Subject:	Preliminary Feasibility Study of Solar PV and Battery Storage
Client:	San Mateo-Foster City School District
Prepared by:	Sage Energy Consulting
Date:	June 22, 2021

1. Introduction

Sage Energy Consulting was contracted by San Mateo-Foster City School District ("District") to conduct a feasibility study to assess the needs and viability of Solar Photovoltaic (PV) and Battery Energy Storage Systems (BESS) at the District's 26 school sites.

The objective of the study is to determine requirements and conceptualize the siting and optimal sizing of PV systems and BESS and estimate financial performance of these systems under various financing scenarios, including a cash purchase (Measure T), Power Purchase Agreement (PPA), a PPA with Buyout in year 7, and debt (lease structures).

Sage's findings from the preliminary feasibility study are presented in this report.

2. Executive Summary

This analysis identifies a portfolio of school sites that will be physically viable, fit within the available budget of approximately $10-11M Measure T funding, and yielding positive financial returns at each identified site and across the portfolio. The District's primary objective for the project is to reduce operating costs with an aspirational goal achieving zero net energy (ZNE) consumption at all District sites. Site constraints aside from budget include available open area, shading from vegetation, solar ready roofs, easy EVA access in parking lots, and planned site changes.

Based on goals and criteria articulated above, 16 sites were identified for solar PV installations.

Table 2-1 and Table 2-2 below summarize the key metrics of the viable solar PV and BESS project portfolio analyzed in the feasibility study. Section 4 outlines the PV systems in further detail and Attachment B provides a summary of the 25-year financial modeling and environmental performance analysis.

Table 2-1: Summary of Project – 16-Site Portfolio

Metric	Solar PV Only	Solar PV + BESS
Number of sites	16 PV	16 PV + 6 BESS
PV System Size	~2,500 kW_p	
Total BESS Size	-	720 kWh / 360 kW
Environmental Benefit, 25-year, Metric Tons of Carbon Dioxide (CO2e)	25,000	
Energy Consumption Offset Average	75%	
Energy Cost Offset Average	60%	

Table 2-2: 25-Year Project Financial Summary of Sixteen Site Portfolio

Metric	Cash Purchase[1]		PPA[2]		PPA Buyout[3]		Lease[4]	
	Solar PV Only	Solar PV + BESS	Solar PV Only	Solar PV + BESS	Solar PV Only	Solar PV + BESS	Solar PV Only	Solar PV + BESS
Solar PV System Capital Cost to District	$11.10M		-		-		-	
BESS System Capital Cost to District	-	$0.83M	-	-	-	-	-	-
Project Development Costs & Contingency (Soft Costs)	$0.89M	$0.95M	-	-	-	-	-	-
Annual Operating Costs (Year-1)	$0.14M	$0.21M	$1,250	$1,250	$1,250	$1,250	$0.14M	$0.21M
25-Year Net General Fund Savings (Nominal $)	$22.03M	$21.34M	$8.41M	$8.31M	$10.62M	$9.96M	$5.41M	$3.48M
25-Year General Fund NPV Savings (2.5% discount rate)	$15.93M	$15.42M	$6.07M	$5.98M	$6.03M	$5.54M	$2.06M	$0.51M
Simple Payback	15 Years	16 Years	N/A	N/A	N/A	N/A	N/A	N/A

1. Capital cost in a Cash purchase through Measure T GO bonds is not borne by the District.
2. Project development costs are assumed to be rolled into the PPA price. Annual Operating costs are District asset management costs.
3. PPA buyout is assumed to be financed with GO bonds.
4. Project development costs are assumed to be rolled into the lease payments.

3. Key Considerations and Findings

1) The District has 26 sites that include the District office, the Maintenance & Operation (M&O) building, Children Nutrition Center (CNC) kitchen, and schools. Most sites can host enough solar PV to offset 50% to 100% of the sites' energy consumption for the District's aspirational ZNE goals. However, because surplus solar energy exported to the grid (in excess of the site's annual electricity consumption) has little value, the PV systems were sized to offset no more than 90% of the site's energy consumption.
2) Based on the above considerations, planned site changes, and anticipated build costs, 16 sites were identified for solar PV installations. The 16-site solar PV portfolio is financially and physically viable, showing positive nominal and NPV savings for all financing scenarios. This portfolio fits within the District's ~$10-11M budget for the project.
3) The Measure-T bond-funded cash purchase scenario significantly outperforms other forms of financing because the District does not have to repay the capital and soft costs of the project, so all energy cost operational savings from the project, minus M&O costs, accrue to the General Fund.
4) Energy consumption changes stemming from site modernization, and other energy projects were considered in determining appropriate PV system sizes.
5) Preliminary conceptual layouts for the PV systems were created for each of the 26 sites and 16 sites were identified through working meetings with the District. In addition to energy cost savings from PV, the District will gain shade for parked cars and play areas.
6) Under current tariffs, installed costs and incentives, Battery Energy Storage Systems (BESS) creates minimal to no savings at any of the sites. This could change in the future as BESS installed costs decrease. BESS could also be considered if the District identifies a need for resiliency to PG&E electrical grid outages at some of its school sites. The District could consider including as an additive-alternative to a Request for Proposals (RFP) to evaluate market pricing and determine financial viability.
7) California Public Utility Commission (CPUC) is looking to issue a final decision on Net Energy Metering (NEM) 3.0 proceedings in January 2022 which, when adopted, will significantly reduce the financial returns for future solar customers. For this project to benefit from the solar-friendly NEM 2.0 tariff, the District needs to submit interconnection applications (IA) and have them deemed complete by PG&E by January 13, 2022 (current CPUC schedule). To meet this deadline, Sage recommends submitting IAs no later than early November 2021 to allow time for PG&E processing and any changes that may be required. This will ensure that systems will be grandfathered under NEM 2.0 for 20 years from the date of initial operation, maximizing financial performance.

4. Solar PV Feasibility

4.1 Site Selection

The first step towards evaluating solar PV feasibility involved identification of sites that can situate a cost-effective system. The District's school sites were mostly within residential neighborhoods and

space constrained. Also, the value of exported solar energy is much less than the value of solar energy used onsite. As such, for economic optimality considerations, the PV target was set to offset between 80-90% of site energy consumption, wherever possible. Solar PV design options available to the District include shade structures, carport canopies and rooftop PV systems. A shortlist of the sixteen sites capped by available Measure T funds as well as other considerations like sufficient site loads, available open space or roof area for PV installation, least shading from surrounding vegetation and other site modernization considerations was identified.

The District and Sage conducted a site-by-site review of the designs taking into consideration the District's keen interest in adding shade area through shade canopies as well as carport shade structures and the goal to move towards net zero energy also played a role at this stage. Carport, shade canopy, and roof PV were utilized in the designs of the systems. Table 4-1 lists the set of sixteen chosen sites. For the purposes of the analysis, College Park Elementary and Turnbull Preschool are evaluated as a single site under Net Energy Metering Aggregation (NEMA) considerations.

Table 4-1: Site Selection

Site #	Site Name	School Type
1	Audubon	Elementary
2	Bayside Academy	K-8
3	Beach Park	Elementary
4	Borel	Middle
5	Brewer Island	Elementary
6	Child Nutrition Center	Kitchen
7	College Park	Elementary
8	Fiesta Gardens	Elementary
9	Foster City	Elementary
10	Laurel	Elementary
11	LEAD	Elementary
12	North Shoreview	K-8
13	Parkside	K-8
14	SMFC District	District Office
15	Sunnybrae	Elementary
16	Turnbull	Pre-school

4.2 Facility Energy Consumption

Tables 4-2a and 4-2b shows the utility consumption information for Calendar Year (CY) 2019. Site modernization considerations like planned new construction as well as planned new HVAC system installations have been taken into consideration to estimate final facility energy consumption that will need to be offset by PV generation.

Sage has removed the following meters from the scope of this project due to insufficient usage, cost to be offset by PV and/or unavailable space for PV:

- Abbott MS, SAID 5855922944
- Baywood ES, SAID 5855922905
- Beresford ES, SAID 5855922244
- Bowditch MS, SAID 5855922922
- George Hall ES, SAID 5855922666
- Highlands ES, SAID 5851135557
- Knolls ES, SAID 5853773169, 5855922573, 5855922173
- Maintenance and Operations, SAID 5855922835
- Meadow Heights ES, SAID 5855922026
- Parkside Montessori, Secondary account - SAID 5855922374
- San Mateo Park ES, SAID 5855419226

Beach Park Elementary is a New Construction school site and as such, did not have any energy consumption in CY2019.

Table 4-2a: Adjusted Annual Electric Consumption

Site	CY2019 Electric Consumption, kWh/Yr	New Construction SF[1]	Adjusted Electric Consumption, kWh/Yr[2]
Audubon	427,500		427,450
Bayside Academy	375,900		493,300
Beach Park	NA	42,500	245,950
Borel	328,800	22,500	527,950
Brewer Island	309,200		309,250
Child Nutrition Center	235,200		235,150
College Park	40,700		117,200
Fiesta Gardens	329,900		329,900
Foster City	387,600		488,450

Site	CY2019 Electric Consumption, kWh/Yr	New Construction SF[1]	Adjusted Electric Consumption, kWh/Yr[2]
Laurel	155,600		223,250
LEAD	225,900	6,000	335,200
North Shoreview Montessori	123,900		193,850
Parkside Montessori	160,300	8,000	273,250
SMFC District	455,300		455,250
Sunnybrae	262,400	7,000	303,000
Turnbull	237,500		237,500

1. Average District level EUI of 5.79 kWh / sqft is used to calculate "New Construction" electricity use.
2. Based on Aedis Architects' report; Average classroom size (SF) times number of proposed new HVAC installs at each school was determined. This gross SF was used along with HVAC usage EUI from CBECS 2012 of 3.6 kWh/sqft for Education building type in Marine climate zone to estimate potential increase in energy consumption.

Table 4-2b: Adjusted Annual Electric Consumption and Estimated Cost

Site	CY2019 Electric Consumption, kWh/Yr	Estimated Annual Electric Cost, $/Yr[1]	Estimated Average Cost of Electricity, $/kWh
Audubon	427,450	$106,500	$0.2492
Bayside Academy	493,300	$123,300	$0.2500
Beach Park	245,950	$61,150	$0.2486
Borel	527,950	$137,300	$0.2601
Brewer Island	309,250	$76,050	$0.2459
Child Nutrition Center	235,150	$53,950	$0.2294
Fiesta Gardens	329,900	$83,500	$0.2531
Foster City	488,450	$116,100	$0.2377
Laurel	223,250	$55,400	$0.2482
LEAD	335,200	$82,700	$0.2468
North Shoreview Montessori	193,850	$46,950	$0.2421
Parkside Montessori	273,250	$69,700	$0.2550

Site	CY2019 Electric Consumption, kWh/Yr	Estimated Annual Electric Cost, $/Yr[1]	Estimated Average Cost of Electricity, $/kWh
SMFC District	455,250	$98,000	$0.2153
Sunnybrae	303,000	$87,400	$0.2885
Turnbull & College Park	354,100	$86,250	$0.2436
Total	**5,195,300**	**$1,284,250**	**$0.2472**

1. Assuming tariffs under PG&E's General Rate Case.

4.3 System Size Performance

Table 4-3 details the preliminary system sizes from the optimization analysis, expected Year-1 PV production, yield and usage offset.

Table 4-3: PV System Sizing and Expected Year-1 Production

Site	Interconnection Type	System Size KW_p	Year-1 Production, kWh	Year-1 Yield kWh/kWp	Usage Offset, %
Audubon	NEM	151	239,000	1,580	56%
Bayside Academy	NEM	290	444,000	1,530	90%
Beach Park	NEM	135	219,000	1,625	89%
Borel	NEM	234	375,000	1,600	71%
Brewer Island	NEM	166	265,000	1,595	86%
Child Nutrition Center	NEM	94	129,000	1,375	55%
Fiesta Gardens	NEM	191	297,000	1,550	90%
Foster City	NEM	189	302,000	1,595	62%
Laurel	NEM	98	160,000	1,630	72%
LEAD	NEM	123	200,000	1,620	60%
North Shoreview Montessori	NEM	112	174,000	1,550	90%
Parkside Montessori	NEM	98	157,000	1,600	58%
SMFC District	NEM	258	412,000	1,600	91%

Sunnybrae	NEM	164	247,000	1,510	81%
Turnbull & College Park	NEMA	194	299,000	1,540	84%
Total		**~2,500**	**3,919,000**	**~1,570**	**~75%**

4.4 Utility Tariff Analysis Results

Sage conducted tariff modeling using actual consumption data from PG&E, and simulated Helioscope PV production data. Table 4-4 shows the Year-1 utility savings, usage and bill offset, and value of PV energy. As noted in Table 4-3, Net Energy Metering Aggregation (NEMA) was assessed at Turnbull and College Park sites, and Net Energy Metering (NEM) at the remaining ones.

Under NEMA, a single site with multiple meters on the same property, or on the customer's adjacent or contiguous property, can use renewable energy generation to serve their aggregated load behind all eligible meters. The site with PV (generating account) produces energy for itself and the adjacent meters (load or benefitting accounts). Exported energy is allocated to all accounts in the NEMA arrangement based on the proportion of the most recent year's usage for each meter. This arrangement was considered for sites with multiple meters on same parcel of adjacent parcels, while the NEM arrangement was considered for sites with single meters. Under NEM, when a PV system produces more power than is used at the site at any instant, the excess energy is fed back into the utility system grid and the customer is credited for the cost of the excess electricity generated.

This proposed solar project would be interconnected under the NEM 2.0 tariff if the interconnection application (IA) with the utility is submitted and deemed complete before the CPUC issues a final decision in the NEM 3.0 proceedings, expected in January 2022. NEM 3.0 will result in a lower value for solar PV system generation, significantly reducing financial returns for future solar customers. However, if the IA is approved under NEM 2.0 guidelines, the system will be grandfathered for 20 years from the date of initial operation of the solar PV system.

Table 4-4: Year-1 Utility Tariff Analysis Results

Scenario	Year-1 Energy Savings	Bill Offset, %	Value of Energy, $/kWh
Solar PV Only	$775,000	60.4%	$0.1978
Solar PV & BESS	$788,000	61.4%	$0.2011

While BESS produces extra energy savings, these savings over the lifetime of the system must outweigh the costs of purchase and maintenance for the system to pencil. We detail this further in Section 5.

4.5 Financing Options

There are three primary financing types for solar PV and BESS projects considered in this evaluation:

Cash Purchase: In a Cash Purchase Agreement, the District owns the PV systems and accrues all the financial savings from them. In this case, the capital to purchase the solar PV and BESS systems would come from Measure T General Obligation (GO) bonds which are paid by district taxpayers.

Power Purchase Agreement (PPA): Financing through a Power Purchase Agreement (PPA) means that a third-party finances, owns, and operates the systems. The District purchases all the power generated by the solar PV system at a contracted price for a period of 20-25 years from the third-party owner. The District may also consider a partial pre-payment of the PPA, where the District prepays some portion of the PPA energy costs. A PPA prepayment lowers the PPA price while retaining the benefits of third-party owner maintaining and operating the system. Prepayment options can be solicited as part of the RFP process. The District can also choose to purchase the system from the PPA owner at certain time intervals negotiated in the PPA contract. In Sage's experience, the buyout options typically become available in year 7, year 12-15, and year 20.

Tax-Exempt Municipal Lease (TEML): With a TEML, the District would be responsible to pay back the borrowed amount with interest, functioning as a standard lease-purchase. Current all-in TEML rates, including cost of issuance, are around 4.5%. The pros and cons of each financing option are detailed in Table 4-5.

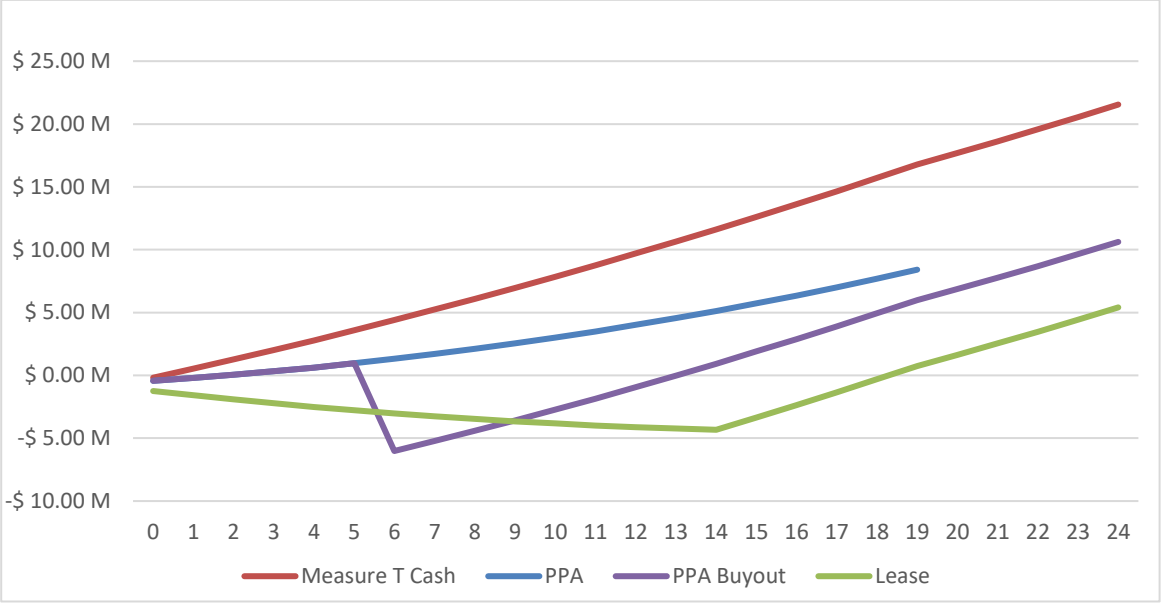
Table 4-5: Financing Options, Pros and Cons

Financing Type	Pros	Cons
Cash Purchase with Measure T GO bonds	• Highest General Fund savings of all financing types	• District responsible for O&M • Federal ITC credit and MACRS not available
Power Purchase Agreement (PPA)	• No large upfront investment • No O&M burden • Predictable electricity rate • ITC and MACRS can be monetized by the developer, lowering PPA price • PV system performance guarantee from vendor	• Savings less than those available via cash purchase • Long term (20-25 year) contracts • Risk associated with changes to campuses that impact solar PV system performance
Tax Exempt Municipal Lease (TEML)	• No large upfront investment • Low interest rate • Preserves GO bond funds for other projects • Ownership at the end of the lease	• Savings typically less than available via cash purchase or PPA • Impacts District bonding capacity

4.6 Lifecycle Modeling

Sage performed 25-Year financial modeling to determine the anticipated financial performance of the solar PV project. The financial analysis evaluated financing the system via cash purchase or debt, and a PPA with a buyout option. See Attachment B for more information. Cumulative energy savings for all financing types are shown in Figure 4-1.

Figure 4-1: Cumulative Project Cash Flow Over Time, Nominal $



The modeling methodology and key financing assumptions have been detailed in Attachment A. Attachment B provides the 25-year financial modeling analysis summary.

For this project specifically, Sage evaluated financing the system via Measure-T bond funded cash purchase. The District does not incur the capital cost for the project even though this is a cash purchase. As such, the utility cost savings result in positive cash flow for the project almost immediately.

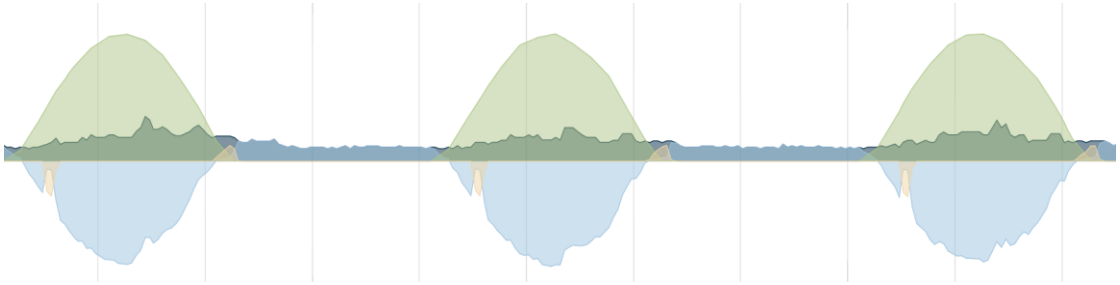
5. Battery Energy Storage System (BESS) Feasibility

Sage assessed multiple scenarios with varying sizes of BESS paired with solar PV and found negligible to negative annual savings over the lifetime of the system. The financial performance of a BESS can be attributed to the following reasons:

1. The primary value proposition of a BESS is demand reduction by managing demand spikes. Both before and after the installation of PV, all sites will be subscribed to a tariff that does not contain time-of-use demand-based charges. These tariffs are not well suited to extracting the best financial value from a BESS since the majority of the costs are associated

with volumetric energy usage as compared to a maximum energy usage in a given 15-minute interval. Furthermore, the demand profiles at these sites exhibit peaks during the time PV is producing, in which case the solar reduces both demand and volumetric charges (for example, Sedgwick and most other sites in the portfolio; see Figure 5-1 below). In the figure, dark blue represents the current utility data profile, green representing solar production, and light blue representing the net consumption with solar.

Figure 5-1: Borel Demand profile, 3 days in April 2019



2. The secondary value proposition of a BESS is energy arbitrage. Energy savings via energy arbitrage is derived by charging the battery during times of low-cost electricity and discharging during times of high-cost electricity. This is not a viable value stream for all sites in the portfolio as much of the energy usage has already been offset by the solar. Additionally, since the PG&E tariffs have flattened energy differentials, the value of solar energy and battery energy arbitrage is significantly decreased, thus the savings generated are not sufficient to recover the additional capital cost of the BESS.

The District can consider BESS in the future, when the economics are aided by the following factors:

1. Battery costs have declined by nearly 70% between 2010 and 2016 and are expected to continue declining by 30-40% over the next five years.

2. The BESS system size considerations for the projects at the District's schools are small – in the "less than 250 kW" category. These systems are currently under severe inventory shortage and have a 1-year backlog. The supply shortage has also contributed to price inflation of the smaller BESS systems.

We recommend including BESS as an Additive-Alternative (Add-Alt) in the RFP, to collect market pricing and evaluate its impact on the overall project economics. More certainty around Option S should be available at the time of project implementation and a BESS could easily be integrated if a clear financial driver is identified.

6. Other Considerations

The following section discusses important general considerations, and specific ones that may impact project schedule and costs.

6.1 Net Energy Metering (NEM) 2.0 Grandfathering

A Per the Net Energy Metering (NEM) rules, a PV system is grandfathered on the active NEM version for 20 years from the date the system is interconnected. The transition to NEM 3.0, the successor to NEM 2.0, is expected to occur after 2021. NEM 3.0 is likely to further reduce the value of solar PV generated energy.

6.2 Geotechnical

Geotechnical conditions are important for the design of the foundations for ground mount PV structures. Soil classification and geohazard zones (such as areas at risk of liquification) can increase the cost of ground mount structures.

Sage reviewed California Geologic Survey (CGS) maps to identify noted mapped geohazard zones. For sites within a CGS classified hazard zone, Sage often recommends geotechnical investigations be performed before an RFP is released to minimize risk of project feasibility. Soils reports should be included in the RFP to inform proposers' cost estimates.

6.3 Electrical Infrastructure

Generation projects need to be interconnected to the existing electrical infrastructure at the site. To complete this process, upgrades to the customer or utility-side infrastructure may be required. Sage has not reviewed the electrical infrastructure at each site as part of this study. A visual evaluation of electrical infrastructure at each site should be performed and information gathered provided in a future RFP.

6.4 Ancillary Infrastructure for Future Battery Energy Storage System (BESS) and Electric Vehicle (EV) Charging

If the District is interested in pursuing a BESS at any of the sites in the future, cost efficiencies can be gained by including spare conduits for the BESS during PV system installation; and by reserving space for the BESS as close to the main service as possible.

EV charging infrastructure is also a growing consideration for parking areas. At a minimum, Sage recommends that PV projects with structures in parking areas include spare conduits for future EV charging.

6.5 California Environmental Quality Act (CEQA)

CEQA requires state and local agencies (public agencies) to identify the significant environmental impacts of their actions and to avoid or mitigate them, if feasible. CEQA does apply to solar PV projects. There are CEQA statutory exemptions for solar PV constructed in parking lots and rooftops, which will apply to the sites outlined in this report. In most other cases, a categorical exemption

would likely be pursued, since most other sites include canopies on hardscape play areas or at the edges of hardscape.

A CEQA consultant should be engaged to assess the appropriate determination for each site, prepare the necessary documentation, and oversee the process. Sage can act as or would assist CEQA consultant.

6.6 Division of State Architect (DSA) Roof Review

In Sage's recent experience, DSA review of rooftop PV projects has become increasingly cumbersome and protracted. PV roof projects are typically easier on new buildings, however there is uncertainty around the added time and cost of the DSA approval process. Also noteworthy is that ballasted racking systems are more difficult to get permitted with DSA than fully attached systems. All these were considered while developing preliminary layouts for various sites. The handful of sites with Rooftop PV design options may need a structural and roofing assessment should the District elect to move forward with a roof-mounted system at the sites.

6.7 Project Delivery

Capital improvement projects for public entities like schools are typically fall under two delivery methods Design-Bid-Build and Design-Build. The choice of the delivery method may be driven by client needs like cost performance, timelines and some by legal or statutory requirements but both delivery methods have their place in construction projects.

Design-Bid-Build: This is the more traditional project delivery method where the owner contracts a designer and a contractor separately. The designer is responsible for providing completed design documents based on which the owner solicits proposals from multiple contractors to choose one. The designer and the contractor do not have contractual obligations to one another and the risk of validating the design documents for completeness and driving a project based on this is borne by the owner.
Such a delivery method may be ideal for project owners that would like to have control over the design as well as construction phase. This is more costly when compared to Design/Build.

Design / Build: The project owner hires a design/builder, a single entity that is responsible for both design and construction of the project, usually under a single contract. The design/builder may hire sub-contractors to perform work on specific scopes within the larger project (for e.g. trenching for electricals). This method typically needs higher levels of collaboration and coordination among the contracting and the sub-contracting entities with the risk borne by the design/builder contractually. Design-build delivery process typically outperforms Design-bid-build in terms of cost, schedule, quality as well as risk mitigation.

For Solar PV projects, based on Sage's experience with both delivery methods, Design/Build usually works better from the owner's standpoint.

7. Next Steps

1. Request for Proposal: Utilize an RFP to solicit competitive design-build proposals from qualified solar vendors for the project under California Government Code Section 4217.10 et seq. (allowing for a best value evaluation of proposals).
2. Proposal Evaluation: Evaluate proposals for qualitative and quantitative criteria and rank vendors with a committee of District stakeholders.
3. Contracting Approval – Board approval to enter into contract negotiations with selected vendor with the intent to bring a finalized contract to the Board for approval.
4. Contract Negotiations – Contract negotiations with selected vendor to bring a finalized contract to the Board for approval.
5. Government Code 4217 – A minimum of two weeks prior to Board approval of the contract, public notice must be given that a finding will be made under GC 4217. A formal resolution, to be prepared by the District's attorney with help from Sage, will be required for contract award.
6. Contract Award – Award contract to selected vendor upon Board approval.
7. Project Kickoff – After execution of the Contract, conduct a Project kickoff meeting to introduce all Project team members, review criteria, schedule and project design requirements, and set up regular Project meetings going forward.
8. Design – Technical oversight of the design process, with input from District staff and District representatives as needed. The selected vendor will act as designer of record and manage the AHJ process as well as any other permitting requirements.
9. Construction – Selected vendor will construct the systems. District representative to assist District staff in overseeing and coordinating construction at the individual sites.
10. Commissioning – Selected vendor will commission the systems. District representative to confirm commissioning, utility interconnection and successful startup of the systems.
11. Project Close Out – Ensure that all contract requirements are met, punch list items are adequately addressed, project training and documentation has been delivered, and the Project is closed and certified with the AHJ and all other permitting entities.
12. Performance Management – Audit system performance to ensure production guarantees and operations and maintenance requirements are being met, and determine actual realized utility savings.

Attachment A

Methodology and Assumptions

Methodology and Assumptions

Tariff Modeling

Sage performed modeling using the Energy Toolbase solar analytics program, Sage's proprietary modeling, and PG&E's proposed tariff schedules, to determine cost offsets. As previously described, the financial modeling utilized electricity consumption data from PG&E and simulated production data modeled using an industry-standard solar design software, HelioScope. The analysis was conducted using PG&E / PCE tariffs.

Lifecycle Financial Modeling (25-Year)

Utilizing the results from the tariff modeling, a 25-year cost analysis was performed. Sage assumed the project will not be grandfathered under NEM 2.0 regulations for 20 years, which govern the value of energy exported to the utility grid when PV production exceeds onsite consumption.

The solar PV financial models are greatly influenced by the assumptions. Modeling assumptions consider risks associated with changes in utility TOU schedules, rates and conditions. Sage uses conservative assumptions across the board. System pricing assumptions are based on market knowledge from other similar projects and current industry trends. Utility escalation rates are based on historical averages over the past thirty years. If utility rates increase more over time in the future due to increased regulations, demand, and finite resources, the financial performance of the systems will be affected positively. Conversely, if rates increase slower than historical averages, the financial performance will be negatively affected. This variability is assessed in Sage's sensitivity and risk analysis.

Key financial assumptions, project capital cost and soft cost assumptions in Sage's Measure T cash purchase financial modeling are shown in Tables A-1, A-2, and A-3 respectively.

Table A-1: Key Financial Modeling Assumptions

Metric	Value
Annual Utility Escalation	3%
Utility Tariff Degradation Risk	-0.10%
NEM 2.0 Export Energy Rate	Full retail rate, minus non-bypassable charges, for 20 years
NEM 2.0 Loss % (2042)	-15%
Discount Rate (for NPV calculations)	2.50%

Table A-2: Project Pricing Assumptions, PV Only

Cash Purchase	PV Only	
Design-Build Turnkey Project Cost	$11,099,350 ($4.44/W_p)[1]	
PPA		
PV PPA Price (inclusive of project development costs)	$0.1543	
BESS PPA Price (inclusive of project development costs)	-	
PPA Annual Escalator	0%	
PPA Buyout Year	7	
Debt Financing		
Bond Annual Interest Rate	4.50%	
Cash & Loan Scenario		
Project Development Soft Costs	% of Build Cost	Capital Cost Equivalent
Consulting Fees	1-2%	$150,000
Contingency	2%	$222,000
Consultant Fees	1%	~$111,000
Construction Management, Testing and Inspection Fees	1%	~$111,000
Legal and Administration Fees	2.5%	$275,000
Interconnection Fees	0.3%	$30,000
Total	**~8.3%**	**~$900,000**
PPA Scenario		
Project Development Soft Costs	% of Build Cost	Capital Cost Equivalent
Consultant Fees (Host + District)	~2-3%	~$315,000
Construction Management, Testing and Inspection Fees	1%	$111,000
Legal and Administration Fees	2%	~$222,000
Total	**~5.5%**	**~$650,000**

1. For Measure T Bond funded cash purchase, the turnkey project cost is not borne by the District.

Table A-3: Project Pricing Assumptions, PV + BESS System

Cash Purchase	PV + BESS	
Design-Build Turnkey Project Cost	$11,927,350 ($4.77/W_p)[1]	
PPA		
PV PPA Price (inclusive of project development costs)	$0.1543	
BESS PPA Price (inclusive of project development costs)	$0.006	
PPA Annual Escalator	0%	
PPA Buyout Year	7	
Debt Financing		
Bond Annual Interest Rate	4.50%	
Cash & Loan Scenario		
Project Development Soft Costs	% of Build Cost	Capital Cost Equivalent
Consulting Fees	1-2%	$150,000
Contingency	2%	$238,500
Consultant Fees	1%	~$119,500
Construction Management, Testing and Inspection Fees	1%	~$119,500
Legal and Administration Fees	2.5%	$298,000
Interconnection Fees	0.3%	$30,000
Total	**~8.3%**	**~$950,000**
PPA Scenario		
Project Development Soft Costs	% of Build Cost	Capital Cost Equivalent
Consultant Fees (Host + District)	2-3%	~$325,000
Construction Management, Testing and Inspection Fees	1%	$119,500
Legal and Administration Fees	2%	~$238,500
Total	**~5.5%**	**~$685,000**

1. For Measure T Bond funded cash purchase, the turnkey project cost is not borne by the District.

Attachment B

Cash Flow Table

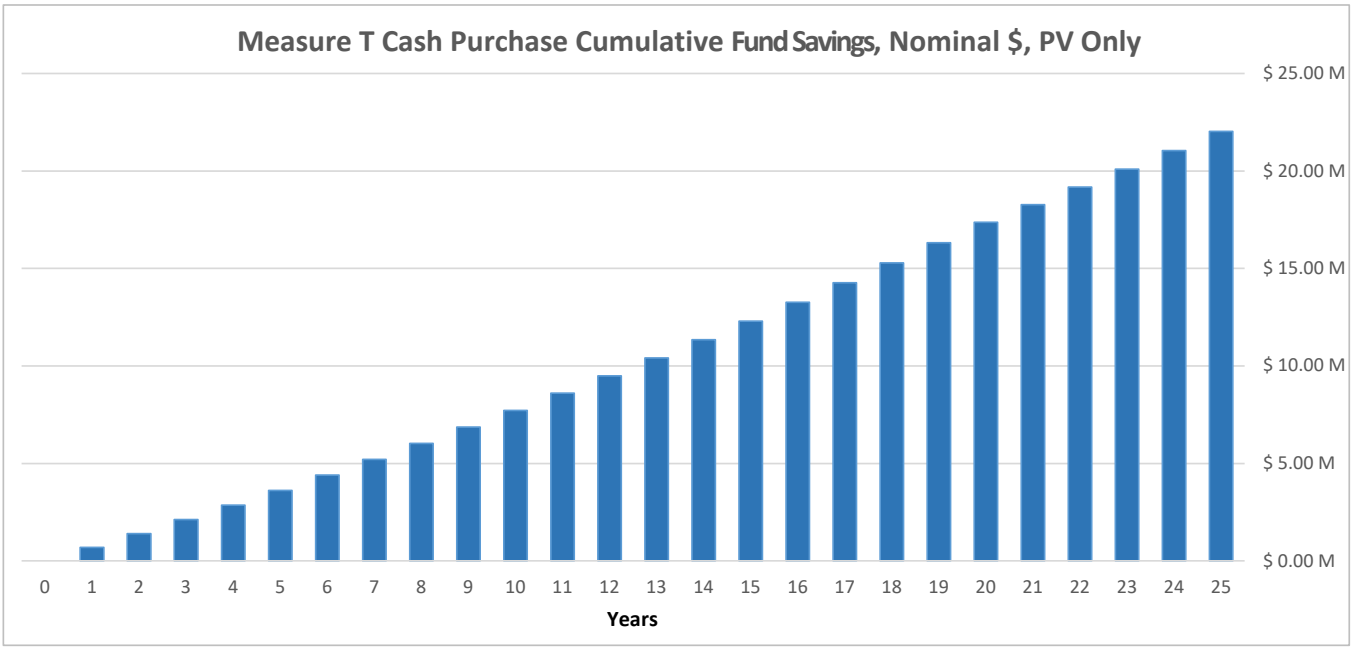
SAGE ENERGY CONSULTING

Cumulative Project Cash Flow - NEM 2.0 Assumptions, Cash Financed

Savings Analysis of Solar Cash Purchase, PV Only

San Mateo Foster City School District, 16 Sites, June 16 2021

			PV			
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV	PV Operating Costs	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ -
1	5,193,000	$ 1,323,000	$ 495,000	$ 135,000	$ 692,000	$ 692,000
2	5,193,000	$ 1,362,000	$ 516,000	$ 138,000	$ 708,000	$ 1,400,000
3	5,193,000	$ 1,403,000	$ 539,000	$ 141,000	$ 723,000	$ 2,123,000
4	5,193,000	$ 1,445,000	$ 562,000	$ 144,000	$ 739,000	$ 2,862,000
5	5,193,000	$ 1,489,000	$ 587,000	$ 146,000	$ 755,000	$ 3,617,000
6	5,193,000	$ 1,534,000	$ 613,000	$ 134,000	$ 787,000	$ 4,404,000
7	5,193,000	$ 1,580,000	$ 639,000	$ 137,000	$ 804,000	$ 5,208,000
8	5,193,000	$ 1,627,000	$ 666,000	$ 140,000	$ 821,000	$ 6,029,000
9	5,193,000	$ 1,676,000	$ 694,000	$ 143,000	$ 839,000	$ 6,868,000
10	5,193,000	$ 1,726,000	$ 723,000	$ 146,000	$ 857,000	$ 7,725,000
11	5,193,000	$ 1,778,000	$ 753,000	$ 150,000	$ 875,000	$ 8,600,000
12	5,193,000	$ 1,831,000	$ 784,000	$ 153,000	$ 893,000	$ 9,493,000
13	5,193,000	$ 1,886,000	$ 817,000	$ 155,000	$ 915,000	$ 10,408,000
14	5,193,000	$ 1,943,000	$ 851,000	$ 158,000	$ 934,000	$ 11,342,000
15	5,193,000	$ 2,001,000	$ 885,000	$ 162,000	$ 954,000	$ 12,296,000
16	5,193,000	$ 2,061,000	$ 921,000	$ 166,000	$ 974,000	$ 13,270,000
17	5,193,000	$ 2,123,000	$ 958,000	$ 170,000	$ 994,000	$ 14,264,000
18	5,193,000	$ 2,186,000	$ 996,000	$ 175,000	$ 1,015,000	$ 15,279,000
19	5,193,000	$ 2,252,000	$ 1,037,000	$ 179,000	$ 1,036,000	$ 16,315,000
20	5,193,000	$ 2,320,000	$ 1,078,000	$ 183,000	$ 1,058,000	$ 17,373,000
21	5,193,000	$ 2,389,000	$ 1,311,000	$ 188,000	$ 890,000	$ 18,263,000
22	5,193,000	$ 2,461,000	$ 1,360,000	$ 193,000	$ 909,000	$ 19,172,000
23	5,193,000	$ 2,535,000	$ 1,410,000	$ 197,000	$ 928,000	$ 20,100,000
24	5,193,000	$ 2,611,000	$ 1,462,000	$ 203,000	$ 947,000	$ 21,047,000
25	5,193,000	$ 2,689,000	$ 1,515,000	$ 190,000	$ 985,000	$ 22,032,000



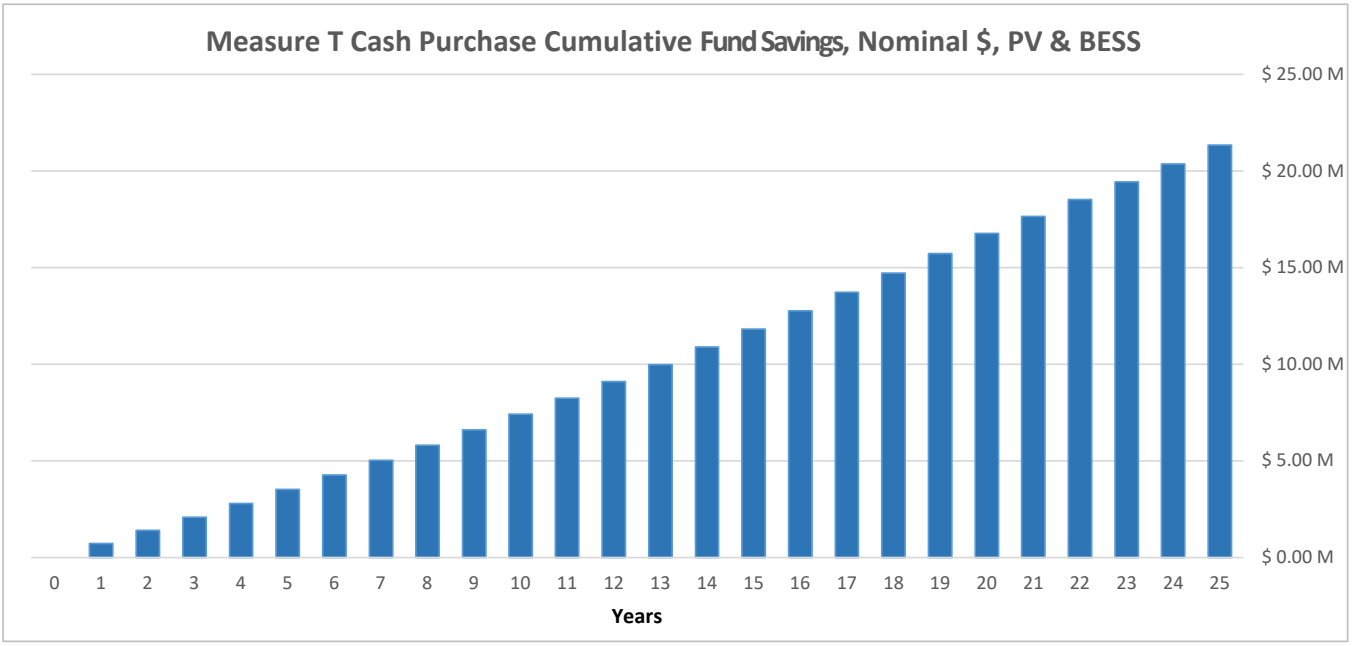
SAGE ENERGY CONSULTING

Cumulative Project Cash Flow - NEM 2.0 Assumptions, Cash Financed

Savings Analysis of Solar Cash Purchase, PV & BESS

San Mateo Foster City School District, 16 Sites, June 16 2021

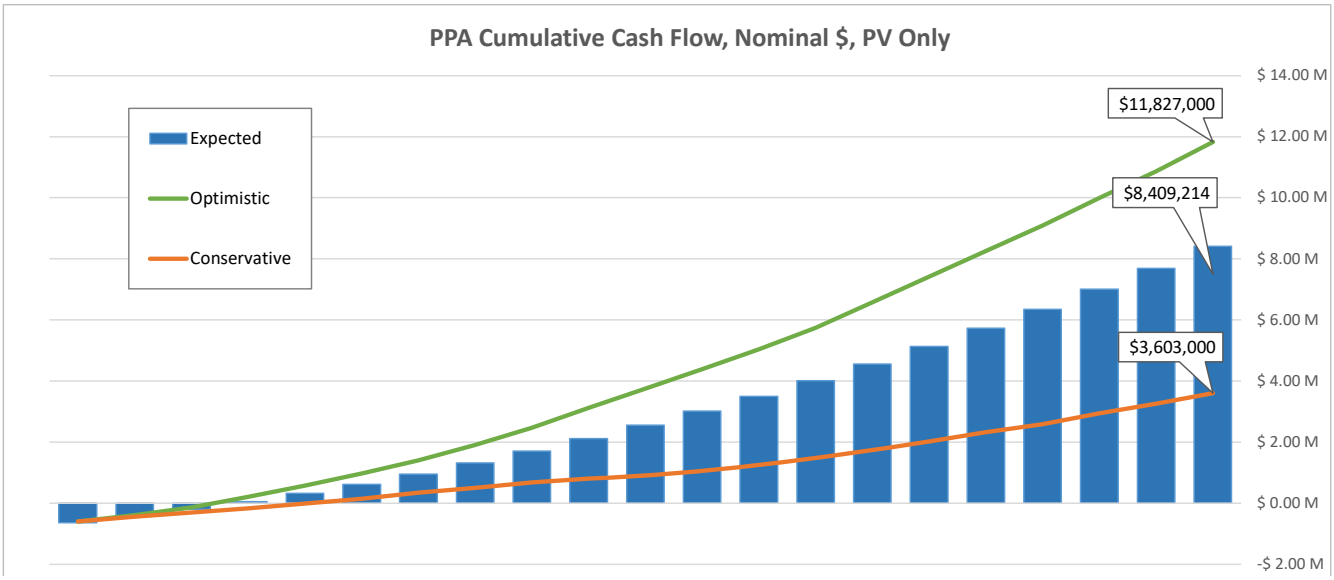
			PV & BESS			
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV & BESS	PV & BESS Operating Costs	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ -
1	5,193,000	$ 1,323,000	$ 482,000	$ 104,000	$ 737,000	$ 737,000
2	5,193,000	$ 1,362,000	$ 503,000	$ 190,000	$ 669,000	$ 1,406,000
3	5,193,000	$ 1,403,000	$ 525,000	$ 191,000	$ 687,000	$ 2,093,000
4	5,193,000	$ 1,445,000	$ 548,000	$ 192,000	$ 705,000	$ 2,798,000
5	5,193,000	$ 1,489,000	$ 573,000	$ 193,000	$ 724,000	$ 3,522,000
6	5,193,000	$ 1,534,000	$ 598,000	$ 178,000	$ 758,000	$ 4,280,000
7	5,193,000	$ 1,580,000	$ 624,000	$ 201,000	$ 755,000	$ 5,035,000
8	5,193,000	$ 1,627,000	$ 650,000	$ 202,000	$ 774,000	$ 5,809,000
9	5,193,000	$ 1,676,000	$ 678,000	$ 204,000	$ 794,000	$ 6,603,000
10	5,193,000	$ 1,726,000	$ 706,000	$ 205,000	$ 814,000	$ 7,417,000
11	5,193,000	$ 1,778,000	$ 737,000	$ 207,000	$ 834,000	$ 8,251,000
12	5,193,000	$ 1,831,000	$ 767,000	$ 209,000	$ 854,000	$ 9,105,000
13	5,193,000	$ 1,886,000	$ 797,000	$ 206,000	$ 883,000	$ 9,988,000
14	5,193,000	$ 1,943,000	$ 831,000	$ 209,000	$ 904,000	$ 10,892,000
15	5,193,000	$ 2,001,000	$ 865,000	$ 211,000	$ 925,000	$ 11,817,000
16	5,193,000	$ 2,061,000	$ 900,000	$ 214,000	$ 947,000	$ 12,764,000
17	5,193,000	$ 2,123,000	$ 937,000	$ 217,000	$ 969,000	$ 13,733,000
18	5,193,000	$ 2,186,000	$ 975,000	$ 220,000	$ 991,000	$ 14,724,000
19	5,193,000	$ 2,252,000	$ 1,015,000	$ 223,000	$ 1,014,000	$ 15,738,000
20	5,193,000	$ 2,320,000	$ 1,056,000	$ 227,000	$ 1,037,000	$ 16,775,000
21	5,193,000	$ 2,389,000	$ 1,291,000	$ 230,000	$ 867,000	$ 17,642,000
22	5,193,000	$ 2,461,000	$ 1,340,000	$ 234,000	$ 887,000	$ 18,529,000
23	5,193,000	$ 2,535,000	$ 1,390,000	$ 238,000	$ 907,000	$ 19,436,000
24	5,193,000	$ 2,611,000	$ 1,441,000	$ 242,000	$ 928,000	$ 20,364,000
25	5,193,000	$ 2,689,000	$ 1,491,000	$ 225,000	$ 972,000	$ 21,336,000



Cash Flow Analysis of Solar PPA, PV Only

San Mateo Foster City School District, 16 Sites, June 16 2021

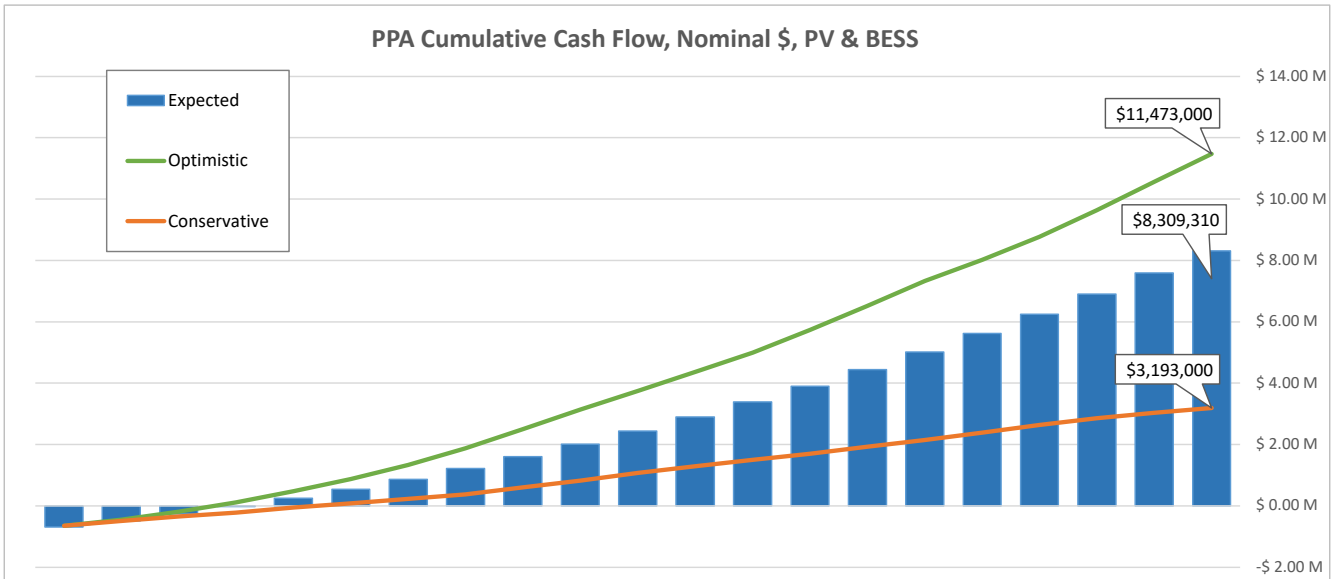
	PV						
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV	PV Operating Costs	PPA Payments	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ (639,000)	$ (639,000)
1	5,193,000	$ 1,323,000	$ 495,000	$ 622,000	$ 605,000	$ 206,000	$ (433,000)
2	5,193,000	$ 1,362,000	$ 516,000	$ 617,000	$ 600,000	$ 229,000	$ (204,000)
3	5,193,000	$ 1,403,000	$ 539,000	$ 613,000	$ 596,000	$ 251,000	$ 47,000
4	5,193,000	$ 1,445,000	$ 562,000	$ 608,000	$ 591,000	$ 274,000	$ 321,000
5	5,193,000	$ 1,489,000	$ 587,000	$ 604,000	$ 587,000	$ 298,000	$ 619,000
6	5,193,000	$ 1,534,000	$ 613,000	$ 584,000	$ 582,000	$ 337,000	$ 956,000
7	5,193,000	$ 1,580,000	$ 639,000	$ 579,000	$ 578,000	$ 361,000	$ 1,317,000
8	5,193,000	$ 1,627,000	$ 666,000	$ 575,000	$ 574,000	$ 386,000	$ 1,703,000
9	5,193,000	$ 1,676,000	$ 694,000	$ 571,000	$ 569,000	$ 411,000	$ 2,114,000
10	5,193,000	$ 1,726,000	$ 723,000	$ 567,000	$ 565,000	$ 436,000	$ 2,550,000
11	5,193,000	$ 1,778,000	$ 753,000	$ 563,000	$ 561,000	$ 462,000	$ 3,012,000
12	5,193,000	$ 1,831,000	$ 784,000	$ 558,000	$ 557,000	$ 488,000	$ 3,500,000
13	5,193,000	$ 1,886,000	$ 817,000	$ 554,000	$ 552,000	$ 515,000	$ 4,015,000
14	5,193,000	$ 1,943,000	$ 851,000	$ 550,000	$ 548,000	$ 542,000	$ 4,557,000
15	5,193,000	$ 2,001,000	$ 885,000	$ 546,000	$ 544,000	$ 570,000	$ 5,127,000
16	5,193,000	$ 2,061,000	$ 921,000	$ 542,000	$ 540,000	$ 598,000	$ 5,725,000
17	5,193,000	$ 2,123,000	$ 958,000	$ 538,000	$ 536,000	$ 626,000	$ 6,351,000
18	5,193,000	$ 2,186,000	$ 996,000	$ 534,000	$ 532,000	$ 656,000	$ 7,007,000
19	5,193,000	$ 2,252,000	$ 1,037,000	$ 530,000	$ 528,000	$ 685,000	$ 7,692,000
20	5,193,000	$ 2,320,000	$ 1,078,000	$ 526,000	$ 524,000	$ 715,000	$ 8,407,000



Cash Flow Analysis of Solar PPA, PV & BESS

San Mateo Foster City School District, 16 Sites, June 16 2021

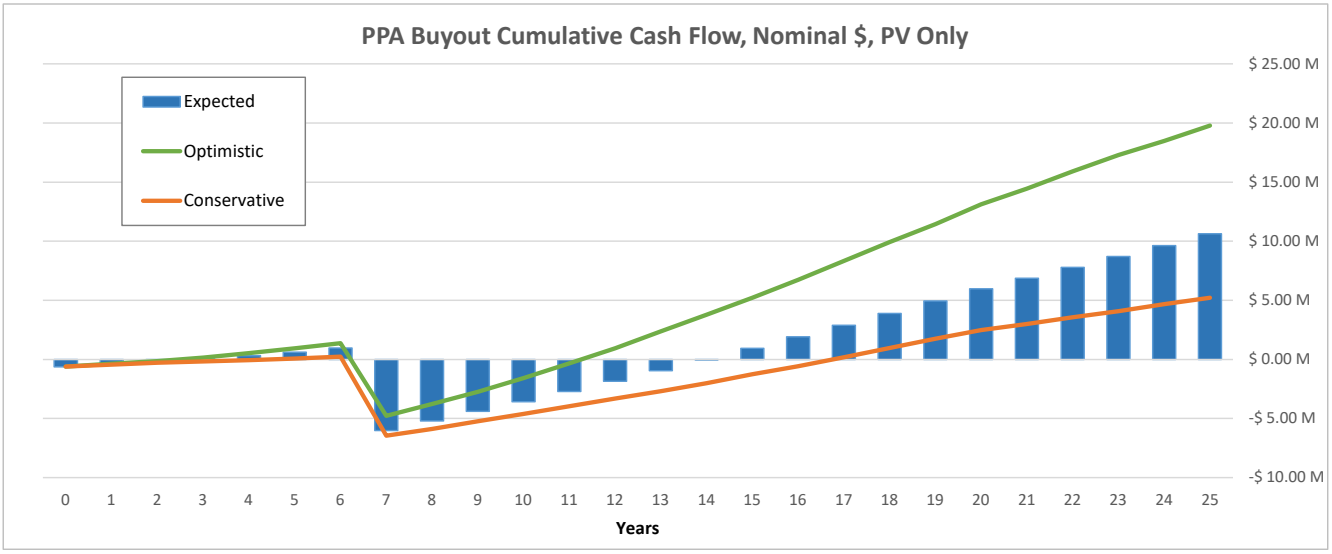
PV & BESS							
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV & BESS	PV & BESS Operating Costs	PPA Payments	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ (687,000)	$ (687,000)
1	5,193,000	$ 1,323,000	$ 482,000	$ 643,000	$ 626,000	$ 198,000	$ (489,000)
2	5,193,000	$ 1,362,000	$ 503,000	$ 638,000	$ 622,000	$ 221,000	$ (268,000)
3	5,193,000	$ 1,403,000	$ 525,000	$ 634,000	$ 617,000	$ 244,000	$ (24,000)
4	5,193,000	$ 1,445,000	$ 548,000	$ 629,000	$ 612,000	$ 267,000	$ 243,000
5	5,193,000	$ 1,489,000	$ 573,000	$ 625,000	$ 608,000	$ 292,000	$ 535,000
6	5,193,000	$ 1,534,000	$ 598,000	$ 605,000	$ 603,000	$ 331,000	$ 866,000
7	5,193,000	$ 1,580,000	$ 624,000	$ 600,000	$ 599,000	$ 356,000	$ 1,222,000
8	5,193,000	$ 1,627,000	$ 650,000	$ 596,000	$ 594,000	$ 381,000	$ 1,603,000
9	5,193,000	$ 1,676,000	$ 678,000	$ 591,000	$ 590,000	$ 407,000	$ 2,010,000
10	5,193,000	$ 1,726,000	$ 706,000	$ 587,000	$ 585,000	$ 433,000	$ 2,443,000
11	5,193,000	$ 1,778,000	$ 737,000	$ 583,000	$ 581,000	$ 459,000	$ 2,902,000
12	5,193,000	$ 1,831,000	$ 767,000	$ 578,000	$ 577,000	$ 486,000	$ 3,388,000
13	5,193,000	$ 1,886,000	$ 797,000	$ 574,000	$ 572,000	$ 515,000	$ 3,903,000
14	5,193,000	$ 1,943,000	$ 831,000	$ 570,000	$ 568,000	$ 543,000	$ 4,446,000
15	5,193,000	$ 2,001,000	$ 865,000	$ 566,000	$ 564,000	$ 571,000	$ 5,017,000
16	5,193,000	$ 2,061,000	$ 900,000	$ 561,000	$ 559,000	$ 599,000	$ 5,616,000
17	5,193,000	$ 2,123,000	$ 937,000	$ 557,000	$ 555,000	$ 629,000	$ 6,245,000
18	5,193,000	$ 2,186,000	$ 975,000	$ 553,000	$ 551,000	$ 658,000	$ 6,903,000
19	5,193,000	$ 2,252,000	$ 1,015,000	$ 549,000	$ 547,000	$ 688,000	$ 7,591,000
20	5,193,000	$ 2,320,000	$ 1,056,000	$ 545,000	$ 543,000	$ 719,000	$ 8,310,000



Cash Flow Analysis of Solar PPA Buyout, PV Only

San Mateo Foster City School District, 16 Sites, June 16 2021

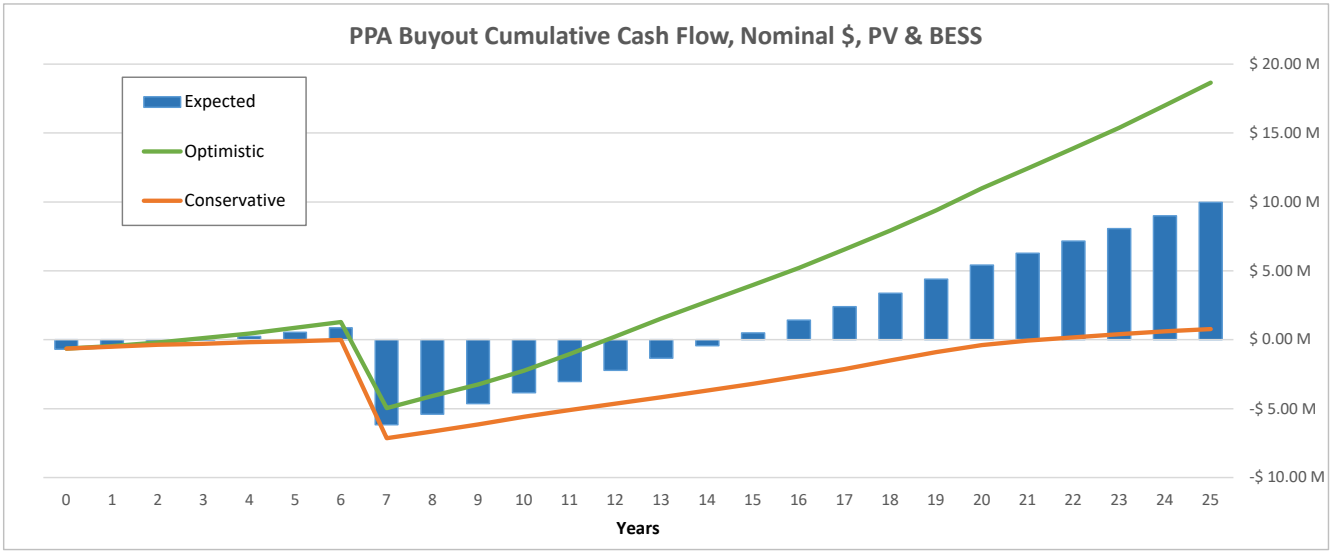
	PV						
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV	PV Operating Costs Buyout Year-7	PPA Payments	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ (639,000)	$ (639,000)
1	5,193,000	$ 1,323,000	$ 495,000	$ 622,000	$ 605,000	$ 206,000	$ (433,000)
2	5,193,000	$ 1,362,000	$ 516,000	$ 617,000	$ 600,000	$ 229,000	$ (204,000)
3	5,193,000	$ 1,403,000	$ 539,000	$ 613,000	$ 596,000	$ 251,000	$ 47,000
4	5,193,000	$ 1,445,000	$ 562,000	$ 608,000	$ 591,000	$ 274,000	$ 321,000
5	5,193,000	$ 1,489,000	$ 587,000	$ 604,000	$ 587,000	$ 298,000	$ 619,000
6	5,193,000	$ 1,534,000	$ 613,000	$ 584,000	$ 582,000	$ 337,000	$ 956,000
7	5,193,000	$ 1,580,000	$ 639,000	$ 7,915,000	$ -	$ (6,974,000)	$ (6,018,000)
8	5,193,000	$ 1,627,000	$ 666,000	$ 165,000	$ -	$ 796,000	$ (5,222,000)
9	5,193,000	$ 1,676,000	$ 694,000	$ 168,000	$ -	$ 814,000	$ (4,408,000)
10	5,193,000	$ 1,726,000	$ 723,000	$ 172,000	$ -	$ 831,000	$ (3,577,000)
11	5,193,000	$ 1,778,000	$ 753,000	$ 175,000	$ -	$ 850,000	$ (2,727,000)
12	5,193,000	$ 1,831,000	$ 784,000	$ 179,000	$ -	$ 868,000	$ (1,859,000)
13	5,193,000	$ 1,886,000	$ 817,000	$ 159,000	$ -	$ 910,000	$ (949,000)
14	5,193,000	$ 1,943,000	$ 851,000	$ 163,000	$ -	$ 929,000	$ (20,000)
15	5,193,000	$ 2,001,000	$ 885,000	$ 167,000	$ -	$ 949,000	$ 929,000
16	5,193,000	$ 2,061,000	$ 921,000	$ 171,000	$ -	$ 969,000	$ 1,898,000
17	5,193,000	$ 2,123,000	$ 958,000	$ 175,000	$ -	$ 990,000	$ 2,888,000
18	5,193,000	$ 2,186,000	$ 996,000	$ 179,000	$ -	$ 1,010,000	$ 3,898,000
19	5,193,000	$ 2,252,000	$ 1,037,000	$ 184,000	$ -	$ 1,032,000	$ 4,930,000
20	5,193,000	$ 2,320,000	$ 1,078,000	$ 188,000	$ -	$ 1,054,000	$ 5,984,000
21	5,193,000	$ 2,389,000	$ 1,311,000	$ 193,000	$ -	$ 885,000	$ 6,869,000
22	5,193,000	$ 2,461,000	$ 1,360,000	$ 197,000	$ -	$ 904,000	$ 7,773,000
23	5,193,000	$ 2,535,000	$ 1,410,000	$ 202,000	$ -	$ 923,000	$ 8,696,000
24	5,193,000	$ 2,611,000	$ 1,462,000	$ 207,000	$ -	$ 942,000	$ 9,638,000
25	5,193,000	$ 2,689,000	$ 1,515,000	$ 194,000	$ -	$ 980,000	$ 10,618,000



Cash Flow Analysis of Solar PPA Buyout, PV & BESS

San Mateo Foster City School District, 16 Sites, June 16 2021

PV & BESS							
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV & BESS	PV Operating Costs Buyout Year-7	PPA Payments	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ (687,000)	$ (687,000)
1	5,193,000	$ 1,323,000	$ 482,000	$ 643,000	$ 626,000	$ 198,000	$ (489,000)
2	5,193,000	$ 1,362,000	$ 503,000	$ 638,000	$ 622,000	$ 221,000	$ (268,000)
3	5,193,000	$ 1,403,000	$ 525,000	$ 634,000	$ 617,000	$ 244,000	$ (24,000)
4	5,193,000	$ 1,445,000	$ 548,000	$ 629,000	$ 612,000	$ 267,000	$ 243,000
5	5,193,000	$ 1,489,000	$ 573,000	$ 625,000	$ 608,000	$ 292,000	$ 535,000
6	5,193,000	$ 1,534,000	$ 598,000	$ 605,000	$ 603,000	$ 331,000	$ 866,000
7	5,193,000	$ 1,580,000	$ 624,000	$ 7,979,000	$ -	$ (7,023,000)	$ (6,157,000)
8	5,193,000	$ 1,627,000	$ 650,000	$ 227,000	$ -	$ 749,000	$ (5,408,000)
9	5,193,000	$ 1,676,000	$ 678,000	$ 229,000	$ -	$ 769,000	$ (4,639,000)
10	5,193,000	$ 1,726,000	$ 706,000	$ 231,000	$ -	$ 789,000	$ (3,850,000)
11	5,193,000	$ 1,778,000	$ 737,000	$ 233,000	$ -	$ 809,000	$ (3,041,000)
12	5,193,000	$ 1,831,000	$ 767,000	$ 235,000	$ -	$ 829,000	$ (2,212,000)
13	5,193,000	$ 1,886,000	$ 797,000	$ 211,000	$ -	$ 878,000	$ (1,334,000)
14	5,193,000	$ 1,943,000	$ 831,000	$ 213,000	$ -	$ 899,000	$ (435,000)
15	5,193,000	$ 2,001,000	$ 865,000	$ 216,000	$ -	$ 920,000	$ 485,000
16	5,193,000	$ 2,061,000	$ 900,000	$ 219,000	$ -	$ 942,000	$ 1,427,000
17	5,193,000	$ 2,123,000	$ 937,000	$ 221,000	$ -	$ 964,000	$ 2,391,000
18	5,193,000	$ 2,186,000	$ 975,000	$ 225,000	$ -	$ 987,000	$ 3,378,000
19	5,193,000	$ 2,252,000	$ 1,015,000	$ 228,000	$ -	$ 1,010,000	$ 4,388,000
20	5,193,000	$ 2,320,000	$ 1,056,000	$ 231,000	$ -	$ 1,033,000	$ 5,421,000
21	5,193,000	$ 2,389,000	$ 1,291,000	$ 235,000	$ -	$ 863,000	$ 6,284,000
22	5,193,000	$ 2,461,000	$ 1,340,000	$ 239,000	$ -	$ 882,000	$ 7,166,000
23	5,193,000	$ 2,535,000	$ 1,390,000	$ 243,000	$ -	$ 903,000	$ 8,069,000
24	5,193,000	$ 2,611,000	$ 1,441,000	$ 247,000	$ -	$ 923,000	$ 8,992,000
25	5,193,000	$ 2,689,000	$ 1,491,000	$ 230,000	$ -	$ 968,000	$ 9,960,000



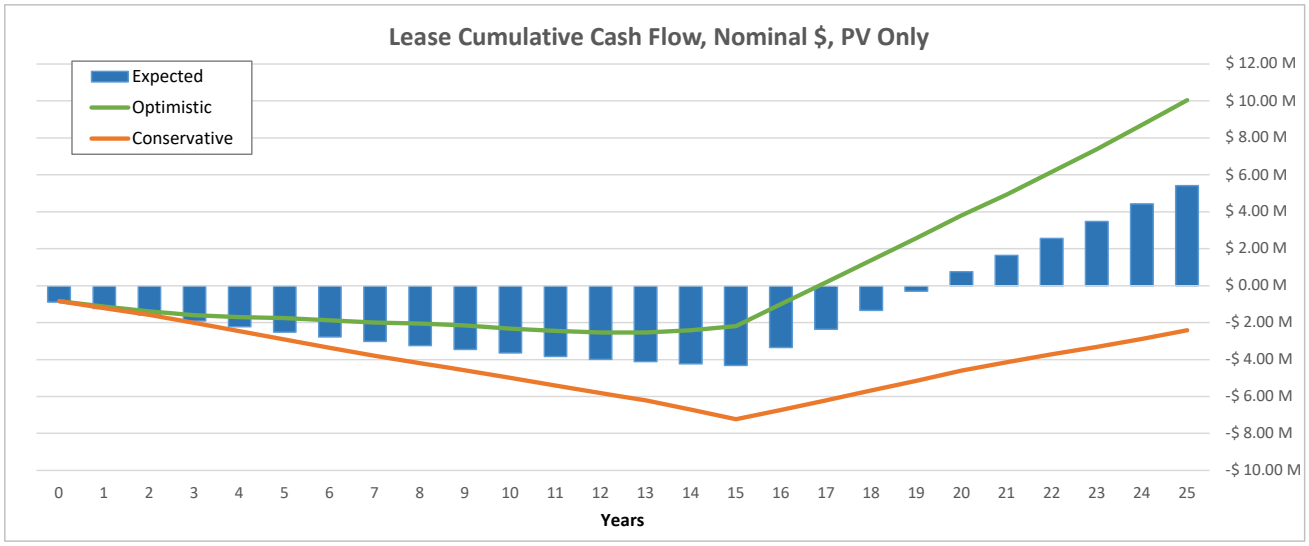
SAGE ENERGY CONSULTING

Cumulative Project Cash Flow - NEM 2.0 Assumptions, Lease Financed

Cash Flow Analysis of Solar PPA Buyout, PV

San Mateo Foster City School District, 16 Sites, June 16 2021

			PV				
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV	PV Operating Costs	Loan Payments	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ (889,000)	$ (889,000)
1	5,193,000	$ 1,323,000	$ 495,000	$ 135,000	$ 1,049,000	$ (357,000)	$ (1,246,000)
2	5,193,000	$ 1,362,000	$ 516,000	$ 138,000	$ 1,049,000	$ (341,000)	$ (1,587,000)
3	5,193,000	$ 1,403,000	$ 539,000	$ 141,000	$ 1,049,000	$ (326,000)	$ (1,913,000)
4	5,193,000	$ 1,445,000	$ 562,000	$ 144,000	$ 1,049,000	$ (310,000)	$ (2,223,000)
5	5,193,000	$ 1,489,000	$ 587,000	$ 146,000	$ 1,049,000	$ (294,000)	$ (2,517,000)
6	5,193,000	$ 1,534,000	$ 613,000	$ 134,000	$ 1,049,000	$ (262,000)	$ (2,779,000)
7	5,193,000	$ 1,580,000	$ 639,000	$ 137,000	$ 1,049,000	$ (245,000)	$ (3,024,000)
8	5,193,000	$ 1,627,000	$ 666,000	$ 140,000	$ 1,049,000	$ (228,000)	$ (3,252,000)
9	5,193,000	$ 1,676,000	$ 694,000	$ 143,000	$ 1,049,000	$ (210,000)	$ (3,462,000)
10	5,193,000	$ 1,726,000	$ 723,000	$ 146,000	$ 1,049,000	$ (192,000)	$ (3,654,000)
11	5,193,000	$ 1,778,000	$ 753,000	$ 150,000	$ 1,049,000	$ (174,000)	$ (3,828,000)
12	5,193,000	$ 1,831,000	$ 784,000	$ 153,000	$ 1,049,000	$ (156,000)	$ (3,984,000)
13	5,193,000	$ 1,886,000	$ 817,000	$ 155,000	$ 1,049,000	$ (134,000)	$ (4,118,000)
14	5,193,000	$ 1,943,000	$ 851,000	$ 158,000	$ 1,049,000	$ (115,000)	$ (4,233,000)
15	5,193,000	$ 2,001,000	$ 885,000	$ 162,000	$ 1,049,000	$ (95,000)	$ (4,328,000)
16	5,193,000	$ 2,061,000	$ 921,000	$ 166,000	$ -	$ 974,000	$ (3,354,000)
17	5,193,000	$ 2,123,000	$ 958,000	$ 170,000	$ -	$ 994,000	$ (2,360,000)
18	5,193,000	$ 2,186,000	$ 996,000	$ 175,000	$ -	$ 1,015,000	$ (1,345,000)
19	5,193,000	$ 2,252,000	$ 1,037,000	$ 179,000	$ -	$ 1,036,000	$ (309,000)
20	5,193,000	$ 2,320,000	$ 1,078,000	$ 183,000	$ -	$ 1,058,000	$ 749,000
21	5,193,000	$ 2,389,000	$ 1,311,000	$ 188,000	$ -	$ 890,000	$ 1,639,000
22	5,193,000	$ 2,461,000	$ 1,360,000	$ 193,000	$ -	$ 909,000	$ 2,548,000
23	5,193,000	$ 2,535,000	$ 1,410,000	$ 197,000	$ -	$ 928,000	$ 3,476,000
24	5,193,000	$ 2,611,000	$ 1,462,000	$ 203,000	$ -	$ 947,000	$ 4,423,000
25	5,193,000	$ 2,689,000	$ 1,515,000	$ 190,000	$ -	$ 985,000	$ 5,408,000



SAGE ENERGY CONSULTING

Cumulative Project Cash Flow - NEM 2.0 Assumptions, Lease Financed

Cash Flow Analysis of Solar PPA Buyout, PV & BESS

San Mateo Foster City School District, 16 Sites, June 16 2021

				PV & BESS			
Year	Estimated Utility Usage (kWh)	Annual Estimated Utility Cost w/o PV	Utility Energy Cost w/PV & BESS	PV & BESS Operating Costs	Loan Payments	Net Annual Savings	Cumulative Project Cash Flow
0	-	$ -	$ -	$ -	$ -	$ (955,000)	$ (955,000)
1	5,193,000	$ 1,323,000	$ 482,000	$ 212,000	$ 1,127,000	$ (390,000)	$ (1,345,000)
2	5,193,000	$ 1,362,000	$ 503,000	$ 212,000	$ 1,127,000	$ (458,000)	$ (1,803,000)
3	5,193,000	$ 1,403,000	$ 525,000	$ 213,000	$ 1,127,000	$ (441,000)	$ (2,244,000)
4	5,193,000	$ 1,445,000	$ 548,000	$ 213,000	$ 1,127,000	$ (422,000)	$ (2,666,000)
5	5,193,000	$ 1,489,000	$ 573,000	$ 214,000	$ 1,127,000	$ (404,000)	$ (3,070,000)
6	5,193,000	$ 1,534,000	$ 598,000	$ 200,000	$ 1,127,000	$ (369,000)	$ (3,439,000)
7	5,193,000	$ 1,580,000	$ 624,000	$ 201,000	$ 1,127,000	$ (372,000)	$ (3,811,000)
8	5,193,000	$ 1,627,000	$ 650,000	$ 202,000	$ 1,127,000	$ (353,000)	$ (4,164,000)
9	5,193,000	$ 1,676,000	$ 678,000	$ 204,000	$ 1,127,000	$ (333,000)	$ (4,497,000)
10	5,193,000	$ 1,726,000	$ 706,000	$ 205,000	$ 1,127,000	$ (313,000)	$ (4,810,000)
11	5,193,000	$ 1,778,000	$ 737,000	$ 207,000	$ 1,127,000	$ (293,000)	$ (5,103,000)
12	5,193,000	$ 1,831,000	$ 767,000	$ 209,000	$ 1,127,000	$ (273,000)	$ (5,376,000)
13	5,193,000	$ 1,886,000	$ 797,000	$ 206,000	$ 1,127,000	$ (245,000)	$ (5,621,000)
14	5,193,000	$ 1,943,000	$ 831,000	$ 209,000	$ 1,127,000	$ (223,000)	$ (5,844,000)
15	5,193,000	$ 2,001,000	$ 865,000	$ 211,000	$ 1,127,000	$ (202,000)	$ (6,046,000)
16	5,193,000	$ 2,061,000	$ 900,000	$ 214,000	$ -	$ 947,000	$ (5,099,000)
17	5,193,000	$ 2,123,000	$ 937,000	$ 217,000	$ -	$ 969,000	$ (4,130,000)
18	5,193,000	$ 2,186,000	$ 975,000	$ 220,000	$ -	$ 991,000	$ (3,139,000)
19	5,193,000	$ 2,252,000	$ 1,015,000	$ 223,000	$ -	$ 1,014,000	$ (2,125,000)
20	5,193,000	$ 2,320,000	$ 1,056,000	$ 227,000	$ -	$ 1,037,000	$ (1,088,000)
21	5,193,000	$ 2,389,000	$ 1,291,000	$ 230,000	$ -	$ 867,000	$ (221,000)
22	5,193,000	$ 2,461,000	$ 1,340,000	$ 234,000	$ -	$ 887,000	$ 666,000
23	5,193,000	$ 2,535,000	$ 1,390,000	$ 238,000	$ -	$ 907,000	$ 1,573,000
24	5,193,000	$ 2,611,000	$ 1,441,000	$ 242,000	$ -	$ 928,000	$ 2,501,000
25	5,193,000	$ 2,689,000	$ 1,491,000	$ 225,000	$ -	$ 972,000	$ 3,473,000