



# Solar Electric System

## Proposal and Financial Report

Optimized for 117 So Mary Ave, #30, Sunnyvale, CA

10/22/2015

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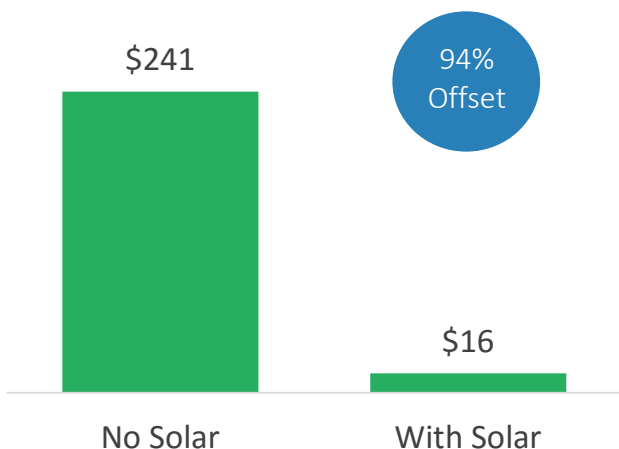
jack@goingsolar.com



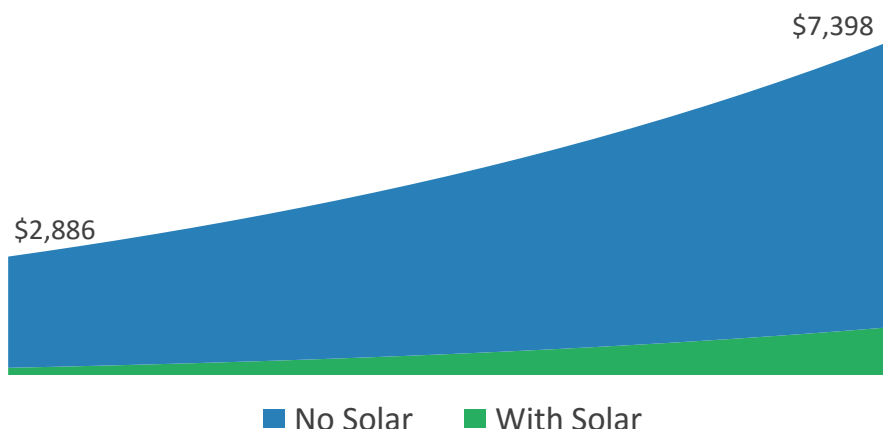


# Financial Projections

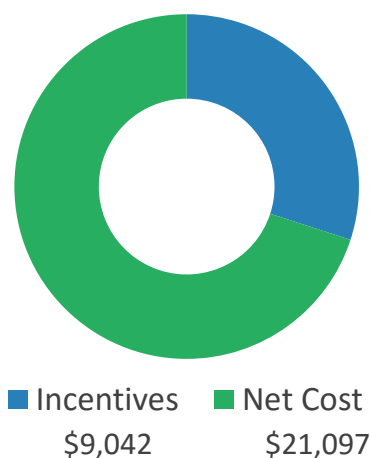
Monthly Bill Comparison



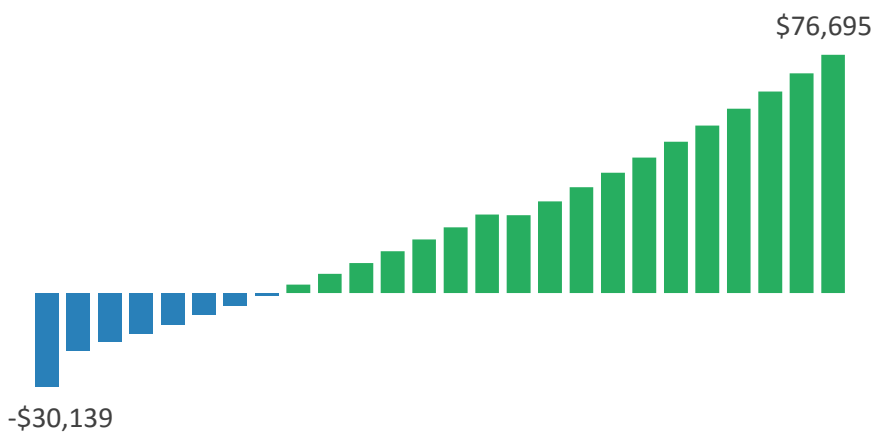
Annual Bill Comparison over 25 Years  
(With 4.0% Annual Rate Inflation)



System Cost



Cumulative Cash Flow



## Compare Investment Opportunities

U.S. Treasury  
30 Year Security  
(As of 10/1/2015)



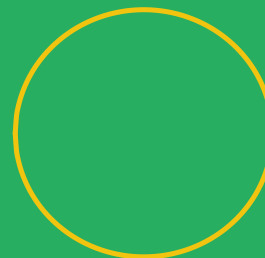
2.9% APY<sup>1</sup>

S&P 500  
Annualized Return  
(2000 to 2014)



4.2% APY<sup>2</sup>

Solar System  
Compound Return  
(2015 to 2039)



25.6% APY

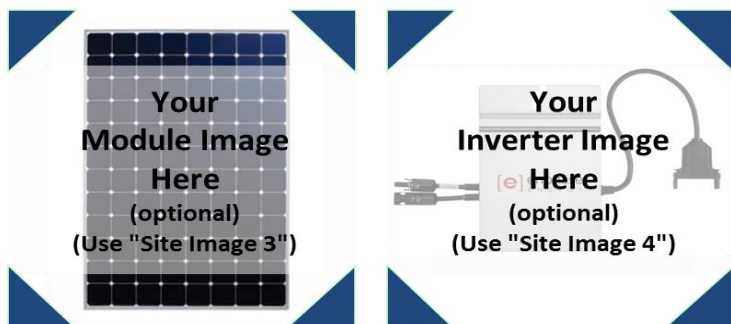
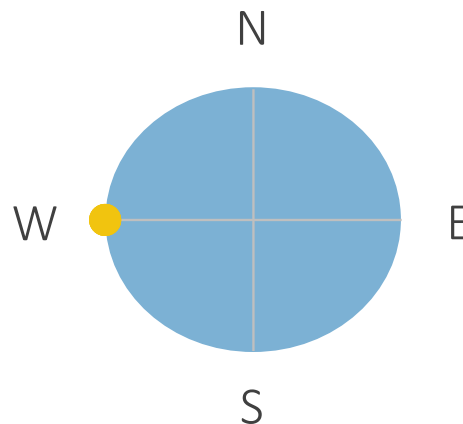


# System Overview

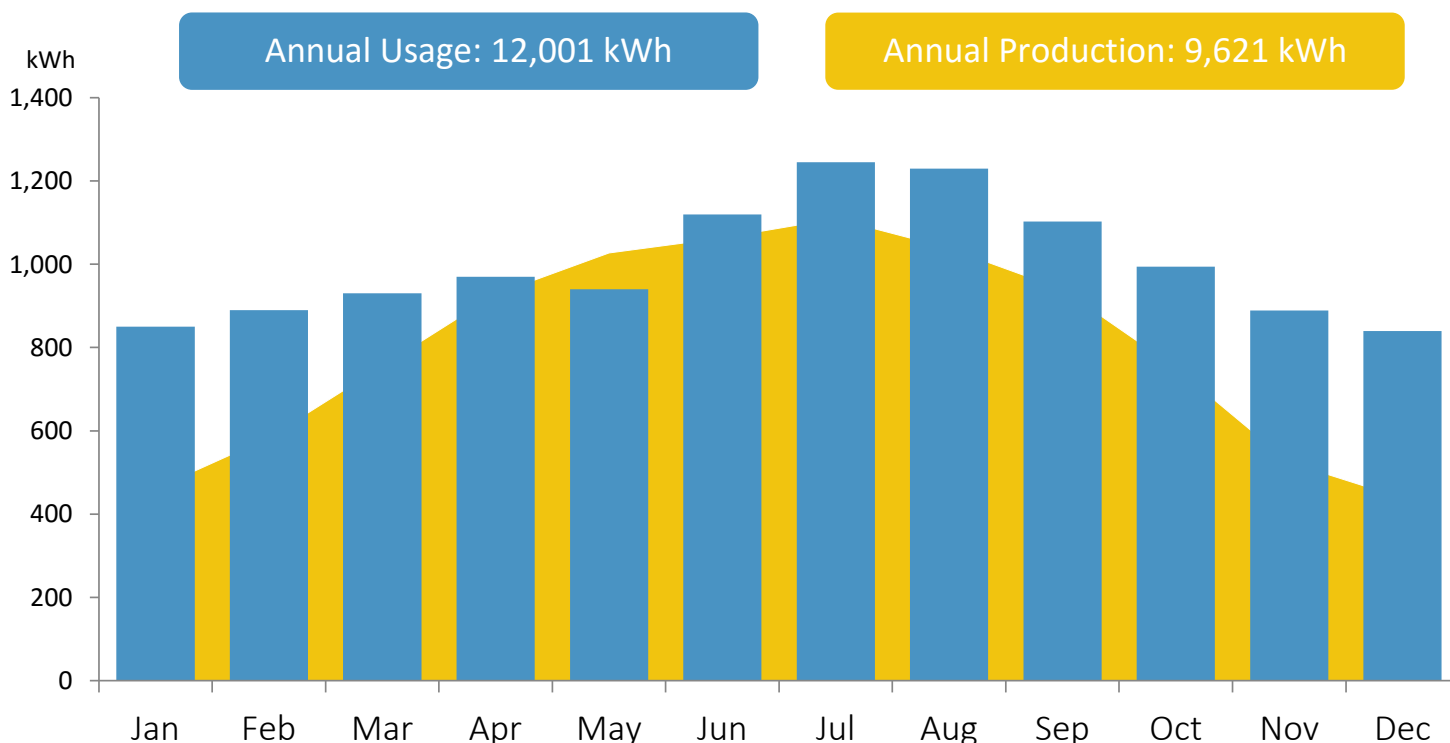
6.3 kW DC System Size

27 SunPower Panels (235W DC)

27 Enphase Energy Inverters



# System Production





# Financial Timeline

Year	Annual Bill No Solar	Annual Bill With Solar	Electric Bill Savings	Net Incentives	System Upkeep	Cash Flow	Cumulative Cash Flow
0						(\$30,139)	(\$30,139)
1	\$2,886	\$186	\$2,700	\$9,042	(\$75)	\$11,666	(\$18,472)
2	\$3,002	\$207	\$2,795		(\$78)	\$2,717	(\$15,756)
3	\$3,122	\$229	\$2,892		(\$81)	\$2,812	(\$12,944)
4	\$3,246	\$253	\$2,994		(\$84)	\$2,910	(\$10,034)
5	\$3,376	\$278	\$3,098		(\$86)	\$3,012	(\$7,022)
6	\$3,511	\$305	\$3,207		(\$89)	\$3,117	(\$3,905)
7	\$3,652	\$333	\$3,319		(\$93)	\$3,227	(\$678)
8	\$3,798	\$363	\$3,435		(\$96)	\$3,339	\$2,661
9	\$3,950	\$394	\$3,556		(\$99)	\$3,456	\$6,118
10	\$4,108	\$428	\$3,680		(\$103)	\$3,577	\$9,695
11	\$4,272	\$463	\$3,809		(\$106)	\$3,702	\$13,397
12	\$4,443	\$501	\$3,942		(\$110)	\$3,832	\$17,230
13	\$4,621	\$541	\$4,080		(\$114)	\$3,966	\$21,196
14	\$4,806	\$583	\$4,223		(\$118)	\$4,105	\$25,301
15	\$4,998	\$627	\$4,371		(\$4,563)	(\$193)	\$25,108
16	\$5,198	\$674	\$4,524		(\$126)	\$4,397	\$29,505
17	\$5,406	\$724	\$4,682		(\$131)	\$4,551	\$34,057
18	\$5,622	\$776	\$4,846		(\$135)	\$4,711	\$38,767
19	\$5,847	\$831	\$5,015		(\$140)	\$4,875	\$43,643
20	\$6,081	\$890	\$5,191		(\$145)	\$5,046	\$48,689
21	\$6,324	\$951	\$5,373		(\$150)	\$5,223	\$53,912
22	\$6,577	\$1,016	\$5,561		(\$155)	\$5,406	\$59,317
23	\$6,840	\$1,085	\$5,755		(\$161)	\$5,595	\$64,912
24	\$7,113	\$1,157	\$5,957		(\$166)	\$5,791	\$70,702
25	\$7,398	\$1,233	\$6,165		(\$172)	\$5,993	\$76,695
<b>Total</b>	<b>\$120,195</b>	<b>\$15,026</b>	<b>\$105,169</b>	<b>\$9,042</b>	<b>(\$7,376)</b>	<b>\$76,695</b>	<b>\$76,695</b>

## Net Incentives Includes:

30% Federal Tax Credit

## System Upkeep Includes:

Maintenance  
Inverter Replacement



# Additional Information

Jack Sun and Jill Sky  
117 So Mary Ave, #30  
Sunnyvale, CA 94087

Utility: PG&E  
Current Rate: E1 -- Residential Tiered-kWh  
New Solar Rate: E6 -- Residential TOU Tiered-kWh

## System Detail

System Size: 6.3 kW DC

### Equipment:

27 SunPower SER-235P Modules  
27 Enphase Energy M250-60-2LL-S2X (-ZC) (-NA) (240V)  
Facing South at 22° Tilt

## System Cost

Gross System Price (\$4.75 per DC Watt)	\$30,139
30% Federal Tax Credit	-\$9,042
<b>Net System Cost</b>	<b>\$21,097</b>

## Assumptions

Federal Income Tax Rate	28.0%
State Income Tax Rate	9.3%
Annual Electric Rate Inflation	4.0%
Sun Hours (Daily Average)	5.3
Annual Module Degradation	0.5%
Total System Efficiency *	77.06%
Annual System Maintenance (Year 1)	\$75
Inverter Replacement Cost (Year 15)	\$4,442
Analysis Period	25 Years

## Results (Projected)

Historical Annual Usage	12,001 kWh
Annual Solar Production	9,621 kWh
Old Monthly Bill Average	\$241
New Monthly Bill Average	\$16
Annual Utility Bill Offset	94%
25-Year Net Savings	\$97,793
APY (Pre-Tax Adjusted)	25.6%

\* Losses by category: Dust / Soiling (4.0%), Wiring (3.0%), Module Mismatch (0.0%), System Availability (2.0%), Manufacturer Production Tolerance (3.0%), Inverter (3.5%), PTC Rating Correction (7.8%), Shading (0.0%)