

10-Year Financial Plan Update

FYE 2019 through FYE 2028

Eric Sandler, Chief Financial Officer

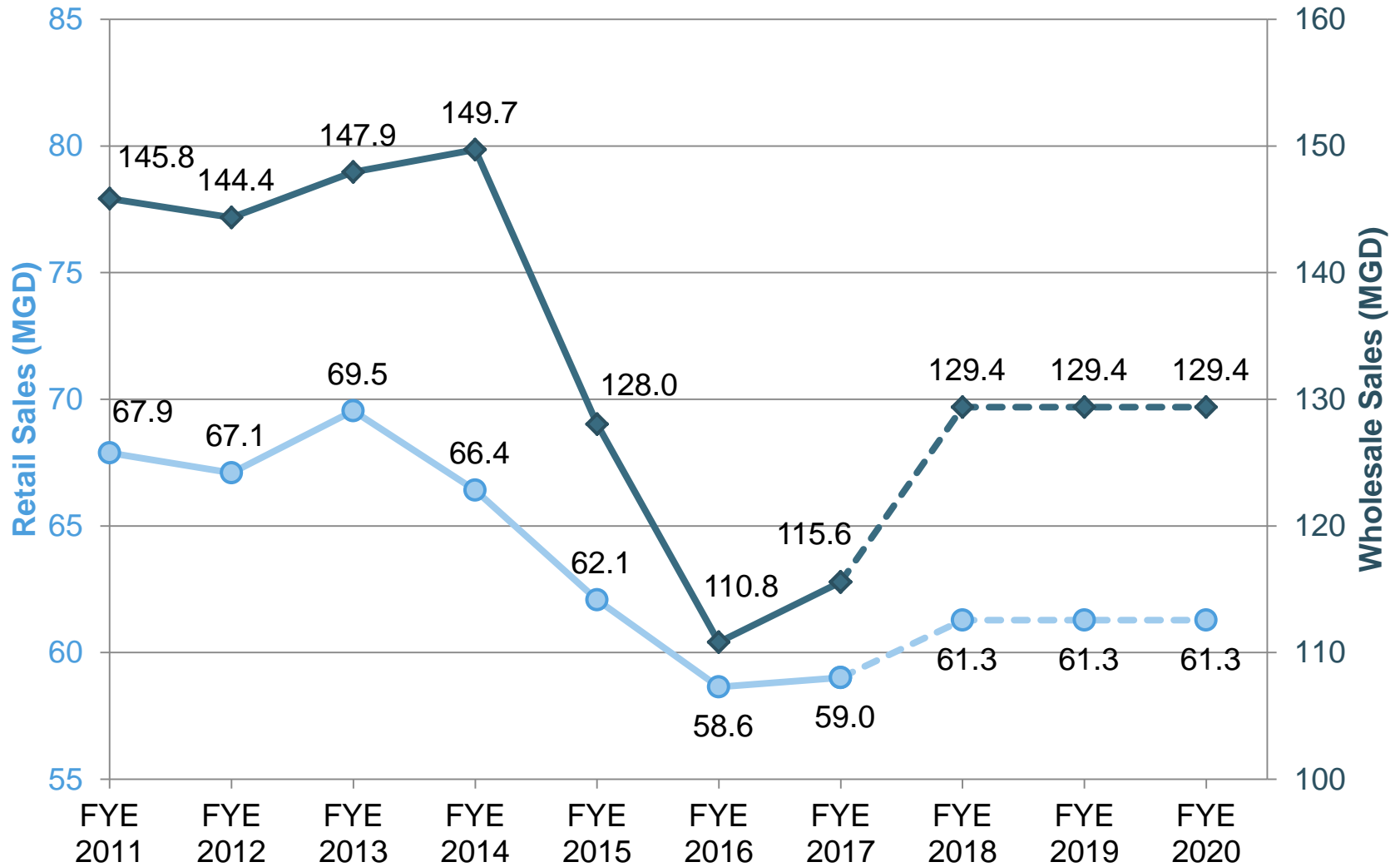
February 13, 2018



Key Assumptions — Water

- Conforms with Commission-approved financial policies
- FYE 19/20 proposed Operating Budgets are incorporated
- Sales volumes increased slightly in current year from historic lows, but assumed flat going forward
 - **Retail:** slight increase in volumes assumed—at 61.3 MGD for FYE 2018 onward, compared to 59.3 MGD in prior plan
 - **Wholesale:** moderate increase in volumes—at 129.4 MGD from FYE 2018 onward, compared to 117.5 MGD in prior plan
- FYE 19/20 proposed Capital Budget and 10 Year Capital Plan update are incorporated

Water Sales Volumes





Water Enterprise Projections

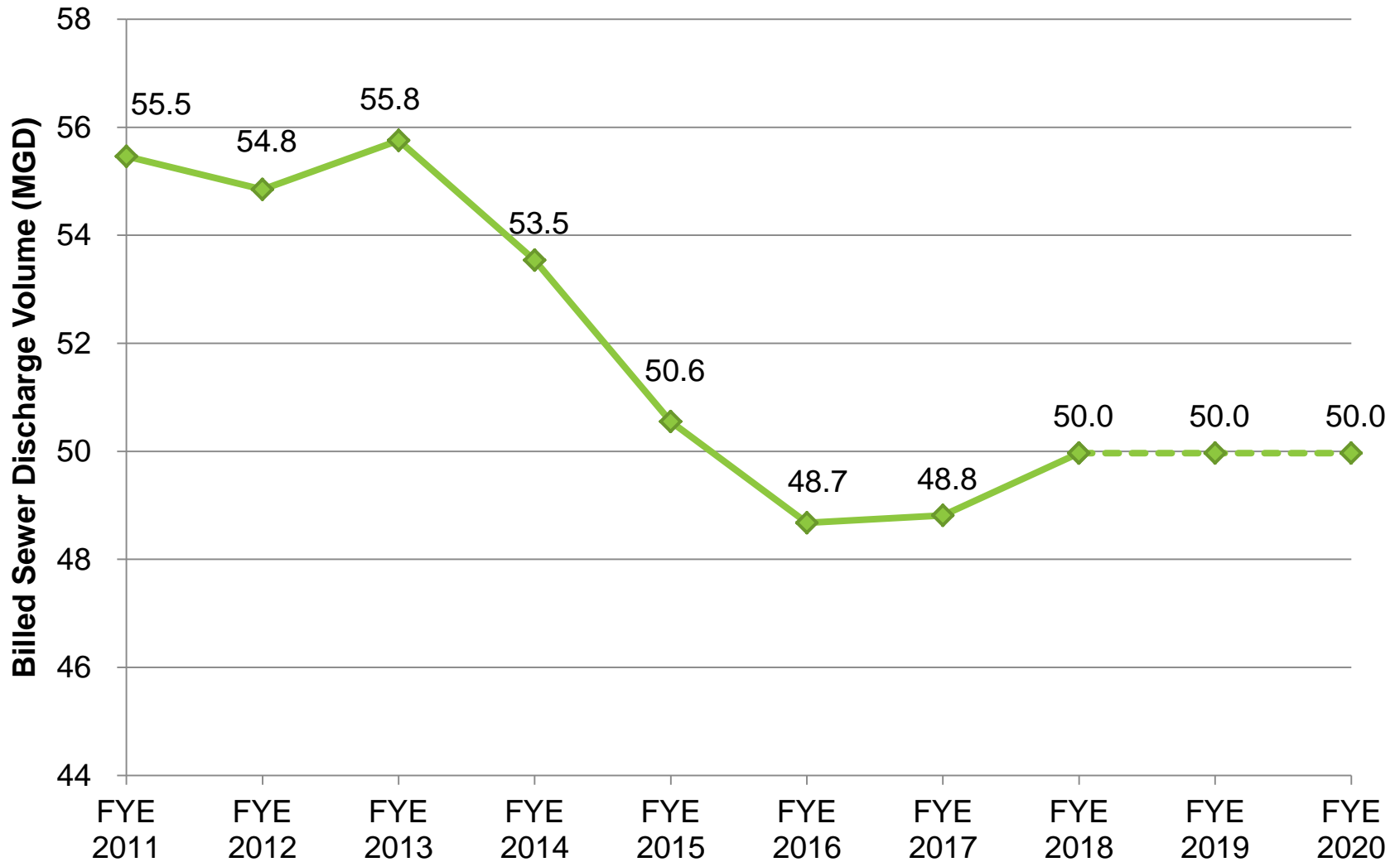
(\$M)	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Beginning Fund Balance	\$ 174.2	\$ 223.9	\$ 222.9	\$ 202.5	\$ 188.3	\$ 175.4	\$ 157.7	\$ 162.6	\$ 157.0	\$ 153.4	\$ 152.1
Sources											
Retail Water Sales	256.5	279.5	301.9	323.0	345.7	369.8	395.7	415.5	436.3	453.7	471.9
Wholesale											
Wholesale Share of Operating Costs	109.0	109.3	111.9	112.9	113.0	117.7	129.1	135.1	138.6	142.6	146.0
Wholesale Share of Capital & Debt	<u>155.2</u>	<u>154.9</u>	<u>153.0</u>	<u>151.3</u>	<u>151.3</u>	<u>164.3</u>	<u>187.3</u>	<u>195.7</u>	<u>209.9</u>	<u>217.4</u>	<u>234.0</u>
Wholesale Water Sales	264.2	264.2	264.9	264.2	264.2	282.0	316.4	330.8	348.5	359.9	380.0
Other Miscellaneous Income	<u>96.2</u>	<u>59.1</u>	<u>59.5</u>	<u>109.8</u>	<u>100.8</u>	<u>61.1</u>	<u>61.6</u>	<u>62.1</u>	<u>62.3</u>	<u>62.9</u>	<u>63.3</u>
Total Sources	616.9	\$ 602.9	\$ 626.3	\$ 697.1	\$ 710.7	\$ 712.9	\$ 773.8	\$ 808.4	\$ 847.1	\$ 876.6	\$ 915.2
Uses											
Operations & Maintenance	219.5	237.7	250.5	256.8	263.4	268.3	276.2	285.7	293.8	302.0	310.4
Hetchy Transfer	32.6	33.6	34.6	35.6	36.7	37.8	38.9	40.1	41.3	42.5	43.8
Debt Service	256.0	283.7	306.3	320.5	332.0	355.4	383.7	399.9	422.1	439.0	451.2
Revenue-Funded Projects - Retail	40.6	30.4	30.2	88.8	79.4	55.9	57.1	73.6	76.4	77.9	85.4
Revenue-Funded Projects - Wholesale	<u>18.4</u>	<u>26.4</u>	<u>26.4</u>	<u>13.2</u>	<u>13.2</u>	<u>15.2</u>	<u>15.9</u>	<u>16.5</u>	<u>19.8</u>	<u>18.5</u>	<u>26.4</u>
Total Uses	567.1	\$ 611.7	\$ 648.0	\$ 715.0	\$ 724.8	\$ 732.5	\$ 771.7	\$ 815.9	\$ 853.5	\$ 880.0	\$ 917.1
Net Revenues	49.7	\$ (8.9)	\$ (21.7)	\$ (17.9)	\$ (14.1)	\$ (19.6)	\$ 2.0	\$ (7.5)	\$ (6.3)	\$ (3.4)	\$ (2.0)
Ending Fund Balance	223.9	\$ 215.0	\$ 201.2	\$ 184.6	\$ 174.2	\$ 155.8	\$ 159.7	\$ 155.1	\$ 150.6	\$ 150.0	\$ 150.2
Rate Increase - Retail	7.0%	9.0%	8.0%	7.0%	7.0%	7.0%	7.0%	5.0%	5.0%	4.0%	4.0%
Rate Increase - Wholesale	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	12.5%	4.2%	5.4%	3.1%	5.7%
Fund Balance as % of Op. Expenses	89%	82%	71%	64%	58%	52%	52%	48%	46%	44%	43%
Debt Service Coverage (Current)	1.33	1.18	1.13	1.12	1.13	1.15	1.20	1.21	1.22	1.22	1.25
Debt Service Coverage (Indenture)	2.00	1.97	1.85	1.75	1.69	1.65	1.62	1.62	1.59	1.57	1.59
Revenue-Funded % of Capital	35%										



Key Assumptions — Wastewater

- Conforms with Commission-approved policies
- FYE 19/20 proposed Operating Budgets are incorporated
- Minimal increase in billed volumes projected as water usage increases slightly from drought
 - 50.0 MGD projected in FYE 2018 onward
 - Compares to 48.9 MGD projection in prior plan
- FYE 19/20 proposed Capital Budget and 10 Year Capital Plan update are incorporated
 - SSIP bond issuance schedule updated following re-baselining, moving out the projected increase in debt service
 - Incorporates SRF loans already received, but does not assume WIFIA or future SRF loans for biosolids

Wastewater Sales Volumes





Wastewater Enterprise Projections

(\$M)	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Beginning Fund Balance	\$ 144.7	\$ 198.8	\$ 190.5	\$ 186.8	\$ 189.8	\$ 190.4	\$ 183.3	\$ 174.6	\$ 163.5	\$ 153.2	\$ 132.1
Sources											
Sewer Charges	306.0	328.0	350.9	378.9	409.2	446.1	490.7	539.8	593.7	653.2	718.6
Interest Income	1.5	2.8	3.0	3.0	3.7	3.7	4.0	3.8	3.6	3.6	3.1
Federal Bond Interest Subsidy	4.0	4.0	4.0	4.0	4.0	4.0	3.8	3.7	3.5	3.4	3.2
Other Miscellaneous Income	10.3	9.7	8.1	8.2	8.2	8.3	8.3	8.4	8.4	8.5	8.6
Total Sources	\$ 321.8	\$ 344.5	\$ 366.1	\$ 394.1	\$ 425.1	\$ 462.0	\$ 506.9	\$ 555.7	\$ 609.3	\$ 668.7	\$ 733.5
Uses											
Operations & Maintenance	168.8	176.7	181.6	186.7	192.0	197.5	203.1	208.8	214.6	220.7	226.9
Debt Service	50.5	63.1	70.7	81.8	116.3	149.7	184.6	223.7	264.0	322.8	390.2
Revenue-Funded Projects	47.5	112.9	117.6	122.5	116.2	122.0	128.0	134.3	140.9	146.3	153.6
Total Uses	\$ 266.8	\$ 352.7	\$ 369.8	\$ 391.0	\$ 424.5	\$ 469.1	\$ 515.6	\$ 566.8	\$ 619.6	\$ 689.8	\$ 770.7
Net Revenues	\$ 55.0	\$ (8.3)	\$ (3.7)	\$ 3.0	\$ 0.6	\$ (7.1)	\$ (8.7)	\$ (11.1)	\$ (10.3)	\$ (21.1)	\$ (37.2)
Ending Fund Balance	\$ 199.8	\$ 190.5	\$ 186.8	\$ 189.8	\$ 190.4	\$ 183.3	\$ 174.6	\$ 163.5	\$ 153.2	\$ 132.1	\$ 94.9
Retail Rate Increase	11.0%	7.0%	7.0%	8.0%	8.0%	9.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Fund Balance as % of Op. Expenses	118%	108%	103%	102%	99%	93%	86%	78%	71%	60%	42%
Debt Service Coverage (Current)	3.02	2.66	2.61	2.54	2.01	1.77	1.65	1.55	1.49	1.39	1.30
Debt Service Coverage (Indenture)	5.89	5.90	5.65	4.82	3.64	3.04	2.64	2.33	2.11	1.86	1.63
Revenue-Funded % of Capital	23%										



Combined Water & Wastewater Retail Rate Changes

Actual

Projected

Fiscal Year	FYE 2017 Combined	FYE 2018 Combined	FYE 2019 Projection				
			Water Nominal	Wastewater Nominal	FYE 2019 Combined	Change vs. Prior Year	Change vs. 2 Years Ago
FYE 2010			15.0%	7.0%	10.1%		
FYE 2011			15.0%	7.0%	10.2%		
FYE 2012			12.5%	5.0%	8.2%		
FYE 2013			12.5%	5.0%	8.3%		
FYE 2014			6.5%	5.0%	5.7%		
FYE 2015			12.0%	5.0%	8.2%		
FYE 2016			12.0%	5.0%	8.3%		
FYE 2017			10.0%	7.0%	8.4%		
FYE 2018			7.0%	11.0%	9.2%		
FYE 2019	12.2%	12.7%	9.0%	7.0%	7.9%	-4.8%	-4.3%
FYE 2020	12.7%	8.9%	8.0%	7.0%	7.5%	-1.5%	-5.2%
FYE 2021	12.7%	8.5%	7.0%	8.0%	7.5%	-0.9%	-5.1%
FYE 2022	9.8%	9.0%	7.0%	8.0%	7.5%	-1.5%	-2.3%
FYE 2023	8.3%	10.0%	7.0%	9.0%	8.1%	-1.9%	-0.2%
FYE 2024	8.4%	10.6%	7.0%	10.0%	8.7%	-1.9%	0.3%
FYE 2025	7.2%	8.5%	5.0%	10.0%	7.8%	-0.6%	0.6%
FYE 2026	5.2%	9.2%	5.0%	10.0%	7.9%	-1.3%	2.7%
FYE 2027	4.4%	7.1%	4.0%	10.0%	7.6%	0.5%	3.1%
FYE 2028	3.8%	5.6%	4.0%	10.0%	7.6%	2.1%	3.8%
FYE 2029	3.9%	2.3%	2.0%	11.0%	7.6%	5.4%	3.8%
FYE 2030	3.3%	3.6%	2.0%	10.0%	7.1%	3.6%	3.9%
FYE 2031	3.3%	2.3%	2.0%	3.0%	2.6%	0.3%	-0.6%
FYE 2032	3.3%	3.0%	2.0%	3.0%	2.6%	-0.3%	-0.6%
FYE 2033	3.3%	3.0%	1.0%	3.0%	2.3%	-0.7%	-1.0%
FYE 2034	3.3%	4.0%	1.0%	3.0%	2.3%	-1.7%	-1.0%
FYE 2035	3.3%	4.0%	1.0%	3.0%	2.3%	-1.7%	-1.0%
FYE 2036	3.3%	2.7%	1.0%	3.0%	2.3%	-0.4%	-1.0%
FYE 2037	2.3%	2.7%	1.0%	3.0%	2.3%	-0.3%	0.0%
FYE 2038	2.3%	2.0%	1.0%	3.0%	2.3%	0.3%	0.0%



Combined Water & Wastewater Average Single Family Monthly Bill

Actual

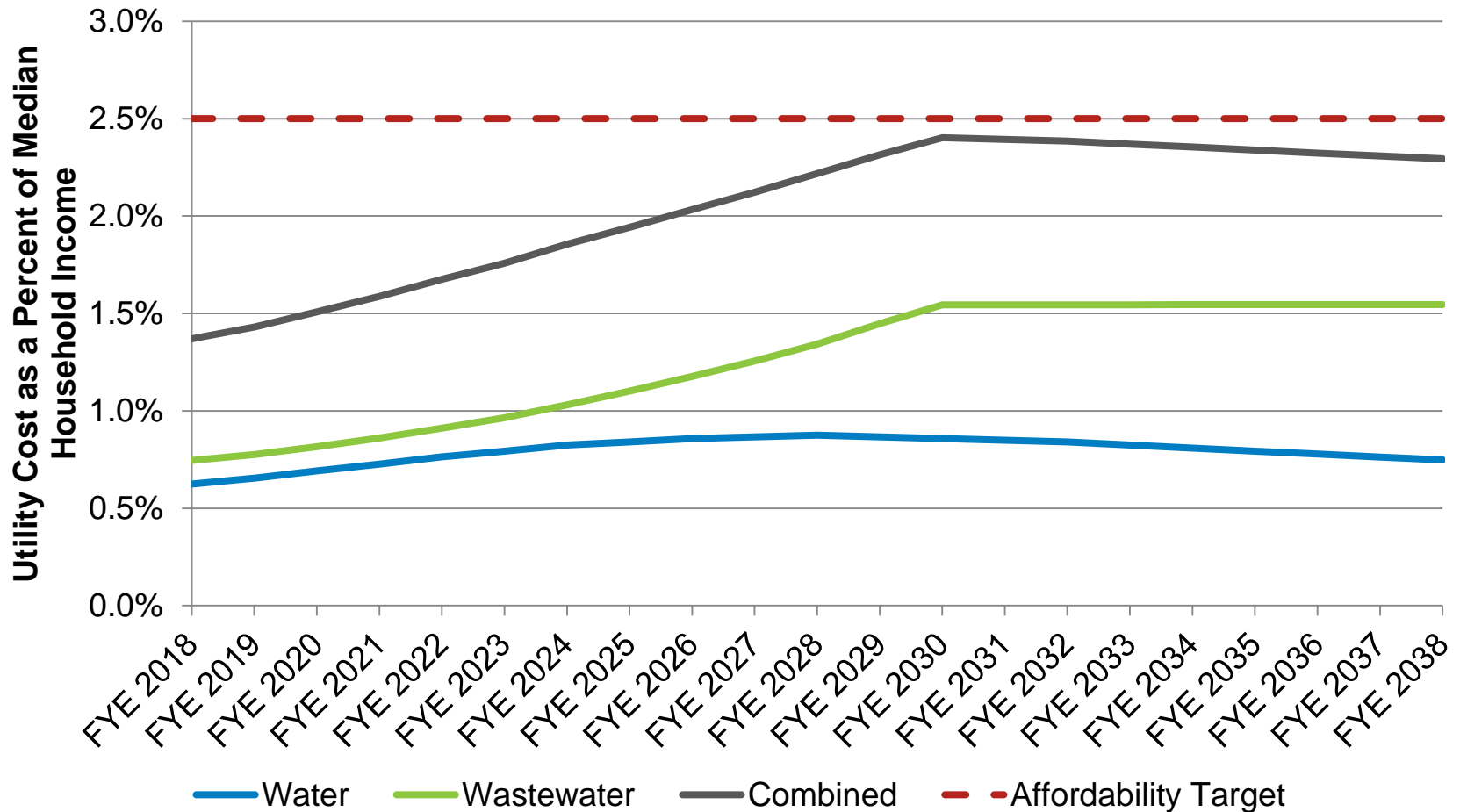
Fiscal Year	FYE 2017 Combined	FYE 2018 Combined	FYE 2019 Projection				
			Water	Wastewater	FYE 2019 Combined	Change vs. Prior Year	Change vs. 2 Years Ago
FYE 2010			\$24	\$38	\$62		
FYE 2011			\$28	\$41	\$69		
FYE 2012			\$31	\$43	\$74		
FYE 2013			\$36	\$47	\$83		
FYE 2014			\$37	\$47	\$85		
FYE 2015			\$37	\$44	\$81		
FYE 2016			\$39	\$45	\$84		
FYE 2017			\$44	\$50	\$94		
FYE 2018			\$48	\$58	\$106		
FYE 2019	\$117	\$114	\$52	\$62	\$114	\$0	-\$3
FYE 2020	\$132	\$124	\$57	\$67	\$124	\$0	-\$8
FYE 2021	\$148	\$135	\$62	\$73	\$134	-\$1	-\$14
FYE 2022	\$163	\$147	\$67	\$80	\$146	-\$1	-\$17
FYE 2023	\$176	\$162	\$71	\$87	\$158	-\$3	-\$18
FYE 2024	\$191	\$179	\$76	\$95	\$172	-\$7	-\$19
FYE 2025	\$205	\$194	\$80	\$105	\$185	-\$9	-\$20
FYE 2026	\$216	\$212	\$84	\$115	\$200	-\$12	-\$16
FYE 2027	\$225	\$227	\$88	\$127	\$215	-\$12	-\$11
FYE 2028	\$234	\$239	\$91	\$140	\$231	-\$8	-\$3
FYE 2029	\$243	\$245	\$93	\$155	\$248	\$3	\$5
FYE 2030	\$251	\$253	\$95	\$171	\$265	\$12	\$14
FYE 2031	\$259	\$259	\$97	\$176	\$272	\$13	\$13
FYE 2032	\$268	\$267	\$99	\$181	\$279	\$13	\$12
FYE 2033	\$276	\$275	\$100	\$186	\$286	\$11	\$10
FYE 2034	\$285	\$286	\$101	\$192	\$293	\$7	\$7
FYE 2035	\$295	\$297	\$102	\$198	\$299	\$2	\$4
FYE 2036	\$305	\$305	\$103	\$204	\$306	\$1	\$2
FYE 2037	\$312	\$314	\$104	\$210	\$313	\$0	\$2
FYE 2038	\$319	\$320	\$105	\$216	\$321	\$1	\$2

Projected



Utility Affordability

Cost as a Percent of Median Household Income

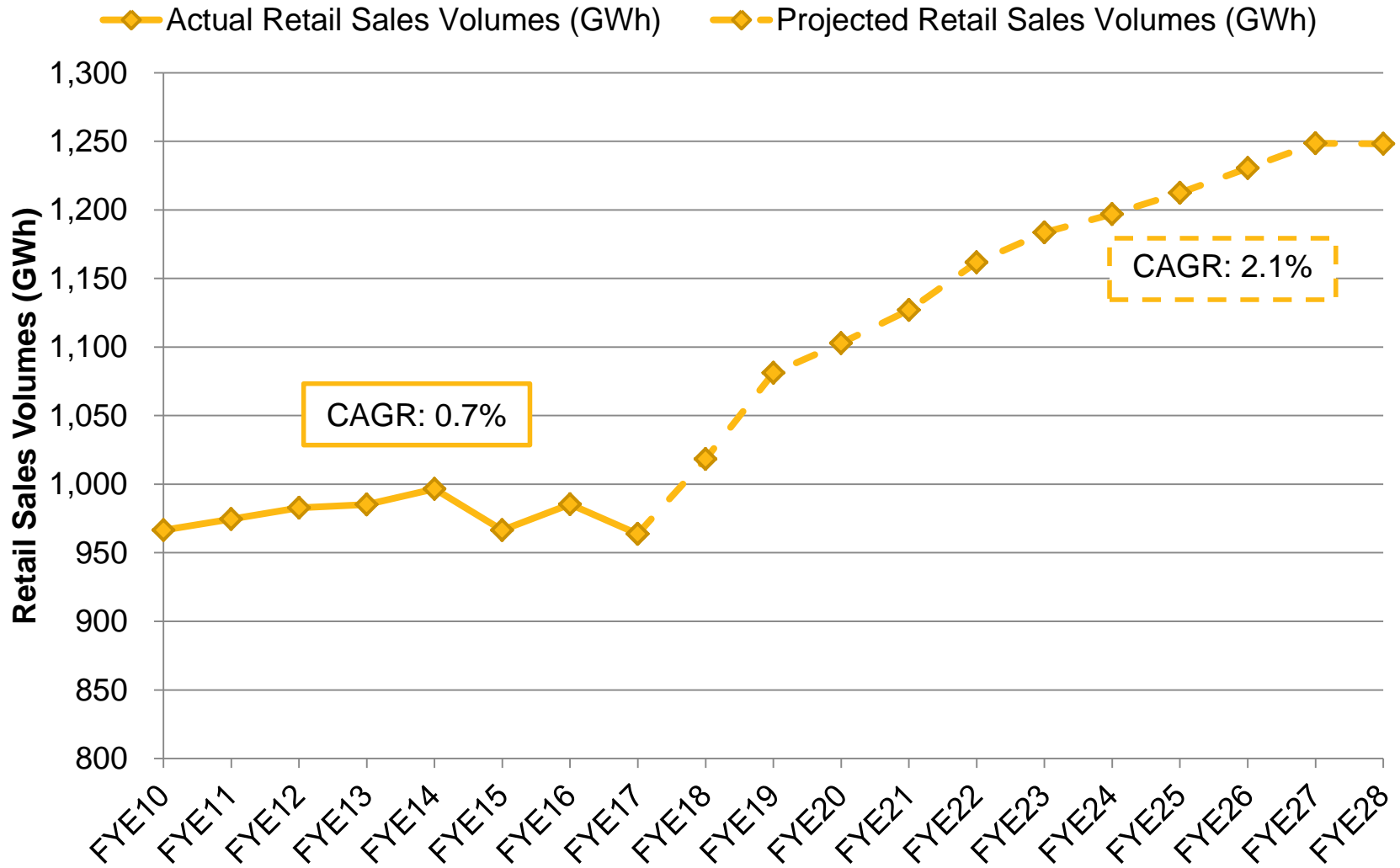




Key Assumptions — Hetch Hetchy Water and Power Power Enterprise

- Conforms with Commission-approved financial policies
- FYE 19/20 proposed Operating Budgets are incorporated
- FYE 19/20 proposed Capital Budget and 10 Year Capital Plan update are incorporated
 - Does not incorporate possible future debt issuance from proposed ballot initiative to fund new power infrastructure which are currently revenue funded
- Sales volumes
 - 2.1% compound annual growth rate on projected sales volumes FYE 18-28
 - Assumes FYE 19/20 volume growth from new transfer load customers

Power Enterprise Sales Volumes





Hetch Hetchy Water and Power Projections

(\$M)	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Beginning Fund Balance	\$ 49.6	\$ 51.6	\$ 37.9	\$ 32.8	\$ 34.6	\$ 40.4	\$ 50.2	\$ 60.9	\$ 70.3	\$ 75.1	\$ 76.2
Sources											
Power Sales - Municipal General Fund Rates	28.6	35.2	37.7	40.1	42.2	44.3	46.4	48.5	50.7	52.8	54.9
Power Sales - Municipal Enterprise Rates	83.5	83.4	85.8	88.8	94.9	100.3	104.9	109.4	114.3	119.2	122.4
Power Sales - Retail	6.7	14.5	19.7	19.6	23.4	25.5	27.2	29.8	32.5	35.8	37.5
Power Sales - Wholesale	6.1	17.9	17.4	19.4	19.5	19.2	19.1	19.0	18.9	18.8	19.4
Gas & Steam Sales	11.3	12.5	12.5	12.8	13.2	13.6	14.0	14.4	14.9	15.3	15.8
Water Sales	1.2	2.7	2.9	3.1	3.4	3.6	3.8	3.9	4.1	4.3	4.5
Hetchy Transfer	32.6	33.6	34.6	35.6	36.7	37.8	38.9	40.1	41.3	42.5	43.8
Other Misc Income	16.1	19.0	19.0	16.7	13.9	14.2	14.8	15.3	15.8	16.4	16.7
Total Sources	\$ 186.2	\$ 218.7	\$ 229.6	\$ 236.2	\$ 247.1	\$ 258.5	\$ 269.1	\$ 280.6	\$ 292.5	\$ 305.2	\$ 315.0
Uses											
Operations & Maintenance	141.8	182.7	189.0	201.3	208.4	216.4	224.5	233.3	242.6	252.3	261.4
Debt Service	4.8	4.8	4.7	4.2	4.3	8.1	13.3	18.6	25.7	32.6	37.1
Revenue-Funded Projects	39.3	44.9	41.0	28.8	28.6	24.3	20.6	19.4	19.4	19.2	19.2
Total Uses	\$ 185.9	\$ 232.4	\$ 234.7	\$ 234.3	\$ 241.3	\$ 248.7	\$ 258.4	\$ 271.2	\$ 287.7	\$ 304.0	\$ 317.7
Net Revenues	\$ 0.2	\$ (13.7)	\$ (5.1)	\$ 1.8	\$ 5.8	\$ 9.8	\$ 10.7	\$ 9.4	\$ 4.8	\$ 1.2	\$ (2.8)
Ending Fund Balance	\$ 49.8	\$ 37.9	\$ 32.8	\$ 34.6	\$ 40.4	\$ 50.2	\$ 60.9	\$ 70.3	\$ 75.1	\$ 76.2	\$ 73.5
Fund Balance as % of Power Op. Expenses	49%	30%	25%	25%	28%	33%	39%	43%	45%	44%	41%
Debt Service Coverage (Current)	7.34	7.38	8.55	7.52	9.04	5.25	3.35	2.56	1.95	1.63	1.44
Debt Service Coverage (Indenture)	28.75	33.84	30.58	25.19	26.32	12.58	7.72	6.17	4.86	4.05	3.56
Revenue-Funded % of Capital	31%										



Selected Average Power Rates

(\$/kWh)	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Municipal General Fund Rates											
All General Fund	0.07976	0.08476	0.08984	0.09459	0.09959	0.10459	0.10959	0.11459	0.11959	0.12459	0.12959
Municipal Enterprise Rates											
Airport	0.14029	0.14068	0.14352	0.14616	0.15055	0.15506	0.15971	0.16451	0.16944	0.17452	0.17976
Other Enterprise Departments	0.16769	0.17415	0.17767	0.18099	0.18641	0.19201	0.19777	0.20370	0.20981	0.21611	0.22259
Wholesale Rates											
Market Rate Sales	0.02258	0.04663	0.04803	0.04947	0.05095	0.05248	0.05406	0.05568	0.05735	0.05907	0.06084
Retail/Redevelopment Rates											
Residential	0.20869	0.21495	0.22140	0.22804	0.23488	0.24193	0.24919	0.25666	0.26436	0.27230	0.28046
Medium Commercial, Secondary Voltage	0.18378	0.18929	0.19497	0.20082	0.20685	0.21305	0.21944	0.22603	0.23281	0.23979	0.24698
Industrial, Primary Voltage	0.13748	0.14161	0.14586	0.15023	0.15474	0.15938	0.16416	0.16909	0.17416	0.17939	0.18477

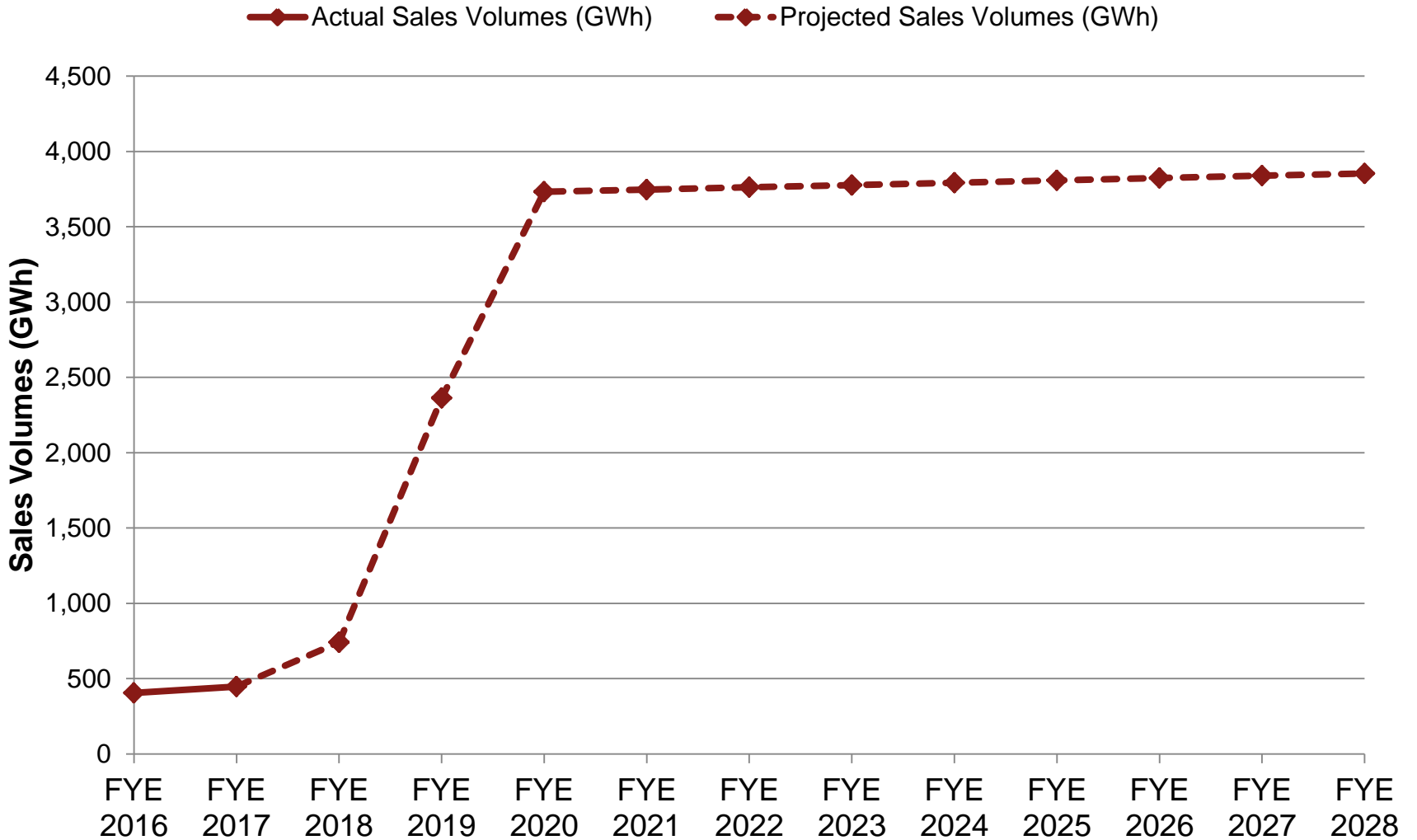


Key Assumptions — CleanPowerSF

- Conforms with Commission-approved financial policies, except during ramp up period where fund balance is below policy threshold
- FYE 19/20 proposed Operating Budgets are incorporated
- Phase II customer roll-out in July 2018, Phase III customer roll-out in July 2019
- Sales Volumes
 - 20% compound annual growth rate on sales volumes FYE 16-28
 - 385% compound annual growth rate on sales volumes FYE 19-28



CleanPowerSF Enterprise Sales Volumes





CleanPowerSF Projections

(\$M)	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
Beginning Fund Balance	\$ 8.9	\$ 12.1	\$ 25.1	\$ 49.0	\$ 69.6	\$ 86.4	\$ 102.0	\$ 116.8	\$ 130.4	\$ 143.0	\$ 154.5
Sources											
Power Sales	40.3	166.1	261.1	270.2	279.5	289.3	299.4	309.8	320.5	331.5	342.8
Total Sources	\$ 40.3	\$ 166.1	\$ 261.1	\$ 270.2	\$ 279.5	\$ 289.3	\$ 299.4	\$ 309.8	\$ 320.5	\$ 331.5	\$ 342.8
Uses											
Supply	28.6	129.6	209.3	221.2	234.9	245.0	255.4	266.1	277.1	288.4	300.2
Operating Costs	6.4	21.5	25.9	27.2	27.9	28.6	29.3	30.0	30.8	31.6	32.4
Debt Service	2.1	2.1	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Uses	\$ 37.1	\$ 153.1	\$ 237.2	\$ 249.6	\$ 262.8	\$ 273.6	\$ 284.7	\$ 296.1	\$ 307.9	\$ 320.0	\$ 332.6
Net Revenues	\$ 3.2	\$ 13.0	\$ 23.9	\$ 20.6	\$ 16.8	\$ 15.7	\$ 14.7	\$ 13.7	\$ 12.6	\$ 11.5	\$ 10.2
Ending Fund Balance	\$ 12.1	\$ 25.1	\$ 49.0	\$ 69.6	\$ 86.4	\$ 102.0	\$ 116.8	\$ 130.4	\$ 143.0	\$ 154.5	\$ 164.7
Fund Balance as % of Operating Expenses	35%	17%	21%	28%	33%	37%	41%	44%	46%	48%	50%



Selected Average CleanPowerSF Rates

(\$/kWh)	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028
CleanPowerSF Retail Rates											
Residential	0.06813	0.06511	0.06704	0.06905	0.07113	0.07326	0.07546	0.07772	0.08005	0.08246	0.08493
Medium Commercial, Secondary Voltage	0.08126	0.07357	0.07542	0.07769	0.08002	0.08244	0.08491	0.08744	0.09006	0.09274	0.09553
Industrial, Primary Voltage	0.05578	0.07519	0.06401	0.06593	0.06791	0.06997	0.07207	0.07421	0.07644	0.07871	0.08107

Discussion

