



PSUSD

PALM SPRINGS UNIFIED SCHOOL DISTRICT



FACILITIES STUDY SESSION OE-12

June 8, 2021

Presented by PSUSD Staff:

Julie Arthur, Executive Director Facilities

Planning & Development

AGENDA

1. January 26, 2021 Facilities Study Session Outcomes
2. Review Redevelopment Projects and Funds
3. Review Measure E & I Bond Projects and Funds
4. Review of Phase 1 Modernizations
5. Battery Storage Analysis
6. Electric Vehicle Charging Stations
7. Identify Potential New Actions and Projects

1. January 26, 2021
Facilities Study
Session Outcomes

1. January 26, 2021 Facilities Study Session Outcomes

Bond Funded Projects:

1. Approve sale of Measure I Series A Bond of \$118,000,000 for 2021. Resolution brought to the Board of Education for approval February 23, 2021.
2. Approve Della Lindley Elementary renovation/modernization budget of \$18,250,000 - Bond Funds.
3. Approve Landau Elementary renovation/modernization budget of \$37,410,000 – Bond Funds.
4. Approve Sunny Sands Elementary renovation/modernization budget of \$38,215,800 – Bond Funds.

Redevelopment Funds:

1. Approval of annual/on-going expenses in the amount of \$7,051,172. No new redevelopment projects approved.

2. Redevelopment Projects and Funds

2. Redevelopment Fund Projects

Name of Project	Board Approval Date	Status
1. Ongoing Minor Capital Projects	7/28/2020	On-going
2. Solar shade parking canopies Landau Elementary and District Administration Center	7/24/2018	Complete
3. Solar shade parking canopy Sunny Sands Elementary	7/24/2018	Complete
4. Desert Hot Springs High mini-gym flooring	7/23/2019	Bidding
5. Solar, battery storage and micro-grid review	12/11/2018	Design
6. District Administration Center building alteration fund	7/24/2018	On-going
7. Surplus property sales	5/12/2015	On-hold
8. LED Marquees – Elementary & Middle Schools	12/11/2018	Complete
9. Solar canopies at RVES &MSJ (CEC Zero Interest Loan)	12/10/2019	DSA

2. Redevelopment Fund Balance

Projects	Expense thru 6/30/2020	FY21 Budget	FY22 Budget	Project Budgets
Desert Hot Springs High mini-gym floor		150,000	1,000,000	1,150,000
TBP ES Reception/Library Renovation	251,567	2,472	0	254,039
District Administration Center & Alterations	32,321,322	129,455	1,049,223	33,500,000
Solar Canopies at LES, SSES and DAC	4,315,618	576,443	150,000	5,042,061
District-wide Safety & Vulnerability Study	187,065	28,312	0	215,377
LED Marquees for Elementary & Middle Schools	133,413	1,394,139	572,448	2,100,000
Solar Canopies at RVES and MSJ*		10,000	565,000	575,000
Solar, battery storage and micro-grids		200,000	6,200,000	6,400,000
Estimated Total Project Amounts	\$37,208,985	2,490,821	9,536,671	49,236,477

*Fund match for zero interest CEC loan

2. Redevelopment Annual/On-going Expenses

Annual/On-going Expenses	Expense thru 6/30/2020	FY21 Budget	FY22 Budget
Student technology devices 06 for Technology	2,000,000	*0	*0
Restricted Routine Maintenance Account funds (3%)	4,650,531	4,406,118	4,448,134
Communication tower maintenance (Airlinks)	132,000	132,000	144,000
Lease Edom Hill antennas & ETIS PO's	22,275	48,000	33,000
980 Tahquitz Lease – final payment	22,705	0	0
1000 Tahquitz Lease	126,177	126,177	126,177
MCP Funds*	136,507	338,877	200,000
Estimated Total of Annual Amounts	\$7,090,495	\$5,051,172	5,347,396

* Student technology devices may be purchased using Cares Act Funds

2. Redevelopment Fund Balance

	Expensed as of 6/30/2020	FY21 Budget	FY22 Budget
Estimated Total of Annual/On-going Amounts	7,090,495	5,051,172	4,951,311
Estimated Total of Project Amounts (Page 13)	37,208,985	2,490,821	9,536,671
Total Combined Annual & Project Amounts		7,541,993	14,487,982
Projected Revenues		11,200,000	11,200,000
Net Change		3,658,007	(3,287,982)
	FY20	FY21	FY22
EST. Balance as of 6/30/20	13,546,927		
Balance as of 6/30/21		17,204,934	
Balance as of 6/30/22			13,916,952

3. Bond Projects and Funds

3. Measure E Bond Current Projects

Name of Project	Board Approval Date	Status
1. Bubbling Wells Elementary Modernization*	2/11/2020	Design Phase
2. Della Lindley Elementary Modernization*	2/11/2020	Design Phase
3. Landau Elementary Modernization*	2/11/2020	Design Phase
4. Sunny Sands Elementary Modernization*	2/11/2020	Design Phase
5. James Workman Middle Modernization*	2/11/2020	Design Phase
6. Cathedral City High Modernization*	2/11/2020	Design Phase
7. DHS HS locker room HVAC	12/11/2018	Construction
8. Palm Springs High Seismic Renovation	12/12/2017	Construction (75%)
9. Proposition 39 Lighting & HVAC projects	5/24/2016	Ongoing
10. Central Plant replacement Richards Center	7/28/2020	DSA /bidding

* Design only – construction expenses part of Measure I.

3. Measure E Bond Projects

Name of Project	Board Approval Date	Status
11. Updated Facilities Master Plan	12/13/2016	On-going
12. Elementary Shade Structures & Trees	12/12/2020	On-going
13. DW Drinking Fountains	12/11/2018	99% Complete
14. Maintenance & Operation Deferred Maintenance projects	5/24/2016	99% Complete
15. Purchase new elementary site/Desert Hot Springs	5/24/2016	On hold
16. Parking lot renovation at Della Lindley Elementary	12/11/2018	Completed 2021
17. Metal shade canopies	12/12/2017	Completed 2020
18. Parking lot improvements – RVES & CCES	7/24/2018	Completed 2020
19. Nellie Coffman Middle chiller replacement	12/12/2017	Completed 2020
20. Agua Caliente Elementary renovation	5/13/2014	Completed 2020

3. Measure E Bond Fund Balance

Project	Expenditures Thru 6/30/2020	FY21 Budget	FY22 Budget	Project Budget	Total Cost to Bond Measure
Desert Hot Springs Locker Room HVAC	60,525	380,475	359,000	800,000	800,000
Central Plant replacement Richards Center		172,033	1,827,967	2,000,000	2,000,000
DW Prop 39 HVAC/Lighting Projects	3,231,496	614,859	940,645	4,787,000	4,787,000
Parking Lot Redesign - CCES	1,456,892	37,492		1,494,384	1,494,384
Parking Lot Redesign – RVES	2,201,932	9,755		2,211,687	2,225,000
Parking Lot Redesign – DLES	79,116	1,350,884		1,430,000	1,430,000
Chiller Replacement NCMS	2,379,215	35,360		2,449,935	3,750,000
M & O Deferred Maintenance Bond Projects	10,037,569	762,431		10,800,000	10,800,000
Palm Springs High Seismic Renovation	7,732,282	18,385,184	15,682,534	41,800,000	41,800,000
Desert Learning Academy (BLDG 500)	79,224	100,000	1,020,776	1,200,000	1,200,000
DW Drinking Fountains	1,524,767	475,233		2,000,000	2,000,000

3. Measure E Bond Fund Balance

Project	Expensed thru 6/30/2020	FY21 Budget	FY22 Budget	Project Budgets	Total Cost to Bond Measure
Facilities Master Plan Update	255,520	50,000	144,480	450,000	450,000
ELEM Shade Structures and Tree's	2,870,963	179,037	250,000	3,300,000	3,300,000
Fire Alarms at CCHS, SS, LAN, DSL	128,461	0	0	128,461	128,461
Bubbling Wells E. S. Modernization – design only	0	200,000	800,000	1,000,000	1,000,000
Della S. Lindley E. S. Modernization – design only	0	756,250	822,126	1,578,376	1,578,376
Landau E. S. Modernization - design only	0	200,000	1,314,432	1,514,432	1,514,432
Sunny Sands E. S. Modernization - design only	0	200,000	1,347,628	1,547,628	1,547,628
James Workman M. S. Modernization – design only	0	132,300	1,867,700	2,000,000	2,000,000
Cathedral City H. S. Modernization – design only	0	226,285	4,304,818	4,531,103	2,500,000
Other Bond Costs	242,956	100,000	100,000		442,956
DHS New Elementary Land – on hold with approved budget			0	2,000,000	2,000,000
Remaining Budgets for closed-out Projects – EW F&E, NNC MOD, TBP Parking Lot, AC RECON		208,706		208,706	208,706

\$3,671,539 Balance of Fire Alarms Upgrade 3.8 million budget was distributed to DSL MOD, LAN MOD, SS MOD, CCHS MOD

3. Measure E Bond Fund Balance

Project	Expensed thru 6/30/2020	FY21 Budget	FY22 Budget	Project Budget	Total Cost to Bond Measure
Estimated Total Project Amounts	32,316,278	24,576,284	32,782,106	\$ 89,674,688	\$ 89,674,688
Interest Revenues	1,986,958	250,000	170,000		
Other Revenues / Refunds	4,270				
Estimated Total Revenues	1,991,228	250,000	170,000		
Funding Source:					
Measure E Bond Funds	FY 2020	FY 2021	FY 2022		
Cash balance 7/1/2020	58,522,782				
Estimated expenses 6/30/21		(24,326,284)			
Estimated Cash balance 6/30/21				34,196,499	
Estimated expenses 6/30/22			(32,612,106)		
Estimated Cash balance 6/30/22				\$1,584,392	

3. Measure E Bond Authorization

Measure E \$516,000,000	Series	Authorized Amount	Total Bonds Issued	Remaining Authorization
November 2010	A	\$19,539,035	\$19,539,035	
November 2010	B	110,000,000	129,539,035	
November 2013	C	70,000,000	199,539,035	
July 2016	D	100,000,000	\$299,539,035	\$216,460,965
November 2016*	Measure I	\$216,460,965	216,460,965	0.00

***Voters approve Measure I**

3. Measure I Bond Authorization

Measure I April 2021	Series	Authorized Amount	Total Bonds Issued	Remaining Authorization
\$216,460,965	A	\$118,000,000	\$118,000,000	98,460,965

SALE OF MEASURE I SERIES A BONDS

TIMING	ACTIVITY
Friday, January 8, 2021	DS&C Distributes Timetable, Term Sheet and Distribution List
Tuesday, January 26, 2021	Bond Counsel Distributes Draft legal Documents & POS
Friday, February 12, 2021	Agenda Deadline for District Board Meeting
Week of February 15, 2021	Rating Agency Presentation
Tuesday, February 23, 2021	District Board Adopts Bond Resolution
Thursday, March 4, 2021	Receive Rating
Wednesday, March 17, 2021	Post Preliminary Official Statement
Wednesday, March 24, 2021	Bond Sale
Wednesday, March 31, 2021	Post Final Official Statement
Wednesday, April 14, 2021	Closed

3. Measure I Bond Fund Balance

Measure I April 2021	Series	Authorized Amount	Total Bonds Issued	Remaining Authorization
\$216,460,965	A	\$118,000,000	\$118,000,000	98,460,965

Project	FY21 Budget	FY22 Budget	FY23 Budget	Project Budgets	Total Cost to Bond Measure
Della S. Lindley E. S. Modernization	182,500	8,000,000	10,067,500	18,250,000	18,250,000
Landau E. S. Modernization	374,100	17,000,000	20,035,900	37,410,000	37,410,000
Sunny Sands E. S. Modernization	382,158	17,000,000	20,833,642	38,215,800	38,215,800

3. Measure I Bond Fund Balance

Project	FY21 Budget	FY22 Budget	FY23 Budget	Project Budget	Total Cost to Bond Measure
Estimated Total Project Amounts	\$ 938,758	\$ 42,000,000	\$ 50,937,042	\$ 93,875,800	
Interest Revenues	130,000	250,000	250,000		
Other Revenues / Refunds					
Estimated Total Revenues	130,000	250,000	250,000		
Funding Source: Measure I Series A	FY21 Budget	FY22 Budget	FY23 Budget		
Estimated Cash balance 6/30/21	117,191,242				
Estimated expenses 6/30/22		(41,750,000)			
Estimated Cash balance 6/30/22				75,441,242	
Estimated expenses 6/30/23			(50,687,042)		
Estimated balance 6/30/23				\$ 24,754,200	

4. PHASE 1 SCHOOL MODERNIZATION- RENOVATIONS

SCHOOLS PRESENTED AT JANUARY 28, 2020 FACILITIES STUDY SESSION

PHASE 1a (1980s)

- DELLA LINDLEY ELEMENTARY
- LANDAU ELEMENTARY
- SUNNY SANDS ELEMENTARY

PHASE 1b (1990s)

- BUBBLING WELLS ELMENTARY
- CATHEDRAL CITY HIGH
- JAMES WORKMAN MIDDLE

4. Della Lindley Elementary Modernization

Sustainability Measures to save energy and reduce environmental impact:

- Very low VOC floor coverings and adhesives.
- New LED lighting fixtures.
- New energy efficient windows.
- CO2 monitors.
- New HVAC equipment with high air filtration and exchange systems that run quietly and efficiently.
- New fire alarm system
- New public address system.
- New ceiling system.
- New Wall hanging systems.
- Touch Screen ViewSonics.



VIEW OF KINDERGARTEN CLASSROOM
DELLA LINDLEY ELEMENTARY

MODERNIZATION

4. Della Lindley Elementary Modernization



**VIEW OF KINDERGARTEN CLASSROOM
DELLA LINDLEY ELEMENTARY MODERNIZATION**

4. Landau Elementary Modernization



LANDAU ELEMENTARY SCHOOL
PALM SPRINGS UNIFIED SCHOOL DISTRICT

OPTION A
1 & 2 story classrooms



LANDAU ELEMENTARY VIEW FROM CORNER OF LANDAU BLVD. AND 30TH AVENUE

4. Sunny Sands Elementary Modernization



SUNNY SANDS ELEMENTARY SCHOOL
PALM SPRINGS UNIFIED SCHOOL DISTRICT

OPTION A
1 & 2 Story classrooms



SUNNY SANDS ELEMENTARY VIEW FROM McCALLUM WAY/SAN ELJAY AVE.

5. Battery Storage Analysis

5. PSUSD Demand Charge Reduction

At the December 2018 Facilities Study Session (FSS), the Board of Education members approved a budget of \$8.5 M for solar, battery storage and microgrid review, remaining \$6.4M.

Almost a year ago at the July 28, 2020 FSS, we discussed the need to reduce electric bills at the schools by reducing demand charges through battery storage systems.

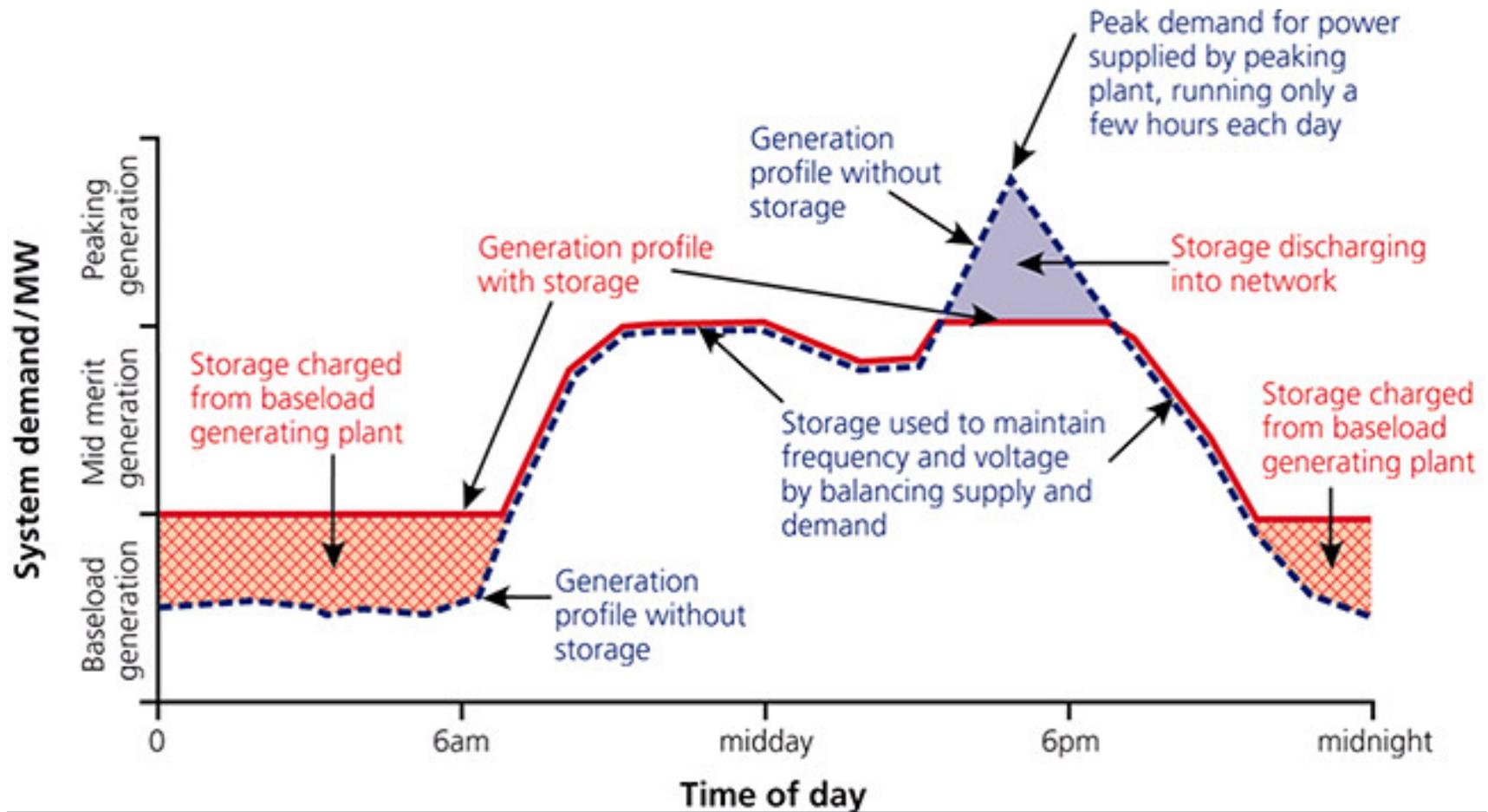
Refresher:

What are SCE demand charges?

5. PSUSD Demand Charge Reduction

- Utilities apply demand charges based on the maximum amount of power used in a 15-minute interval during a billing cycle.
- The demand charge for a given month is determined by the maximum power demand multiplied by the demand charge rate provided by SCE.
- PSUSD's high schools and district offices have the largest HVAC equipment which draws the most electrical power.
- Smoothing out the electricity demand throughout the day, will reduce the district's electrical bills.

4. Typical Load Profile – Peak Shaving Opportunity



Rancho Mirage HS SCE Bill

Electricity bills are based on kWh used and demand charges.

Electric charges varies by time of day and time of year. 6/1 to 9/30 peak months.

Demand charge – highest 15 minutes of electric use at RMHS is 6:15am to 6:30am using 649 kW.

SCE Bar chart:

RMHS consumed 113,283 kWhs.

RMHS net generated 143,940 kWhs.

Excess kWhs generated is <29,657>.



Service account 8004882548
Service address R MIRAGE HIGH SCHL4
 31001 RATTLER RD
 RANCHO MIRAGE, CA 92270
Rotating outage Group N001

DELIVERY
 SOUTHERN CALIFORNIA EDISON
 delivers your electricity

Your cost varies by time of day

	Weekdays	Weekends & Holidays
Mid peak	8am - 9pm	
Off peak	12am - 8am 9pm - 12am	All hours

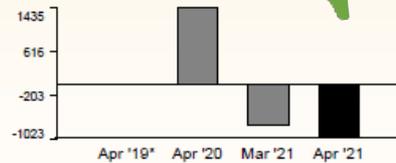
Your past and current electricity usage

	Electricity (kWh)	Demand (KW)
Winter Season - Consumption		
Mid Peak	36,471	497 04/12/21 07:00pm-07:15pm
Off peak	76,812	649 04/12/21 06:15am-06:30am
Winter Season - Net Generation		
Mid Peak	-98,837	
Off peak	-44,103	
Total	-29,657	

Your next billing cycle for meter V349N-004833 will end on or about 05/11/21.

Reactive usage is 34,752 kVarh
 Reactive usage is 35,411 kVarh

Your daily average electricity usage (kWh)



* No data available

Usage comparison

	Apr '19	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21
Total kWh used	41,626	-20,884	-42,423	101,705	153,748	205,348	147,878	74,098	61,587	27,840	21,860	-34,353	-29,657	
Number of days	29	32	30	33	29	30	32	30	32	30	29	32	29	
Appx. average kWh used/day	1,435	-652	-1,414	3,081	5,301	6,844	4,621	2,469	1,924	931	753	-761	-1,022	

RMHS SCE Bill



For billing and service inquiries
1-866-701-7889
www.sce.com

Your electricity bill

PALM SPRINGS UNIFIED SCHL DIST / Page 1 of 6

Entire bill is demand charges

Customer Account
700456086788

Date bill prepared
04/30/21

Amount due \$10,470.98
Due by 06/21/21

150 DISTRICT CENTER DR
PALM SPRINGS, CA

PALM SPRINGS UNIFIED SCHL DIST / Page 4 of 6

Details of your new charges

Your rate: TOU-8-R (SCE)

Billing period: 03/15/21 to 04/12/21 (29 days)

Delivery charges - *Cost to deliver your electricity*

Facilities rel demand	649 kW x \$14.85000	\$9,637.65
Customer charge		\$571.13
Power factor adj	437 kVar x \$0.60000	\$262.20

Subtotal of your new charges **\$10,470.98**

Your new charges **\$10,470.98**

Your Delivery charges include:

- \$3,024.34 transmission charges
- \$7,446.64 distribution charges

Your overall energy charges include:

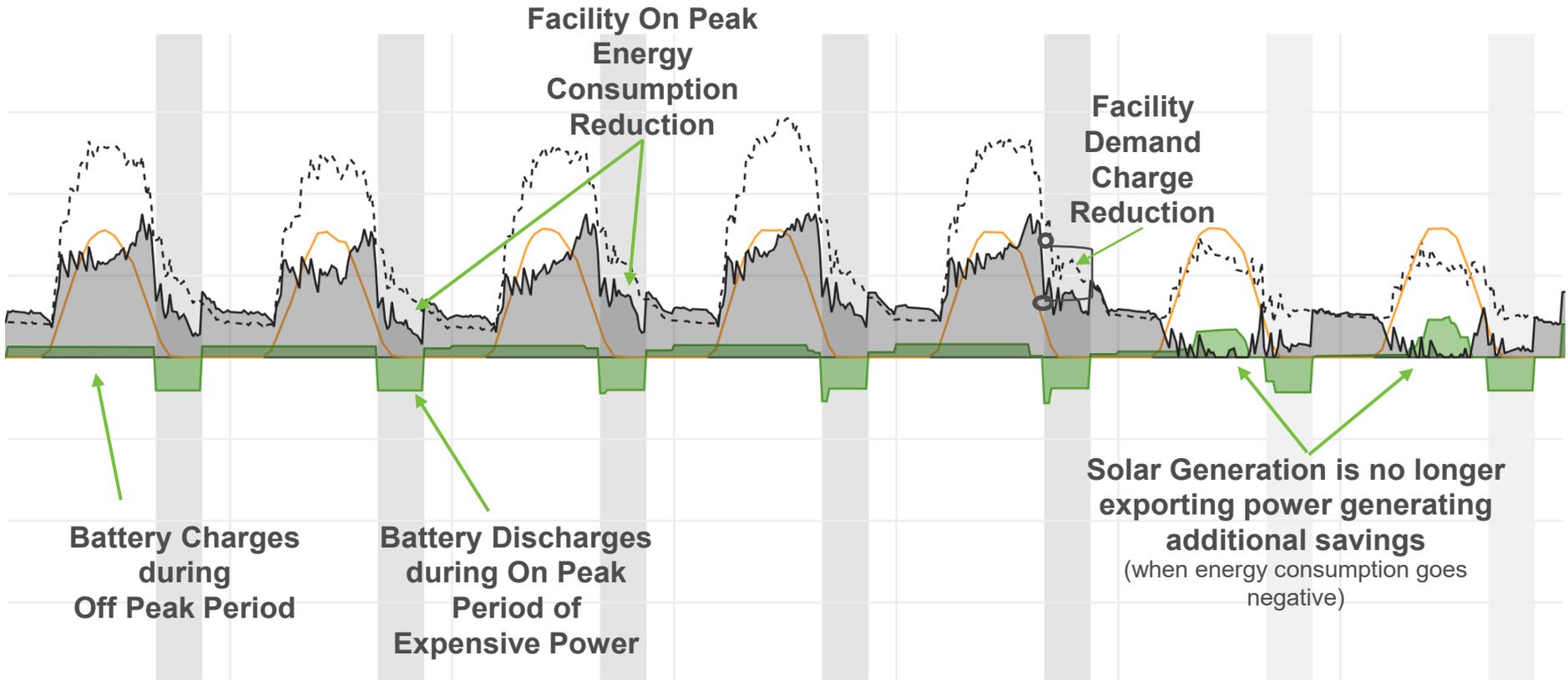
- \$95.75 franchise fees

Additional information:

- Service voltage: 480 volts
- Net Surplus Compensation option: Ineligible
- Generation Municipal Surcharge (GMS) factor: 0.009144
- 2017 Vintage CRS

Rancho Mirage HS Grid Connected Operations

Typical Solar and Storage Operations



----- Facility Demand — Solar Generation ■ Battery Power ■ Demand Net Solar and Storage



5. PSUSD Battery Analysis & Demand Charge Reduction

- The Battery Analysis looked at how the district could save money by using stored energy to offset SCE bills.
- Reduce the high demand load charges by using energy made by solar during the day and stored in the battery.
- When the highest need for electricity is identified at each school, use the batteries-stored energy instead of SCE energy.
- Battery storage time is roughly 4 hours. This stored energy can be used at night when solar is not available and when central plants are turned on triggering large amounts of energy consumption.



Storage Solution Overview

Battery System Characteristics

Battery Size	248 kW (496 kWh)
Battery Cells and Racking	Samsung
Inverter	Sungrow
Controls	EDF / PowerFlex
Footprint (L x W x H)	15' x 3.24' x 8'
Warranty	10 Years
Enclosure Rating	NEMA 3 and NEMA 3R
Certifications	UL1642, UL 1973, UL1741-SA, UL9540a

Containerized Battery Solution



SUNGROW



SAMSUNG SDI

EDF RE Confidential



PSUSD Portfolio Breakdown

	Rancho Mirage High School	Palm Springs High School	Desert Hot Springs High School*	Admin Center	Cathedral City High School
Battery System Size	248kW (496kWh)	248kW (496kWh)	248kW (496kWh)	248kW (496kWh)	248kW (496kWh)
Purchase Price	\$478,923	\$442,551	\$423,565	\$392,571	\$398,616
SGIP Incentive Value	\$173,600	\$173,600	\$173,600	\$173,600	\$173,600
Year 1 Utility Savings	\$33,776	\$34,252	\$27,040	\$35,512	\$30,711
Year 1 Expenses (O&M)	\$6,992	\$6,992	\$6,992	\$6,992	\$6,992
Year 1 Net Savings	\$113,584	\$114,060	\$106,848	\$115,320	\$110,519
15 Year Cumulative Cash Flow	\$893,477	\$785,393	\$607,125	\$691,363	\$703,729
Simple Payback	6.9 Years	7.1 Years	9.2 Years	7.1 Years	6.9 Years
Storage Lifecycle	15 Years	15 Years	15 Years	15 Years	15 Years

*EnergyStar school

*Net Savings is EBITDA – inclusive of all cash flows and non-tax incentives
*Equipment pricing is valid for 30 days.



PSUSD Portfolio Breakdown

Rancho Mirage High School	
Battery System Size	248kW (496kWh)
Purchase Price	\$478,923
SGIP Incentive Value	\$173,600
Year 1 Utility Savings	\$33,776
Year 1 Expenses (O&M)	\$6,992
Year 1 Net Savings	\$113,584
15 Year Cumulative Cash Flow	\$893,477
Simple Payback	6.9 Years
Storage Lifecycle	15 Years

*EnergyStar school

SGIP Conditional Reservation Letter, Palm Springs Unified School District [SCE-SGIP



SGIP Group <SGIPGroup@sce.com>
To Arthur, Julie (jarthur@psusd.us)
Cc SGIP Database; ethan.klimist@edf-re.com

You forwarded this message on 6/3/2021 10:06 AM.



06/03/21

Dear Julie Arthur,

This notice confirms that a Conditional Reservation has been approved for your proposed self-generation project. Detai

Project ID:	SCE-SGIP-2021-14255
Host Customer:	Palm Springs Unified School District
Site Address:	31001 Rattler Rd Rancho Mirage, CA 92270
Equipment Type:	Electrochemical Storage
Storage Capacity:	496 kWh
Rated Capacity :	248.000 kW
Paired With:	Photovoltaic
Reserved Incentive Amount:	\$173,600.00
Application Fee Paid:	\$8,750.00
Request for Proposal Due Date:	09/01/21
Proof of Project Milestone Date:	01/29/22
Reservation Expiration Date:	12/03/22

The reserved incentive amount is specific to the proposed project information listed on the Reservation Request Form. and affidavit and final system approval.

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PSUSD Portfolio Breakdown

		Desert Hot					
Rancho Mirage High School		REVENUES/SAVINGS	Year 1	Year 2	Year 3	Year 4	Year 5
Battery System Size	248kW (496kWh)	Storage Incentive SGIP	\$86,800	\$50,077	\$36,723	\$0	\$0
Purchase Price	\$478,923	Storage Demand Savings	\$21,848	\$22,851	\$24,184	\$24,963	\$25,758
SGIP Incentive Value	\$173,600	Storage Energy Arbitrage	\$11,927	\$18,724	\$32,225	\$31,918	\$31,586
		TOTAL REVENUES	\$120,576	\$91,652	\$93,132	\$56,881	\$57,344
		EXPENSES					
Year 1 Utility Savings	\$33,776	Storage Annual O&M	\$3,012	\$3,102	\$3,195	\$3,291	\$3,390
Year 1 Expenses (O&M)	\$6,992	Storage Software & Monitoring	\$3,980	\$4,013	\$4,047	\$4,081	\$4,116
Year 1 Net Savings	\$113,584	TOTAL EXPENSES	\$6,992	\$7,115	\$7,242	\$7,372	\$7,506
15 Year Cumulative Cash Flow	\$893,477	Net Saving	\$113,584	\$84,537	\$85,890	\$49,508	\$49,838
Simple Payback	6.9 Years						
Storage Lifecycle	15 Years						

*EnergyStar school

*Net Savings is EBITDA – inclusive of all cash flows and non-tax incentives
 *Equipment pricing is valid for 30 days.



PSUSD Storage: 5 Site Portfolio

Portfolio Financial Highlights

Battery System Size	1240kW (2480kWh)
Purchase Price	\$2,136,226
SGIP Incentive Value	\$868,000
<hr/>	
Year 1 Utility Savings	\$161,291
Year 1 Expenses (O&M)	\$34,960
Year 1 Net Savings	\$560,331
<hr/>	
15 Year Cumulative Cash Flow	\$3,681,087
Average Simple Payback	7.4 Years
Storage Lifecycle	15 Years

Purchase Key Terms

Project Ownership
PSUSD

Self Generation Incentive Program
PSUSD Collects SGIP

Annual Fees
Includes All O&M, software, and monitoring services

Depreciation
PSUSD cannot monetize tax benefits

Warranties
Includes manufacturers and workmanship warranty for term of contract

*Net Savings is EBITDA – inclusive of all cash flows and non-tax incentives
*Equipment pricing is valid for 30 days.

6. Electric Vehicle Charging Stations



6. California Green Building Standards Code – CALGreen

In 2010 CALGreen became California's first green building code and first in the nation state-mandated green building code. It is formally known as the California Green Building Standards Code, [Title 24, Part 11, of the California Code of Regulations Opens in New Window.](#)

The purpose of CALGreen is to improve public health, safety, and general welfare through enhanced design and construction of buildings using concepts which reduce negative impacts and promote those principles which have a positive environmental impact and encourage sustainable construction practices.

CALGreen was adopted to address the five divisions of building construction:

- Planning and design
- Water efficiency and conservation
- Material conservation and resource efficiency
- Energy efficiency
- Environmental quality

CALGreen has been phased every 3 years to increase the directives from voluntary to mandated. January 1, 2023 will remove all voluntary portions and all codes will be mandatory.

Example: EV charging underground infrastructure has been required for all DSA projects since 2016 but in 2023 all new construction projects will need to install electric vehicle charging station equipment in parking lots, not just the infrastructure.

6. PSUSD Electric Vehicle future

- California Gov. Gavin Newsom's executive order from September 23, 2020, requires that "by 2035, all new cars and passenger trucks sold in California be zero-emission vehicles." Starting on January 1, 2035, the executive order would ban the sale of new vehicles that are powered by an internal combustion engine, which includes gasoline, diesel and hybrid electric vehicles.
- According to a 2017 report by the California Air Resources Board, transportation contributes to 40.1% of greenhouse gas emissions statewide. Passenger vehicles are responsible for 28% of emissions, while heavy-duty vehicles contribute another 8.4%.
- Electric vehicles (EVs) are a key element in cutting carbon emissions. For the district to begin switching to EV, charging the vehicles needs to be inexpensive, convenient and quick.

6. Electric Vehicle Charging Stations



EV Charging Infrastructure

Nonresidential

2016 CALGreen EV Spaces Required

Parking Provided	Mandatory Measures: EV Spaces Required	Voluntary Measures: EV Spaces Tier 1	Voluntary Measures: EV Spaces Tier 2
0 – 9	0	0	1
10 – 25	1	2	2
26 – 50	2	3	4
51 – 75	4	5	6
76 – 100	5	7	9
101 – 150	7	10	12
151 – 200	10	14	17
201 and over	6% of spaces	8% of spaces	10% of spaces



Example - 500 parking spaces

- 6% = 30 EV Spaces (Mandatory)
- 8% = 40 EV Spaces (Voluntary Tier 1)
- 10% = 50 EV Spaces (Voluntary Tier 2)

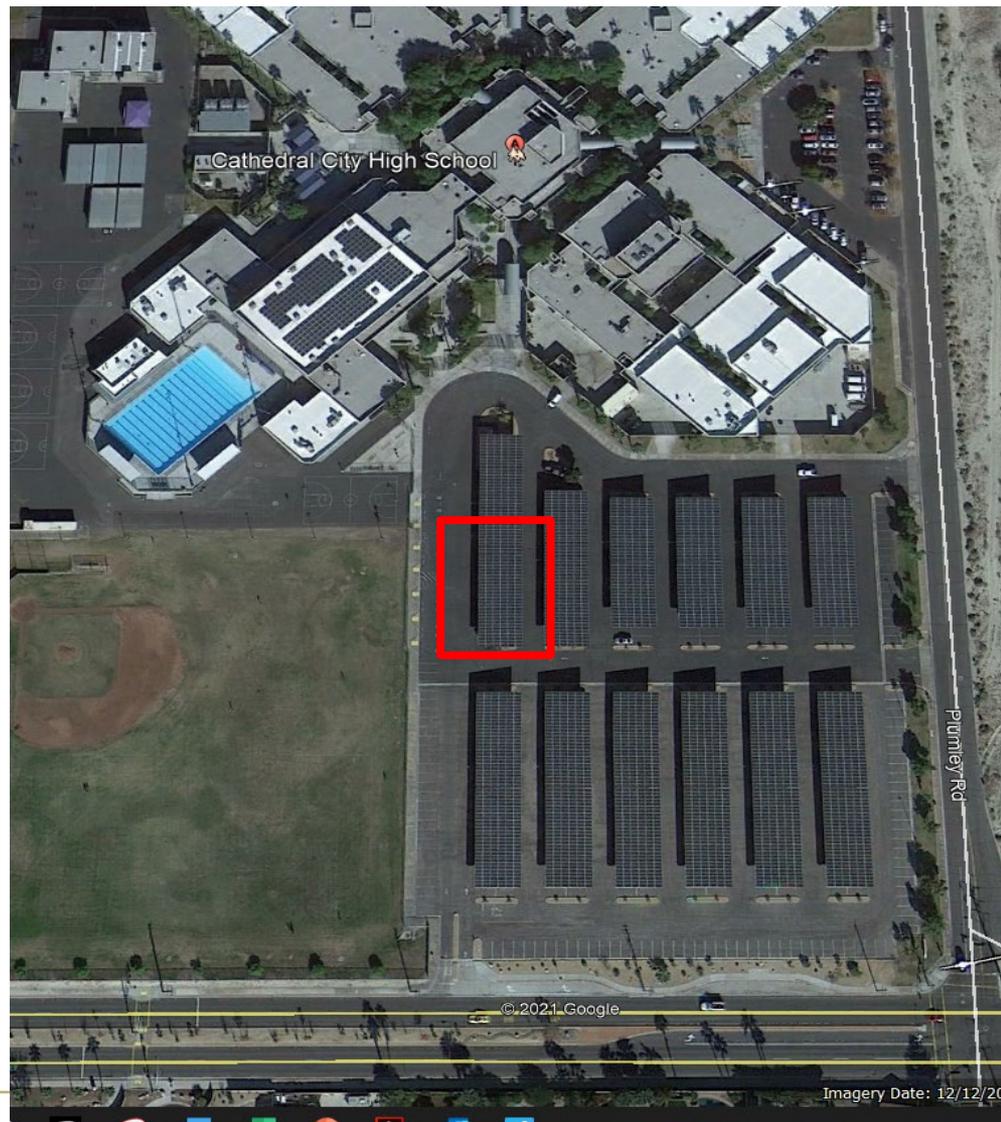
These are requirements for new buildings but only **recommended consideration** for existing buildings.

6. CCHS Electric Vehicle Charging Stations

Cathedral City High School is one of 38 school sites to get EV chargers through a new SCE pilot.

Cathedral City High School is the first school to benefit from a state-approved \$10 million Southern California Edison pilot to provide electric vehicle charging stations, including all necessary electrical infrastructure, to K-12 schools within the utility's service area.

 Location of 12 EV stations.



6. CCHS Electric Vehicle Charging Stations

PSUSD's first step on the journey to lower carbon emissions

Project Scope: 12 EV charging stations.

Construction is scheduled to start in June 2021.

Completion August 2021.



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AC Level 2 Charger
INSTALLATION AND USER'S MANUAL

EQUIPMENT DESCRIPTION

30A / 40A / 70A SINGLE OR DUAL PORT PEDESTAL CHARGING STATION

COMPONENT DESCRIPTION

- 7" LCD Panel Display
- Charging Connector 2 (for dual configurations), 1 (for single configuration)
- Charging Connector 1 (for dual configurations)
- Payment System
Available Options:
 - RFID Reader
 - Encrypted Insert MagStripe Card Reader
 - Nayax EMV/Contactless Card Reader

NOTE
Both the wall-mount and pedestal charger can come with an optional Cable Retractor. Refer to L2 Charger Cable Retractor Installation Manual for the details.

6. Electric Vehicle Charging Stations examples northern California districts



7. Potential New Actions For Bond & Redevelopment Funds

7. Potential Actions Pending BOE Direction

1. In order to comply with Gov. Newsom's executive order for zero-emission vehicles in 2035, include electric vehicle charging equipment in current Phase 1 modernizations, RVES and MSJ solar projects and the battery projects at the 4 high schools and DAC/DSC.
2. Business Services to devise an electric vehicle replacement plan for the white fleet over the next 13 years.

Questions or
comments?