

Vallecitos School District

2023-2024

Solar Update

November 14, 2023



*Where Achievement and
Attendance Matter!*



Solar Update

- **NEM 2.0 Application- In Process with SDG&E- Current Status = Pending AHJ Inspection (Authority Having Jurisdiction). I understand this to include an inspection of our current electrical system by a County official. We are waiting on formal communication from SDG&E.**
- **0% Solar Loan- Per Sean Lockwood at CA Department of Energy, program is low on funds and our application is on a wait list and we are about 8th in line. ECAA program funded through loan re-payments and Sean said we may be looking at up to two years before funding reaches Vallecitos.**
- **The remaining slides include cost/savings forecast provided by Zach Campbell from Baker Electric.**





Solar Options- Carport





Solar Options- Carport



Carport Mounting Pros:

1. **Dual Functionality:** Provides covered parking while generating energy.
2. **Enhanced Sun Exposure:** Often optimized for better sun exposure.
3. **Space Optimization:** Maximizes land use for energy generation.

Cons:

1. **Cost Considerations:** Higher cost due to additional materials and construction.
2. **Maintenance Challenges:** Potential due to height and accessibility.
3. **Permitting Challenges:** Potential challenges with building codes and zoning.
4. **Property Line Concerns:** Will carport encroach on setback limits set by County zoning rules?
5. **Proximity to Sports Fields:** Errant balls may damage panels.
6. **Distance from Meter:** Location of carport may not be within proximity to meter.

Approximate Cost of Carport Option- \$725,725 (Assumes no hidden issues or setbacks).



Solar Options- Carport



Project Summary

Payment Options	Cash Purchase
Upfront Payment	\$725,725
Total Additional Improvement(s)	\$0
Total Annual Adjustment(s)	\$0
Total Payments	\$725,725
Total Incentives	\$217,718
Net Payments	\$508,008
Electric Bill Savings - Term	\$2,216,958
IRR - Term	12.2%
LCOE PV Generation	\$0.180 /kWh
Net Present Value	\$588,982
Payback Period	8.6 Years
ROI	231.7%



Solar Options- Rooftop



Rooftop Mounting Pros:

1. **Maximizes Space Utilization:** No additional land use loss.
2. **Reduced Land Use:** Ideal for areas with limited land availability.
3. **Reduced Installation Costs:** Often lower compared to ground-mounted systems.
4. **Permitting:** May allow us to bypass some regulatory hurdles.
5. **Provides dual benefit of providing renovation of roofs.**

Cons:

1. **Structural Considerations:** Structure must support equipment, which may require reinforcing or upgrades to the building. Will require an engineer's inspection to determine integrity.
2. **Maintenance Challenges:** Due to needing special equipment or safety measures.
3. **Limited Solar Exposure:** Rooftop systems might have limited optimal sun exposure due to shading from nearby structures or trees.

Approximate Cost of Rooftop Option- \$376,338 (Assumes no hidden issues or setbacks).



Solar Options- Rooftop

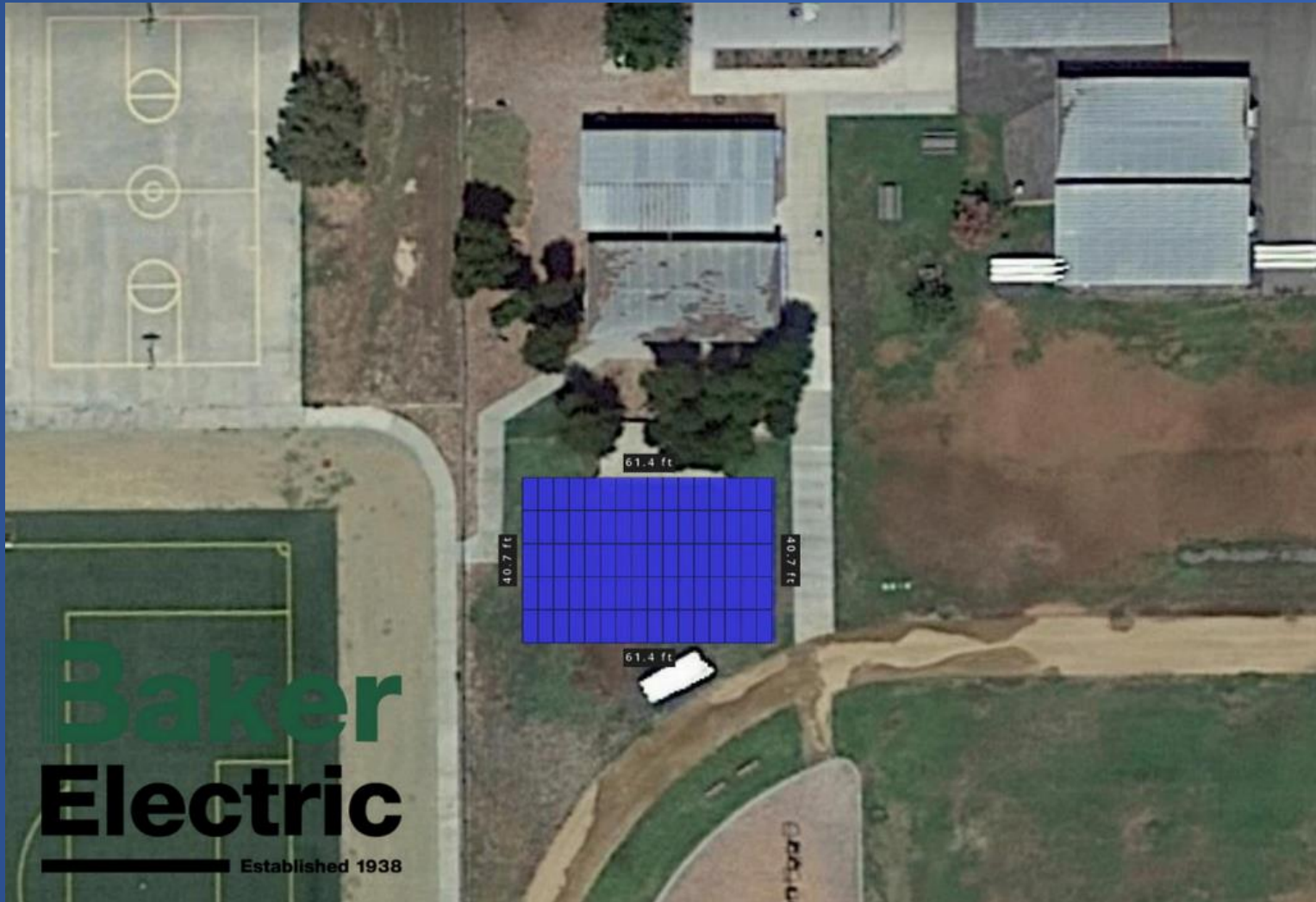


Project Summary

Payment Options	Cash Purchase
Upfront Payment	\$376,338
Total Additional Improvement(s)	\$0
Total Annual Adjustment(s)	\$0
Total Payments	\$376,338
Total Incentives	\$112,901
Net Payments	\$263,436
Electric Bill Savings - Term	\$2,077,397
IRR - Term	20.5%
LCOE PV Generation	\$0.104 /kWh
Net Present Value	\$769,125
Payback Period	5.1 Years
ROI	475.4%



Solar Options- Shade Structure



Proposed location is near/over stage area. Provides benefits for student and community use.



Solar Options- Shade Structure

Pros:

1. **Dual Functionality:** Shading for outdoor activities while generating solar energy.
2. **Educational Opportunity:** Up close student exposure to renewable energy.
3. **Aesthetic Enhancement:** Increases appeal of the school grounds.

Cons:

1. **Cost Considerations:** More expensive compared to traditional shade structures.
2. **Design Limitations:** Balancing shade and solar generation may require specific design considerations.
3. **Maintenance and Cleaning:** Similar challenges with maintenance and cleaning as carport installations due to height and design complexities.
4. **Increased Regulatory Hurdles:** DSA/CEQA

Approximate Cost of Rooftop Option- \$630,488 (Assumes no hidden issues or setbacks).



Solar Options- Shade Structure

Project Summary

Payment Options	Cash Purchase
Upfront Payment	\$630,488
Total Additional Improvement(s)	\$0
Total Annual Adjustment(s)	\$0
Total Payments	\$630,488
Total Incentives	\$189,146
Net Payments	\$441,341
Electric Bill Savings - Term	\$1,973,897
IRR - Term	12.5%
LCOE PV Generation	\$0.189 /kWh
Net Present Value	\$536,539
Payback Period	8.4 Years
ROI	239.5%



Next Steps for Solar Project

- Eliminate 1-2 of the mounting options (Now to December 2023).
- Conduct further research into remaining option(s) to determine viability (Now to January 2023).
- Make final determination for install method (January 2023).
- Solicit engineer/design firm Proposals (February 2023).
- Evaluate progress and new information to determine next steps (February-March 2023).



Conclusion /Questions

