



### Solar Repower Proposal for

**Sonoma County Water Agency** 

November 30th, 2023

White Pine Renewables 7621 N. Del Mar Avenue #102 Fresno, CA 93711

1808 Wedemeyer Street #221 San Francisco, CA, 94219

(248)-808-2015 www.WhitePineRenew.com





November 11<sup>th</sup>, 2023 Dale Roberts Principal Engineer 22501 8<sup>th</sup> St E Sonoma, CA 95476

Mr. Roberts,

White Pine Renewables is pleased to present the following proposal with updated pricing for the repowering of Sonoma County Water Agency's (SCWA) currently non-operational solar PV project. This updated pricing now reflects White Pine taking full responsibility for the decommissioning work of the existing site including removal and disposal of all material not to be repurposed for the repowered facility.

White Pine has sized the repower project option to keep the same interconnection agreement with PG&E from 2008, with favorable terms for selling energy not utilized by SCWA on the wholesale market. The energy from the repowered project will be sold via a Power Purchase Agreement (PPA), meaning there is no commitment by SCWA any upfront capital spend associated with the construction of the solar project, nor maintenance associated with the project during decommissioning, construction or operations. White Pine will assume all upfront costs for decommissioning, developing, building, and maintaining the system as part of the PPA.

Please don't hesitate to reach out with any questions on the material below—we look forward to building a successful partnership between White Pine Renewables and Sonoma County Water Agency.

Evan Riley Co-Founder, CEO White Pine Renewables (248)-808-2015 evan@whitepinerenew.com



Project Summary: Sonoma	a County Water Agency
	Solar Project Repower
Solar PV System Size <sub>dc</sub>	1,100 kW <sub>dc</sub>
Solar PV System Size <sub>ac</sub>	900 kW <sub>ac</sub> (Same as existing interconnect)
Solar PV Generation (kWh/Yr)	2,213,300 kWh
Percent Energy Offset (Average Year)	53% Offset
Exported Energy (% of Total Generation, Average Year)	31%
PPA Summary	
PPA Rate (Year 1) <sup>1</sup>	\$.0988 / kWh
PPA Term <sup>2</sup>	35 Years
PPA Escalator	1.5%
Existing Project Decommissioning	WP will decommission the existing site and remove all materials not to be re-used as part of this contract
Site License	The Site License will be inclusive of the right to operate the repower facility as well as utilize re-used material
Savings Summary	
Offsetable Bill Components of PWRPA Charges	1. Load Cost, WDT, TAC 2. RECs (SCWA obligations + excess RECs) = \$70 / REC 3. Excess Exported PV Energy to Wholesale Market
Total Bill Reduction Generated from Solar (Average Year) and \$70 / MWh RECs for PWRPA	\$.164 / kWh
Total Bill Reduction Generated from Solar (Average Year) and \$35 / MWh RECs for PWRPA	\$.125 / kWh
Energy Cost with PPA	\$.0988 / kWh
Year 1 Energy Cost Savings (\$) (Current REC Pricing) Year 1 Energy Cost Savings (\$) (50% of Current REC Pricing)	\$70 RECs: \$143,056 \$35 RECs: \$49,043
Cumulative 35 Year Energy Cost Savings (\$) (\$70 RECs) Cumulative 35 Year Energy Cost Savings (\$) (\$35 RECs)	\$70 RECs: \$15,462,274 \$35 RECs: \$4,009,202

<sup>&</sup>lt;sup>1</sup> The PPA rate shown above assumed an estimate for no PG&E interconnection upgrade costs due to the existing interconnection arrangement. In the case that interconnection costs are different than estimated, the PPA rate will be adjusted upwards by \$.0048/kWh (and vice-versa) for each additional \$100k in interconnection cost upgrades in excess of these initial estimates.

<sup>&</sup>lt;sup>2</sup> The term can be adjusted downwards as SCWA sees fit. For each 5-year reduction in PPA term, the PPA rate will increase by \$.002/kWh.



### **Project Layout**





# SCWA's Existing Interconnection Agreement and Components of Project Energy Cost Savings

The current existing interconnection agreement SCWA has with PG&E from 2008 is for a Rule 21 Small Generating Facility Interconnection Agreement (SGIA). Because of this SGIA framework, the current project, as well as the proposed repower, will be able to be registered with CAISO as a market resource under the New Resource Implementation (NRI) process and exported PV generation will be able to be scheduled into the wholesale market. This exported energy is taken into account in the energy savings modeling for the repower based on historic wholesale energy rates.

The other components of the energy cost savings the solar project generates are as follows:

- 1. Load cost
  - a. These costs fluctuate annually based on broader market dynamics. We have used the last 4 years of historic market data as a go-forward assumption for project savings into the future years of the PPA
- 2. WDT Distribution costs
  - a. These costs being offset by solar are minimal and have more to do with the peak load of the facility rather than volumetric energy charges which solar can attack
- 3. TAC Transmission charges
  - a. These charges are relatively fixed but escalate at a very high historic rate (10%+ per year). We have modeled multiple scenarios of how these charges might change and increase in the future to come up with a "75% of Historic Transmission Escalator" and "50% of Historic Transmission Escalator" view of the savings the project will generate over the term of the PPA.
- 4. Renewable Energy Credits (RECs). These fall into two categories:
  - a. RECs used to fulfill SCWA's current environmental obligations. SCWA procures an average of 1,850 RECs per year at a current cost of ~\$70/REC or ~\$129,557 per year. Solar will eliminate entirely the need for outside procurement of these RECs by the energy it produces coincident with SCWA's facility load
  - b. RECs sold into the market. The RECs bundled with exported energy into the CAISO market also have value. This value is assumed by PWRPA to be similar ~\$70/REC. These REC sale proceeds will also contribute to SCWA's total value contributed by the repowered solar project.

#### **Escalator Assumptions**

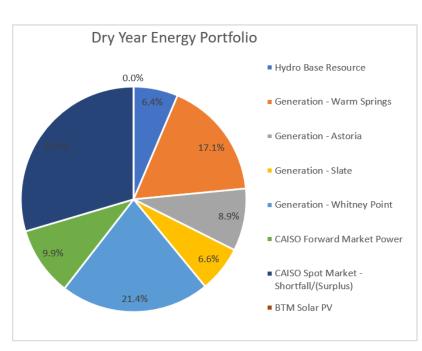
	Past Values	75% of Historic Transmission Escalator Assumptions	50% of Historic Transmission Escalator Assumptions
Load Cost	2% - 3%	2%	1%
WDT Distribution Costs	2% - 3%	2%	1%
TAC Transmission Charges	12.2%	8.7%	5.8%
REC Value	4% - 5%	2%	1%



# **Energy Portfolio Mix: Pre and Post-Solar** (Dry Year)

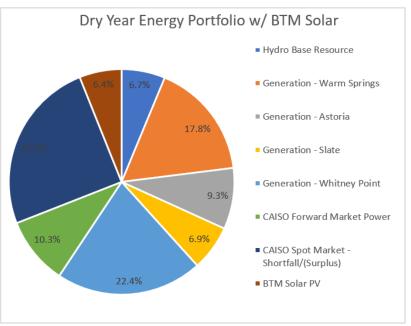
Energy Source         kWh         Policy           CAISO Energy         35,865,391           Hydro Base Resource         2,285,110           Generation - Warm Springs         6,132,000           Generation - Astoria         3,209,424           Generation - Slate         2,383,033           Generation - Whitney Point         7,690,524           CAISO Forward Market Power         3,555,370           CAISO Spot Market -         12,600,000	Dry Year (2021 basis) Energy Portfolio								
Hydro Base Resource       2,285,110         Generation - Warm Springs       6,132,000         Generation - Astoria       3,209,424         Generation - Slate       2,383,033         Generation - Whitney Point       7,690,524         CAISO Forward Market Power       3,555,370	ercent of Total								
Generation - Warm Springs 6,132,000 Generation - Astoria 3,209,424 Generation - Slate 2,383,033 Generation - Whitney Point 7,690,524 CAISO Forward Market Power 3,555,370									
Generation - Astoria 3,209,424 Generation - Slate 2,383,033 Generation - Whitney Point 7,690,524 CAISO Forward Market Power 3,555,370	6.4%								
Generation - Slate 2,383,033 Generation - Whitney Point 7,690,524 CAISO Forward Market Power 3,555,370	17.1%								
Generation - Whitney Point 7,690,524 CAISO Forward Market Power 3,555,370	8.9%								
CAISO Forward Market Power 3,555,370	6.6%								
	21.4%								
CAISO Spot Market	9.9%								
Shortfall/(Surplus) 10,609,930	29.6%								
BTM Solar PV	0.0%								

100.0%



Dry Year (2021 basis) Energy Portfolio with BTM Solar								
Energy Source	kWh	Percent of Total						
CAISO Energy	34,360,227							
Hydro Base Resource	2,285,110	6.7%						
Generation - Warm Springs	6,132,000	17.8%						
Generation - Astoria	3,209,424	9.3%						
Generation - Slate	2,383,033	6.9%						
Generation - Whitney Point	7,690,524	22.4%						
CAISO Forward Market Power	3,555,370	10.3%						
CAISO Spot Market - Shortfall/(Surplus)	9,104,766	26.5%						
BTM Solar PV	2,215,400	6.4%						

106.4%

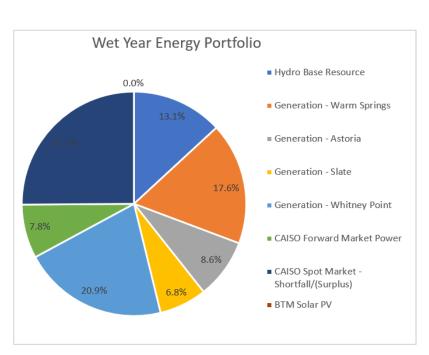




### **Energy Portfolio Mix: Pre and Post-Solar** (Wet Year)

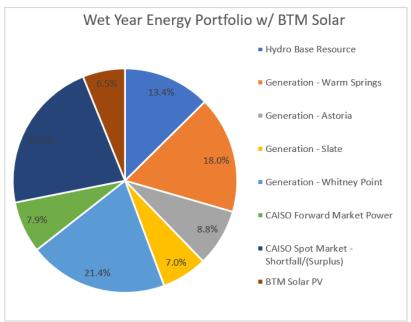
Wet Year (2019 Basis) Energy Portfolio								
Energy Source	kWh	Percent of Total						
CAISO Energy	34,841,846							
Hydro Base Resource	4,572,210	13.1%						
Generation - Warm Springs	6,132,000	17.6%						
Generation - Astoria	3,006,874	8.6%						
Generation - Slate	2,383,033	6.8%						
Generation - Whitney Point	7,290,594	20.9%						
Supplemental - Fixed	2,707,948	7.8%						
CAISO Spot Market -	0.740.107	25.40/						
Shortfall/(Surplus)	8,749,187	25.1%						
BTM Solar PV	-	0.0%						

100.0%



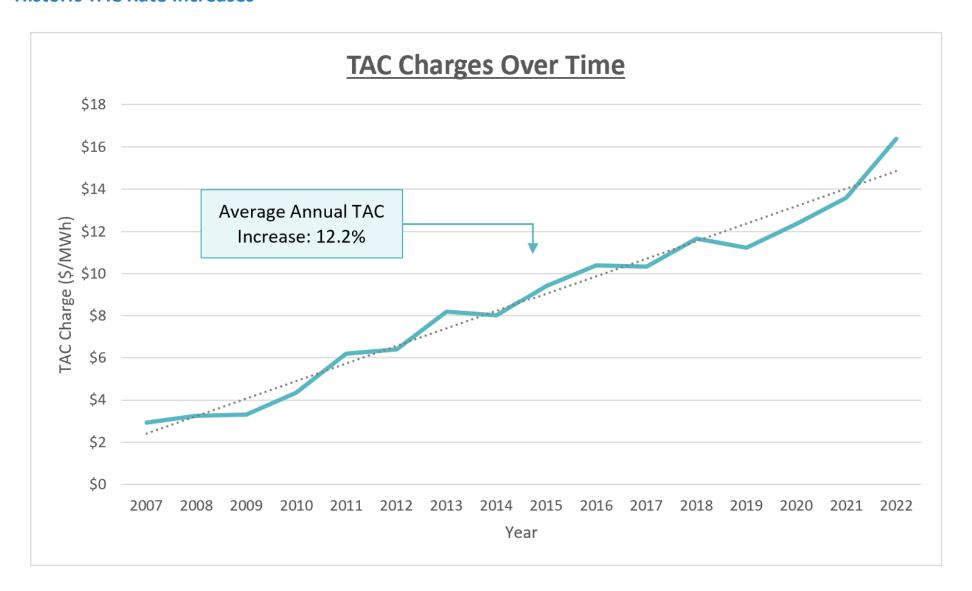
Wet Year (2019 basis) Energy Portfolio with BTM Solar								
Energy Source	kWh	Percent of Total						
CAISO Energy	34,090,005							
Hydro Base Resource	4,572,210	13.4%						
Generation - Warm Springs	6,132,000	18.0%						
Generation - Astoria	3,006,874	8.8%						
Generation - Slate	2,383,033	7.0%						
Generation - Whitney Point	7,290,594	21.4%						
Supplemental - Fixed	2,707,948	7.9%						
CAISO Spot Market - Shortfall/(Surplus)	7,997,346	23.5%						
BTM Solar PV	2,215,400	6.5%						
		106 5%						

106.5%





### **Historic TAC Rate Increases**





# Energy Savings Pro Forma: 75% of Historic Transmission Escalator Assumptions, Current REC Pricing \$70/REC

					PV Generation				PPA Paym	ents & Savings		
Year of PPA	Calendar Year	Sonoma County Water Agency Load	Proxy Load Year	Annual Solar PV Generation (kWh)	Coincident PV Generation (kWh)	Excess PV Generation Purchased via PPA (kWh)	PPA Rate (\$/kWh)	Post-Solar PWRPA Bill (\$)	PPA Bill (\$)	Total Bill Post Solar (PWRPA + PPA) (S)	Energy Savings Net PPA Payments (\$)	Cumulative Total Project Value (\$)
1	2025	4,414,857	2019	2,213,200	1,586,056	627,144	\$0.0988	\$558,307	\$218,664	\$776,971	\$143,056	\$143,056
2	2026	3,839,915	2020	2,202,134	1,420,449	781,685	\$0.1003	\$161,896	\$220,834	\$382,730	\$71,405	\$214,461
3	2027	4,270,898	2021	2,191,123	1,490,150	700,973	\$0.1018	\$280,481	\$223,026	\$503,507	\$119,682	\$334,143
4	2028	4,299,901	2022	2,180,168	1,615,911	564,257	\$0.1033	\$546,485	\$225,240	\$771,724	\$215,337	\$549,479
5	2029	4,414,857	2019	2,169,267	1,554,572	614,695	\$0.1049	\$680,308	\$227,475	\$907,784	\$183,060	\$732,540
6	2030	3,839,915	2020	2,158,421	1,392,252	766,168	\$0.1064	\$206,866	\$229,733	\$436,599	\$100,891	\$833,431
7	2031	4,270,898	2021	2,147,628	1,460,570	687,058	\$0.1080	\$352,681	\$232,013	\$584,694	\$154,954	\$988,385
8	2032	4,299,901	2022	2,136,890	1,583,835	553,056	\$0.1097	\$687,025	\$234,316	\$921,341	\$266,029	\$1,254,414
9	2033	4,414,857	2019	2,126,206	1,523,713	602,493	\$0.1113	\$852,766	\$236,641	\$1,089,407	\$234,413	\$1,488,826
10	2034	3,839,915	2020	2,115,575	1,364,615	750,959	\$0.1130	\$272,211	\$238,990	\$511,201	\$138,777	\$1,627,603
11	2035	4,270,898	2021	2,104,997	1,431,577	673,420	\$0.1147	\$455,913	\$241,362	\$697,275	\$199,962	\$1,827,565
12	2036	4,299,901	2022	2,094,472	1,552,395	542,077	\$0.1164	\$888,157	\$243,757	\$1,131,914	\$330,841	\$2,158,405
13	2037	4,414,857	2019	2,084,000	1,493,466	590,533	\$0.1181	\$1,102,589	\$246,177	\$1,348,766	\$300,949	\$2,459,354
14	2038	3,839,915	2020	2,073,580	1,337,527	736,052	\$0.1199	\$369,367	\$248,620	\$617,987	\$187,862	\$2,647,216
15	2039	4,270,898	2021	2,063,212	1,403,160	660,052	\$0.1217	\$607,193	\$251,088	\$858,281	\$257,946	\$2,905,162
16	2040	4,299,901	2022	2,052,896	1,521,579	531,317	\$0.1235	\$1,182,762	\$253,580	\$1,436,342	\$414,547	\$3,319,708
17	2041	4,414,857	2019	2,042,631	1,463,820	578,811	\$0.1254	\$1,471,876	\$256,096	\$1,727,972	\$387,894	\$3,707,603
18	2042	3,839,915	2020	2,032,418	1,310,977	721,441	\$0.1273	\$516,491	\$258,638	\$775,129	\$251,953	\$3,959,556
19	2043	4,270,898	2021	2,022,256	1,375,306	646,950	\$0.1292	\$833,470	\$261,205	\$1,094,675	\$333,315	\$4,292,870
20	2044	4,299,901	2022	2,012,145	1,491,375	520,770	\$0.1311	\$1,622,602	\$263,798	\$1,886,399	\$523,654	\$4,816,525
21	2045	4,414,857	2019	2,002,084	1,434,763	567,321	\$0.1331	\$2,026,571	\$266,416	\$2,292,987	\$502,376	\$5,318,901
22	2046	3,839,915	2020	1,992,073	1,284,953	707,120	\$0.1351	\$742,456	\$269,060	\$1,011,516	\$336,237	\$5,655,138
23	2047	4,270,898	2021	1,982,113	1,348,006	634,107	\$0.1371	\$1,177,509	\$271,730	\$1,449,239	\$432,075	\$6,087,213
24	2048	4,299,901	2022	1,972,203	1,461,770	510,432	\$0.1391	\$2,289,126	\$274,427	\$2,563,554	\$667,039	\$6,754,252
25	2049	4,414,857	2019	1,962,342	1,406,282	556,060	\$0.1412	\$2,869,724	\$277,151	\$3,146,875	\$654,123	\$7,408,375
26	2050	3,839,915	2020	1,952,530	1,259,446	693,084	\$0.1434	\$1,093,096	\$279,902	\$1,372,998	\$447,789	\$7,856,164
27	2051	4,270,898	2021	1,942,767	1,321,247	621,520	\$0.1455	\$1,707,097	\$282,680	\$1,989,776	\$562,419	\$8,418,583
28	2052	4,299,901	2022	1,933,053	1,432,753	500,300	\$0.1477	\$3,309,982	\$285,485	\$3,595,468	\$856,821	\$9,275,405
29	2053	4,414,857	2019	1,923,388	1,378,366	545,022	\$0.1499	\$4,161,310	\$288,319	\$4,449,629	\$856,431	\$10,131,836
30	2054	3,839,915	2020	1,913,771	1,234,445	679,326	\$0.1522	\$1,640,762	\$291,180	\$1,931,943	\$596,268	\$10,728,104
31	2055	4,270,898	2021	1,904,202	1,295,020	609,183	\$0.1544	\$2,529,088	\$294,070	\$2,823,158	\$735,537	\$11,463,641
32	2056	4,299,901	2022	1,894,681	1,404,312	490,369	\$0.1567	\$4,883,554	\$296,989	\$5,180,543	\$1,109,564	\$12,573,205
33	2057	4,414,857	2019	1,885,208	1,351,005	534,203	\$0.1591	\$6,147,109	\$299,937	\$6,447,046	\$1,127,479	\$13,700,684
34	2058	3,839,915	2020	1,875,782	1,209,941	665,841	\$0.1615	\$2,498,542	\$302,914	\$2,801,456	\$794,872	\$14,495,556
35	2059	4,270,898	2021	1,866,403	1,269,313	597,090	\$0.1639	\$3,810,309	\$305,920	\$4,116,229	\$966,718	\$15,462,274

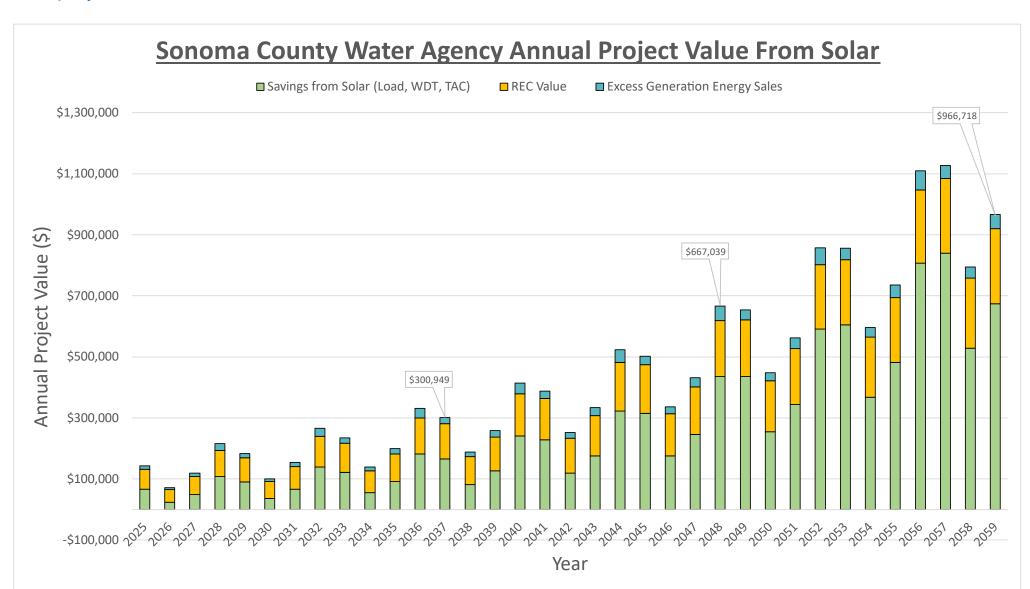


# PWRPA Bill Reduction Pro Forma: 75% of Historic Transmission Escalator Assumptions, Current REC Pricing \$70/REC

					PV Generation				PWRPA	Bill Reduction due to B	TM Solar		
Year of PPA	Calendar Year	Sonoma County ndar Year Water Agency Load	Proxy Load Year	Annual Solar PV Generation (kWh)	Coincident PV Generation (kWh)	Excess PV Generation Purchased via PPA (kWh)	Distribution WDT Bill Reduction from Solar PV (\$)	TAC Bill Reduction from Solar PV (\$)	Load Cost Bill Reduction from Solar PV (\$)	Concident Solar RECs Value (\$)	Excess Solar RECs Value (\$)	Excess Energy Sold to ISO Value (\$)	Total Project Bill Reduction + REC Value (\$)
1	2025	4,414,857	2019	2,213,200	1,586,056	627,144	\$641	\$73,002	\$94,786	\$117,819	\$46,751	\$28,721	\$361,720
2	2026	3,839,915	2020	2,202,134	1,420,449	781,685	\$885	\$52,870	\$43,273	\$108,169	\$60,246	\$26,797	\$292,239
3	2027	4,270,898	2021	2,191,123	1,490,150	700,973	\$87	\$61,280	\$77,181	\$116,328	\$54,891	\$32,942	\$342,708
4	2028	4,299,901	2022	2,180,168	1,615,911	564,257	\$858	\$91,000	\$128,847	\$129,315	\$45,329	\$45,229	\$440,576
5	2029	4,414,857	2019	2,169,267	1,554,572	614,695	\$680	\$100,068	\$100,562	\$127,532	\$50,604	\$31,089	\$410,536
6	2030	3,839,915	2020	2,158,421	1,392,252	766,168	\$939	\$72,471	\$45,910	\$117,085	\$65,212	\$29,006	\$330,624
7	2031	4,270,898	2021	2,147,628	1,460,570	687,058	\$92	\$84,000	\$81,884	\$125,917	\$59,416	\$35,657	\$386,967
8	2032	4,299,901	2022	2,136,890	1,583,835	553,056	\$910	\$124,739	\$136,699	\$139,974	\$49,065	\$48,957	\$500,345
9	2033	4,414,857	2019	2,126,206	1,523,713	602,493	\$722	\$137,169	\$106,691	\$138,044	\$54,776	\$33,652	\$471,054
10	2034	3,839,915	2020	2,115,575	1,364,615	750,959	\$996	\$99,341	\$48,708	\$126,737	\$70,588	\$31,397	\$377,767
11	2035	4,270,898	2021	2,104,997	1,431,577	673,420	\$98	\$115,144	\$86,875	\$136,296	\$64,314	\$38,596	\$441,324
12	2036	4,299,901	2022	2,094,472	1,552,395	542,077	\$966	\$170,987	\$145,031	\$151,513	\$53,110	\$52,993	\$574,598
13	2037	4,414,857	2019	2,084,000	1,493,466	590,533	\$766	\$188,026	\$113,193	\$149,424	\$59,291	\$36,426	\$547,126
14	2038	3,839,915	2020	2,073,580	1,337,527	736,052	\$1,057	\$136,173	\$51,676	\$137,184	\$76,407	\$33,985	\$436,482
15	2039	4,270,898	2021	2,063,212	1,403,160	660,052	\$104	\$157,835	\$92,169	\$147,532	\$69,615	\$41,778	\$509,034
16	2040	4,299,901	2022	2,052,896	1,521,579	531,317	\$1,025	\$234,382	\$153,870	\$164,002	\$57,488	\$57,361	\$668,127
17	2041	4,414,857	2019	2,042,631	1,463,820	578,811	\$812	\$257,739	\$120,092	\$161,741	\$64,179	\$39,428	\$643,991
18	2042	3,839,915	2020	2,032,418	1,310,977	721,441	\$1,122	\$186,660	\$54,826	\$148,492	\$82,705	\$36,786	\$510,591
19	2043	4,270,898	2021	2,022,256	1,375,306	646,950	\$110	\$216,354	\$97,787	\$159,693	\$75,354	\$45,222	\$594,520
20	2044	4,299,901	2022	2,012,145	1,491,375	520,770	\$1,087	\$321,281	\$163,247	\$177,521	\$62,226	\$62,089	\$787,452
21	2045	4,414,857	2019	2,002,084	1,434,763	567,321	\$862	\$353,298	\$127,411	\$175,073	\$69,469	\$42,679	\$768,792
22	2046	3,839,915	2020	1,992,073	1,284,953	707,120	\$1,190	\$255,866	\$58,167	\$160,733	\$89,523	\$39,818	\$605,297
23	2047	4,270,898	2021	1,982,113	1,348,006	634,107	\$117	\$296,570	\$103,746	\$172,857	\$81,565	\$48,950	\$703,805
24	2048	4,299,901	2022	1,972,203	1,461,770	510,432	\$1,154	\$440,399	\$173,196	\$192,155	\$67,356	\$67,208	\$941,467
25	2049	4,414,857	2019	1,962,342	1,406,282	556,060	\$914	\$484,286	\$135,176	\$189,505	\$75,195	\$46,197	\$931,274
26	2050	3,839,915	2020	1,952,530	1,259,446	693,084	\$1,263	\$350,731	\$61,712	\$173,982	\$96,902	\$43,101	\$727,691
27	2051	4,270,898	2021	1,942,767	1,321,247	621,520	\$124	\$406,526	\$110,069	\$187,106	\$88,289	\$52,985	\$845,099
28	2052	4,299,901	2022	1,933,053	1,432,753	500,300	\$1,224	\$603,681	\$183,752	\$207,994	\$72,908	\$72,748	\$1,142,307
29	2053	4,414,857	2019	1,923,388	1,378,366	545,022	\$970	\$663,840	\$143,414	\$205,127	\$81,394	\$50,005	\$1,144,750
30	2054	3,839,915	2020	1,913,771	1,234,445	679,326	\$1,339	\$480,768	\$65,473	\$188,324	\$104,890	\$46,654	\$887,448
31	2055	4,270,898	2021	1,904,202	1,295,020	609,183	\$132	\$557,250	\$116,777	\$202,529	\$95,567	\$57,352	\$1,029,607
32	2056	4,299,901	2022	1,894,681	1,404,312	490,369	\$1,298	\$827,502	\$194,951	\$225,140	\$78,918	\$78,744	\$1,406,553
33	2057	4,414,857	2019	1,885,208	1,351,005	534,203	\$1,029	\$909,966	\$152,155	\$222,036	\$88,103	\$54,127	\$1,427,416
34	2058	3,839,915	2020	1,875,782	1,209,941	665,841	\$1,421	\$659,017	\$69,464	\$203,848	\$113,536	\$50,499	\$1,097,786
35	2059	4,270,898	2021	1,866,403	1,269,313	597,090	\$140	\$763,856	\$123,895	\$219,224	\$103,444	\$62,080	\$1,272,638

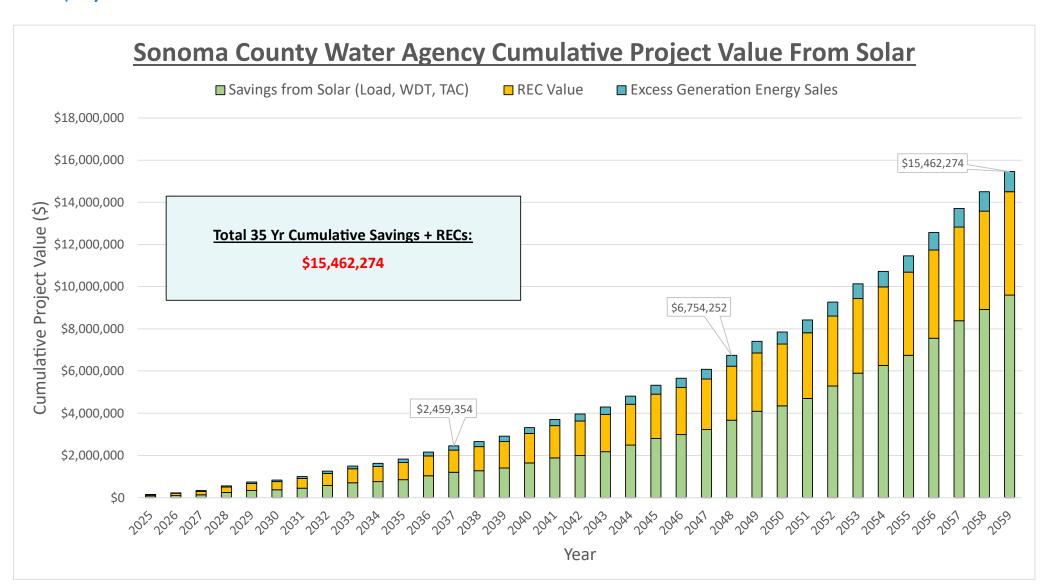


# Project Annual Savings 75% of Historic Transmission Escalator Assumptions, Current REC Pricing \$70/REC





### Project Cumulative Savings 75% of Historic Transmission Escalator Assumptions, Current REC Pricing \$70/REC





### **Estimated Project Schedule**

#### • Contracting and Interconnection Application

- Initial Proposal Delivered 9/20/2023
- Proposal Update with Incorporated Feeback Delivered 11/6/2023
- Proposal Update with Decommissioning Scope Added 11/30/2023
- Verbal Award 12/15/2023
- o PPA Signing 1/15/2024

#### • <u>Development</u>

- Existing System Decommissioning and Recycling and Salvage 3/1/2023 to 5/1/2023
- Geotechnical Study 6/15/2024 8/15/2024
- o Alta and Topo Survey 6/15/2024 8/15/2024

#### • Engineering, Procurement and Construction

- o Solar Modules and Long-Lead Equipment Ordered 9/15/2024
- o Detailed Design 8/15/2024 11/15/2024
- Construction Contract Signed 11/15/2024
- o B&E Permits Applied and Received 11/15/2024 1/15/2025
- Mobilization and B&E Permits Received 1/15/2025

Mechanical Completion – 4/15/2025
Plant Energization and Ribbon Cutting — 6/15/2025



# **APPENDIX**



# Energy Savings Pro Forma: 50% of Transmission Escalator Assumptions, 50% of Current REC Pricing \$35/REC

					PV Generation				PPA Paym	ents & Savings		
Year of PPA	Calendar Year	Sonoma County Water Agency Load	Proxy Load Year	Annual Solar PV Generation (kWh)	Coincident PV Generation (kWh)	Excess PV Generation Purchased via PPA (kWh)	PPA Rate (\$/kWh)	Post-Solar PWRPA Bill (\$)	PPA Bill (\$)	Total Bill Post Solar (PWRPA + PPA) (S)	Energy Savings Net PPA Payments (\$)	Cumulative Total Project Value (\$)
1	2025	4,414,857	2019	2,213,200	1,586,056	627,144	\$0.0988	\$547,648	\$218,664	\$766,312	\$49,043	\$49,043
2	2026	3,839,915	2020	2,202,134	1,420,449	781,685	\$0.1003	\$173,574	\$220,834	\$394,408	(\$24,245)	\$24,798
3	2027	4,270,898	2021	2,191,123	1,490,150	700,973	\$0.1018	\$274,476	\$223,026	\$497,502	\$16,874	\$41,672
4	2028	4,299,901	2022	2,180,168	1,615,911	564,257	\$0.1033	\$512,741	\$225,240	\$737,981	\$99,269	\$140,942
5	2029	4,414,857	2019	2,169,267	1,554,572	614,695	\$0.1049	\$627,492	\$227,475	\$854,968	\$61,902	\$202,844
6	2030	3,839,915	2020	2,158,421	1,392,252	766,168	\$0.1064	\$205,086	\$229,733	\$434,819	(\$17,077)	\$185,767
7	2031	4,270,898	2021	2,147,628	1,460,570	687,058	\$0.1080	\$320,856	\$232,013	\$552,869	\$26,217	\$211,983
8	2032	4,299,901	2022	2,136,890	1,583,835	553,056	\$0.1097	\$597,561	\$234,316	\$831,877	\$115,452	\$327,435
9	2033	4,414,857	2019	2,126,206	1,523,713	602,493	\$0.1113	\$729,338	\$236,641	\$965,979	\$78,167	\$405,602
10	2034	3,839,915	2020	2,115,575	1,364,615	750,959	\$0.1130	\$245,563	\$238,990	\$484,553	(\$7,576)	\$398,026
11	2035	4,270,898	2021	2,104,997	1,431,577	673,420	\$0.1147	\$379,978	\$241,362	\$621,339	\$38,232	\$436,258
12	2036	4,299,901	2022	2,094,472	1,552,395	542,077	\$0.1164	\$705,795	\$243,757	\$949,553	\$135,597	\$571,855
13	2037	4,414,857	2019	2,084,000	1,493,466	590,533	\$0.1181	\$860,625	\$246,177	\$1,106,802	\$98,644	\$670,499
14	2038	3,839,915	2020	2,073,580	1,337,527	736,052	\$0.1199	\$298,118	\$248,620	\$546,738	\$4,825	\$675,324
15	2039	4,270,898	2021	2,063,212	1,403,160	660,052	\$0.1217	\$456,227	\$251,088	\$707,315	\$53,559	\$728,883
16	2040	4,299,901	2022	2,052,896	1,521,579	531,317	\$0.1235	\$845,452	\$253,580	\$1,099,031	\$160,635	\$889,519
17	2041	4,414,857	2019	2,042,631	1,463,820	578,811	\$0.1254	\$1,031,382	\$256,096	\$1,287,479	\$124,328	\$1,013,847
18	2042	3,839,915	2020	2,032,418	1,310,977	721,441	\$0.1273	\$366,972	\$258,638	\$625,610	\$20,825	\$1,034,672
19	2043	4,270,898	2021	2,022,256	1,375,306	646,950	\$0.1292	\$555,561	\$261,205	\$816,766	\$72,989	\$1,107,661
20	2044	4,299,901	2022	2,012,145	1,491,375	520,770	\$0.1311	\$1,027,383	\$263,798	\$1,291,180	\$191,710	\$1,299,371
21	2045	4,414,857	2019	2,002,084	1,434,763	567,321	\$0.1331	\$1,255,121	\$266,416	\$1,521,537	\$156,444	\$1,455,814
22	2046	3,839,915	2020	1,992,073	1,284,953	707,120	\$0.1351	\$457,844	\$269,060	\$726,904	\$41,282	\$1,497,097
23	2047	4,270,898	2021	1,982,113	1,348,006	634,107	\$0.1371	\$686,069	\$271,730	\$957,799	\$97,491	\$1,594,588
24	2048	4,299,901	2022	1,972,203	1,461,770	510,432	\$0.1391	\$1,266,281	\$274,427	\$1,540,708	\$230,229	\$1,824,818
25	2049	4,414,857	2019	1,962,342	1,406,282	556,060	\$0.1412	\$1,550,013	\$277,151	\$1,827,164	\$196,496	\$2,021,313
26	2050	3,839,915	2020	1,952,530	1,259,446	693,084	\$0.1434	\$578,471	\$279,902	\$858,373	\$67,256	\$2,088,570
27	2051	4,270,898	2021	1,942,767	1,321,247	621,520	\$0.1455	\$858,719	\$282,680	\$1,141,399	\$128,263	\$2,216,832
28	2052	4,299,901	2022	1,933,053	1,432,753	500,300	\$0.1477	\$1,581,997	\$285,485	\$1,867,482	\$277,926	\$2,494,759
29	2053	4,414,857	2019	1,923,388	1,378,366	545,022	\$0.1499	\$1,940,423	\$288,319	\$2,228,742	\$246,337	\$2,741,096
30	2054	3,839,915	2020	1,913,771	1,234,445	679,326	\$0.1522	\$739,282	\$291,180	\$1,030,463	\$100,050	\$2,841,145
31	2055	4,270,898	2021	1,904,202	1,295,020	609,183	\$0.1544	\$1,088,350	\$294,070	\$1,382,420	\$166,775	\$3,007,920
32	2056	4,299,901	2022	1,894,681	1,404,312	490,369	\$0.1567	\$2,001,260	\$296,989	\$2,298,249	\$336,931	\$3,344,851
33	2057	4,414,857	2019	1,885,208	1,351,005	534,203	\$0.1591	\$2,458,866	\$299,937	\$2,758,803	\$308,248	\$3,653,099
34	2058	3,839,915	2020	1,875,782	1,209,941	665,841	\$0.1615	\$954,274	\$302,914	\$1,257,187	\$141,266	\$3,794,365
35	2059	4,270,898	2021	1.866,403	1,269,313	597.090	\$0.1639	\$1,394,950	\$305,920	\$1,700,870	\$214,837	\$4,009,202

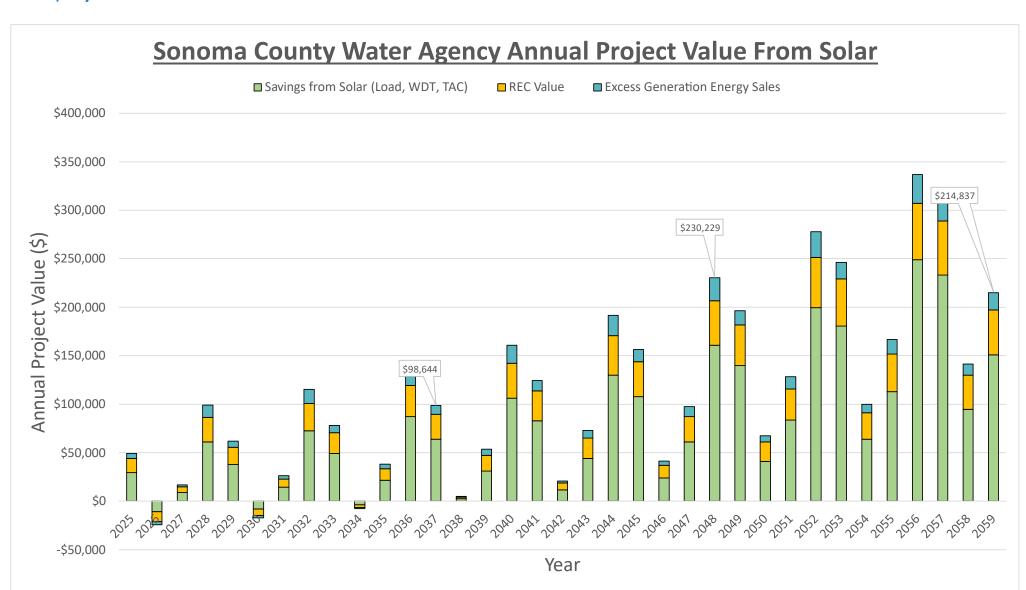


# PWRPA Bill Reduction Pro Forma: 50% of Transmission Escalator Assumptions, 50% of Current REC Pricing \$35/REC

					PV Generation			PWRPA Bill Reduction due to BTM Solar					
Year of PPA	Calendar Year	Sonoma County Water Agency Load	Proxy Load Year	Annual Solar PV Generation (kWh)	Coincident PV Generation (kWh)	Excess PV Generation Purchased via PPA (kWh)	Distribution WDT Bill Reduction from Solar PV (\$)	TAC Bill Reduction from Solar PV (\$)	Load Cost Bill Reduction from Solar PV (\$)	Concident Solar RECs Value (\$)	Excess Solar RECs Value (\$)	Excess Energy Sold to ISO Value (\$)	Total Project Bill Reduction + REC Value (\$)
1	2025	4,414,857	2019	2,213,200	1,586,056	627,144	\$623	\$67,286	\$92,025	\$57,194	\$22,695	\$27,885	\$267,707
2	2026	3,839,915	2020	2,202,134	1,420,449	781,685	\$851	\$47,424	\$41,601	\$51,994	\$28,959	\$25,761	\$196,590
3	2027	4,270,898	2021	2,191,123	1,490,150	700,973	\$83	\$53,494	\$73,471	\$55,368	\$26,126	\$31,358	\$239,900
4	2028	4,299,901	2022	2,180,168	1,615,911	564,257	\$809	\$77,307	\$121,451	\$60,946	\$21,363	\$42,633	\$324,509
5	2029	4,414,857	2019	2,169,267	1,554,572	614,695	\$635	\$82,732	\$93,861	\$59,516	\$23,616	\$29,017	\$289,377
6	2030	3,839,915	2020	2,158,421	1,392,252	766,168	\$868	\$58,310	\$42,430	\$54,106	\$30,135	\$26,807	\$212,656
7	2031	4,270,898	2021	2,147,628	1,460,570	687,058	\$85	\$65,774	\$74,936	\$57,616	\$27,187	\$32,631	\$258,230
8	2032	4,299,901	2022	2,136,890	1,583,835	553,056	\$825	\$95,054	\$123,874	\$63,421	\$22,231	\$44,364	\$349,768
9	2033	4,414,857	2019	2,126,206	1,523,713	602,493	\$648	\$101,724	\$95,733	\$61,933	\$24,575	\$30,195	\$314,808
10	2034	3,839,915	2020	2,115,575	1,364,615	750,959	\$885	\$71,696	\$43,277	\$56,302	\$31,358	\$27,896	\$231,414
11	2035	4,270,898	2021	2,104,997	1,431,577	673,420	\$86	\$80,873	\$76,431	\$59,956	\$28,291	\$33,956	\$279,593
12	2036	4,299,901	2022	2,094,472	1,552,395	542,077	\$842	\$116,875	\$126,345	\$65,996	\$23,133	\$46,165	\$379,355
13	2037	4,414,857	2019	2,084,000	1,493,466	590,533	\$661	\$125,076	\$97,643	\$64,448	\$25,573	\$31,422	\$344,821
14	2038	3,839,915	2020	2,073,580	1,337,527	736,052	\$903	\$88,154	\$44,140	\$58,589	\$32,632	\$29,028	\$253,446
15	2039	4,270,898	2021	2,063,212	1,403,160	660,052	\$88	\$99,438	\$77,956	\$62,390	\$29,440	\$35,335	\$304,647
16	2040	4,299,901	2022	2,052,896	1,521,579	531,317	\$858	\$143,704	\$128,865	\$68,675	\$24,073	\$48,039	\$414,215
17	2041	4,414,857	2019	2,042,631	1,463,820	578,811	\$674	\$153,788	\$99,590	\$67,064	\$26,611	\$32,697	\$380,425
18	2042	3,839,915	2020	2,032,418	1,310,977	721,441	\$921	\$108,390	\$45,020	\$60,967	\$33,957	\$30,207	\$279,463
19	2043	4,270,898	2021	2,022,256	1,375,306	646,950	\$90	\$122,265	\$79,511	\$64,923	\$30,635	\$36,770	\$334,194
20	2044	4,299,901	2022	2,012,145	1,491,375	520,770	\$875	\$176,693	\$131,435	\$71,464	\$25,050	\$49,990	\$455,508
21	2045	4,414,857	2019	2,002,084	1,434,763	567,321	\$687	\$189,091	\$101,577	\$69,788	\$27,692	\$34,025	\$422,860
22	2046	3,839,915	2020	1,992,073	1,284,953	707,120	\$939	\$133,272	\$45,919	\$63,443	\$35,336	\$31,434	\$310,342
23	2047	4,270,898	2021	1,982,113	1,348,006	634,107	\$92	\$150,332	\$81,097	\$67,559	\$31,879	\$38,263	\$369,222
24	2048	4,299,901	2022	1,972,203	1,461,770	510,432	\$893	\$217,254	\$134,057	\$74,366	\$26,067	\$52,020	\$504,657
25	2049	4,414,857	2019	1,962,342	1,406,282	556,060	\$701	\$232,499	\$103,603	\$72,621	\$28,816	\$35,407	\$473,647
26	2050	3,839,915	2020	1,952,530	1,259,446	693,084	\$958	\$163,866	\$46,834	\$66,019	\$36,770	\$32,710	\$347,158
27	2051	4,270,898	2021	1,942,767	1,321,247	621,520	\$93	\$184,842	\$82,714	\$70,303	\$33,173	\$39,817	\$410,943
28	2052	4,299,901	2022	1,933,053	1,432,753	500,300	\$911	\$267,127	\$136,731	\$77,385	\$27,126	\$54,132	\$563,412
29	2053	4,414,857	2019	1,923,388	1,378,366	545,022	\$715	\$285,871	\$105,670	\$75,570	\$29,986	\$36,844	\$534,656
30	2054	3,839,915	2020	1,913,771	1,234,445	679,326	\$977	\$201,483	\$47,769	\$68,700	\$38,263	\$34,038	\$391,230
31	2055	4,270,898	2021	1,904,202	1,295,020	609,183	\$95	\$227,274	\$84,364	\$73,157	\$34,520	\$41,433	\$460,845
32	2056	4,299,901	2022	1,894,681	1,404,312	490,369	\$929	\$328,448	\$139,459	\$80,527	\$28,227	\$56,330	\$633,920
33	2057	4,414,857	2019	1,885,208	1,351,005	534,203	\$729	\$351,495	\$107,777	\$78,638	\$31,204	\$38,340	\$608,184
34	2058	3,839,915	2020	1,875,782	1,209,941	665,841	\$997	\$247,735	\$48,722	\$71,489	\$39,817	\$35,420	\$444,180
35	2059	4,270,898	2021	1,866,403	1,269,313	597,090	\$97	\$279,447	\$86,047	\$76,128	\$35,922	\$43,116	\$520,757

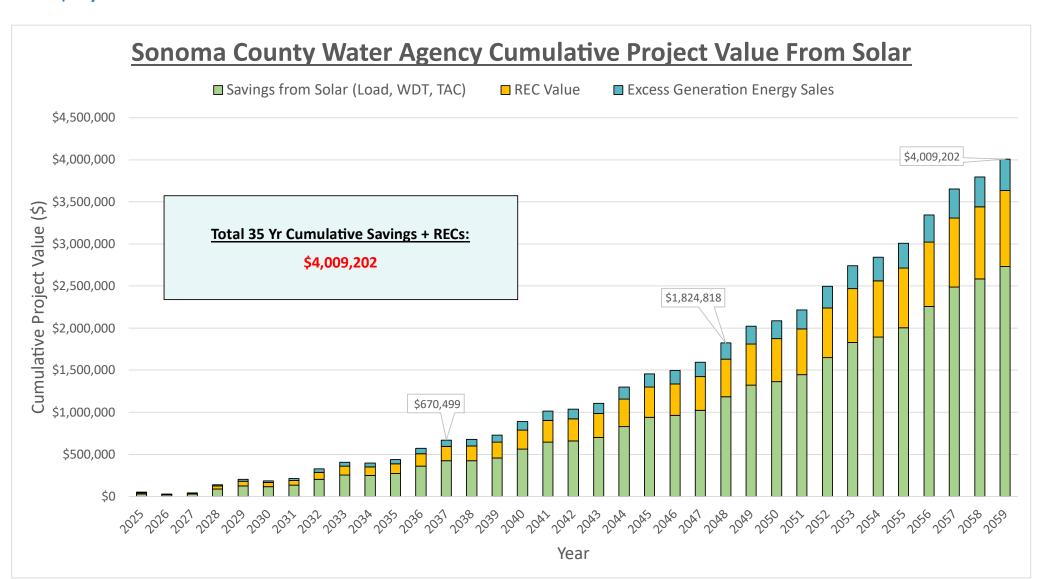


## Project Annual Savings 50% of Transmission Escalator Assumptions, 50% of Current REC Pricing \$35/REC





## Project Cumulative Savings 50% of Transmission Escalator Assumptions, 50% of Current REC Pricing \$35/REC





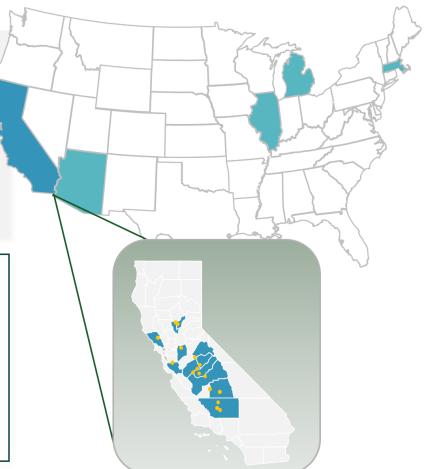
### **White Pine Renewables**

**White Pine Renewables** is a full-service solar and storage development company, primarily serving industrial, agricultural, municipal, and commercial customers with on-site energy solutions.

Prior to founding White Pine in 2020, the White Pine team established a combined 20+ year track record of experience in the solar industry, having successfully contracted, developed, financed, and constructed 2+ GW of solar and storage projects.

### **White Pine Portfolio and Pipeline**

Project Stage	Acres	MWdc PV	MWh Battery	Project Count
Operational	345	46 MWdc PV		28
Construction	285	38 MWdc PV		9
Development	1,005	134 MWdc PV	251 MWh	31





Customer	kW of Solar & Battery Capacity	State
Olam Farming	16,000 kW <sub>dc</sub> Portfolio	CA
Wheeler Ridge Maricopa Water Storage District	14,500 kW <sub>dc</sub> Portfolio	CA
North Kern Water Storage District	14,000 kW <sub>dc</sub> Portfolio	CA
Vulcan Materials / Aggregate Mining	15,720 kW <sub>dc</sub> + kWh Portfolio	CA
Corcoran Irrigation District (Floating & Groundmount)	11,000 kW <sub>dc</sub> Portfolio	CA
City of Fresno DAC / Pacific Gas & Electric	13,500 kW <sub>dc</sub>	CA
James Irrigation District	6,175 kW <sub>dc</sub> Portfolio	CA
City of Healdsburg (Floating Solar)	5,000 kW <sub>dc</sub>	CA
Cawelo Water District	3,500 kW <sub>dc</sub>	CA





### **Case Study: Corcoran Irrigation District**

5.63 MW Solar Project in Kings County, California

**Energy-Water Nexus:** As a water utility in California's Central Valley, the Corcoran Irrigation District (CID) consumes a substantial amount of electricity in the process of pumping and delivering water to its customers.

**Long-Term Savings:** Over the 30-year term of the PPA, CID is expected to realize substantial savings on electricity costs relative to prevailing PG&E rates.

**Multi-Project Partnership:** The CID project is the second of three projects built for the District, each of which will help lower CID's utility bills and provide long-term certainty on electricity pricing





### **Leadership Team**



### Evan Riley - Co-Founder & Managing Partner

Evan leads market strategy, project origination, and provides long-term vision for White Pine.

Evan is an experienced solar executive focused on win-win deal-making and creating value for all project stakeholders. Formerly Vice President of Development at Cypress Creek Renewables, Evan built and led the team responsible for bringing more than 2,000 MW of solar from Concept to completion across 150 projects nationwide.

Evan holds an MS in Solar Engineering from Dalarna University's European Solar Engineering School. He also has a BS in both Physics and Mathematics from Indian University.



#### Michael Kremer – Co-Founder & Managing Partner

Michael leads corporate and project finance at White Pine, raising capital for the full project lifecycle spanning development, tax equity, debt, and M&A.

Prior to White Pine, Michael was a Director of Project Finance at Cypress Creek Renewables, where he raised \$1+ billion of capital across the corporate and project finance spectrum and led other key strategic initiatives on the development and operations sides of the business.

Michael holds a BA in International Relations from Tufts University.



### Joe McLean – VP of Energy Storage & Markets

Joe leads Energy Storage and Markets at White Pine, and is responsible for origination, strategy, procurement and engineering.

Prior to White Pine, Joe over saw business development, and energy storage software at SunPower and TotalEnergies.

Joe earned a degree in Electrical Engineering from the University of Washington and is a licensed professional engineer in the State of California.



### Andrew Sundling - Director of Development

Andrew is a lead developer at White Pine, supporting and managing full development lifecycles across the company's portfolio of floating, ground mounted PV and energy storage projects.

Prior to White Pine, Andrew led business development for multinational companies focused on reliability and quality assessments within the solar industry.

Andrew has an MSc in Environmental Technology & Business from Imperial College London.



### **Advantages of a Solar Power Purchase Agreement**

Many businesses, municipalities, and non-profits are interested or required to install solar but are restricted by upfront or ongoing maintenance costs or simply do not want to carry those costs on balance sheet. While purchasing a system outright or leasing are sometimes options, they require either a large upfront payment or large monthly payment, and ongoing maintenance and oversight, neither of which is an attractive option to those looking to comply with state laws or reduce costs.

There are many advantages to going solar with a White Pine Renewable's PPA. There are no upfront capital costs, no installation costs, and White Pine Renewables assumes all long-term responsibility for operations, maintenance, and system removal. With a White Pine PPA, you host the solar system on your land that you own or lease. You pay only for the electricity the system generates, at an established price lower than what you're paying for energy today.

**Immediate Savings:** The instant your system is energized, you start saving money on your electricity bill. In addition, PPAs can increase your savings over time as grid electricity prices rise faster than your PPA rate.

Pay Only for the Energy Your System Produces: With a PPA, if your system doesn't perform, you don't pay. You buy the electricity that is produced at a guaranteed low rate every month.

**Predictable Long-Term Costs:** Commercial utility rates are increasing every year. In California, electricity rates increase faster than any other state in the nation. With a PPA you get long-term predictability and a hedge against PG&E's annual increase in electricity costs for the next 25 years or more.

**No Maintenance Costs or Worry:** White Pine Renewables will maintain the system and will have a vested financial interest in making sure the system runs efficiently.

Off-Balance Sheet: If you are not in a position to take advantage of tax incentives, a PPA is an efficient way to reduce your energy costs without an impact to your balance sheet. A PPA is not a loan; it is a long-term service contract that does not affect your borrowing limits or debt covenants and does not encumber your balance sheet.



### **PPA Project Development: The White Pine Advantage**

Successful development of a PPA project requires evaluating and resolving project-specific issues that may arise. White Pine's permitting, design, and financing experience combined with a strong EPC partner benefits all our projects, as we identify and mitigate issues early in the process; we ensure a high quality, reliable system is constructed and built, and ultimately, placed into the WPR operating asset management portfolio. The following summarizes White Pine's strengths:

#### **Funding**

White Pine is experienced in securing the best sources of funding to decrease the energy rates we pass along to our partners, including the Federal Incentive Tax Credit (ITC) and the Self Generation Incentive Program (SGIP) funds. It is not by coincidence that we are the developer to have secured the most SGIP funds in step 5 for large scale energy storage, meaning that we have decreased project costs to our partners by nearly \$5M whereas many of our competitors have not put in the same effort to become SGIP-approved.

#### Construction

Cost-effective engineering, procurement and construction strategies are incorporated into our PPA offerings. White Pine optimizes system design and constructability based on our experience building hundreds of megawatts. The value of good design is passed on to customers through competitive PPA rates and entices investors to partner on projects where development and construction are seamlessly integrated.

#### **Utility Interconnection**

Understanding the utility's process and potential costs for interconnection is critical to project development. White Pine's dedicated interconnection team evaluates project design to minimize costs and estimate timelines as one of the factors in PPA offering. As a project progresses, we continually update timelines and financial models to account for the utility review process.

#### **Investor Relations**

White Pine is the long-term owner and operator of your project. Unlike many of our competitors, we have already secured financing for your project through our existing solar investment fund. Investors appreciate White Pine Renewable's ability to maintain responsibility and accountability for the long-term project performance, as it keeps us aligned with our customers in that our financial return is based on the performance of the system, and engaged and working with all stakeholders to ensure the project is a win-win-win.