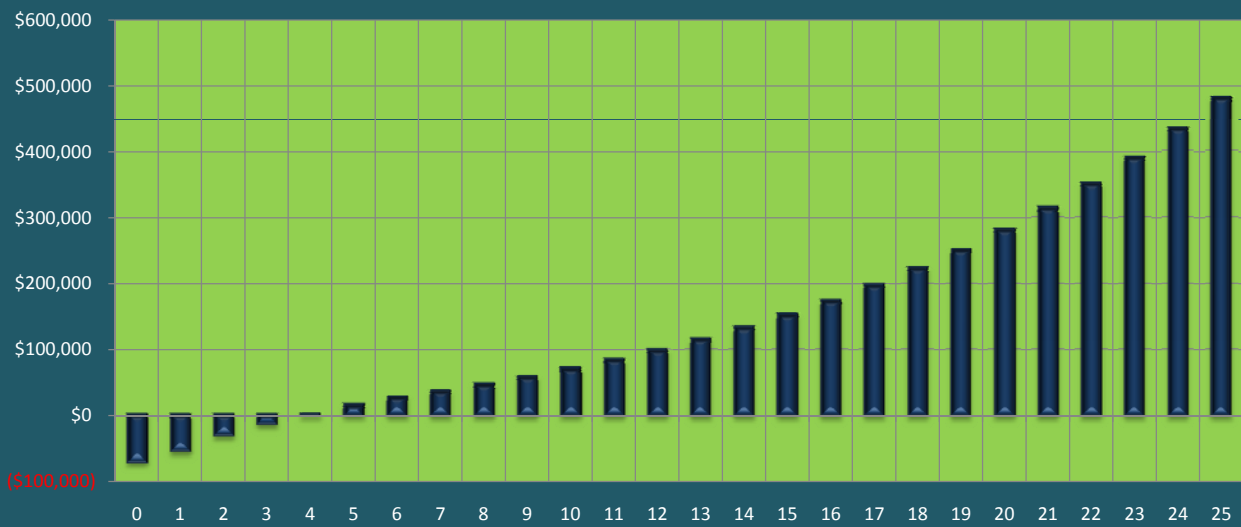




STANDING SEAM BIPV RETURN ON INVESTMENT ANALYSIS

Net Cash Flow over the 25 year life of Solar Array



Project		Results	
ID No:	<i>072108-1</i>	25 yr. Total Power Output (kWh)	871,841
System (kW)	<i>30.0</i>	25 yr. Cash Flow of Electricity (cost of electricity avoided)	\$508,599
Project:	<i>SAMPLE_NY_30KW</i>	Internal Rate of Return	23.11%
Location	<i>New York</i>	Years to Payback	4
Date	<i>21-Jul-08</i>	Annual CO2 Reduction (Lbs)	55698.03

IMPORTANT NOTES

The customer or user of this report implicitly agrees with the following:

1. The enclosed analysis includes estimates of power production based on information supplied by the customer, as well as publicly-available insolation tables. These estimates do not guarantee a specific level of power production. Factors such as varying weather conditions (e.g., cloud cover, precipitation, sun spot activity, etc.) may cause solar irradiance distributions to vary and thus affect power production.
2. All power production calculations are based on the assumption that no shading of the solar array occurs at any time of the day or year. If it is believed that shading might be a factor, please contact your supplier for revised power production estimates. Dirt accumulation from the environment occurs naturally, and it is recommended that the solar array be cleaned at least annually to maintain optimal transmittance and power production.
3. All financial calculations and assumptions should be reviewed by a professional accountant to confirm their applicability to this specific project. Federal or State PV incentives are included in this analysis where indicated, based on our understanding of their applicability to this project. Attainment of these incentives is not guaranteed and may be contingent on current status of incentives, individual project conditions and tax status of the owners. The customer must verify eligibility for specific incentives. It is the responsibility of the customer to apply and receive said incentives.
4. This financial analysis incorporates the 30% Federal solar energy tax credit, which is presently set to expire on 12/31/08. The solar array described by this report must be installed by 12/31/08 (keep receipt) in order to be eligible for this tax credit. If the array is installed after 12/31/08, the incentive is reduced to a 10% tax credit, if this congress doesn't extend this act before end of their term. That said, it is likely the next President will push far stronger renewable energy legislation, to federally mandate what 28 states have independently done already.

Project Specific Notes (if any):

1. *As this is a "Sample Report" utility rebate program has not been considered ,only the State rebate program has been taken in to consideration. The Break even year would decrease further on consideration of Utility Rebate Programs.*
2. *The New York State Energy Research and Development Authority (NYSERDA) will hold the title to renewable energy credits (RECs) associated with the system's energy production for a period of three years, after which REC ownership will revert to the customer/generator.*
3. *NYSERDA has Funding of approximately \$13.8 million in incentives, through 2009, for the Solar Electric Incentive Program ("Program") has been allocated by the New York State Renewable Portfolio Standard. Additional funding may be made available based on customer demand and program success. Incentives are granted on a first-come, first-served basis. Applications will be accepted through September 30, 2009, or until funds are fully committed, whichever comes first.*

ENVIRONMENTAL BENEFITS ANNUALLY

		POLLUTANTS AVOIDED via SOLAR GENERATED ELECTRICITY (Annually)							
Fossil Fuel Atmospheric Pollutant		Coal* based Energy		Gas based Energy		Oil based Energy		# of Pine Trees - sequestering	# of SUV miles not Driven
CO2	CO2, Carbon Dioxide, is a non-toxic gas, however a strong heat-retaining greenhouse gas.	67,377	lbs	43,121	lbs	56,596	lbs	3,978	35,476
NOx Gases	Oxides of Nitrogen - Created when nitrogen is burned as part of the combustion process, one of the main causes of ozone (smog), also associated with acid rain.	195.39	lbs	38.40	lbs	42.45	lbs		
PM10	Particulate matter smaller than 10 microns - associated with lung ailments.	6.74	lbs	1.35	lbs	1.35	lbs		
SO2	Sulphur Dioxide - Associated with visible pollution (haze) and acid rain.	117.24	lbs	0.20	lbs	34.36	lbs		
VOC	Volatile Organic Compounds - One of the primary causes of ozone (smog), also some of the individual compounds are toxic.	4.04	lbs	3.37	lbs	2.02	lbs		

**average of eastern and western coal*

http://www.infinitepower.org/calc_electric.htm

SUMMARY OF ROI REQUEST

Information Request ID #:

072108-1

Request Date:

21-Jul-08

Instructions

** This is a summary of the data that was provided by you on your web-form request for ROI calculations

** Only cells in Yellow used to input data. Rest are calculated or derived from databases

Name:	
Company:	
E-mail Contact:	
Phone Contact:	

Project Name	SAMPLE_NY_30KW	
Project Description	Commercial	(under 256 Characters)
Property Type	Large Comercial	
State	New York	
County	Albany	(Enter county name)
City	Albany	(Enter city name)
Identify closest city	Albany	Closest city where NREL measures solar rad.
Utility Company		(Enter utility that will serve your needs)

Tax Rate that applies to owner of property		
* Federal Tax Rate	30	%
* State Tax Rate	6	%
Estimated inflation of Electricty Costs Annually	10	%
Estimated cost of installation of PV	7.30	\$/Watt of DC

Total Roof Area	7,000	Sq. Ft
Length of roof (L) <i>see ref. diagram below</i>	20	Ft
Width of Roof (W) <i>see ref. diagram below</i>	350	Ft
Select 1 module type for the standing seam roof being used		
* 16inch module <i>see ref. diagram below</i>	FALSE	
* 18inch module <i>see ref. diagram below</i>	TRUE	
* 20inch module <i>see ref. diagram below</i>	FALSE	
* 24inch module <i>see ref. diagram below</i>	FALSE	
Roof Area facing South / South E / South W	6,000	Sq. Ft
Tilt angle of the roof (Φ , <i>see ref. diagram below</i>)	35	degrees relative to horizontal
Azimuth angle between the roof orientation and true North (Ψ , <i>see ref. diagram</i>)	180	degrees relative to true North

SUMMARY OF ROI REQUEST (continued)

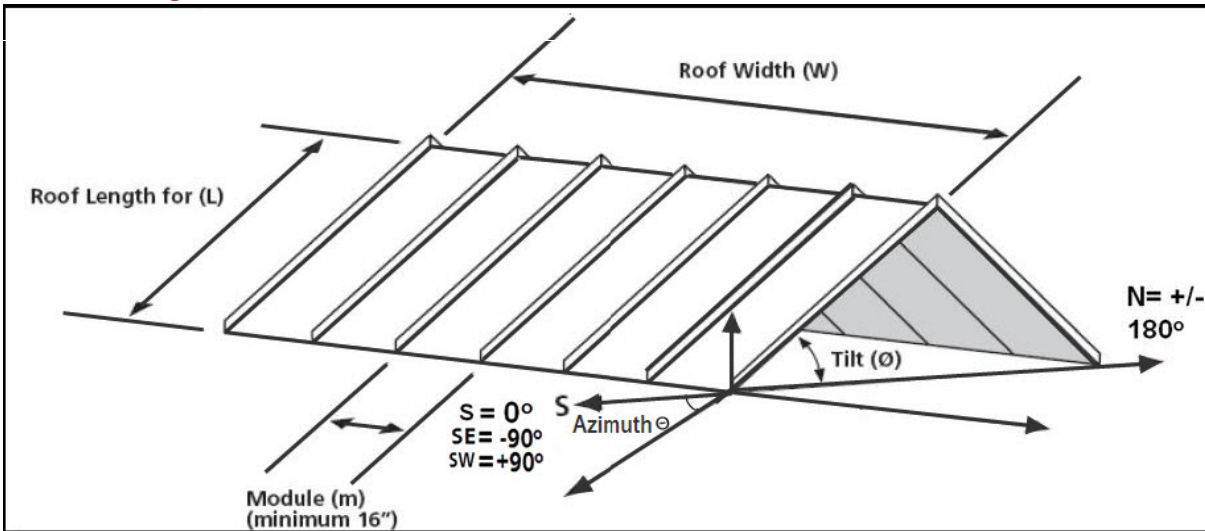
PV Modules Selected

Rated Power (DC)	Quantity of System	Rated Power (kW - DC)	Min Sq. Ft of Roof Occupied by PV System
3kW	0	0	0
5kW	0	0	0
10kW	0	0	0
15kW	0	0	0
30kW	1	30	6,540
60kW	0	0	0
125kW	0	0	0
TOTAL	1	30	6,540

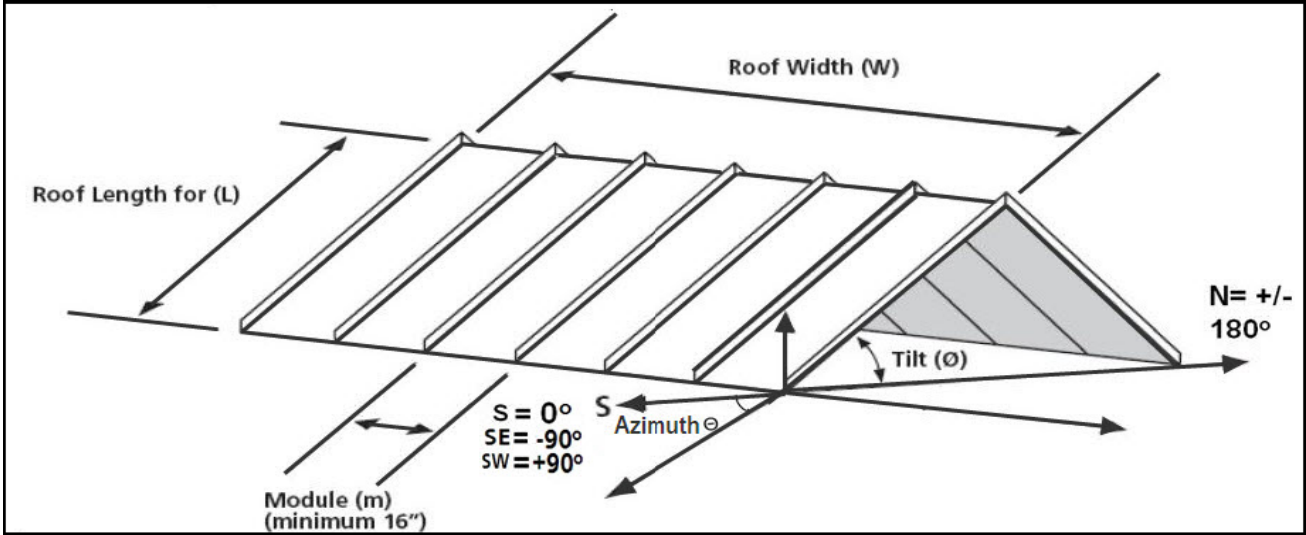
Press Submit button to proceed to next page

SUBMIT >>

Reference Diagram



Roof Area & System Summary



Total Roof Area	7,000	Sq. Ft
Roof Area facing South / South E / South W	6,000	Sq. Ft
Length of roof (L) <i>see ref. diagram above</i>	20	Ft
Width of Roof (W) <i>see ref. diagram above</i>	350	Ft
Tilt angle of the roof (ϕ , <i>see ref. diagram below</i>)	35	degrees relative to horizontal
Azimuth angle between the roof orientation and true North	180	degrees relative to true North

Total Rated Power (kW - DC)	Roof Panel Module (inch)	Total No. of PVL-136 Modules Required	Rectangular Roof Area Required(sq. ft.)		Roof Area covered (sq.ft.) by PVL- 136 Modules
			L (ft.)	W (ft.)	
30	18	216	20	327	6540

PV SYSTEM SUMMARY

Instructions

** This is the summary of the PV System that has been chosen

Project Name	SAMPLE_NY_30KW	
State	New York	
City	Albany	
Closest City with Radiation data	Albany	
Roof Tilt	35	degrees relative to horizontal
Azimuth Correction	180	degrees relative to true North
Rated Power of Solar Array	30.0	kW of DC
Square feet of PV arrays on Roof	6,540	Sq. Ft

Financials

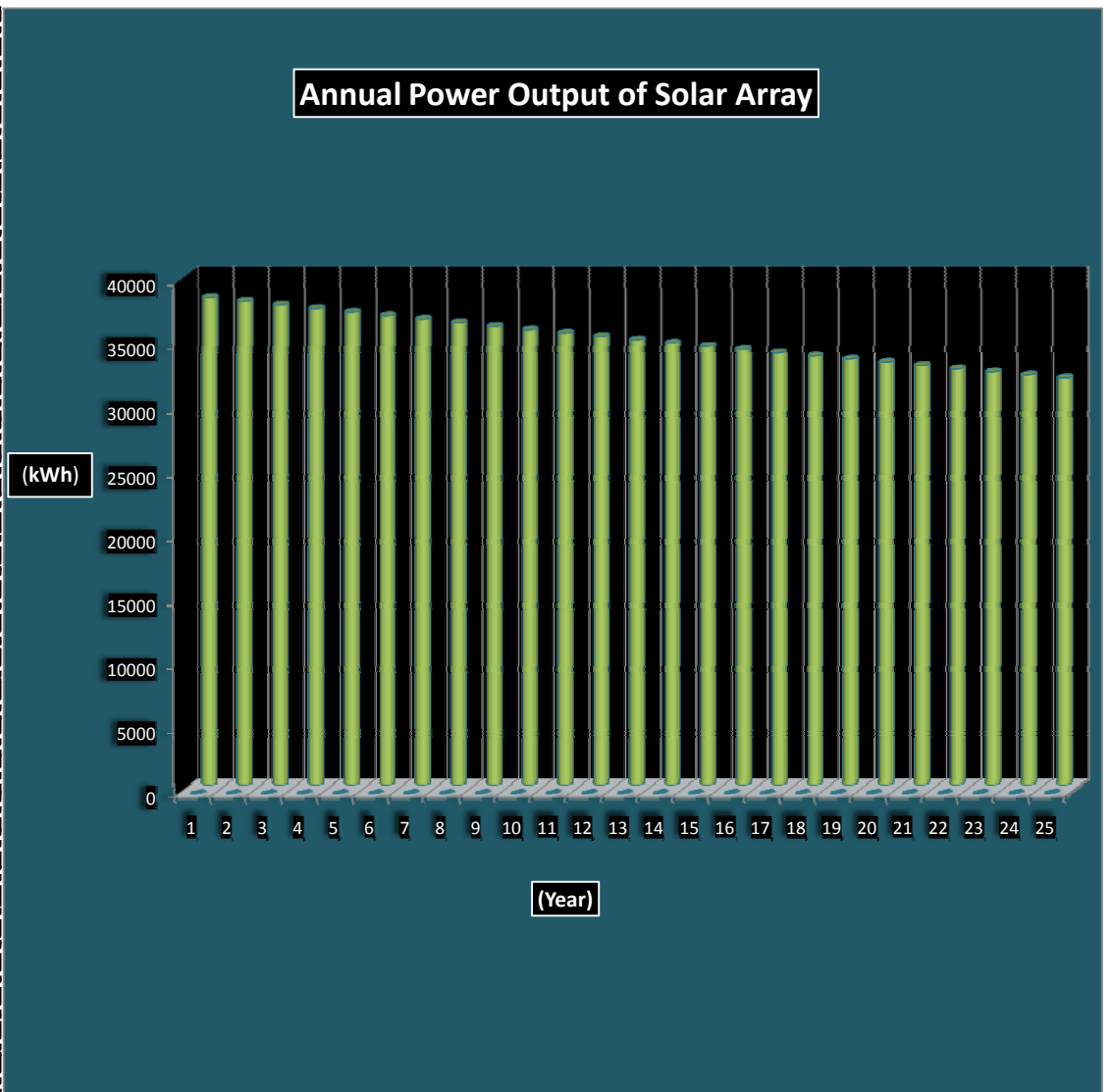
Average Annual Cost of Electricity in chosen state	0.1535	\$/kWh
Installed cost of PV System*	7.30	\$/Watt of DC
25 year Cash flow (accounting for electricity cost inflation)	\$508,599	(straight sum, i.e. not discounted to present value)
Capital Cost of PV System	\$219,000	

*Installed Cost Includes:

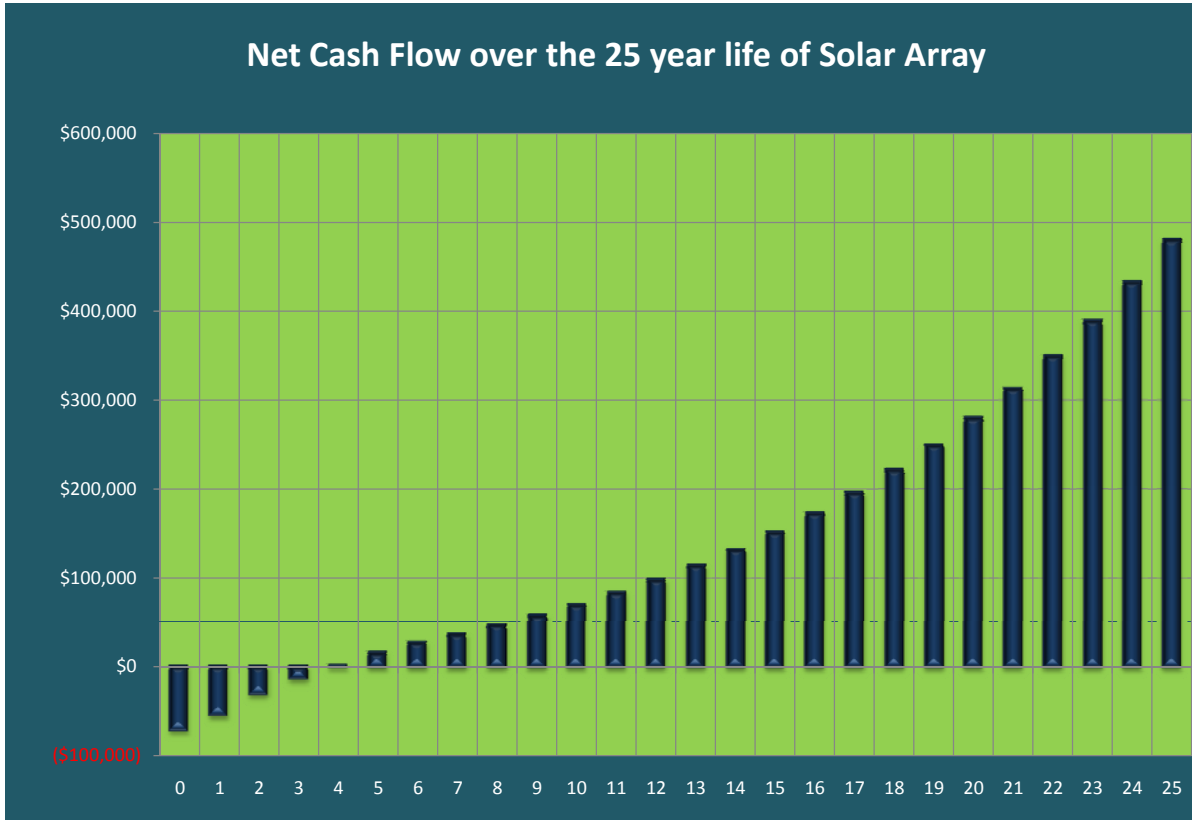
UNISOLAR PV modules ; DC-to-AC Inverter; Balance-of-System (BOS) components (combiner boxes, AC and DC disconnects, wire, conduit); Application labor (to adhere PV laminates to standing seam panels); Electrical labor; Misc. (design, freight, insurance, etc.)

Annual Output & Annual Cash Flow for 25 years

Year	Annual Output (kWh) 25yrs	Annual Cash flow from returning Electricity to Grid(25yrs)
1	38114.58	\$5,850.59
2	37828.72	\$6,387.38
3	37545.00	\$6,973.42
4	37263.42	\$7,613.23
5	36983.94	\$8,311.75
6	36706.56	\$9,074.35
7	36431.26	\$9,906.92
8	36158.03	\$10,815.88
9	35886.84	\$11,808.24
10	35617.69	\$12,891.64
11	35350.56	\$14,074.45
12	35085.43	\$15,365.78
13	34822.29	\$16,775.59
14	34561.12	\$18,314.75
15	34301.91	\$19,995.13
16	34044.65	\$21,829.69
17	33789.31	\$23,832.56
18	33535.89	\$26,019.20
19	33284.37	\$28,406.46
20	33034.74	\$31,012.75
21	32786.98	\$33,858.17
22	32541.08	\$36,964.66
23	32297.02	\$40,356.17
24	32054.79	\$44,058.84
25	31814.38	\$48,101.24



CASH FLOW PERFORMANCE



Breakeven Year

4 years

Internal Rate of Return

23.11%

FOR AVAILABLE/APPLICABLE REBATES PLEASE REVIEW THE APPENDIX

appendix

25 year Cash flow & Rebate Summary

25 YEAR CASH FLOW (AFTER TAX DOLLARS)

	Years>>									
	0	1	2	3	4	5	6	7	8	9
DEPRECIATION CALCULATIONS										
Capital Costs	\$219,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Investment Credit Tax Incentive	\$65,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation Basis	\$0	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150
MACRS Depreciation Value	\$0	\$37,230	\$59,568	\$35,741	\$21,444	\$21,444	\$10,722	\$0	\$0	\$0
CASH FLOW ANALYSIS										
Capital Cost	(\$219,000)	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Federal Incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Tax Credit	\$65,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal MACRS depreciation credit	\$0	\$11,169	\$17,870	\$10,722	\$6,433	\$6,433	\$3,217	\$0	\$0	\$0
<u>State/Local/Utility Incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
One-time cash rebate / REC	\$129,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Performance Based Rebates /REC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal+StateTax on State/Local Incentives	(\$46,764)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>State tax incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State tax incentives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal tax on State tax incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Cost Savings from PV installation	\$0	\$5,851	\$6,387	\$6,973	\$7,613	\$8,312	\$9,074	\$9,907	\$10,816	\$11,808
Maintenance Costs (Assump: 0.25% of installed cost yearly)	\$0	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)
NET IMPACT	(\$70,164)	\$16,472	\$23,710	\$17,148	\$13,499	\$14,198	\$11,744	\$9,359	\$10,268	\$11,261
CUMULATIVE NET IMPACT	(\$70,164)	(\$53,692)	(\$29,982)	(\$12,833)	\$666	\$14,863	\$26,607	\$35,966	\$46,235	\$57,495

ANALYSIS OF INVESTMENT PERFORMANCE	
BREAKEVEN YEAR	4
INTERNAL RATE OF RETURN (IRR)	23.11%

Summary Comment

Your investment will breakeven in 4 years and over a 25 year period will perform at a 23.11% rate of return.

25 YEAR CASH FLOW (AFTER TAX DOLLARS)

	Years>>								
	10	11	12	13	14	15	16	17	18
DEPRECIATION CALCULATIONS									
Capital Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Investment Credit Tax Incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation Basis	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150
MACRS Depreciation Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CASH FLOW ANALYSIS									
Capital Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Federal Incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Tax Credit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal MACRS depreciation credit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>State/Local/Utility Incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
One-time cash rebate / REC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Performance Based Rebates /REC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal+StateTax on State/Local Incentives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>State tax incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State tax incentives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal tax on State tax incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Cost Savings from PV installation	\$12,892	\$14,074	\$15,366	\$16,776	\$18,315	\$19,995	\$21,830	\$23,833	\$26,019
Maintenance Costs (Assump: 0.25% of installed cost yearly)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)
NET IMPACT	\$12,344	\$13,527	\$14,818	\$16,228	\$17,767	\$19,448	\$21,282	\$23,285	\$25,472
CUMULATIVE NET IMPACT	\$69,839	\$83,366	\$98,185	\$114,413	\$132,180	\$151,628	\$172,910	\$196,195	\$221,667
ANALYSIS OF INVESTMENT PERFORMANCE									
BREAKEVEN YEAR	4								
INTERNAL RATE OF RETURN (IRR)	23.11%								

25 YEAR CASH FLOW (AFTER TAX DOLLARS)

	Years>>						
	19	20	21	22	23	24	25
DEPRECIATION CALCULATIONS							
Capital Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Investment Credit Tax Incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation Basis	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150	\$186,150
MACRS Depreciation Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CASH FLOW ANALYSIS							
Capital Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Federal Incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Tax Credit	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal MACRS depreciation credit	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>State/Local/Utility Incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
One-time cash rebate / REC	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Performance Based Rebates /REC	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal+StateTax on State/Local Incentives	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>State tax incentives</u>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State tax incentives	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal tax on State tax incentive	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Cost Savings from PV installation	\$28,406	\$31,013	\$33,858	\$36,965	\$40,356	\$44,059	\$48,101
Maintenance Costs (Assump: 0.25% of installed cost yearly)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)	(\$548)
NET IMPACT	\$27,859	\$30,465	\$33,311	\$36,417	\$39,809	\$43,511	\$47,554
CUMULATIVE NET IMPACT	\$249,526	\$279,991	\$313,301	\$349,719	\$389,527	\$433,039	\$480,592
ANALYSIS OF INVESTMENT PERFORMANCE							
BREAKEVEN YEAR	4						
INTERNAL RATE OF RETURN (IRR)	23.11%						

SUMMARY OF AVAILABLE REBATES

Instructions:

** Please place "1" on the rebate that is of interest. Multiple rebates can be chosen by placing 1 on top of

STATE	New York			
User Selection			1	
Property_Type	Commercial	Non-Profit	Commercial	Residential
Rebate_Name	LIPA-Solar Pioneer Program	LIPA-Solar Pioneer Program	NYSERDA-PV Incentive Program	NYSERDA-PV Incentive Program
Value (\$/W)	\$3.50	\$4.50	\$4.33	\$1.33
State tax credit	\$0	\$0	\$0	\$0
2008	\$0.00	\$0.00	\$0.00	\$0.00
2009	\$0.00	\$0.00	\$0.00	\$0.00
2010	\$0.00	\$0.00	\$0.00	\$0.00
2011	\$0.00	\$0.00	\$0.00	\$0.00
2012	\$0.00	\$0.00	\$0.00	\$0.00
2013	\$0.00	\$0.00	\$0.00	\$0.00
2014	\$0.00	\$0.00	\$0.00	\$0.00
2015	\$0.00	\$0.00	\$0.00	\$0.00
2016	\$0.00	\$0.00	\$0.00	\$0.00
2017	\$0.00	\$0.00	\$0.00	\$0.00
2018	\$0.00	\$0.00	\$0.00	\$0.00
2019	\$0.00	\$0.00	\$0.00	\$0.00
2020	\$0.00	\$0.00	\$0.00	\$0.00
2021	\$0.00	\$0.00	\$0.00	\$0.00
2022	\$0.00	\$0.00	\$0.00	\$0.00
2023	\$0.00	\$0.00	\$0.00	\$0.00
2024	\$0.00	\$0.00	\$0.00	\$0.00
2025	\$0.00	\$0.00	\$0.00	\$0.00
2026	\$0.00	\$0.00	\$0.00	\$0.00
2027	\$0.00	\$0.00	\$0.00	\$0.00
2028	\$0.00	\$0.00	\$0.00	\$0.00
2029	\$0.00	\$0.00	\$0.00	\$0.00
2030	\$0.00	\$0.00	\$0.00	\$0.00
2031	\$0.00	\$0.00	\$0.00	\$0.00
2032	\$0.00	\$0.00	\$0.00	\$0.00
Limit on Max Incentive Value(\$)				
Minimum System Size (kW)	0	0	0	0
Maximum eligible system size (kW)	10	10	50	10
OTHER COMPLEXITIES	0	0	for the 1st 25kw-\$4.50/W DC; next 25kw-\$3.50/W DC	for the 1st 25kw-\$4.50/W DC; next 25kw-\$3.50/W DC
DATA LINK (www.dsireusa.org)	http://www.dsireusa.org/library/includes/incentivesearch.cfm?Incentive_Code=NY04F&Search=Technology&techno=Photovoltaics&currentpageid=2&EE=1&RE=1	http://www.dsireusa.org/library/includes/incentivesearch.cfm?Incentive_Code=NY04F&Search=Technology&techno=Photovoltaics&currentpageid=2&EE=1&RE=1	http://www.dsireusa.org/library/includes/incentivesearch.cfm?Incentive_Code=NY10F&Search=Technology&techno=Photovoltaics&currentpageid=2&EE=1&RE=1	http://www.dsireusa.org/library/includes/incentivesearch.cfm?Incentive_Code=NY10F&Search=Technology&techno=Photovoltaics&currentpageid=2&EE=1&RE=1
LAST REVIEWED DATE	1/10/08	1/10/08	2/15/08	2/15/08
INCENTIVE TYPE	Utility Rebate Program	Utility Rebate Program	State Rebate Program	State Rebate Program
NOTE	You exceed Max-kW limit for this incentive	You exceed Max-kW limit for this incentive		You exceed Max-kW limit for this incentive

25 Years PBI Summary