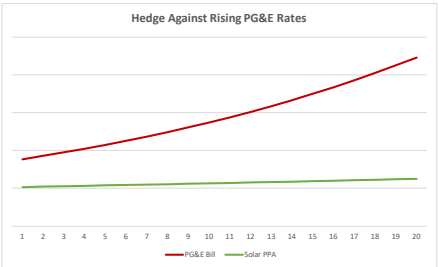


# PCE's Draft Cost Benefit Analysis

PPA OPTION	
Year 1 Inputs	
kWh/year generation	408,200 kWh/year
Value of Year 1 ENERGY at current PG&E rates	\$80,295
Demand charge savings (2019)	\$8,030
Savings available to customer (net of equipment and PCE costs)	\$36,677
PPA Cost - Year 1	\$51,647
PPA Cost - Year 1 - \$/kWh	\$0.13
Assumptions:	
Regular utility bill escalation (\$/kWh component)	5% per year
PPA escalation	1% per year
Calculations	
Year 1 savings	\$36,677
Year 20 savings	\$160,797
Savings (simple)	\$1,783,321
NPV savings (2% discount rate) for PPA option	\$1,389,215

NOTE: THE ACTUAL PPA RATE HAS NOT BEEN DETERMINED YET. THIS IS AN ESTIMATE!  
ACTUAL PPA RATE WILL BE DETERMINED AFTER RECEIVING EQUIPMENT PRICING



Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Estimated total value of utility bill savings	\$88,325	\$92,741	\$97,378	\$102,247	\$107,359	\$112,727	\$118,364	\$124,282	\$130,496	\$137,021	\$143,872	\$151,065	\$158,619	\$166,550	\$174,877	\$183,621	\$192,802	\$202,442	\$212,564	\$223,193
PPA Cost	\$51,647	\$52,164	\$52,686	\$53,212	\$53,745	\$54,282	\$54,825	\$55,373	\$55,927	\$56,486	\$57,051	\$57,621	\$58,198	\$58,780	\$59,367	\$59,961	\$60,561	\$61,166	\$61,778	\$62,396
Net Savings	\$36,677	\$40,577	\$44,693	\$49,035	\$53,615	\$58,445	\$63,539	\$68,909	\$74,569	\$80,535	\$86,821	\$93,444	\$100,421	\$107,770	\$115,510	\$123,660	\$132,241	\$141,276	\$150,786	\$160,797

Notes:  
Panel degradation, expected 0.5%/year, not accounted for. Will not meaningfully change analysis.

## Purchase Option

Disclaimer: This is a simple analysis for comparison purposes, at city's request.  
If purchasing, city will not be able to monetize the tax benefits (ITC or depreciation), a portion of which are captured in the PPA model above

Purchase price	\$	1,200,000	Quote provided by Rod																			
Discount rate		2%																				
Year-->	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Capital Cost	\$	(1,200,000)																				
Other costs (running RFP, vendor negotiations, maintenance, operations) - not estimating a value but noting they are costs																						
Energy savings	\$	-	\$ 88,325	\$ 92,741	\$ 97,378	\$ 102,247	\$ 107,359	\$ 112,727	\$ 118,364	\$ 124,282	\$ 130,496	\$ 137,021	\$ 143,872	\$ 151,065	\$ 158,619	\$ 166,550	\$ 174,877	\$ 183,621	\$ 192,802	\$ 202,442	\$ 212,564	\$ 223,193
Cash flow	\$	(1,200,000)	\$ 88,325	\$ 92,741	\$ 97,378	\$ 102,247	\$ 107,359	\$ 112,727	\$ 118,364	\$ 124,282	\$ 130,496	\$ 137,021	\$ 143,872	\$ 151,065	\$ 158,619	\$ 166,550	\$ 174,877	\$ 183,621	\$ 192,802	\$ 202,442	\$ 212,564	\$ 223,193
Cumulative Cash Flow	\$	(1,200,000)	\$ (1,111,675)	\$ (1,018,934)	\$ (921,556)	\$ (819,309)	\$ (711,949)	\$ (599,222)	\$ (480,858)	\$ (356,576)	\$ (226,080)	\$ (89,059)	\$ 54,812	\$ 205,878	\$ 364,497	\$ 531,046	\$ 705,924	\$ 889,545	\$ 1,082,347	\$ 1,284,789	\$ 1,497,353	\$ 1,720,546
NPV		\$1,091,092																				
IRR		1%																				
Payback Period		10 years																				

IN BOTH OPTIONS THERE IS A VALUE TO THE SYSTEM AFTER YEAR 20  
In PPA scenario, the system would have to be purchased at Fair Market Value at start of Year 21. We don't know what FMV is, but do not expect it to be a high value.  
In purchase scenario, there would be no additional cost in year 20  
Life of system expected 25 to 30 years  
Revenue stream would be the same for either scenario starting in year 21. Difference is PPA scenario requires purchase at FMV.

Term 20 Years

## Summary

Status	Site	Facility Type	Owner / Jurisdiction	Rate	Rooftop PV (kW DC)	Rooftop PV Spec Prod (kWh/kWp)	Total PV Base Case (kW DC)	Weighted Avg. Spec Prod (kWh/kWp)	Estimated Annual AC Solar Production (MWh/yr)	Facility	Rate	PV(kW)	Cost Estimate Roof Mount (\$/kW)	PCE Program Support Cost (\$/kWh)	Cost Estimate Roof Mount (\$)	Total Solar Cost	Estimated Energy Savings (\$/yr)	Estimated Demand Savings (\$/yr)	Estimated Total Electric Bill Savings (\$/yr)	Solar Equipment Cost (\$/yr simple)	Estimated PCE Costs (\$/yr)	Net Savings to Customer Year 1
Pending	San Bruno Aquatic Center	Community Center	City of San Bruno	B10 (assume)	271.8	1502	271.8	1502	408	San Bruno Aquatic Center	B10 (assume)	271.8	\$3,500	\$ 0.01	\$951,300	\$951,300	\$ 80,295	\$ 8,030	\$88,325	\$47,565	\$4,082	\$36,677