

# ENERGY TOOLBASE™

Prepared For  
Generic Customer  
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\$285 Monthly Bill

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The team at ALL Save Energy are your local Commercial Solar Energy Specialist. A family-owned business, with an expert team of designers and installers, ALL Save Energy provides the most economical Solar PV Solution - with a hassle free process from beginning to end. Top Tier Solar Energy products coupled with industry leading warranties and Industry Best Practices deliver the best value available. The team of professionals at ALL Save Energy will guide you through the process from start to finish, making the transition to Solar Energy exciting and lucrative with minimal impact on your business operations throughout the project.



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# 1 Project Summary

Payment Options	Cash Purchase	15-Year Loan
IRR - Term	13.8%	0.0%
LCOE PV Generation	\$0.121 /kWh	\$0.223 /kWh
Net Present Value	\$14,085	\$19,763
Payback Period	6.8 Years	-
Total Payments	\$31,181	\$48,124
Total Incentives	\$11,216	\$11,216
Net Payments	\$19,965	\$36,908
Electric Bill Savings - Term	\$67,955	\$67,955
Upfront Payment	\$31,181	\$0
Loan Term	-	15 Years

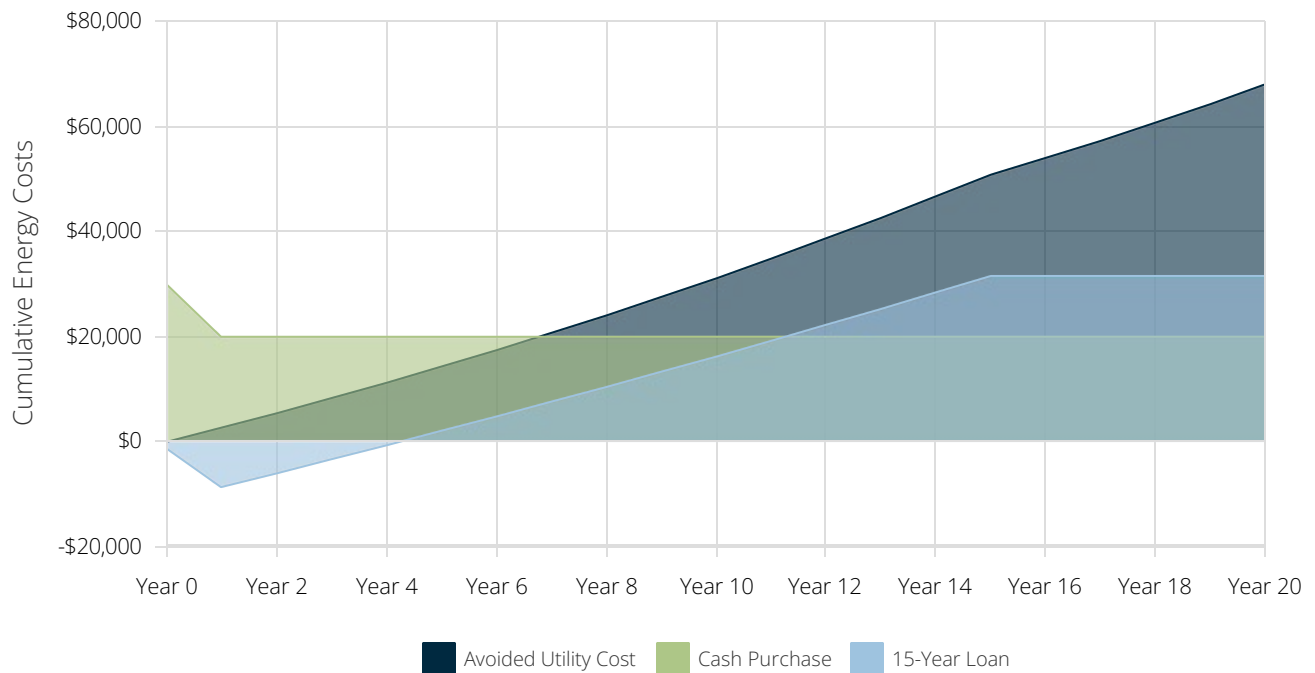
## Combined Solar PV Rating

Power Rating: 6,050 W-DC  
 Power Rating: 5,324 W-AC-CEC

## Combined ESS Ratings

Energy Capacity: 13.2 kWh  
 Power Rating: 7.6 kW

**Cumulative Energy Costs By Payment Option**



## 2.1.1 PV System Details

### General Information

Facility: Residential Model  
 Address: 9311 Single Tree Ct Stockton CA 95209

### Solar PV System Rating

Power Rating: 6,050 W-DC  
 Power Rating: 5,324 W-AC-CEC

### Solar PV Equipment Description

Solar Panels: 6.05 kW-DC Standard Modules  
 Inverters: Standard Inverter

### Energy Consumption Mix

Annual Energy Use: 8,507 kWh

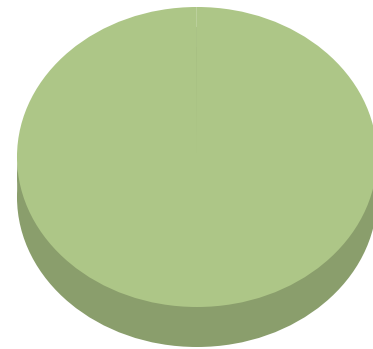
### Solar PV Equipment Typical Lifespan

Solar Panels: Greater than 30 Years  
 Inverters: 25 Years

### Solar PV System Cost and Incentives

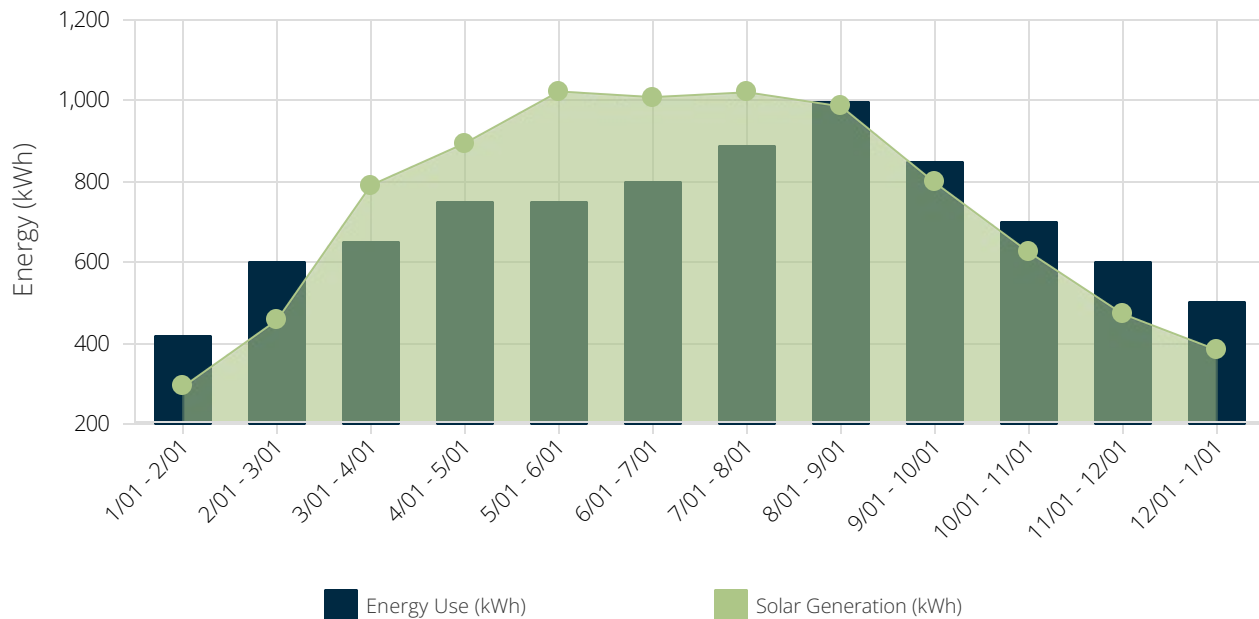
Solar PV System Cost	\$22,017
Federal Tax Credit	-\$6,380
All Save Rebate	-\$750

**Net Solar PV System Cost \$14,887**



Utility	-244 kWh (0.00%)
Solar PV	8,751 kWh (100.00%)

Monthly Energy Use vs Solar Generation



## 2.1.2 Energy Storage System (ESS) Details

### General Information

Facility: Residential Model  
Address: Stockton CA 95209

### ESS System Ratings

Energy Capacity: 13.2 kWh  
Power Rating: 7.6 kW

### ESS Equipment Description

Battery Banks: 7.6kw/13.2kWh Energy Storage System  
Inverters: 7.6kw/13.2kWh Energy Storage System

### ESS Equipment Typical Lifespan

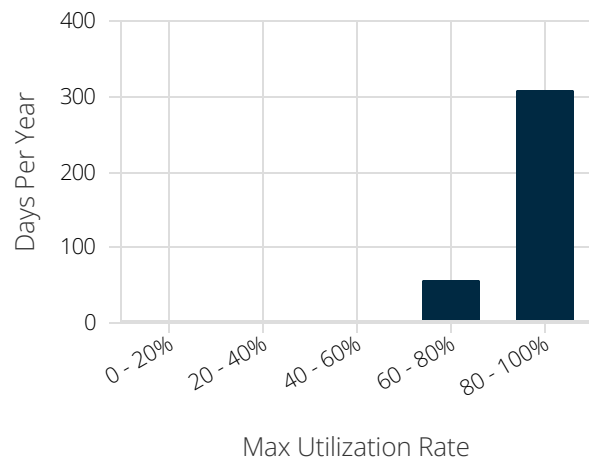
Battery Banks: 15 Years  
Inverters: 15 Years

### ESS Cost and Incentives

ESS Cost \$9,164  
Federal Tax Credit (ESS) **-\$2,749**  
SGIP Incentive **-\$1,337**

**Net ESS Cost \$5,078**

### Energy Storage Annual Utilization



Energy Output and Demand Savings From Solar PV and Energy Storage				
Date Range	ESS Energy Discharge (kWh)	Solar PV Generation (kWh)	ESS Energy as % of PV Energy	Total Demand Savings
1/1/2023 - 2/1/2023	165	292	56.51%	\$0
2/1/2023 - 3/1/2023	230	457	50.33%	\$0
3/1/2023 - 4/1/2023	313	791	39.57%	\$0
4/1/2023 - 5/1/2023	304	895	33.97%	\$0
5/1/2023 - 6/1/2023	324	1,023	31.67%	\$0
6/1/2023 - 7/1/2023	286	1,009	28.34%	\$0
7/1/2023 - 8/1/2023	292	1,021	28.60%	\$0
8/1/2023 - 9/1/2023	330	986	33.47%	\$0
9/1/2023 - 10/1/2023	314	797	39.40%	\$0
10/1/2023 - 11/1/2023	281	625	44.96%	\$0
11/1/2022 - 12/1/2022	258	472	54.66%	\$0
12/1/2022 - 1/1/2023	222	383	57.96%	\$0
<b>Total</b>	<b>3,319</b>	<b>8,751</b>	<b>37.93%</b>	<b>\$0</b>

## 2.1.3 Rebates and Incentives

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

### **Investment Tax Credit (ITC), Residential - 30%**

The Inflation Reduction Act (IRA) of 2022 establishes and extends the federal Investment Tax Credit (ITC) for solar photovoltaic (PV) systems at a rate of 30% of the total PV system cost. The 30% ITC was extended for 10 years, through 2032. Unlike tax deductions, this tax credit can be used to directly offset your tax liability dollar for dollar.

Total Incentive Value: \$6,380

### **Transfer Switch Upgrade Promo**

\$750 Discount for Systems over 6.0kW for transfer switch upgrade.

Total Incentive Value: \$750

### **Investment Tax Credit (ITC), Residential - 30% (ESS)**

The Inflation Reduction Act (IRA) of 2022 established a federal Investment Tax Credit (ITC) for energy storage system (ESS) projects at a rate of 30% of the total ESS system cost. The IRA explicitly stated that the 30% ESS ITC was applicable for standalone ESS projects, and also ESS projects paired with a solar PV system. The ESS ITC was established for 10 years, through 2032. Unlike tax deductions, this tax credit can be used to directly offset your tax liability dollar for dollar.

Total Incentive Value: \$2,749

### **SGIP – Step 7 Residential (\$150/kWh)**

The 2020 Self-Generation Incentive Program (SGIP), Step 7 incentive is \$0.15/Wh for small residential (<10 kW) Energy Storage Systems (ESS). Residential storage projects will receive the entire incentive paid upfront. The methodology for calculating an SGIP incentive is dynamic and based on several factors, including: the hourly duration of the ESS, and the total energy capacity (kWh) of the ESS. The sum of the SGIP incentive and other incentives received for the project may not exceed the total eligible project costs. Disclaimer on the Greenhouse Gas (GHG) reduction requirement: the incentive calculation assumes that the ESS reduces at least 5 kg/kWh of GHG reduction, and there is no corresponding reduction in SGIP amount.

Total Incentive Value: \$1,782

## 2.1.4 Utility Rates

You have the option to remain on your current rate schedule (E-1) or switch to an alternative rate schedule (E-ELEC). The rates for each are shown below and your estimated electric bills are shown on the following page for each rate schedule.

Customer Charges					Energy Charges				
Season	Charge Type	Rate Type	E-1	E-ELEC	Season	Charge Type	Rate Type	E-1	E-ELEC
W	Flat Rate	per day	-	\$0.49	W	T < 10.2 kw	Import	\$0.35841	-
S	Flat Rate	per day	-	\$0.49	W	10.2 kw < T	Import	\$0.44692	-
					S	T < 15 kw	Import	\$0.35841	-
					S	15 kw < T	Import	\$0.44692	-
					W	On Peak	Import	-	\$0.33438
					W	Part-Peak	Import	-	\$0.31229
					W	Off-Peak	Import	-	\$0.29843
					S	On Peak	Import	-	\$0.56589
					S	Part-Peak	Import	-	\$0.40401
					S	Off-Peak	Import	-	\$0.34733

## 2.1.5 Current Electric Bill

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

### Rate Schedule: PG&E - E-1

Time Periods	Energy Use (kWh)	Charges		
		NBC	Energy	Total
Bill Ranges & Seasons	Total			
1/1/2023 - 2/1/2023 W	420	\$14	\$146	\$160
2/1/2023 - 3/1/2023 W	600	\$20	\$223	\$243
3/1/2023 - 4/1/2023 W	650	\$21	\$241	\$263
4/1/2023 - 5/1/2023 W	750	\$25	\$284	\$308
5/1/2023 - 6/1/2023 W	750	\$25	\$283	\$307
6/1/2023 - 7/1/2023 S	800	\$26	\$292	\$318
7/1/2023 - 8/1/2023 S	888	\$29	\$327	\$356
8/1/2023 - 9/1/2023 S	999	\$33	\$373	\$405
9/1/2023 - 10/1/2023 S	850	\$28	\$312	\$340
10/1/2023 - 11/1/2023 W	700	\$23	\$262	\$285
11/1/2022 - 12/1/2022 W	600	\$20	\$221	\$241
12/1/2022 - 1/1/2023 W	500	\$16	\$179	\$195
Total	8,507	\$278	\$3,142	\$3,421

## 2.1.6 New Electric Bill

### Rate Schedule Option 1: PG&E - E-1

Time Periods Bill Ranges & Seasons	Energy Use (kWh)			Charges		
	Total	NBC	Energy	Total		
1/1/2023 - 2/1/2023 W	154	\$6	\$50	\$56		
2/1/2023 - 3/1/2023 W	178	\$7	\$58	\$65		
3/1/2023 - 4/1/2023 W	-92	\$3	\$30	\$27		
4/1/2023 - 5/1/2023 W	-99	\$4	\$32	\$28		
5/1/2023 - 6/1/2023 W	-220	\$2	\$72	\$70		
6/1/2023 - 7/1/2023 S	-161	\$3	\$53	\$50		
7/1/2023 - 8/1/2023 S	-88	\$5	\$29	\$24		
8/1/2023 - 9/1/2023 S	62	\$7	\$20	\$27		
9/1/2023 - 10/1/2023 S	102	\$7	\$33	\$40		
10/1/2023 - 11/1/2023 W	120	\$6	\$39	\$45		
11/1/2022 - 12/1/2022 W	164	\$6	\$53	\$60		
12/1/2022 - 1/1/2023 W	154	\$6	\$50	\$56		
<b>Total</b>	<b>274</b>	<b>\$62</b>	<b>\$88</b>	<b>\$150</b>		

### New Rate Schedule Option 2: PG&E - E-ELEC

Time Periods Bill Ranges & Seasons	Energy Use (kWh)			Charges			
	On Peak	Part-Peak	Off-Peak	Other	NBC	Energy	Total
1/1/2023 - 2/1/2023 W	33	26	95	\$15	\$6	\$48	\$69
2/1/2023 - 3/1/2023 W	39	33	106	\$14	\$7	\$61	\$82
3/1/2023 - 4/1/2023 W	-32	-3	-57	\$15	\$3	\$25	\$43
4/1/2023 - 5/1/2023 W	-1	4	-102	\$15	\$4	\$34	\$53
5/1/2023 - 6/1/2023 W	-19	-5	-197	\$15	\$2	\$12	\$29
6/1/2023 - 7/1/2023 S	-5	-3	-153	\$15	\$3	\$18	\$35
7/1/2023 - 8/1/2023 S	7	9	-104	\$15	\$5	\$40	\$60
8/1/2023 - 9/1/2023 S	1	8	52	\$15	\$7	\$61	\$83
9/1/2023 - 10/1/2023 S	2	11	89	\$15	\$7	\$65	\$87
10/1/2023 - 11/1/2023 W	22	22	76	\$15	\$6	\$47	\$68
11/1/2022 - 12/1/2022 W	39	32	93	\$15	\$6	\$53	\$74
12/1/2022 - 1/1/2023 W	35	28	91	\$15	\$6	\$47	\$68
<b>Total</b>	<b>121</b>	<b>162</b>	<b>-11</b>	<b>\$180</b>	<b>\$62</b>	<b>\$511</b>	<b>\$753</b>

**Annual Electricity Savings: \$2,668**



# 3.1 Cash Purchase

## Assumptions and Key Financial Metrics

IRR - Term	13.8%	Net Present Value	\$14,085	Payback Period	6.8 Years
ROI	160.8%	PV Degradation Rate	0.57%	Discount Rate	7.0%
Energy Cost Escalation Rate	5.0%	Federal Income Tax Rate	25.0%	State Income Tax Rate	9.0%
Total Project Costs	\$31,181				

Years	Project Costs	All Save Rebate	SGIP Incentive	Electric Bill Savings	Federal Tax Effect	Total Cash Flow	Cumulative Cash Flow
Upfront	<b>-\$31,181</b>	-	\$1,782	-	<b>-\$445</b>	<b>-\$29,845</b>	<b>-\$29,845</b>
1	-	\$750	-	\$2,668	\$9,129	\$12,547	<b>-\$17,297</b>
2	-	-	-	\$2,760	-	\$2,760	<b>-\$14,538</b>
3	-	-	-	\$2,854	-	\$2,854	<b>-\$11,684</b>
4	-	-	-	\$2,950	-	\$2,950	<b>-\$8,734</b>
5	-	-	-	\$3,049	-	\$3,049	<b>-\$5,684</b>
6	-	-	-	\$3,151	-	\$3,151	<b>-\$2,533</b>
7	-	-	-	\$3,255	-	\$3,255	\$722
8	-	-	-	\$3,362	-	\$3,362	\$4,085
9	-	-	-	\$3,471	-	\$3,471	\$7,556
10	-	-	-	\$3,583	-	\$3,583	\$11,139
11	-	-	-	\$3,698	-	\$3,698	\$14,837
12	-	-	-	\$3,814	-	\$3,814	\$18,651
13	-	-	-	\$3,934	-	\$3,934	\$22,585
14	-	-	-	\$4,055	-	\$4,055	\$26,640
15	-	-	-	\$4,179	-	\$4,179	\$30,820
16	-	-	-	\$3,148	-	\$3,148	\$33,968
17	-	-	-	\$3,285	-	\$3,285	\$37,253
18	-	-	-	\$3,428	-	\$3,428	\$40,681
19	-	-	-	\$3,577	-	\$3,577	\$44,258
20	-	-	-	\$3,732	-	\$3,732	\$47,989
Totals:	<b>-\$31,181</b>	\$750	\$1,782	\$67,955	\$8,684	\$47,989	-

## 3.2 15-Year Loan

### Assumptions and Key Financial Metrics

PV Degradation Rate	0.57%	Energy Cost Escalation Rate	5.0%	Federal Income Tax Rate	25.0%
State Income Tax Rate	9.0%	Interest Rate	6.25%	Total Project Cost	\$31,181
Upfront Payment	\$0	Loan Term	15 Years		

Years	Financing Payments	All Save Rebate	SGIP Incentive	Electric Bill Savings	State Tax Effect	Federal Tax Effect	Total Cash Flow	Cumulative Cash Flow
Upfront	-	-	\$1,782	-	-	-\$445	\$1,336	\$1,336
1	-\$3,208	\$750	-	\$2,668	\$172	\$9,564	\$9,946	\$11,283
2	-\$3,208	-	-	\$2,760	\$165	\$416	\$132	\$11,415
3	-\$3,208	-	-	\$2,854	\$157	\$396	\$198	\$11,613
4	-\$3,208	-	-	\$2,950	\$148	\$374	\$265	\$11,877
5	-\$3,208	-	-	\$3,049	\$139	\$351	\$332	\$12,209
6	-\$3,208	-	-	\$3,151	\$129	\$327	\$399	\$12,608
7	-\$3,208	-	-	\$3,255	\$119	\$301	\$468	\$13,076
8	-\$3,208	-	-	\$3,362	\$108	\$274	\$536	\$13,612
9	-\$3,208	-	-	\$3,471	\$97	\$244	\$604	\$14,216
10	-\$3,208	-	-	\$3,583	\$84	\$213	\$672	\$14,888
11	-\$3,208	-	-	\$3,698	\$71	\$180	\$740	\$15,629
12	-\$3,208	-	-	\$3,814	\$57	\$144	\$808	\$16,437
13	-\$3,208	-	-	\$3,934	\$42	\$107	\$875	\$17,311
14	-\$3,208	-	-	\$4,055	\$26	\$67	\$940	\$18,252
15	-\$3,208	-	-	\$4,179	\$10	\$24	\$1,005	\$19,256
16	-	-	-	\$3,148	-	-	\$3,148	\$22,405
17	-	-	-	\$3,285	-	-	\$3,285	\$25,690
18	-	-	-	\$3,428	-	-	\$3,428	\$29,118
19	-	-	-	\$3,577	-	-	\$3,577	\$32,695
20	-	-	-	\$3,732	-	-	\$3,732	\$36,426
Totals:	-\$48,124	\$750	\$1,782	\$67,955	\$1,525	\$12,538	\$36,426	-