



# ORCAS POWER AND LIGHT COOPERATIVE 2020 BUDGET REPORT



## MEMORANDUM

Date: November 15, 2019

To: Board of Directors

From: Foster Hildreth, General Manager

Re: 2020 Budget Presentation

Attached please find our 2020 Budget Presentation. Consistent with last year's projections, staff is recommending a 3.0% rate increase (4.0% operating revenue increase) for the 2020 budget year only. Staff is recommending that our 2020 budget revenue increase from \$30.6M (projected 2019) to \$31.9M to meet our financial, operational and capital project commitments. The projected figures for years 2021 thru 2024 are for reference only, as future years will be reviewed annually during our normal budgeting process.

OPALCO is strategically positioned to address the future power needs of our membership and sustain our island communities through the escalating costs and challenges of the carbon economy. With Washington's Clean Energy Transformation Act (CETA), the clock is now ticking. OPALCO has the expertise in its Board, management and team to get the job done; and, thanks to the foresight of recent past boards, we have built the foundation - a modern grid and communication infrastructure - required to succeed. In 2019, OPALCO completed an update to the Integrated Resource Plan (IRP) that contains the vision for our future power. 2020 will be a year of telling the story of OPALCO's vision, bringing members into their part of the story, and hunkering down between major projects to take a budgetary breath before embarking on the equity building that will be required next.

There are very few discretionary expenses. The Co-op budget is tightly constrained: one-third for power costs; one-third for labor (bargaining unit and competitive wage rates) and most of the final third in fixed costs such as plant, mortgage and operations; discretionary expenses are largely limited to member facing programs. In order to minimize rate increases in 2020, the following programs have been reduced: County Fair (canceled), Youth Scholarship Program (scaled back), Education and Outreach (scaled back). Capital projects that could be delayed have been shifted to future years: two major transformer repairs and upgrades and a resource study. The challenge of 2020 is to find ways to demonstrate OPALCO's vision for the future while keeping members more engaged than ever in the programs - like Switch it Up, Community Solar and Energy Efficiency and Fuel Switching Rebates - that will help position them and the Co-op for sustainability going forward.

With the high cost of living in the islands, OPALCO is strengthening its commitment to bill paying assistance for member households of low and fixed income. Project PAL has been restructured and will be administered through the three island family resource centers. Energy Assist Credit will, once again, be adjusted to offset the service access charge increase.

The 2020 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. Leverage grants, state and federal programs to help members increase efficiency and position themselves for sustainability in the coming carbon economy.

TOMORROW: Increase local resilience. Bring more local renewables on, leveraging our dynamic grid and building emergency back-up power for emergency services. Prepare for grid parity when renewables (local and regional) will be less expensive than our mainland power provider.

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. To give members access to this dynamic power world, OPALCO must begin to upgrade transformers and other equipment to provide the capacity necessary to manage the number of EVs, local distributed power generators and battery storage units that will be commonplace in member homes – as well as smart appliances and individual devices.

The 2020 Budget includes completion of the first energy storage (battery) project on Decatur, the next Community Solar project (on Lopez) and an increased scope and funding for Switch it Up, the on-bill finance program to encourage members to make wise use of electricity and increase the efficiency of their homes and businesses. Operations will replace 20 miles of URD and connect generators to existing active sites for power back-up and reliability, as well as routine replacement of transmission poles and upgrades to our switching between BPA feeds to improve reliability in the event of a BPA outage between Anacortes and Lopez.

Staff recommends Board make a motion to approve the 2020 budget as submitted.

## 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 – OPALCO has a rigorous safety program for all employees and provides safety information to members through classroom visits, demonstrations, field assistance and the website. The right-of-way (tree trimming and brush clearing) program is key for system reliability and fire safety. OPALCO depends on member cooperation to address right-of-way issues in a timely manner. The Co-op is committed to continually improving and fortifying our safety programs. OPALCO's grid is critical for the safety of our community and especially our crew members in the field. OPALCO's grid connects the County to real-world services for education, economic development and quality of life.

✓ Reliability – OPALCO's system provides power 99.8% of the time to its members. This is a reliability rating to be proud of. 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 2020, we will complete the first Energy Storage System (0.5MW/2 MWh battery) on our system at Decatur substation. This battery, along with the 504kW-DC Community Solar array, completes 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. Our first battery storage bank is a first step in creating cost savings through relieving stress on our assets, load shifting and peak shaving. Equipment replacement scheduled for 2020 and beyond position the Co-op to benefit from local distributed power resources as we reach grid parity.

✓ Environmentally Sensitive – OPALCO has critical infrastructure installed throughout our beautiful and sometimes fragile island environs. 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. In every project, OPALCO's vision of sustainable island communities keeps us focused on best practices and member education to protect ocean health and do our part to mitigate the effects of climate change.

### **Load Forecast:**

The Load Forecast is the heart of the budget and the most precarious aspect of our forecasting. The forecasting drives our power cost which is one-third of our expenses and our energy (kWh) sales which is two-thirds of our revenue. 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.

Forecasting is challenging. Our team uses every available tool 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 and historical data, including air temperature, water temperature, wind, and precipitation, to name but a few.



OPALCO's load peaks in the winter, in large part due to increased heating and lighting load. Weather drives heating load. Predicting the weather for a year ahead is fraught with uncertainty due to variations of temperature, wind and humidity and yet we depend on weather forecasting to meet our budgetary commitments. In 2020, the forecast is a neutral weather pattern (in between El Niño and La Niña) with projected kilowatt hour purchases of 212M kWh. As a point of reference, OPALCO's load has averaged 215M kWh, ranging between 204M (2015) – 229M (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.

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. The Energy Charge Adjustment (ECA) was implemented in 2019 to partially offset weather volatility and its working well.

## BUDGET ASSUMPTIONS

### GENERAL:

- **General Inflation Rate:**

The general annual inflation rate has been projected at 3.00% for years 2020, 3.00% for 2021 and 3.5% for years 2022 through 2024.

We use the US Department of Labor, Bureau of Statistics, Seattle-Tacoma-Bellevue consumer price index as the baseline for inflation.

([https://www.bls.gov/regions/west/data/consumerpriceindex\\_seattle\\_table.pdf](https://www.bls.gov/regions/west/data/consumerpriceindex_seattle_table.pdf))

- **2020-24 Budget Basis:**

The 2020-2024 budgetary figures have been forecast with the use of actual activity from January through September 2019 and adjusted 4<sup>th</sup> quarter 2019 projections.

- **BPA Power Cost Projections:**

- ~90% of the power resource we depend on are sourced from our Federal Hydro System.
- BPA operates on a two-year rate cycle. 2020 is the second year of their current rate case. In 2020, we are budgeting for BPA increases of approximately 3% over 2019 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.
- From 2021 through 2024, we have maintained a 5% BPA cost increase for each year.
- Load growth is expected to be approximately 1% per year.



- **Labor:**
  - Staffing levels will remain at 51 full-time OPALCO employees from 2020 through 2024 (see organization chart).
  - The general wage increase is in accordance with the current Collective Bargaining Agreement.
  - The benefit growth assumptions are in accordance with 2020 NRECA and LineCo rate projections based on the changes to the benefits package.
  
- **Capital Projects:**
  - The 2020 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.
  - Planning – Engineering will complete the 20-year Long Range Plan and 2021-2024 Construction Work Plan (CWP) in 2020 with the supporting Environmental Report for the CWP by year end for submittal to USDA RUS. These plans will grow load and resources as anticipated in the IRP such to ensure our system is built to handle electric vehicle integration, electrification of the ferries, fuel switching and also remain stable with the integration of distributed resources (batteries, roof-top solar, etc.) and utility resources to include community solar, utility scale solar, utility scale battery systems tidal generation, etc.
  - Distribution System:
    - New Services continue to trend upward since the lows of the recession (2008-13). For 2019, \$397k is budgeted with an average of \$408k 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 140 miles ofunjacketed URD to replace system-wide over time with problem areas mapped for priority scheduling. In 2020, 20 miles of URD is slated for replacement at a budgeted cost of \$1.6 M. Staff expect an average annual spending of \$1.5 - \$2M for the foreseeable future for replacement of unjacketed URD.
    - Conversions, Line Changes and Tie Lines - ~\$1.2M is budgeted in 2020 for conversion to large conductors: upgrading lines to carry greater capacity and increased ability to reroute power.



- Sectionalizing Equipment expenses will be to automated switches on our system improve reliability and give us greater visibility into our system.
- SCADA spending is business as usual in 2020 (\$70k) with security upgrades planned as we segment our SCADA system away from our business networks.
- Grid Control Communications Infrastructure (fiber) expansion for 2020 (\$110k) is budgeted to install conduits for future fiber jointly with other projects and connect generators to active sites for power back-up and reliability.
- Transmission System – Projects include the routine replacement of transmission poles and upgrades to our switching between BPA feeds to improve reliability in the event of a BPA outage between Anacortes and Lopez.
- Facilities – Decreased spending budgeted for 2020 (\$330k) to complete the bathroom remodel, installation of vehicle charges, and repairs to the Friday Harbor and Lopez office generators.
- Transportation – Capital expense for fleet are expected to average ~\$539k per year.
- Substation/Community Solar
  - Add circuit breaker to the Olga Substation to better protect the transmission system in back feed instances.
  - Energy Storage System (ESS) – The 2020 budget includes the completion of the Decatur ESS (\$775k) with offsetting funds from a WA DOE grant (\$670k remaining to draw). Commissioning of the 1 MW/2.7 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 outage.
  - Community Solar Project – The 2020 budget includes our potential next project for 660kW DC (500 kW AC) projected for Lopez to interconnect to the proposed 1.5 MW/4 MWh ESS in years 2021-2022 (\$4.2M not including a \$2M WA DOC grant). This project may span years yet will have offsets from member contributions due to dependencies such as contracting, siting, interconnection, etc.
- Project Shifting – Below are projects that are shifting to future years to levelize capital spending:
  - Olga Transformer to 2022 (\$800k) – This project would replace the Olga Substation transformer. The existing Olga Substation transformer would be relocated to the Lopez Substation as a means for transformer maintenance and failure contingency.



This transformer would allow for Olga Substation to support Eastsound and Orcas Substations during maintenance or outage events.

- Roche Harbor Transformer Pump Replacement to 2021 (\$80k) – Replacement of failed oil pump in the Roche Harbor Substation transformer. Without this pump, the transformer is limited in its capacity to 16 MVA, when repaired this capacity increases to 22.5 MVA. The normal load on this transformer does not exceed its capacity without the pump yet limits the times in the year in which we can back up either the Gravel Pit or Friday Harbor Substations.
- Tidal Study in 2021 (\$30k) – Tidal flow study in San Juan Islands

- **Energy Savings:**

- Staff have applied for additional RESP funds from RUS for the Switch it Up on-bill financing program. Programs are expected to expand to more energy savings measures as members participating in the existing programs continue to pay back for their financed projects.
- New Community Solar projects will be available for member purchase in 2020.
- BPA/PNGC pass-through rebates will continue for ductless heat pumps, weatherization, commercial lighting, and appliances. Members will be able to apply for rebates online.
- Beneficial electrification (fuel-switching) rebates are offered again in 2020. More self-funded incentives for ductless heat pumps and EV charging stations will be available. These conversions bring new load (kWh usage) and revenue, and help members breach the cost barrier for these appliances. Switch it Up participants will also receive beneficial electrification incentive off the principle of their projects.
- Staff will continue to get support for energy education and outreach via the San Juan Islands Conservation District.

- **Capital Credits**

- Capital credit pay out cash planning is based on an average 25 year pay back cycle (1995 capital credits in 2020) plus an additional “smoothing” payout amount (71% portion of 1996 in 2020). \$1.3M in capital credits are expected to be retired in 2020 and 2021, going up to \$1.4M in 2022 and 2023 and \$1.5M in 2024. The goal is to smooth out the low and high year payouts by using an average rather than strict year total.

- **Energy Assistance Program:**

- The 2020 Budget includes a continuation of ~\$134k for low-income monthly bill credits, which range from ~\$30 (single person household) to ~\$60 (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 \$0.60 on the average residential bill). Approximately 437 members



participated in 2019, up from 418 in 2019. Outreach continues to encourage participation. Note, the EAP credits increase of \$1.65 will offset the increase in service access charge.

- **Communications**

- Key Projects - Comprehensive communication strategies will be implemented to engage members in Community Solar 2, another round of Switch It Up and, most importantly, to build understanding for and investment in OPALCO's vision for future power and the priorities of the IRP. The San Juan Island Conservation District will collaborate with OPALCO in this effort.
- Reputation - Staff will present an updated look and feel to OPALCO's brand in 2020 to tell the current story of how OPALCO contributes to the quality of life in San Juan County. The new look will reflect the evolution of the Co-op and help to broaden the demographics of engaged members.
- Safety - A member awareness campaign is planned to inform members about key safety issues including power outages, natural disasters, wildfires, lineman and electrical safety.
- Research – In partnership with NRECA, staff will launch a member satisfaction survey in April to gather member feedback and industry comparables. This data will inform member program development and initiatives.
- Clearing Up Newsletter – Staff is budgeting to reinstate the subscription to the Clearing Up newsletter for ~\$3k annually.



## **OVERALL SUMMARIZATION:**

### **1. Revenue:**

Staff recommends a rate increase of 3.0% (equating to a total revenue increase of ~3.8%) for 2020. The recommended increase applies equally to both the facility charge and energy usage charge, while balancing the cost of service between rate classes. Based on the 2018 cost of service study, we will begin a five-year phased approach to balancing equitability between the rate classes.

### **2. Margins:**

Per Staff recommendation, projected margins are as follows: \$ 2.4M in 2019 (projected), \$2.1M in 2020 (budget), \$2.0M in 2021 and 2022 (forecast), \$2.3M in 2023 (forecast), and \$2.8M in 2024 (forecast).

### **3. TIER:**

Per Staff recommendation, TIER is as follows: 2.23 in 2019 (projected), 2.06 in 2020 (budget), 1.98 in 2021 and 2022 (forecast) 2.05 in 2023 (forecast), and 2.24 in 2024 (forecast).

### **4. Equity % of Total Capitalization (OPALCO):**

Per Staff recommendation, Equity % of Total Capitalization is as follows: 39.5% in 2019 (projected), 38.8% in 2020 (budget), 38.2% in 2021 (forecast), 38.0% in 2022 (forecast), 38.3% in 2023 (forecast), and 39.1%in 2024 (forecast).

### **5. Debt:**

OPALCO is expected to borrow from RUS \$3.1M in 2020 and 2021, \$3.2M in 2022, \$3.4M in 2023 and \$4M in 2024, for capital projects. We anticipate using our approved RUS (FFB) loan funds and have estimated interest rates between 3% and 4% for 2020 through 2024. RUS Rural Energy Savings Program (RESP) funds will be borrowed at 0% over a 10-year period as member demand defines, to provide on-bill financing to members for efficiency / fuel switching measures.

6. Rate Detail:

- The chart below details the impact on average residential members Energy Assistance Program and PAL recipients. An average residential member (12,330 meters) would see a bill increase of about \$3.92 including the Energy Assistance Program line item.

	Average Residential User		Average EAP Recipients	Average PAL Recipients	Average Seasonal Occupancy
Number of Services (Meter Points)	12,330		334	207	1109
Average Months of Usage	12		12	12	12
Average Usage (kWh) per month	995		851	1118	1005
Average Monthly Bill using Existing Rate (2019)	152.85		137.53	165.93	153.91
Average Monthly Bill using Recommended Rate (2020 Proposed)	157.52		141.73	171.01	158.62

Notes: 1) Data period from November 2018 to October 2019.  
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. The Average Bills above do not factor in any assistance received.  
4)Service Access Charge increases from \$47.00 to \$48.65 and the energy charge increases from \$0.1057 to \$0.1094 per kWh,



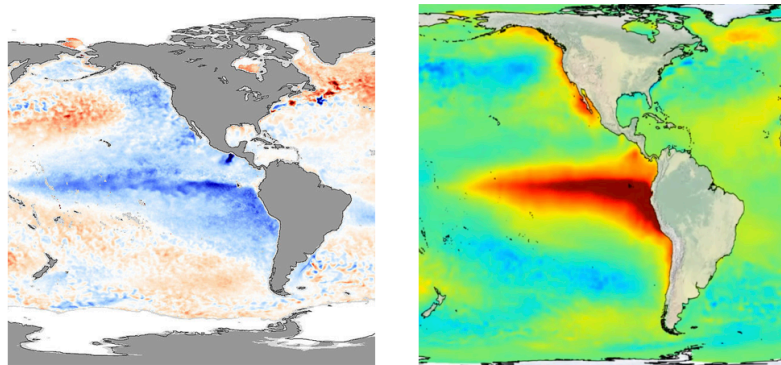
# 2020 Load Forecast (1 of 3)

1

## Global Weather Perspective: Oceanic Niño Index (ONI)

Our winds prevail from the south, and the air temperature is influenced by *southern* hemisphere El Niño and La Niña cycles

### Southern Hemisphere Pacific



La Niña  
(cooler winters)

El Niño  
(warmer winters)

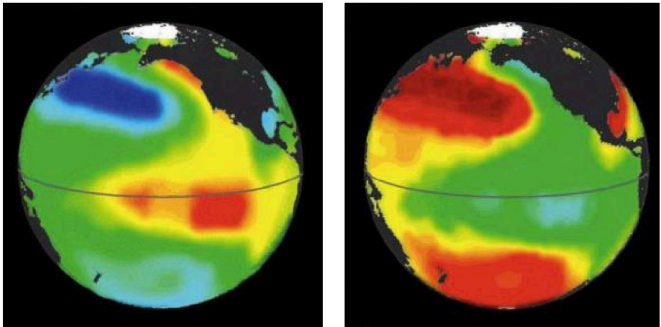
Source: NOAA

3

## NW Weather Perspective: Pacific Decadal Oscillation (PDO)

Our air temperature is also influenced by *northern* hemisphere PDO which effects nearby ocean temperatures

### Northern Hemisphere Pacific



Cold PDO

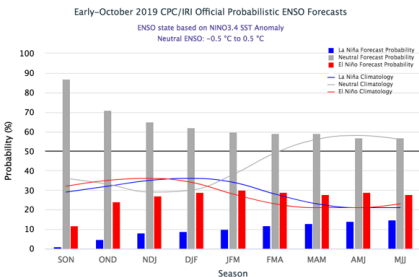
Warm PDO  
(The "Blob" 2016)

Source: NOAA

2

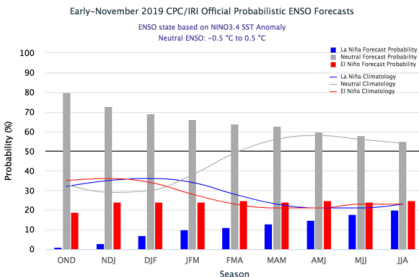
## Global Weather Perspective: Oceanic Niño Index (ONI) Forecast

### Last Month Forecast



Weak warm El Niño has firmly transitioned to cooler neutral condition

### November Forecast

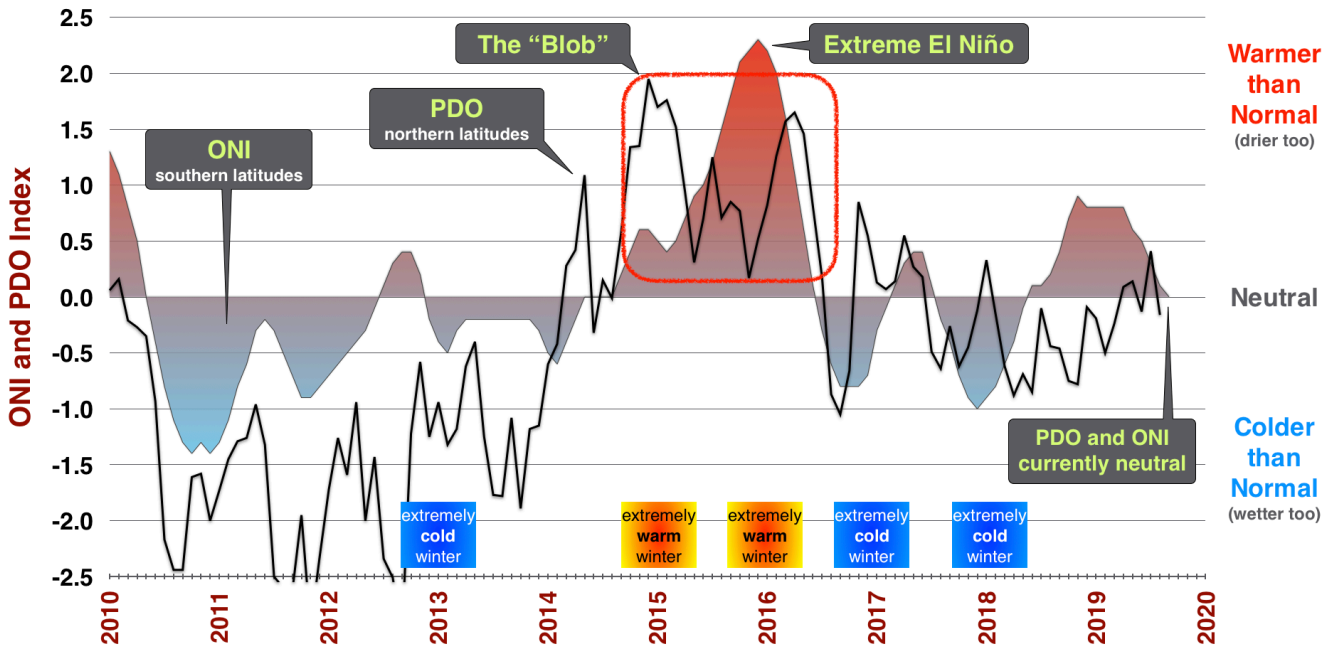


Neutral expected to continue through winter, with slightly increasing tilt toward warmer El Niño next year

Source: NOAA

4

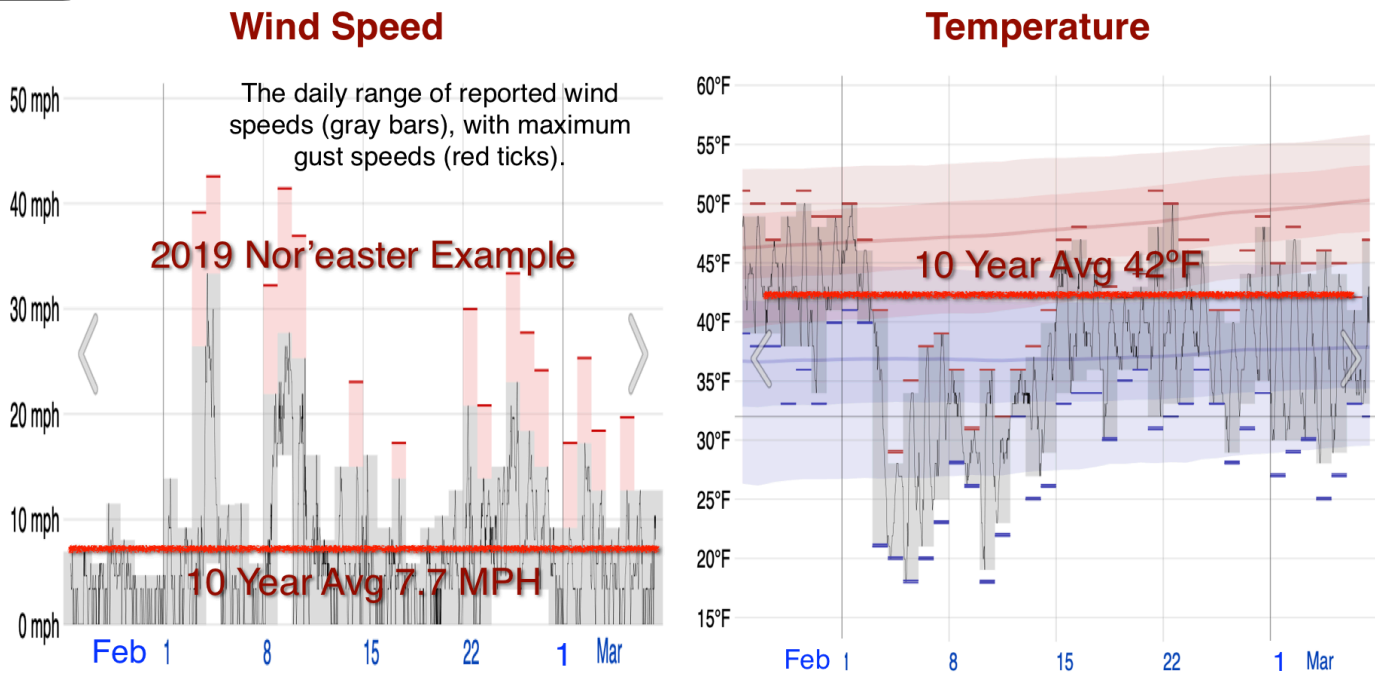
## NW Weather Perspective: PDO can "amplify" (or temper) the Oceanic Niño Index



# 2020 Load Forecast (2 of 3)

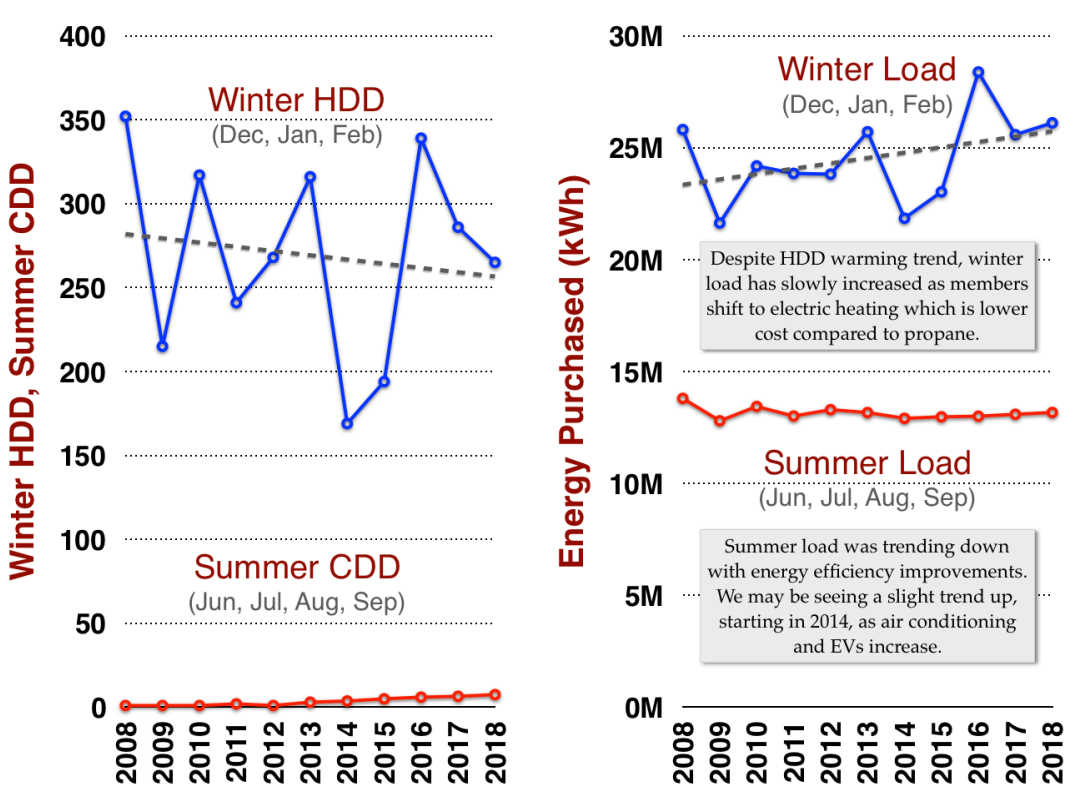
5

## NW Weather Perspective: Wind is a Wild Card



7

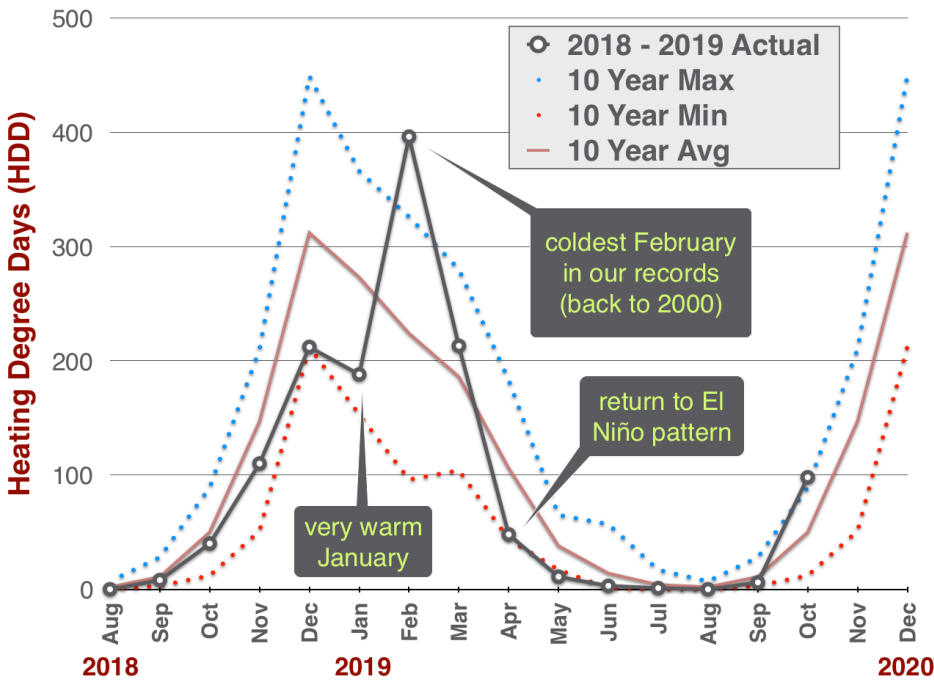
## Local Seasonal Energy Perspective: HDD, CDD, and Load



6

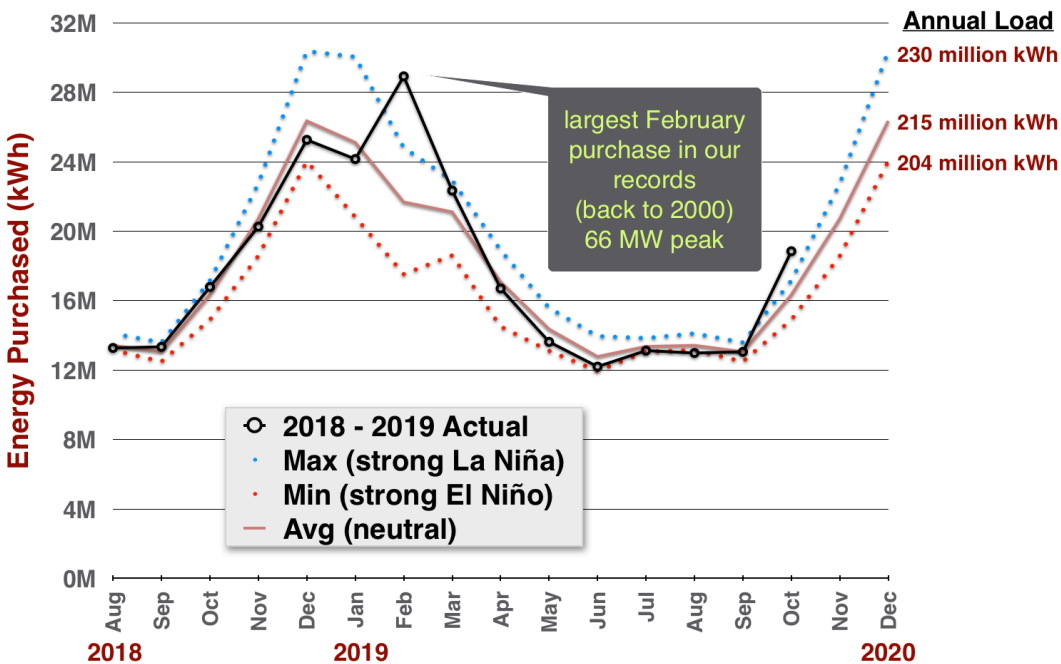
## Local Seasonal Energy Perspective: Monthly SJC HDD

Warm summer transitioning to cool October as we move from weak El Niño to neutral conditions.



8

## 2019 Monthly Energy Purchased: 10 Year Average, Max, Min, 2019 Actual





9

*Efficiency moderating growth now.  
EVs, eFerries, and telecommuters will lift growth in coming decade.*



Power - Purchased		January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
	Index	1	2	3	4	5	6	7	8	9	10	11	12	
2009	1	26,407,747	21,699,912	22,795,444	16,751,839	14,396,951	11,948,154	13,188,505	13,287,745	12,764,135	16,285,985	19,685,574	26,563,148	215,775,139
2010	2	20,816,401	17,524,762	19,053,483	16,517,185	15,116,432	13,137,275	13,640,319	13,710,286	13,259,316	15,774,897	22,744,297	24,026,806	205,321,459
2011	3	24,916,062	23,606,282	21,350,811	18,903,108	15,582,996	12,662,848	13,495,604	13,316,374	12,564,342	16,419,297	21,935,736	24,370,157	219,123,617
2012	4	25,708,234	21,473,551	22,176,902	16,187,863	14,746,002	13,511,408	13,550,906	13,288,850	12,824,903	16,596,508	19,995,037	24,804,913	214,865,077
2013	5	25,942,681	20,704,258	20,690,151	17,253,318	14,309,061	12,503,372	13,179,669	13,635,840	13,342,354	17,149,832	20,925,364	28,277,954	217,913,854
2014	6	24,042,632	24,808,824	21,068,301	16,580,487	13,567,275	12,439,266	13,334,282	13,371,257	12,487,726	14,894,686	21,386,705	24,368,500	212,349,941
2015	7	23,133,873	18,044,632	18,602,560	16,641,545	13,605,075	12,038,766	13,059,362	13,216,313	13,587,913	15,226,274	22,003,038	24,918,044	204,077,395
2016	8	24,299,530	19,871,416	19,131,679	14,508,029	13,107,880	12,524,428	13,236,359	13,154,083	13,092,944	16,432,860	18,585,502	30,368,310	208,313,020
2017	9	30,041,223	24,729,372	22,922,763	17,760,810	14,948,276	12,871,815	13,231,427	13,243,294	13,004,215	17,120,037	21,758,174	27,523,221	229,154,627
2018	10	24,852,160	24,367,468	22,536,237	17,987,538	13,225,180	12,904,443	13,161,872	13,272,416	13,337,764	16,785,281	20,258,432	25,259,272	217,948,063
2019	11	24,153,134	28,916,723	22,336,512	16,699,447	13,624,642	12,197,571	13,118,110	12,982,401	13,047,062	18,842,209	20,766,178	26,374,726	223,058,715
Hi		30,041,223	28,916,723	22,922,763	18,903,108	15,582,996	13,511,408	13,640,319	13,710,286	13,587,913	18,842,209	22,744,297	30,368,310	229,154,627
Lo		20,816,401	17,524,762	18,602,560	14,508,029	13,107,880	11,948,154	13,059,362	12,982,401	12,487,726	14,894,686	18,573,709	24,026,806	204,077,395
Average		24,937,607	22,340,655	21,151,349	16,890,106	14,202,706	12,612,668	13,290,583	13,316,260	13,028,425	16,502,533	20,713,779	26,345,413	215,306,608
Annual Trend (kWh)		60,904	455,093	31,311	-84,579	-163,188	-61,918	-47,678	-59,721	16,314	99,419	52,399	29,313	327,668
Forecast - Boundary		0.525	<== boundary scale factor											
Strong La Niña		27,677,910	26,248,183	22,112,652	17,862,353	14,764,170	13,022,588	13,426,517	13,463,402	13,338,470	17,830,282	21,832,200	28,486,747	230,065,475
Strong El Niño		22,834,878	20,267,404	19,844,546	15,554,936	13,464,734	12,201,880	13,121,514	13,081,263	12,760,872	15,757,832	19,642,641	25,157,457	203,689,958
Neutral		24,998,511	22,795,747	21,182,660	16,805,527	14,039,518	12,550,750	13,242,905	13,256,539	13,044,739	16,601,952	20,766,178	26,374,726	215,659,752
2020 Forecast</														

11

*Neutral winter, driven by neutral ONI and PDO, possibly transitioning to warmer weak El Niño next winter.*

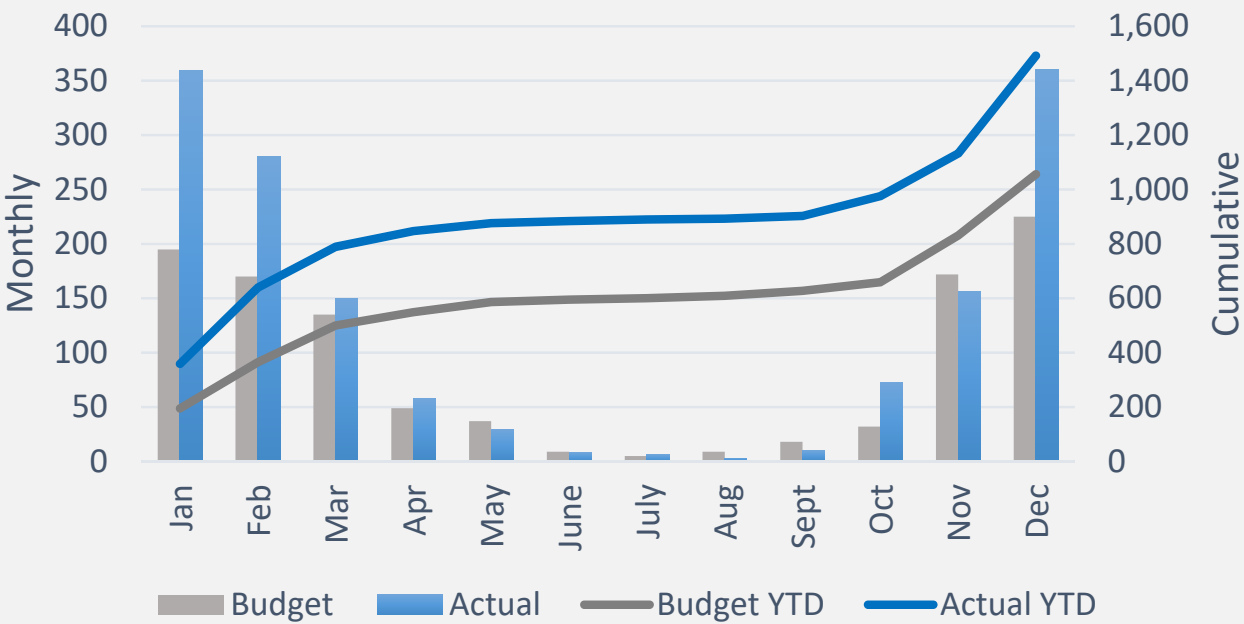


The scatter plot shows the relationship between Annual Heating Degree Days (HDD) on the x-axis and Annual kWh Purchased on the y-axis. The x-axis ranges from 900 to 1,800, with 'Warmer' at the left and 'Colder' at the right. The y-axis ranges from 200M to 230M. A dashed trend line indicates a positive correlation. Specific years are highlighted with icons and text: 2017 (Strong La Niña, snowflake icon), 2010 (Strong El Niño, sun icon), 2020 OPALCO, and 2020 BPA. Other years shown include 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016, and 2019 Projected.

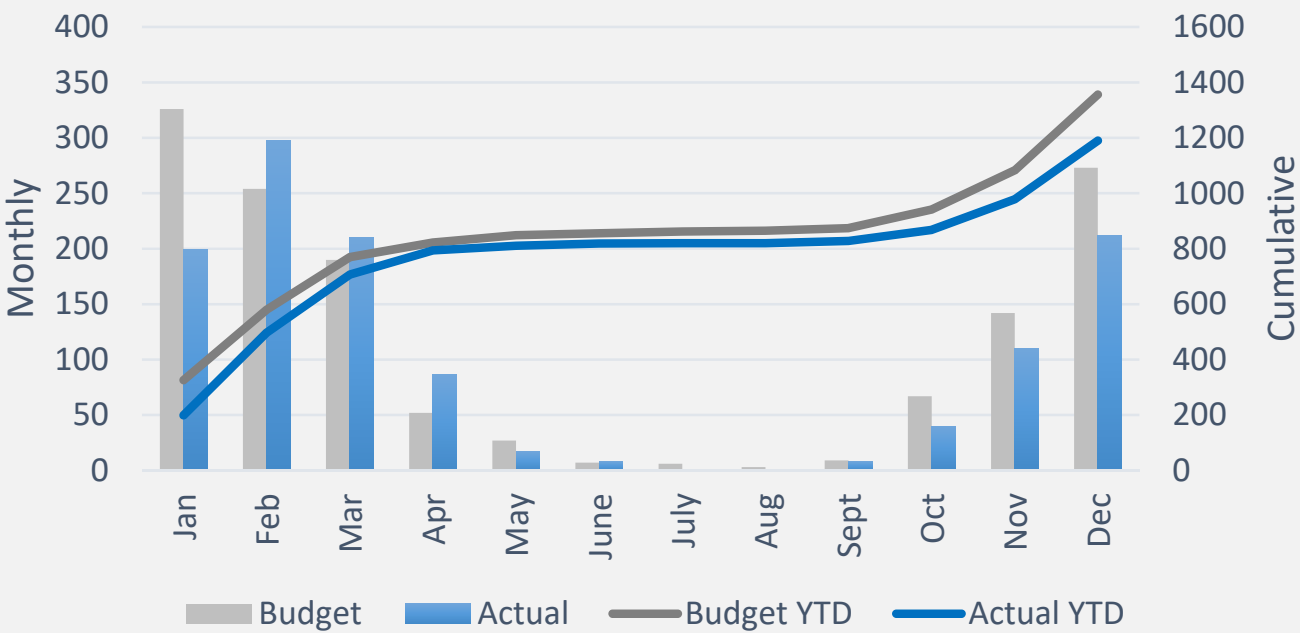
Year	Annual HDD (approx.)	Annual kWh Purchased (approx.)	Notes
2008	1,780	223.5	
2009	1,680	215.5	
2010	1,050	204.5	Strong El Niño
2011	1,480	219.0	
2012	1,320	214.5	
2013	1,620	218.0	
2014	1,280	212.5	
2015	1,080	203.5	
2016	980	208.5	
2017	1,450	228.5	Strong La Niña
2018	1,220	218.0	
2019 Projected	1,320	209.0	
2020 OPALCO	1,220	212.0	
2020 BPA	1,550	218.5	

# 2020 Budget: Heating Degree Days

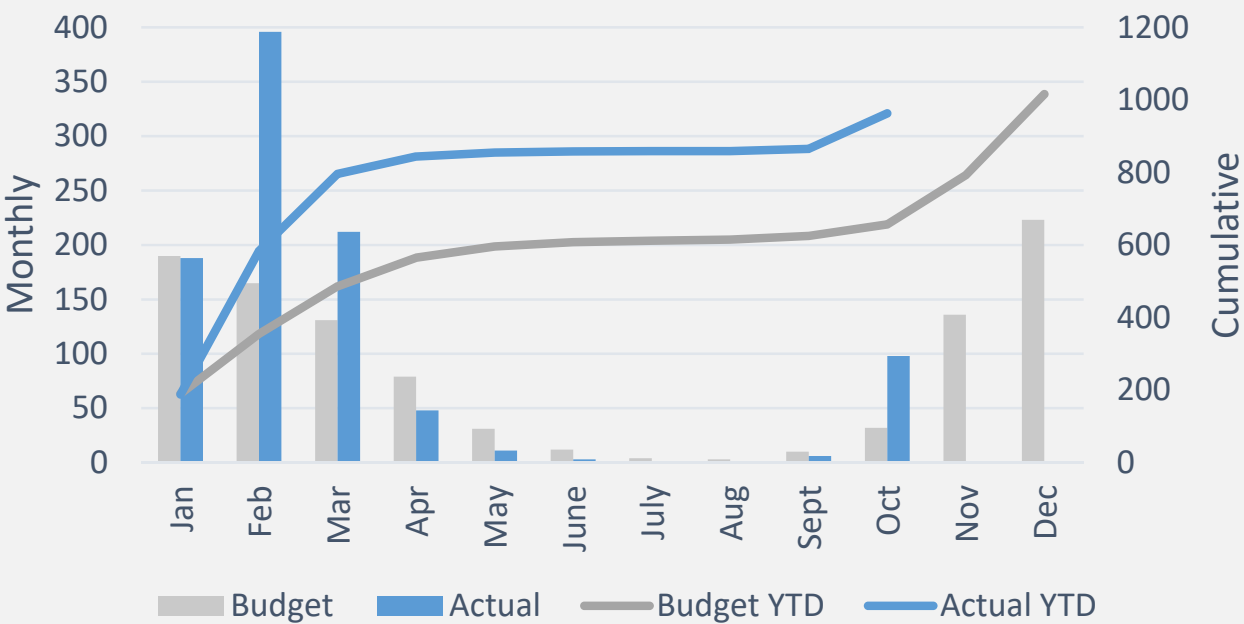
2017 HDD's



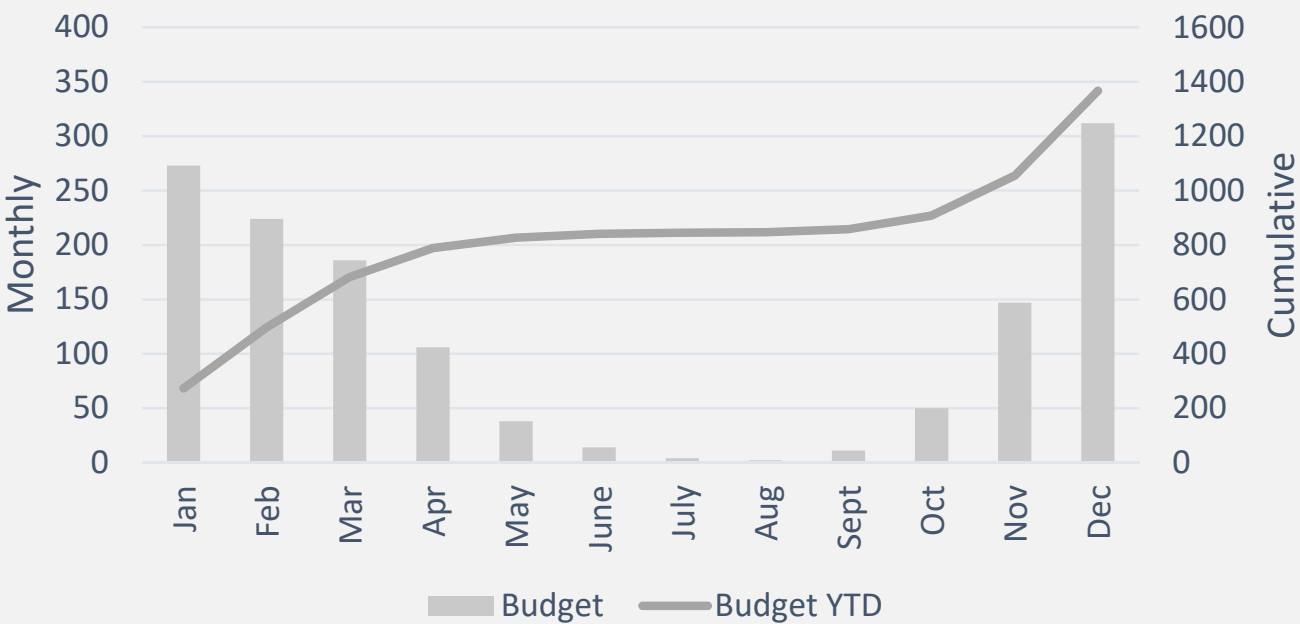
2018 HDD's



2019 HDD's



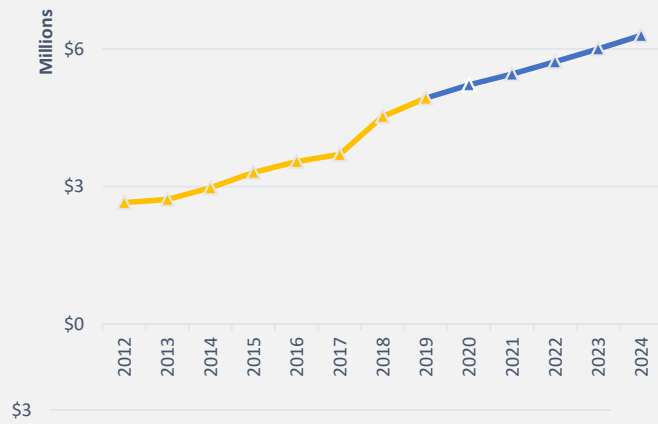
2020 HDD's



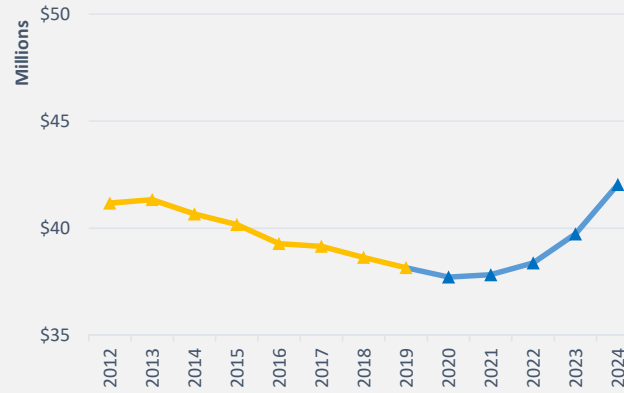


## 2020 Budget: Financial Metrics

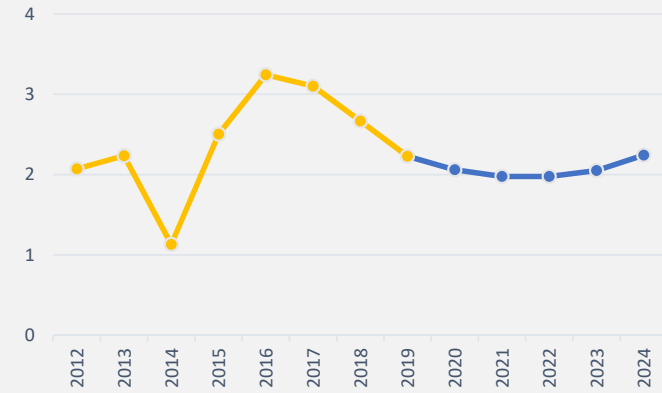
### Depreciation & Amortization



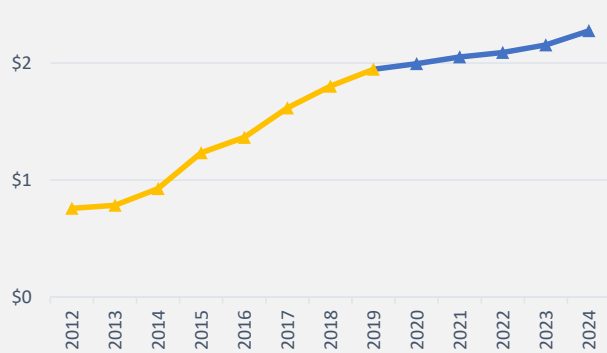
### Equity



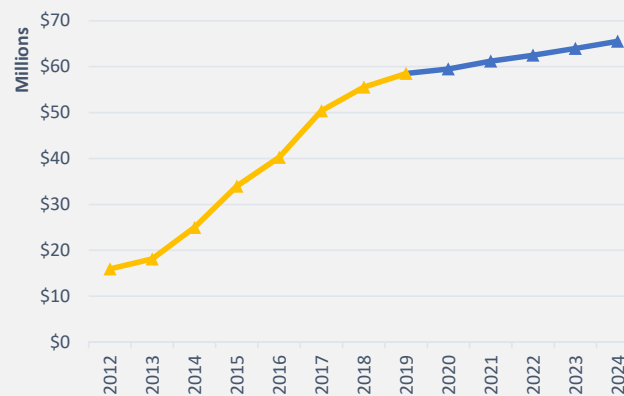
### TIER



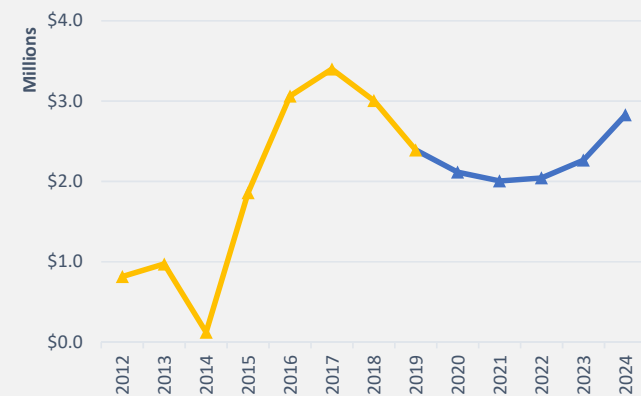
### Interest



### Debt



### Margin



ORCAS POWER AND LIGHT COOPERATIVE

BUDGET EXECUTIVE SUMMARY

		A. Audited Year End 12/31/2017	B. Audited Year End 12/31/2018	C. Approved Budget 12/31/2019	D. Projected Year End 12/31/2019	E. Proposed Budget 12/31/2020	% Change from 2019	F. Forecast 12/31/2021	G. Forecast 12/31/2022	H. Forecast 12/31/2023	I. Forecast 12/31/2024	Comments
1	kWh Purchases	229,154,627	217,948,063	216,993,070	209,893,000	212,000,000	1.0%	214,000,000	216,000,000	218,000,000	220,000,000	OPALCO estimate conservatively below BPA estimate of 218M kWh
2	% Rate Increase *	5%	5%	5%	5%	3.0%		3.5%	4.0%	5.0%	6.0%	
3	% Total Revenue Increase	10%	5%	2%	4%	3.8%		4.5%	4.9%	5.6%	6.7%	
4	Total Revenue	28,310,000	29,683,000	30,283,000	31,001,000	32,185,000	3.8%	33,624,000	35,255,000	37,236,000	39,713,000	Revenue necessary to meet budget and cash flow requirements
5	Cost of power	8,916,000	9,054,000	9,358,000	9,390,000	9,533,000	1.5%	10,104,000	10,713,000	11,358,000	12,040,000	BPA rate increases for fish spill surcharge, power and financial reserve cost recovery estimated at > +3%
6	Operations & G&A	9,971,000	10,181,000	11,034,000	11,088,000	11,931,000	7.6%	12,492,000	13,067,000	13,745,000	14,466,000	General inflation of 3.25% and 2020 employee count target of 51 includes full staffing of system engineer, journyman lineman, ad two new apprentices
7	Depr, Int & Taxes	6,023,000	7,441,000	8,072,000	8,133,000	8,605,000	5.8%	9,022,000	9,431,000	9,867,000	10,378,000	Depreciation on new assets & interest on related borrowings
8		24,910,000	26,676,000	28,464,000	28,611,000	30,069,000	5.1%	31,618,000	33,211,000	34,970,000	36,884,000	
9	Net Margins	\$ 3,400,000	\$ 3,007,000	\$ 1,819,000	\$ 2,390,000	\$ 2,116,000	-11.5%	\$ 2,006,000	\$ 2,044,000	\$ 2,266,000	\$ 2,829,000	Lower end of acceptable margin in order cover capital credit retirements only, especially moving into El Nino weather conditions.
10	TIER	3.10	2.67	1.93	2.23	2.06		1.98	1.98	2.05	2.24	Aiming for lower end of TIER range. Fluctuates with changes in weather & borrowing rates.
11	Equity % of Total Cap	43.7%	40.3%	38.8%	39.5%	38.8%		38.2%	38.0%	38.3%	39.1%	Conitinue to manage closely over next several years to ensure we start trending upwards for future capital investment.
12	Equity	39,152,000	38,633,000	36,897,000	38,154,000	37,719,000	-1.1%	37,828,000	38,375,000	39,729,000	42,036,000	Equity trending upwards (gradual building for next large capital investment)
13	Long Term Debt	50,398,000	57,211,000	58,181,000	58,515,000	59,495,000	1.7%	61,218,000	62,491,000	63,985,000	65,537,000	Borrowings growth slowed as operations generate cash flow to cover much of the new capital project investment
14	Capital Spending	(18,598,000)	(11,181,000)	(6,342,000)	(6,350,000)	(5,837,000)	-8.1%	(6,045,000)	(6,225,000)	(6,666,000)	(7,835,000)	Capital spending returning to normal range of \$6-8M in 2020-2024
15	Capital Credit Retirement (net)	(1,102,000)	(1,084,000)	(1,051,000)	(1,003,000)	(1,051,000)	4.8%	(1,051,000)	(1,118,000)	(1,118,000)	(1,184,000)	Smoothing of capital credit retirements (reduces volatility in margin, cash and equity requirements)
16	Annual HDD	1,491	1,190	1,031	1,322	1,367		1,338	1,350	1,363	1,375	HDD definition: Number of degrees that a day's average temperature is below 50 degrees Fahrenheit
17	kWh per HDD	153,692	183,150	210,469	158,769	155,084		159,940	160,000	159,941	160,000	
18	* Assumes average residential usage of 1000 kWh / month.											



ORCAS POWER AND LIGHT COOPERATIVE

RATE SENSITIVITY

Proposed 2020 Budget Figures; Future Years for Reference Only

	A. Budget 12/31/2020	B. Forecast 12/31/2021	C. Forecast 12/31/2022	D. Forecast 12/31/2023	E. Forecast 12/31/2024	F. Total	Comment
kWh Purchases	212,000,000	214,000,000	216,000,000	218,000,000	220,000,000		
OPTION 1 - Recommended							
% Avg. Residential Rate Increase	3.0%	3.5%	4.0%	5.0%	6.0%		Recommended rate/revenue increase as this profile allows for rate stability while also stalbalizing & building equity in future years. Please note we will be revisiting these rate increases annually.
% Revenue Increase	4.0%	4.5%	4.9%	5.7%	6.7%		
Incremental Debt	\$ 3,600,000	\$ 3,850,000	\$ 4,200,000	\$ 4,400,000	\$ 5,500,000	\$ 21,600,000	
Margin	\$ 2,115,348	\$ 2,006,369	\$ 2,044,091	\$ 2,265,471	\$ 2,828,164		
Equity % of Total Capital	38.8%	38.2%	38.0%	38.3%	39.1%		
TIER	2.06	1.98	1.98	2.05	2.24		
Incremental Cash flow	\$ 2,478,348	\$ 2,795,369	\$ 2,729,091	\$ 2,878,471	\$ 3,289,164	\$ 14,170,443	
BASE LINE: No Rate Change (Not Financially Viable)							
% Avg. Residential Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%		Baseline only to see the implication of no rate increase.
% Revenue Increase (Decrease)	0.5%	0.7%	0.7%	0.7%	0.7%		
Incremental Debt	\$ 3,600,000	\$ 6,350,000	\$ 8,200,000	\$ 9,900,000	\$ 13,500,000	\$ 41,600,000	
Margin	\$ 1,098,831	\$ (228,799)	\$ (1,599,805)	\$ (3,133,875)	\$ (4,821,751)		
Equity % of Total Capital	38.2%	36.1%	33.5%	30.0%	25.2%		
TIER	1.55	0.89	0.23	(0.45)	(1.12)		
Incremental Cash flow	\$ 1,462,000	\$ 560,000	\$ -	\$ -	\$ -	\$ 2,022,000	
OPTION 2							
% Avg. Residential Rate Increase	2.0%	3.5%	3.5%	3.5%	3.5%		This option leaves little room for weather/revenue and expense deviation and does not sufficiently build equity. Equity decrease is significant, and this approach would require larger revenue increases in out-years to get equity back on course.
% Revenue Increase	2.4%	4.5%	4.5%	4.6%	4.6%		
Incremental Debt	\$ 3,600,000	\$ 3,850,000	\$ 4,200,000	\$ 4,400,000	\$ 5,500,000	\$ 21,600,000	
Margin	\$ 1,604,048	\$ 1,471,851	\$ 1,369,242	\$ 1,180,500	\$ 919,064		
Equity % of Total Capital	38.5%	37.5%	37.0%	36.6%	36.3%		
TIER	1.80	1.72	1.65	1.55	1.40		
Incremental Cash flow	\$ 1,967,048	\$ 2,260,851	\$ 2,054,242	\$ 1,793,500	\$ 1,380,064	\$ 9,455,705	
OPTION 3							
% Avg. Residential Rate Increase	3.5%	3.5%	4.0%	5.0%	6.0%		TIER is sufficient to maintain capital credit retirement cycle and build equity needed for future capital projects, though rate increase is higher than desired for short-term planning.
% Revenue Increase	4.4%	4.5%	4.9%	5.7%	6.7%		
Incremental Debt	\$ 3,600,000	\$ 3,850,000	\$ 4,200,000	\$ 4,400,000	\$ 5,500,000	\$ 21,600,000	
Margin	\$ 2,221,859	\$ 2,117,717	\$ 2,160,921	\$ 2,388,961	\$ 2,959,990		
Equity % of Total Capital	38.9%	38.3%	38.3%	38.6%	39.4%		
TIER	2.11	2.03	2.03	2.11	2.30		
Incremental Cash flow	\$ 2,584,859	\$ 2,906,717	\$ 2,845,921	\$ 3,001,961	\$ 3,420,990	\$ 14,760,448	

ORCAS POWER AND LIGHT COOPERATIVE

RATE SENSITIVITY

Proposed 2020 Budget Figures; Future Years for Reference Only

	A. Budget 12/31/2020	B. Forecast 12/31/2021	C. Forecast 12/31/2022	D. Forecast 12/31/2023	E. Forecast 12/31/2024	F. Total	Comment
kWh Purchases	212,000,000	214,000,000	216,000,000	218,000,000	220,000,000		
OPTION 4							
% Avg. Residential Rate Increase	4.0%	4.0%	4.0%	4.0%	4.0%		See description of option 3
% Revenue Increase	4.5%	4.8%	4.9%	4.9%	4.9%		
Incremental Debt	\$ 3,700,000	\$ 3,850,000	\$ 4,200,000	\$ 4,400,000	\$ 5,500,000	\$ 21,700,000	
Margin	\$ 2,328,368	\$ 2,340,663	\$ 2,394,846	\$ 2,376,152	\$ 2,299,042		
Equity % of Total Capital	38.9%	38.5%	38.6%	38.9%	39.3%		
TIER	2.17	2.14	2.15	2.10	2.01		
Incremental Cash flow	\$ 2,691,000	\$ 3,130,000	\$ 3,080,000	\$ 2,989,000	\$ 2,760,000	\$ 14,650,000	
OPTION 5							
% Avg. Residential Rate Increase	5.0%	5.0%	5.0%	5.0%	5.0%		This option, however viable, exceeds managments short-term rate goals and long-term margin & equity goals.
% Revenue Increase	5.3%	5.6%	5.6%	5.6%	5.6%		
Incremental Debt	\$ 3,600,000	\$ 3,850,000	\$ 4,200,000	\$ 4,400,000	\$ 5,500,000	\$ 21,600,000	
Margin	\$ 2,576,696	\$ 2,859,612	\$ 3,201,638	\$ 3,488,999	\$ 3,737,214		
Equity % of Total Capital	39.1%	39.0%	39.5%	40.4%	41.6%		
TIER	2.29	2.39	2.53	2.62	2.64		
Incremental Cash flow	\$ 2,940,000	\$ 3,649,000	\$ 3,887,000	\$ 4,102,000	\$ 4,198,000	\$ 18,776,000	
OPTION 6							
% Avg. Residential Rate Increase	6.0%	6.0%	6.0%	6.0%	6.0%		This options generates margin & TIER in excess of Co-op goals and could result in a greater cash burden on future years capital credit retirements.
% Revenue Increase	6.6%	6.8%	6.8%	6.7%	6.7%		
Incremental Debt	\$ 3,600,000	\$ 3,850,000	\$ 4,200,000	\$ 4,400,000	\$ 5,500,000	\$ 21,600,000	
Margin	\$ 2,970,800	\$ 3,683,203	\$ 4,482,044	\$ 5,255,130	\$ 6,019,642		
Equity % of Total Capital	39.3%	39.7%	41.0%	42.7%	44.8%		
TIER	2.49	2.79	3.14	3.44	3.65		
Incremental Cash flow	\$ 3,334,000	\$ 4,472,000	\$ 5,167,000	\$ 5,868,000	\$ 6,481,000	\$ 25,322,000	

ORCAS POWER AND LIGHT COOPERATIVE  
 STATEMENT OF OPERATIONS

	A. Audited Year End 12/31/2017	B. Audited Year End 12/31/2018	C. Approved Budget 12/31/2019	D. Projected Year End 12/31/2019	E. Proposed Budget 12/31/2020	% Change from 2019	F. Forecast 12/31/2021	G. Forecast 12/31/2022	H. Forecast 12/31/2023	I. Forecast 12/31/2024
1 OPERATING REVENUES										
2 kWh Purchases	229,155,000	217,948,000	206,000,000	213,000,000	212,000,000		214,000,000	216,000,000	218,000,000	220,000,000
3 % Rate Increase		5%	5%		3.0%		3.5%	4.0%	5.0%	6.0%
4 % Operating Revenue Increase	3%	5%	5%	5%	4.0%		4.5%	4.9%	5.7%	6.7%
3 Residential	\$ 20,153,220	\$ 21,373,137	\$ 21,779,381	\$ 22,250,396	\$ 23,156,921	4%	\$ 24,207,767	\$ 25,399,162	\$ 26,846,040	\$ 28,657,277
4 Commercial	7,063,321	7,655,416	7,950,218	8,081,930	8,411,026	4%	8,792,514	9,225,026	9,750,285	10,407,818
5 Other	768,644	234,822	230,536	252,931	252,931	0%	252,931	252,931	252,931	252,931
6 Total operating revenue	27,985,185	29,263,375	29,960,135	30,585,257	31,820,878	4%	33,253,212	34,877,119	36,849,256	39,318,026
7										
8 OPERATING EXPENSES										
9 Cost of power	8,916,059	9,053,663	9,357,588	9,389,747	9,532,908	2%	10,103,928	10,713,242	11,357,877	12,039,843
10 Transmission	210,740	252,433	262,099	374,056	377,727	1%	394,844	409,380	425,523	442,060
11 Distribution - operations	3,617,096	3,365,842	3,665,670	3,640,906	3,913,175	7%	4,155,899	4,357,776	4,609,214	4,878,667
12 Distribution - maintenance	1,767,342	1,945,822	2,197,512	2,226,848	2,324,623	4%	2,446,286	2,570,804	2,692,551	2,821,427
13 Consumer accounts	982,216	1,014,503	1,116,869	1,032,898	1,153,739	12%	1,170,670	1,233,076	1,303,453	1,378,743
14										
15 General and administration										
16 Administration G&A	2,957,169	3,191,624	3,355,745	3,361,960	3,593,738	7%	3,727,292	3,878,471	4,071,982	4,276,722
17 Energy services G&A	401,970	375,582	400,348	389,561	505,230	30%	533,441	554,683	579,377	605,523
18 Subsidiary Charges	34,920	34,920	36,055	61,378	63,219	3%	63,219	63,219	63,219	63,219
19 Total general and administration	3,394,059	3,602,127	3,792,148	3,812,899	4,162,187	9%	4,323,952	4,496,373	4,714,578	4,945,464
20										
21 Depreciation and amortization	3,699,958	4,528,224	4,887,249	4,928,226	5,216,895	6%	5,452,663	5,720,044	6,000,795	6,295,584
22 Taxes	1,261,409	1,365,016	1,424,613	1,426,009	1,514,661	6%	1,601,723	1,693,818	1,784,926	1,881,131
23										
24 Total operating expenses	23,848,878	25,127,630	26,703,748	26,831,589	28,195,915	5%	29,649,965	31,194,513	32,888,917	34,682,919
25										
26 Operating margins before fixed charges	4,136,307	4,135,745	3,256,387	3,753,668	3,624,963	-3%	3,603,247	3,682,606	3,960,339	4,635,107
27										
28 FIXED CHARGES										
29 Interest on long-term debt	1,061,579	1,547,868	1,760,491	1,778,577	1,873,848	5%	1,967,537	2,016,895	2,081,240	2,201,734
30										
31 Total fixed charges	1,061,579	1,547,868	1,760,491	1,778,577	1,873,848	5%	1,967,537	2,016,895	2,081,240	2,201,734
32										
33 Operating margins after fixed charges	3,074,728	2,587,877	1,495,896	1,975,091	1,751,115	-11%	1,635,710	1,665,711	1,879,099	2,433,373
34										
35 PATRONAGE CAPITAL CREDITS	77,586	143,090	90,907	128,519	132,375	3%	136,346	141,118	146,057	151,169
36										
37 Net operating margins	3,152,314	2,730,967	1,586,803	2,103,610	1,883,490	-10%	1,772,056	1,806,829	2,025,156	2,584,542
38										
39 NON-OPERATING MARGINS										
40 Interest income	223,696	176,305	129,208	200,724	160,724	-20%	163,168	166,105	169,145	172,291
41 Other income	23,279	100,097	103,211	86,567	71,134	-18%	71,145	71,157	71,170	71,331
42										
43 Net non-operating margins	246,975	276,402	232,419	287,291	231,858	-19%	234,313	237,262	240,315	243,622
44										
45 NET MARGINS	\$ 3,399,289	\$ 3,007,369	\$ 1,819,222	\$ 2,390,901	\$ 2,115,348	-12%	\$ 2,006,369	\$ 2,044,091	\$ 2,265,471	\$ 2,828,164
46										
47 TIER	3.10	2.67	1.93	2.23	2.06	-8%	1.98	1.98	2.05	2.24
48 Equity % of Total Capital	42.9%	40.3%	38.2%	39.5%	38.8%	-2%	38.2%	38.0%	38.3%	39.1%



ORCAS POWER AND LIGHT COOPERATIVE

STATEMENT OF CASH FLOW

NON GAAP

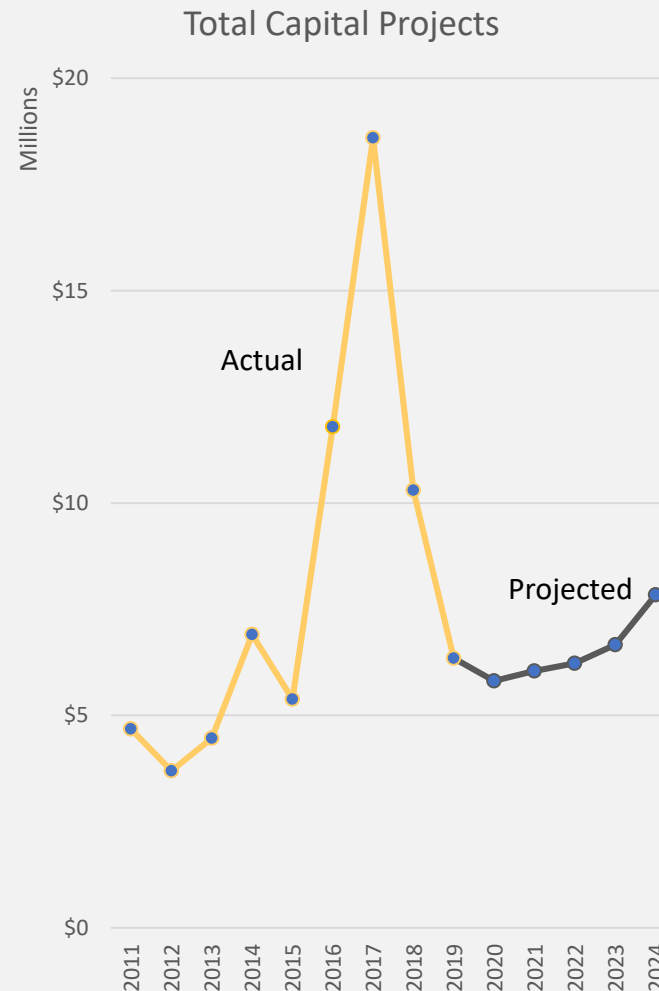
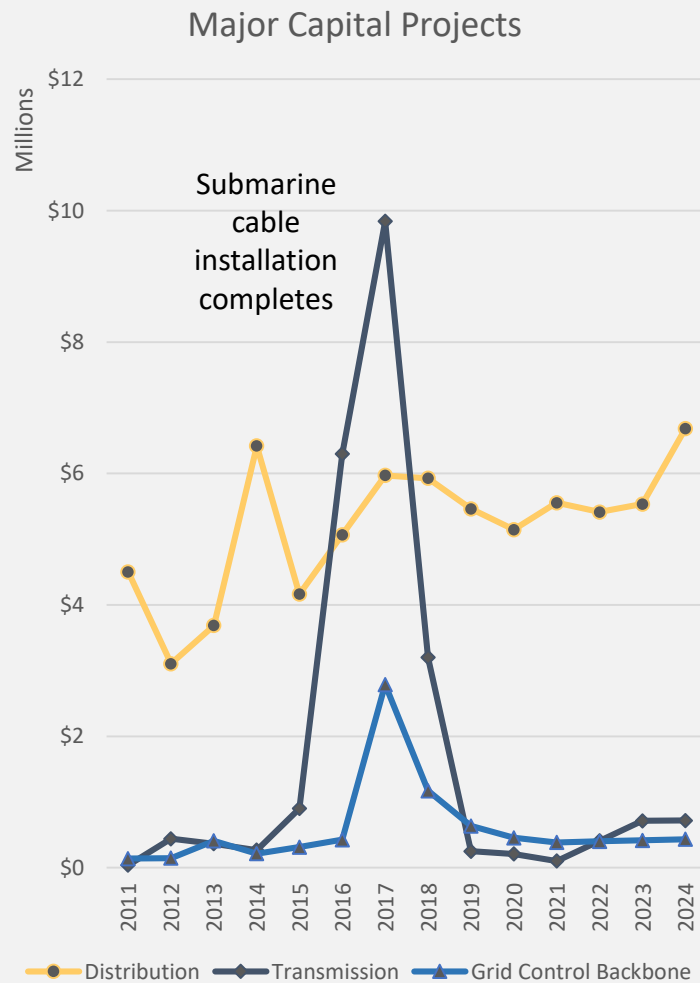
	A. Projected Year End 12/31/2019	B. Proposed Budget 12/31/2020	C. Forecast 12/31/2021	D. Forecast 12/31/2022	E. Forecast 12/31/2023	F. Forecast 12/31/2024
1      % Total Revenue Increase		3.8%	4.5%	4.9%	5.6%	6.7%
2    Operating Activities						
3      Margins	\$      2,391,000	\$ <b>2,115,000</b>	\$      2,006,000	\$      2,044,000	\$      2,265,000	\$      2,828,000
4      Plus Depreciation/Amortization	4,928,000	<b>5,217,000</b>	5,453,000	5,720,000	6,001,000	6,296,000
5      Cash Flow Operations	7,319,000	<b>7,332,000</b>	7,459,000	7,764,000	8,266,000	9,124,000
6						
7    Plant Investment (Net)	(5,619,000)	<b>(5,847,000)</b>	(6,063,000)	(6,247,000)	(6,696,000)	(7,873,000)
8    Cash Flows from Patronage Capital	(1,003,000)	<b>(1,051,000)</b>	(1,051,000)	(1,118,000)	(1,118,000)	(1,184,000)
9    Net Borrowings	3,194,000	<b>2,044,000</b>	2,450,000	2,330,000	2,426,000	3,222,000
10      Annual Estimated Cash Increase (decrease)	<u>\$      3,891,000</u>	<u>\$      <b>2,478,000</b></u>	<u>\$      2,795,000</u>	<u>\$      2,729,000</u>	<u>\$      2,878,000</u>	<u>\$      3,289,000</u>
11						
12    RUS Capital Borrowings	4,000,000	<b>3,100,000</b>	3,100,000	3,200,000	3,400,000	4,000,000
13    0% RESP Borrowing	-	<b>600,000</b>	750,000	1,000,000	1,000,000	1,500,000
14    Gross Borrowings	4,000,000	<b>3,700,000</b>	3,850,000	4,200,000	4,400,000	5,500,000

ORCAS POWER AND LIGHT COOPERATIVE

CAPITAL PROJECTS BUDGET

			A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.
			Actual	Actual	Budget	Projected Year End	Proposed Budget	Forecast	Forecast	Forecast	Forecast	Strategic Directives	Reliablr	Environ	
RUS CWP DESCRIPTION			12/13/2017	12/31/2018	2019	2019	2020	2021	2022	2023	2024				Comments
1	DISTRIBUTION														
2	100	New Services	\$ 349,000	\$ 398,000	\$ 372,000	\$ 382,000	\$ 397,000	\$ 412,000	\$ 428,000	\$ 444,000	\$ 461,000				
3	200	New Tie Lines	1,000	3,000	-	-	115,000	200,000	-	-	1,100,000		*		2024 Preconstruction for Submarine Cable - Olga to White Beach
4	300	Conversions and Line Changes	1,382,000	754,000	750,000	736,000	1,165,000	1,450,000	650,000	420,000	75,000		*	*	
5	400	New Substations, switching station, metering point, etc.	-	-	-	-	-	-	-	-	-				
6	500	Substation, Switching Station, Metering Point Changes	677,000	1,502,000	2,306,000	1,197,000	1,005,000	1,780,000	2,520,000	1,945,000	1,860,000	*	*		2020 Decatur Battery, 2021-22 Lopez Microgrid, 2022 Olga Transformer, 2023-2024 Orca Mircogrid
7	600	Miscellaneous Distribution Equipment													
8	601	Transformers & Meters	570,000	801,000	600,000	621,000	646,000	672,000	699,000	727,000	1,218,000	*	*	*	2024 Metering
9	602	Sets of Service Wires to increase Capacity	-	-	-	-	-	-	-	-	-				
10	603	Sectionalizing Equipment	266,000	1,000	300,000	88,000	140,000	150,000	156,000	163,000	170,000	*	*		
11	604	Regulators	26,000	114,000	127,000	2,000	100,000	80,000	140,000	-	-				
12	606	Ordinary Replacements	78,000	147,000	127,000	263,000	350,000	364,000	454,000	395,000	411,000	*	*		Increased pole replacements
13	607	Overhead to Underground Replacements	-	-	-	-	70,000	50,000	50,000	60,000	63,000	*	*		
14	608	Underground Dist. Cable Replacement	2,506,000	1,680,000	1,414,000	1,857,000	1,600,000	1,500,000	1,555,000	1,618,000	1,683,000	*	*	*	
15	700	Other Distribution Items													
16	701	Engineering Fees	-	-	-	-	-	-	-	-	-				
17	704	LMS & SCADA	78,000	140,000	116,000	127,000	70,000	40,000	41,000	42,000	43,000	*	*		
18	705	AMR	-	233,000	-	45,000	55,000	-	-	-	-				
19	706	Communications/Fiber	2,425,000	535,000	150,000	179,000	110,000	115,000	120,000	125,000	130,000	*	*	*	
20	TRANSMISSION														
21	800	New Tie Line	-	-	-	-	-	-	-	-	-				
22	900	New Substations, switching station, metering point, etc.	1,373,000	526,000	-	123,000	110,000	-	300,000	600,000	600,000				2022-24 Cathodic Protection for Submarine Cables with ROV/Dive Survey
23	1000	Line and Station Changes	8,464,000	2,673,000	120,000	129,000	100,000	104,000	109,000	114,000	119,000	*	*		
24	1100	Other Transmission	-	-	-	-	-	-	-	-	-				
25	GENERATION														
26	1200	Generation	-	-	-	-	-	-	-	-	-		*	*	
27	OTHER														
28	1300	Facilities	100,000	77,000	630,000	610,000	355,000	160,000	117,000	92,000	46,000	*			
29	1400	Acquisitions	-	219,000	-	-	60,000	40,000	20,000	60,000	-				
30	1500	All Other													
31	1501	Transportation/Equipment/Tools/Radios	478,000	612,000	593,000	570,000	539,000	496,000	456,000	475,000	494,000	*	*	*	
32	1502	Office Equipment/Furniture/Etc.	25,000	10,000	22,000	5,000	80,000	15,000	16,000	17,000	18,000				
33	1503	Computer/Servers/Software	286,000	264,000	293,500	284,000	222,000	231,000	241,000	251,000	262,000	*	*		
34	1504	Community Solar (member funded)	-	985,000	-	33,000	1,500,000	-	1,500,000	-	-		*	*	Anticipate 670 kW (500 kW AC) installed in 2020 and 670 kW DC (500 kW AC) in 2022
35	1600	Minor Projects	296,000	606,000	175,000	224,000	155,000	162,000	169,000	176,000	184,000				
36	RUS CWP SUBTOTAL		19,380,000	12,280,000	8,095,500	7,475,000	8,944,000	8,021,000	9,741,000	7,724,000	8,937,000				
37	CONTRIBUTION IN AID OF CONSTRUCTION (CIAC)														
38		New Services	(231,000)	(449,000)	(350,000)	(434,000)	(408,000)	(425,000)	(442,000)	(460,000)	(479,000)				Offset to Line 2 - New Services
39		Meters and Transformers	(244,000)	(273,000)	(288,000)	(274,000)	(285,000)	(297,000)	(309,000)	(322,000)	(335,000)				Offset to Line 8 - Transformers and Meters
40		Joint Projects	(309,000)	(95,000)	(296,000)	(234,000)	(244,000)	(254,000)	(265,000)	(276,000)	(288,000)				Offset to Lines 3,4,13,14 - Tie Lines, Conversion, OH to UG Conv., URD Replacements
41		WA DOC Grant Funding	-	(180,000)	(820,000)	(150,000)	(670,000)	(1,000,000)	(1,000,000)	-	-				Offset to Line 6 - Substations
42		Community Solar Member Contributions	-	(985,000)	-	(33,000)	(1,500,000)	-	(1,500,000)	-	-				Offset to Line 34 - Community Solar
43	RUS CWP NET TOTAL		18,596,000	10,298,000	6,341,500	6,350,000	5,837,000	6,045,000	6,225,000	6,666,000	7,835,000				

# 2020 Budget: Capital Projects



## Notes:

- Transmission: peak is Lopez San Juan submarine cable
- Distribution: Normal under-grounding to improve reliability, Decatur substation upgrade, grid storage project
- Grid Control Backbone: Expansion to improve:
  - Reliability
  - Field communications
  - Preparing for intermittent local renewable energy resources



ORCAS POWER AND LIGHT COOPERATIVE

2020 - 2024 BUDGETED STAFFING LEVELS

	A.	B.	C.	D.
		ACTUAL	APPROVED BUDGET	APPROVED
		# EMPLOYEES	# EMPLOYEES	# EMPLOYEES
	DEPARTMENT	2019	2020	2021 - 2024
1	Operations <sup>1</sup>	23.5	24.5	24.5
2	Engineering <sup>1</sup>	8.5	8.5	8.5
3	General Management	5	5	5
4	Technical Services	1	1	1
5	Member Services <sup>2</sup>	6.5	6.5	6.5
6	Administration	4	4	4
7	Energy Savings <sup>2</sup>	1.5	1.5	1.5
8	Total	50	51	51

Notes:

1 Engineering & Operations Manager split between departments

2 Member & Energy Services Manager split between departments

# OPALCO ORGANIZATIONAL CHART - 2020 BUDGET

