

OPALCO 2018 Budget Overview

November 2017 Board Meeting

Accomplishments

Accomplishments

Complete

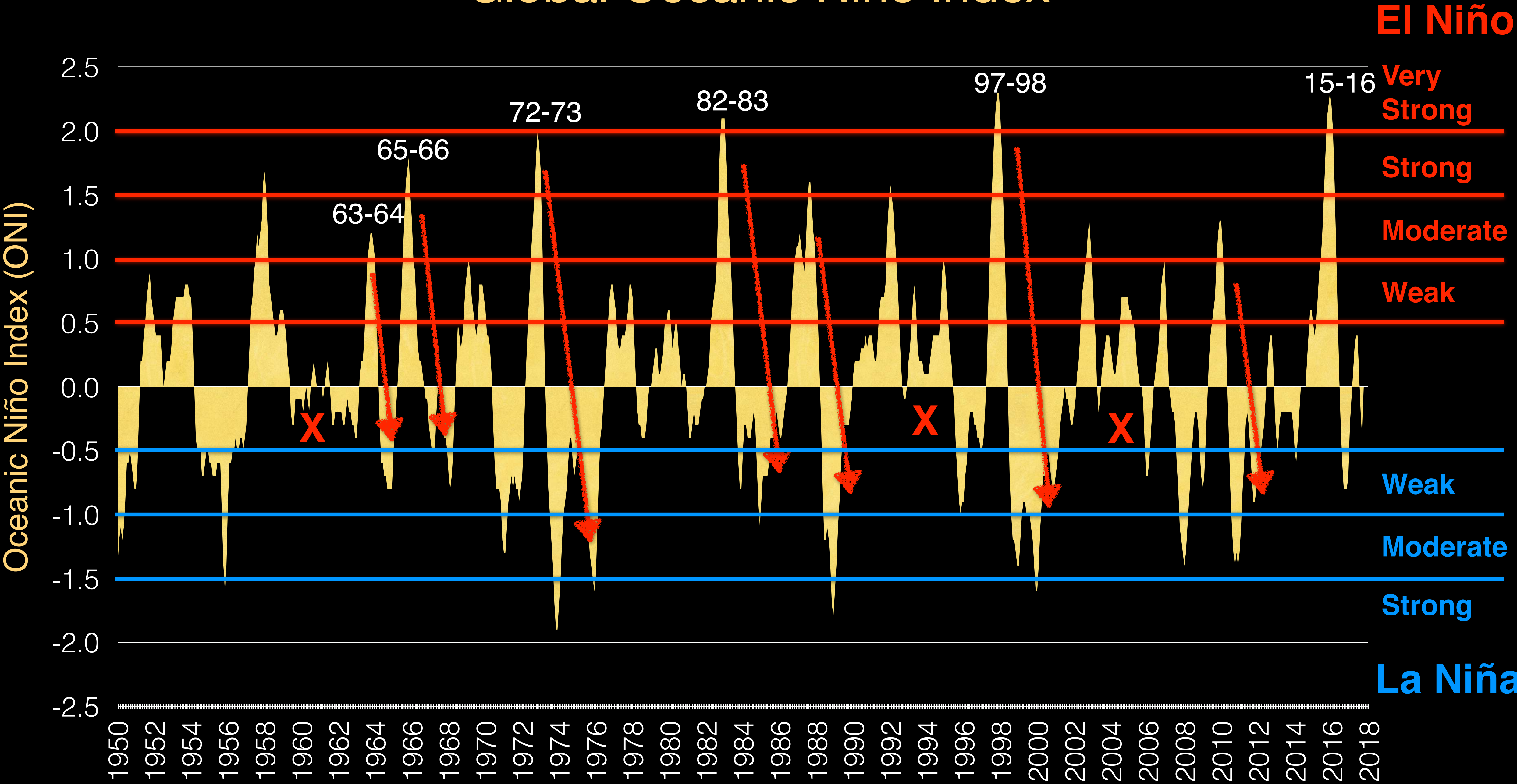
- ✓ Remove and replace submarine cable
- ✓ Reduced the number of communication dead zones to near zero
- ✓ Continued undergrounding of distribution system
- ✓ RESP Approved, loan docs to follow
- ✓ \$1 million CEF battery grant
- ✓ Submitted new CWP and RUS loan applications
- ✓ Deployment of office automation to field crews
- ✓ Next generation of co-op employees are on board
- ✓ Became the largest provider of internet services in the county
- ✓ Outage map

What's Coming in 2018?

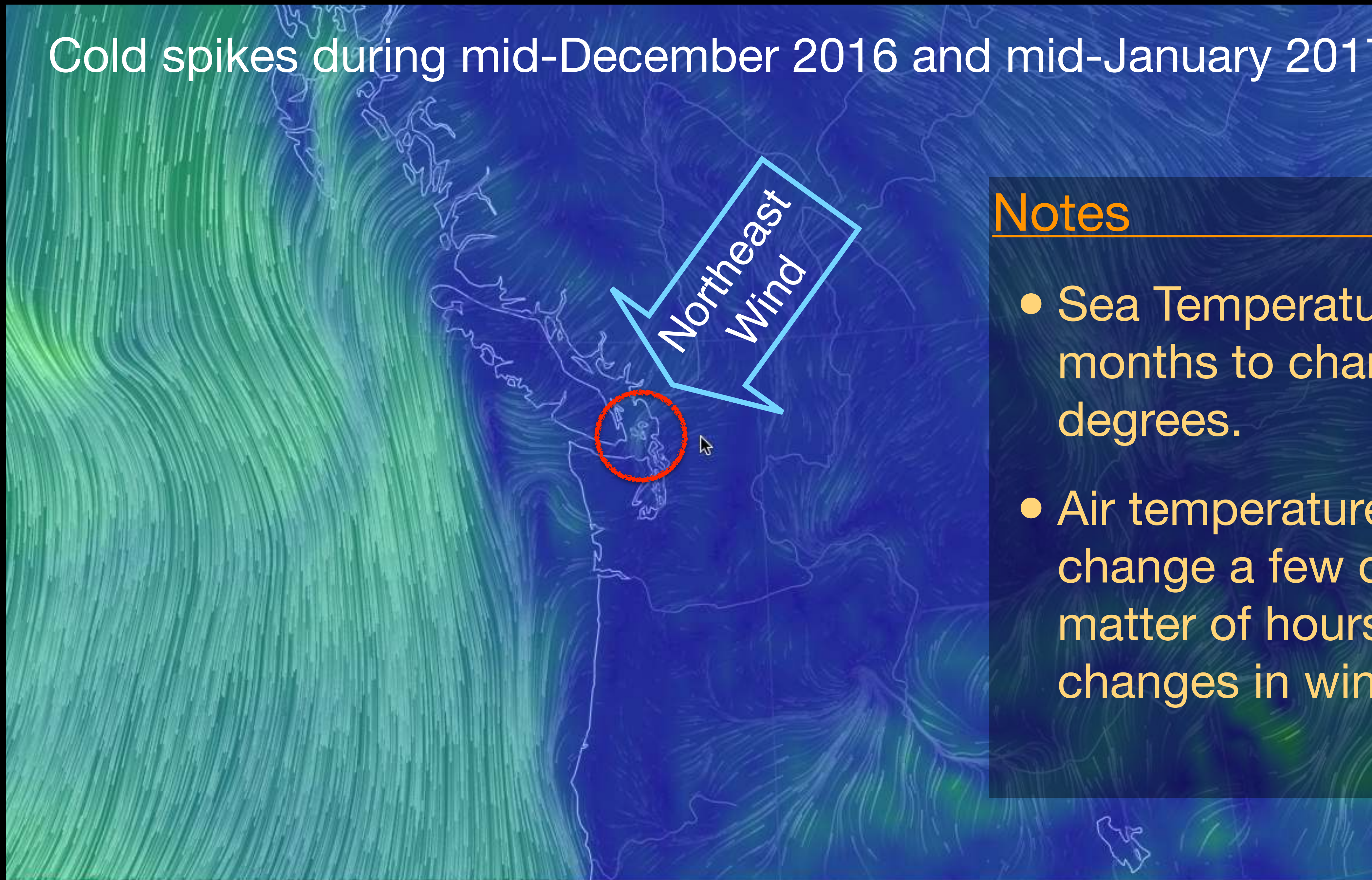
- ✓ Decatur Island 69 kV tap
- ✓ Community solar + storage
- ✓ RESP loan program launch
- ✓ Propane generators on active sites
- ✓ We are fully staffed, employee appreciation
- ✓ On-bill financing

Load Forecast

Global Oceanic Niño Index



Cold spikes during mid-December 2016 and mid-January 2017 wind shift



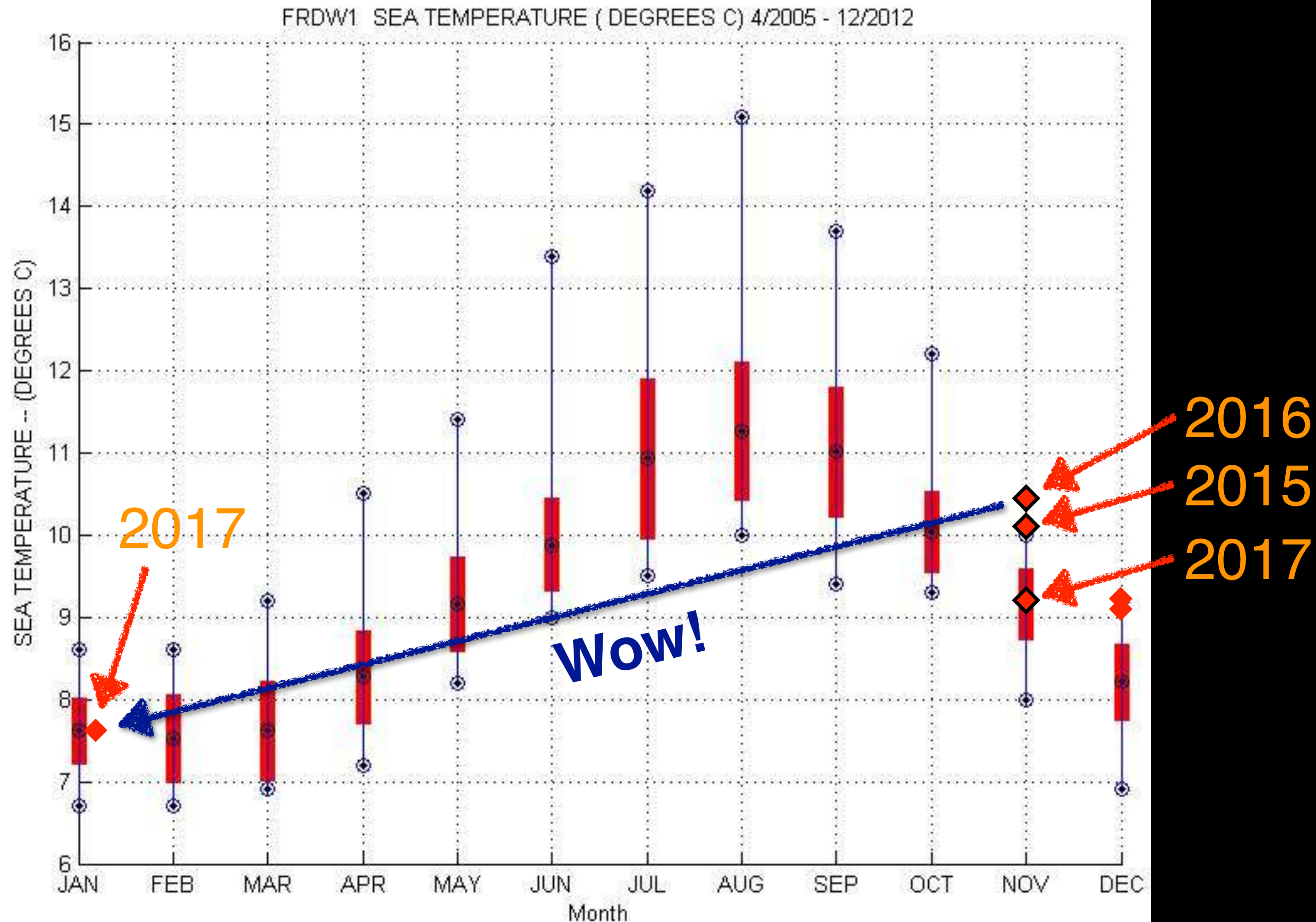
Notes

- Sea Temperature takes months to change a few degrees.
- Air temperature can change a few degrees in a matter of hours due to changes in wind direction.

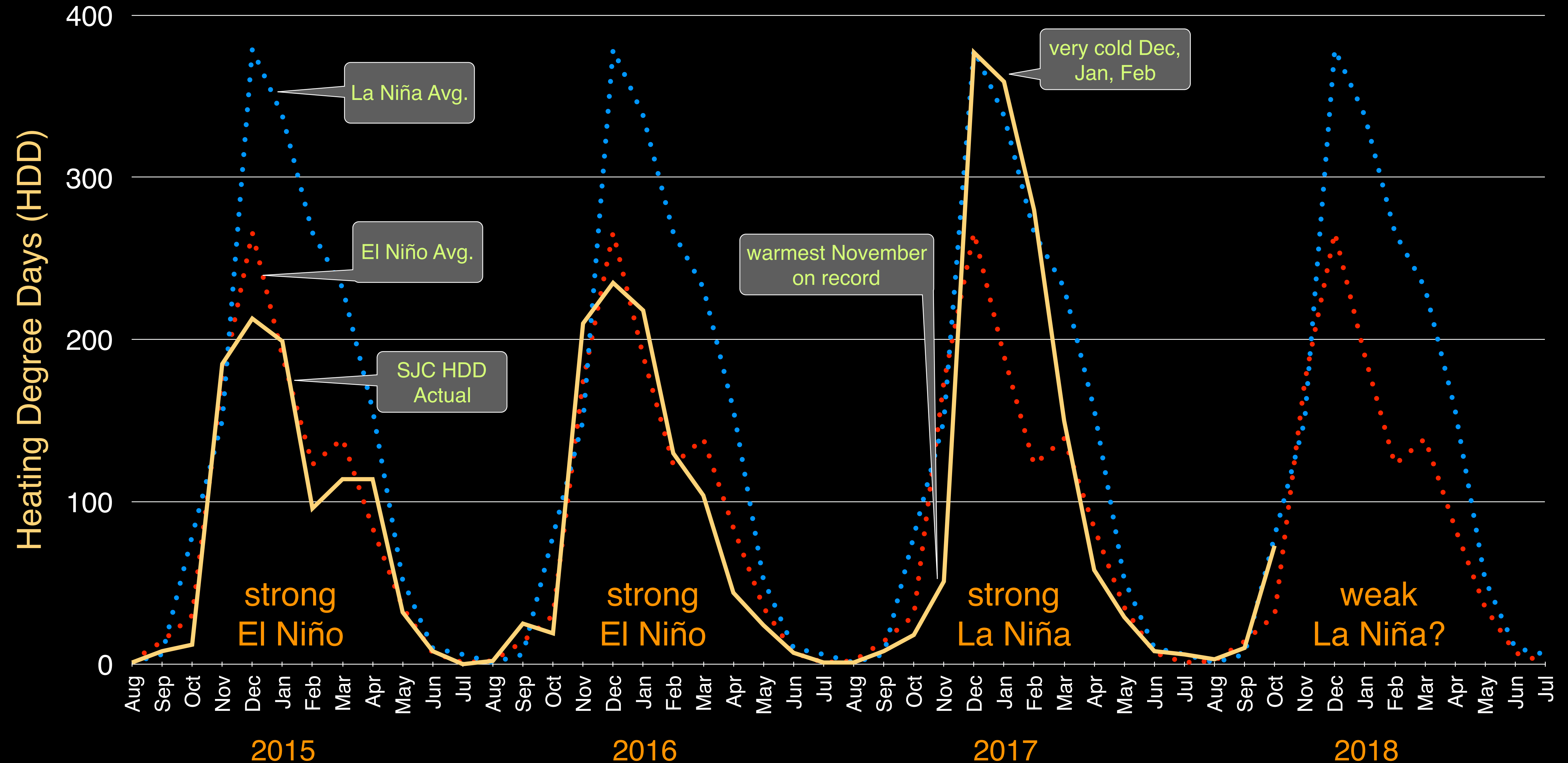
San Juan County: Current Sea Temperature is Neutral

Headline

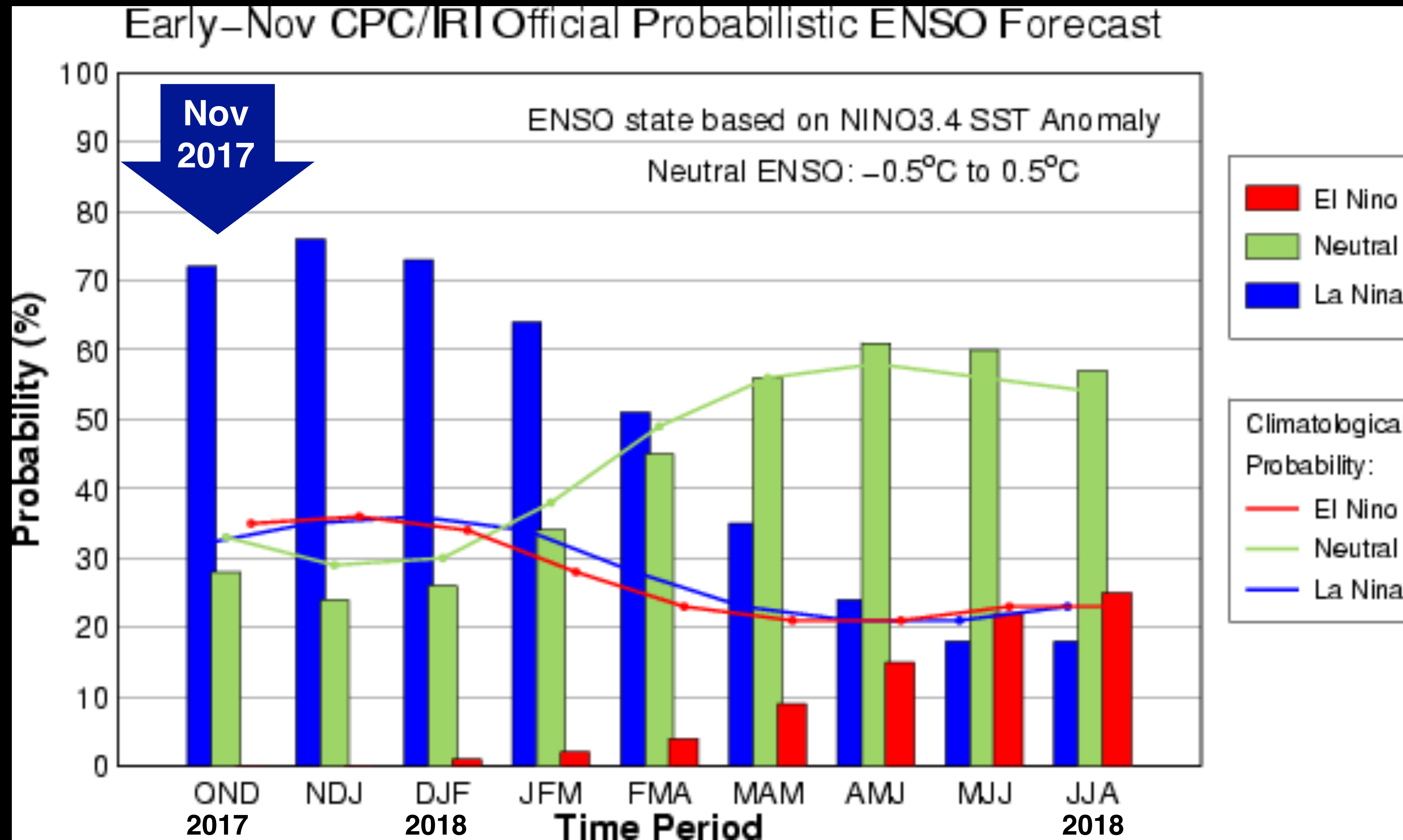
- Sea temperature is warmer than normal for November and December (average 2005 through 2012)



Current Winter Was Much Colder Than Previous Two Winters

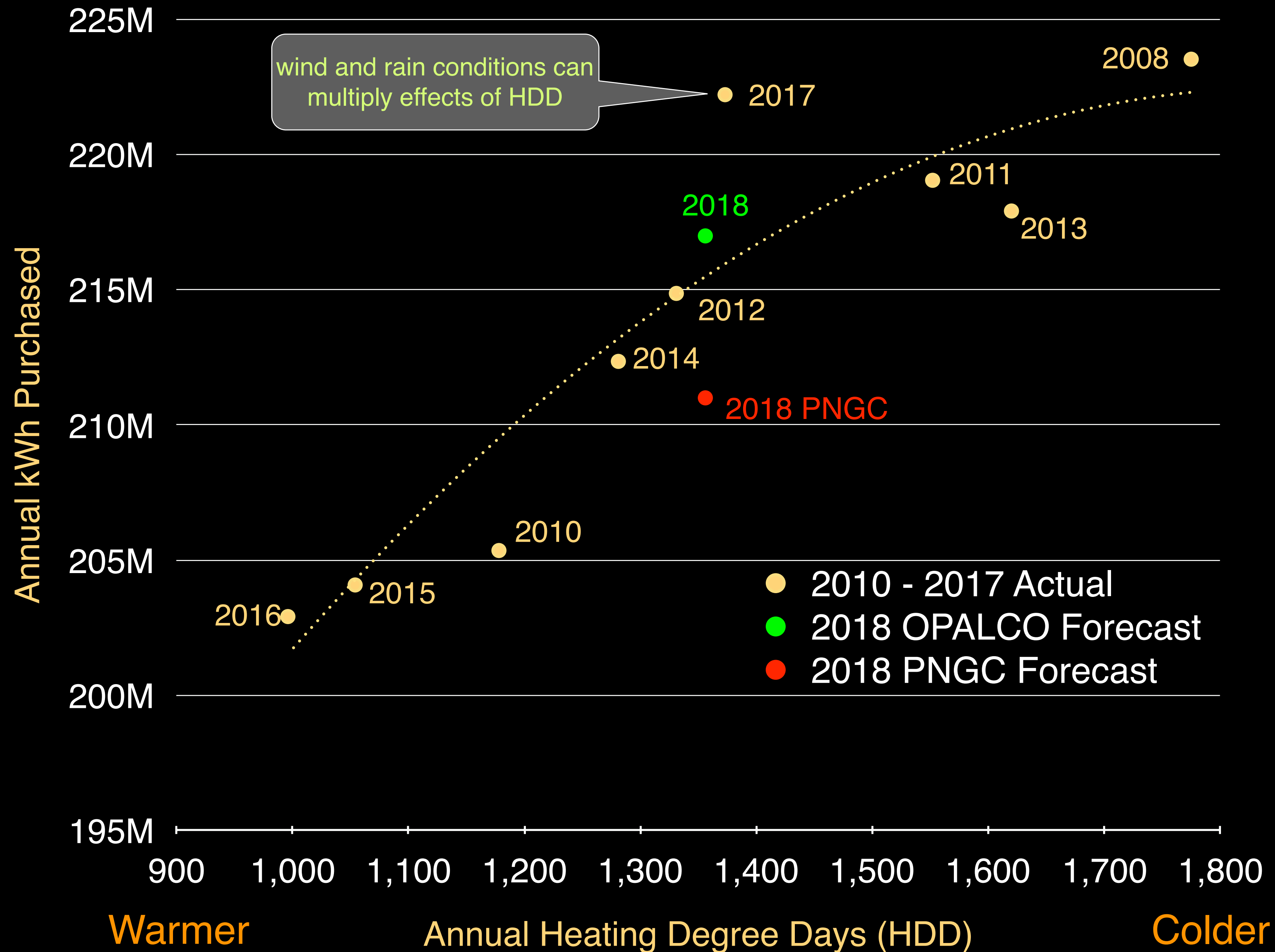


Weather Uncertainty: NOAA Update (9 November 2017)



Weak La Niña conditions are predicted to continue (~65-75% chance) at least through the Northern Hemisphere winter 2017-18

Load Forecast: 2018 Forecast



Revenue

Rule of Thumb

each 1 million kWh sold
= \$150,000 in revenue
= \$100,000 incremental margin

each 1% rate increase = \$250,000 in revenue

Expenses

Energy Purchases

People

Everything Else

2018 Budget: Statement of Operations

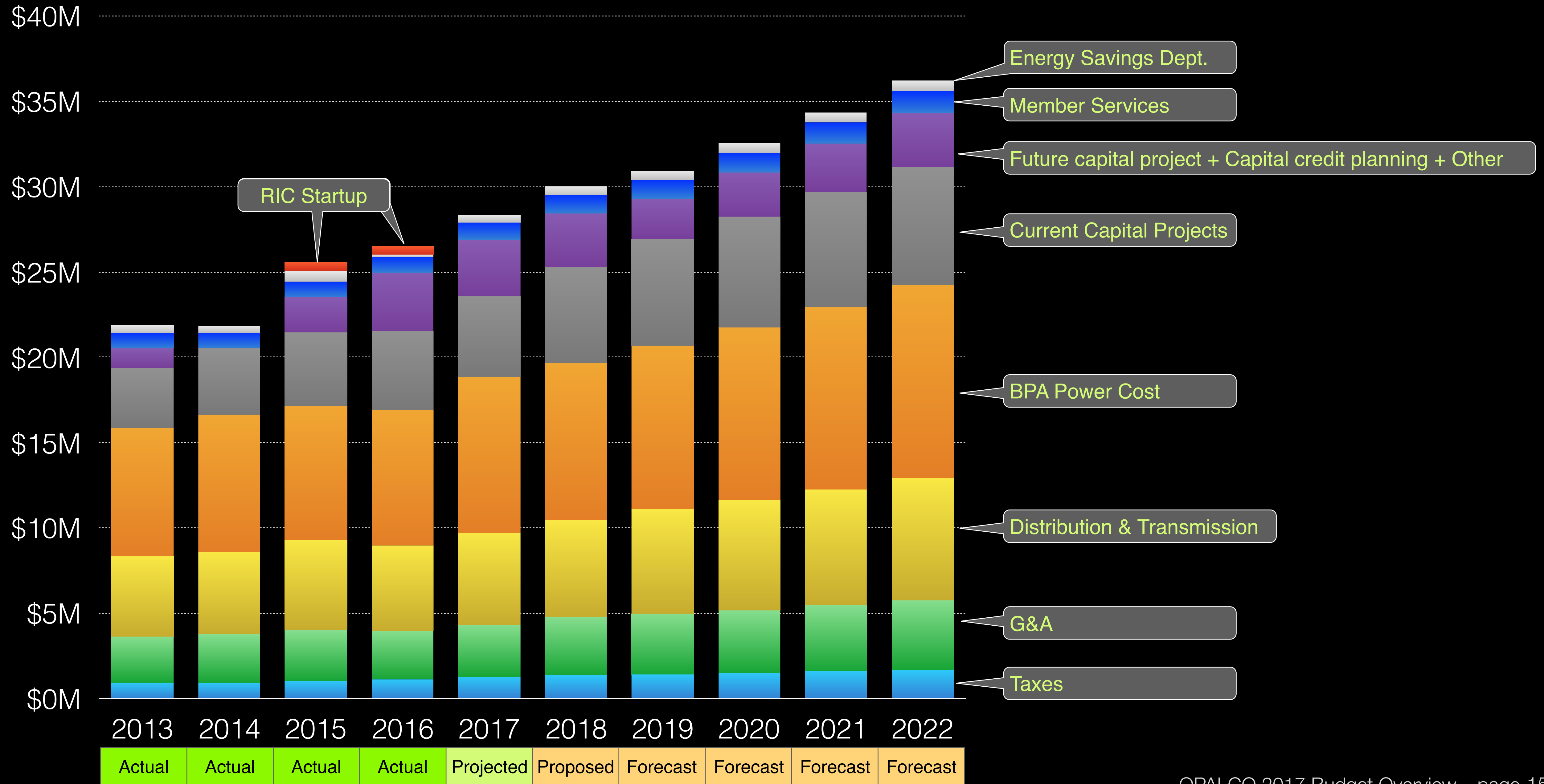
	A. Audited Year End 12/31/2014	B. Audited Year End 12/31/2015	C. Audited Year End 12/31/2016	D. Approved Budget 12/31/2017	E. Projected Year End 12/31/2017	F. Proposed Budget 12/31/2018	G. % Change (D - C)	H. Forecast 12/31/2019	I. Forecast 12/31/2020	J. Forecast 12/31/2021	K. Forecast 12/31/2022
1 OPERATING 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%

Total Operating Revenue

Total Operating Expenses

TIER and Equity

Revenue Allocation



2018 Budget: Capital Projects

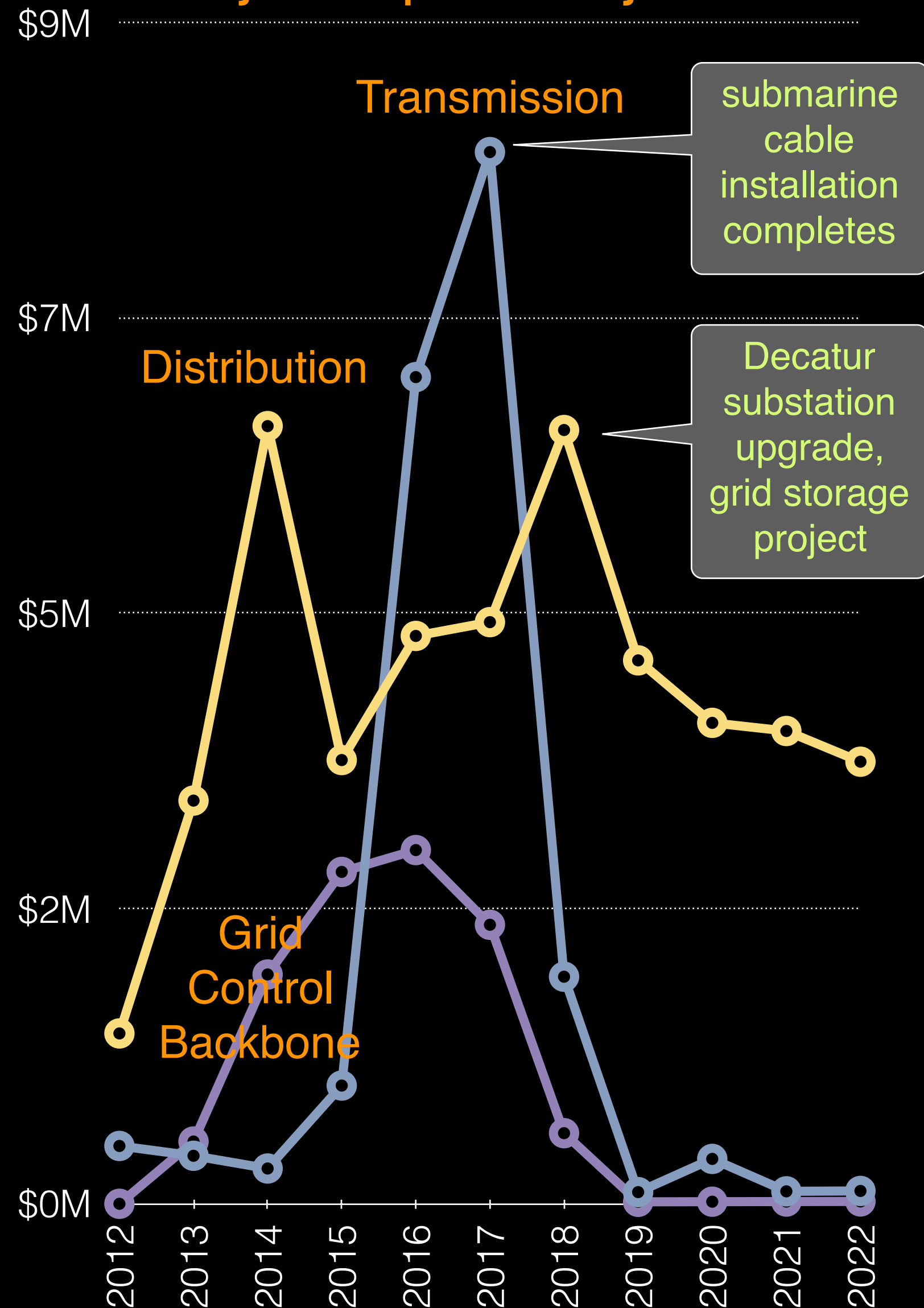
			A.	B.	C.	D.	E.	F.	G.	H.	I.	J.
			Actual	Actual	Actual	Budget	Projected	Proposed	Forecast	Forecast	Forecast	Forecast
			12/31/2014	12/31/2015	12/31/2016	2017	Year End 2017	Budget 2018	2019	2020	2021	2022
RUS CWP DESCRIPTION												
1	DISTRIBUTION											
2	100	New Services	\$ 256,450	\$ 221,770	\$ 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

Distribution

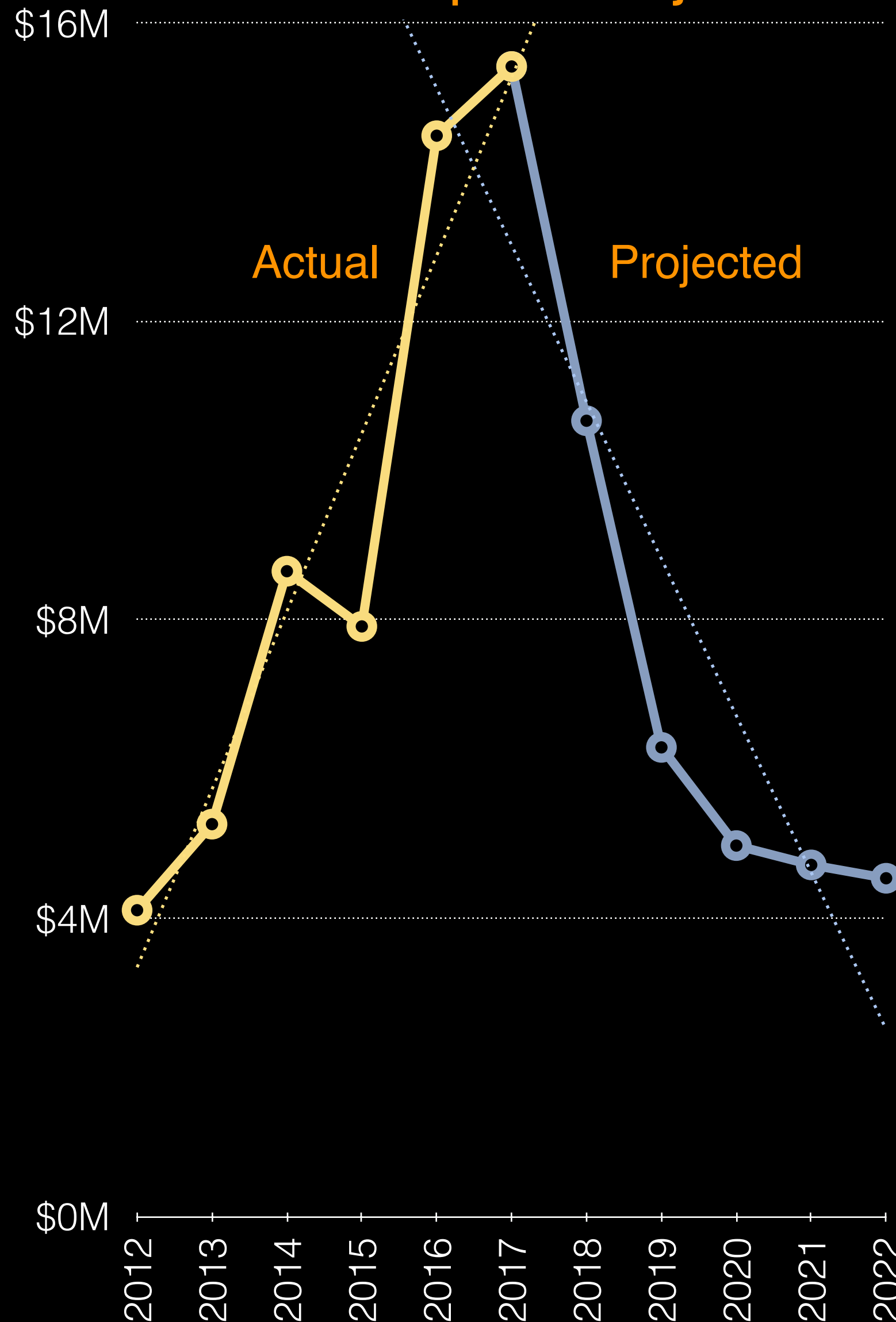
Submarine Cables

2018 Budget: Capital Projects

Major Capital Projects



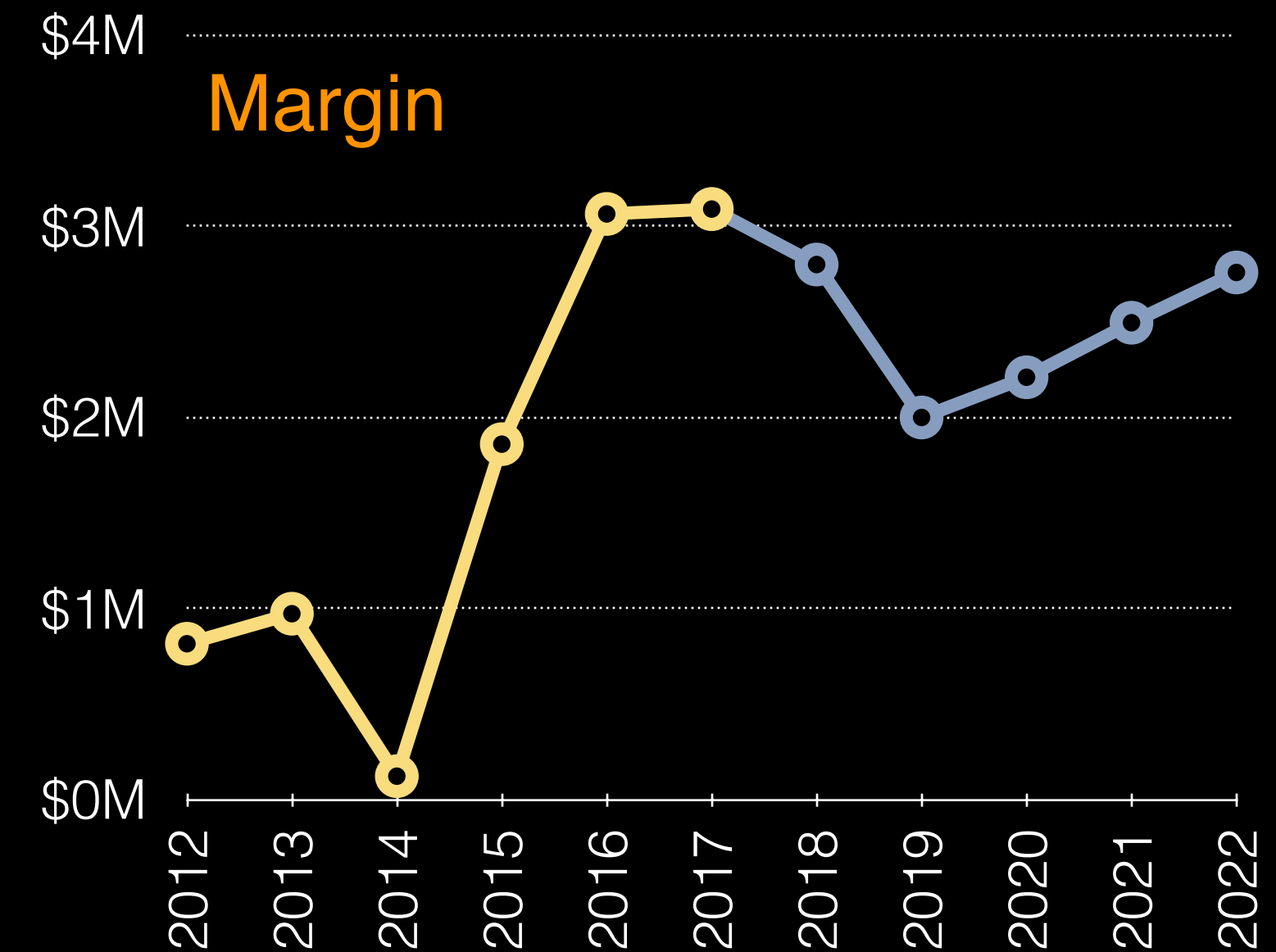
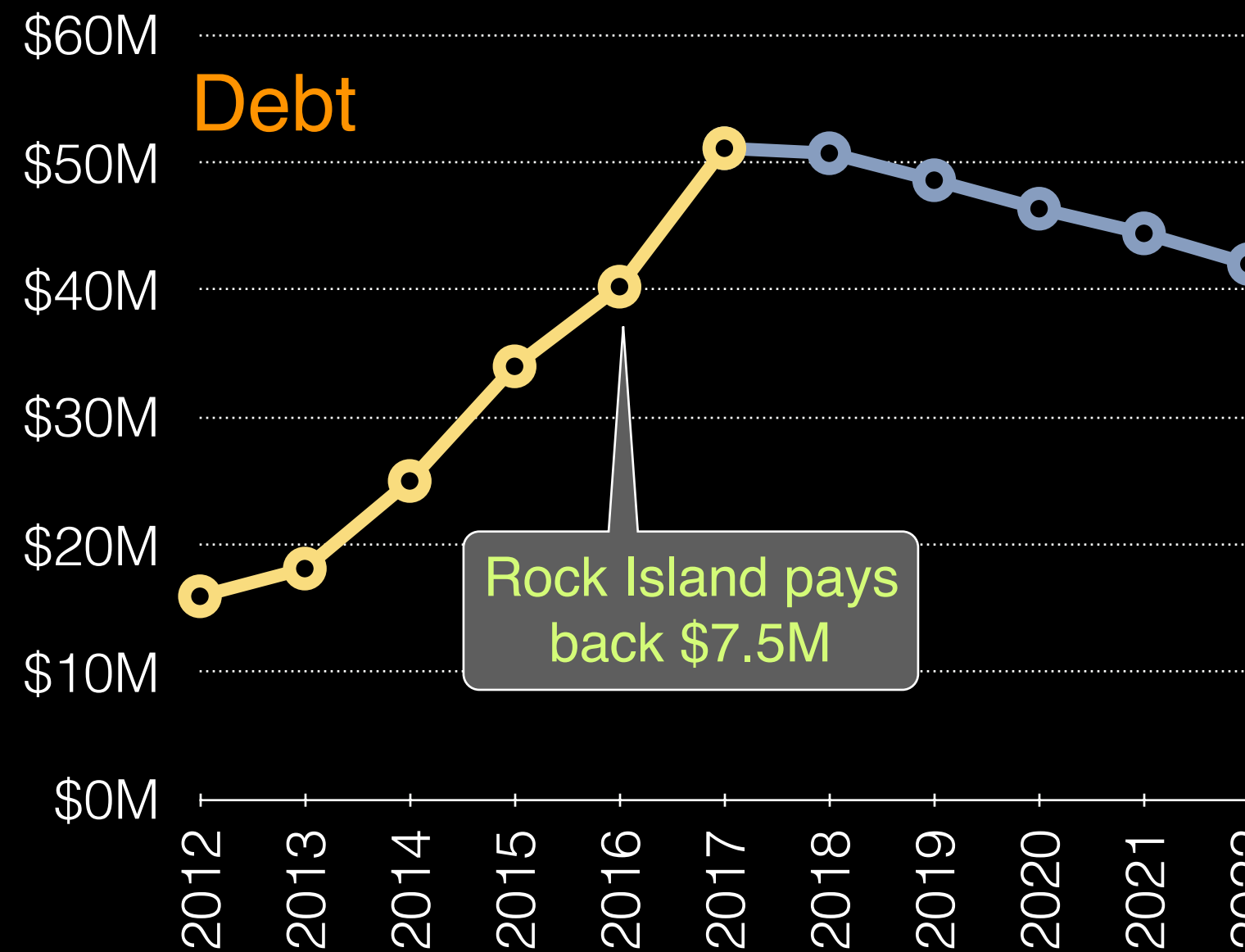
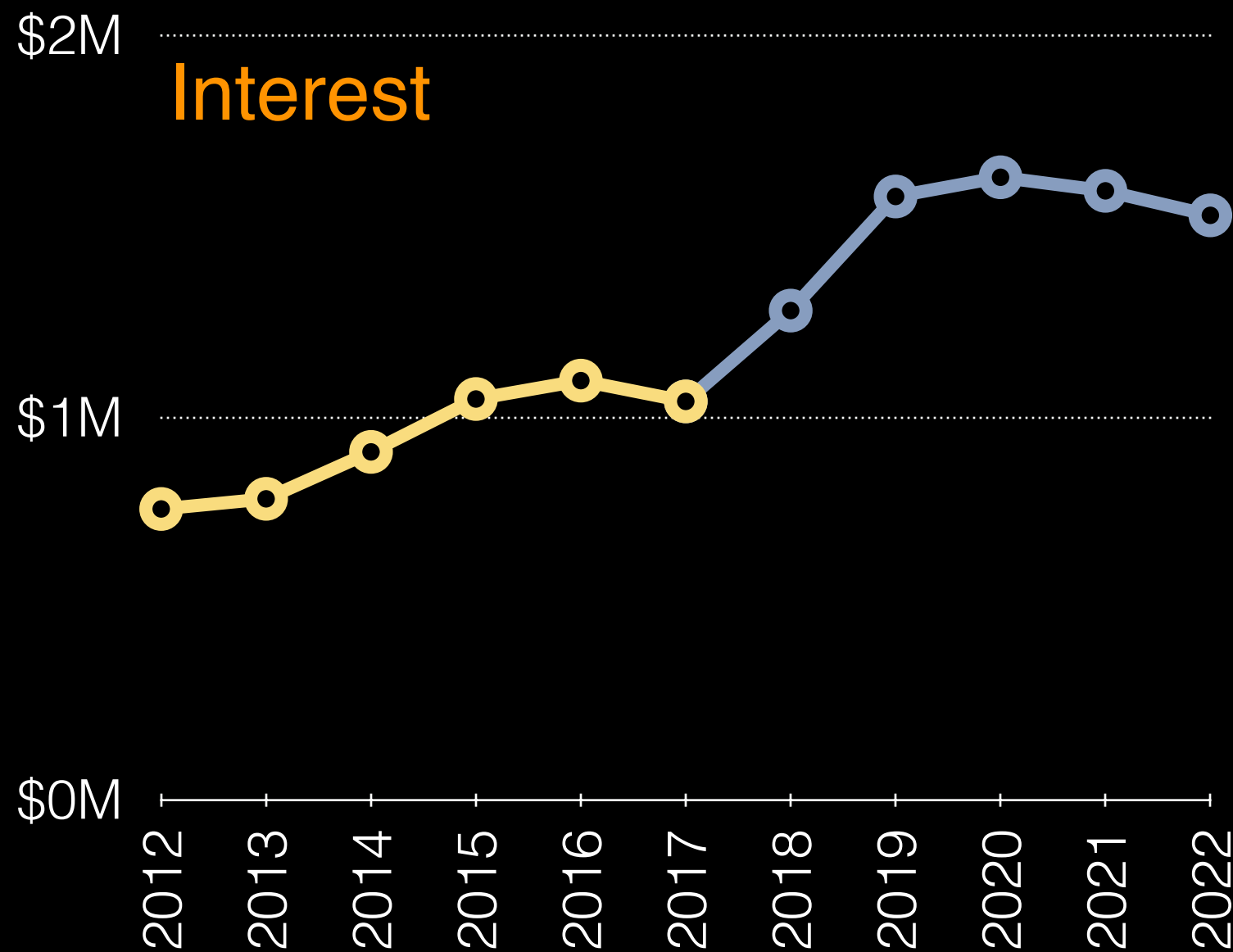
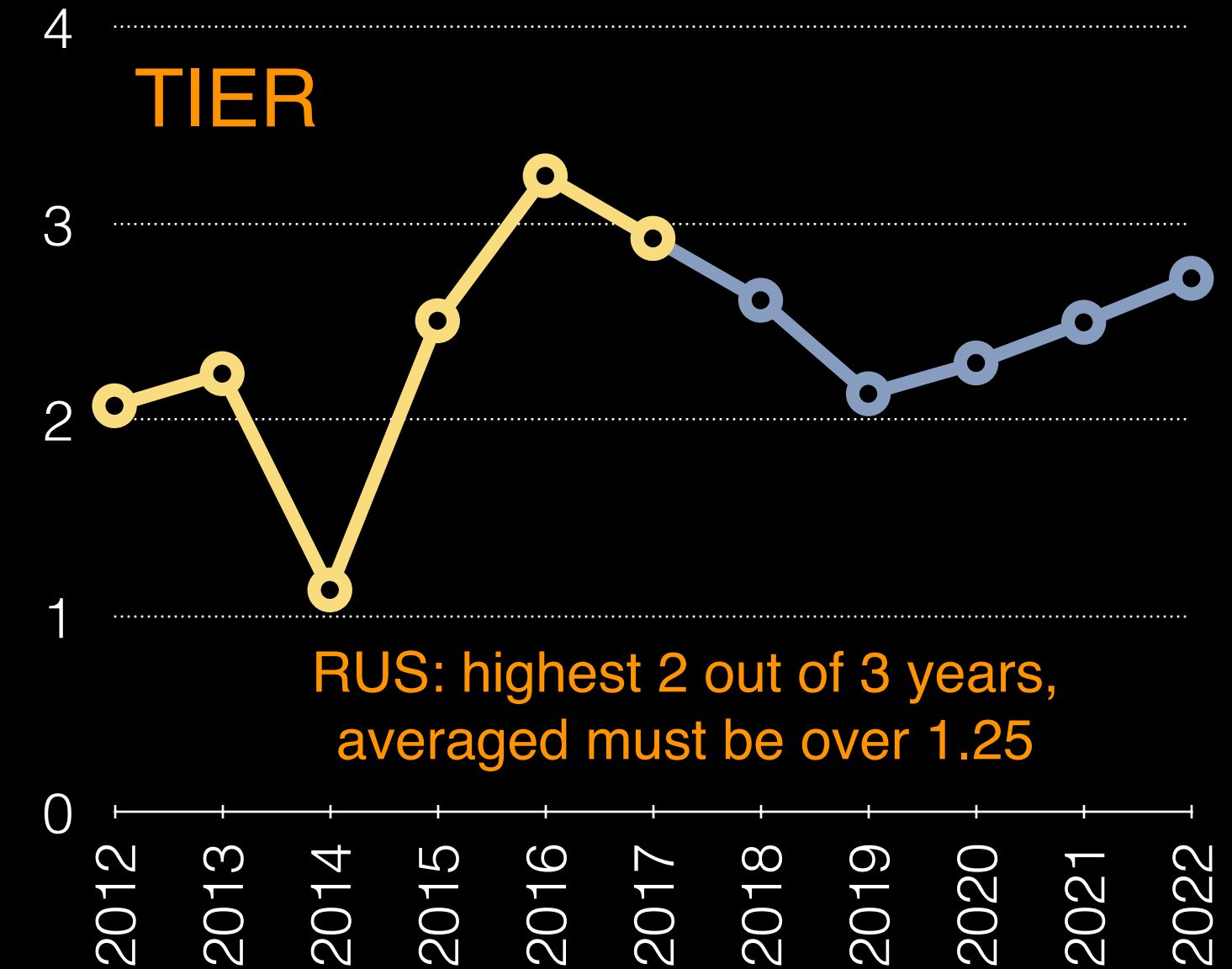
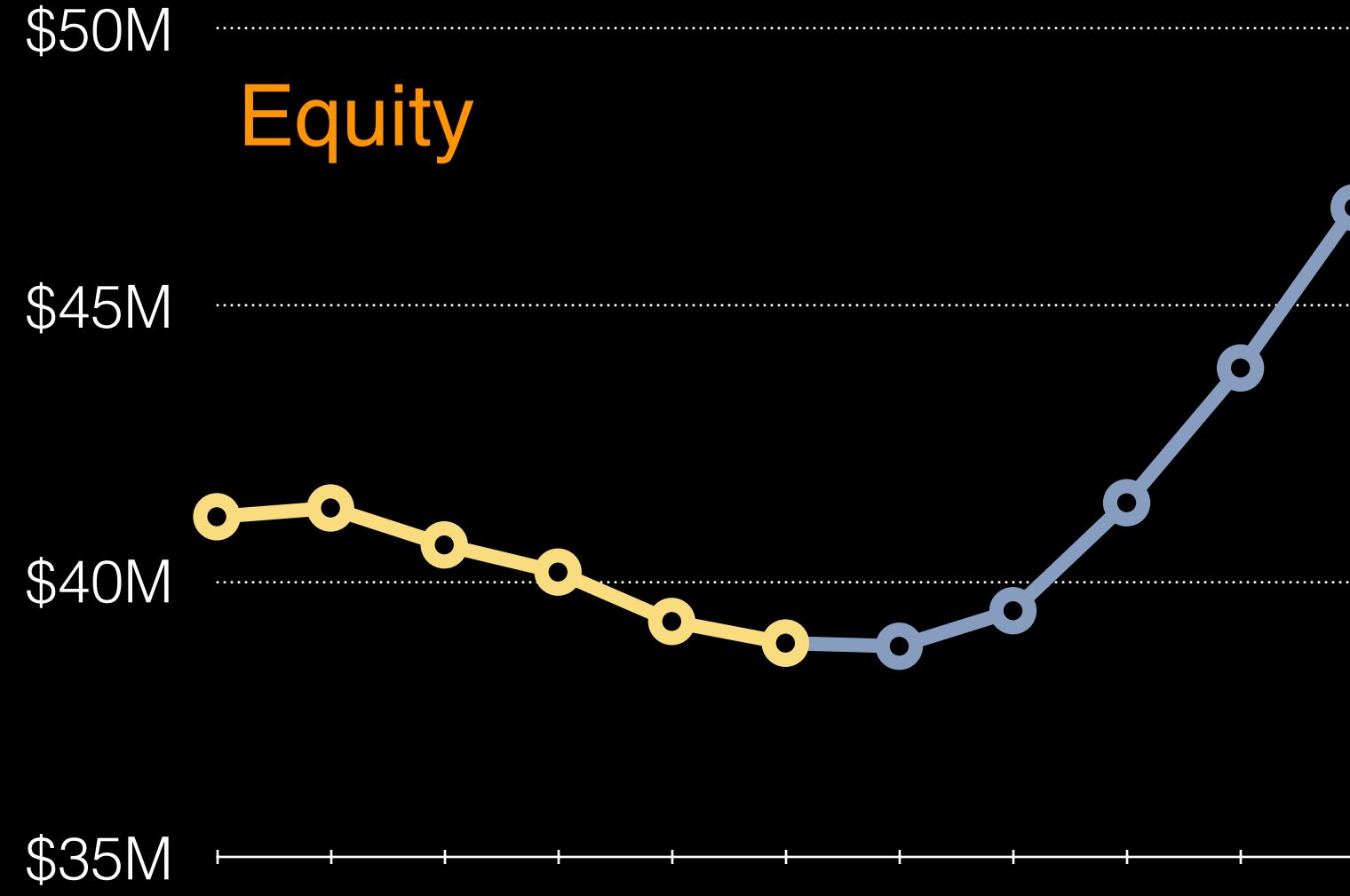
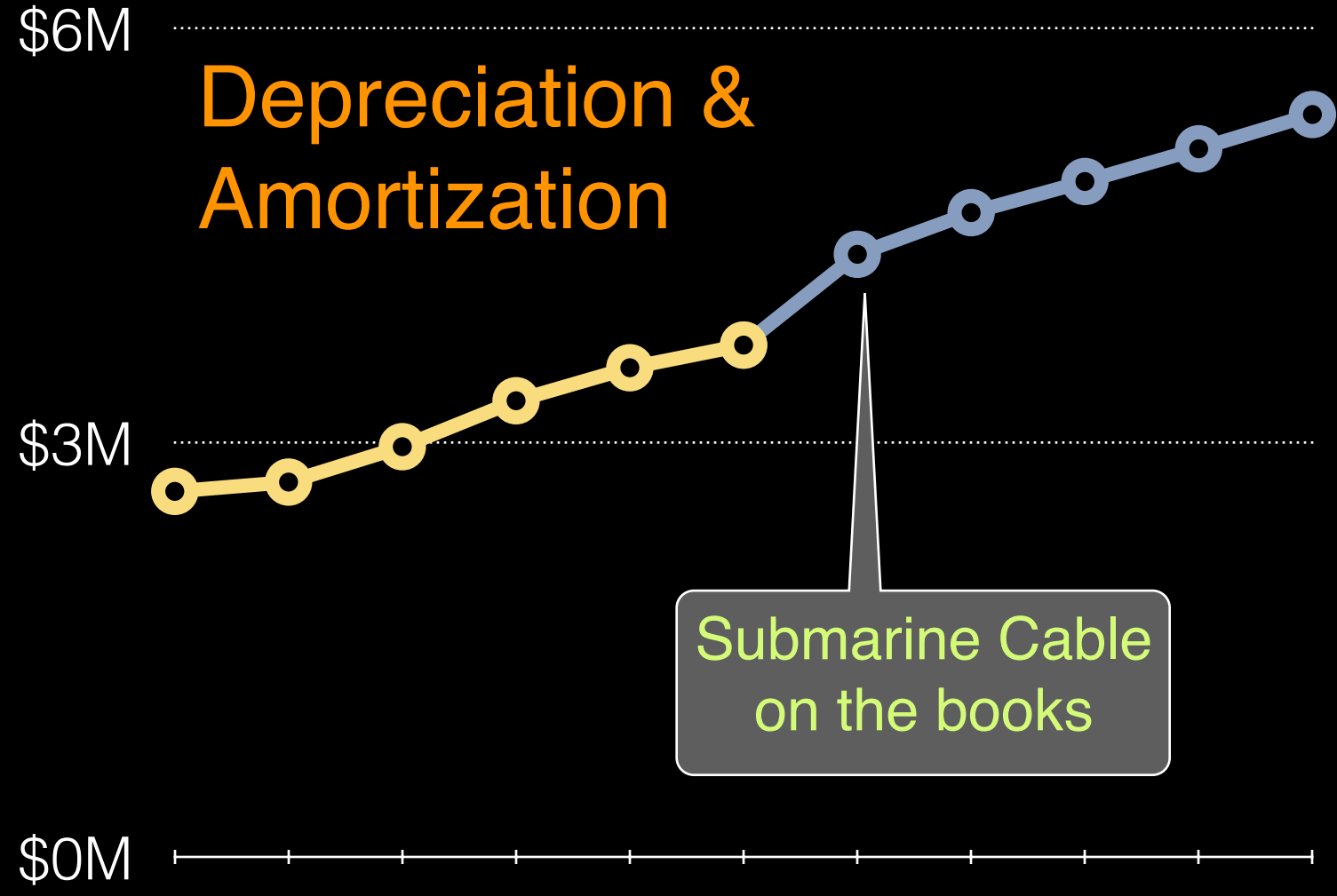
Total Capital Projects



Headline

- 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

2018 Budget: Financial Metrics

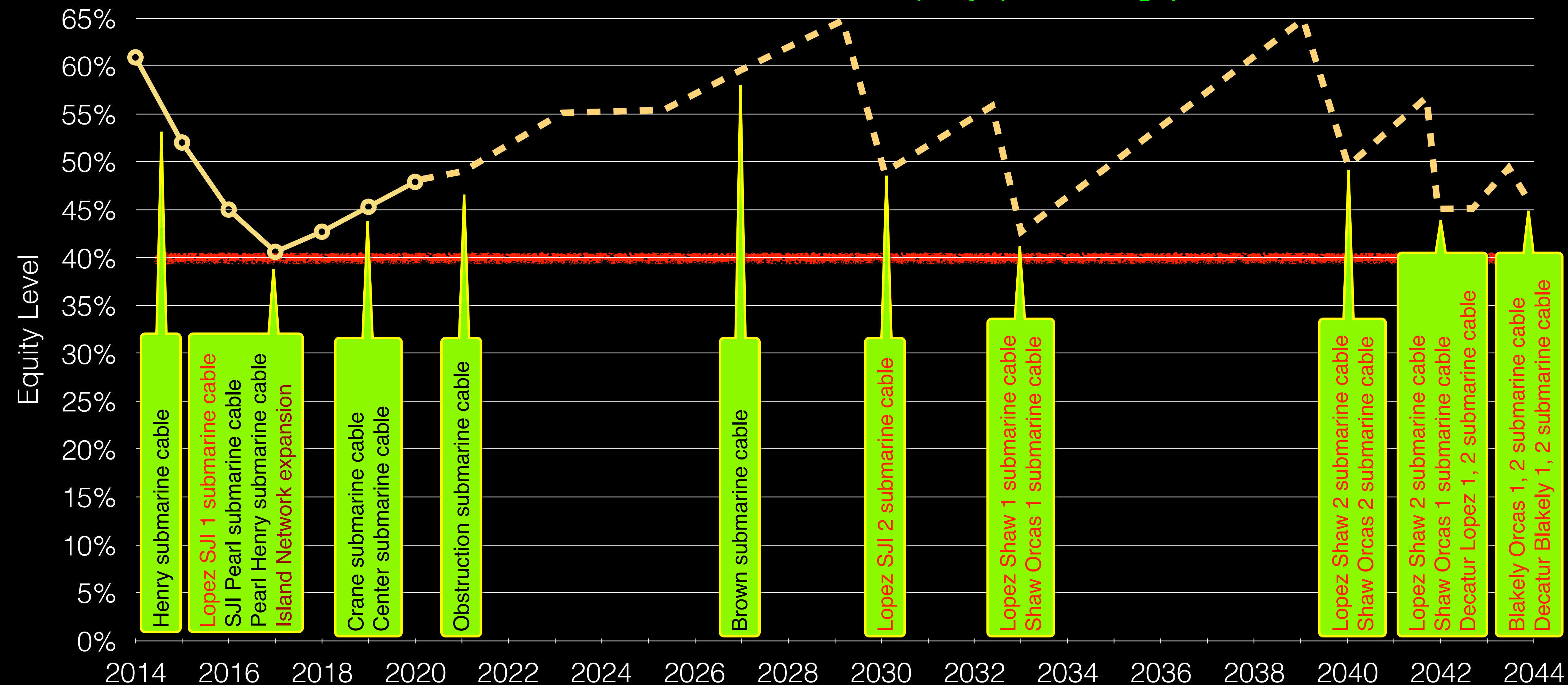


2018 Budget: Debt Equity Ratio



Submarine Cable Replacements: Managing Equity Level

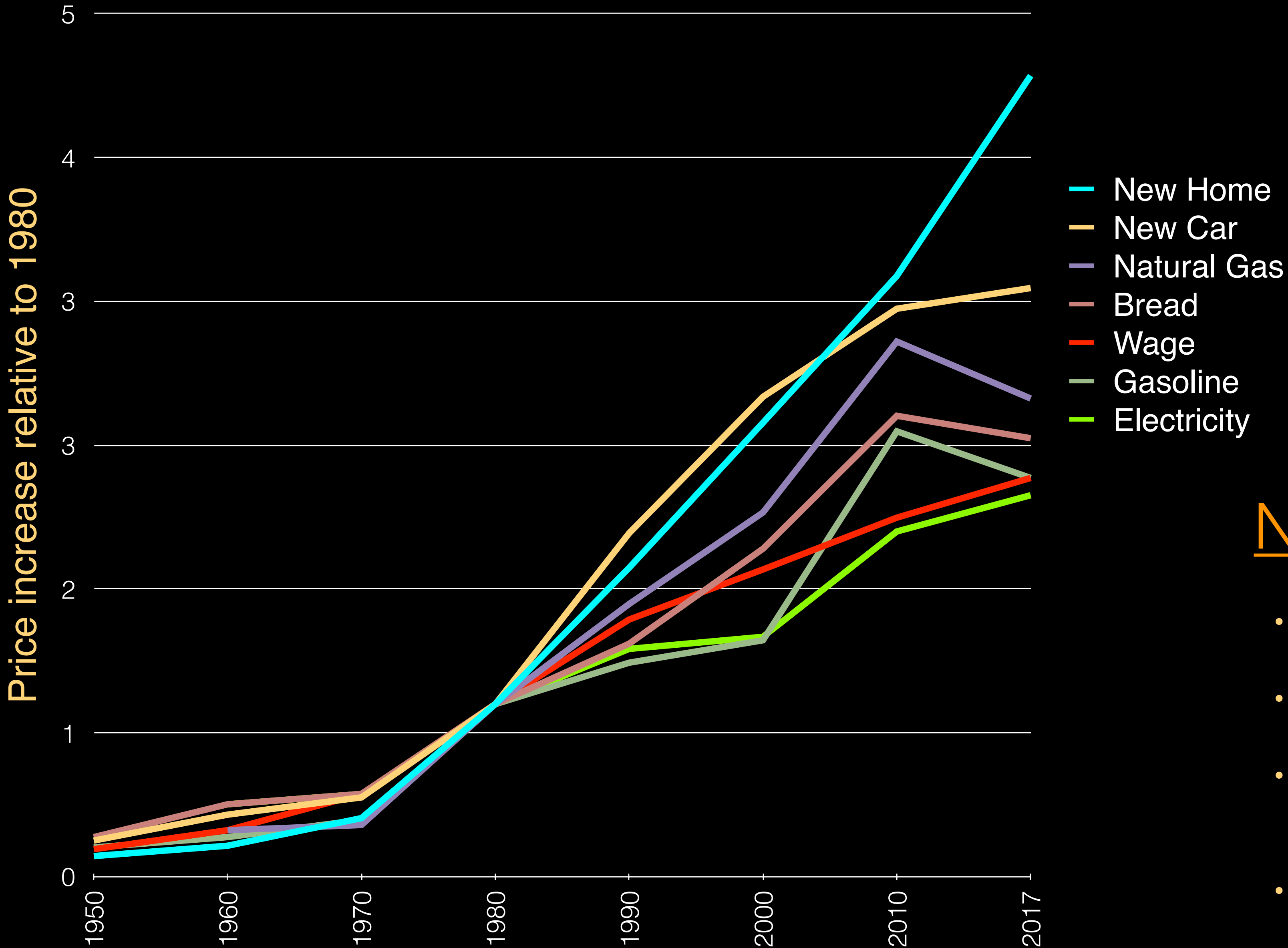
Note: Schematic to illustrate equity planning process



Rates

Proposed rate study in 2018

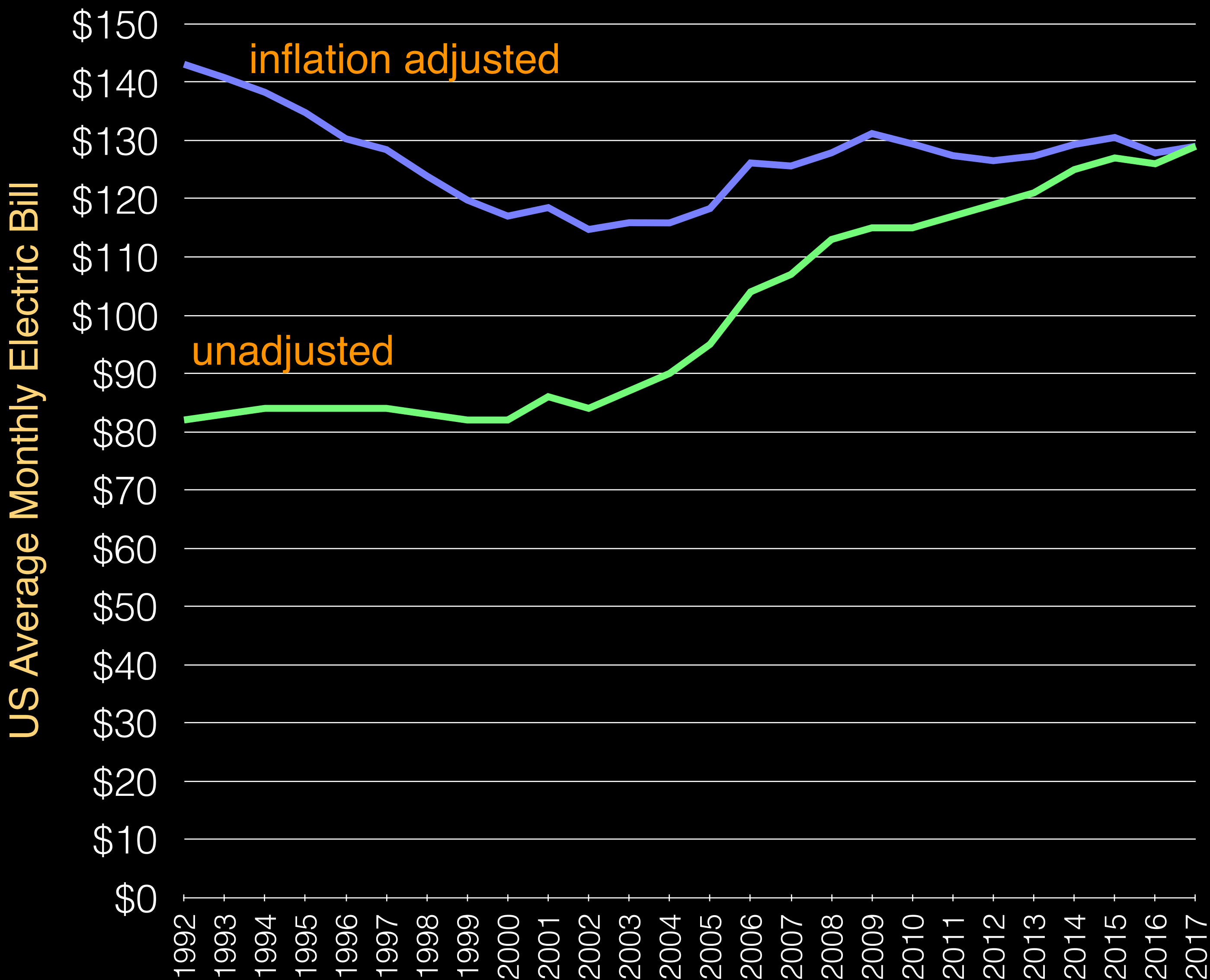
Cost Index of U.S. Consumer Items: Not Inflation Adjusted



Notes

- Prices indexed to 1 in 1980
- Electricity has increased the least
- Wages have not kept up with most household expenses
- Food prices are volatile, often moving in concert with the price of oil and natural gas

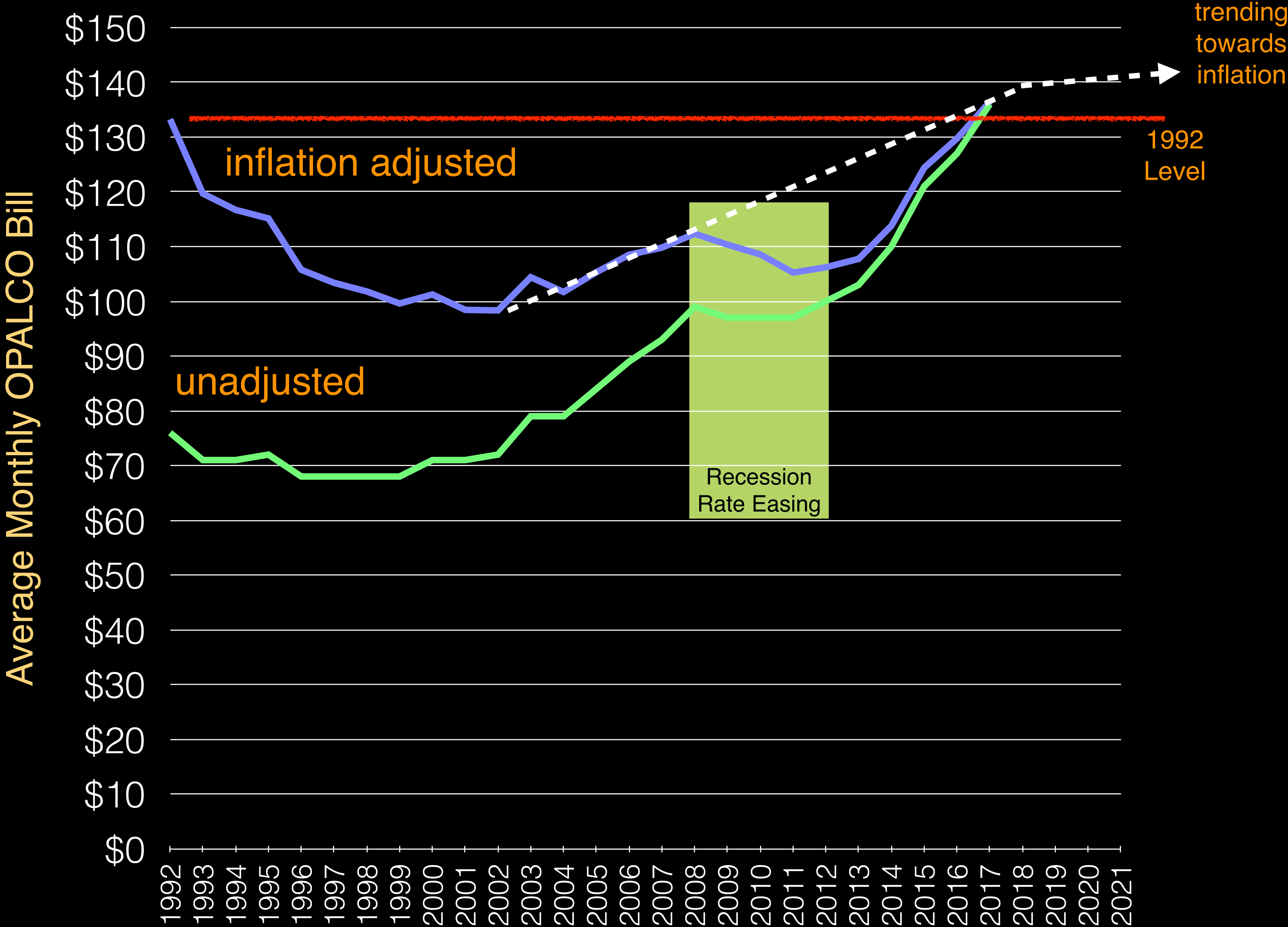
History of 1,000 kWh Monthly Bill U.S., inflation adjusted



Notes

- 1992 through 2017, Residential
- Historically, average OPALCO member usage has been 1,000 kWh/month
- Monthly bill includes all Facility, Usage Charges for US and OPALCO
- OPALCO Rate increases postponed during 2008 - 2011 recession and after effects, to ease economic impact on county.

History of 1,000 kWh Monthly Bill OPALCO, inflation adjusted



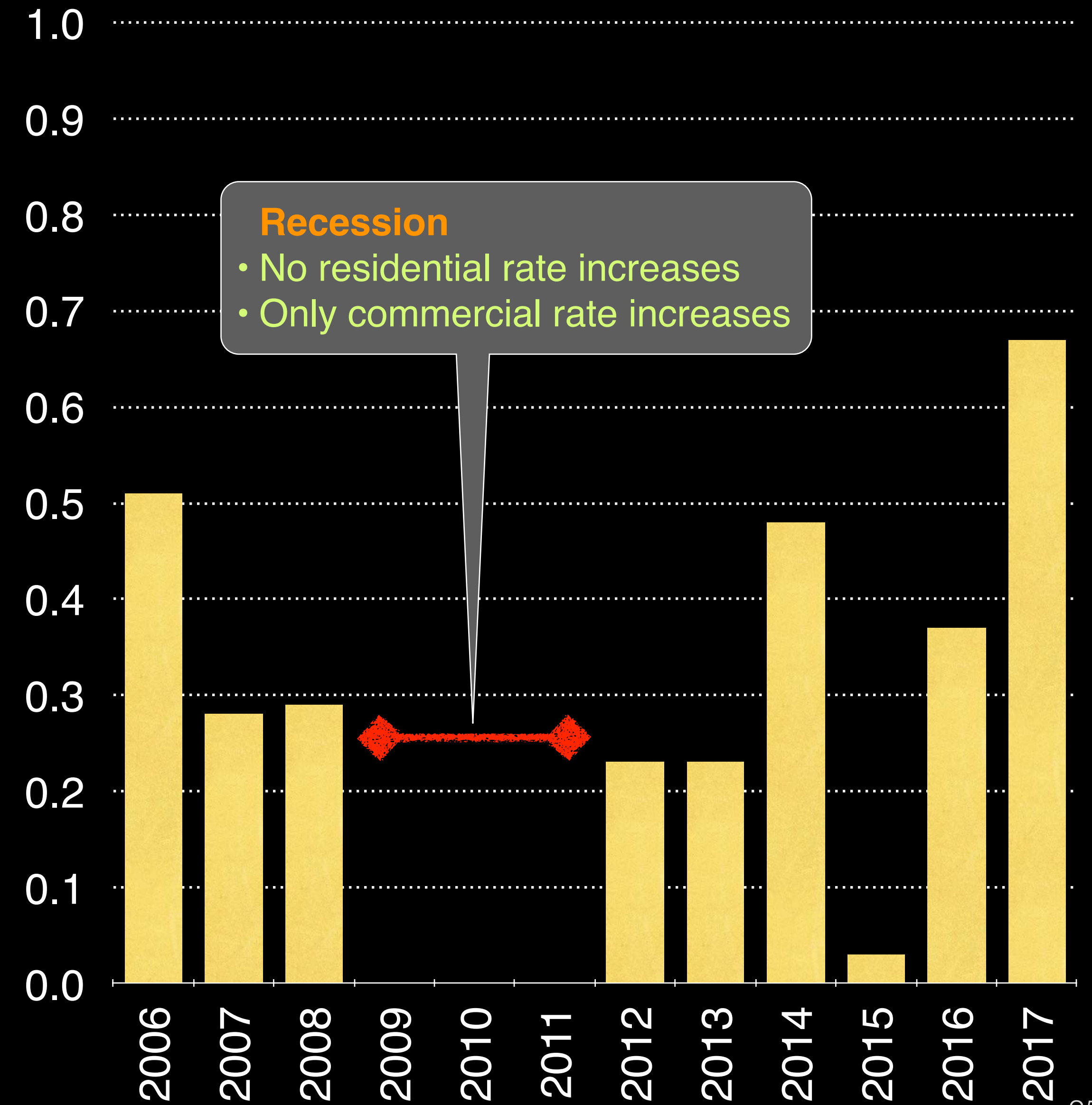
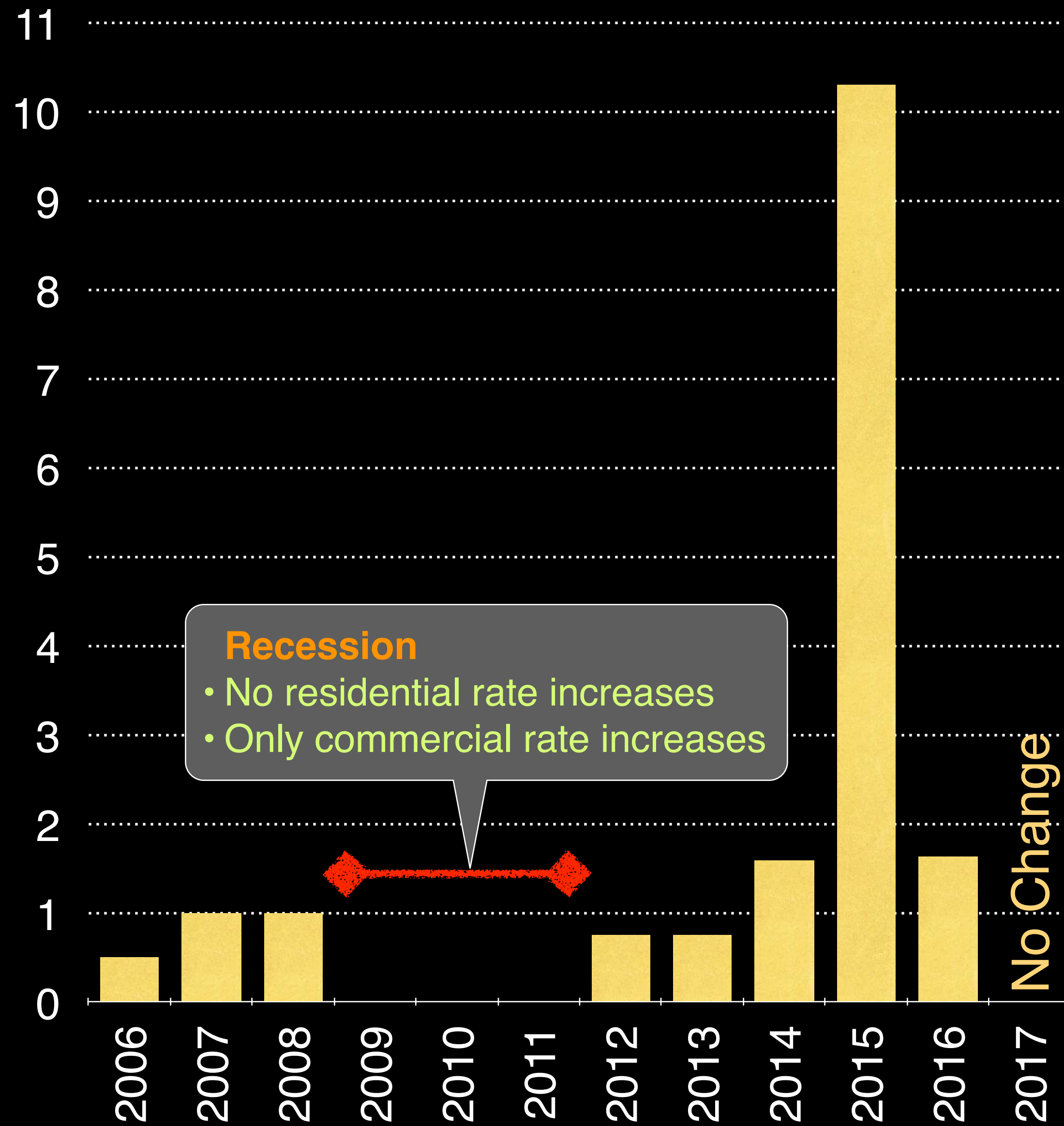
Notes

- OPALCO 2017 average bills are about the same as they were 25 years ago
- 1992 through 2017, Residential
- Historically, average OPALCO member usage has been 1,000 kWh/month
- Monthly bill includes all Facility, Usage Charges
- OPALCO Rate increases postponed during 2008 - 2011 recession and after effects, to ease economic impact on county.

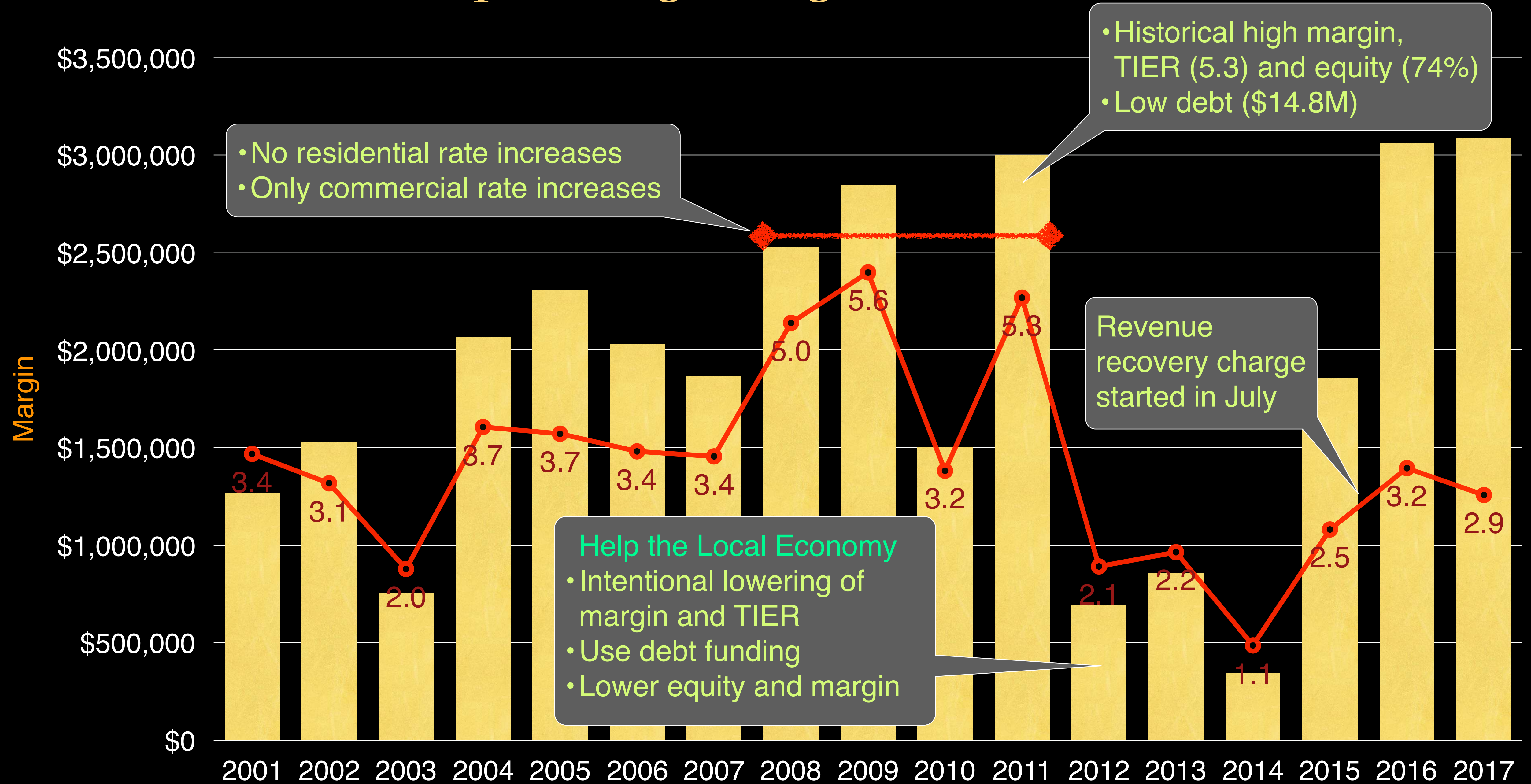
Residential Rate History: Monthly Facility Charge and Usage

Facility Charge Change (\$)

kWH Charge Change (¢)



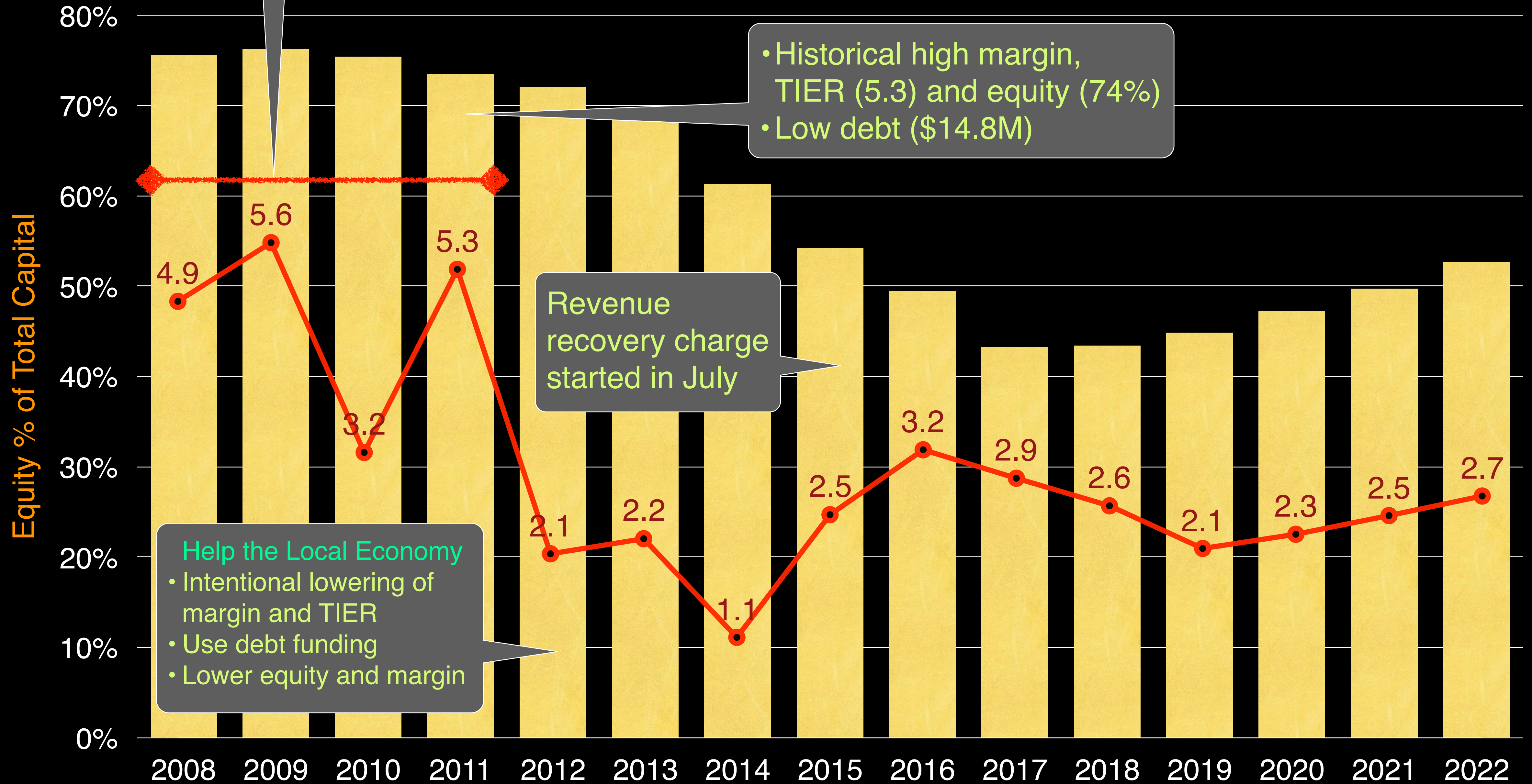
Operating Margin and TIER



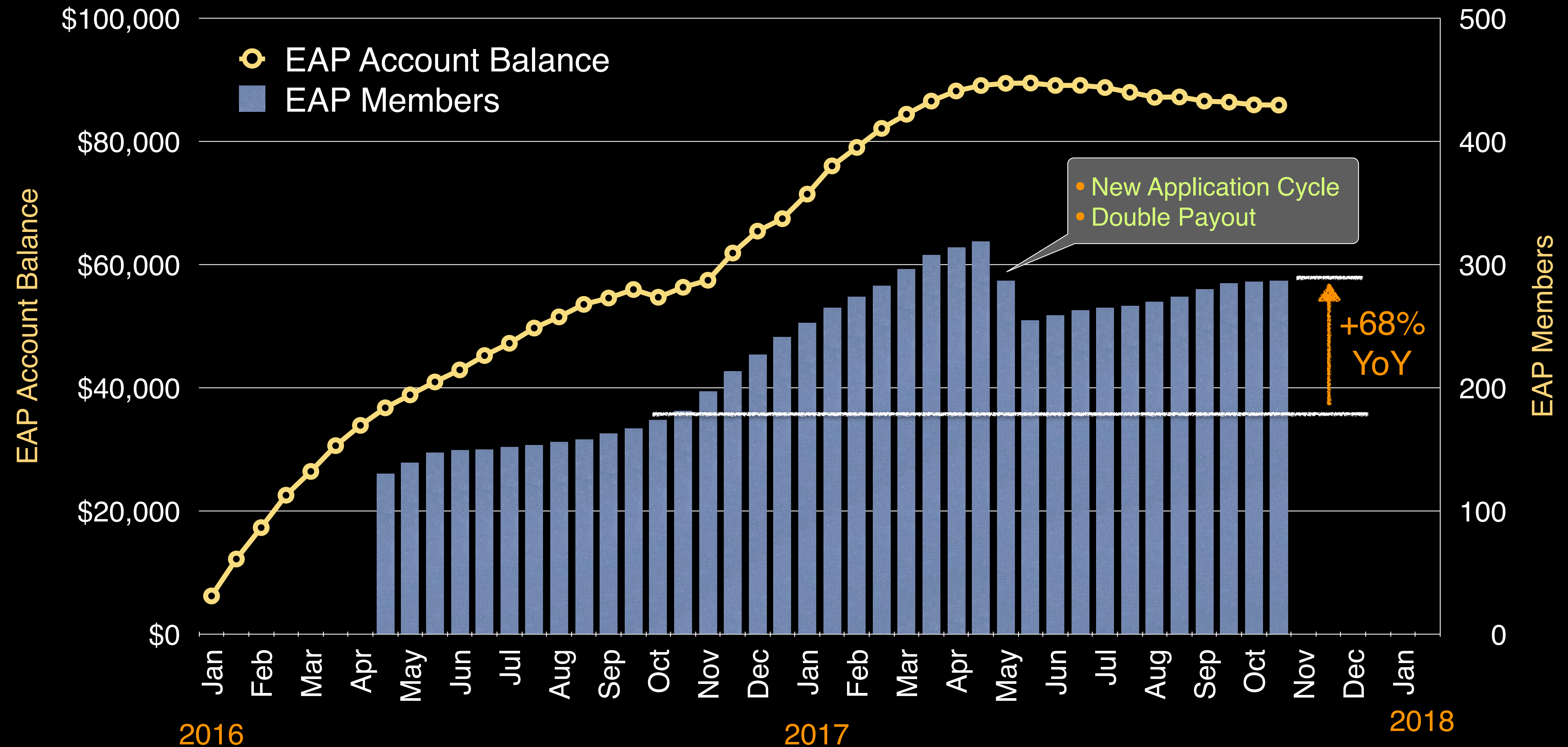
- No residential rate increases
- Only commercial rate increases

Equity and TIER

- Historical high margin, TIER (5.3) and equity (74%)
- Low debt (\$14.8M)



New Energy Assistance Program: (In addition to PAL and LIHEAP)



Discussion

Thank You!