

Glendale Unified School District

*\$10,916,000 Clean Renewable Energy Bonds * 2016 "Phase 5" Solar Project*

**Board Meeting & Public Hearing
October 4, 2016**

Steve Nielsen
Principal



Overview of CREB Financing

- Purpose: To Finance 100% of District's "Phase 5 Solar Project"
- Estimated Size = \$10,916,000*
- Repayment Period = 17 Years
- Estimated Net Interest Cost = 0.616 %

Gross Rate Paid to Lender =	3.430%		
Fed Subsidy (70% of TCR) =	-2.814%	4.020%	=TCR (Tax Credit Rate) on 9/27/16
Estimated Net Interest Rate =	0.616%		

* Final proposed CREB amount to be presented at October 4th Public Hearing.

CREBs "Use of Proceeds"

SPWR EPC Contract =	\$ 9,843,500
Project Development Cost =	\$ 890,000
Total Solar Project =	\$ 10,733,500
Cost of Issuance =	\$ 182,500
TOTAL CREBs PAR AMOUNT =	\$ 10,916,000

Solar Project Detail

Phase 5 Solar Project			
	System Size (kWp)	Yield (kWh/kWp)	Generation (kWh /Year 1)
Cerritos ES	95.70	1,809.56	173,175
E. Toll MS	287.10	1,826.28	524,325
Horace Mann ES	95.70	1,810.93	173,306
John Muir ES	208.80	1,794.00	374,587
RD White ES	182.70	1,821.86	332,854
T Jefferson ES	117.45	1,809.35	212,508
W. Wilson MS	365.40	1,799.42	657,508
Glendale HS	461.15	1,747.88	806,032
Hoover HS	625.60	1,757.16	1,099,273
Total /Avg	2,439.59	1,784.5	4,353,566

Estimated Solar Procurement Cost
\$9,943,465
 (\$4.03 per Watt-dc)

Proposed Time Table

- OCT 4th - Board Meeting & Public Hearing
 - ✓ **Board Approves Authorizing Resolution**
- OCT 5th – Lock in Tax Credit Rate (Fix CREB Interest Rate)
- OCT 14th – Financial Closing of CREBs
- OCT 18th - Board Approves Solar Contracts
- District Issues “Notice to Proceed” to SunPower

Additional Information / Solar Project Detail

Corrected
10/4/16

30-Year Solar Cash Flow

(97% Solar

Production)

GENERAL FUND SAVINGS (Bill Reduction)				GENERAL FUND COST (Repay Bonds)			GENERAL FUND SAVINGS	
System Size (kWp)				Solar System Cost =			25 Yr Gross Savings = \$ 9,376,671	
EPC Price (\$/Wp)				Project Dev /Contingency Costs =			30 Yr Gross Savings = \$ 15,607,076	
Solar Yield (kWh per kWp)				Cost of Issuance =			25 Yr NPV Savings = \$ 5,712,000	
Annual Rate of PV Degradation				Total CREB Loan Amount =			30 Yr NPV Savings = \$ 8,830,000	
Avg Avoided Cost (\$/kWh)				First Year O&M Cost =				
Annual Electricity Cost Inflation				O&M Annual Escalation Rate =				
Fisc Yr	Solar Generation (kWh)	X Avoided Utility Cost (\$/kWh)	= Utility Bill Savings	Operation & Maint Costs	CREB Repayment (after Subsidy)	Total Cost of Solar	General Fund Savings by Fiscal Year	
2017/18 *	2,520,788	\$ 0.1593	\$ 401,489	\$ (56,740)	\$ (290,436)	\$ (347,176)	\$	54,313
2018/19	4,212,402	\$ 0.1676	\$ 706,092	\$ (84,212)	\$ (573,278)	\$ (657,490)	\$	48,603
2019/20	4,201,870	\$ 0.1727	\$ 725,457	\$ (86,738)	\$ (588,121)	\$ (674,859)	\$	50,598
2020/21	4,191,366	\$ 0.1778	\$ 745,353	\$ (89,341)	\$ (604,850)	\$ (694,190)	\$	51,163
2021/22	4,180,887	\$ 0.1832	\$ 765,794	\$ (92,021)	\$ (621,455)	\$ (713,476)	\$	52,318
2022/23	4,170,435	\$ 0.1887	\$ 786,796	\$ (94,781)	\$ (637,938)	\$ (732,719)	\$	54,076
2023/24	4,160,009	\$ 0.1943	\$ 808,374	\$ (97,625)	\$ (656,294)	\$ (753,919)	\$	54,455
2024/25	4,149,609	\$ 0.2001	\$ 830,543	\$ (100,554)	\$ (674,515)	\$ (775,069)	\$	55,475
2025/26	4,139,235	\$ 0.2062	\$ 853,321	\$ (103,570)	\$ (692,601)	\$ (796,171)	\$	57,150
2026/27	4,128,887	\$ 0.2123	\$ 876,723	\$ (106,677)	\$ (710,550)	\$ (817,228)	\$	59,496
2027/28	4,118,565	\$ 0.2187	\$ 900,768	\$ (109,878)	\$ (730,362)	\$ (840,239)	\$	60,528
2028/29	4,108,268	\$ 0.2253	\$ 925,471	\$ (113,174)	\$ (750,025)	\$ (863,199)	\$	62,272
2029/30	4,097,998	\$ 0.2320	\$ 950,852	\$ (116,569)	\$ (771,537)	\$ (888,106)	\$	62,746
2030/31	4,087,753	\$ 0.2390	\$ 976,929	\$ (120,066)	\$ (792,890)	\$ (912,956)	\$	63,973
2031/32	4,077,533	\$ 0.2462	\$ 1,003,722	\$ (123,668)	\$ (814,082)	\$ (937,750)	\$	65,972
2032/33	4,067,339	\$ 0.2535	\$ 1,031,249	\$ (127,378)	\$ (835,114)	\$ (962,492)	\$	68,757
2033/34	4,057,171	\$ 0.2612	\$ 1,059,531	\$ (131,200)	\$ (863,973)	\$ (995,173)	\$	64,358 (CREBs Paid-Off)
2034/35	4,047,028	\$ 0.2690	\$ 1,088,588	\$ (135,136)		\$ (135,136)	\$	953,453
2035/36	4,036,911	\$ 0.2771	\$ 1,118,443	\$ (139,190)		\$ (139,190)	\$	979,253
2036/37	4,026,818	\$ 0.2854	\$ 1,149,116	\$ (143,365)		\$ (143,365)	\$	1,005,751
2037/38	4,016,751	\$ 0.2939	\$ 1,180,631	\$ (147,666)		\$ (147,666)	\$	1,032,964
2038/39	4,006,709	\$ 0.3027	\$ 1,213,009	\$ (152,096)		\$ (152,096)	\$	1,060,913
2039/40	3,996,693	\$ 0.3118	\$ 1,246,276	\$ (156,659)		\$ (156,659)	\$	1,089,617
2040/41	3,986,701	\$ 0.3212	\$ 1,280,455	\$ (161,359)		\$ (161,359)	\$	1,119,096
2041/42	3,976,734	\$ 0.3308	\$ 1,315,572	\$ (166,200)		\$ (166,200)	\$	1,149,372
2042/43	3,966,792	\$ 0.3407	\$ 1,351,651	\$ (171,186)		\$ (171,186)	\$	1,180,466
2043/44	3,956,875	\$ 0.3510	\$ 1,388,720	\$ (176,321)		\$ (176,321)	\$	1,212,399
2044/45	3,946,983	\$ 0.3615	\$ 1,426,806	\$ (181,611)		\$ (181,611)	\$	1,245,195
2045/46	3,937,116	\$ 0.3723	\$ 1,465,936	\$ (187,059)		\$ (187,059)	\$	1,278,877
2046/47	3,927,273	\$ 0.3835	\$ 1,506,139	\$ (192,671)		\$ (192,671)	\$	1,313,468
Total	120,499,501		\$ 31,079,805	\$ (3,864,710)	\$ (11,608,019)	\$ (15,472,729)	\$	15,607,076

* Partial first year - assumes two highschoools receive PTO 12/8/2017 and remaining 7 schools solar projects receive PTO 10/19/17

Muni Lease Financing- Overview

