OPALCO Data Insights Series: Finance and Governance

2017 Budget Budget Overview (Step 2 of 3)

The Budget Process

- Load Forecast
- Each year, in November, OPALCO staff prepare a budget for the following year. There are three elements of the budget:
- Budget
- Rates
- See Part 1 for the Load Forecast, which models the anticipated weather to predict how much energy will be needed.

- The following Budget lays out anticipated expenses and revenue for operations and capital projects.

- See Part 3 for Rates, which are set to produce enough revenue to cover expenses, given the anticipated kWh sales from the Load Forecast.

Rule of Thumb

About one-third of co-op expenses are energy purchases. The rest comes from operating and capital project costs.





At the heart of the budget, the Income Statement lays out the revenue, expenses and financial metrics. The next slide shows the 2017 Budget Income Statement, with forecasts through 2021.





2017 Budget: Income Statement

	A. Audited	B. Audited	C. Audited	D. Approved	E.	V.	G.)L	L	1.	к		
	Year End	Year End	Year End	Budget	Year End	Budget	% Change	Forecast	Forecast	Forecast	Forecast		
1 OPERATING REVENUES	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2016	12/31/2017	(F - E)	12/31/2018	12/31/2019	12/31/2020	12/31/2021		kWh Sales
2 kWh Sales	206,560,734	198,231,749	191,169,018	187,272,362	190,622,548	189,105,732		190,996,989	192,907,159	194,836,431	196,784,995		generates
 % Rate Increase % Revenue Increase 	5%	3%	12%	5% 1%	3%	5% 5%		6% 7%	6% 7%	5% 6%	5% 6%		Revenue
5 Residential	\$ 15,598,797	\$ 15,913,325	S 17,694,706	\$ 18,018,001	\$ 18,084,448	\$ 18,910,272	5%	\$ 20,177,923	\$ 21,530,633	\$ 22,763,290	\$ 24,066,578		
6 Commercial 7 Other	5,467,588	5,694,901	6,356,143	6,591,872	6,553,294	6,851,153	5%	7,308,371	7,796,268	8,240,864	8,710,935		
 8 Energy assistance Program 		420,798	531,009	(90.000)		048,189	2.74			7.32,149			
9 Total operating revenue	21,431,278	22,029,025	24,581,918	24,833,155	25,267,806	26,409,613	5%	28,162,303	30,032,598	31,736,903	33,538,865	Total	Operating R
10 CODER ATINES EXPENSION													
12 Cost of power	7.514.128	8.037.428	7.787.142	7.624.980	7.862.852	8.402.223	7%	8,931,486	9,297,382	9.637.125	9.864.637		
13 Transmission	70,117	92,874	179,264	53,560	140,173	177,500	27%	183,660	192,797	202,433	212,629		
14 Distribution - operations	2,968,003	2,961,250	3,391,150	3,420,263	3,235,145	3,514,721	9%	3,687,219	3,913,628	4,136,797	4,381,228		
15 Distribution - maintenance 16 Consumer accounts	853.211	898,198	893.766	930.975	1,854,448	1,851,312	0% 0%	1,929,035	2,048,255	1.234.922	1.306.534		Kevenue
17		1000 Contraction (1000)							-,,				Dave
18 General and administration	2 719 990	2 922 430	2 950 777	3 049 996	2 030 413	2 110 220	261	3 253 507	3 399 553	3 550 654	3 751 913		rays
20 Energy services G&A	462,966	373,323	658,939	410.376	146,577	491,931	236%	511,911	537,927	561,258	595.980		Expenses
21 Subsidiary Charges		50000000000000000000000000000000000000	29,100		34,920	69,720	100%	69,720	69,720	69,720	69,720		
Total general and administration	3,181,855	3,195,763	3,638,816	3,469,263	3,111,910	3,671,871	15%	3,835,228	3,996,199	4,190,633	4,417,511		
24 Depreciation and amortization	2,719,560	2,975,650	3,308,154	3,673,019	3,516,601	3,801,831	8%	4,467,061	4,777,216	5,007,962	5,250,245		
25 Taxes	930,482	961,815	1,046,626	1,028,086	1,153,464	1,220,252	6%	1,285,844	1,355,143	1,431,060	1,511,317		
27 Total operating expenses	19,906,881	20,901,493	21,958,841	21,902,293	21,837,862	23,685,050	8%	25,418,222	26,748,445	27,997,955	29,216,664	Total	Operating E
 Operating margins before fixed charges 30 	1,524,397	1,127,532	2,623,077	2,930,863	3, <mark>429</mark> ,945	2,724,563	-21%	2,744,081	3,284,153	3,738,948	4,322,201		
31 FIXED CHARGES													
32 Interest on long-term debt	786,193	908,934	1,047,248	1,360,588	1,100,506	1,019,178	-7%	1,482,669	1,613,904	1,573,625	1,525,124		
33 Other Interest		10								(177) (177)			
35 Total fixed charges	786,193	908,934	1,047,248	1,360,588	1,100,506	1,019,178	-7%	1,482,669	1,613,904	1,573,625	1,525,124		Which
37 Operating margins after fixed charges	738,204	218,598	1,575,829	1,570,274	2, <mark>32</mark> 9,439	1,705,385	-27%	1,261,413	1,670,249	2,165,323	2,797,077		maintains
39 PATRONAGE CAPITAL CREDITS	38,048	67,853	83,608	56,051	79,323	79,323	0%	81,702	84,153	87,519	91,020		healthy
41 Net operating margins	776,252	286,451	1,659,437	1,626,325	2,408,761	1,784,707	-26%	1,343,115	1,754,402	2,252,842	2,888,097		financial
42 43 NON-OPERATING MARGINS													Inancial
44 Interest income	33,261	32,130	127,804	332,289	217,357	112,357	-48%	113,442	84,559	61,092	42,688		metrics
45 Other income	46,893	23,458	71,081	20,381	112,311	113,036	1%	113,781	114,550	115,605	116,702		
46 Piper Optics Division 47		(220,088)		-		Si 		()					1
48 Net non-operating margins	195,265	(164,500)	198,886	352,670	329,669	225,393	-32%	227,223	199,108	176,697	159,390		
49 50 NET MARGINS	\$ 971.518	<u>\$ 121.951</u>	<u>S 1.858.322</u>	\$ 1.978.996	\$ 2,738,430	5 2,010,100	-27%	\$ 1,570,338	\$ 1,953,510	\$ 2,429,540	\$ 3.047.487		
51													
52 OPALCO TIER	2.24	1.13	2.51	2.20	2.99	2.36	-21%	1.94	2.15	2.47	2.91		and Equity
53 OPALCO Equity % of Total Cap	69.5%	61.3%	53.3%	45.6%	48.3%	43.0%	\$1156	41.5%	42.8%	44.8%	47.4%		Land Lyuny







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About one third of expenses are due to the cost of energy. The remainder is driven primarily by capital project costs such as submarine cables, under grounding distribution cables, and grid modernization.

The next slide shows how revenue is allocated each year.





Revenue Allocation









Diving into the Capital Projects, the next two slides highlight major capital projects. Note how capital project costs peak in 2017, driven primarily by the Lopez-San Juan submarine cable replacement project. Capital project spending falls to a much

Capital project spending falls to a much lower level by 2019.



2017 Budget: Capital Projects

				2	A. Actual	в. Actual	c. Actual		D. Budget		E. Projected		F. Proposed		G.	ş	н.	ģ	L.	12	J.	
		RUS	CWP DESCRIPTION	12	31/2013	12/31/2014	12/31/2015		2016		2016		2017		2018	ł	2019	2	2020	r	2021	
1 DI	STRIBU	TION			5116015	10.01/0011	12:01/2010	_	2010		2010	-	2017	-	2010	-			a va v		1021	
2	100	New Services		\$	125,675	\$ 256,450	\$ 221,77	0 5	170,000	S	282,148	S	291,000	\$	300,000	\$	309,000	\$	319,000	\$	329,000	
3	200	New Tie Lines			319,404	341,341	147,77	6	2. E		16,001		200,000						-		55	
4	300	Conversions and	Line Changes		692,238	1,194,755	528,77	6	975,000		594,967		1,335,000	al in distant	1,592,000	in the second	875,000	and and and a	510,000	S	643,000	
5	400	New Substations,	, switching station, metering point, etc.																			
6	500	Substation, Swite	ching Station, Metering Point Changes		123,386	23,034	14	5	-		2,443		126,000		2,150,000		450,000		350,000			
7	600	Miscellaneous Di	istribution Equipment																			
8		601	Transformers & Meters		372,396	575,840	627,34	2	500,000		499,490		525,000		541,000		558,000		576,000		594,000	
9		602	Sets of Service Wires to increase Capacity					7														Dist
10		603	Sectionalizing Equipment		68,473	401,123	101,55	7	255,000		2,618		100,000		700,000		100,000		220,000		75,000	
11		604	Regulators		156,491	131,410	15,91	1	325,000		8,439				75,000		75,000		80,000			and the second se
12		605	Capacitors		24			12	<u>-</u>													No. of Concession, Name
13		606	Ordinary Replacements		236,490	179,360	170,43	9	275,000		278,519		119,000		123,000		127,000		131,000		135,000	
14		608	Underground Dist. Cable Replacement		924,947	3,202,174	2,127,27	0	2,285,000		2,843,911		1,942,000		1,211,000		1,732,000		2,161,000		2,226,000	
15	700	Other Distribution	n Items																			
16		701	Engineering Fees					-														
17		704	LMS & SCADA	(52,327	1,805	32,71	5	45,000		86,026		89,000		162,000		84,000		44,000		23,000	
18		705	AMR (not including meters)			a na sa ang sa	and a star of the second star of the	-	a dan dan dan manana karang dan		and the state of the		an a		200,000		and the state of the		Managements and the state of the		a na an	🤳 Grid
19		706	Communications				<u> 2. za manifesta de composito de la composito</u>										and a state of the same for form the state of the state		Contraction of the Contraction o			
20		706.0	Island Network		322,418	349,692		-														Mod
21		706.1	Fiber/Microwave Infrastructure (1)		474,460	1,747,051	2,528,42	8	2,400,000		2,418,139		1,290,000		300,000		15,000		16,000		17,000	
22 TR	ANSMIS	SSION																				
23	800	New Tie Line			-			-	-													
24	900	New Substations,	, switching station, metering point, etc.			11,32	44	3	600,000		250,427		650,000		500,000							
25	1000	Line and Station	Changes		365,876	257,537	900,33	8	3,025,000		6,338,884		8,408,000		1,886,000		89,000		92,000		95,000	💭 Sudi
26	1100	Other Transmissi	on		-	2		-	-		-											
27 GI	INERAT	ION																				Ca
28	1200	Generation			-	3		-	-													
29 OI	1200	T			240.280	(2.11)	400.07		124 000		166 000		200 000		60.000		(2.000		67.000		71.000	
30	1300	Facilities			249,280	62,112	409,97	0	124,000		156,229		300,000		60,000		63,000		67,000		/1,000	
31	1400	Acquisitions			-			-														
32	1500	All Other	Transportation/Equipment/Tools/Padios		448 241	426 010	335.94	2	463 000		563 960		450 000		315,000		231.000		348 000		366 000	
33		1502	Office Equipment/Euroiture/Etc		440,241	420,915	333,84	2	30,000		26 866		450,000		21,000		22,000		22,000		24 000	
34		1502	Computer/Servers/Software		358 351	212 07	293.25	/ A	262,000		251 684		20,000		21,000		329,000		346 000		24,000	
35		1504	Community Solar (member funded) an		356,551	212,07.	205,25	7	202,000		251,004		290,000		500,000		500,000		540,000		304,000	
30	1600	Minor Projects	Community Solar (member funded)(2)		549 042	212 30/	04 34	3	90,000		247 694		100 000		103,000		107,000		111.000		115 000	
19	1000	Minor Projects	PUS CWP SUBTOTAL	() <u>s</u>	5 844 096	9 594 25	8 507 05	$\frac{5}{2}$ -	12 124 000	-	14 868 344	-	16 243 000	-	11 052 000	3	5 766 000		5 394 000	<u>.</u>	5 077 000	
10 C(NTRIR	UTION IN AID O	F CONSTRUCTION (CIAC)		3,011,050	1,014,40	0,071,00	-	12,124,000		14,000,044		10,240,000		11,052,000		5,700,000		5,594,000		5,077,000	
40		New Services	r construction (cinc)		(583 883)	(272 30)	(181.92	2)	(318,000)		(373 294)		(356.000)		(367,000)		(379.000)		(391.000)		(403 000)	
41		Meters and Trans	formers		(000,000)	(137.843) (176.24	1)	(510,000)		(253 486)		(209,000)		(216,000)		(223 000)		(230,000)		(237,000)	
42		Joint Projects				(184 65	(329.14	5)			(120,107)		(233,000)		(156,000)		(104,000)		(108,000)		(112,000)	
43	Island Network Department				(305 819)	- /			(120,107)		(200,000)		(100,000)		(10 1,000)		(100,000)		(
44		WA DOC Grant I	Funding			(505,015	<i>.</i>								(1.000.000)							
45		Community Solar	r Member Contributions						(300,000)				(250.000)		(500.000)		(250.000)					
46			RUS CWP NET TOTAL		5,260,213	8,693,638	7,909,74	4	11,506,000		14,121,458		15,195,000		8,813,000		4,810,000		4,665,000		4,325,000	

Distribution

Modernization



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2017 Budget: Capital Projects



<u>Headline</u>

- 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











Co-ops use debt to finance projects. The next slide shows debt per meter (member). Not how the debt peaked back in the 60s, with major submarine cable projects, as OPALCO wired the 20 island community.

Though submarine cables are increasingly expensive, we have many more members these days, and fewer submarine cable projects, so the cost per member is a fraction of what it used to be.



2016 Budget: Debt Analysis







As each submarine cable replacement project is planned, we start building up equity to help fund the project. The next slide shows the ebb and flow of equity and how it relates to cable projects.





Submarine Cable Replacements: Managing Equity Level Note: Schematic to illustrate equity planning process



Level

Equity



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The following slides provide additional data related to expense trends, financial metrics, and comparison with other electric utilities.

Appendix





each 1 million kWh sold = \$100,000 in revenue = \$70,000 incremental margin



How does OPALCO compare to our mainland counterparts?



On a per capita basis, OPALCO's 20 island service area and infrastructure is the most complicated in the nation.

Unlike the mainland, much of the electricity transmission and distribution is via very expensive submarine cables - over 30 miles, costing from \$1,000,000 to \$5,600,000 per mile.

Lopez - San Juan submarine 2017 replacement cable is estimated to cost at least \$15,000,000 for just under 3 miles of cable.





Seasonal

Co-Op	State	Meters	Gross Plant	Revenu
Harney Electric Co-op	OR	2,413	40,784,551	11,360,64
Okanogan	WA	3,517	11,356,250	4,878,68
Columbia Basin Electric Co-op	OR	3,860	32,179,650	7,687,78
West Oregon Electric Co-op	OR	4,273	38,181,664	8,971,52
Tanner	WA	4,558	36,288,323	9,275,33
Wasco Electric Co-op	OR	4,633	32,306,084	9,977,25
Columbia	WA	4,942	81,436,054	20,991,25
Blachy-Lane Electric Cooperative	OR	5,000	24,139,628	11,517,86
Big Bend	WA	8,694	70,102,236	27,526,57
Lakeview	WA	9,848	27,264,950	20,716,49
Douglas Electric Co-op	OR	10,000	56,989,726	13,651,72
Lane Electric Cooperative	OR	12,878	66,755,182	21,514,33
Elmhurst	WA	13,935	34,226,787	14,558,91
Umatilla Electric Co-op	OR	14,497	131,101,784	54,662,14
OPALCO	WA	14,738	83,593,001	20,987,01
Benton	WA	16,041	109,158,098	37,875,72
Coos-Curry Electric Co-op	OR	17,452	116,955,019	30,974,26
Midstate Electric Co-op	OR	18,578	96,194,065	27,083,14
Salem Electric	OR	18,759	56,493,242	24,654,24
Consumers Power, Inc.	OR	22,014	136,937,382	32,926,51
Oregon Trail Electric Consumers Co-op	OR	30,309	146,627,833	46,589,60
Peninsula Light Co	WA	30,921	149,236,086	49,139,00
Central Electric Co-op	OR	31,733	206,192,112	49,355,30
Inland Power and Light Co	WA	38,951	199,954,999	60,654,56

Notes

Source: 2012 IRS Form 990 tax filings Area: Square miles of land





Regional Co-Op Comparison: Meters & Gross Plant





Notes

Serving 20 Islands with multi-island substations and distributed aerial, buried and submarine infrastructure is much more expensive than mainland counterparts

Yet, OPALCO plant expense is inulletline with mainland counterparts





Distribution: Overhead versus Underground Cable

Irrigation

16,451





Serving 20 Islands with stormhardened infrastructure requires very expensive buried distribution cable for comparable reliability

- Example "Rural" utility service area ightarrow200 times larger than OPALCO
- Example "Seasonal" territory size ulletsimilar to OPALCO, with concentrated neighborhoods rather than our scattered rural population

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