



Summary Report

Measure J Citizens' Oversight Committee South San Francisco Unified School District

Meeting Type: Meeting of the Citizens' Oversight Committee (Meeting No. 35)

Meeting Date: Tuesday, September 13, 2016, 6:15 pm

Location: South San Francisco Unified School District Office Board Room
398 B Street
South San Francisco, CA 94080

Notice:

1. Preliminary

1.1 CALL TO ORDER – 6:15 pm

1.2 ROLL CALL

1.2.1 PRESENT: Richard Holt
Paul Formosa
Martin Romero

1.2.2 ABSENT: Rich Blank
Dana Abarca (Clerk) - excused
America Gutierrez
Julia Lopez
Patricia Turpo Ames
John Sanna (Chair) - excused

1.2.3 OTHER: Michael Krause, SSFUSD (MK)
Patrick Lucy, SSFUSD Board President (PL)
Jackie Cabanas
Donna Fentanes, SSFUSD (DF)
Cindy Alger – Winston Manor Comm. Assc.
Gary Rubino – Winston Manor Comm. Assc.
Sandy Tidwell
Courtney Jenkins, OpTerra (CJ)
Dave Baldwin, OpTerra (DB)
Scott Grindy

1.2.4 DF performed a roll call. Three (3) out of nine (9) members were present which resulted in lack of quorum.

Mr. Holt stated that since there is no quorum, the committee is unable to perform any action items. Items will be for discussion only.

2. Approval of Agenda – **Deferred to next meeting.**
3. Approval of Meeting Minutes Nos. 33 and 34 – **Deferred to next meeting.**
4. Annual Report Review moved to next meeting
5. OpTerra Presentation:
 - 5.1 MK introduced Courtney Jenkins (CJ) and Dave Baldwin (DB) from OpTerra. CJ reviewed history of the Measure J energy savings program. Reviewed process overview from attached power point presentation.
 - 5.2 DB reviewed the scope of work outlined in attached power point presentation. MR asked if each Phase 1 sites' KW/hr amount was calculated, DB answered an average rate for the time. DB reviewed Bond language as it related to energy savings program, make sure it was aligned with Measure J.
 - 5.3 DB answered questions that had been submitted: 1. Project Cost – see PPT, project was on time, on budget and safely executed. 2. Project Payment – OpTerra was not involved in District payment processes, MK was not here for initial financing, will investigate. MR commented staff had two months to answer these questions. 3. Reduction of Costs without Rebates – reviewed Annual Year 3 savings, MR reiterated question to staff: how much electric cost have been reduced, should be a record of that expense. MK will get back to you. PL commented line of questioning getting uncomfortable, let OpTerra finish, MR my responsibility to ask difficult questions, Supt. assured we'd have answers tonight, PL will contact Supt. MR apologized, but answers have not been forthcoming for last three years. PL will get answers.
 - 5.4 4. Rebates – MR would like to verify we received credit from PG&E. 5. 5 year program – DB assured OpTerra guarantees rebate amount and energy savings that was lost, production guarantee and rebate amounts separate, MR would like staff to break out the rebate and savings amounts, commented that commingling rebate and savings amount confusing and misleading. 6. Not correct, questions and answers on attached PPT. 7. Increased cost of electricity impacted cost savings. 8. DB notes that values are in the contract. 9. & 10. Operations & Maintenance and Annual Measure Verification costs have been included in financial proforma.
 - 5.5 11. If District defaults on O&M and AMV costs, performance & savings guarantees terminate. 12. Reviewed past three years of total savings. 13. MR asked if projective savings include electricity costs, DB said yes. 14. Repeat of 11. 15. CJ & DB explained kilowatt misinformation as clerical error, will revise report. CJ did mention last meeting they were not a “no-show” but had a previous commitment. RH thanked CJ & DB for presentation.
6. Measure J Update
 - 6.1 MK updated CBOC on three school site projects. Martin project has selected Architect, HY Architects, and they will be presenting the scope of work for Martin.
 - 6.2 The Buri project will be preparing bids for building construction. Interstate Grading and Paving are completing the Sitework project which includes a sidewalk to the Admin building, signage, some fencing & irrigation, playground preparation. The second project, the Demolition and Grading project, starts up today with R.V. Stich Construction as the contractor. Big part of this project will be to move the mound of dirt as well as demo'ing the old admin building. The next bid for the construction of the Library and MPR will be later this fall. PF

asked if the dirt was to be moved offsite, MK said it will stay onsite. CA remarked not all dirt is BB's. PF asked CA to send pics to MK, CA said no, PL asked for the pics, CA said ok. PF asked about dust issues, MK said water trucks being used to keep dust down, working with City. CA mentioned Bay Area Air Quality called at least 2X on Interstate.

- 6.3 MK updated that Parkway scope of work not as large as Buri, but equally important. Some sitework will be done for parking area at West Campus. Fencing and half of portable classrooms have been removed.

7. Review of updated Measure J budgets & financials

- 7.1 MK estimated a 2018 completion date for the Measure J program. Sources remain the same, the Measure J bond, funds still in reserves for mediation, hopefully in 6 months, some funds freed up. Measure on state ballot may generate some funds, but don't know how to apply for them.
- 7.2 MK said Bill Savidge has updated estimated budget. Not a lot of wiggle room in the Parkway budget. No reports from Accountability because Accounting Tech position still open. MR asked when AB quit, DF responded 4/29. MK said no staff is trained in Accountability. MR commented Accountability used to provide CBOC with on-going reports of expenditures, took AB 1-11/2 years to come up to speed. With AB gone, no longer tracking our expenditures using Accountability, report with County doesn't give us details per project expenditures. Need to get back in Accountability, that's why Board spent all that money. MK said Accountability redundant to County system, will contact County to see if we can break out costs by site. MR suggested to ask AB to come back as independent contractor to update Accountability. MK not in contact with her.
- 7.3 MK said still has \$13M to complete current scopes of work. MK commented staff challenged, we have new CM, Victoria Vargas. PF commented that is the financial report could be exported to Excel, they could do the sorting. MK will see if it can be done.

8. Newsletter & Messaging to the Public

- 8.1 This item was tabled.

9. Attendance Report Review

- 9.1 This item will be discussed at next meeting.

10. Meeting Schedule

- 10.1 The next meeting will be Tuesday, November 8, 2016 at 6:15 PM.

11. Public Comment

11.1 PL said that Supt. asked him to be here. PL conveyed Supt's desire to work together to build a better district, build camaraderie. CA also commented to keep our kids in mind, especially during the work at Buri Buri, commented that grandson had to use his inhaler, also that kids are eating their lunch outside right next to Mt. Buri.

11. Adjournment

Mr. Holt concluded the meeting at 8:10 pm. There was no adjournment due to a lack of quorum.

Please advise the District within 48 hours if there are any errors in the meeting minutes. Provide questions and comments in a written form and address all discrepancies to the Assistant Superintendent of Business Services and South San Francisco Unified School District.



OPTERRA
ENERGY SERVICES

South San Francisco Unified School District

Citizens Bond Oversight Committee
September 13, 2016

Agenda

- Phase I Overview
 - Process
 - Scope
 - Savings Model
- Phase I Savings Report
- Q&A

Phase I Process Overview



- **Comprehensive on-site energy analysis (October 2010-March 2011)**
 - Heating and Cooling Systems
 - Energy Management Control Systems
 - Renewable Energy Options (cogeneration, solar, wind)
 - Facility Sustainability (long-term cost-benefit analysis)
 - Lighting Performance Improvements (indoor/outdoor)
 - Water Efficiency (restrooms, pools, Irrigation)
 - Roofing
- **Collaboration with Staff, Board, and Principals**
- **Synchronous with Master Plan and future Measure J bond projects to allow for site flexibility**
- **Rebates (lighting), Incentives (Solar PV) and Grants (Football Field)**

Phase I Process



- Initiated Comprehensive Energy Audit on 10/6/10
- Conducted Energy Conservation Leadership Team Meetings on 10/13, 11/8, 12/6, 12/17, 1/20, and 2/1 with members of the Facilities Sub-Committee
- Held School Principal Meeting on 11/15, followed by individual site visits
- Presented Board Updates at public meetings on 12/9/10 and 2/10/11
- Collaborated closely with Eugene Sim, Interim Bond Liaison, and his team
- Vetting technical scope, reviewing DSA plan, negotiating contract terms, reviewing schedule, reviewing savings, investigating innovative financing options
- Held multiple meetings, including 2/16/11, 3/1, 3/8, 3/10, and 3/15
- Conducted competitive and transparent process for sub-contractors and equipment for all scopes
- Community Forums held in April and May 2011
- **Process was built on the principles of *Collaboration, Communication and Transparency***

Phase I Scope

- Solar PV at 15 sites
- Lighting
- Boilers
- HVAC
- Roofing
- Irrigation controls
- Energy Management Systems
- Energy education

Phase I Scope



						1	2	3	4	5	6	7	8	9	10
School	Sqft	kWh/yr	\$/yr	kWh/sqft	\$/kWh	Solar PV System	Lighting	Irrigation Controls	Boilers	HVAC	EMS	Roofing	Energy Education	Cogen	Football Field/ Track
El Camino High School	180,208	1,130,754	\$172,823	6.27	\$0.153	X	X	X			X	X	X	X	
South San Francisco High School	154,167	907,219	\$129,734	5.88	\$0.143	X	X	X	X		X	X	X	X	
District Office	38,056	428,080	\$65,020	11.25	\$0.152										X
Westborough Middle School	66,221	331,360	\$62,763	5.00	\$0.189	X		X			X		X		
Baden High School	51,977	299,400	\$55,365	5.76	\$0.185	X	X	X		X	X	X	X		
Alta Loma Middle School	69,877	293,760	\$47,549	4.20	\$0.162	X		X					X		
Sunshine Gardens Elementary School	47,261	211,760	\$38,469	4.48	\$0.182	X	X	X			X		X		
Parkway Heights Middle School	76,097	208,500	\$38,366	2.74	\$0.184	X		X					X		
Spruce Elementary School	70,569	190,880	\$36,891	2.70	\$0.193	X	X	X			X	X	X		
Buri Buri Elementary School	54,955	179,200	\$33,025	3.26	\$0.184	X		X					X		
Monte Verde Elementary School	38,487	176,880	\$30,589	4.60	\$0.173	X	X	X			X		X		
Martin Elementary School	40,261	172,800	\$28,475	4.29	\$0.165	X		X					X		
Skyline Elementary	40,554	152,160	\$30,030	3.75	\$0.197	X	X	X			X		X		
Junipero Serra Elementary	32,393	134,192	\$23,747	4.14	\$0.177	X	X	X			X		X		
Ponderosa Elementary	35,510	133,600	\$23,309	3.76	\$0.174	X	X	X			X		X		
Los Cerritos Elementary	32,618	87,920	\$15,862	2.70	\$0.180	X	X	X			X		X		

Alignment with Measure J



- **Renovation, Repair and Construction**
- Repair/replace deteriorated roofs or portions of roofs to extend the useful life of school facilities (#7)
- Upgrade outdated electrical, heating and ventilation, and power generation and distribution systems, to provide for basic facilities operating needs, meet the requirements of technology upgrades, etc. (#4, 5, 6)
- Renovate, improve, construct and/or repair athletic fields, tracks and turf, swimming pool, bleachers, lighting, fencing, etc., including irrigation and drainage, to improve student safety and allow greater use of school facilities including community use (#10)
- Upgrade buildings with efficient technologies to conserve energy and reduce costs, such as energy-efficient windows, window coverings, improved insulation, and climate control systems (#2, 3, 9)
- Install solar panels and power-generating equipment, and other alternative/renewable energy systems (#1)

Phase I Savings Model



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Solar PV and Energy Efficiency				\$14,852,089			
Energy Infrastructure Upgrades				\$9,828,744			
Year	Solar Electricity Produced (kWh) ⁽¹⁾	CSI Incentive (\$/kWh) ⁽²⁾	Net Solar Project Savings	Energy Conservation Rebates	Energy Conservation Savings	Project Net Benefit	Cumulative Net Benefit
1	2,437,243	\$399,342	\$907,995	\$52,071	\$110,351	\$1,070,417	\$1,070,417
2	2,425,057	\$397,346	\$926,942		\$115,869	\$1,042,810	\$2,113,227
3	2,412,932	\$395,359	\$946,845		\$121,662	\$1,068,507	\$3,181,734
4	2,400,867	\$393,382	\$967,746		\$127,745	\$1,095,491	\$4,277,225
5	2,388,863	\$391,415	\$989,690		\$134,132	\$1,123,823	\$5,401,047
6	2,376,918		\$519,223		\$140,839	\$660,062	\$6,061,110
7	2,365,034		\$541,987		\$147,881	\$689,868	\$6,750,978
8	2,353,208		\$565,819		\$155,275	\$721,094	\$7,472,072
9	2,341,442		\$590,770		\$163,039	\$753,809	\$8,225,881
10	2,329,735		\$616,890		\$171,191	\$788,080	\$9,013,961
11	2,318,087		\$644,232		\$179,750	\$823,983	\$9,837,943
12	2,306,496		\$672,854		\$188,738	\$861,592	\$10,699,535
13	2,294,964		\$702,814		\$198,175	\$900,989	\$11,600,524
14	2,283,489		\$734,173		\$208,083	\$942,256	\$12,542,780
15	2,272,071		\$766,995		\$218,487	\$985,483	\$13,528,263
20	2,215,835		\$955,516			\$955,516	\$17,911,666
25	2,160,990		\$1,281,487			\$1,281,487	\$23,795,289
30	2,107,503		\$1,594,942			\$1,594,942	\$31,115,134
35	2,053,340		\$1,986,685			\$1,986,685	\$40,230,198
Total	68,055,530	1,976,844	\$37,796,911		\$2,381,216	\$40,230,198	



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Phase I Savings Model

Financials - Cash and Financing Option South San Francisco USD 4217 Code Compliance Test

Project Cost
Solar PV and Energy Efficiency
Energy Incentives Upgrade
Roof Contribution

Financial Amount

\$14,400,833
\$14,852,089
\$9,688,744
\$54,440,833

INPUTS	
Projected Utility Annual Energy Expenditure Factor	5.00%
Projected Solar Production in year of operation	2,437,243
Solar Avoided Electricity Energy Rate	\$0.194
CST Incentive	\$0.164
Solar Electricity Production Depreciation Factor	0.50%

Year	Solar Electricity Produced (kWh/yr)	CST Incentive (\$/kWh/yr)	Solar Avoided Electricity Rate (\$/kWh/yr)	Total Projected Utility Electricity Savings	Solar QSM Cost ⁽¹⁾	Solar L&EV Cost ⁽²⁾	Renewable Energy Credit ⁽³⁾	Net Solar Project Savings ⁽⁴⁾	Energy Conservation Rebates ⁽⁵⁾	Energy Conservation Savings ⁽⁶⁾	Lease Payment ⁽⁷⁾	Project Net Benefit ⁽⁸⁾	Cumulative Net Benefit ⁽⁹⁾
1	2,437,243	\$398,543	\$0.184	\$437,704	\$36,559	\$48,126	\$36,559	\$907,942	\$52,071	\$110,351	\$0	\$1,042,810	\$1,042,810
2	2,435,057	\$397,346	\$0.203	\$430,230	\$36,776	\$48,811	\$36,776	\$926,942	\$51,669	\$115,669	\$0	\$1,068,507	\$2,111,317
3	2,412,913	\$393,539	\$0.214	\$411,292	\$36,914	\$49,554	\$36,914	\$946,845	\$51,262	\$121,662	\$0	\$1,095,391	\$3,181,754
4	2,400,867	\$393,382	\$0.224	\$393,382	\$37,007	\$50,296	\$37,007	\$967,746	\$50,859	\$127,745	\$0	\$1,123,833	\$4,305,587
5	2,388,863	\$391,417	\$0.237	\$378,632	\$37,139	\$51,039	\$37,139	\$989,690	\$50,456	\$134,132	\$0	\$1,153,833	\$5,459,420
6	2,376,818		\$0.247	\$363,882	\$37,271	\$51,781	\$37,271	\$1,012,634	\$50,053	\$140,619	\$0	\$1,184,833	\$6,644,253
7	2,364,773		\$0.250	\$349,132	\$37,403	\$52,524	\$37,403	\$1,035,578	\$49,650	\$147,106	\$0	\$1,216,833	\$7,859,086
8	2,352,728		\$0.253	\$334,382	\$37,535	\$53,266	\$37,535	\$1,058,522	\$49,247	\$153,593	\$0	\$1,249,833	\$9,108,919
9	2,340,683		\$0.256	\$319,632	\$37,667	\$54,008	\$37,667	\$1,081,466	\$48,844	\$160,080	\$0	\$1,282,833	\$10,391,752
10	2,328,638		\$0.260	\$304,882	\$37,799	\$54,750	\$37,799	\$1,104,410	\$48,441	\$166,567	\$0	\$1,315,833	\$11,707,585
11	2,316,593		\$0.263	\$290,132	\$37,931	\$55,492	\$37,931	\$1,127,354	\$48,038	\$173,054	\$0	\$1,348,833	\$13,056,418
12	2,304,548		\$0.266	\$275,382	\$38,063	\$56,234	\$38,063	\$1,150,298	\$47,635	\$179,541	\$0	\$1,381,833	\$14,438,251
13	2,292,503		\$0.269	\$260,632	\$38,195	\$56,976	\$38,195	\$1,173,242	\$47,232	\$186,028	\$0	\$1,414,833	\$15,853,084
14	2,280,458		\$0.272	\$245,882	\$38,327	\$57,718	\$38,327	\$1,196,186	\$46,829	\$192,515	\$0	\$1,447,833	\$17,300,917
15	2,268,413		\$0.275	\$231,132	\$38,459	\$58,460	\$38,459	\$1,219,130	\$46,426	\$200,002	\$0	\$1,480,833	\$18,781,750
16	2,256,368		\$0.278	\$216,382	\$38,591	\$59,202	\$38,591	\$1,242,074	\$46,023	\$207,489	\$0	\$1,513,833	\$20,295,583
17	2,244,323		\$0.281	\$201,632	\$38,723	\$59,944	\$38,723	\$1,265,018	\$45,620	\$214,976	\$0	\$1,546,833	\$21,842,416
18	2,232,278		\$0.284	\$186,882	\$38,855	\$60,686	\$38,855	\$1,287,962	\$45,217	\$222,463	\$0	\$1,579,833	\$23,422,249
19	2,220,233		\$0.287	\$172,132	\$38,987	\$61,428	\$38,987	\$1,310,906	\$44,814	\$230,000	\$0	\$1,612,833	\$25,035,082
20	2,208,188		\$0.290	\$157,382	\$39,119	\$62,170	\$39,119	\$1,333,850	\$44,411	\$237,537	\$0	\$1,645,833	\$26,680,915
21	2,196,143		\$0.293	\$142,632	\$39,251	\$62,912	\$39,251	\$1,356,794	\$44,008	\$245,074	\$0	\$1,678,833	\$28,369,748
22	2,184,098		\$0.296	\$127,882	\$39,383	\$63,654	\$39,383	\$1,379,738	\$43,605	\$252,611	\$0	\$1,711,833	\$30,101,581
23	2,172,053		\$0.299	\$113,132	\$39,515	\$64,396	\$39,515	\$1,402,682	\$43,202	\$260,148	\$0	\$1,744,833	\$31,876,414
24	2,160,008		\$0.302	\$98,382	\$39,647	\$65,138	\$39,647	\$1,425,626	\$42,799	\$267,685	\$0	\$1,777,833	\$33,694,247
25	2,147,963		\$0.305	\$83,632	\$39,779	\$65,880	\$39,779	\$1,448,570	\$42,396	\$275,222	\$0	\$1,810,833	\$35,545,080
26	2,135,918		\$0.308	\$68,882	\$39,911	\$66,622	\$39,911	\$1,471,514	\$41,993	\$282,759	\$0	\$1,843,833	\$37,427,913
27	2,123,873		\$0.311	\$54,132	\$40,043	\$67,364	\$40,043	\$1,494,458	\$41,590	\$290,296	\$0	\$1,876,833	\$39,341,746
28	2,111,828		\$0.314	\$39,382	\$40,175	\$68,106	\$40,175	\$1,517,402	\$41,187	\$297,833	\$0	\$1,909,833	\$41,287,579
29	2,100,000		\$0.317	\$24,632	\$40,307	\$68,848	\$40,307	\$1,540,346	\$40,784	\$305,370	\$0	\$1,942,833	\$43,265,412
30	2,088,000		\$0.320	\$9,882	\$40,439	\$69,590	\$40,439	\$1,563,290	\$40,381	\$312,907	\$0	\$1,975,833	\$45,275,245
31	2,076,000		\$0.323	\$-5,882	\$40,571	\$70,332	\$40,571	\$1,586,234	\$40,000	\$320,444	\$0	\$2,008,833	\$47,317,078
32	2,064,000		\$0.326	\$-11,132	\$40,703	\$71,074	\$40,703	\$1,609,178	\$39,600	\$327,981	\$0	\$2,041,833	\$49,390,000
33	2,052,000		\$0.329	\$-16,382	\$40,835	\$71,816	\$40,835	\$1,632,122	\$39,200	\$335,518	\$0	\$2,074,833	\$51,494,833
34	2,040,000		\$0.332	\$-21,632	\$40,967	\$72,558	\$40,967	\$1,655,066	\$38,800	\$343,055	\$0	\$2,107,833	\$53,631,666
35	2,028,000		\$0.335	\$-26,882	\$41,099	\$73,300	\$41,099	\$1,678,010	\$38,400	\$350,592	\$0	\$2,140,833	\$55,802,500
Total	68,018,430	1,978,844		\$2,867,937	2,087,972	\$807,240	\$808,912	\$37,706,911		\$2,581,216	0	\$40,240,198	\$40,240,198

4217 Code Compliance (Assumed Method) - Positive Cash Flow via Cumulative Profit - Column D	Over 25 years	Over 30	Over 35
YES	YES	YES	YES



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CBOC Questions

Project Cost



- 1. What were the total costs, including change orders, for the Opterra/CES project and what is the breakdown of the costs (solar vs. other work performed by CES)?
- The total cost of the project was \$24,540,833.
 - The solar/lighting cost \$14,852,089.
 - The rest of the infrastructure including roofing, boilers, HVAC, irrigation controls and energy management system cost \$9,688,744.
- The project included no change orders.

Project Payment



- 2. What are the specific terms for payment by taxpayers (# of years) and total amount that will be paid by taxpayers, including interest, for the Opterra/CES project? Please specify how this amount is calculated?
- OpTerra was not involved and has no knowledge of the bond payment terms or interest rates.

Electricity Spend Reduction



- **3. What has been the actual reduction in the District's electricity costs per year (excluding rebates)?**
- OpTerra tracks the solar savings and presents to the Board on an annual basis.
- Table 1 in the Guarantee Report summarizes annual Actual Solar Energy Production and Actual Energy Savings, along with key performance parameters in accordance with the Contract. (OpTerra Year 3 Guarantee Reconciliation Report). The actual solar savings over the past 3 years without rebates is \$1,859,570.
- In addition, the District-wide lighting scope provides over \$100,000 in annual savings each year. (Project Proforma)

Table 1: Annual Guarantee Reconciliation

Year	Guaranteed Savings (\$)	Measurement Period	Avoided Rate (\$/kWh)	Actual Energy Production (kWh)	Actual Energy Savings (\$)	Excess / Shortfall (\$)	Accumulated Savings (\$)
0	-	1/1/2012	0.195	1,668,180*	\$325,296	-	\$325,296
1	\$827,909	11/1/2012	0.358	2,543,494	\$910,571	\$82,662	\$407,958
2	\$843,329	11/1/2013	0.366	2,607,380	\$946,795	\$103,465	\$511,423
3	\$859,640	11/1/2014	0.375	2,472,282	\$927,106	\$67,466	\$578,889
4	\$876,948	11/1/2015	0.384				
5	\$895,337	11/1/2016	0.395				
6	\$544,967	11/1/2017	0.241				
7	\$567,648	11/1/2018	0.253				
8	\$591,679	11/1/2019	0.265				
9	\$617,185	11/1/2020	0.277				
10	\$644,367	11/1/2021	0.291				
11	\$673,236	11/1/2022	0.306				
12	\$703,995	11/1/2023	0.321				
13	\$736,829	11/1/2024	0.338				
14	\$772,023	11/1/2025	0.356				
15	\$809,629	11/1/2026	0.375				
16	\$849,935	11/1/2027	0.396				
17	\$893,220	11/1/2028	0.418				
18	\$939,894	11/1/2029	0.442				
19	\$990,081	11/1/2030	0.468				
20	\$1,044,195	11/1/2031	0.496				

Utility Rebates



- **4. What are the actual rebate amounts and please provide proof of payment from PG&E for each rebate?**
- OpTerra provides to the District an annual summary of the rebate amounts per site in the Annual Guarantee Report.
- Through year 3, the actual solar production has exceeded the guarantee production values.
- Since the rebates are based on the solar production, the actual rebate amounts are greater than projected.



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Appendix B: California Solar Initiative

Table 7: Payment Period 21-26

Number	Site	Payment Period 21 11/1/2013	Payment Period 22 12/1/2013	Payment Period 23 1/1/2014	Payment Period 24 2/1/2014	Payment Period 25 3/1/2014	Payment Period 26 4/1/2014
CSI28163	SSFHS	\$ 2,436.86	\$ 2,363.05	\$ 2,301.48	\$ 2,260.44	\$ 3,656.94	\$ 4,595.03
CSI28167	ELCHS	\$ 4,729.05	\$ 6,528.44	\$ 6,325.38	\$ 6,311.43	\$ 10,339.87	\$ 12,794.49
CSI28169	SG	\$ 836.43	\$ 821.07	\$ 816.14	\$ 808.88	\$ 1,328.25	\$ 1,684.42
CSI29722	ALMS	\$ 1,425.15	\$ 1,350.36	\$ 1,374.83	\$ 1,429.88	\$ 2,427.45	\$ 3,070.84
CSI29724	WBMS	\$ 2,765.03	\$ 2,968.72	\$ 2,304.36	\$ 2,227.85	\$ 3,383.92	\$ 3,903.34
CSI29725	Bader	\$ 1,353.67	\$ 1,274.36	\$ 1,303.20	\$ 1,419.03	\$ 2,396.79	\$ 3,149.10
CSI29727	PKMS	\$ 1,490.98	\$ 1,518.36	\$ 1,448.23	\$ 1,328.16	\$ 2,136.61	\$ 2,567.38
CSI29836	Spruce	\$ 865.58	\$ 808.50	\$ 805.38	\$ 827.02	\$ 1,383.48	\$ 1,803.53
CSI29837	Martin	\$ 808.48	\$ 789.31	\$ 761.75	\$ 772.23	\$ 1,248.90	\$ 1,646.74
CSI29838	BB	\$ 1,001.11	\$ 983.53	\$ 906.11	\$ 961.96	\$ 1,584.47	\$ 2,023.22
CSI34682	MV	\$ 865.34	\$ 793.28	\$ 714.49	\$ 798.00	\$ 1,285.84	\$ 1,581.74
CSI34683	JS	\$ 705.99	\$ 686.59	\$ 654.82	\$ 672.14	\$ 1,050.42	\$ 1,366.88
CSI34684	LC	\$ 472.89	\$ 457.77	\$ 422.65	\$ 454.03	\$ 760.48	\$ 995.99
CSI34685	PD	\$ 811.62	\$ 772.95	\$ 762.25	\$ 963.86	\$ 1,374.67	\$ 1,567.13
CSI34686	SK	\$ 1,272.86	\$ 1,368.25	\$ 1,104.12	\$ 1,043.20	\$ 1,611.94	\$ 1,847.19
		\$ 21,841.04	\$ 23,484.54	\$ 22,005.19	\$ 22,278.11	\$ 35,970.03	\$ 44,597.02

Table 8: Payment Period 27-32

Number	Site	Payment Period 27 5/1/2014	Payment Period 28 6/1/2014	Payment Period 29 7/1/2014	Payment Period 30 8/1/2014	Payment Period 31 9/1/2014	Payment Period 32 10/1/2014
CSI28163	SSFHS	\$ 5,333.79	\$ 5,237.03	\$ 5,057.43	\$ 4,336.79	\$ 3,869.69	\$ 3,325.19
CSI28167	ELCHS	\$ 14,913.88	\$ 14,334.38	\$ 13,238.39	\$ 11,375.75	\$ 10,270.62	\$ 9,013.15
CSI28169	SG	\$ 1,997.88	\$ 1,938.91	\$ 1,796.69	\$ 1,522.31	\$ 1,331.94	\$ 1,121.46
CSI29722	ALMS	\$ 3,632.79	\$ 3,461.88	\$ 3,216.95	\$ 2,753.47	\$ 2,442.23	\$ 1,985.38
CSI29724	WBMS	\$ 4,304.14	\$ 4,160.12	\$ 3,871.04	\$ 3,514.12	\$ 3,360.99	\$ 3,293.51
CSI29725	Bader	\$ 3,786.42	\$ 3,721.68	\$ 3,524.51	\$ 2,936.68	\$ 2,481.21	\$ 1,985.51
CSI29727	PKMS	\$ 3,027.24	\$ 2,911.94	\$ 2,756.51	\$ 2,411.49	\$ 2,230.27	\$ 1,925.71
CSI29836	Spruce	\$ 2,180.05	\$ 2,102.25	\$ 1,932.67	\$ 1,587.65	\$ 1,377.91	\$ 1,155.96
CSI29837	Martin	\$ 1,978.30	\$ 1,947.90	\$ 1,858.86	\$ 1,575.42	\$ 1,326.29	\$ 1,089.14
CSI29838	BB	\$ 2,396.60	\$ 1,679.10	\$ -	\$ -	\$ -	\$ 749.39
CSI34682	MV	\$ 1,802.08	\$ 1,791.58	\$ 1,706.06	\$ 1,497.49	\$ 1,362.83	\$ 1,193.71
CSI34683	JS	\$ 1,604.33	\$ 1,552.17	\$ 1,377.80	\$ 1,222.21	\$ 1,103.63	\$ 972.69
CSI34684	LC	\$ 1,176.60	\$ 1,151.30	\$ 1,070.89	\$ 903.51	\$ 769.79	\$ 629.82
CSI34685	PD	\$ 1,685.23	\$ 1,565.70	\$ 1,485.59	\$ 1,383.55	\$ 1,139.64	\$ -
CSI34686	SK	\$ 2,036.06	\$ 1,926.23	\$ 1,783.43	\$ 1,638.62	\$ 1,554.71	\$ 1,513.31
		\$ 51,855.39	\$ 49,482.17	\$ 44,676.82	\$ 38,659.06	\$ 34,621.75	\$ 29,953.93

Utility Rebates



- 5. Why were PG&E rebates factored into the Solar Production Guarantee Table "SGBT" for years one through five (CES contract page 58)?
- This provides the District greater protection by also guaranteeing the rebate amounts in addition to the solar production.

Guaranteed Savings



- 6. Is it correct that the public was promised by the District and CES a yearly savings of \$1 million for \$20 years (a total of \$20 Million) but the contract guarantee is only \$15,682,046?
- This is not correct. The proforma presented to the Board is provided.
- The contract guarantee is for the solar savings only at 95% of the projected savings.
- The February 10, 2011 Board Update Presentation shows a projected \$20 million savings over a 25 year period.

Financials - Cash and Financing Option

South San Francisco USD

4217 Code Compliance Test

Project Cost	\$24,410,833
Solar PV and Energy Efficiency	\$14,852,089
Energy Infrastructure Upgrades	\$9,688,744
Bond Contribution	\$24,410,833
Financed Amount	\$

INPUTS	
Projected Utility Annual Energy Escalation Factor	5.0%
Projected Solar Production 1st year of operation	2,437,243
Solar Avoided Electricity Energy Rate	\$0.194
CSI Incentive	\$0.164
Solar Electricity Production Depreciation Factor	0.50%

Year	Solar Electricity Produced (kWh/yr)	CSI Incentive (\$/kWh/yr)	Solar Avoided Electric Rate (\$/kWh/yr)	Total Projected Utility Electricity Savings F = A * C	Solar O&M Cost ⁽⁹⁾	Solar M&EY Cost ⁽⁹⁾	Renewable Energy Credit ⁽⁹⁾	Net Solar Project Savings = (F - G) + H - I	Energy Conservation Rebates J	Energy Conservation Savings J	Lease Payment ⁽⁹⁾ K	Project Net Benefit L = I - J - K	Cumulative Net Benefit O
1	2,437,243	\$399,542	\$0.194	\$472,094			\$36,559	\$907,995	\$52,071	\$110,551	\$0	\$1,070,417	\$1,070,417
2	2,435,057	\$397,346	\$0.203	\$493,220			\$36,376	\$926,942		\$115,869	\$0	\$1,042,810	\$2,113,227
3	2,412,932	\$395,359	\$0.214	\$515,292			\$36,194	\$946,845		\$121,662	\$0	\$1,068,507	\$3,181,734
4	2,400,867	\$393,582	\$0.224	\$538,351			\$36,013	\$967,746		\$127,745	\$0	\$1,095,491	\$4,277,225
5	2,388,863	\$391,415	\$0.235	\$562,442			\$35,833	\$989,690		\$134,132	\$0	\$1,123,823	\$5,401,047
6	2,376,918		\$0.247	\$587,612	\$57,543	\$46,499	\$35,654	\$519,223		\$140,839	\$0	\$660,062	\$6,061,110
7	2,365,034		\$0.260	\$613,907	\$59,269	\$48,126	\$35,476	\$541,967		\$147,881	\$0	\$689,868	\$6,750,978
8	2,353,208		\$0.273	\$641,380	\$61,047	\$49,811	\$35,298	\$565,819		\$155,275	\$0	\$721,094	\$7,472,072
9	2,341,442		\$0.286	\$670,081	\$62,879	\$51,554	\$35,122	\$590,770		\$163,059	\$0	\$753,809	\$8,225,881
10	2,329,735		\$0.300	\$700,067	\$64,765	\$53,359	\$34,946	\$616,890		\$171,191	\$0	\$788,080	\$9,013,961
11	2,318,087		\$0.316	\$731,395	\$66,708	\$55,226	\$34,771	\$644,232		\$179,750	\$0	\$823,983	\$9,837,943
12	2,306,496		\$0.331	\$764,125	\$68,709	\$57,159	\$34,597	\$672,854		\$188,738	\$0	\$861,592	\$10,699,535
13	2,294,964		\$0.348	\$798,320	\$70,771	\$59,160	\$34,424	\$702,814		\$198,175	\$0	\$902,989	\$11,600,524
14	2,283,489		\$0.365	\$834,045	\$72,894	\$61,230	\$34,252	\$734,173		\$208,083	\$0	\$942,256	\$12,542,780
15	2,272,071		\$0.384	\$871,368	\$75,081	\$63,373	\$34,081	\$766,995		\$218,487	\$0	\$985,483	\$13,528,263
16	2,260,711		\$0.403	\$910,362	\$77,333	\$65,591	\$33,911	\$801,348				\$801,348	\$14,329,612
17	2,249,407		\$0.423	\$951,101	\$79,653	\$67,887	\$33,741	\$837,302				\$837,302	\$15,166,913
18	2,238,160		\$0.444	\$993,663	\$82,043	\$70,268	\$33,572	\$874,929				\$874,929	\$16,041,843
19	2,226,970		\$0.466	\$1,038,129	\$84,504	\$72,722	\$33,405	\$914,307				\$914,307	\$16,956,150
20	2,215,835		\$0.489	\$1,084,585	\$87,039	\$75,268	\$33,238	\$955,516				\$955,516	\$17,911,666
21	2,204,756		\$0.514	\$1,133,120	\$89,650		\$33,071	\$1,006,542				\$1,006,542	\$18,988,207
22	2,193,732		\$0.540	\$1,183,828	\$92,340		\$32,906	\$1,064,394				\$1,064,394	\$20,112,601
23	2,182,763		\$0.567	\$1,236,804	\$95,110		\$32,741	\$1,124,435				\$1,124,435	\$21,287,037
24	2,171,849		\$0.595	\$1,292,151	\$97,963		\$32,578	\$1,226,765				\$1,226,765	\$22,513,802
25	2,160,990		\$0.625	\$1,349,975	\$100,902		\$32,415	\$1,281,487				\$1,281,487	\$23,795,289
26	2,150,185		\$0.656	\$1,410,386	\$103,929		\$32,253	\$1,338,710				\$1,338,710	\$25,133,999
27	2,139,434		\$0.689	\$1,473,501	\$107,047		\$32,092	\$1,398,545				\$1,398,545	\$26,532,544
28	2,128,737		\$0.723	\$1,539,440	\$110,258		\$31,931	\$1,461,113				\$1,461,113	\$27,993,657
29	2,118,093		\$0.759	\$1,608,330	\$113,566		\$31,771	\$1,526,535				\$1,526,535	\$29,520,192
30	2,107,503		\$0.797	\$1,680,302	\$116,973		\$31,613	\$1,594,942				\$1,594,942	\$31,115,134
31	2,096,965		\$0.837	\$1,755,496	\$120,482		\$31,454	\$1,666,468				\$1,666,468	\$32,781,602
32	2,086,481		\$0.879	\$1,834,054	\$124,097		\$31,297	\$1,741,235				\$1,741,235	\$34,522,837
33	2,076,048		\$0.923	\$1,916,128	\$127,820		\$31,141	\$1,819,449				\$1,819,449	\$36,342,306
34	2,065,668		\$0.969	\$2,001,875	\$131,654		\$30,985	\$1,901,206				\$1,901,206	\$38,243,512
35	2,055,340		\$1.018	\$2,091,459	\$135,604		\$30,830	\$1,986,685				\$1,986,685	\$40,230,198
Total	68,065,830	1,976,844		\$28,679,375	\$2,097,975	\$897,230	\$969,912	\$37,796,911			0	\$40,230,198	

4217 Code Compliance (Annual Method) - Positive Cash Flow on Cumulative Basis - Column O	Over 25 years	Over 30	Over 35
	YES	YES	YES

Savings



- 7. How will the district save \$1 million, subsequent to the rebate period (years 6 through 20) if the projected reduction in electricity costs is expected to be \$544K for year six and has only averaged thus far \$524,748 (see item 12 below), as indicated in the SBG?T?
- The proforma shows the savings between years 6 through 20 as \$660,062 to \$955,516.
- 13. How does the District and Opterra/CES expect the District to save \$1 million per year from years six through twenty, when there are no further rebates, if the current savings have thus far averaged only \$524,748?
- As stated previously in Number 7, the proforma shows the savings between years 6 through 20 as \$660,062 to \$955,516.

Financials - Cash and Financing Option
South San Francisco USD
4217 Code Compliance Test

Project Cost	\$24,440,833
Solar PV and Energy Efficiency	\$14,852,089
Energy Infrastructure Upgrade:	\$9,688,744
Bond Contribution	\$24,440,833
Financed Amount	\$ -

INPUTS	
Projected Utility Annual Energy Escalation Factor	5.0%
Projected Solar Production 1st year of operation	2,437,243
Solar Avoided Electricity Energy Rate	\$0.194
CSI Incentive	\$0.164
Solar Electricity Production Degradation Factor	0.50%

Year	A Solar Electricity Produced (kWh) ⁽¹⁾	B CSI Incentive (\$/kWh) ⁽²⁾	C Solar Avoided Electric Rate (\$/kWh) ⁽³⁾	F = A * C Total Projected Electricity Savings	G Solar O&M Cost ⁽⁴⁾	G1 Solar M&EY Cost ⁽⁵⁾	H Renewable Energy Credit ⁽⁶⁾	I = (F - G) + H * 2 Net Solar Project Savings	J1 Energy Conservation Rebates	J Energy Conservation Savings	K Lease Payment ⁽⁸⁾	L = I - J - J1 * K Project Net Benefit	O Cumulative Net Benefit
1	2,437,243	\$399,342	\$0.194	\$472,094				\$907,995	\$52,071	\$110,351	\$0	\$1,070,417	\$1,070,417
2	2,425,057	\$397,346	\$0.203	\$493,220				\$926,942		\$115,869	\$0	\$1,042,810	\$2,113,227
3	2,412,932	\$395,359	\$0.214	\$515,292				\$946,845		\$121,662	\$0	\$1,068,507	\$3,181,734
4	2,400,867	\$393,382	\$0.224	\$538,351				\$967,746		\$127,745	\$0	\$1,095,491	\$4,277,225
5	2,388,863	\$391,415	\$0.235	\$562,442				\$989,680		\$134,132	\$0	\$1,123,623	\$5,401,047
6	2,376,918		\$0.247	\$587,612	\$7,543	\$46,499		\$519,223		\$140,839	\$0	\$660,062	\$6,061,110
7	2,365,034		\$0.260	\$613,907	\$9,269	\$48,126		\$541,987		\$147,881	\$0	\$689,868	\$6,750,978
8	2,353,208		\$0.273	\$641,380	\$61,047	\$49,811		\$565,819		\$155,275	\$0	\$721,094	\$7,472,072
9	2,341,442		\$0.286	\$670,081	\$62,879	\$51,554		\$590,770		\$163,039	\$0	\$753,809	\$8,225,881
10	2,329,735		\$0.300	\$700,067	\$64,765	\$53,359		\$616,890		\$171,191	\$0	\$788,080	\$9,013,961
11	2,318,087		\$0.316	\$731,395	\$66,708	\$55,226		\$644,232		\$179,750	\$0	\$823,983	\$9,837,943
12	2,306,496		\$0.331	\$764,125	\$68,709	\$57,159		\$672,854		\$188,738	\$0	\$861,592	\$10,699,535
13	2,294,964		\$0.348	\$798,320	\$70,771	\$59,160		\$702,814		\$198,175	\$0	\$900,989	\$11,600,524
14	2,283,489		\$0.365	\$834,045	\$72,894	\$61,250		\$734,175		\$208,083	\$0	\$942,236	\$12,542,780
15	2,272,071		\$0.384	\$871,368	\$75,081	\$63,373		\$766,995		\$218,487	\$0	\$985,483	\$13,528,263
16	2,260,711		\$0.403	\$910,362	\$77,333	\$65,591		\$801,348		\$229,302	\$0	\$1,027,307	\$14,557,570
17	2,249,407		\$0.423	\$951,101	\$79,633	\$67,887		\$837,302		\$240,637	\$0	\$1,070,417	\$15,628,000
18	2,238,160		\$0.444	\$993,663	\$82,043	\$70,263		\$874,929		\$252,499	\$0	\$1,114,394	\$16,742,394
19	2,226,970		\$0.466	\$1,038,129	\$84,504	\$72,722		\$914,307		\$264,887	\$0	\$1,159,307	\$17,901,701
20	2,215,835		\$0.489	\$1,084,585	\$87,039	\$75,268		\$955,516		\$277,916	\$0	\$1,205,232	\$19,106,933
21	2,204,756		\$0.514	\$1,133,120	\$89,650			\$1,006,442		\$291,587	\$0	\$1,252,719	\$20,359,652
22	2,193,732		\$0.540	\$1,183,828	\$92,340			\$1,124,394		\$305,741	\$0	\$1,301,655	\$21,661,307
23	2,182,763		\$0.567	\$1,236,804	\$95,110			\$1,174,435		\$320,475	\$0	\$1,352,130	\$23,013,437
24	2,171,849		\$0.595	\$1,292,151	\$97,963			\$1,226,765		\$335,788	\$0	\$1,404,318	\$24,418,255
25	2,160,990		\$0.625	\$1,349,975	\$100,902			\$1,281,487		\$351,680	\$0	\$1,458,399	\$25,876,654
26	2,150,185		\$0.656	\$1,410,386	\$103,929			\$1,338,710		\$368,153	\$0	\$1,514,372	\$27,390,999
27	2,139,434		\$0.689	\$1,473,501	\$107,047			\$1,398,545		\$385,206	\$0	\$1,572,168	\$28,963,167
28	2,128,737		\$0.723	\$1,539,440	\$110,258			\$1,461,113		\$402,939	\$0	\$1,631,702	\$30,594,869
29	2,118,093		\$0.759	\$1,608,330	\$113,566			\$1,526,535		\$421,352	\$0	\$1,693,054	\$32,297,923
30	2,107,503		\$0.797	\$1,680,302	\$116,973			\$1,594,942		\$440,555	\$0	\$1,757,209	\$34,075,132
31	2,096,961		\$0.837	\$1,755,496	\$120,482			\$1,666,468		\$460,548	\$0	\$1,824,157	\$35,929,289
32	2,086,481		\$0.879	\$1,834,054	\$124,097			\$1,741,255		\$481,327	\$0	\$1,893,884	\$37,863,173
33	2,076,048		\$0.923	\$1,916,128	\$127,820			\$1,819,449		\$502,895	\$0	\$1,966,685	\$39,879,858
34	2,065,668		\$0.969	\$2,001,875	\$131,654			\$1,901,206		\$524,246	\$0	\$2,043,931	\$41,983,789
35	2,055,340		\$1.018	\$2,091,459	\$135,604			\$1,986,685		\$546,487	\$0	\$2,126,418	\$44,180,207
Total	68,085,430	1,976,844		\$28,679,375	2,097,975	\$897,230		\$999,912		\$2,381,216	0	\$40,230,198	\$40,230,198

Electricity Cost Assumption



- 8. The SBTG indicates in the contract an annual increase in the value of electricity beginning in year six from \$0.241 per kwh to \$0.496 per kwh by year 20. If the actual cost of electricity does not increase by this amount indicated, will this amount be adjusted in the SBTG?
- The SBTG assumes a 5% per year increase in electricity costs. The SBTG will not be adjusted for actual electricity cost changes.

Operations & Maintenance



- 9. Will there be additional costs for years six to twenty of \$1,946,453 for Operations and Maintenance "O&M" and Annual Measure Verification "AMV" (CES contract pages 60 & 63)?
- No, the O&M and M&V costs during the project lifecycle have been included in the financial proforma. No additional bond funds are required.
- 10. Will the SSFUSD pay these additional costs and have these costs been included in the budget?
- These costs have been included in the cost savings estimates.
- 14. Will the additional costs of \$1.9 million for O&M and M&V reduce the overall savings that the District was expecting to realize as a result of this project?
- No, these costs have always been factored into the savings analysis.

Operations & Maintenance



- 11. If the SSFUSD defaults on payment of the **additional costs for O&M and M&V, could this result in the termination of the performance and savings guarantee?**
- The O&M and M&V are not additional bond costs
- Yes, defaults on payment of these charges will result in the termination of the performance and savings guarantee.

Actual Savings



- 12. Excluding year zero, is it correct that the actual amount saved by the District in years 1, 2 & 3 was \$1,574,244 (excluding rebates) a three year average of \$524,748., as reported by Opterra?
- This is a close estimation of the solar-only savings not including the lighting or rebates. Including all the savings (solar, lighting, rebates, year 0) the total for the 3 years is \$3,509,721.

Solar Production



- 15. Explain fully why was the kwh reported by Opterra/CES in the annual report for 2012 (and in 2013 & 2014), for year zero (October 31, 2012) of 1,668,180 kwh was changed in the 2015 annual report to 2,149,774 kwh, an increase in kwh of 715,860?
- The correct year zero solar production was 1,668,180 kWh.
- A revised 2015 report will be provided to the Board to correct the clerical error.
- 16. Explain fully why was the dollar amount reported by the Opterra/CES in the annual report for 2012 (and in 2013 & 2014), for year zero (October 31, 2012) of \$325,926 was increased to \$853,490 in the 2015 annual report, an increase of \$528,194?
- The correct year zero Accumulated Savings was \$325,296.
- A revised 2015 report will be provided to the Board to correct the clerical error.

Year 1 Report (2012)



Table 1: Annual Guarantee Reconciliation

Year	Guaranteed Savings (\$)	Measurement Period	Avoided Rate (\$/kWh)	Actual Energy Production (kWh)	Actual Energy Savings (\$)	Excess / Shortfall (\$)	Accumulated Savings (\$)
0	-	1/1/2012	0.195	1,668,180*	\$325,296	-	\$325,296
1	\$827,909	11/1/2012	0.358	2,543,494	\$910,571	\$82,662	\$407,958
2	\$843,329	11/1/2013	0.366				
3	\$859,640	11/1/2014	0.375				
4	\$876,948	11/1/2015	0.384				
5	\$895,337	11/1/2016	0.395				
6	\$544,967	11/1/2017	0.241				
7	\$567,648	11/1/2018	0.253				
8	\$591,679	11/1/2019	0.265				
9	\$617,185	11/1/2020	0.277				
10	\$644,367	11/1/2021	0.291				
11	\$673,236	11/1/2022	0.306				
12	\$703,995	11/1/2023	0.321				
13	\$736,829	11/1/2024	0.338				
14	\$772,023	11/1/2025	0.356				
15	\$809,629	11/1/2026	0.375				
16	\$849,935	11/1/2027	0.396				
17	\$893,220	11/1/2028	0.418				
18	\$939,894	11/1/2029	0.442				
19	\$990,081	11/1/2030	0.468				
20	\$1,044,195	11/1/2031	0.496				

Year 3 Report (2015)

Table 1: Annual Guarantee Reconciliation

Year	Guaranteed Savings (\$)	Measurement Period	Avoided Rate (\$/kWh)	Actual Energy Production (kWh)	Actual Energy Savings (\$)	Excess / Shortfall (\$)	Accumulated Savings (\$)
0	-	1/1/2012 - 10/31/2012	0.195	1,668,180*	\$325,296	-	\$325,296
1	\$827,909	11/1/2012 - 10/31/2013	0.358	2,543,494	\$910,571	\$82,662	\$407,958
2	\$843,329	11/1/2013 - 10/31/2014	0.366	2,607,380	\$946,795	\$103,465	\$511,423
3	\$859,640	11/1/2014 - 10/31/2015	0.375	2,472,282	\$927,106	\$67,466	\$578,889
4	\$876,948	11/1/2015 - 10/31/2016	0.384				
5	\$895,337	11/1/2016 - 10/31/2017	0.395				
6	\$544,967	11/1/2017 - 10/31/2018	0.241				
7	\$567,648	11/1/2018 - 10/31/2019	0.253				
8	\$591,679	11/1/2019 - 10/31/2020	0.265				
9	\$617,185	11/1/2020 - 10/31/2021	0.277				
10	\$644,367	11/1/2021 - 10/31/2022	0.291				
11	\$673,236	11/1/2022 - 10/31/2023	0.306				
12	\$703,995	11/1/2023 - 10/31/2024	0.321				
13	\$736,829	11/1/2024 - 10/31/2025	0.338				
14	\$772,023	11/1/2025 - 10/31/2026	0.356				
15	\$809,629	11/1/2026 - 10/31/2027	0.375				
16	\$849,935	11/1/2027 - 10/31/2028	0.396				
17	\$893,220	11/1/2028 - 10/31/2029	0.418				
18	\$939,894	11/1/2029 - 10/31/2030	0.442				
19	\$990,081	11/1/2030 - 10/31/2031	0.468				
20	\$1,044,195	11/1/2031 - 10/31/2032	0.496				



Project Benefits



Create **100-120 local jobs** and use American-made equipment

Generate over **\$20 million in general fund savings** over program lifetime

Over **\$3 million in savings** generated for the District after 3 years

Hands-on opportunity for math, science, and energy education to maximize **student achievement**

Reduce carbon emissions by over 6 million lbs of CO₂ (equal to planting 2,000,000 trees)

