Environmental Protection Agency regulations, federal government regulations or orders concerning the operation, maintenance and/or licensing of facilities.

NOTE 3 INVESTMENTS MEASURED AT FAIR VALUE

The City measures and records its investments within the fair value hierarchy established by generally accepted accounting principles.

The Hierarchy is based on the valuation inputs used to measure the fair value of the asset, where fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. These guidelines recognize a three-tiered fair value hierarchy, as follows:

- Level 1 - Level 1 inputs are quoted (adjusted) prices in active markets for identical assets or liabilities that the government can access at the measurement data. Observable markets include exchange markets, dealer markets, brokered markets and principal-to-principal markets.
- Level 2 - Level 2 inputs are other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. These inputs are sourced from pricing vendors using models that are market-based and corroborated by observable market data including: quoted prices; nominal yield spreads; benchmark yield curves; and other corroborated inputs.
- Level 3 - Level 3 inputs are unobservable inputs for the asset or liability and should only be used when relevant Level 1 or Level 2 inputs are unavailable.

The fair value evaluations are provided by Interactive Data. Interactive Data utilizes evaluated pricing models that vary by asset class and incorporate available trade, bid and other market information and for structured securities, cash flow and, when available, loan performance data. Because many fixed income securities do not trade on a daily basis, Interactive Data's evaluated pricing applications apply available information as applicable through processes such as benchmark curves, benchmarking of like securities, sector groupings, and matrix pricing, to prepare evaluations. In addition, Interactive Data uses model processes, such as the Option Adjusted Spread model to assess interest rate impact and development payment scenarios. Their models and processes take into account market convention. For each asset class, a team of evaluators gathers information from market sources and integrates relevant credit information, perceived market movements and sector news into the evaluated pricing applications and models.

Source: Interactive Data "Summary of Inputs by Asset Class Fixed Income Evaluations, Fair Value Information Service and Valuations of Certain Other Instruments" dated January 2016.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Cash and cash equivalents include highly liquid investments including short-term investment funds. Cash and cash equivalents are valued at cost and, therefore, excluded from the fair value schedule.

Data regarding the City's investments, valued and categorized according to the above outlined levels, is below:

	As of 12/31/2016	Level 1	Level 2	Level 3
Debt Securities				
U.S. Treasury Securities	\$ 146,824,628	\$ -	\$ 146,824,628	\$ -
U.S. Agency Securities	544,579,831	-	544,579,831	-
Municipal Bonds	61,450,051	-	61,450,051	-
Total	<u>\$ 752,854,510</u>	<u>\$ -</u>	<u>\$ 752,854,510</u>	<u>\$ -</u>

	As of 12/31/2015	Level 1	Level 2	Level 3
Debt Securities				
U.S. Treasury Securities	\$ 108,647,159	\$ -	\$ 108,647,159	\$ -
U.S. Agency Securities	541,730,184	-	541,730,184	-
Municipal Bonds	119,200,942	-	119,200,942	-
Total	<u>\$ 769,578,285</u>	<u>\$ -</u>	<u>\$ 769,578,285</u>	<u>\$ -</u>

Tacoma Power's share of the City investments shown in the table above is 33.84% and 33.19% for 2016 and 2015.

NOTE 4 UTILITY PLANT - A summary of the balances and changes in utility plant for 2016 and 2015 follows:

	Balance December 31, 2015	Additions	Retirements	Transfers & Adjustments	Balance December 31, 2016
Intangible Plant	\$ 41,682,352	\$ 3,797,958	\$ (48,212)	\$ -	\$ 45,432,098
Hydraulic Production					
Plant	554,637,653	89,259,998	-	-	643,897,651
Transmission Plant	219,918,041	9,721,911	(259,570)	-	229,380,382
Distribution Plant	618,397,975	27,229,473	(3,189,896)	-	642,437,552
Regional Transmission	18,147,561	6,776,297	-	-	24,923,858
General Plant	200,160,423	5,391,442	-	-	205,551,865
Telecommunications					
Plant	<u>208,198,584</u>	<u>4,382,792</u>	<u>-</u>	<u>-</u>	<u>212,581,376</u>
Total Utility Plant in Service	1,861,142,589	146,559,871	(3,497,678)	-	2,004,204,782
Less Accumulated Depreciation	<u>946,283,353</u>	<u>55,702,297</u>	<u>(3,449,466)</u>	<u>(1,328,559)</u>	<u>997,207,625</u>
	914,859,236	90,857,574	(48,212)	1,328,559	1,006,997,157
Construction Work In Progress	<u>87,951,638</u>	<u>85,011,567</u>	<u>-</u>	<u>(146,551,298)</u>	<u>26,411,907</u>
Net Utility Plant	<u>\$ 1,002,810,874</u>	<u>\$ 175,869,141</u>	<u>\$ (48,212)</u>	<u>\$ (145,222,739)</u>	<u>\$ 1,033,409,064</u>

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

	Balance December 31, 2014	Additions	Retirements	Transfers & Adjustments	Balance December 31, 2015
Intangible Plant	\$ 40,584,864	\$ 1,287,650	\$ (190,162)	\$ -	\$ 41,682,352
Hydraulic Production Plant	536,424,903	18,212,750	-	-	554,637,653
Transmission Plant	215,039,287	5,495,463	(616,709)	-	219,918,041
Distribution Plant	604,029,355	17,270,360	(2,901,740)	-	618,397,975
Regional Transmission	17,537,662	609,899	-	-	18,147,561
General Plant	197,036,437	3,204,314	-	(80,328)	200,160,423
Telecommunications Plant	207,244,967	953,617	-	-	208,198,584
Total Utility Plant in Service	1,817,897,475	47,034,053	(3,708,611)	(80,328)	1,861,142,589
Less Accumulated Depreciation	893,801,525	57,381,578	(3,518,449)	(1,381,301)	946,283,353
	924,095,950	(10,347,525)	(190,162)	1,300,973	914,859,236
Construction Work In Progress	54,789,325	80,107,465	-	(46,945,152)	87,951,638
Net Utility Plant	<u>\$ 978,885,275</u>	<u>\$ 69,759,940</u>	<u>\$ (190,162)</u>	<u>\$ (45,644,179)</u>	<u>\$ 1,002,810,874</u>

Total Utility Plant in Service includes non-depreciable assets of \$75,780,466 for 2016 and \$75,310,858 for 2015.

The total amount of interest cost incurred and capitalized is \$3,752,735 for 2016 and \$3,407,633 for 2015.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

NOTE 5 LONG-TERM DEBT – Tacoma Power’s long-term debt is primarily for capital improvements. Long-term liability activity for the years ended December 31, 2016 and December 31, 2015 was as follows:

	Balance December 31, 2015	Additions	Reductions	Balance December 31, 2016	Due Within One Year
Revenue Bonds	\$ 385,800,000	\$ -	\$ (14,735,000)	\$ 371,065,000	\$ 12,730,000
Plus: Unamortized					
Premium	20,613,130	-	(1,596,404)	19,016,726	-
Net Revenue Bonds	406,413,130	-	(16,331,404)	390,081,726	12,730,000
Line of Credit	50,250,000	30,000,000	-	80,250,000	-
Total Long-Term					
Debt	<u>\$ 456,663,130</u>	<u>\$ 30,000,000</u>	<u>\$ (16,331,404)</u>	<u>\$ 470,331,726</u>	<u>\$ 12,730,000</u>

	Balance December 31, 2014	Additions	Reductions	Balance December 31, 2015	Due Within One Year
Revenue Bonds	\$ 540,050,000	\$ -	\$ (154,250,000)	\$ 385,800,000	\$ 14,735,000
Plus: Unamortized					
Premium	22,645,510	-	(2,032,380)	20,613,130	-
Net Revenue Bonds	562,695,510	-	(156,282,380)	406,413,130	14,735,000
Line of Credit	-	50,250,000	-	50,250,000	-
Total Long-Term					
Debt	<u>\$ 562,695,510</u>	<u>\$ 50,250,000</u>	<u>\$ (156,282,380)</u>	<u>\$ 456,663,130</u>	<u>\$ 14,735,000</u>

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Tacoma Power's long-term debt at December 31 consists of the following payable from revenues of Tacoma Power:

	<u>2016</u>	<u>2015</u>
2005A Revenue Bonds, with interest rates ranging from 3.5% to 4.3%, due in yearly installments of \$115,000 to \$13,275,000 paid in full in 2016. Original Issue: \$93,480,000	\$ -	\$ 130,000
2010B Revenue Bonds, with interest rates ranging from 5.791% to 5.966%, with a Build America Bond (BAB) rebate ranging from 32.45% to 32.62% of interest, due in yearly installments of \$27,310,000 to \$31,630,000 from 2031 to 2035. Original Issue: \$147,070,000 Current Portion: \$0	147,070,000	147,070,000
2010C Revenue Bonds, with an interest rate of 5.641%, with Clean Renewal Energy Bond rebate at 67% of interest, due in one payment of \$24,185,000 in 2027. Original Issue: \$24,185,000 Current Portion: \$0	24,185,000	24,185,000
2013A Refunding Bonds, with interest rates ranging from 4.0% to 5.0%, due in yearly installments of \$10,095,000 to \$29,165,000 through 2042. Original Issue: \$181,610,000 Current Portion: \$12,730,000	164,190,000	178,795,000
2013B Refunding Bonds, with interest rates ranging from 3.05% to 5.0%, due in yearly installments of \$3,795,000 to \$5,155,000 from 2022 through 2030. Original Issue: \$35,620,000 Current Portion: \$0	35,620,000	35,620,000
	<u>371,065,000</u>	<u>385,800,000</u>
Unamortized premium	19,016,726	20,613,130
Current Portion	<u>(12,730,000)</u>	<u>(14,735,000)</u>
Long-term Portion of Revenue Bond Debt	377,351,726	391,678,130
Revolving Line of Credit	80,250,000	50,250,000
Total Long Term Debt	<u>\$ 457,601,726</u>	<u>\$ 441,928,130</u>

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

In 2015, Tacoma Power entered into a \$100 million line-of-credit agreement with Wells Fargo for working capital. The line matures in May 2018, and each advance will bear interest at the London Interbank Offered Rate (LIBOR) of 1.64344% at December 31, 2016. Each advance is secured by Revenues as set forth in the Note Ordinance. The balance outstanding is \$80.3 million as of December 31, 2016.

Scheduled principal maturities on the bonds and interest payments are as follows:

	Principal	Interest
2017	\$ 12,730,000	\$ 18,707,560
2018	11,575,000	18,157,810
2019	10,095,000	17,698,935
2020	29,165,000	16,792,435
2021	11,970,000	15,839,060
2022-2026	20,885,000	75,475,070
2027-2031	66,230,000	66,152,269
2032-2036	130,750,000	37,344,302
2037-2041	63,355,000	9,659,100
2042	14,310,000	286,200
	\$ 371,065,000	\$ 276,112,740

Tacoma Power's revenue bonds are secured by the net revenue of Tacoma Power and all cash and investments held in the bond and construction funds. The bonds are also subject to certain financial and non-financial covenants. The Division was in compliance with all loan covenants at December 31, 2016.

As of December 31, 2016, the following outstanding bonds were considered defeased:

<u>Issue</u>	<u>Amount</u>
1964 Light & Power Bonds	\$ 1,235,000
1965 Light & Power Bonds	3,360,000
1967 Light & Power Bonds - Series A & B	2,825,000
1969 Light & Power Bonds	2,260,000
1979 Light & Power Bonds	5,475,000
2005 Electric System Revenue Bonds - Series A	230,000
2005 Electric System Revenue Bonds - Series B	27,460,000
2007 Electric System Revenue Refunding Bonds	14,540,000
	\$ 57,385,000

These refunded bonds constitute a contingent liability of Tacoma Power only to the extent that cash and investments presently in the control of the refunding trustees are not sufficient to meet debt service requirements, and are therefore excluded from the financial statements because the likelihood of additional funding requirements is considered remote.

NOTE 6 PURCHASED POWER – Tacoma Power purchased electric power and energy from BPA under a long-term contract that expires on September 30, 2028. The contract consists of a base rate per kWh and certain cost-recovery adjustment clauses can be invoked under particular circumstances.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

On December 1, 2008, the Board authorized the execution of a twenty-year Slice/Block Power Sales and Creditworthiness Agreement with BPA. The agreement allows Tacoma Power to purchase a Slice/Block power product from BPA which began October 1, 2011 and continues through September 30, 2028. In broad terms, the agreement requires Tacoma Power to purchase a firm amount (Block) and proportionate share (Slice) of power based on a number of criteria and calculations. This is a take or pay arrangement which allows Tacoma Power to remarket excess capacity. The related Creditworthiness Agreement provides for BPA to conduct a credit review of Tacoma Power. To determine if a letter of credit or cash deposit would be required, BPA completed this review and determined that as long as Tacoma Power's credit rating remains above BBB-, no Letter of Credit or cash deposit will be required.

The power received under this contract averaged approximately 433,427 and 419,422 kilowatts per hour for 2016 and 2015, respectively. Charges for the BPA purchased power were approximately \$114 million and \$112 million for 2016 and 2015, respectively, and are based on the total amount of energy delivered and the monthly peak power demand.

Tacoma Power entered into an Energy Conservation Agreement (ECA) with BPA in 2009. Under this agreement, funds are collected in wholesale power rates to support regional energy efficiency programs. As utilities implement conservation programs and activities, BPA reimburses these funds per program specifications. For the years 2016 and 2015, Tacoma Power recovered \$7,076,890 and \$763,356 respectively through the ECA.

Under fixed contracts with other power suppliers, Tacoma Power has agreed to purchase portions of the output of certain generating facilities. Although Tacoma Power has no investment in such facilities, these contracts require Tacoma Power to pay minimum amounts (which are based at least in part on the debt service requirements of the supplier) whether or not the facility is operating. The cost of power obtained under the contracts, including payments made when a facility is not operating, is included in operations expense in the Statements of Revenues, Expenses and Changes in Net Position.

Information for the year ended December 31, 2016 pertaining to these contracts is summarized as follows:

Tacoma Power's Current Share of	Grand Coulee Project Hydro Authority	Grant County PUD - Priest Rapids Project
Energy Output	253,625 mWh	26,975 mWh
Megawatt Capacity	-	5 mW
Operating Costs	\$ 2,227,828	\$80,802
Incentive Payments	\$ 3,538,658	-
R & R Repayment	\$ 399,836	-
Contract Expiration Date	5/9/2024	4/1/2052

On April 17, 2008, the FERC issued a new license to the Public Utility District No. 2 of Grant County (Grant PUD) for the continued operation of the Priest Rapids Hydroelectric Project which consists of the Priest Rapids Development and the Wanapum Development. The original license for the Priest Rapids Project was issued on November 4, 1955 and expired on October 31, 2005. Since then, the Project had operated under annual licenses. The renewed license issued by FERC allows Grant PUD a 44-year license for the continued operation of the Project. The term of Tacoma Power's contract with Grant PUD is for the term of the FERC license. Tacoma Power's purchase quantity and costs are tied to the actual costs of the Project.

Total expenses under the above contracts for the years 2016 and 2015 were \$6,412,705 and \$6,395,201, respectively, for Grand Coulee Project Hydro Authority, however, proceeds under the contract exceeded expenses in 2016 and 2015 for Grant County PUD - Priest Rapids resulting in a gain of \$80,802 and \$659,731, respectively.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

In addition, Tacoma Power is required to pay its proportionate share of the variable operating expenses of these projects.

Other Power Transactions - Other power transactions include purchases under short-term agreements and interchanges of secondary power between utilities in response to seasonal resource and demand variations. Fluctuations in annual precipitation levels and other weather conditions materially affect the energy output from Tacoma Power's hydroelectric facilities. Accordingly, the net interchange of secondary power in and out may vary significantly from year to year. Tacoma Power's trading activities are limited to purchasing power to meet native loads, optimizing the value of Tacoma Power's power supply portfolio and selling energy during times of surplus.

Tacoma Power records applicable energy contracts using accrual accounting and recognizes the revenue or expense at the time of contract performance, settlement or termination. As of December 31, 2016 Tacoma Power had forward sales contracts totaling \$28.7 million dollars extending out to September 2018 with a fair market value of \$28.7 million. These contracts meet the normal purchase normal sales scope exception for derivative reporting under GASB 53.

Tacoma Power's net power purchases or sales and interchanged activities are reflected in the Statements of Revenues, Expenses and Changes in Net Position.

A breakdown of the net interchange in kilowatt-hours is as follows:

<u>Interchange Summary</u>	<u>2016</u> (in kWh)	<u>2015</u> (in kWh)
Secondary Sales	(2,731,083,000)	(1,917,685,000)
Portfolio Purchases	263,105,000	293,059,000
Miscellaneous Exchanges	(1,533,000)	(1,441,000)
Other	<u>26,228,000</u>	<u>54,924,000</u>
Net Interchange	<u>(2,443,283,000)</u>	<u>(1,571,144,000)</u>

NOTE 7 FLEET SERVICES FUND - The Department of Public Utilities has established a Fleet Services Fund to perform scheduled maintenance, repair and replacement of Department vehicles and related equipment.

Tacoma Power pays the Fleet Services Fund for its use of the vehicles and equipment to cover fleet operating expenses. Payments made by Tacoma Power in 2016 and 2015 were \$6,733,591 and \$7,212,082, respectively.

Fleet Services' management makes an annual assessment of the capital replacement reserve balance for appropriate funding levels. It is the Fund's policy to maintain the Fund's maximum balance at a level that will provide adequate purchasing power for a three-year cycle. The solvency of the Replacement Fund allowed Fleet Services to return a portion of interest earned on fund investments for the year to their customers. In 2016 and 2015, Fleet Services returned 75% of the interest earned to Tacoma Power's replacement fund. The amount of the refund was \$106,192 and \$107,916 for 2016 and 2015, respectively, which was used to offset the corresponding year's fleet expenses.

NOTE 8 SELF-INSURANCE FUND - The Department of Public Utilities maintains a self-insurance program and insurance policies. The Department has established a Self-Insurance Fund to insure Tacoma Power and other divisions within the Department for certain losses arising from personal and property damage claims by third parties. The major risks to Tacoma Power are flooding, wind damage, chemical spills and earthquakes. Mitigating controls and emergency and business resumption plans are in place. To the extent damage or claims exceed insured values, rates may be impacted.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Tacoma Power is required to make payments to the Self-Insurance Fund to cover claims incurred by Tacoma Power and administrative expenses of the Fund. Tacoma Power's premium payments totaled \$900,000 in both 2016 and 2015 respectively. Assets in the Self-Insurance Fund total \$7.6 million which exceeds accrued and incurred but not reported liabilities. Equity in the Self-Insurance Fund is transferred to the appropriate operating divisions in accordance with GASB 10. Management believes Tacoma Power's investment in the Self-Insurance Fund is more than adequate to settle all its known or estimated claims.

The City purchased a \$15 million Fiduciary Liability Policy with a \$100,000 deductible that provides for wrongful acts arising out of the administration of the City's employee benefit programs and a Crime policy with a \$1 million limit and \$75,000 deductible for employee dishonesty and for fraudulent or dishonest act by employees against the City for loss of money, securities and property.

Other insurance policies presently in effect include coverage on the Department's buildings and fleet vehicles as well as general liability and public official's liability. The current insurance policies covering the buildings and fleet vehicles have deductibles or self-insured retentions of \$250,000 for buildings and property within buildings and \$10,000 per vehicle. There is a self-insured retention of \$1.5 million for general liability. The public official liability policy has a \$200,000 deductible. The Department's total liability limit is \$60 million any one occurrence and \$60 million annual aggregate.

The general government general liability and public official liability policies provide \$20 million of excess coverage with a \$3 million retention. The City has a policy to cover extraordinary worker's compensation claims with a statutory limit and a self-insured retention of \$1 million per occurrence and an additional \$250,000 for each 12 month policy period.

NOTE 9 TACOMA EMPLOYEES' RETIREMENT SYSTEM FUND (TERS)

The Tacoma Employees' Retirement System (TERS or System), a pension trust fund of the City of Tacoma, issues a publicly available CAFR that includes financial statements and required supplementary information may be obtained by writing to:

Tacoma Employee's Retirement System
3628 South 35th Street
Tacoma, WA 98409

Or the TERS CAFR may be downloaded from the TERS website at www.cityoftacoma.org/retirement.

Administration of The System - The "Tacoma Employees' Retirement System" is a cost-sharing, multiple-employer, defined benefit retirement plan covering substantially all employees of the City of Tacoma, with the exception of police officers, firefighters, and Tacoma Rail employees who are covered by state and federal retirement plans. Employees of the Tacoma-Pierce County Health Department, as well as, certain employees of the Pierce Transit and Law Enforcement Support Agency who established membership in the System when these agencies were still City of Tacoma departments, are also members. The Board of Administration of the Tacoma Employees' Retirement System administers the plan and derives its authority in accordance with Chapter 41.28 RCW and Chapter 1.30 of the Tacoma City Code.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

At the direction of the City Council, the System is administered by the Board of Administration (the Board) consisting of nine regular members and one alternate member. The members of the Board are: the Mayor, who serves as Chair; the Director of Finance; the City Manager (or designee); the Public Utilities Director (or designee); three elected employee representatives; one elected retired representative; and one City resident (not employed by the City) elected by the other eight members. The nine Board members appoint a TERS member, either active or retired, as an alternate Board member. The Board is required by the Tacoma Municipal Code to make annual reports to the City Council on the financial condition of the System. The Board, subject to City Council approval, appoints the Director who is responsible for managing the daily operations of the System.

The breakdown of membership as of December 31, 2015 is as follows:

Retirees and beneficiaries currently receiving benefits	2,234
Terminated vested and other terminated participants	644
Active members:	
City of Tacoma	2,654
South Sound 911	4
Pierce Transit	7
Tacoma-Pierce County Health Department	262
Total active members	<u>2,927</u>
Total membership	<u><u>5,805</u></u>

Membership - Substantially all employees of the City of Tacoma are members of the System, with the exception of police officers, firefighter, and Tacoma Rail employees, who are covered by state or federal retirement plans. Other members include employees of the Tacoma-Pierce County Health Department, and certain employees of the Pierce Transit and the South Sound 911 (formerly known as Law Enforcement Support Agency) who established membership in the System when these agencies were still City of Tacoma departments.

Benefits - There are two formulas to calculate the retirement benefits. The benefit paid will be issued on the formula which provides the higher benefit. The most commonly applied formula, "service retirement", is a product of the member's average monthly salary for the highest, consecutive 24-month period, the number of years of membership credit, and a percentage factor (2% maximum) that is based on the member's age and years of service. The other formula is an annuity based on member contributions. There are several options available for the retiree to provide for their beneficiaries. The System also provides death, disability and deferred retirement. Additionally, the System provides cost of living adjustment (COLA) increases up to 2.125% as of July 1st of each year; the actual COLA granted is dependent on the Consumer Price Index (Seattle Area – all items) over the preceding calendar year.

Any active member who has not retired, and has five or more years of service as a member may purchase up to five additional years of service at the time of retirement. Total service including service purchased cannot exceed 30 years.

The System participates in the portability of public retirement benefits in Washington State public retirement. As provided under Chapter 4154 of the RCW, this allows a member to use all years of service with qualified Washington systems to determine retirement eligibility and percentage factor for benefits under the System.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Contributions - The participating employers are responsible for funding the System at a level sufficient to pay obligations and ensure the actuarial and financial soundness of the System. Contribution rates for the employer and the employee are recommended by the Board of Administration and final approval rests with the Tacoma City Council.

Currently, the required contribution rate for employees is 9.20% of their regular gross pay; the employer contributes 10.80%, for a combined total of 20.00% which is sufficient to amortize the Unfunded Actuarial Accrued Liability (UAAL) of the System if future experience follows all actuarial assumptions. Changes to the contribution rate are subject to Sections 1.30.340 and 1.30.360 of the Tacoma Municipal Code.

Significant Assumptions - The following actuarial methods were used in the funding valuation.

Measurement Date	December 31, 2015
Valuation Date	January 1, 2016
Actuarial Cost Method	Entry Age Normal
	Funding is based on statutory contributions rate.
	This amount is compared to a 30-year amortization for the purposes of calculating the Actuarially Determined Contribution.
	The amortization method for the ADC is as follows:
Amortization Method	<ul style="list-style-type: none">• Level percent• Open periods• 30 year amortization period at 01/01/2016• 4% amortization growth rate
Asset Valuation Method	4 year smoothing period; Corridor - None
Inflation	3%
Salary Increases	4% general wage increase assumption
Investment Rate of Return	7.25%
Cost of Living Adjustment	2.13%
Retirement Age	Varies by age, gender, eligibility
Turnover	Varies by age, gender, eligibility
Mortality	RP-2000 mortality for healthy and disabled annuitants, with age adjustments

Benefit and Assumption Changes - The comparability of the data from year to year can be affected by changes in actuarial assumptions, benefit provisions, accounting policies, and other factors. Between January 1, 2015 and January 1, 2016 no assumptions were changed.

Target Allocations - The long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting volatility and correlation. The capital market assumptions are per Milliman's (the System's actuary) investment consulting practice as of December 31, 2015. The target asset allocation is based on TERS Investment Policy Statement dated February 2014.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Asset Class	Target Allocation	Arithmetic Real Rate of Return
Investment Grade Fixed Income	15.0%	2.00%
US Inflation-Indexed Bonds	5.0%	1.41%
High Yield Bonds	9.0%	4.22%
Emerging Market Debt	5.0%	5.06%
Global Equity	41.5%	5.72%
Public Real Estate	2.0%	6.07%
Private Real Estate	2.5%	3.60%
Private Equity	10.0%	9.29%
Master Limited Partnerships	4.0%	3.98%
Timber	2.0%	3.73%
Infrastructure	2.0%	5.14%
Agriculture	2.0%	4.30%
Assumed Inflation - Mean		3.00%
Assumed Inflation - Standard Deviation		1.89%
Portfolio Arithmetic Real Mean Return		4.94%
Portfolio Median Nominal Geometric Return		7.06%
Portfolio Standard Deviation		11.84%
Long-Term Expected Rate of Return, net of investment expenses		7.25%

Sensitivity Analysis - The following presents the net pension liability (asset) of the System, calculated using the discount rate of 7.25%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (6.25%) or 1 percentage point higher (8.25%) than the current rate

	1% Decrease 6.25%	Current Discount Rate 7.25%	1% Increase 8.25%
Net pension liability (asset)	\$ 105,989,573	\$ 34,177,293	\$ (26,296,701)

As of December 31, 2015, the deferred inflows and outflows of resources are as follows:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Difference Between Expected and Actual Experience	\$ (2,287,552)	\$ -
Net Difference Between Projected and Actual Earnings	-	30,122,690
Changes in Employer Proportion	(431)	24,760
Contributions Made Subsequent to the Measurement Date	-	9,322,004
Total	\$ (2,287,983)	\$ 39,469,454

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

The net amount of deferred inflows and outflows, other than contributions made subsequent to the measurement date, will be recognized as pension expense in each of the next four years.

Amounts will be recognized in pension expense as follows:

2016	\$	6,736,673
2017		6,736,673
2018		6,736,672
2019		7,739,529
2020		(90,080)
	\$	<u>27,859,467</u>

The proportionate share of the Power Division is 39.47% of total System's pension liability. The proportionate share was based on the actual contributions for the year.

NOTE 10 OTHER POST EMPLOYMENT BENEFITS (OPEB)

Plan Description - The City charges some early retirees not yet eligible for Medicare a health premium based on the claims experience of active employees and retirees rather than based on the claims experience of retirees only. This difference is a benefit to the retirees, since health claims costs generally increase with age. GAAP requires that the portion of age-adjusted expected retiree health claims costs that exceed the premium charged to retirees be recognized as a liability for accounting purposes. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and are subject to continual revision as results are compared to past expectation and new estimates are made about the future.

Funding Policy - The City uses pay as you go funding; contributions to a separate trust are not required.

Annual OPEB Cost and Net OPEB Obligation - The Present Value of Benefits (PVB) is the present value of projected benefits discounted at the valuation interest rate (3.75%).

The Actuarial Accrued Liability (AAL) is the portion of the present value of benefits attributed to past service only. The portion attributed to future employee service is excluded. For inactive employees, the AAL is equal to the present value of benefits. For active employees, the actuarial present value of the projected benefits of each individual is allocated as a level percentage of expected salary for each year of employment between entry age (defined as age at hire) and assumed exit (until maximum retirement age). The portion attributed to service between entry age and the valuation date is the actuarial accrued liability.

The Normal Cost is that portion of the City provided benefit attributable to employee service in the current year.

The Annual Required Contribution (ARC) is the amount the City is required to report as an expense for the year. The ARC is equal to the Normal Cost plus an amount to amortize the UAAL on a closed basis of 30 years, beginning January 1, 2007. The amortization period for 2016 is 21 years.

The ARC represents an accounting expense, but the City is not required to contribute the ARC to a separate trust. If the City does not set aside funds equal to the ARC (less current year benefit payments) each year, then the ARC (less benefit payments) will accumulate as a non-current liability (Net OPEB Obligation) on the statements of net position. The City has a Net OPEB Obligation as of December 31, 2016 as the City has not set aside funds for OPEB.

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Excise Tax For High Cost or “Cadillac” Health Plans in 2018 and Beyond– An excise tax for high cost health coverage or “Cadillac” health plans was included in the Affordable Care Act (ACA) passed into law in March 2010. The provision levies a 40% tax on the value of health plan costs that exceed certain thresholds for single coverage or family coverage. The 2018 annual thresholds are \$10,200 for single coverage and \$27,500 for a family plan. If, between 2010 and 2018, the cost of health care insurance rises more than 55%, the threshold for the excise tax will be adjusted.

The City believes that the current provisions of ACA should be reflected in the projection of benefits and therefore, the value of the excise tax is included in the valuation. It is assumed that there will be no changes to the current law and that there will be no changes in plan design to help mitigate the impact of the tax.

GASB Statement No. 45 indicates that the projection of benefits should include all benefits to be provided to retirees in accordance with the current “substantive” plan. The substantive plan refers to the plan terms as understood by the employer and plan members at the time of the valuation. For this reason, the City believes that the current provisions of PPACA should be reflected in the projection of benefits and therefore, the value of the excise tax is included in this valuation. It is assumed that there will be no changes to the current law and that there will be no changes in plan design to help mitigate the impact of the tax.

Summary of Changes – As of the January 1, 2015 valuation the total AAL was \$208,814,312, for the City, 20% lower than expected primarily due to clarification in spouse benefits, medical costs, demographic experience and a change to the assumption for future medical trends.

The following table is a summary of valuation results with a comparison to the results from the last valuation.

	January 1, 2013	January 1, 2015
Active employees	3,335	3,404
Terminated vested employees	394	442
Retired employees & dependents	846	744
Total	<u>4,575</u>	<u>4,590</u>
Annual Benefit Payments	\$ 9,887,335	\$ 8,963,089
Discount rate	3.75%	3.75%
Present Value of Benefits (PVB)	\$ 326,742,538	\$ 262,184,195
Actuarial Accrued Liability (AAL)	\$ 251,839,846	\$ 208,814,312
Assets	<u>\$ -</u>	<u>\$ -</u>
Unfunded Actuarial Accrued Liability (UAAL)	<u>\$ 251,839,846</u>	<u>\$ 208,814,312</u>
Normal Cost	\$ 5,484,587	\$ 3,832,131
Annual Required Contribution (ARC)	\$ 20,058,760	\$ 16,966,964

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

The following table shows the total value of the benefits provided, the member paid premiums and the City paid benefits as of January 1, 2015.

Value of Subsidy at 3.75% Interest Rate	Total Value of Benefits	Member Paid Premiums	City Paid Benefits
Present Value of Benefits (PVB)	\$ 420,832,932	\$ 158,648,737	\$ 262,184,195
Actuarial Accrued Liability (AAL)	\$ 291,228,295	\$ 82,413,983	\$ 208,814,312
Normal Cost	\$ 9,501,758	\$ 5,669,627	\$ 3,832,131
Annual Benefit Payments	\$ 12,325,369	\$ 3,362,280	\$ 8,963,089

The following table shows the calculation of the Annual Required Contribution and Net OPEB Obligation for the City and for Tacoma Power as of December 31, 2016.

	City	Division
Determination of Annual Required Contribution:		
Normal Cost at Year-end	\$ 3,803,090	\$ 858,656
Amortization of UALL	15,665,117	398,368
Annual Required Contribution (ARC)	<u>\$ 19,468,207</u>	<u>\$ 1,257,024</u>
Determination of NET OPEB Obligation:		
Annual Required Contribution (ARC)	\$ 19,468,207	\$ 1,257,024
Interest on prior year Net OPEB Obligation	2,666,468	377,568
Adjustments to ARC	<u>(3,983,647)</u>	<u>(468,000)</u>
Annual OPEB Cost	18,151,028	1,166,592
Actual benefits paid	<u>(8,539,402)</u>	<u>(344,092)</u>
Increase in Net OPEB Obligation	9,611,626	822,500
Net OPEB Obligation - beginning of year	<u>73,129,502</u>	<u>10,068,490</u>
Net OPEB Obligation - end of year	<u>\$ 82,741,128</u>	<u>\$ 10,890,990</u>

The Division has included the liability in the other long term liabilities on the Statement of Net Position.

Funded Status and Funding Progress -

The following table shows the annual OPEB costs and net OPEB obligation for three years. This table is based upon a 3.75% interest rate.

Year Ended	Annual OPEB Cost		Benefits Paid		Net OPEB Obligation	
	City	Division	City	Division	City	Division
12/31/2014	\$ 19,319,944	\$ 2,084,511	\$ 9,292,539	\$ 692,894	\$ 66,138,206	\$ 9,198,300
12/31/2015	\$ 15,954,387	\$ 1,194,337	\$ 8,963,089	\$ 324,146	\$ 73,129,502	\$ 10,068,491
12/31/2016	\$ 18,151,028	\$ 1,166,592	\$ 8,539,402	\$ 344,092	\$ 82,741,128	\$ 10,890,990

TACOMA POWER NOTES TO FINANCIAL STATEMENTS (continued)

Actuarial Methods and Assumptions - The actuarial cost method used for determining the benefit obligations is the Entry Age Normal Cost Method. Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of expected salary for each year of employment between entry age (defined as age at hire) and assumed exit (until maximum retirement age).

The portion of actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the UAAL. In determining the Annual Required Contribution, the UAAL is amortized as a level percentage of expected payrolls for non-LEOFF 1 groups. For LEOFF 1, the UAAL is amortized as a level dollar amount. The amortization period was 30 years in 2007 and is now 21 years.

Actuarial Methods and Significant Actuarial Assumptions:

Valuation Date:	January 1, 2015
Census Date:	January 1, 2015
Actuarial Cost Method:	Entry Age
Amortization Method:	Combination of level percentage and level dollar amount, see note above.
Remaining Amortization Period:	21 years, closed
Demographic Assumptions:	Demographic assumptions regarding retirement, disability, and turnover are based upon pension valuations for the various pension plans.

Actuarial Assumptions:

Discount Rate:	3.75% for pay-as-you-go funding
Medical Cost Trend:	2015 6.9%
	2016 6.6%
	2017 5.9%
	2020 5.5%
	2030 5.9%
	2040 5.7%
	The medical cost rate is assumed to continue grading downward until achieving the ultimate rate of 4.8% in 2071 and beyond. The first year trend reflects assumed increases based on ACA fees. These trend rates assume that, over time, deductibles and out-of-pocket maximums will be periodically increased as medical trends increase. The trends above do not reflect the increases in costs due to the excise tax.

Economic Assumptions – Discount Rate (Liabilities):	3.75%
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Demographic Assumptions:.....	Eligibility: Disability - Five years of service are required for non-service connected disability.
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- Retirement - TERS members are eligible for retiree medical benefits after becoming eligible for service retirement pension benefits (either reduced or full pension benefits):
- Age 55 with 10 years of service
 - Age 40 with 20 years of service

NOTE 11 COMMITMENTS AND CONTINGENCIES

Capital Improvements - The financial requirement for Tacoma Power's 2015/2016 biennial Capital Improvement Program is approximately \$182.7 million. At December 31, 2016, the remaining financial requirement was approximately \$12 million. The remaining financial requirement for Capital Improvement Programs relating to prior biennium is approximately \$932,445.

General Legal Matters - Tacoma Power Division has received several other miscellaneous claims that either do not allege significant amounts or that the Legal Department has determined do not pose a risk to liability to the utilities.

REQUIRED SUPPLEMENTARY INFORMATION

Proportionate Share of the Net Pension Liability Last 10 Years*

	Fiscal Year Ended December 31st,	
	2016	2015
Employer's proportion of the net pension liability (asset) as a percentage	39.47%	39.80%
Employer's proportion share of net pension liability (asset)	\$34,177,293	(\$3,823,476)
Employer's covered payroll	\$20,220,795	\$93,063,240
Employer's proportionate share of net pension liability (asset) as a percentage of its covered employee payroll	169.02%	-4.11%
Plan fiduciary net position as a percentage the total pension liability	93.94%	100.71%

Schedule of Contributions Last 10 Fiscal Years

	Fiscal Year Ended December 31st,	
	2016	2015
Contractually required employer contribution	\$9,322,005	\$9,053,341
Contributions in relation to the contractually required employer contribution	(9,322,005)	(9,053,341)
Employer contribution deficiency (excess)	-	-
Employer's covered employee payroll	\$91,704,363	\$93,063,240
Employer contribution as a percentage of covered-employee payroll	10.17%	9.73%

*Fiscal year 2015 was the first year of implementation; therefore, only two years are shown.

STATISTICAL DATA (Unaudited)

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

TEN-YEAR FINANCIAL REVIEW

STATEMENTS OF NET POSITION	2016	2015	2014	2013
ASSETS				
Utility Plant - Net	\$1,033,409,064	\$1,002,810,874	\$978,885,275	\$959,885,269
Special and Other Assets	95,903,332	125,203,792	160,778,160	213,192,582
Current Assets	289,162,319	267,460,091	365,173,352	328,974,357
Deferred Charges	-	-	-	-
Total Assets	1,418,474,715	1,395,474,757	1,504,836,787	1,502,052,208
Deferred Outflows	39,469,454	10,977,517	8,026,229	15,941,231
TOTAL ASSETS AND DEFERRED OUTFLOWS	1,457,944,169	1,406,452,274	1,512,863,016	1,517,993,439
NET POSITION	821,995,693	825,933,297	822,803,061	799,078,660
LIABILITIES				
Long-Term Debt	457,601,726	441,928,130	530,580,510	564,960,765
Current Liabilities	70,165,746	63,906,544	86,776,174	82,905,132
Long-Term Liabilities	57,893,021	22,647,914	24,703,271	23,048,882
Total Liabilities	585,660,493	528,482,588	642,059,955	670,914,779
Deferred Inflows	50,287,983	52,036,389	48,000,000	48,000,000
TOTAL NET POSITION, LIABILITIES, AND DEFERRED INFLOWS	\$1,457,944,169	\$1,406,452,274	\$1,512,863,016	\$1,517,993,439
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION				
OPERATING REVENUES				
Residential	\$154,091,270	\$149,195,092	\$150,972,050	\$149,662,791
Commercial	27,703,400	26,956,059	26,594,512	25,110,481
General	115,600,650	116,053,999	114,718,365	109,046,936
Contract Industrial	21,462,712	21,356,911	21,150,771	19,804,613
Bulk Power	54,506,535	50,380,147	82,796,740	64,210,259
Unbilled	(840,477)	677,091	(666,187)	1,651,808
Other	1,725,200	1,643,756	1,609,143	1,562,082
Total Electric Revenues	374,249,290	366,263,055	397,175,394	371,048,970
Other Operating Revenue	44,365,098	44,363,160	44,070,713	43,413,115
Total Operating Revenues	418,614,388	410,626,215	441,246,107	414,462,085
OPERATING EXPENSES				
Operation and Maintenance	312,790,388	299,200,704	294,741,044	276,558,723
Taxes	19,727,313	19,993,833	19,276,216	19,562,858
Depreciation	55,702,297	57,381,578	59,156,228	56,397,306
Loss on Asset Impairment	-	-	-	-
Total Operating Expenses	388,219,998	376,576,115	373,173,488	352,518,887
NET OPERATING INCOME	30,394,390	34,050,100	68,072,619	61,943,198
NON-OPERATING REVENUES (EXPENSES)				
Other Income and Expense (Net)	1,555,659	(1,923,329)	(728,908)	(252,363)
Interest Earned on Investments	2,405,144	1,796,071	3,780,834	1,899,829
Interest Charges (Net)	(16,196,734)	(19,428,673)	(27,290,021)	(25,688,219)
Contributions to Family Need ..	(480,000)	(480,000)	(900,000)	(900,000)
Gain on Sale of Utility Plant ..	-	-	-	-
Net Income Before Contributions, Transfers & Extraordinary Items	17,678,459	14,014,169	42,934,524	37,002,445
Total Capital Contributions	8,846,216	9,383,844	7,788,292	8,839,960
Transfers Out	(30,462,279)	(24,969,422)	(26,998,415)	(25,970,230)
CHANGE IN NET POSITION	(\$3,937,604)	(\$1,571,409)	\$23,724,401	\$19,872,175

In accordance with Governmental Accounting Standards Board Statement No.65 both 2012 and 2011 were restated for comparative purposes. Years prior to 2011 are shown as originally reported.

2012	2011	2010	2009	2008	2007
\$954,141,423	\$944,969,878	\$933,796,881	\$900,879,652	\$855,373,200	\$794,683,393
154,745,677	196,860,001	223,057,734	104,606,844	122,629,299	157,462,325
333,694,736	313,457,995	279,967,672	288,083,393	312,006,708	272,409,296
-	-	17,651,421	7,304,736	1,990,596	2,356,842
1,442,581,836	1,455,287,874	1,454,473,708	1,300,874,625	1,291,999,803	1,226,911,856
7,848,910	8,213,239	-	-	-	-
1,450,430,746	1,463,501,113	1,454,473,708	1,300,874,625	1,291,999,803	1,226,911,856
779,206,485	762,944,507	744,735,781	735,593,799	695,305,259	621,817,950
518,251,959	563,718,608	582,930,840	459,202,498	490,528,958	517,834,315
84,070,814	82,861,816	95,884,868	83,385,715	100,219,839	81,446,692
20,901,488	17,976,182	30,922,219	22,692,613	5,945,747	5,812,899
623,224,261	664,556,606	709,737,927	565,280,826	596,694,544	605,093,906
48,000,000	36,000,000	-	-	-	-
\$1,450,430,746	\$1,463,501,113	\$1,454,473,708	\$1,300,874,625	\$1,291,999,803	\$1,226,911,856
\$141,236,063	\$136,944,688	\$127,908,143	\$125,807,518	\$131,188,854	\$127,539,844
23,499,735	22,324,063	21,147,156	21,005,151	22,138,244	22,486,943
103,586,233	99,958,156	96,579,940	90,782,730	100,142,959	101,628,965
18,870,807	18,341,067	16,898,845	14,101,372	15,430,080	15,078,247
53,532,081	48,118,090	69,518,730	67,338,457	98,545,139	98,276,853
4,615,802	369,424	(3,564,337)	(411,080)	1,576,914	49,376
1,558,268	1,373,168	1,472,125	1,190,013	1,387,629	1,359,098
346,898,989	327,428,656	329,960,602	319,814,161	370,409,819	366,419,326
40,983,752	36,895,939	36,892,658	35,691,490	33,998,632	33,739,569
387,882,741	364,324,595	366,853,260	355,505,651	404,408,451	400,158,895
267,457,626	247,409,057	259,366,287	220,849,709	246,856,188	237,383,019
17,494,729	16,970,015	15,553,041	15,187,859	16,075,356	15,558,011
57,842,109	56,555,538	55,717,463	53,049,558	48,377,708	43,705,705
-	-	-	-	-	-
342,794,464	320,934,610	330,636,791	289,087,126	311,309,252	296,646,735
45,088,277	43,389,985	36,216,469	66,418,525	93,099,199	103,512,160
3,055,848	1,226,132	2,202,089	1,322,007	3,255,797	1,754,339
5,835,775	8,444,683	7,786,710	8,721,608	12,539,619	14,127,012
(22,859,967)	(21,917,623)	(22,773,604)	(22,804,261)	(22,420,879)	(22,680,647)
(450,000)	(450,000)	(900,000)	(1,229,676)	(450,000)	(450,000)
-	-	-	-	2,923,465	1,467,378
30,669,933	30,693,177	22,531,664	52,428,203	88,947,201	97,730,242
9,480,111	14,222,934	10,224,518	9,844,736	10,219,425	12,046,164
(23,888,066)	(23,913,077)	(23,614,200)	(21,984,399)	(25,679,317)	(25,258,949)
\$16,261,978	\$21,003,034	\$9,141,982	\$40,288,540	\$73,487,309	\$84,517,457

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

TEN-YEAR POWER SUMMARY

	2016	2015	2014	2013
MWh Available				
Generated				
Nisqually	630,483	511,592	635,121	572,932
Cushman	507,618	272,457	358,509	239,528
Cowlitz	1,989,438	1,630,130	2,111,686	1,792,975
Wynoochee	37,209	12,680	14,272	24,404
Hood Street	2,942	1,889	2,281	3,503
Grant Net Actual	-	-	(2,018)	(3,279)
Tacoma's Share of Priest Rapids	26,975	25,360	22,733	34,846
Tacoma's Share of GCPHA	253,625	258,679	272,846	254,570
Total Generated	3,448,290	2,712,787	3,415,430	2,919,479
Purchased	3,807,370	3,674,140	3,845,666	3,756,763
Interchange - Net	(2,438,369)	(1,569,981)	(2,339,277)	(1,665,811)
Losses - Net	(8,870)	10,340	14,057	7,398
Total System Load	4,808,421	4,827,286	4,935,876	5,017,829
MWh Billed				
Residential and Other.....	1,855,706	1,801,114	1,890,970	1,950,829
Commercial/General/Industrial....	2,771,822	2,786,233	2,838,967	2,855,932
Total Firm MWh Billed	4,627,528	4,587,347	4,729,936	4,806,761
MWh Available Over MWh Billed				
(Causes: Timing differences, internal use, and losses other than those reflected above.)	180,894	239,939	175,940	211,068
Percent of Power Generated	71.71%	56.20%	69.20%	58.18%
Average Load Factor	60.02%	62.71%	55.31%	54.18%
Average Number of Billings	176,784	174,562	172,531	171,506
Maximum Hourly Energy Load				
MWh	913	877	1,016	980
Date	12/17/16	12/31/15	2/6/14	12/9/13
Time	0900 hr	0900 hr	800 hr	800 hr
Maximum Daily Energy Load				
MWh	19,641	18,675	21,686	21,172
Date	12/17/16	12/31/15	2/6/14	12/09/13
Minimum Hourly Energy Load				
MWh	351	354	348	349
Date	7/5/16	6/21/15	7/6/14	9/8/13
Time	0400 hr	0600 hr	0600 hr	0500 hr
Minimum Daily Energy Load				
MWh	10,110	10,262	10,221	10,379
Date	9/4/16	5/24/15	7/5/14	7/4/13
Average Hourly Energy Load	548	550	562	572

2012	2011	2010	2009	2008	2007
699,104	663,345	586,433	553,062	530,839	515,585
261,735	410,723	393,563	246,898	208,604	381,193
2,322,875	2,157,106	1,725,424	1,677,554	1,736,328	1,590,719
38,149	35,692	36,320	25,298	25,368	35,518
4,029	3,313	4,133	3,243	4,217	3,914
(3,285)	-	-	-	-	-
37,355	34,417	30,705	-	-	-
255,564	237,794	240,845	-	-	-
3,615,526	3,542,390	3,017,423	2,506,055	2,505,356	2,526,929
4,167,263	3,799,037	4,132,049	4,235,019	4,252,681	4,401,097
(2,814,479)	(2,266,720)	(1,993,911)	(1,729,701)	(1,677,704)	(1,918,581)
20,718	(8,112)	10,599	4,210	10,132	12,433
4,989,028	5,066,595	5,166,160	5,015,583	5,090,465	5,021,878
1,935,518	1,997,714	1,925,549	1,994,692	1,979,930	1,922,289
2,812,769	2,838,424	2,794,406	2,829,425	2,866,480	2,889,520
4,748,287	4,836,138	4,719,955	4,824,117	4,846,410	4,811,809
240,741	230,457	446,205	191,466	243,639	210,069
72.47%	69.92%	58.41%	49.97%	49.22%	50.32%
61.47%	58.86%	52.82%	51.69%	56.68%	59.27%
169,012	169,123	169,413	168,207	166,307	165,122
924	931	992	1,062	1,018	960
1/16/12	1/3/11	11/23/10	12/10/09	12/15/08	1/12/07
1800 hr	0800 hr	1800 hr	800 hr	1900 hr	900 hr
19,100	18,788	20,591	21,103	21,237	20,312
1/16/12	1/11/11	11/23/10	12/9/09	12/15/08	1/12/07
340	310	303	295	349	355
9/19/12	7/5/11	9/3/10	7/5/09	7/6/08	9/16/07
0400 hr	0400 hr	0300 hr	0700 hr	0700 hr	0500 hr
10,160	9,171	9,041	9,036	10,235	10,348
9/2/12	7/3/11	9/5/10	8/15/09	8/31/08	9/2/07
566	548	524	549	577	569

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CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

GROSS GENERATION REPORT - December 31, 2016 AND December 31, 2015

	YEAR ENDED		2016 OVER (UNDER) 2015	PERCENT CHANGE
	Dec 31 2016	Dec 31 2015		
KWH GENERATED, PURCHASED AND INTERCHANGED - Gross				
Generated - LaGrande	378,898,000	319,979,000	58,919,000	18.4%
Generated - Alder	251,585,000	191,613,000	59,972,000	31.3%
TOTAL NISQUALLY	630,483,000	511,592,000	118,891,000	23.2%
Generated - Cushman No. 1	185,318,000	107,411,000	77,907,000	72.5%
Generated - Cushman No. 2	322,300,000	165,046,000	157,254,000	95.3%
TOTAL CUSHMAN	507,618,000	272,457,000	235,161,000	86.3%
Generated - Mossyrock	1,203,631,000	1,007,917,000	195,714,000	19.4%
Generated - Mayfield	785,807,000	622,213,000	163,594,000	26.3%
TOTAL COWLITZ	1,989,438,000	1,630,130,000	359,308,000	22.0%
Generated - Wynoochee	37,209,000	12,680,000	24,529,000	193.4%
Generated - Hood Street	2,942,400	1,889,500	1,052,900	55.7%
Tacoma's Share of Priest Rapids	26,975,000	25,360,000	1,615,000	6.4%
Tacoma's Share of GCPHA	253,625,000	258,679,000	(5,054,000)	-2.0%
TOTAL KWH GENERATED - TACOMA SYSTEM	3,448,290,400	2,712,787,500	735,502,900	27.1%
Purchased Power				
BPA Slice Contract	2,265,823,000	2,080,213,000	185,610,000	8.9%
BPA Block Contract	1,541,547,000	1,593,927,000	(52,380,000)	-3.3%
Interchange Net	(2,438,369,000)	(1,569,981,000)	(868,388,000)	55.3%
TOTAL KWH GENERATED, PURCHASED AND INTERCHANGED ..	4,817,291,400	4,816,946,500	344,900	0.0%
Losses	41,976,966	32,070,742	9,906,224	30.9%
Baldi Replacement	1,864,094	2,645,869	(781,775)	-29.5%
Ketron	262,023	269,163	(7,140)	-2.7%
NT PC Mutuals Schedules.....	(28,498,000)	(28,075,000)	(423,000)	1.5%
PC Mutual Inadvertent	(24,475,004)	3,429,073	(27,904,077)	-813.7%
TACOMA SYSTEM FIRM LOAD	4,808,421,479	4,827,286,347	(18,864,868)	-0.4%
PIERCE COUNTY MUTUAL LOAD	1,435,535,000	1,422,462,000	13,073,000	0.9%
KWH BILLED				
Residential Sales	1,817,931,140	1,764,596,523	53,334,617	3.0%
Commercial Sales	316,085,742	309,650,083	6,435,659	2.1%
General	1,947,062,423	1,969,382,254	(22,319,831)	-1.1%
Contract Industrial	508,673,780	507,200,696	1,473,084	0.3%
Public Street and Highway Lighting	31,555,485	30,545,257	1,010,228	3.3%
Sales to Other Electric Utilities	6,219,000	5,972,400	246,600	4.1%
TOTAL FIRM	4,627,527,570	4,587,347,213	40,180,357	0.9%
Bulk Power Sales	2,731,076,000	1,917,685,000	813,391,000	42.4%
TOTAL KWH BILLED	7,358,603,570	6,505,032,213	853,571,357	13.1%

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

<u>YEAR</u>	<u>PRINCIPAL</u>	<u>INTEREST</u>	<u>TOTAL</u>
2017	11,575,000	18,389,310	29,964,310
2018	10,095,000	17,926,310	28,021,310
2019	29,165,000	17,471,560	46,636,560
2020	11,970,000	16,113,310	28,083,310
2021	3,795,000	15,564,810	19,359,810
2022	3,985,000	15,375,060	19,360,060
2023	4,185,000	15,175,810	19,360,810
2024	4,395,000	14,966,560	19,361,560
2025	4,525,000	14,832,512	19,357,512
2026	24,185,000	14,685,450	38,870,450
2027	4,675,000	13,321,174	17,996,174
2028	4,905,000	13,087,424	17,992,424
2029	5,155,000	12,842,174	17,997,174
2030	27,310,000	12,584,424	39,894,424
2031	28,335,000	11,002,902	39,337,902
2032	29,335,000	9,347,016	38,682,016
2033	30,460,000	7,596,889	38,056,889
2034	31,630,000	5,779,646	37,409,646
2035	10,990,000	3,892,600	14,882,600
2036	11,535,000	3,343,100	14,878,100
2037	12,115,000	2,766,350	14,881,350
2038	12,720,000	2,160,600	14,880,600
2039	13,230,000	1,651,800	14,881,800
2040	13,755,000	1,122,600	14,877,600
2041	14,310,000	572,400	14,882,400
	<u>\$358,335,000</u>	<u>\$261,571,791</u>	<u>\$619,906,791</u>

The amounts above reflect debt service requirements, and do not include the portion funded in the current year for \$12,730,000.

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

FUNDS AVAILABLE FOR DEBT SERVICE

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Total Income	\$425,755,909	\$413,680,801	\$447,043,485	\$418,841,237	\$400,235,482
Less: Operating Exp	<u>332,517,701</u>	<u>319,194,537</u>	<u>314,017,260</u>	<u>296,121,581</u>	<u>284,952,355</u>
Income Available for Debt Service	<u>\$93,238,208</u>	<u>\$94,486,264</u>	<u>\$133,026,225</u>	<u>\$122,719,656</u>	<u>\$115,283,127</u>
Bond Redemption	\$12,730,000	\$14,735,000	\$32,115,000	\$28,295,000	\$28,785,000
Bond Interest	<u>19,025,810</u>	<u>22,420,035</u>	<u>26,626,411</u>	<u>24,112,971</u>	<u>27,747,001</u>
Debt Service Payable on All Debt	\$31,755,810	\$37,155,035	\$58,741,411	\$52,407,971	\$56,532,001
Times Debt Service Covered	2.94	2.54	2.26	2.34	2.04

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

RESOURCES
AS OF DECEMBER 31, 2016

GENERATING FACILITIES	GENERATING UNITS	AGGREGATE NAME PLATE RATING (kW)	APPROX. RATED 4-YR. AVERAGE ANNUAL OUTPUT (1,000 kWh)
Hydro:			
Alder	2	50,000	228,355
LaGrande	5	64,000	358,733
Cushman No. 1	2	43,200	130,506
Cushman No. 2	3	81,000	214,011
Mayfield	4	162,000	736,654
Mossyrock	2	300,000	1,144,311
Wynoochee	1	12,800	22,141
Total Hydro		713,000	2,834,711

Tacoma Power and the City of Seattle Light Department have entered into a 40-year purchase power contract with three Eastern Washington irrigation districts that have combined to develop the Grand Coulee Project Hydroelectric Authority. Tacoma Power and the City of Seattle Light Department share equally the output of the project which has a combined capacity of 128,700 kW and an annual energy capability of about 476,000,000 kWh.

CUSTOMERS BY CLASS	AVERAGE NUMBER BILLINGS	AVERAGE HOURLY ENERGY (kW)
Residential	157,540	1.312
Incidental	15,688	2.300
General	2,642	106.376
Public Streets and Highways	914	3.941
Total System	176,784	2.988

Circuit Miles of Transmission Lines

115 kV	307
230 kV	44

Circuit Miles of Distribution Lines

Overhead	1,178
Underground	836

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

TAXES AND EMPLOYEE WELFARE CONTRIBUTIONS
FOR THE YEAR 2016

FEDERAL

Power Social Security (FICA)	\$6,792,585	
Total		\$6,792,585

STATE OF WASHINGTON

Retail Sales and Use Taxes	3,753,474	
Power Utilities and Business Operations Tax	13,070,478	
Power State Employment Security	101,804	
Total		16,925,756

COUNTY

Lewis County - In Lieu of Taxes	1,529,863	
Mason County - In Lieu of Taxes	184,297	
Pierce County School Support - Eatonville	7,000	
White Pass School Support	122,293	
Mossyrock School Support	106,222	
Morton School Support	2,985	
Lewis County Fire Protection District	10,794	
Pierce County Fire Protection District	56,965	
Pierce County Drainage District	17,484	
Thurston County	938	
Total		2,038,841

MUNICIPALITIES

City of Tacoma Power Gross Earnings Tax	28,412,707	
Click!Network Gross Earnings Tax/Franchise Fees	3,304,400	
City of Fife Power Franchise Fee	1,206,459	
City of University Place Power Franchise Fee	1,080,368	
City of Lakewood Power Franchise Fee	824,727	
City of Fircrest Power Franchise Fee	244,641	
City of Steilacoom Power Franchise Fee	4,790	
Total		35,078,092
TOTAL TAXES		<u>\$60,835,274</u>

Taxes as a % of Operating Revenues of \$418,614,388		14.53%
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EMPLOYEE WELFARE CONTRIBUTIONS

Power Industrial Insurance and Medical Aid.....	\$2,035,370	
Power City of Tacoma Pension Fund	9,282,983	
Power Medical/Life Insurance	17,386,237	
TOTAL EMPLOYEE WELFARE CONTRIBUTIONS		<u>\$28,704,590</u>

CITY OF TACOMA, WASHINGTON
DEPARTMENT OF PUBLIC UTILITIES
TACOMA POWER

2016 ELECTRIC RATES
(Based on 2015 rate schedules)

RATE PER MONTH

Schedule A-1 - Residential Service

Customer Charge	\$10.50 per month
Customer Charge (for collectively metered apartments)	\$8.50 per month
Energy (all energy measured in kilowatt-hours)	\$0.039710 per kWh
Delivery (all energy delivered in kilowatt-hours) .	\$0.034435 per kWh

Schedule A-2 - Low-Income/Elderly/Handicapped Residential Service

Seventy percent (70%) of the monthly bill as
calculated under Section 12.06.160 of the official
Code of the City of Tacoma, known as RESIDENTIAL SERVICE -
SCHEDULE A-1.

Schedule B - Small General Service

Customer Charge	\$19.00 per month
Customer Charge (for unmetered services)	\$14.75 per month
Energy (all energy measured in kilowatt-hours)	\$0.042507 per kWh
Delivery (all energy delivered in kilowatt-hours) ..	\$0.034587 per kWh

Schedule G - General Service

Customer Charge	\$50.00 per month
Energy (all energy measured in kilowatt-hours)	\$0.041192 per kWh
Delivery (all kilowatts of Billing Demand delivered)	\$7.50 per kW

Schedule HVG - High Voltage General Service

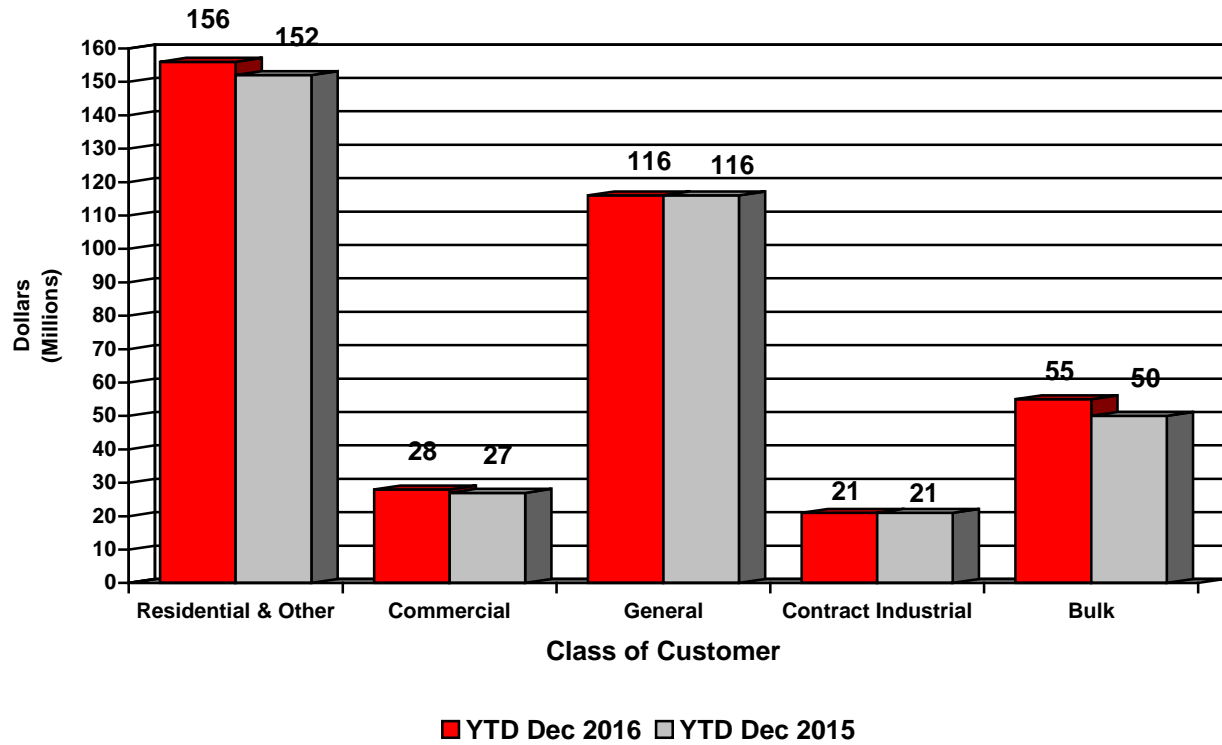
Customer Charge	\$210.00 per month
Energy (all energy measured in kilowatt-hours)	\$0.035175 per kWh
Delivery (all kilowatts of Billing Demand delivered)	\$4.00 per kW

Other schedules also now in effect are:

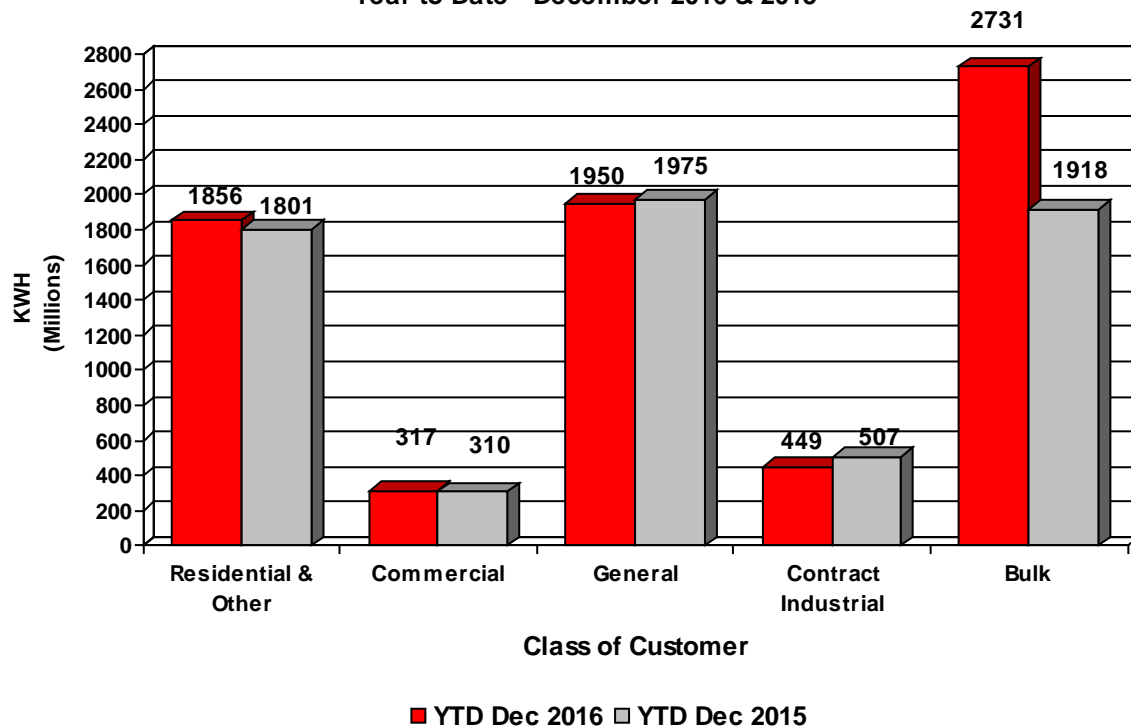
- CP - Contract Industrial Service (major industrial power use -
written contract required)
- H-1 - Street Lighting and Traffic Signal Service
- H-2 - Private Off-Street Lighting Service

Electric rates were established by Ordinance No. 28285 passed March 17, 2015
and became effective April 1, 2015.

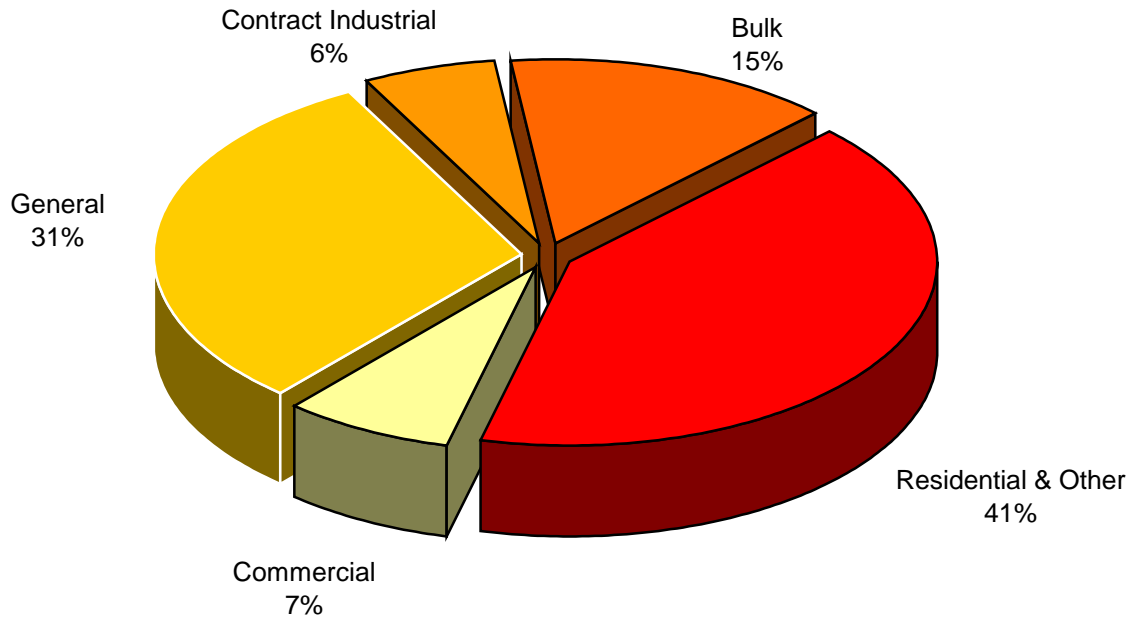
SALES OF ELECTRIC ENERGY
Year to Date - December 2016 & 2015



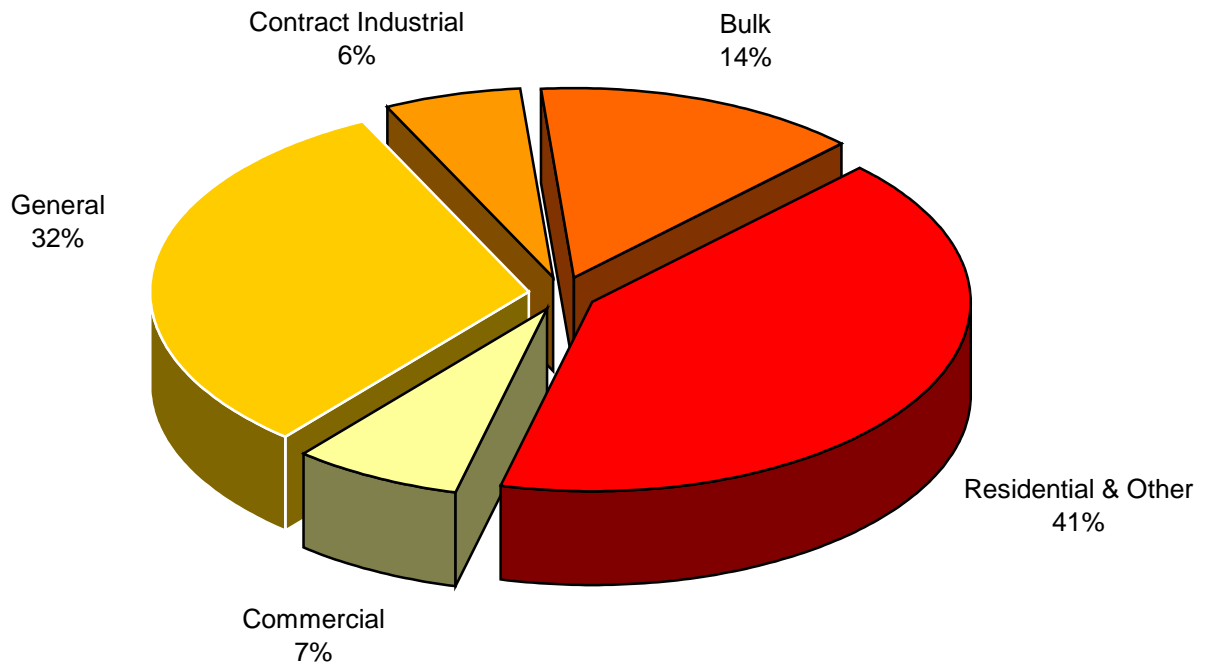
TOTAL POWER BILLED
Year to Date - December 2016 & 2015



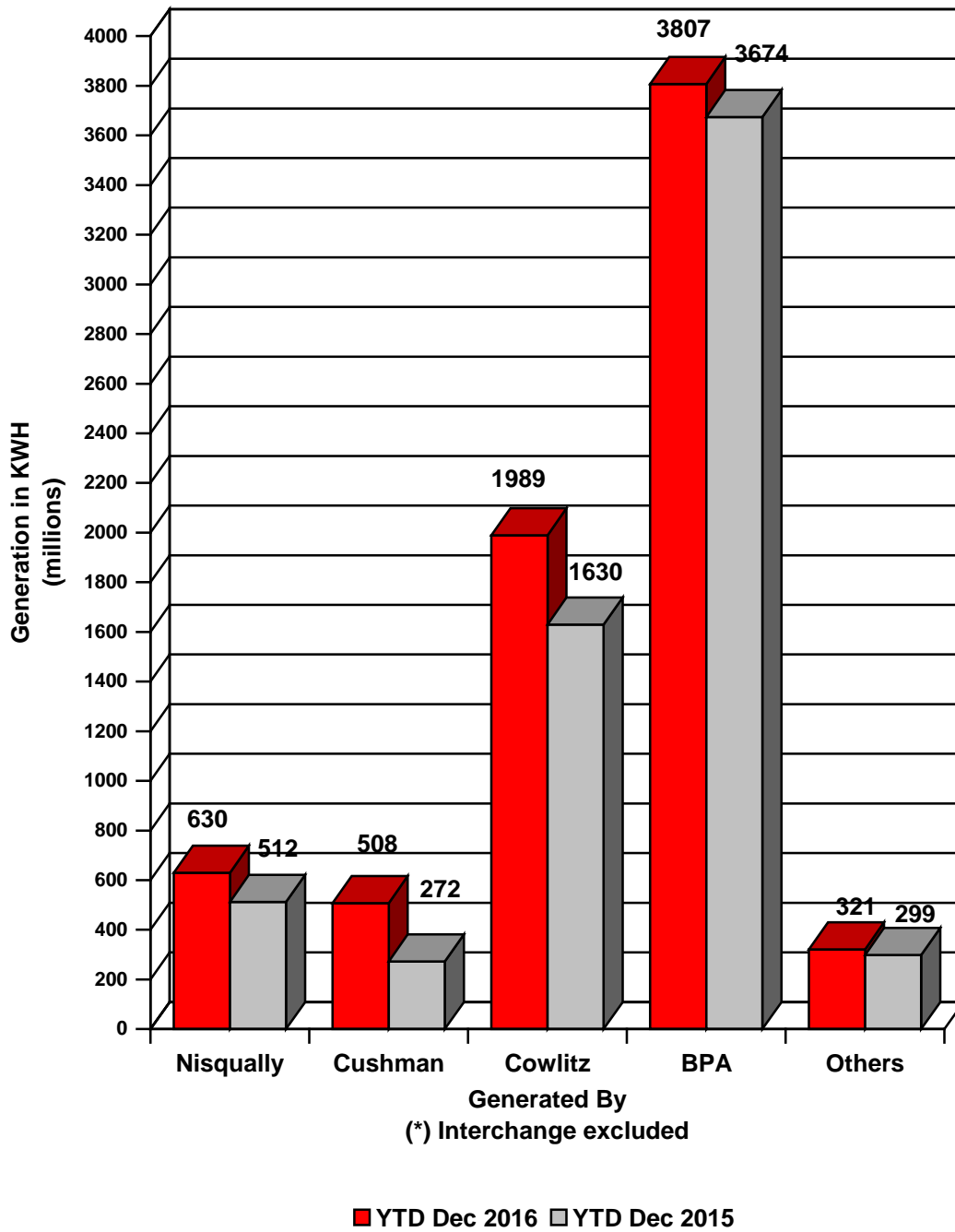
SALES OF ELECTRIC ENERGY
Year to Date - Dec 2016 (\$374,249,290)



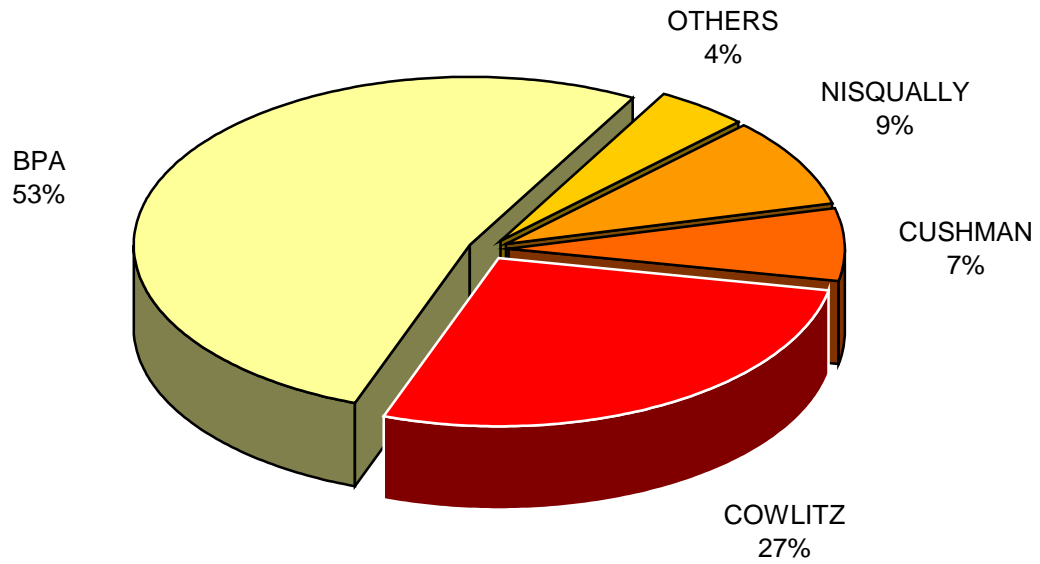
SALES OF ELECTRIC ENERGY
Year to Date - Dec 2015 (\$366,263,055)



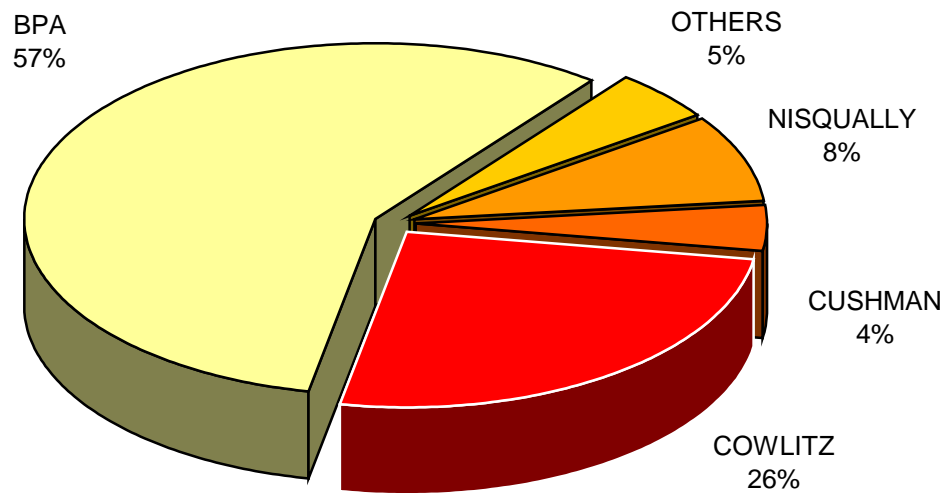
POWER SOURCES (*)
Year to Date December 2016 & 2015



POWER SOURCES (*)
Year to Date - December 2016

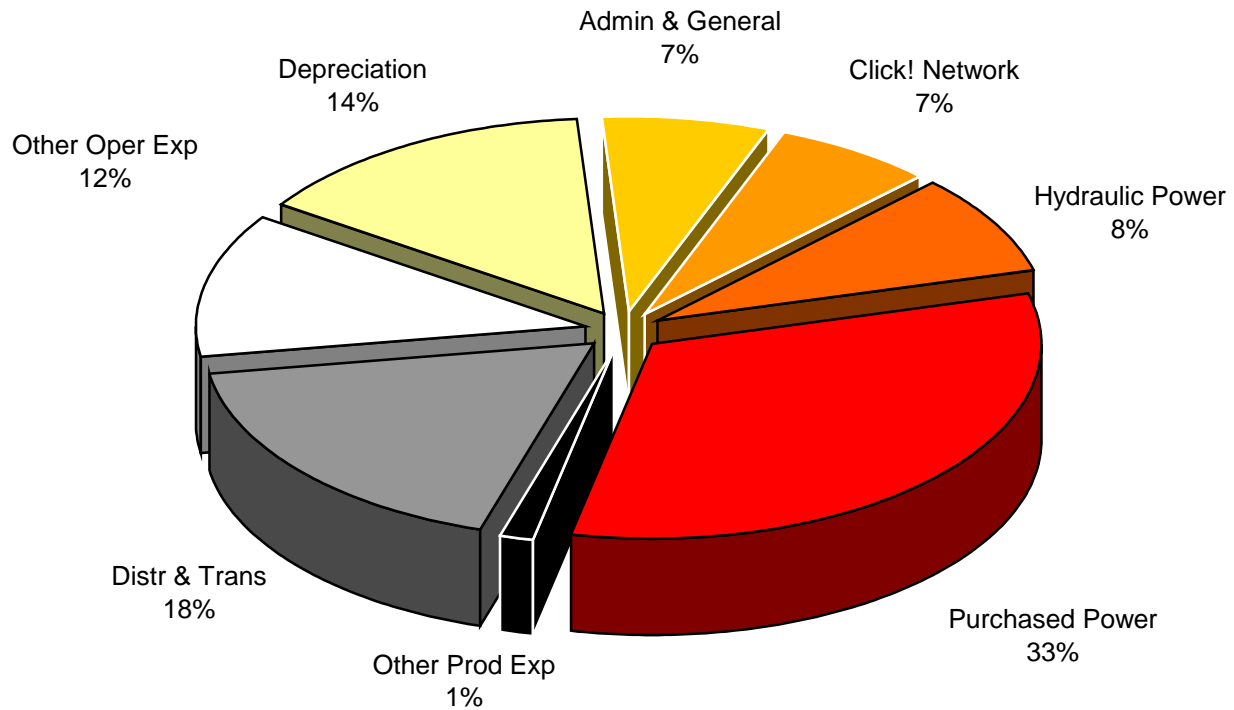


POWER SOURCES (*)
Year to Date - December 2015

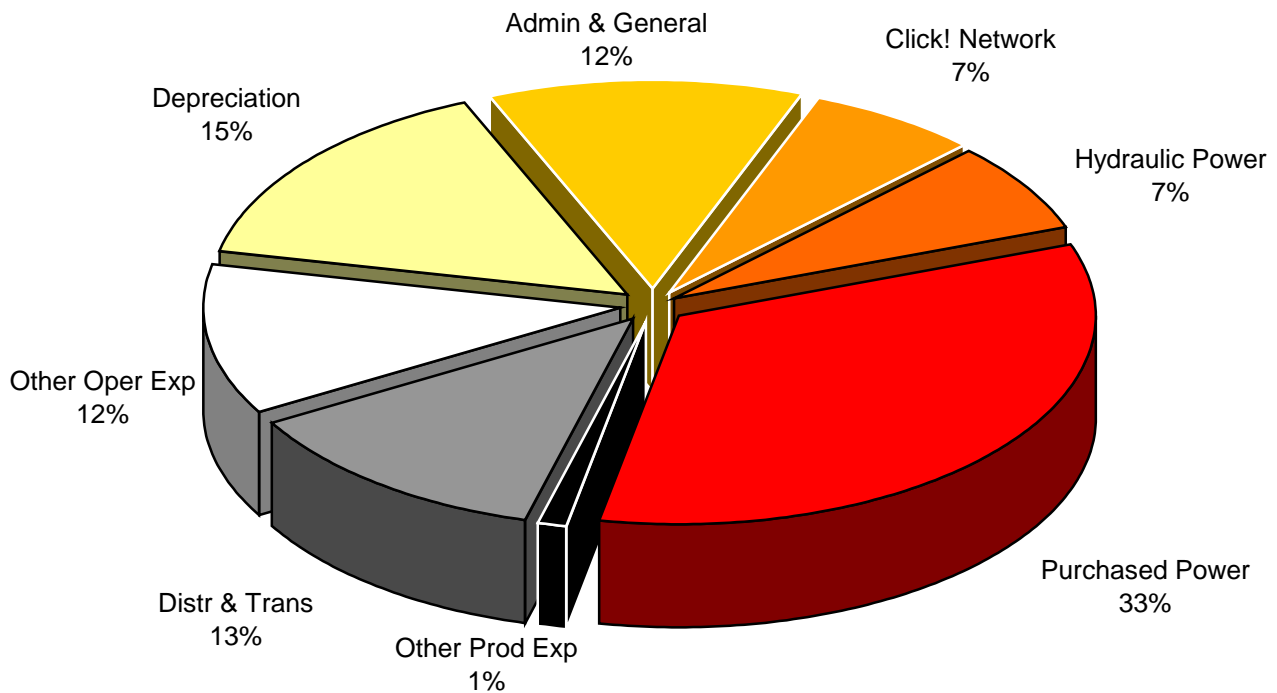


(*) Interchange excluded

TOTAL OPERATING EXPENSES *
Year to Date - Dec 2016 (\$388,219,998)

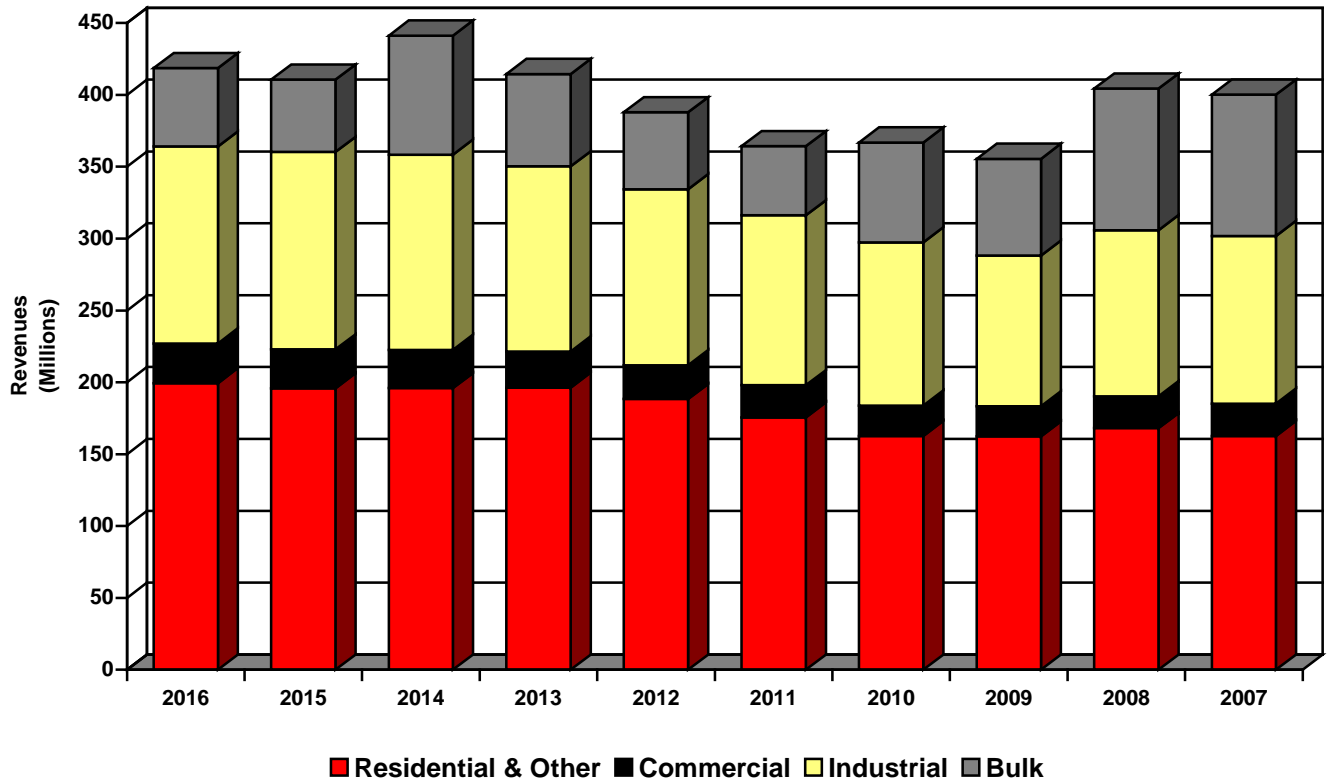


TOTAL OPERATING EXPENSES *
Year to Date - Dec 2015 (\$376,576,115)

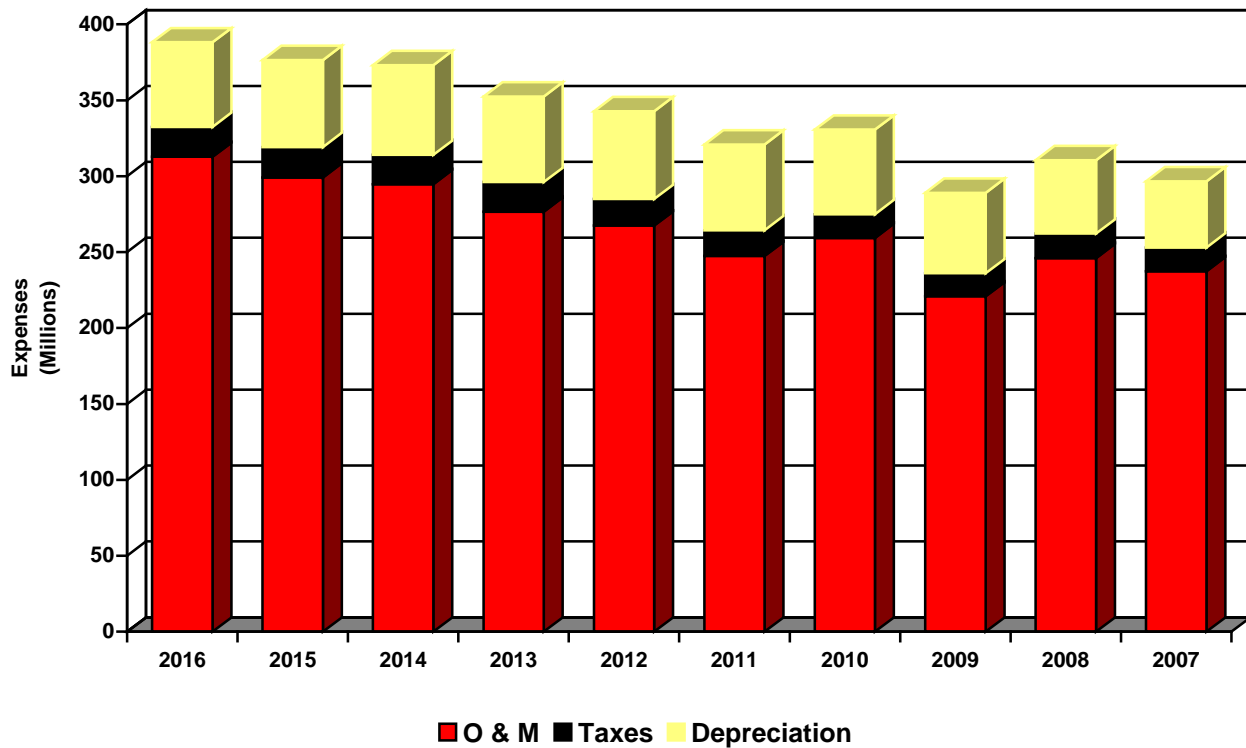


* City Gross Earnings Taxes are not included in Total Operating Expenses.

TEN-YEAR SUMMARY OF OPERATING REVENUES



TEN-YEAR SUMMARY OF OPERATING EXPENSES



2016 SUPERINTENDENT'S REPORT TACOMA POWER

CLICK!

Financial Status

Click! Network commercial revenues declined from \$27.3 million in 2015 to \$26.7 million in 2016. The retail cable TV customer base dropped 4.6 percent ending the year with 17,468 active customers, and the Internet cable modem customers served by the three wholesale Internet Service Providers (ISPs) - Advanced Stream, Net-Venture, Inc., and Rainier Connect, grew by .4 percent ending the year with 23,344 active customers. Click! provided 173 broadband transport circuits to Click!'s wholesale service providers allowing them to provide an array of telecommunication services to many businesses in the service area. Additionally, Click! continued to provide the City of Tacoma I-Net services to approximately 190 sites, keeping the cost of telecommunications low for many government entities, and also provided support for just over 15,000 gateway power meter connections.

Cable TV Rate Adjustments

Because a final policymaker decision regarding Click! Network's long term business plan remained outstanding in 2016, no cable television rate increases were implemented. Although Cable television prices continue to remain under market, the postponement of rate adjustments contributed to the decline in revenues.

Channel Additions

During 2016, Click! Network migrated 10 networks from optional service levels to its Broadcast package and migrated Big Ten Network and Sprout from its Sports & Family package to its Click! ON Digital package. Three networks discontinued operations in 2016, Pivot, UWTV, and MundoMax, but TV Tacoma HD was added, bringing the total to 376 video and 65 audio channels. Click! also added a variety of national and local video on demand content for a total offering of over 12,000 hours of content to make the product more competitive. Additionally, Click! added new networks to its Watch TV Everywhere service. Click!'s cable TV customers can now enjoy watching Click! video content from 84 networks on any of their mobile devices with an internet connection.

Website Improvements

Click! Network launched a new website in June 2016. Improvements included streamlined navigation, responsiveness to mobile device screen sizes, enhanced TV listings, and an online shopping cart. Click! cable television products, along with ISP internet packages, are now prominently displayed, enabling the potential customer to select services and submit a self-service order online.

Customer Satisfaction Survey

Customer Satisfaction survey cards were mailed to all new cable TV customers and to all customers who had a service related issue. Click! customer service and technicians representatives received ratings averaging 3.7 and 3.8 respectively on a scale of 1 – 4. In addition, a Customer Satisfaction Survey conducted on Click! Network's behalf by Washington State University's Social & Economic Sciences Research Center (SESRC) showed a mean average overall customer satisfaction score of 8.08 on a 1-10 scale. The results revealed that customers are very satisfied with the services provided by Click! and in particular, recognized the quality of service provided by our Sales and Service Representatives and Service Technicians.

New Tools

Click! purchased the CPAT Flex Digital Leakage Monitoring System to address concerns about interference from cable leakage in the aeronautical and LTE bands. The CPAT Flex Digital Leakage Monitoring System automates the signal leakage detection process freeing up technicians for other tasks. Since the tool is continuously monitoring the network, signal leakage is quickly detected and repaired.

Click! also purchased the CheetahXD software to replace the former Cheetah Lite version. The CheetahXD software helps Click! network technicians manage the HFC network by providing end-to-end visibility across the HFC operations environment, and enables NOC personnel to proactively isolate network problems, trace root causes, assess potential impacts, and prioritize truck rolls by pinpointing fault and performance issues in real-time. With CheetahXD software, HFC network assurance is simplified, operational costs are reduced, and network performance is improved resulting in enhanced customer satisfaction.

Spectrum Reclamation

In 2015, Click! fully converted its system from analog to digital and freed up nineteen (19) 6 MHz channel slots. Since then, 6 of those freed up channels have been added to the bank of downstream Internet channels to meet the growth in customers and Internet usage. Therefore leaving 13 channels available for use.

Network Bandwidth

During 2016, Click! added NETFLIX cache servers to the local network. The addition of these cache servers has reduced bandwidth utilization by as much as 30%. Click! added an additional 10 Gig connection at Downtown South and Downtown North for a total of 30 Gig potential capacity at each location. The Core routers are being upgraded from the Cisco 7600 platform to the Cisco ASR 9912 platform. This will provide the necessary 10 gig ports and throughput to support current and future network growth. The Cable Modem Termination Systems (CMTS) are also being upgraded. The existing Cisco uBR 10000 series CMTSs are going to be replaced with new Cisco cBR-8 CMTSs. The first set of Cisco cBR-8 CMTSs were purchased during 2016. These will support DOCSIS 3.1 Gigabit services and provide higher port and bandwidth capacity for meeting bandwidth demands and subscriber growth.

Asset Management Program

During 2016, Click! continued to build its asset list and has developed its registries for the Router, HFC Distribution, and Headend Equipment asset classes, and is prepared to participate in the Tacoma Power's Strategic Asset Management program. Click! also developed a Network Maturity Model, to more effectively manage its asset lifecycles and plan future capital expenditures.

Safety and Work Practices

In 2016, Click! continued to make improvements to its safety management practices. Improvements included: (i) Focusing on reviewing past performance; (ii) improvements in the oversight of injured worker claims; and (iii) increased review of leading indicators such as near misses and non-medical injury reports. Additional training was provided on Home Safety and how the employees and their families can be impacted by the activities we engage in outside of our work life. Safety posters and bulletin board messages were utilized to promote safety awareness. Each business unit held monthly safety meetings and the Click! Safety Committee met quarterly to improve safety related communications.

GENERATION

Hydroelectric Projects

Tacoma Power's hydro plants were available 99.83 percent of the time in 2016 except for scheduled maintenance outages.

Cowlitz

Construction is wrapping up on the Cowlitz Falls North Shore Collector for collection of downstream migrating smolts from the upper Cowlitz River. The collector, located at Lewis County Public Utility District Cowlitz Falls Dam, will improve natural fish runs in the Cowlitz River and help Tacoma Power meet its Federal Energy Regulatory Commission (FERC) license obligations. The \$35 million construction project is scheduled for final commissioning and operation in April, 2017. The 70 ton head gate for unit 51 was removed for the first time in 48 years and rehabilitated.

Cushman

Construction on both of the new Cushman fish hatcheries were completed and began operation in 2016. One Cushman unit was modified to allow for synchronous condensing operation which will allow Power Management to supply and sell capacity without consuming water. The 20-year-old exciters for all three generators at Cushman 2 were replaced. Construction of recreation improvements in the Staircase area were completed and opened to the public during 2016.

Nisqually

The 20-year-old exciters were replaced on four units at LaGrande and one governor was upgraded.

Regulatory Compliance and Dam Safety

All dam safety and license compliance requirements were met and submitted to the Federal Energy Regulatory Commission on time. All NERC compliance obligations were met and the 2016 audit resulted in no findings. Several studies were concluded or nearly concluded relating to seismic upgrades to parts of our plants including the Mayfield penstock slope and the spillways at both Mayfield and Mossyrock. Potential seismic loading was recently increased on these projects which will cause us to have to rework some previous studies and explore new alternatives.

Parks

Tacoma Power's parks served over 300,000 customers in 2016. Tacoma Power's park customers continue to compliment the cleanliness, admire the beauty and maintenance, and praise the friendly and helpful staff. Nearly 99 percent of the customers rate the employees as helpful in the 2300 surveys that were completed. A few of the many positive customer comments received include: "The staff is so friendly, gave a warm reception, very welcoming, helpful, warm, kind, congenial, cordial, courteous, amenable and generous!." "Great family camping spot! Well-kept and lots of fun things to do."

Facilities

Chief Imo retired as the Facilities Manager and was replaced by Terry Coggins in 2016. Construction was nearly completed on the 4th floor remodel which will combine Finance and Purchasing functions on the 4th floor and free up space on the Main floor for other pressing facility needs.

POWER MANAGEMENT

2016 was a productive year for Power Management. Highlights (with more detail following) include:

1. Power Management had overall responsibility for developing Tacoma's first community solar projects. The projects were fully subscribed, constructed ahead of schedule and under budget, and received a warm reception from the community.
2. We developed, marketed and executed numerous non-energy products and services in 2016 to mitigate weak wholesale market prices. The effort resulted in \$2.4 million in additional net benefit for our customers.
3. We exceeded the conservation target in 2016 with low resource acquisition costs.
4. Power Management led efforts to create a way to convert City of Tacoma street lights to LED technology without the City borrowing funds.
5. We participated in regional efforts to investigate and influence regional wholesale markets and to investigate the potential benefits of transportation electrification.

6. We renewed contracts with two large industrial customers that required significant negotiation and accommodation in key elements of the agreements.

Conservation Resources Management (CRM)

Tacoma Power acquires energy conservation as a resource to defer its need for future, more costly supply-side resources. Conservation in 2016 cost less than \$21/MWh while other resources we might use to meet future load cost significantly more. CRM completed over 1,000 residential projects and over 200 commercial projects. Conservation also provides a positive touch point for thousands of customers with its popular programs that provide homeowners and businesses technical assistance as well as financial incentives to reduce the cost of their energy efficiency improvements. Additionally, CRM held 30 community events and 33 retailer events to promote efficient retail products.

For the 2016-2017 compliance biennium, Tacoma Power has a target of 9.4 aMW. As the first year of the biennium draws to a close, Conservation Resources Management (CRM) projects a year-end savings of 5.7 aMW and biennial savings of about 10 aMW. Savings in excess of the target would be eligible for use against our targets in the following two biennia subject to stipulations in RCW 19.285.040(c)(i), a Tacoma Power-led amendment to the Energy Independence Act.

In addition to working to meet its conservation goals, CRM developed new programs and tools throughout 2016 to better prepare for the future. CRM has implemented a new central database to house customer, program, and financial transaction information and automate time consuming tasks. Database development projects like this often come in over budget and delayed but this project was completed on time and within budget.

CRM has launched a new community solar program which allows customers to benefit from lucrative State incentives even if they don't own their home or otherwise are not able to install solar energy themselves. The solar array is housed atop the TPU warehouse roof.

Another major project involving CRM was to create a rate whereby the City of Tacoma can convert most of its streetlights to LED fixtures without increasing its budget. CRM will manage the RFP process and oversee installation of the LED streetlights.

CRM also continues to promote the success of its "trade allies" who install energy efficiency measures under its programs. A new database portal will allow trade allies to view information regarding projects with their shared customers.

Energy Resource Planning

Tacoma Power's purchases a significant amount of power and transmission from the Bonneville Power Administration (BPA) at an annual cost of approximately \$120 million and \$18 million respectively. The Planning Unit actively participated in BPA's pre-BP-18 Wholesale Power and Transmission rate case workshops. We vigorously supported a revision to the way BPA allocated transmission costs among NT and PTP customers. However, BPA did not accept our recommendation. Pursuant to the BPA Power contract, on May 1 Tacoma Power had a one-time opportunity to change from a "slice" to a "block" customer. The Planning Unit assessed both products and found remaining a "slice" customer was most beneficial to the utility.

The Planning Unit participated with four other utilities in a study to illustrative of the value of transportation electrification to the region and individual utilities. The study identified electric vehicle adoption rates, wholesale electric prices, fuel prices, generation capacity prices, distribution system costs, and electric vehicle and charger costs as important factors to the economics of transportation electrification. The study suggests significant regional benefits from transportation electrification; however, utility impacts ranged from negative to positive depending on utility specific circumstances.

The Planning Unit worked with other parts of Tacoma Power to complete a report on potential near term strategies to interact with organized wholesale markets. The study considered functional staffing requirements, computer software and equipment costs for three level of CAISO interaction: participate as a Market Entity, pseudo-tie a unit, and bidding in an external resource.

The Planning Unit completed two contracts to acquire an estimated 200,000 RECs per year (unit contingent) for the post-2020 compliance period. Tacoma Power has now secured about 650,000 of the projected 750,000 renewable MWHs/RECs needed to comply with state mandates

The Planning Unit assessed replacing most of the current old metal-halide/sodium vapor street lights in the city of Tacoma with LED lights. The study found positive net benefits. This unit led a cross-utility team to develop a new street light ordinance to allow the instillation of the LED lights. The Tacoma City Council will consider the ordinance in 2017.

The Planning Unit participated in a number of state regulation and policy development efforts including Clean Air Rule (Ecology), amendments to the Energy Independence Act implementing rules (Commerce), fuel mix disclosure requirements (Commerce), and IRP requirements (Rep. Morris).

The Planning Unit worked with Tacoma Power's two CP customers to renew the contracts under which they receive service. The Tacoma Public Utility Board approved the contracts at their September 21, public meeting.

The Planning Unit worked with RPA to assess how potential changes to rates might affect different segments of customers (particularly low income customers) and how any negative impacts might be mitigated. This assessment was well received by internal audiences and at PPC.

The Planning Unit initiated the biennial service area energy conservation potential assessment. The study was about half complete by the end of the year. Presently it indicates about 35 aMW of achievable economic conservation potential over a 10-year period. As part of this work, the Planning Unit established the BPA Block contract power rate as the new avoided cost for the conservation cost-effectiveness test.

Resource Operations and Trading

Wholesale transactions in 2016 were characterized by strong sales volumes and lower wholesale prices compared to the prior year. Net wholesale power sales were 2.5 million MWh, exceeding the budget estimates of 1.2 million MWh. Annual revenue was \$50.1 million compared to budget estimates of \$53.3 million.

In the first quarter of 2016, flows into Tacoma Power's reservoirs were well above normal. These high inflows were due in part to warm temperatures and in part to high precipitation, especially at the Cushman hydroelectric project. The warm temperatures are typical of the strong El Niño conditions that were present in the first part of 2016.

Snowpack in Tacoma's basins was also above normal into the early spring. However, the weather turned much warmer and drier with record high temperatures in April. The result was a rapid spring melt and a much lower than expected runoff. As a consequence, the storage reservoirs at the Cowlitz and Nisqually hydroelectric projects did not reach the normal summertime operating levels. Tacoma was able to make extraordinary efforts to refill Lake Cushman by early June.

To mitigate the impact of the below normal spring and summer flows, Tacoma worked with State, Federal and Tribal Natural Resource Agencies to reduce required flows at the Nisqually hydroelectric project in order to preserve water in storage and protect the downstream environment.

In October, Tacoma's projects received above average precipitation, and record-setting inflows. The high flows continued into November, and allowed Tacoma's reservoirs to recover after the dry spring and summer. In December, after almost an entire year of above-normal temperatures, conditions shifted towards a weak La Nina, and temperatures were well below normal for the month.

Overall for calendar year 2016, stream flows into Tacoma's Cowlitz, Nisqually, and Cushman hydroelectric projects were above their historic levels at 110 percent, 101 percent, and 136 percent, respectively. Flows into the Federal Columbia River Power System, which affect Tacoma's Slice-of-the-System BPA contract, were 99 percent of normal.

In 2016, Tacoma continued to find innovative ways to monetize the flexibility of its power resource portfolio by participating in emerging markets for various ancillary energy products.

Tacoma continued selling energy as a designated Asset Controlling Supplier (ACS), one of only three in the Pacific Northwest. With this designation, any sales made from Tacoma's resource portfolio are deemed "low carbon" and can be sold at a premium. In 2016, ACS sales resulted in additional revenue of almost \$1.5 million.

Tacoma continued to analyze the capabilities of the resource portfolio to determine whether capacity and reserve products could be reliably supplied and to quantify the associated opportunity cost. We responded to several Request for Offers (RFOs) for Imbalance Capacity Products and were awarded two of the RFOs. Sale of these products plus sales made in the Day-Ahead and Real-Time markets provided additional revenue of approximately \$1 million.

Power Management worked together with T&D and Generation to analyze, develop and implement a new Frequency Reserve product. In December, we were awarded a RFO and began delivering this new product which will provide approximately \$200,000 of additional revenue.

RATES, PLANNING, AND ANALYSIS

Retail Rates

Tacoma Power completed a comprehensive update and review of its cost-of-service study working with its rate consultant, Black & Veatch. Staff also completed a rigorous study of impacts of various residential rate designs on Tacoma Power customers. Initial customer class rate adjustments were presented to the Public Utility Board on 12/14/2016.

Energy Risk Management

Tacoma Power staff completed the first generation cash-flow-at-risk model. The model will enable better analysis of risks related to hedging decisions and provide new reports to Tacoma Power executives.

Staff hired a consultant to benchmark wholesale risk management practices against industry standards. The study helped staff to develop a roadmap and begin implementation of new business processes for enhancing credit reporting and risk controls.

Finance

Facing a \$48.6 million reduction in wholesale and retail revenue, Tacoma Power focused on minimizing expense increases in the Operations & Maintenance, Personnel, and Capital budgets. Over 34 unfilled positions were repurposed during the budget process to align with the strategic needs of the utility.

Additionally, the initial Capital budget was reduced by \$29 million through a new review and development process. These cost reductions allowed the utility to hold rate increases to 5.9% each year despite the reduction in wholesale and retail revenue.

In addition, Tacoma Power's credit ratings were confirmed by S&P in 2016 as part of their regular monitoring and review cycle for the utility. Tacoma Power's existing credit ratings of Aa3/AA/AA- by Moody's, Standard & Poor's, and Fitch, respectively, continue to allow Tacoma Power access to low interest rates for future borrowing needs.

Strategy

Tacoma Power completed development of a new Strategic Plan in October 2016. The plan was developed using feedback from customers, employees, and stakeholders throughout the City of Tacoma. It focuses around the strategic principle of Community Value First and can be summarized into four primary focus areas: Employees, Customers, Finances, and Environmental Stewardship. In order to make progress on the plan, strategic initiatives have been developed and will be managed under a comprehensive strategy management program.

TRANSMISSION AND DISTRIBUTION (T&D)

System Reliability

The reliability performance of the transmission and distribution system is based on a six-year average, from January 1, 2011 through December 31, 2016. The average number of customers (ACO) without service per outage was 81 customers. The average outage duration for each customer served (SAIDI) was 58 outage minutes per customer. The average frequency of sustained interruption per customer (SAIFI) was 0.55 interruption averages per customer.

Rolling Average	6-Year	SAIDI	SAIFI	ACO
01/1/11-12/31/16		58.35	0.5509	81.06
2016 Performance Target		≤ 75	≤ 0.95	≤ 150

Three major weather events occurred again in 2016, significantly more than our normal of 0-1 storms/year. These events were on March 1 (wind gusts to 45 mph SW), March 13 (wind gusts to 44 mph S), and October 15 (wind gusts to 53 mph S). Tacoma applies Institute of Electrical and Electronics Engineers (IEEE) approved criteria to establish exclusion criteria for major storm events and continues to include major event data from qualifying events in its normal outage metrics, when widespread impacts are not realized.

The Tacoma native peak load was 906 MW on Thursday, December 8, 2016. The transmission peak occurred on Saturday, December 16, 2016, at 1,257 MW with a Tacoma Native load of 905 MW.

System Planning and Operations

In December, the T&D Horizon Plan update was completed. The plan was last updated in 2011. The Horizon Plan provides additions, expansions, upgrades, replacements, rehabilitation, and improvements to Tacoma Power's electrical infrastructure to mitigate identified future deficiencies. Staff identified 37 projects outlined in the Horizon Plan as those best to support an effective and productive electrical system, through the most economical means. These projects have been disbursed over eight biennial budgets (2017-2018 through 2031-2032) in an attempt to levelize future expenditures.

The average capital expenditure for the next 16 years is approximately \$50,830,000 per biennium, with a total cost of \$406,659,680. Both the average expenditure per biennium and the total cost are about 17% less than the amounts included in the last Horizon Plan.

On October 29, 2016, System Operations began operating with version 6.5 of the Outage Management System (OMS). The upgrade was one of many corrective actions proposed in the TPU sponsored study conducted by Utility Integration Solutions (UISOL) in 2014. The upgrade has provided System Operations with additional user functionality and resulted in a more efficient means of providing outage information to Tacoma Power customers.

In December, Tacoma Power began operating as a member of Area Control Error Diversity Interchange (ADI). Joining ADI was a recommendation of the Market Assessment and Coordination Committee (MC) Phase-3 membership. Tacoma Power is the twelfth Balancing Authority (BA) to join the group and it is anticipated that one more BA, Chelan County PUD, will join in 2017. ADI members share control error, which results in fewer generator dispatch signals and less wear on generator components.

On December 1, 2016, Tacoma Power began a one-year membership in the Northwest Power Pool (NWPP) Frequency Response Sharing Group (FRSG). The group will allow Tacoma Power to pool compliance risk similar to the NWPP Contingency Reserve Sharing Group. Membership to the FRSG has provided additional support to Tacoma Power's decision to sell 2 MW of frequency response. The sale of this newly created market product has enabled Tacoma to receive additional wholesale revenue.

Transmission Service

Tacoma Power has the following transmission service agreements in place with the Bonneville Power Administration (BPA) for delivery of power to the Pierce County Mutuals (PCM). These agreements are pursuant to Tacoma Power's Open Access Transmission Tariff (OATT).

PCM	Service Type	Agreement Term
Alder	Network	Oct 1, 2013 – Oct 1, 2028
Lewis	Network	Oct 1, 2013 – Oct 1, 2028
Lakeview	Network	Oct 1, 2014 – Oct 1, 2028
PenLight	Network	Oct 1, 2014 – Oct 1, 2028
Eatonville and Ohop	Point-To-Point	Oct 1, 2015 – Oct 1, 2018
Elmhurst and Parkland	Point-To-Point	Oct 1, 2015 – Oct 1, 2018
Milton	Point-To-Point	Oct 1, 2015 – Oct 1, 2018
Steilacoom	Point-To-Point	Oct 1, 2015 – Oct 1, 2018

The Point-To-Point agreements will be converted to network service once the arrangements are in place to allow for remote load shedding of PCM load when necessary to mitigate overloaded transmission lines. A technical team, which includes Chad Edinger and Aaron Anderson from Tacoma Power, has been meeting regularly with PCM personnel to develop a workable plan for the load shedding. Although progress has been somewhat slower than hoped, the meetings have been positive. The intention is to implement load shedding before the existing agreements expire in 2018 to allow for the transition to Network service through October 2028.

In addition to the BPA agreements, Tacoma Power provides transmission service to Avangrid Renewables (previously known as Iberdrola Renewables) and Lewis County PUD. Avandgrid's contract for 45 MW of Point-To-Point service is for the off-system delivery of power from the WestRock biomass generation project. The agreement term is from August 1, 2009 through July 31, 2021. Lewis County PUD takes service under a pre-OATT agreement. The service is for 70 MW of transmission service to deliver Cowlitz Falls generation over Tacoma Power's facilities to BPA's system. The agreement term is concurrent with Lewis County's Federal Energy Regulatory Commission (FERC) licenses for the hydro project.

The estimated annual revenues received from each of the entities are:

BPA	\$7,000,000
Avangrid	670,000
Lewis County PUD	189,000
TOTAL	\$7,859,000

Asset Management

The T&D Asset Management (AM) program optimizes data for programs such as Pole Replacement, Underground Cable Replacement, Pad and Polemount Transformers, #6 Copper Replacement, Padmount Switchgear, High Voltage (HV) Insulator and Power Transformer Replacement capital projects. With data collected, budgeting champions for these projects were able to calibrate their requested funds while optimizing risk levels to the transmission and distribution system.

Due to a higher than anticipated failure rate, T&D AM has gathered and processed asset class registries for live front padmount switchgear, HV insulators, and fused disconnects and has begun coordinated and targeted replacement. Due to high consequence of failure, and utilizing AM best practices, both HV brown porcelain insulators and 3-phase #6 copper conductors are high priority replacement items. In addition, a six-year maintenance plan was implemented for 12.5kV distribution switches to increase operability and mitigate failures.

Through the Pole Test-and-Treat program, 4,459 poles were tested with 4,312 of those poles eligible for treatment. Poles replaced under the Pole Replacement program totaled 0.76% of plant at 664 for 2016.

Utilizing consequence of failure modeling, the Cable Replacement program saw 0.69% of plant replaced in 2016, which totaled 58,397 feet of underground high voltage cable.

System Improvements

East F Substation has been rehabilitated and constructed in a new, modern configuration addressing reliability improvement and load growth. Due to safety concerns and coordination with systems that had to remain energized to carry load temporarily, Tacoma Power personnel performed all construction. The new East F Substation was energized and placed in service in November 2016.

The Potlatch Switching Station site was selected near Union, WA, within Tacoma Power-owned property along the Potlatch transmission lines. This new switching station, which is scheduled to be completed by July 2017, addresses transmission system reliability and new regulatory requirements.

The Pearl Cushman Upgrade project relaying was replaced at Pearl, Cedar, and Hilltop Substations to support rebuilding and replacing the transmission towers on North 21st Street. This project is under way and anticipated to be completed by 2018.

The Henderson Bay Tower Replacement project is 60% designed, and expected to be constructed in 2018.

A new 15 MVA Mobile Substation was added to Tacoma Power's fleet. This will improve our emergency response time to restore power.

The LaGrande Substation transformer, which serves the Nisqually Hydroelectric Project, was replaced. This included removal of the last 115 kV fuses in Tacoma Power's system.

T&D and Generation personnel coordinated with BPA to implement a generator runback and remedial action scheme at the Cowlitz Project to permit full generation output while mitigating overload conditions on the Chehalis-Mayfield 1 230kV line. In coordination with BPA, relaying was replaced on the Mossyrock-Chehalis 230kV line to modernized aging equipment.

Electrical Services

Transmission & Distribution's Electrical Services workgroup provided 216 service connections requiring construction work performed, on average, within 3.9 days and 1,491 service connections, without construction work performed, on average, within 1.7 days. T&D issued 11,876 electrical permits and performed 21,000 electrical inspections for total permit revenue of \$1,750,195.

Electrical Services completed design, agreements, and work orders for \$1,444,000 in Residential Projects and \$1,328,000 in Commercial Projects.

An Automatic Call Distribution (ACD) for the Electrical Permitting group was adopted this year. Utility Staff Support assisted 4,095 walk-in customers in the lobby and supported 23,487 customer phone calls.

Economic Development was promoted thru involvement on collaborative teams for over 20 large potential developments and pre-application meetings for over 100 smaller developments. Economic Development initiatives progressed this year culminating in four drafted policies and procedures to urge economic development.

Safety and Work Practices

This was a year filled with safety rule changes and work practice improvements as we incorporated the new state and federal electrical safety rules updates into common practice. T&D had previously field-tested and selected products to ensure adherence with these revised rules including wood-pole fall protection, bucket-truck fall protection and arc-resistant face protection. The safety rule change with the greatest impact was the use of 100% fall protection while climbing wooden poles. To facilitate this change all wood-pole climbers were issued new fall protection systems and retrained in their proper use. The change to the 100% requirement has been embraced by the Line Section employees and should help prevent falls in the future.

T&D Safety worked with the Tacoma Police Department to provide High-Voltage Safety Training to all uniformed department personnel.

Employee Resources/Development

T&D completed the thirteenth year of its engineering intern program. T&D hosts four engineering students, for 12-13 weeks each summer. The interns are recruited from local universities including University of Idaho, Washington State University, University of Washington, and Seattle University, with approximately 50% of current T&D engineers coming from the program. T&D continues its recruitment/outreach efforts and attends events targeted to increase diversity in our applicant pools. This includes working with the military and veteran populations and fostering partnerships with schools to ensure we have a pipeline of qualified applicants to fill jobs expected to become vacant through retirements in the next few years.

T&D Training and Development managed three apprenticeship programs, and provided training and work experiences to 37 apprentices and trainees in four areas: line (20); substation (12); advanced meter/relay technician (1); and system dispatcher (4).

UTILITY TECHNOLOGY SERVICES

Utility Technology Strategy & Planning

In 2016, UTS developed a comprehensive business case for a combined Water and Power deployment of Advanced Metering Infrastructure across the service area.

This effort required significant engagement with internal and external stakeholders, senior management, vendors, and other utilities in an effort to determine a direction on AMI for TPU. Over the past 10 years Tacoma Power and Tacoma Water have implemented several advanced metering technologies to meet specific business needs for residential, commercial and industrial metering installations. All of the technologies previously implemented have reached the end of their useful life and are or soon will no longer be supported. In addition, customers are beginning to expect greater products and services which are enabled by AMI. The business case development activities included:

- Identification of AMI technology options available today to Power and Water Utilities
- Recommending the best AMI technology solution to meet TPU's AMI business requirements
- Performing a detailed costs and benefits analysis for each AMI for budget planning
- Formalizing and documenting the agreed upon quantifiable and qualitative benefits for TPU
- Conducting presentations for and gaining approval from Executive Leadership and the Utility Board

This effort also established a roadmap for TPU's AMI implementation and defined a program governance model to support a combined Power and Water deployment.

UTS actively supported the Community Solar Project by providing the data communication infrastructure, and network connectivity needed for Tacoma Power to monitor and report on the amount of power generated by this new renewable energy resource. New business processes were developed to sell Community Solar units via a new web application that enabled the collection of payments from customers. This project was a collaborative effort among Power Management - Conservation, IT/EASD, Treasury, and UTS staff.

Employee Engagement

A labor management agreement addressing the support of operational and business technology systems was completed in 2016. The goal of this agreement was to improve service delivery by promoting workforce efficiencies through utilization of shared resources and improved employee knowledge and certification. As a result, UTS began to partition the private cloud computing infrastructure enabling the deployment and support of additional applications and systems from different Tacoma Power operating units and TPU Stakeholders.

Operational Efficiency

Western Electricity Coordinating Council (WECC) visited Tacoma Power in July of 2016 to conduct a Reliability & Compliance Internal Controls Evaluation (ICE).

This evaluation was used to assess whether the controls and measures Tacoma Power uses to ensure compliance with the North American Electric Reliability Corporation (NERC) Reliability Standards are adequate. The results of the evaluation along with any findings identified during the WECC On-Site Audit conducted early 2016 were then used to establish WECC's Compliance Oversight Plan (COP) for Tacoma Power. Moving forward, WECC will use the COP to determine their audit approach for Tacoma Power and the number of Reliability Standards and Requirements Tacoma Power will be required to Self-Certify on an annual basis. The outcome has already greatly reduced our workload and produced a positive outcome for Tacoma Power.

Manual data gathering and manipulation to generate TPU Fleet operational and financial reports were streamlined through a new interface between SAP and the pool car kiosk systems. This project eliminated manual activities and enabled operational efficiencies to be achieved.

Tacoma Power's Outage Management System and Customer Services' iNovah applications were upgraded to bring the applications, operating systems, and databases current for continued vendor support, increasing reliability and reducing security risks.

After a well-received pilot, the GIS team replaced the internet-enabled tool used by field staff with a new tool that provides for a better user interface, increased functionality and reliability.

Desktop Support deployed approximately 350 computers throughout TPU in 2016 using the newly adopted standards and specifications for desktops and/or laptops. In addition, the Computer Support Technicians (CSTs) sanitized over 200 computers infected by new vulnerabilities. The increase in vulnerabilities led to stronger Cyber Security Controls being applied to new computer deployments across TPU.

Technology Advancements

In 2016, UTS partnered and collaborated with key stakeholders across TPU and the City of Tacoma Information Technology Department to deliver a newly re-designed utility bill for our customers. This effort also implemented a new bill design and production solution that addressed end of life issues with the legacy platform and provide greater flexibility to future changes with the invoice and other customer facing documents. This effort was several years in the making and culminated with the delivery of a successful project that met both customer needs and internal technical support requirements.

The Lobby Queueing system was successfully implemented with new functionality that enables better reporting and real time situational awareness of customer traffic and wait times. This new technology has improved the customers experience while paying their utility bills and provided better tools to Customer Service Representatives, Supervisors and Managers.

The operational private cloud computing infrastructure deployed in 2011 to support Tacoma Power's Energy Trading and Risk Management applications was upgraded in 2016. The project significantly increased the computing capacity and included the implementation of the next generation of storage capability to increase reliability, flexibility, and performance.

In 2016, UTS completed a two year process which led to vendor selection and awarding a contract for a new Energy Management System (EMS). During the last year a rigorous evaluation process involving a Selection Advisory Committee comprised of eighteen (18) subject matter experts from UTS and other Tacoma Power workgroups reviewed and scored vendor responses to over 3,000 system requirements. Vendor finalists were then invited to present their solutions to the Selection Advisory Committee who also conducted site visits to other utilities to learn from their EMS upgrades. The new EMS is expected to come on-line in 2018 and will provide for a modern more-flexible platform supporting enhanced security along with more effective and efficient compliance with NERC CIP and other reliability standards.

A unified backup and recovery solution was deployed allowing TPU to consolidate and centrally manage the performance of system backup and recovery operations that support various operational and industrial control systems.

Prior to this implementation these operations had to be managed individually by the application owners. The new solution utilizes technology to enhance performance improve security and system reliability.

The Communications Tower located within the Pearl Substation was deemed to be structurally insufficient. In partnership with Generation, UTS identified opportunities to reduce loading on the tower and make temporary upgrades to further reduce tower loading until the replacement of the existing tower could occur. Immediate planning began and the replacement project kicked off in the third quarter of 2016. Installation of the new tower and removal of the old is scheduled for some time in first quarter of 2017.

Security

UTS established a Cyber Security group comprised of a five (5) member team to begin developing and enhancing information security operations across all of TPU. This group began by utilizing a nationally recognized cyber security framework and approach to conducting security evaluations on TPU's Industrial Control System Environments. The evaluations have identified several areas where TPU can improve its security resilience.

A new security system was designed and installed at the South Service Center to improve physical security and provide enhanced video surveillance throughout the facility.

Regulatory

Tacoma Power's 2016 Western Electricity Coordinating Council (WECC) audit occurred in March. This audit was the culmination of several hundred hours of work and successful collaborations between the Reliability & Compliance (R&C) Office and Subject Matter Experts (SME) across Tacoma Power who support the Critical Infrastructure Protection (CIP) and Operations & Planning (O&P) NERC Reliability Standards. During the audit, WECC commented that Tacoma Power has a strong culture of compliance and a solid compliance program in place. WECC stated they will point to Tacoma Power's Program as the standard for the industry.

July 1, 2016 was the effective date for a significant revision to the NERC Critical Infrastructure Protection Standards (Version 5 to Version 6), and over 20 new or revised Operation & Planning NERC Reliability Standards. Tacoma Power personnel vetted each of these standards through the new Standard Change Organizational Review and Evaluation (SCORE) process to ensure compliance. The SCORE process takes each new or revised standard and evaluates the impact (low, medium, or high) based on the risk and the resources necessary for implementation. This evaluation also assists in building a work schedule for completing any necessary work and assessing compliance prior to the enforcement date(s).

A cross-functional committee (comprised of subject matter experts from Generation, Transmission & Distribution, and Utility Technology Services) developed a plan for meeting the new CIP Low Impact requirements that become enforceable in 2017 and 2018. The planning included identifying the scope of work and resources required for each facility (people, budget, etc.).

In 2016, over 150 compliance documents went through an annual review and approval and a Cybersecurity Tabletop Exercise was conducted involving responders across Tacoma Power and the City of Tacoma Information Technology Department.

Chris Robinson
Power Superintendent



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