



ORCAS POWER & LIGHT COOPERATIVE 2018 BUDGET

MEMORANDUM

Date: November 9, 2018

To: Board of Directors

From: Foster Hildreth, General Manager

Re: 2018 Budget Presentation

Attached please find our 2018 Budget Presentation. Consistent with last year's projections, staff is recommending a 5% rate increase for the 2018 budget year only. Staff is recommending that our 2018 budget revenue increase from \$27.8M (projected 2017) to \$29.3M to meet our financial, operational and capital project commitments. The majority (63%) of the required \$1.4M increase includes \$900k for depreciation and interest expense (primarily submarine cable project) and \$50k in power cost. The projected figures for years 2019 thru 2022 are for reference only, as future years will be reviewed annually during our normal budgeting process.

The 2018 budget continues to align our operations to the mission statement of providing safe, reliable, cost effective, and environmentally sensitive utility services. This budget prepares OPALCO to meet the marks set out in our energy road map:

TODAY: Make the most of our available resources. Reduce members' total energy bills through electrification of transportation and heating while continuing to modernize the grid to meet future needs.

TOMORROW: Increase local resilience. Bring more local renewables on, leveraging our dynamic grid and building emergency back-up power for emergency services.

FUTURE: Give members more control. In the coming "transactive" energy world, members will dynamically buy and sell local power, make decisions about their power usage in response to real time price signals and integrate energy storage (EVs, batteries...) into the Co-op grid.

The Board held two rate work sessions in 2017, attended by co-op members, to explore budget implications of rates (June 16) and alternate rate scenarios (September 22). The consensus of the Board after the budget discussion in June was that there are few to no discretionary expenses to cut in the budget, and that the Board does not support budgetary cuts that would have a negative impact on safety or system reliability. In September, the Board compared residential rate structure components scenarios and tested them for equity and trade-offs across the co-op.

The 2018 Budget includes building our first Community Solar project (on Decatur Island); upgrades to lines and substations to integrate our new 69KV tap from BPA in order to reroute power through Blakely directly to Orcas, increasing capacity and resilience; ongoing underground cable replacement; and sewer remodel of our Eastsound headquarters.

This will be the Board's first reading of the rates, which will be brought back to the Board in December for their approval. A budget narrative is provided detailing the basis, assumptions and notable drivers.

Staff recommends Board make a motion to approve the 2018 budget as submitted.



TABLE OF CONTENTS

1. Budget Narrative
2. Budget Assumptions
3. Executive Summary
4. Statement of Operations
5. Statement of Cash Flow
6. Capital Project
7. Staffing/Organizational Chart

BUDGET NARRATIVE

Mission:

OPALCO serves our members with safe, reliable, cost effective and environmentally sensitive utility services. Our mission drives our budget in the following ways:

✓ Safety – The expansion of OPALCO's grid, built on our fiber backbone, over the last three years, provides a tremendous boost to public safety. Using the fiber and devices connected into our system throughout the islands, OPALCO can reroute power quickly to our members and puts data in the hands of crew members in the field to rapidly locate and resolve outages. First responders, including OPALCO linemen, can reach out for help in the field; members and tourists can get help in times of crisis and our County is connected to real-world services for education, economic development and quality of life.

✓ Reliability – With the new 69KV tap from BPA complete at the Decatur substation, the Blakely and Olga substations will be upgraded from 25KV to 69KV to quickly reroute power and increase capacity. We continue to budget for replacement of the old unjacketed underground cable (referred to as URD) system wide. This trend will continue with prioritization of replacement targeted at the areas with higher failure rates. With each URD project, where needed, we include fiber and increase the reach of our fiber network and therefore the reach of our monitoring and control system. In 2018, we will complete the build out of our first large-scale community solar array. With this ~400KV array and connected Energy Storage System (0.5MW/20 MWh battery), OPALCO will have developed the first step toward a local power supply in case of emergency.

✓ Cost Effective – Our capital construction plan is designed to maximize system efficiency and make best use of member resources. The continual expansion of our grid and fiber-connected devices on our system, helps to contain costs by putting control of the system in the hands of crew members wherever they are. The days of sending linemen out in a storm, in a boat, on a dark night, are going away. With a matching grant from the WA DOC, we'll install a battery storage bank at the Decatur substation that will create cost savings through load shifting and peak shaving, as well as store local power generated by our Community Solar project. With equipment replacements scheduled for 2018, greater efficiency and cost savings will contribute to our sustainability as a co-op. The higher cost of managing a remote, rural utility in our island environment is tempered through prudent use of technology best practices.

✓ Environmentally Sensitive – OPALCO has significant infrastructure installed throughout our beautiful and sometimes fragile island environs. In 2017, we successfully removed an old (1977) oil-filled submarine cable, boring under the seafloor to bypass sensitive shoreline areas and installing an additional conduit on the Lopez side to minimize the disruption for future projects. In 2018, we will construct our first large community solar project to give all co-op members access to renewable generation. Doing the right thing comes at a cost that is reflected in our cost of service and OPALCO is committed to good stewardship, working within the County's Critical Areas Ordinance, complying with all permitting requirements and keeping as low a profile as possible to maintain island character. OPALCO is contributing to the County Comprehensive Plan review (2017-2018) to align our energy future policies and practices with this vision of stewardship and sustainability.

Load Forecast:

The Load Forecast is the heart of the budget and the most precarious aspect of our forecasting. The energy management team of PNGC (Pacific NW Generating Cooperative) assisted us with load forecasting for this budget. They bring valuable industry expertise and resources to our Co-op to help us navigate the rapidly evolving energy market.

OPALCO's load peaks in the winter, in large part due to increased heating and lighting load. Weather drives heating load. Predicting the weather is fraught with uncertainty due to variations of temperature, wind and humidity and yet we depend on weather forecasting to meet our budgetary commitments. We saw load increase in 2017 due to colder temperatures, marking the shift from an El Nino (warmer) weather pattern to the predicted La Nina (cooler) pattern. In 2018, the forecast is for a return to a neutral weather pattern with projected kilowatt hour purchases from BPA of 216M kWh. As a point of reference, OPALCO's load has ranged between 204M (2015) – 220M (2017) kWh.

While predicting the weather beyond a few days or weeks with any certainty is not possible, we can use trends to forecast likely scenarios. Weather drives how much energy co-op members consume, which drives how much revenue the Co-op generates to pay for expenses. Most of OPALCO's expenses are fixed costs. Most of OPALCO's revenue is highly variable and dependent on the weather.

To gauge what impact the weather may have on our Cooperative, we incorporate analysis from various sources which include BPA's climatologist, the National Oceanic and Atmospheric Administration (NOAA), the Office of the Washington State Climatologist, and other Northwest climatologists. We also consider local weather data, including air temperature, water temperature, wind speed, and precipitation, to name but a few.

After considering about a dozen scenarios, we then estimate our kWh load. With that information, we set rates accordingly – to generate the revenue to pay for the expenses. An accurate forecast is important: if it ends up being colder than we forecast, members are over-charged and we end up with more money than needed to cover co-op expenses; if weather was warmer than forecast, members are under-charged and we end up with less money than needed to cover co-op expenses.

BUDGET ASSUMPTIONS

GENERAL:

1. General Inflation Rate:

The general annual inflation rate has been projected at 3.25% for years 2018, 3.5% for 2019 and 4% for years 2020 through 2022.

2. 2018-22 Budget Basis:

The 2018-22 budgetary figures have been forecast with the use of actual activity from January through September 2017 and adjusted 4th quarter 2017 projections.

3. BPA Power Cost Projections:

- BPA operates on a two-year rate cycle. 2018 is the second year of our current rate case. In 2018, we are budgeting for BPA increases of 3% over 2017 to cover fish spill surcharge, power cost recovery adjustment clause (CRAC) increase, BPA financial reserves CRAC, and residential exchange charges. OPALCO works with PNGC to identify these cost increases.
- For 2019, we are using PNGC's power purchase forecast of 5.3%. From 2020 through 2022, we have assumed a 5% BPA cost increase for each year.
- Load growth is expected to be slightly less than 1% per year.

4. Labor:

- Staffing levels have stabilized at 50 full-time OPALCO employees in 2018 (see organization chart). We do not expect any additional FTEs through 2022.
- The general wage increase is in accordance with the current Collective Bargaining Agreement, which is based on the CPI index.
- The benefit growth assumptions are in accordance with 2018 NRECA and LineCo rate projections based on the changes to the benefits package.

5. Capital Projects:

- The 2018 capital projects are based on the 2017 – 2020 RUS Construction Work Plan (CWP). The CWP is derived from outage analysis, system monitoring and system modeling based on load growth projections along with current system loading. The goals are to achieve voltage stability, greater system reliability and overall system efficiency.

- Distribution System:
 - New Services continue to trend upward since the lows of the recession (2008-13). For 2018, \$360k is budgeted with an average of \$309k per year projected in future years. Please note: contributions in aid of construction (CIAC) offset the expense, but the uptick represents significant project work for our crews.
 - Underground Residential Distribution (URD) replacement will continue based on the following criteria: age, cable type, neutral degradation and, most importantly, outage frequency and outage duration. There is approximately 150 miles ofunjacketed URD to replace system-wide over time with problem areas mapped for priority scheduling. In 2018, 14 miles of URD is slated for replacement at a budgeted cost of \$1.7M. Staff expect an average annual spending of \$1.5 - \$2M for the foreseeable future for replacement ofunjacketed URD.
 - Conversions, Line Changes and Tie Lines - ~\$1.5M is budgeted in 2018 for conversion to large conductors: upgrading lines to carry greater capacity and increased ability to reroute power. 2018 projects include Egg Lake Road (San Juan), Hoffman Cove (Shaw) and Crescent Beach (Orcas).
 - Substation expense picks up (\$2.45k – offset \$1M in WA DOC grant funds) with three big projects in 2018: completion of the Energy Storage System battery bank at the remodeled Decatur substation (see Community Solar, below for more detail); and both the Blakely and Olga substations will be converted from 25KV to 69KV as a result of the new BPA tap completed in 2017 at Decatur.
 - Sectionalizing Equipment shows an uptick in expense for the next four years as we replace aging switches and protective devices. Automated switches on our system improve reliability and give us greater visibility into our system.
 - SCADA spending is business as usual in 2018 (\$162k) with security upgrades planned in 2019 (\$84k) as we segment our SCADA system away from our business networks.
 - Grid Control Communications Infrastructure (fiber) expansion for 2018 (\$500k) is budgeted to connect generators to active sites for power back-up and reliability.
- Transmission System – The Sumitomo submarine cable project will close-out in early 2018 and transmission will be rerouted on Orcas Road concurrent with the County road improvement project.
- Facilities – Increased spending budgeted for 2018 (\$500k) to replace the degraded plumbing and sewer systems in the Eastsound headquarters.
- Transportation – Capital expense for fleet are expected to be ~\$600K per year.

- Community Solar Project
 - Energy Storage System (ESS) – The 2018 budget includes \$1.2M to match a DOE grant of \$1M for a battery storage bank. We plan to use a single versatile 0.5MW/20 MWh ESS to provide four complementary functions that enhance grid reliability and operation, and community solar array performance, while increasing storage system “capacity factor” and saving money on our power bill from BPA:
 1. Community solar array conditioning: Conditioning of intermittent solar array output and store energy for later use.
 2. Peak shaving: Discharging battery system during normal system peaks and large outage restoration events to reduce peak charges while restoring the systems quicker.
 3. Load Shifting: Shifting system usage from peak intervals to off peak intervals.
 4. Substation battery backup during system outages: Use of this system to ensure switching capability during extended outages. This is a first step toward an emergency power supply during major mainland outages.
 - Community Solar – A community solar project (350-450KW) will be constructed in 2018. Members will have the opportunity to invest in the project and receive credit for their portion of the production on monthly bills. Member communication and outreach in 2017 showed strong support for the project.

6. Energy Savings:

- Staff have applied for RESP funds from RUS to provide loans and on-bill financing to members for efficiency / fuel switching measures. No funds have been budgeted for this program pending confirmation from RUS in 2018.
- Community Solar is the major project in 2018 with member outreach for investors, oversight of contracting and construction and data integration for member production credits on bills.
- BPA pass-through rebates will continue for ductless heat pumps and additional measures for air sealing and duct sealing will be available in 2018.
- Fuel switching incentives are offered again in 2017, based on the success of the program in 2017. More self-funded incentives for ductless heat pumps and EV charging stations are available. These conversions bring new load (kWh usage) and revenue; the incentives are funded from a five-year projection of a portion of the new revenues. In addition, OPALCO will offer free home charging stations to encourage EV conversion and home charging (kWh usage).
- Low-income weatherization partnership with the Opportunity Council will be offered in 2018. This program provides a whole house weatherization and efficiency upgrade for qualified members. OPALCO provides up-front costs (\$30K) and is reimbursed by BPA.
- Energy Savings staff will continue to support the education and outreach efforts of the Conservation District.

7. Capital Credits

- Capital credit pay out cash planning is based on an average 25 year pay back cycle (1993 capital credits in 2018) plus an additional “smoothing” payout amount (30% portion of 1994 in 2018) based on a rolling average of the ten year period following the distribution year. For the next five years, \$1.3M in capital credits are expected to be retired per year. The goal is to smooth out the low and high year payouts by using an average rather than strict year total.

8. Energy Assistance Program:

- The 2018 Budget includes a continuation of ~\$94k for low-income monthly bill credits, which range from \$20 (single person household) to \$50 (six or more person household) per month, and not to exceed the total bill amount. The Energy Assistance Program is funded as a line item on all member bills (approximately \$0.50 on the average residential bill). Approximately 284 members participated in 2017, up from 170 in 2016. Outreach continues to encourage participation.

OVERALL SUMMARIZATION:

1. Rates:

Staff recommends a rate increase of 5% for 2018. The recommended rate increase applies equally to both the facility charge and energy usage charge for all rates.

2. Margins:

Per Staff recommendation, projected margins are as follows: \$3.1M in 2017 (projected), \$2.8M in 2018 (budget), \$2.0M in 2019 (forecast), \$2.2M in 2020 (forecast), \$2.5M in 2021 (forecast), and \$2.8M in 2022 (forecast).

3. TIER:

Per Staff recommendation, TIER is as follows: 2.92 in 2017 (projected), 2.61 in 2018 (budget), 2.13 in 2019 (forecast), 2.29 in 2020 (forecast) 2.5 in 2021 (forecast), and 2.72 in 2022 (forecast).

4. Equity % of Total Capitalization (OPALCO):

Per Staff recommendation, Equity % of Total Capitalization is as follows: 43.2% in 2017 (projected), 43.4% in 2018 (budget), 44.8% in 2019 (forecast), 47.2% in 2020 (forecast), 49.7% in 2021 (forecast), and 52.7% in 2022 (forecast).

5. Debt:

OPALCO is expected to borrow \$2.5M RUS in 2018 (\$4M total including an advance of \$1.5M borrowed in October 2017 for 2018 projects) and \$0 RUS in years 2019 through 2022. All OPALCO RUS borrowing will be used to supplement the funding of capital projects. We anticipate using our approved RUS (FFB) loan funds and have estimated interest rates between 3% and 3.5% for 2018 through 2022.

Staff have applied for \$5.8M in RESP funds from RUS to provide loans and on-bill financing to members for efficiency / fuel switching measures. No funds have been budgeted for this program pending loan document execution from RUS in 2018.

6. Rate Detail:

- The chart below details the impact on average residential members Energy Assistance Program and PAL recipients. An average residential member (12,055 meters) would see a bill increase of about \$6.78 including the Energy Assistance Program line item.

	Average Residential User		Average EAP Recipients	Average PAL Recipients	Average Seasonal Occupancy
Number of Services (Meter Points)	12,782		284	421	1,553
Average Months of Usage	12		12	12	12
Average Usage (kWh) per month	988		887	820	952
Average Monthly Bill using Existing Rate (2017)	135.79		126.06	119.59	132.32
Average Monthly Bill using Recommended Rate (2018)	142.57		132.35	125.56	138.92
Percentage Increase	5%		5%	5%	5%

Notes: 1) Data period from November 2016 to October 2017.
2) Seasonal Occupancy based on greater usage on May through September than rest of year.
3) PAL and EAP accounts based on those in database who received assistance during data period.

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RECOMMENDED RATE STRUCTURE

	A.	B.	C.	D.	E.	F.	G.
			Recommended			Rate Increase delayed to March ²	Rate increase delayed to April ²
1	Residential	Present Rates	5% Increase to All Components	All Facility	All kWh	6.5% Increase to All Components	7.5% Increase to All Components
2	Facility Rate (\$/Service/Month)	\$40.54	\$42.57	\$48.32	\$40.54	\$43.18	\$43.58
4	Energy Assistance Program (\$/kWh)	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
5	Energy Rates (\$/kWh)						
6	Summer Block 1 (< 1,500 kWh)	\$0.0959	\$0.1007 (< 2,000 kWh)	\$0.0959	\$0.1032	\$0.1022	\$0.1031
7	Summer Block 2 (1,500 kWh to 3000 kWh)	\$0.1087	\$0.1141 (2,000 to 3,000 kWh)	\$0.1011	\$0.1170	\$0.1158	\$0.1169
8	Summer Block 3 (> 3,000 kWh)	\$0.1289	\$0.1353	\$0.1200	\$0.1387	\$0.1373	\$0.1386
9	Winter Block 1 (< 3,000 kWh)	\$0.0959	\$0.1007 (< 4,000 kWh)	\$0.0959	\$0.1032	\$0.1022	\$0.1031
10	Winter Block 2 (3,000 kWh to 5,000 kWh)	\$0.1087	\$0.1141 (4,000 to 5,000 kWh)	\$0.1011	\$0.1170	\$0.1158	\$0.1169
11	Winter Block 3 (> 5,000 kWh)	\$0.1289	\$0.1353	\$0.1200	\$0.1387	\$0.1373	\$0.1386
12							
13	Residential TOU	Present Rates	5% Increase to All Components	All Facility	All kWh	6.5% Increase to All Components	7.5% Increase to All Components
14	Facility Rate (\$/Service/Month)	\$45.99	\$48.29	\$59.06	\$45.99	\$48.98	\$49.44
15	Demand Rate (\$/Service/Month)						
16	Energy Assistance Program (\$/kWh)	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
17	Energy Rates (\$/kWh)						
18	TOU Period 1 (6 AM - Noon)	\$0.1609	\$0.1690	\$0.1609	\$0.1707	\$0.1714	\$0.1730
19	TOU Period 2 (Noon - 6 PM)	\$0.0995	\$0.1045	\$0.0995	\$0.1056	\$0.1060	\$0.1070
20	TOU Period 3 (6 PM - 8 PM)	\$0.1609	\$0.1690	\$0.1609	\$0.1707	\$0.1714	\$0.1730
21	TOU Period 3 (8 PM - 6 AM)	\$0.0436	\$0.0458	\$0.0436	\$0.0463	\$0.0465	\$0.0469
22							
23	Small Commercial (<20 kW)	Present Rates	5% Increase to All Components	All Facility	All kWh	6.5% Increase to All Components	7.5% Increase to All Components
24	Facility Rate (\$/Service/Month)	\$57.65	\$60.53	\$65.75	\$57.65	\$61.40	\$61.97
25	Energy Assistance Program (\$/kWh)	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
26	Energy Rates (\$/kWh)						
27	Block 1 (< 5,000 kWh)	\$0.0976	\$0.1025	\$0.0976	\$0.1053	\$0.1040	\$0.1050
28	Block 2 (> 5,000 kWh)	\$0.1090	\$0.1145	\$0.1090	\$0.1176	\$0.1161	\$0.1172
29	Demand Rates (\$/kW)						
30	First 20 kW (Flat Rate)	\$5.66	\$5.94	\$5.66	\$6.02	\$5.70	\$6.08
31							
32	Large Commercial (> 20kW)	Present Rates	5% Increase to All Components	All Facility	All kWh	6.5% Increase to All Components	7.5% Increase to All Components
33	Facility Rate (\$/Service/Month)	\$57.65	\$60.53	\$113.49	\$57.65	\$61.40	\$61.97
34	Energy Assistance Program (\$/kWh)	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
35	Energy Rates (\$/kWh)						
36	Block 1 (< 5,000 kWh)	\$0.0864	\$0.0907	\$0.0864	\$0.0910	\$0.1138	\$0.1148
37	Block 2 (5,000-150,000 kWh)	\$0.0957	\$0.1005	\$0.0957	\$0.1008	\$0.1260	\$0.1272
38	Block 3 (>150,000 kWh)	\$0.1277	\$0.1341	\$0.1277	\$0.1345	\$0.1681	\$0.1697
39	Demand Rates (\$/kW)						
40	Block 1 (< 300 kW)	\$3.49	\$3.66	\$3.49	\$3.67	\$3.72	\$3.75
41	Block 2 (> 300 kW)	\$5.24	\$5.50	\$5.24	\$5.52	\$5.58	\$5.63
42							
43	Pumps	Present Rates	5% Increase to All Components	All Facility	All kWh	6.5% Increase to All Components	7.5% Increase to All Components
44	Facility Rate (\$/Service/Month)	\$37.93	\$39.83	\$40.90	\$37.93	\$40.39	\$40.77
45	Energy Assistance Program (\$/kWh)	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
46	Energy Rates (\$/kWh)						
47	0 - 370 kWh	\$0.1008	\$0.1059	\$0.1008	\$0.1155	\$0.1074	\$0.1064
48	370-5,000 kwh	\$0.0875	\$0.0919	\$0.0875	\$0.1002	\$0.0932	\$0.0941
49	Over 5,000 kWh	\$0.0982	\$0.1031	\$0.0982	\$0.1124	\$0.1046	\$0.1056
50	Demand Rates (\$/kW)						
51	First 20 kW (Flat Rate)	\$1.05	\$1.10	\$1.05	\$1.14	\$1.12	\$1.13
52	Over 20 kW	\$3.48	\$3.65	\$3.48	\$3.89	\$3.71	\$3.74

1) Any per energy charge (\$ per kWh) above \$0.1025 may induce fuel switching to fossil fuels.
2) Assumes Block changes from Recommended Residential Scenario (Column C) to all rate periods in year
3) Columns C through G produce revenues equal to the Recommended Budget Option.

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BUDGET EXECUTIVE SUMMARY

		A. Audited Year End 12/31/2016	B. Approved Budget 12/31/2017	C. Projected Year End 12/31/2017	D. Proposed Budget 12/31/2018	E. % Change from 2017	F. Forecast 12/31/2019	G. Forecast 12/31/2020	H. Forecast 12/31/2021	I. Forecast 12/31/2022	Comments
1	kWh Purchases	208,313,000	202,132,000	222,218,000	216,993,000	-2.4%	211,388,000	212,931,000	214,485,000	216,051,000	OPALCO estimate slightly above PNGC estimate of 211M kWh
2	% Rate Increase	5%	5%	5%	5.0%		5.0%	5.0%	5.0%	5.0%	
3	% Revenue Increase	3%	4%	5%	5.5%		3.1%	5.3%	5.6%	5.4%	
4	Total Revenue	25,661,000	26,714,000	28,112,000	29,664,000	5.5%	30,570,000	32,182,000	33,984,000	35,826,000	Revenue necessary to meet budget and cash flow requirements
5	Cost of power	7,943,000	8,402,000	9,137,000	9,189,000	0.6%	9,563,000	10,109,000	10,687,000	11,298,000	BPA rate increases for fish spill surcharge, power and financial reserve cost recovery estimated at +3%
6	Operations & G&A	8,877,000	10,261,000	9,857,000	10,678,000	8.3%	11,332,000	11,828,000	12,482,000	13,176,000	General inflation and 2018 employee count remaining at 50
7	Depr, Int & Taxes	5,779,000	6,041,000	6,031,000	6,999,000	16.1%	7,677,000	8,036,000	8,321,000	8,595,000	Largest budget driver is depreciation on submarine cable & interest on related borrowings
8		22,599,000	24,704,000	25,025,000	26,866,000	7.4%	28,572,000	29,973,000	31,490,000	33,069,000	
9	Net Margins	\$ 3,062,000	\$ 2,010,000	\$ 3,087,000	\$ 2,798,000	-9.4%	\$ 1,998,000	\$ 2,209,000	\$ 2,494,000	\$ 2,757,000	Margin needs to cover capital credit retirements with a remaining net balance to build equity
10	TIER	3.24	2.36	2.92	2.61		2.13	2.29	2.50	2.72	Fluctuates with changes in weather & borrowing rates. A healthy TIER ranges from 2-3
11	Equity % of Total Cap	49.4%	43.6%	43.2%	43.4%		44.8%	47.2%	49.7%	52.7%	Increases from (1) Growing equity, (2) Paying off borrowings & (3) improving subsidiary profit(loss)
12	Equity	39,277,000	38,660,000	38,885,000	38,828,000	-0.1%	39,471,000	41,425,000	43,863,000	46,765,000	Equity trending upwards (gradual building for next submarine cable - 2030)
13	Long Term Debt	40,231,000	49,921,000	51,088,000	50,697,000	-0.8%	48,582,000	46,347,000	44,412,000	42,002,000	Operations generate sufficient cash flow to cover capital project investment (note: depreciation is non-cash)
14	Capital Spending	(15,568,000)	(14,570,000)	(15,604,000)	(8,898,000)	-43.0%	(5,512,000)	(5,154,000)	(4,902,000)	(4,732,000)	Capital spending returning to normal range of \$4-5M in 2019-2022
15	Capital Credit Retirement (net)	(1,218,000)	(535,000)	(1,003,000)	(1,051,000)	4.8%	(1,051,000)	(1,051,000)	(1,051,000)	(1,118,000)	Smoothing of capital credit retirements (reduces volatility in margin, cash and equity requirements)
16	Annual HDD	983	1,056	1,373	1,356		1,321	1,331	1,341	1,350	HDD definition: Number of degrees that a day's average temperature is below 50 degrees fahrenheit
17	kWh per HDD	211,916	191,413	161,849	160,024		160,021	159,978	159,944	160,038	

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kWh SENSITIVITY ANALYSIS

		2018 kWh Sensitivity						
Scenario		0	1	2	3	4	200 Fuel Switching Conversions	
		Proposed 2018 Budget	-5% kWh	2015 kWh	RUS TIER Covenant	+5% kWh	To electric +0.5% kWh	To fossil -1.1% kWh
1	kWh Purchases	216,993,000	205,369,000	204,077,000	191,186,000	226,988,000	1,085,000	(2,387,000)
2	Total Revenue	\$ 29,664,000	\$ 28,215,000	\$ 27,898,000	\$ 26,136,000	\$ 31,113,000	\$ 148,000	\$ (326,000)
3	Total Expenses	\$ 26,866,000	\$ 26,374,000	\$ 26,319,000	\$ 25,773,000	\$ 27,289,000	\$ 46,000	\$ (101,000)
4	Net Margins	\$ 2,798,000	\$ 1,841,000	\$ 1,579,000	\$ 363,000	\$ 3,824,000	\$ 102,000	\$ (225,000)
5	TIER	2.61	2.06	1.91	1.21	3.20		
6	Equity % of Total Cap	43.4%	42.8%	42.6%	41.8%	44.0%		
7	Annual HDD	1,356	1,284	1,275	1,195	1,419		
8	Action Required	None	None	None	Energy Adjustment (charge)	Energy Adjustment (credit)		

Fuel Switching Sensitivity:
OPALCO is following our energy roadmap, which encourages the electrification of heating and transportation. Staff estimates that converting 200 homes to electric heat (ductless heat pumps) from fossil fuel heating will save our members ~\$1,000/year/member while generating ~1M additional kWh purchases from BPA (to spread OPALCO’s fixed charges over more kWh sales). Members who switch to electric vehicles also save ~\$1,000 per year in fuel savings. This fuel switching to electric generates \$100,000 of additional margin which will directly offset the need for a rate increase by ~ ½ percent.

To encourage meeting the above targets, our variable cost of energy should incentivize fuel switching to electricity from propane and other fossil fuels. Today, we estimate that the kWh equivalent price that encourages switching from fossil fuels to electric heating is ~\$.1025/kWh or less.

Note that the proposed rates apply the increase to both the facility and kWh charge equally. Given market pricing at this point, management and the Board will need to compare our energy rate at least annually during the budget process to ensure the cost of heating with electricity is less than fossil fuel alternatives.

ORCAS POWER AND LIGHT COOPERATIVE

RATE SENSITIVITY

Proposed 2018 Budget Figures; Future Years for Reference Only							Comment
	A. Budget 12/31/2018	B. Forecast 12/31/2019	C. Forecast 12/31/2020	D. Forecast 12/31/2021	E. Forecast 12/31/2022	F. Total	
kWh Purchases	216,993,000	211,388,000	212,931,000	214,485,000	216,051,000		
0. BASE LINE: 0% increase (Not Financially Viable)							
% Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%		Baseline only to see the implication of no rate increase.
Incremental Debt	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	
Margin	\$ 1,596,161	\$ (778,404)	\$ (2,024,279)	\$ (3,383,961)	\$ (4,804,479)	\$ (4,590,483)	
Equity % of Total Capital	41.9%	40.8%	39.5%	36.7%	32.4%		
TIER	1.92	0.56	(0.18)	(1.03)	(2.00)		
Incremental Cash flow	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
1. OPTION: 4,5,5,5,4							
% Rate Increase	4.0%	5.0%	5.0%	5.0%	4.0%		Management strives to reach financial targets with a minimum '2' TIER level. This option, however viable, leaves little room for weather fluctuations and increasing costs impacting 2019.
Incremental Debt	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	
Margin	\$ 2,644,991	\$ 1,840,376	\$ 2,042,244	\$ 2,317,941	\$ 2,395,233	\$ 8,845,552	
Equity % of Total Capital	43.3%	44.6%	46.9%	49.3%	52.1%		
TIER	2.52	2.04	2.19	2.39	2.50		
Incremental Cash flow	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2. OPTION: 5,5,5,5,5 - Staff Recommendation							
% Rate Increase	5.0%	5.0%	5.0%	5.0%	5.0%		Recommended rate increase as this profile allows for rate stability and adequate equity increases in future years. Please note we will be revisiting these rate increases annually.
Incremental Debt	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	
Margin	\$ 2,797,803	\$ 1,997,921	\$ 2,208,236	\$ 2,493,378	\$ 2,756,319	\$ 9,497,338	
Equity % of Total Capital	43.4%	44.8%	47.2%	49.7%	52.7%		
TIER	2.61	2.13	2.29	2.50	2.72		
Incremental Cash flow	\$ -	\$ -	\$ -	\$ -	\$ 71,000	\$ -	
3. OPTION: 6,5,5,5,5							
% Rate Increase	6.0%	5.0%	5.0%	5.0%	5.0%		TIER is higher than desired in 2018 forward to, management strives to reduce the impact of cost increases facing our industry in future years.
Incremental Debt	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	
Margin	\$ 3,169,403	\$ 2,381,025	\$ 2,611,879	\$ 2,919,995	\$ 3,206,418	\$ 11,082,302	
Equity % of Total Capital	43.6%	45.3%	47.9%	50.6%	53.7%		
TIER	2.82	2.35	2.53	2.75	3.00		
Incremental Cash flow	\$ -	\$ -	\$ -	\$ 111,000	\$ 521,000	\$ 111,000	
4. OPTION: Billing Rate Increase in MARCH - shows required % rate increase to achieve same revenues as option 2 above							
% Rate Increase	6.5%	6.5%	4.0%	6.0%	5.5%		Imposing a rate increase in the March billing period vs. January, results in a more volatile average rate increase in any given year to achieve the same annual revenue requirements. This also puts more pressure on acheiveing November/December revenue goals in any given year.
Incremental Debt	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	
Margin	\$ 2,797,803	\$ 1,997,921	\$ 2,208,236	\$ 2,493,378	\$ 2,756,319	\$ 9,497,338	
Equity % of Total Capital	43.4%	44.8%	47.2%	49.7%	52.7%		
TIER	2.61	2.13	2.29	2.50	2.72		
Incremental Cash flow	\$ -	\$ -	\$ -	\$ -	\$ 71,000	\$ -	
5. OPTION: Billing Rate Increase in APRIL - shows required % rate increase to achieve same revenues as option 2 above							
% Rate Increase	7.5%	4.5%	5.5%	5.5%	5.0%		Imposing a rate increase in the April billing period vs. January, results in a higher and more volatile average rate increase in any given year to achieve the same annual revenue requirements. This also puts more pressure on achieving November/December revenue goals in any given year.
Incremental Debt	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	
Margin	\$ 2,797,803	\$ 1,997,921	\$ 2,208,236	\$ 2,493,378	\$ 2,756,319	\$ 9,497,338	
Equity % of Total Capital	43.4%	44.8%	47.2%	49.7%	52.7%		
TIER	2.61	2.13	2.29	2.50	2.72		
Incremental Cash flow	\$ -	\$ -	\$ -	\$ -	\$ 71,000	\$ -	

ORCAS POWER AND LIGHT COOPERATIVE

STATEMENT OF OPERATIONS

	A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.
	Audited	Audited	Audited	Approved	Projected	Proposed					
	Year End	Year End	Year End	Budget	Year End	Budget	% Change	Forecast	Forecast	Forecast	Forecast
	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2017	12/31/2018	from 2017	12/31/2019	12/31/2020	12/31/2021	12/31/2022
1 OPERATING REVENUES											
2 kWh Purchases	212,349,941	204,077,395	208,313,020	202,132,363	222,217,731	216,993,000		211,388,000	212,931,000	214,485,000	216,051,000
3 % Rate Increase				5%		5%		5%	5%	5%	5%
4 % Revenue Increase	3%	12%	3%	7%	13%	5%		3%	5%	6%	5%
5 Residential	\$ 15,913,325	\$ 17,694,706	\$ 18,104,756	\$ 18,910,272	\$ 19,625,898	\$ 20,942,108	7%	\$ 21,589,964	\$ 22,746,490	\$ 24,040,023	\$ 25,362,218
6 Commercial	5,694,901	6,356,143	6,463,561	6,851,153	7,435,178	7,548,978	2%	7,782,131	8,198,346	8,663,867	9,139,704
7 Other	420,798	531,069	680,713	648,188	742,147	749,965	1%	765,984	794,580	826,563	859,255
8 Total operating revenue	22,029,025	24,581,918	25,249,029	26,409,613	27,803,223	29,241,051	5%	30,138,079	31,739,416	33,530,453	35,361,177
9											
10 OPERATING EXPENSES											
11 Cost of power	8,037,428	7,787,142	7,942,885	8,402,223	9,137,426	9,188,856	1%	9,562,923	10,109,445	10,687,336	11,298,404
12 Transmission	92,874	179,264	94,462	177,500	159,437	159,989	0%	166,959	175,260	185,078	195,542
13 Distribution - operations	2,961,250	3,391,150	3,215,893	3,514,721	3,559,401	3,813,151	7%	4,172,470	4,370,727	4,627,960	4,903,413
14 Distribution - maintenance	1,778,516	1,713,924	1,692,345	1,851,312	1,650,089	1,712,581	4%	1,796,528	1,884,584	1,985,514	2,092,801
15 Consumer accounts	898,198	893,766	947,326	1,045,340	980,585	1,064,826	9%	1,119,487	1,171,425	1,240,281	1,313,872
16											
17 General and administration											
18 Administration G&A	2,822,439	2,950,777	2,787,995	3,110,220	3,004,965	3,384,697	13%	3,510,169	3,630,191	3,819,954	4,019,205
19 Energy services G&A	373,323	658,939	103,671	491,931	467,150	506,939	9%	530,076	560,190	587,068	615,549
20 Subsidiary Charges	-	29,100	34,920	69,720	34,920	36,055	3%	36,055	36,055	36,055	36,055
21 Total general and administration	3,195,763	3,638,816	2,926,586	3,671,871	3,507,035	3,927,691	12%	4,076,300	4,226,436	4,443,077	4,670,809
22											
23 Depreciation and amortization	2,975,650	3,308,154	3,546,977	3,801,831	3,711,133	4,368,126	18%	4,669,624	4,894,990	5,131,624	5,380,091
24 Taxes	961,815	1,046,626	1,137,058	1,220,252	1,278,557	1,352,517	6%	1,430,777	1,513,588	1,598,028	1,687,279
25											
26 Total operating expenses	20,901,493	21,958,841	21,503,532	23,685,051	23,983,663	25,587,737	7%	26,995,068	28,346,455	29,898,898	31,542,211
27											
28 Operating margins before fixed charges	1,127,532	2,623,077	3,745,497	2,724,563	3,819,560	3,653,314	-4%	3,143,011	3,392,961	3,631,555	3,818,966
29											
30 FIXED CHARGES											
31 Interest on long-term debt	908,934	1,047,248	1,095,316	1,019,178	1,040,989	1,278,462	23%	1,576,843	1,627,087	1,591,571	1,527,515
32 Other Interest	-	-	-	-	-	-		-	-	-	-
33											
34 Total fixed charges	908,934	1,047,248	1,095,316	1,019,178	1,040,989	1,278,462	23%	1,576,843	1,627,087	1,591,571	1,527,515
35											
36 Operating margins after fixed charges	218,598	1,575,829	2,650,181	1,705,384	2,778,571	2,374,852	-15%	1,566,168	1,765,874	2,039,984	2,291,451
37											
38 PATRONAGE CAPITAL CREDITS	67,853	83,608	81,361	79,323	77,627	77,627	0%	80,344	83,558	86,900	90,376
39											
40 Net operating margins	286,451	1,659,437	2,731,543	1,784,707	2,856,198	2,452,479	-14%	1,646,512	1,849,432	2,126,884	2,381,827
41											
42 NON-OPERATING MARGINS											
43 Interest income	32,130	127,804	217,758	112,357	238,485	238,485	0%	244,057	250,648	257,502	264,630
44 Other income	23,458	71,081	112,957	113,036	(6,848)	106,839	-1660%	107,352	108,156	108,992	109,862
45 Fiber Optics Division	(220,088)	-	-	-	-	-		-	-	-	-
46											
47 Net non-operating margins	(164,500)	198,886	330,715	225,393	231,637	345,324	49%	351,409	358,804	366,494	374,492
48											
49 NET MARGINS	\$ 121,951	\$ 1,858,322	\$ 3,062,257	\$ 2,010,100	\$ 3,087,835	\$ 2,797,803	-9%	\$ 1,997,921	\$ 2,208,236	\$ 2,493,378	\$ 2,756,319
50											
51 TIER	1.13	2.51	3.24	2.36	2.92	2.61	-11%	2.13	2.29	2.50	2.72
52 Equity % of Total Cap (Directive - 40%)	61.3%	54.2%	49.4%	43.6%	43.2%	43.4%	0%	44.8%	47.2%	49.7%	52.7%

ORCAS POWER AND LIGHT COOPERATIVE

STATEMENT OF OPERATIONS 2018 BUDGET
DETAILED BREAKOUT OF NOTABLE DRIVERS

	A.	B.	C.	D.	
	Projected Year End 12/31/2017	Budget Year End 12/31/2018	Budget Change from 2017	Comments: Budget To Actual (Column C.)	
1	I OPERATING REVENUES	27,803,223	29,241,051	1,437,828	Proposed Rate Increase of 5%, based on 216M kWh purchases which represents a neutral weather condition
2					
3					
4	II OPERATING EXPENSES	23,983,663	25,587,737	1,604,074	Overall increase in operating expenses
5					
6	Cost of Power - Line 11	9,137,426	9,188,856	51,430	Increase in expense - Includes: ~5.2M lower kWh purchases, \$141k fish spill surcharge from BPA, \$44k Power Cost Recovery Adjustment Clause (CRAC) from BPA, \$70k Financial Reserves CRAC from BPA, \$940k Residential Exchange Program net costs from BPA & first full year of PNGC power management costs.
7					
8	Transmission - Line 12 Detail Breakout:	159,437	159,989	552	Increase in expense
9	Maint-OH Lines/Transmission			4,219	General wage increase and benefit growth assumptions
10	Submarine Cable Expenses			(3,560)	Restoration of Lopez to Decatur submarine cable completed 2017
11	Multiple Accounts			(107)	Decrease among multiple general ledger accounts (7 accounts)
12				552	
13					
14	Distribution - Operations - Line 13 Detail Breakout:	3,559,401	3,813,151	253,750	Increase in expense
15	Operation Supervision and Engineering			55,972	General wage increase and benefit growth assumptions
16	Station Expenses			(27,948)	Olga substation transformer oil testing, replacing, and disposal completed 2017
17	Meter Expenses			110,304	Filled Meter Tech position October 2017
18	Misc. Distribution Expenses			67,163	General wage increase and benefit growth assumptions
19	Overhead/Underground Lines Expenses			45,751	Fully staffed Line Crew, general wage increase, and benefit growth assumptions
20	Multiple Accounts			2,508	Increase among multiple general ledger accounts (3 accounts)
21					
22	Subtotal Distribution - Operations			253,750	
23					
24	Distribution - Maintenance - Line 14 Detail Breakout:	1,650,089	1,712,581	62,492	Increase in expense
25	Maintenance of Meters			13,642	Filled Meter Tech position October 2017
26	Maint-Overhead/Underground Lines			41,022	Fully staffed Line Crew, general wage increase, and benefit growth assumptions
27	Multiple Accounts			7,828	Increase among multiple general ledger accounts (12 accounts)
28				62,492	
29	Subtotal Distribution - Maintenance				
30	Consumer accounts - Line 15 Detail Breakout:	980,585	1,064,826	84,241	Increase in expense
31	Customer Records and Collections			82,441	Fully staffed Eastsound and Friday Harbor office
32	Multiple Accounts			1,800	Increase among multiple general ledger accounts (2 accounts)
33	Subtotal Consumer Accounts			84,241	
34					
35	Total General and Administrative (G&A):	3,507,035	3,927,691	420,656	Increase in expense
36					
37	Administration G&A - Line 18 Detail Breakout:	3,004,965	3,384,697	379,732	Increase in expense
38	Informational Instruction/Advertising Expense			60,472	Community solar outreach, lobby kiosk, web projects, and new member survey
39	Administrative /General			23,698	Communication fully staffed
40	Legal Expense			51,414	Increase in Legal expense - less capitalization in 2018
41	Outside Services			55,145	Increase in outside consulting for Cost of Service Study (rate study)

ORCAS POWER AND LIGHT COOPERATIVE

STATEMENT OF OPERATIONS 2018 BUDGET
DETAILED BREAKOUT OF NOTABLE DRIVERS

		A.	B.	C.	D.
		Projected	Budget	Budget	
		Year End	Year End	Change	
		12/31/2017	12/31/2018	from 2017	Comments: Budget To Actual (Column C.)
42	Director's Fee & Expenses			47,856	EGC recommendation (stipend increase) and legal contingency
43	Misc. Gen Exp/Manager/Dues			33,097	Increase in GM travel expenses (PNGC) and employee appreciation
44	Office/Technical Service Supplies & Expenses			99,471	Increase in outside technical services consulting
45	Multiple Accounts			8,579	Increase among multiple general ledger accounts (10 accounts)
46					
47	Subtotal Administration G&A			379,732	
48					
49	Energy Services G&A - Line 19	467,150	506,939	39,789	Increase in expense
50	General Overhead Expenses			15,153	General wage increase and benefit growth assumptions
51	Education and Outreach			43,465	Increase in outreach projects & outside consulting
52	BPA Rebates			34,980	Increase in BPA rebate programs available for 2018
53	BPA EEI Funding			(101,789)	Increase in EEI Funding available in BPAs fiscal year '18/'19 rate period
54	Other Residential Rebates			38,100	Increase in heat pump fuel switching and Northwest Energy Efficient Manufactured homes
55	Multiple Accounts			9,880	Increase among multiple general ledger accounts (6 accounts)
56	Subtotal Energy Services G&A			39,789	
57					
58	Subsidiary Charges G&A - Line 20	34,920	36,055	1,135	Increase in expense
59					
60	Total General and Administrative (G&A)	3,507,035	3,927,691	420,656	Overall increase in expense
61					
62	Deprec. & Amort. - Line 23	3,711,133	4,368,126	656,993	Increase in expense - based on capital project plan (submarine cable begins in March)
63					
64	Taxes - Line 24	1,278,557	1,352,517	73,960	Increase in expense - based on increase in revenue
65					
66	TOTAL OPERATING EXPENSES	23,983,663	25,587,737	1,604,075	Overall increase in expense
67					
68					
69	III FIXED CHARGES - Interest Expense - Line 34	1,040,989	1,278,462	237,473	Increase in expense - submarine cable loan
70					
71	IV PATRONAGE CAPITAL CREDITS - Line 38	77,627	77,627	-	No increase
72					
73					
74	TOTAL NET OPERATING MARGINS	2,856,198	2,452,479	(403,719)	Decrease in margin
75					
76					
77	V NON-OPERATING MARGINS	231,637	345,324	113,687	Increase in margin
78					
79	Interest and Dividend Income - Line 43	238,485	238,485	0	No change in income
80					
81	Other Income - Line 44	(6,848)	106,839	113,687	Increase in income
82	Loss on Disposition of Property			71,515	Less old equipment retirements
83	Misc Nonoperating Income			41,586	No demand charge corrections
84	Multiple Accounts			586	Increase among multiple general ledger accounts (6 accounts)
85					
86	TOTAL OPALCO NET MARGIN DETAIL BREAKOUT	3,087,835	2,797,803	(290,032)	Decrease in margin

ORCAS POWER AND LIGHT COOPERATIVE

STATEMENT OF CASH FLOW

NON GAAP

	A. Projected Year End 12/31/2017	B. Proposed Budget 12/31/2018	C. Forecast 12/31/2019	D. Forecast 12/31/2020	E. Forecast 12/31/2021	F. Forecast 12/31/2022
1 % Rate Increase		5%	5%	5%	5%	5%
2 Operating Activities						
3 Margins	\$ 3,088,000	\$ 2,798,000	\$ 1,998,000	\$ 2,208,000	\$ 2,493,000	\$ 2,756,000
4 Plus Depreciation/Amortization	3,711,000	4,368,000	4,670,000	4,895,000	5,132,000	5,380,000
5 Cash Flow Operations	6,799,000	7,166,000	6,668,000	7,103,000	7,625,000	8,136,000
6						
7 Plant Investment (Net)	(15,537,000)	(8,890,000)	(5,413,000)	(5,097,000)	(4,838,000)	(4,659,000)
8 Cash Flows from Patronage Capital	(1,003,000)	(1,051,000)	(1,051,000)	(1,051,000)	(1,051,000)	(1,118,000)
9 Net Borrowings	10,849,000	24,000	(2,187,000)	(2,226,000)	(2,052,000)	(2,288,000)
10 Annual Estimated Cash Increase (decrease)	\$ 1,108,000	\$ (2,751,000)	\$ (1,983,000)	\$ (1,271,000)	\$ (316,000)	\$ 71,000

ORCAS POWER AND LIGHT COOPERATIVE

CAPITAL PROJECTS BUDGET

			A.	B.	C.	D.	E.	F.	G.	H.	I.	J.
			Actual	Actual	Actual	Budget	Projected	Proposed	Forecast	Forecast	Forecast	Forecast
			12/31/2014	12/31/2015	12/31/2016	2017	Year End	Budget	2019	2020	2021	2022
			2017				2017	2018				
1	DISTRIBUTION											
2	100	New Services	\$ 256,450	\$ 221,770	\$ 384,240	\$ 291,000	\$ 331,601	\$ 361,000	\$ 372,000	\$ 384,000	\$ 396,000	\$ 408,000
3	200	New Tie Lines	341,347	147,776	(13,438)	200,000	541					
4	300	Conversions and Line Changes	1,194,755	528,776	679,000	1,335,000	1,220,822	410,000	1,430,000	910,000	1,147,000	1,182,000
5	400	New Substations, switching station, metering point, etc.	-	-	-	-	-					
6	500	Substation, Switching Station, Metering Point Changes	23,034	145	2,443	126,000	428,237	2,450,000	126,000	350,000		
7	600	Miscellaneous Distribution Equipment										
8	601	Transformers & Meters	575,840	627,342	671,830	525,000	524,877	545,000	511,000	576,000	594,000	612,000
9	602	Sets of Service Wires to increase Capacity	-	-	-	-	-					
10	603	Sectionalizing Equipment	401,127	101,557	(185,844)	100,000	268,090	440,000	300,000	300,000	75,000	75,000
11	604	Regulators	131,410	15,911	-	-	5,170	150,000		80,000		
12	605	Capacitors	-	-	-	-	-					
13	606	Ordinary Replacements	179,366	170,439	291,336	119,000	23,556	123,000	127,000	131,000	135,000	140,000
14	608	Underground Dist. Cable Replacement	3,202,174	2,127,270	3,137,344	1,942,000	2,019,304	1,712,000	1,613,000	1,593,000	1,641,000	1,691,000
15	700	Other Distribution Items										
16	701	Engineering Fees	-	-	-	-	-					
17	704	LMS & SCADA	1,805	32,715	87,054	89,000	84,952	162,000	84,000	87,000	45,000	24,000
18	705	AMR Station Equipment (No Meters)	-	-	-	-	172	270,000				
19	706	Communications										
20	706.0	Island Network	349,692	-	-	-	-					
21	706.1	Fiber/Microwave Infrastructure (1)	1,747,051	2,528,428	2,694,821	1,290,000	2,125,770	538,000	15,000	16,000	17,000	18,000
22	TRANSMISSION											
23	800	New Tie Line	-	-	-	-	-					
24	900	New Substations, switching station, metering point, etc.	11,321	443	68,174	650,000	520,379					
25	1000	Line and Station Changes	257,537	900,338	6,229,978	8,408,000	7,492,231	1,730,000	89,000	342,000	95,000	98,000
26	1100	Other Transmission	-	-	-	-	-	-	-	-	-	-
27	GENERATION											
28	1200	Generation	-	-	-	-	-	-	-	-	-	-
29	OTHER											
30	1300	Facilities	62,112	409,976	178,301	300,000	96,448	675,000	110,000	70,000	74,000	78,000
31	1400	Acquisitions	-	-	-	-	-	-	-	-	-	-
32	1500	All Other										
33	1501	Transportation/Equipment/Tools/Radios	426,919	335,842	604,272	450,000	445,150	613,000	631,000	568,000	597,000	627,000
34	1502	Office Equipment/Furniture/Etc.	7,938	70,727	44,740	20,000	10,845	41,000	22,000	23,000	24,000	25,000
35	1503	Computer/Servers/Software	212,073	283,254	339,289	298,000	290,909	274,000	282,000	290,000	305,000	321,000
36	1504	Community Solar (member funded) (2)	-	-	-	-	-	900,000	1,000,000	-	-	-
37	1600	Minor Projects	212,306	94,343	205,310	100,000	247,333	170,000	175,000	180,000	186,000	192,000
38	RUS CWP SUBTOTAL		9,594,257	8,597,052	15,418,851	16,243,000	16,136,388	11,564,000	6,887,000	5,900,000	5,331,000	5,491,000
39	CONTRIBUTION IN AID OF CONSTRUCTION (CIAC)											
40		New Services	(272,300)	(181,922)	(495,959)	(291,000)	(235,000)	(307,000)	(289,000)	(317,000)	(298,000)	(327,000)
41		Meters and Transformers	(137,843)	(176,241)	(398,561)	(209,000)	(252,812)	(304,000)	(177,000)	(314,000)	(183,000)	(324,000)
42		Joint Projects	(184,657)	(329,145)	(38,549)	(298,000)	(235,425)	(287,000)	(132,000)	(296,000)	(136,000)	(305,000)
43		Island Network Department	(305,819)				-					
44		WA DOC Grant Funding					-	(1,000,000)				
45		Community Solar Member Contributions			(300,000)		-	(900,000)	(1,000,000)			
46	RUS CWP NET TOTAL		8,693,638	7,909,744	14,185,782	15,445,000	15,413,151	8,766,000	5,289,000	4,973,000	4,714,000	4,535,000

Notes:

1 Totals in Fiber/Microwave Infrastructure (706.1) equal \$7.5M from 2014 though budgeted 2017 with further expenditures to create redundant wireless links from San Juan to other islands in 2017.

2 Community solar program is expected to begin via member contributions in 2018 through 2019 while construction is expected to commence in 2018 based on the amount of these contributions.

ORCAS POWER AND LIGHT COOPERATIVE

CAPITAL PROJECTS BUDGET
NOTABLE DRIVERS

RUS CWP DESCRIPTION			A. Projected Year End 2017	B. Proposed Budget 2018	C. Budget Change from 2017	D. Comments
1	DISTRIBUTION		\$ 7,033,092	\$ 7,161,000	\$ 64,131	
2						
3	100	New Services	331,601	361,000	29,399	
4						
5	200	New Tie Lines	541	-	(541)	
6						
7	300	Conversions and Line Changes	1,220,822	410,000	(810,822)	
8				250,000		Egg Lake Road
9				80,000		Hoffman Cove Road
10				80,000		Crescent Beach Road
11				410,000		
12						
13	500	Substation, Switching Station, Metering Point Changes	428,237	2,450,000	2,021,763	
14				2,200,000		Decatur Energy Storage System (Offset WA DOC Grant. See CIAC below.)
15				200,000		Blakely Substation (To allow rerouting of power form BPA Decatur tap)
16				50,000		Olga Substation (To allow rerouting of power form BPA Decatur tap)
17				2,450,000		
18						
19	600	Miscellaneous Distribution Equipment	2,840,997	2,970,000	129,003	
20						
21	601	Transformers & Meters	524,877	545,000	20,123	
22				365,000		Transformer and Meter Purchases
23				50,000		Meter Replacements
24				130,000		Replacement of transclosures
25				545,000		
26						
27	603	Sectionalizing Equipment	268,090	440,000	171,910	
28						
29	604	Regulators	5,170	150,000	144,830	
30						
31	606	Ordinary Replacements	23,556	123,000	99,444	
32						
33	608	Underground Dist. Cable Replacement	2,019,304	1,712,000	(307,304)	Partially offset by Conversions and Line Changes (300) above.
34				114,000		Decatur Head
35				231,000		Pine Drive
36				145,000		Pioneer Hill
37				126,000		Aleck Bay
38				116,000		Davidson Head
39				294,000		Decatur NW
40				686,000		Single span and other small projects
41				1,712,000		
42						
43	700	Other Distribution Items				
44						
45	704	LMS & SCADA	84,952	162,000	77,048	SCADA Network Segregation
46						
47	705	AMR Station Equipment (No Meters)	172	270,000	77,048	Blakely, Decatur and Olga AMR Substation Equipment
48						
49	706	Communications				
50						

ORCAS POWER AND LIGHT COOPERATIVE

CAPITAL PROJECTS BUDGET
NOTABLE DRIVERS

			A.	B.	C.	D.
			Projected	Proposed	Budget	
			Year End	Budget	Change	
			2017	2018	from 2017	Comments
51	706.1	Fiber/Microwave Infrastructure ⁽¹⁾	2,125,770	538,000	(1,587,770)	
52				132,000		Afterglow
53				106,000		Armadale
54				300,000		Generators for Active Sites
55				538,000		
56						
57	TRANSMISSION		8,012,610	\$ 1,730,000	(6,282,610)	Submarine Cable Installation in 2017
58						
59	900	New Substations, switching station, metering point, etc.	520,379	\$ -	(520,379)	BPA Tap in 2017
60						
61	1000	Line and Station Changes	7,492,231	1,730,000	(5,762,231)	
62				1,350,000		Lopez to San Juan Submarine Cable Completion in 2018
63				250,000		Orcas Road Transmission Relocation
64				130,000		Deer Point Terminal and Ordinary Pole Replacement
65				1,730,000		
66	OTHER					
67	1300	Facilities	96,448	675,000	578,552	
68				500,000		Eastsound Office - Sewer system replacement
69				175,000		7 Misc. Projects
70				675,000		
71						
72	1500	All Other	746,904	\$ 928,000	181,096	
73						
74		1501 Transportation/Equipment/Tools/Radios	445,150	613,000	167,850	
75						
76		1502 Office Equipment/Furniture/Etc.	10,845	41,000	30,155	
77						
78		1503 Computer/Servers/Software	290,909	274,000	(16,909)	
79						
80		1504 Community Solar	-	900,000	900,000	Offset by Member Contributions (see CIAC below)
81						
82	1600	Minor Projects	247,333	170,000	(77,333)	Projected joint projects and overhead conversions
83						
84	RUS CWP SUBTOTAL		16,136,388	11,564,000	(4,572,388)	
85						
86	CONTRIBUTION IN AID OF CONSTRUCTION (CIAC)		(723,237)	(2,798,000)	(2,074,763)	
87		New Services	(235,000)	(307,000)	(72,000)	Historical trend of new services less abnormal services
88		Meters and Transformers	(252,812)	(304,000)	(51,188)	Historical trend of new service transformers and meters less abnormal services
89		Joint Projects	(235,425)	(287,000)	(51,575)	Anticipated joint projects with CenturyLink
90		WA DOC Grant Funding	-	(1,000,000)	(1,000,000)	
91		Community Solar Member Contributions ⁽²⁾	-	(900,000)	(900,000)	Anticipated contributions from members toward community solar in 2018
92						
93	RUS CWP NET TOTAL		15,413,151	8,766,000	(6,647,151)	
94						
95	Notes:					
96	1 Totals in Fiber/Microwave Infrastructure (706.1) equal \$7.5M from 2014 though budgeted 2017 with further expenditures to create redundant wireless links from San Juan to other islands in 2017.					
97	2 Community solar program is expected to begin via member contributions in 2017 through 2019 while construction is expected to commence in 2018 based on the amount of these contributions.					

ORCAS POWER AND LIGHT COOPERATIVE

2018 - 2022 BUDGETED STAFFING LEVELS

	A.	B.	C.	D.
		ACTUAL	APPROVED BUDGET	APPROVED
	DEPARTMENT	# EMPLOYEES	# EMPLOYEES	# EMPLOYEES
		2017	2018	2018 - 2022
1	Operations ¹	21.5	22.5	22.5
2	Engineering ¹	9.5	9.5	9.5
3	General Management	5	5	5
4	Technical Services	1	1	1
5	Member Services ²	6.5	6.5	6.5
6	Administration	4	4	4
7	Energy Savings ²	1.5	1.5	1.5
8	Total	49	50	50

Notes:

1 Engineering & Operations Manager split between departments

2 Member & Energy Services Manager split between departments

OPALCO ORGANIZATIONAL CHART— 2018 Budget

