

ATTACHMENTS TO MCE DEEP GREEN STAFF REPORT
JANUARY 22, 2018
AD HOC COMMITTEE ON SUSTAINABILITY

Estimated Annual Electricity Consumption		40,443,282	
Estimated Annual Premium of Deep Green	\$	404,433	
Estimated Annual Increase of Electricity Cost with Deep Green		5.50%	
# of Contra Costa County Accounts in MCE Service Area		592	
Municipal Emissions Impact for Contra Costa County with Deep Green			
Emissions Saved with Current Cost (MTCO2)*		5,228	
Cost per metric ton reduced with Deep Green	\$	77.35	
*Based on actual usage of Contra Costa County Municipal accounts: CY2016			
* MCE Light Green Emission Factor of 285 lbs CO2/MWh in 2016			
Anticipated Deep Green Power Mix			
Power Supplier	Location	MW Capacity	Contract Exeuction Year
Shiloh (Wind)	Solano County	25	2016
Rising Tree (Wind)	Kern County	99	2014
SolarOne (Solar)	Contra Costa County	11	2015
Cottonwood (Solar)	Marin & Kings County	24	2011

Figure 1: MCE Summary Data on Deep Green Product

SunPower							
Site	1000 WARD ST	30 DOUGLAS DR	50 DOUGLAS DR	30 MUIR RD	1305 MACDONALD AVE	4800 IMHOFF PL	2935 PINOLE VALLEY RD
Energy Consumption (kWh/yr)	2,526,524	2,034,165	985,486	320,993	468,109	315,606	106,516
Energy Cost (\$)	\$ 417,536	\$ 309,944	\$ 216,344	\$ 65,815	\$ 50,244	\$ 48,325	\$ 30,404
Estimated Solar (kWac)	1,313	842	370	149	241	184	66
Main Meter Original Rate	E19S	E19SV	A10SX	HA10SX	NEMS	NEMEXP	HA10SX
Borrego Solar							
Site	597 Center	2530 Arnold	4545 Delta Fair	4549 Delta Fair			
Energy Consumption (kWh/yr)	651,674	1,067,935	753,365	429,169			
Energy Cost (\$)	\$ 143,631	\$ 210,914	\$ 129,798	\$ 92,394		Total New Capacity	
Estimated Solar (kWac)	196	462	396	198		4.417 Mwach	
Main Meter Original Rate	A10SX	NEMEXPM	E19SX	NEMEXPM			
Opterra Energy Services (now Engie Services U.S.)	Awaiting information from K. Fergusson						

Figure 2: County Facilities With Grandfathered Interconnection Agreements

On site PV at designated County facilities	
Portfolio PV Capacity, kWp	5,000
Average portfolio yield, kWh/kWp	1,650
Year 1 PV Production, kWh/Y1	8,250,000
Average Avoided Utility Rate, \$/kWh	0.17
PPA Rate, \$/kWh	0.12
Avoided Rate minus PPA Rate	(0.05)
Year 1 Savings	\$ 412,500
Balance of County kWh from MCE with onsite solar	40,200,000
Premium over Utility kWh for Deep Green	\$ 0.010
MCE Deep Green Costs	\$ (402,000)

*Figure 3: Breakdown Of Year One Savings From Solar PPA And
Year One Costs With MCE Deep Green*

Year	Electricity Cost Premium v MCE LG	Onsite Solar PPA Savings	Residual Non-Solar County Load with MCE Deep Green
1	-\$402,000	\$412,500	-\$319,500
2	-\$414,060	\$424,875	-\$329,085
3	-\$426,482	\$437,621	-\$338,958
4	-\$439,276	\$450,750	-\$349,126
5	-\$452,455	\$464,272	-\$359,600
6	-\$466,028	\$478,201	-\$370,388
7	-\$480,009	\$492,547	-\$381,500
8	-\$494,409	\$507,323	-\$392,945
9	-\$509,242	\$522,543	-\$404,733
10	-\$524,519	\$538,219	-\$416,875
11	-\$540,254	\$554,366	-\$429,381
12	-\$556,462	\$570,996	-\$442,263
13	-\$573,156	\$588,126	-\$455,531
14	-\$590,351	\$605,770	-\$469,197
15	-\$608,061	\$623,943	-\$483,272
16	-\$626,303	\$642,662	-\$497,771
17	-\$645,092	\$661,941	-\$512,704
18	-\$664,445	\$681,800	-\$528,085
19	-\$684,378	\$702,254	-\$543,927
20	-\$704,909	\$723,321	-\$560,245
21	-\$726,057	\$745,021	-\$577,053
22	-\$747,838	\$767,372	-\$594,364
23	-\$770,274	\$790,393	-\$612,195
24	-\$793,382	\$814,104	-\$630,561
25	-\$817,183	\$838,528	-\$649,478
Term	-\$14,656,624	\$15,039,447	-\$11,648,735

Figure 4: Savings Over PPA Term Versus MCE Deep Green Expenditure Over Term