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Jacobs Facilities/Pacifica Services, Inc.
East Los Angeles College
1200 West Floral Drive
Monterey Park, CA 91754
Telephone (323) 859-2330
Fax (323) 859-2342

January 13, 2007
Revised January 15, 2007

Ms. W. Agnes Leung PE. , LEED AP
Project Manager II
Chevron Energy Solutions Company
150 East Colorado Blvd
Suite 360
Pasadena , CA 91105

Re: ELAC Northwest Parking 1 MW Photovoltaic
02E.6279.03.01
Letter No.10 SSA Proposal Review

Dear Agnes,

Summary

The options for East Los Angeles College (ELAC) to comply with the Los Angeles Community College District (LACCD) Sustainable Directive(s) are to either install Photovoltaic at the Northwest Parking Lot or the Sixth Floor of Parking Structure No. 3. The costing for Photovoltaic in the Northwest Parking and Parking Structure No.3 are as noted below. Therefore, based on your concurrence of our understanding the Northwest Parking option appears to be the best value for ELAC.

1 MW System

	Operation Cost	**Bond Cost**
User Fees first Six year	$ 2,136,577	Buy-Out $3,172,750
Off set SCE Cost Reduction	($ 1,669,634)	In 2007 Bond Dollars
Net Operation Cost Increase	$ 466,944	$ 2,367,555
Twenty Year Value	**$ 5,485,693**	
300 KW System		
Design & Construction		$ 2,714,072
Twenty Year Value	**$ 2,282,117**	

Forward

On July 26, 2006 a Notice to Proceed was issued to Chevron Energy Solutions (CES) for the design and construction of Photovoltaic Covered Parking at ELAC. The Notice to Proceed was based on the approval of a Power Purchase Agreement (PPA) between CES and LACCD. The PPA draft was submitted to the LACCD Energy Team on August 9, 2006 for their review and comments. The PPA, changed to a Solar Service Agreement (SSA) was being reviewed with the 5956 Agreement for approval by LACCD. Additionally, as noted in the Notice to Proceed, CES has been meeting with the CPM at ELAC with 100 % Construction Documents submitted to the CPM for approval on December 21, 2006

On January 12, 2007 CES issued the SSA proposal information for review by the CPM. The information submitted was A) 1.2 MW Photovoltaic System Information, B) PV Financials for all SSA under the heading " Detailed Level 1" noting a 20 year SSA, C) PV Financials for all SSA under the heading " Detailed Level 2" noting a "Buy-Out" option, D) 1200kW PV proforma 3 percent escalation noting a 20 year SSA.

SSA with Buy Out

Our review will be limited to the SSA with a Buy Out after six years. While this Proposal appears to offer the best advantage for ELAC, we would like for CES to confirm our understandings. Since ELAC is required by the LACCD Sustainable Directive to provide 10% green power for additions and new construction, we compared the cost for Photovoltaic at the Northwest Parking (1 MW) and Parking Structure No.3 (300 KW).

1 MW Table I

Overall System kW Output Capacity (AC)		**1,002,000**	**Watts**			
Canopy Square Footage		**90,590**	**SF**			
Cost of PV Panels:		$4,166,400	$ per watt	$4.16	$ per SF	$45.99
Cost of Ancillary Electrical Equipment:		$775,000	$ per watt	$0.77	$ per SF	$8.56
Cost of Structures and Installation:		$2,625,000	$ per watt	$2.62	$ per SF	$28.98
Cost of Engineering:		$180,000	$ per watt	$0.18	$ per SF	$1.99
Cost Construction Management:		$360,000	$ per watt	$0.36	$ per SF	$3.97
Cost of General Site Work:		$110,000	$ per watt	$0.11	$ per SF	$1.21
OH & P:		$848,600	$ per watt	$0.85	$ per SF	$9.37
	Hard and Soft Cost:	$9,065,000	$ per watt	$9.05	$ per SF	$100.07
Incentives		-$2,800,000	$ per watt	-$2.79	$ per SF	-$30.91
	Total Net Cost	$6,265,000	$ per watt	$6.25	$ per SF	$69.16

The 1 MW Table I above notes the Net Cost to be $ 6,265,000 or $6.25 per watt or $ 69.16 per SF. The Design & Construction Schedule would be a total of seventeen (17) months with eleven (11) months for design and DSA approval and six (6) months for construction.

Southern California Edison (SCE) Billing Summary (Attachment C) notes the Electrical Usage for 2006 at a calculated rate of 10,261,455 kWh with an average growth of 454,782 kWh per year. Beginning with year 2008 Attachment A notes the ELAC kWh consumption per year with the associated SCE costing, the amount of Solar Electricity produced with CES User Fees. Therefore, beginning in 2008 the ELAC Operation Cost would reflect an increase for the first six years in the amount of $ 466,944. However, after the Buy-Out in year seven, ELAC would recoup those funds during year eight. In twenty years this would reflect a reduction in ELAC Operation Cost in the amount of $5,485,693.

The purchase of this option could be accomplished with ELAC operation funds for the first six (6) years and using A/AA Bond Funds for the Seventh Year Buy-Out. See Attachment A and Table II below.

Table II Bond Costing

A	B	C	D	E
Cost 1 MW PV Farm	SGIP Incentives	Net Project Cost	7th Year Net Bond Cost	Savings to A/AA Bond
CES	CES	A-B=C	CES	D-C= E
$9,065,000	($2,800,000)	$6,265,000	$3,172,750	$3,092,250

*Actual Bond cost in 2007 Dollars would be $ 2,622,107

300 KW Photovoltaic Table II

Overall System kW Output Capacity (AC)	**300,000**	**Watts**			
Canopy Square Footage	**26,485**	**SF**			
Cost of PV Panels:	$1,248,000	$ per watt	$4.16	$ per SF	$47.12
Cost of Ancillary Electrical Equipment:	$231,000	$ per watt	$0.77	$ per SF	$8.72
Cost of Structures and Installation:	$786,000	$ per watt	$2.62	$ per SF	$29.68
Cost of Engineering:	$54,000	$ per watt	$0.18	$ per SF	$2.04
Cost Construction Management:	$108,000	$ per watt	$0.36	$ per SF	$4.08
Cost of General Site Work:	$33,000	$ per watt	$0.11	$ per SF	$1.25
OH & P:	$255,000	$ per watt	$0.85	$ per SF	$9.63
Hard and Soft Cost:	$2,715,000	$ per watt	$9.05	$ per SF	$102.51
Incentives	$0	$ per watt	$0.00	$ per SF	$0.00
Total Net Cost	$2,715,000	$ per watt	$9.05	$ per SF	$102.51

The 300 KW Table II above notes the Net Cost to be $ 2,715,000 or $9.05 per watt or $ 102.51 per SF. The Design & Construction Schedule would be a total of seventeen (17) months with eleven (11) months for design and DSA approval and six (6) months for construction

Southern California Edison (SCE) Billing Summary (Attachment C) notes the Electrical Usage for 2006 at a calculated rate of 10,261,455 kWh with an average growth of 454,782 kWh per year. Beginning with year 2008 Attachment B notes the ELAC kWh consumption per year with the associated SCE costing. Therefore, beginning in 2008 the ELAC Operation Cost would reflect a decrease for the first six years in the amount of $ 499,890. In twenty years this would reflect a reduction in ELAC Operation Cost in the amount of $ 2,282,117.

The purchase of this option could be accomplished with A/AA Bond Funds. See Table III below.

A	B	C
Cost 300 KW PV Farm	SGIP Incentives	Net Bond Cost
		A-B=C
$2,714,072	Unknown	$2,714,072

* Actual Bond cost in 2007 Dollars would be $ 2,714,072

Please do not hesitate to contact me at 323.859.2330 or mobile 323.350.2188 with any questions.

Sincerely,
Jacobs Facilities/Pacifica Services, Inc.

Lynn S. Pilcher AACE, CMAA
Project Manager

cc: Maria T. Carvajal, Area Program Manager DMJM/JGM
Antoine Atallah, Project Director J/P
Bharat Patel, Sustainability DMJM/JGM
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Estimated Electrical Cost per year
1 MW Photovoltaics
Attachment A

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Year	Estimated kWh consumption	SCE Rate $ kWh 5% Escalation	Estimated Cost per Year	Solar Electricity Produced (kWh) Yearly	SSA Sale Price 5% Escalation	SSA Electricity Cost	Fixed Capacity Charge	Total SSA Costing per year	Net KWh Consumption	SCE Rate $ kWh 5% Escalation	Adjusted SCE Cost per Year	Total Cost of Electricity to ELAC	Total Value to ELAC	Subtotal of ELAC Value	% of Electricity produced by PV
			B * C = D			E * F = G		G+H=I	B - E = J		K * J = L	L + I = M	D - M = N		
2008	11,171,019	$0.160	$1,787,363	1,564,850	$0.130	$203,431	$130,000	$333,431	9,606,169	$0.160	$1,536,987	$1,870,418	-$83,055		14.01%
2009	11,474,207	$0.168	$1,927,667	1,553,114	$0.137	$212,000	$130,000	$342,000	9,921,093	$0.168	$1,666,744	$2,008,744	-$81,077		13.54%
2010	11,777,395	$0.176	$2,077,532	1,541,465	$0.143	$220,931	$130,000	$350,931	10,235,930	$0.176	$1,805,618	$2,156,549	-$79,016		13.09%
2011	12,080,583	$0.185	$2,237,566	1,529,904	$0.150	$230,237	$130,000	$360,237	10,550,679	$0.185	$1,954,197	$2,314,434	-$76,868		12.66%
2012	12,383,771	$0.194	$2,408,408	1,518,430	$0.158	$239,936	$130,000	$369,936	10,865,341	$0.194	$2,113,102	$2,483,038	-$74,630		12.26%
2013	**12,686,959**	**$0.204**	**$2,590,741**	**1,507,042**	**$0.166**	**$250,043**	**$130,000**	**$380,043**	**11,179,917**	**$0.204**	**$2,282,996**	**$2,663,039**	**-$72,298**	**-$466,944**	**11.88%**
2014	12,990,147	$0.214	$2,785,286	1,495,739					11,494,408	$0.214	$2,464,577	$2,464,577	$320,709		11.51%
2015	13,293,335	$0.225	$2,992,809	1,484,521					11,808,814	$0.225	$2,658,590	$2,658,590	$334,219		11.17%
2016	13,596,523	$0.236	$3,214,121	1,473,387					12,123,136	$0.236	$2,865,823	$2,865,823	$348,298		10.84%
2017	13,899,711	$0.248	$3,450,082	1,462,337					12,437,374	$0.248	$3,087,112	$3,087,112	$362,970		10.52%
2018	14,202,899	$0.261	$3,701,604	1,451,369					12,751,530	$0.261	$3,323,344	$3,323,344	$378,260		10.22%
2019	14,506,087	$0.274	$3,969,653	1,440,484					13,065,603	$0.274	$3,575,458	$3,575,458	$394,195		9.93%
2020	14,809,275	$0.287	$4,255,253	1,429,680					13,379,595	$0.287	$3,844,453	$3,844,453	$410,800		9.65%
2021	15,112,463	$0.302	$4,559,488	1,418,958					13,693,505	$0.302	$4,131,383	$4,131,383	$428,105		9.39%
2022	15,415,651	$0.317	$4,883,510	1,408,315					14,007,336	$0.317	$4,437,371	$4,437,371	$446,139		9.14%
2023	15,718,839	$0.333	$5,228,534	1,397,753					14,321,086	$0.333	$4,763,601	$4,763,601	$464,933		8.89%
2024	16,022,027	$0.349	$5,595,852	1,387,270					14,634,757	$0.349	$5,111,334	$5,111,334	$484,518		8.66%
2025	16,325,215	$0.367	$5,986,831	1,376,865					14,948,350	$0.367	$5,481,903	$5,481,903	$504,928		8.43%
2026	16,628,403	$0.385	$6,402,918	1,366,539					15,261,864	$0.385	$5,876,719	$5,876,719	$526,198		8.22%
2027	**16,931,591**	**$0.404**	**$6,845,646**	**1,356,290**					**15,575,301**	**$0.404**	**$6,297,282**	**$6,297,282**	**$548,364**	**$5,485,693**	**8.01%**
2028	17,234,779	$0.425	$7,316,640	1,346,118					15,888,661	$0.425	$6,745,176	$6,745,176	$571,464		7.81%
2029	17,537,967	$0.446	$7,817,619	1,336,022					16,201,945	$0.446	$7,222,082	$7,222,082	$595,537		7.62%
2030	17,841,155	$0.468	$8,350,405	1,326,002					16,515,153	$0.468	$7,729,781	$7,729,781	$620,624		7.43%
2031	18,144,343	$0.491	$8,916,925	1,316,057					16,828,286	$0.491	$8,270,157	$8,270,157	$646,768		7.25%
2032	18,447,531	$0.516	$9,519,221	1,306,186					17,141,345	$0.516	$8,845,208	$8,845,208	$674,013		7.08%
2033	18,750,719	$0.542	$10,159,454	1,296,390					17,454,329	$0.542	$9,457,049	$9,457,049	$702,406		6.91%
2034	19,053,907	$0.569	$10,839,913	1,286,667					17,767,240	$0.569	$10,107,918	$10,107,918	$731,995		6.75%
2035	19,357,095	$0.597	$11,563,019	1,277,017					18,080,078	$0.597	$10,800,189	$10,800,189	$762,830		6.60%
2036	19,660,283	$0.627	$12,331,336	1,267,439					18,392,844	$0.627	$11,536,372	$11,536,372	$794,964		6.45%
2037	**19,963,471**	**$0.659**	**$13,147,577**	**1,257,933**					**18,705,538**	**$0.659**	**$12,319,125**	**$12,319,125**	**$828,452**	**$12,414,745**	**6.30%**
						Subtotal User Fees		**$2,136,577**							

Estimated Electrical Cost per year
300 KW Photovoltaics
Attachment B

A	B	C	D	E	J	K	L	M	N	O
Year	Estimated kWh consumption	SCE Rate $ kWh 5% Escalation	Estimated Cost per Year	Solar Electricity Produced (kWh) Yearly	Net KWh Consumption	SCE Rate $ kWh 5% Escalation	Adjusted SCE Cost per Year	Total Value to ELAC	Subtotal of ELAC Value	% of Electricity produced by PV
			B * C = D		B - E = J		K * J = L	D - M = N		
2008	11,171,019	$0.160	$1,787,363	468,518	10,702,501	$0.160	$1,712,400	$74,963		4.19%
2009	11,474,207	$0.168	$1,927,667	465,004	11,009,203	$0.168	$1,849,546	$78,121		4.05%
2010	11,777,395	$0.176	$2,077,532	461,517	11,315,878	$0.176	$1,996,121	$81,412		3.92%
2011	12,080,583	$0.185	$2,237,566	458,055	11,622,528	$0.185	$2,152,725	$84,841		3.79%
2012	12,383,771	$0.194	$2,408,408	454,620	11,929,151	$0.194	$2,319,993	$88,415		3.67%
2013	**12,686,959**	**$0.204**	**$2,590,741**	**451,210**	**12,235,749**	**$0.204**	**$2,498,602**	**$92,139**	**$499,890**	**3.56%**
2014	12,990,147	$0.214	$2,785,286	447,826	12,542,321	$0.214	$2,689,266	$96,021		3.45%
2015	13,293,335	$0.225	$2,992,809	444,467	12,848,868	$0.225	$2,892,744	$100,066		3.34%
2016	13,596,523	$0.236	$3,214,121	441,134	13,155,389	$0.236	$3,109,840	$104,281		3.24%
2017	13,899,711	$0.248	$3,450,082	437,825	13,461,886	$0.248	$3,341,408	$108,674		3.15%
2018	14,202,899	$0.261	$3,701,604	434,542	13,768,357	$0.261	$3,588,353	$113,252		3.06%
2019	14,506,087	$0.274	$3,969,653	431,283	14,074,804	$0.274	$3,851,631	$118,022		2.97%
2020	14,809,275	$0.287	$4,255,253	428,048	14,381,227	$0.287	$4,132,259	$122,994		2.89%
2021	15,112,463	$0.302	$4,559,488	424,838	14,687,625	$0.302	$4,431,313	$128,175		2.81%
2022	15,415,651	$0.317	$4,883,510	421,651	14,994,000	$0.317	$4,749,935	$133,575		2.74%
2023	15,718,839	$0.333	$5,228,534	418,489	15,300,350	$0.333	$5,089,333	$139,201		2.66%
2024	16,022,027	$0.349	$5,595,852	415,350	15,606,677	$0.349	$5,450,787	$145,065		2.59%
2025	16,325,215	$0.367	$5,986,831	412,235	15,912,980	$0.367	$5,835,655	$151,176		2.53%
2026	16,628,403	$0.385	$6,402,918	409,143	16,219,260	$0.385	$6,245,373	$157,544		2.46%
2027	**16,931,591**	**$0.404**	**$6,845,646**	**406,075**	**16,525,516**	**$0.404**	**$6,681,465**	$164,181	**$2,282,117**	**2.40%**
2028	17,234,779	$0.425	$7,316,640	403,029	16,831,750	$0.425	$7,145,543	$171,097		2.34%
2029	17,537,967	$0.446	$7,817,619	400,007	17,137,960	$0.446	$7,639,315	$178,305		2.28%
2030	17,841,155	$0.468	$8,350,405	397,007	17,444,148	$0.468	$8,164,589	$185,816		2.23%
2031	18,144,343	$0.491	$8,916,925	394,029	17,750,314	$0.491	$8,723,282	$193,643		2.17%
2032	18,447,531	$0.516	$9,519,221	391,074	18,056,457	$0.516	$9,317,421	$201,800		2.12%
2033	18,750,719	$0.542	$10,159,454	388,141	18,362,578	$0.542	$9,949,153	$210,301		2.07%
2034	19,053,907	$0.569	$10,839,913	385,230	18,668,677	$0.569	$10,620,753	$219,160		2.02%
2035	19,357,095	$0.597	$11,563,019	382,340	18,974,755	$0.597	$11,334,627	$228,392		1.98%
2036	19,660,283	$0.627	$12,331,336	379,473	19,280,810	$0.627	$12,093,323	$238,013		1.93%
2037	**19,963,471**	**$0.659**	**$13,147,577**	**376,627**	**19,586,844**	**$0.659**	**$12,899,537**	**$248,040**	**$4,356,684**	**1.89%**

East Los Angeles College
SCE Billing Summary 2006
Attachment C

From	to	kWH	Cost		Usage Comparison 2006	2005	2004
7/6/2006	8/4/2006						
	Demand		15,359.17	kWH used	925,555.00	830,491.00	736,310.00
	Adjustments		515.57	No. of Days	29	29	29
	Delivery Charges		26,174.42	**Daily Usage**	**31,915.69**	**28,637.62**	**25,390.00**
	On Peak	253,229	21,486.90				
	Mid Peak	316,978	5,551.36				
	Off Peak	355,348	4,486.57				
	Subtotal	**925,555**	**73,573.99**				
8/4/2006	9/5/2006						
	Demand		16,621.44	kWH used	884,280.00	772,109.00	785,827.00
	Adjustments		422.45	No. of Days	32.00	29.00	29.00
	Delivery Charges		24,949.88	**Daily Usage**	**27,633.75**	**26,624.45**	**27,097.48**
	On Peak	219,418	2,191.99				
	Mid Peak	270,048	2,697.78				
	Off Peak	394,814	3,944.19				
	Subtotal	**884,280**	**50,827.73**				
9/5/2006	10/4/2006						
	Demand		21,005.03	kWH used	883,541.00	881,323.00	891,514.00
	Adjustments		439.73	No. of Days	29.00	32.00	32.00
	Delivery Charges		25,001.90	**Daily Usage**	**30,466.93**	**27,541.34**	**27,859.81**
	On Peak	219,173	2,189.54				
	Mid Peak	325,560	3,281.04				
	Off Peak	338,808	3,409.25				
	Subtotal	**883,541**	**55,326.49**				
12/6/2006	1/5/2007						
	Demand		14,653.94	kWH used	727,109.00	704,246.00	703,646.00
	Adjustments		374.21	No. of Days	30.00	30.00	30.00
	Delivery Charges		20,134.54	**Daily Usage**	**24,236.97**	**23,474.87**	**22,698.26**
	On Peak	0	-				
	Mid Peak	338,102	3,546.91				
	Off Peak	389,007	4,080.74				
	Subtotal	**727,109**	**42,790.34**				
Subtotal		**3,420,485**	**222,519**		**3,420,485**	**3,188,169**	**3,117,297**
Average (monthly)		855,121	55,630	kWH	855,121	797,042	779,324
Average (Yearly) 2007		10,716,237					
Average (Yearly) 2008		11,171,019	667,556	kWH 2006	10,261,455	9,564,507	9,351,891
				kWH increase	909,564	212,616	0
				kWH increase	454,782 per year		

East Los Angeles College

1.2 MW Photovoltaic System Information

By: Chevron
Date: January 11, 2007

Photovoltaic kW Output Capacity (DC):	1,190		
Overall System kW Output Capacity (AC):	1,002		
System Overall Efficiency (DC to AC):	84.2%		
Panel Manufacturer:	Kyocera	STC Max Output per PV Panel (watts):	200
Panel Model Number:	KC200GT	STC Max Power (volts):	26.3
Panel Energy Production Efficiency:	16.0%	STC Max Power (amps):	7.61
Size of Panel (SF):	15.22	Output Operating Temperature:	47 degrees C
System Operating Voltage:	32.90	Cell Temperature Power Coefficient (%/C):	0.0038
Length of Manufacturer Warranty (years):	25	Cell Temperature Voltage Coefficient (%/C):	-0.123
Warranted Maximum Annual Output Degradation:	0.750%		
Description of Warranty:	System Capacity, Output Voltage		
Electric Utility (1=LADWP, 2=SoCal Ed, 3 = CNE):	3 Constellation New Energy	Panel Mount: Fixed or Tracking (1/2 axis):	Fixed

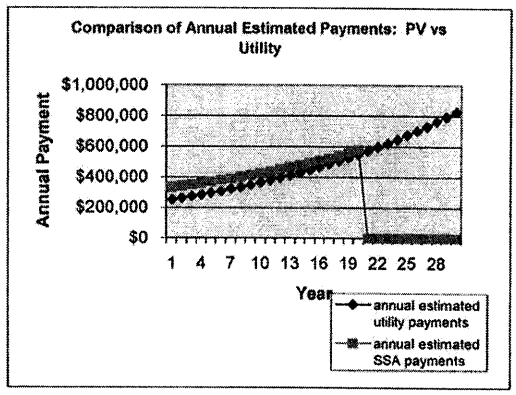
Inverter Manufacturer:	Satcon	*Mandatory Inverter Specifications:*	
Number of Inverters Proposed:	2	Peak Inverter Efficiency:	95%
Inverter Continuous Power Rating:	500 kW	Line Power Factor (above 20% rated power):	
Nominal AC Voltage (3 phase, +10%/-12%	480.0	AC Current Distortion (at rated power):	<3% THD
Standby Tare Losses:		Maximum Open Circuit Voltage:	660 VDC
Power Tracking Window Range (VDC):	280 to 600	Maximum Ripple Current (% of rated current)	

PV Watts2 Simulation Check Information

Year 1 total kWh Provided to College by PV:	1,564,850	2-degree tilt						
Overall System Efficiency (DC to AC):	77.0%							
Percent of Panels on Rooftop:	0%	kW Capacity (DC):	0	Area (SF):	0	Solar Angle & Azimuth:	180.0	0.0
Percent of Panels on Parking Structure:	100%	kW Capacity (DC):	1,190	Area (SF):	0	Solar Angle & Azimuth:	180.0	0.0
Percent of Panels on Mounted Otherwise:	0%	kW Capacity (DC):	0	Area (SF):	0	Solar Angle & Azimuth:	180.0	0.0
	100%	kW Capacity (DC):	1,190					

Hard and Soft Cost of Panel Installation

Cost of PV Panels:	$4,166,400	$ per watt:	$3.50
Cost of Ancillary Electrical Equipment:	$775,000	$ per watt:	$0.65
Cost of Structures and Installation:	$2,625,000	$ per watt:	$2.21
Cost of Engineering:	$180,000	$ per watt:	$0.15
Cost of Construction Management:	$360,000	$ per watt:	$0.30
Cost of General Site Work:	$110,000	$ per watt:	$0.09
Other Costs (Commissioning, Performance Guarantee, Bonds, Fees and Permits, OH&P):	$848,600	$ per watt:	$0.71
Total Hard + Soft Cost:	$9,065,000		$7.62



Incentives

SGIP	$2,800,000	$ per watt:	$2.35
Identify Incentive 2 Source Here:	$0	$ per watt:	$0.00
Identify Incentive 3 Source Here:	$0	$ per watt:	$0.00
Identify Incentive 4 Source Here:	$0	$ per watt:	$0.00
Identify Incentive 5 Source Here:	$0	$ per watt:	$0.00
Total Incentives:	$2,800,000		$2.35

Effective Cost of Project Installation

(A) Total Hard + Soft Cost less Incentives:	$6,265,000	Installed $ per watt:	$5.26

SSA Proposal

Term of SSA Agreement (years):	20	Ownership of Renewable Energy Credits held by:	MMA Renewable Ventures
Capital Contribution to be Financed:	$0	Estimated Average Utility Cost over 30 Years:	$0.345
Year 1 PV Sales - Price per kWh:	0.130	Average PV Cost of SSA over 30 Years:	$0.208
Annual PV Sales Price Escalation:	5%	Estimated Utility Cost Savings over 30 Years:	$5,758,228
Year 1 PV Energy Purchase Cost:	$203,431	Estimated Increase/(Decrease) in Net Present Value:	($1,196,543)

Description of System Proposed:

Please attach the following:

PV Panel cut sheet including technical data and current/voltage characteristics per irradiance and module-temperature graph.
Single line diagram of PV system and campus site plan.
PV Watts2 Calculation Inputs and Outputs

East Los Angeles College - 1MW Photovoltaics

System Size (kWp)		1190
System Size (kW CEC AC)		1002
Estimated Cost of Improvements		$9,065,000
Estimated Self Generation Incentive Program (SGIP) Incentives	$	(2,800,000)
CES Cost of Funds to Carry Incentive (8% per year, for 4 months) ?		$0
Net PROJECT COST		**$6,265,000**
Up-front Infrastructure Expense		$0
Net Financed Amount		**$6,265,000**

Financing Term	20 years
SSA Annual Escalation Factor	5.0%
Module Degradation/Year Factor	0.75%

Year	Solar Electricity Produced (kWh)[1]	Utility Electricity Cost ($/kWh)[2]	SSA Solar Electricity Sale Price ($/kwh)[3]	Total Utiltiy Electricity Cost ($)	SSA Electricity Cost ($)	Difference in Cost between Utility and Solar Electric Production ($)	Fixed Capacity Charge [4]	**Net Benefit**
	A	B	C	D = A * B	E = A * C	F = D - E	G	H=F-G
1	1,564,850	$0.160	$0.130	$250,376	$ 203,431	$46,946	$ 130,000	($83,055)
2	1,553,114	$0.168	$0.137	$260,923	$ 212,000	$48,923	$ 130,000	($81,077)
3	1,541,465	$0.176	$0.143	$271,914	$ 220,931	$50,984	$ 130,000	($79,016)
4	1,529,904	$0.185	$0.150	$283,369	$ 230,237	$53,132	$ 130,000	($76,868)
5	1,518,430	$0.194	$0.158	$295,306	$ 239,936	$55,370	$ 130,000	($74,630)
6	1,507,042	$0.204	$0.166	$307,746	$ 250,043	$57,702	$ 130,000	($72,298)
7	1,495,739	$0.214	$0.000	$320,709	$ -	$320,709	$ 3,172,750	($2,852,041)
8	1,484,521	$0.225	$0.000	$334,219	$ -	$334,219	$ -	$334,219
9	1,473,387	$0.236	$0.000	$348,298	$ -	$348,298	$ -	$348,298
10	1,462,337	$0.248	$0.000	$362,970	$ -	$362,970	$ -	$362,970
11	1,451,369	$0.261	$0.000	$378,260	$ -	$378,260	$ -	$378,260
12	1,440,484	$0.274	$0.000	$394,195	$ -	$394,195	$ -	$394,195
13	1,429,680	$0.287	$0.000	$410,800	$ -	$410,800	$ -	$410,800
14	1,418,958	$0.302	$0.000	$428,105	$ -	$428,105	$ -	$428,105
15	1,408,315	$0.317	$0.000	$446,139	$ -	$446,139	$ -	$446,139
16	1,397,753	$0.333	$0.000	$464,933	$ -	$464,933	$ -	$464,933
17	1,387,270	$0.349	$0.000	$484,518	$ -	$484,518	$ -	$484,518
18	1,376,865	$0.367	$0.000	$504,928	$ -	$504,928	$ -	$504,928
19	1,366,539	$0.385	$0.000	$526,198	$ -	$526,198	$ -	$526,198
20	1,356,290	$0.404	$0.000	$548,364	$ -	$548,364	$ -	$548,364
21	1,346,118	$0.425	$0.000	$571,464	$ -	$571,464	$ -	$571,464
22	1,336,022	$0.446	$0.000	$595,537	$ -	$595,537	$ -	$595,537
23	1,326,002	$0.468	$0.000	$620,624	$ -	$620,624	$ -	$620,624
24	1,316,057	$0.491	$0.000	$646,768	$ -	$646,768	$ -	$646,768
25	1,306,186	$0.516	$0.000	$674,013	$ -	$674,013	$ -	$674,013
26	1,296,390	$0.542	$0.000	$702,406	$ -	$702,406	$ -	$702,406
27	1,286,667	$0.569	$0.000	$731,995	$ -	$731,995	$ -	$731,995
28	1,277,017	$0.597	$0.000	$762,830	$ -	$762,830	$ -	$762,830
29	1,267,439	$0.627	$0.000	$794,964	$ -	$794,964	$ -	$794,964
30	1,257,933	$0.659	$0.000	$828,452	$ -	$828,452	$ -	$828,452
Total	**42,180,142**			**$14,551,323**	**1,356,577**	**$13,194,745**	**3,952,750**	**9,241,995**

		utility	ssa consumption		ssa fixed capacity	savings (NPV)
30 year life:	Net Present Values:	$6,427,450.15	$1,140,880.61		$2,914,654.16	$2,371,915.38
25 year:		$5,454,429.78	$1,140,880.61		$2,914,654.16	$1,398,895.01
20 year:		$4,444,085.57	$1,140,880.61		$2,914,654.16	$388,550.80

Notes and Sources:

(1) The annual kwh produced by the Solar PV system
(2) SCE Electric blended cost per kWh (includes kWh and kW factor)based on announced rate increases . 5.0% Annual Escalation
(3) 5% annual escalation of SSA Rate
(4) Year 7: ELAC buys out SSA