



## 19.968 KW Commercial Example Analysis for a Solar PV System

System Description	Modules Type	Watts (DC)		Qty of Modules		Inverter Mfg		No. of Inverters			
	Sharp	208		96		Solelectric/Fronius		8			
System Size	19,968 kW		<b>Summary</b>								
AC Rating/Output	22,963 kWh/year		Payback Period = 10 years								
2006 Value of electricity	\$0.14 kWh		30 yr. Internal Rate of Return = 15.2%								
SREC (Green Tag) Value	\$225 based on avg trading prices		30 yr. Locked in cost of solar electricity = 0.091 / kWh								
System Price	\$155,750 Price/watt = \$7.80		30 years energy savings = \$251.1K								
30% FITC for Commercial Solar	-\$46,725		14 years SREC earnings = \$72.3K								
Fed. Tax Saved by Depreciation	-\$46,336		Net Present Value = \$77.3K								
Net Investment	\$62,690		Increased Property Value = \$82.7K ***								
Year	1	2	3	4	5	6	7	8	9	10	30 YearTotals
Value of Electricity Produced	\$4,133	\$4,318	\$4,512	\$4,713	\$4,924	\$5,145	\$5,375	\$5,616	\$5,867	\$6,129	\$251,100
SREC (Green Tag) Sales	\$5,167	\$5,167	\$5,167	\$5,167	\$5,167	\$5,167	\$5,167	\$5,167	\$5,167	\$5,167	\$72,334
Fed.Tax saved by Depreciation	\$20,388	\$10,379	\$6,228	\$3,737	\$3,737	\$1,868					\$46,336
30% FITC for Cmrc Solar	\$46,725										\$46,725
Total Income	\$76,413	\$19,864	\$15,906	\$13,617	\$13,828	\$12,180	\$10,542	\$10,782	\$11,034	\$11,296	\$416,495
System Cost	(\$155,750)										(\$155,750)
Tax due to Electrical Savings & Tax on SRECs**	(3,255)	(3,320)	(3,387)	(3,458)	(3,532)	(3,609)	(3,690)	(3,774)	(3,862)	(3,954)	(113,202)
Cash Flows	(\$82,592)	\$16,544	\$12,518	\$10,159	\$10,296	\$8,571	\$6,852	\$7,008	\$7,172	\$7,342	\$147,542
Cumulative Cash Flows	(\$82,592)	(\$66,048)	(\$53,530)	(\$43,371)	(\$33,075)	(\$24,504)	(\$17,652)	(\$10,644)	(\$3,472)	\$3,870	
Loan Payments	Principal \$124,600		Rate 7.00%		Term ( 7 or 10 years)		10	Balloon	\$31,150		
Annual Payments	(19,268)	(19,268)	(19,268)	(19,268)	(19,268)	(19,268)	(19,268)	(19,268)	(19,268)	(19,268)	(223,828)
Tax savings on loan Interest payments	3,785	3,578	3,357	3,120	2,866	2,594	2,304	1,993	1,661	1,305	
Tax benefits*	67,643	10,638	6,197	3,398	3,071	854	(1,386)	(1,781)	(2,201)	(2,649)	83,784
Cash Flow with loan	57,675	855	(3,393)	(5,990)	(6,106)	(8,103)	(10,112)	(10,266)	(10,435)	(10,620)	243,163
Cummulative Cash Flow w/loan	57,675	58,530	55,138	49,148	43,042	34,939	24,828	14,562	4,126	(6,494)	
* Tax Benefits includes: Federal Tax Credit, Accelerated Depreciation, tax savings on loan interest payments, less tax reduction due to energy savings.											
** Tax due to Savings: includes tax increase due to reduction in electrical expenses.											*** Based on Appraisal Institute, Chicago, Illinois
Definitions:			Financial Data:					Legend:			
FITC is Federal Income Tax Credit-allows for 30% of total cost			Estimated escalation of electricity cost - 20% 2007, 5% thereafter					FITC:Federal Income Tax Credit			
Depreciation is per Modified Accelerated Cost Recovery System MACRS and is 6 years			Amount subject to depreciation \$132,388					SREC: Solar Renewable Energy Credit			
Current legislations allows SRECs until 2020 Value of SREC is based on NJ averages			Discount rate =6%					kWh: kilowatts/hour A unit of energy			
Loan is based on a 20% balloon payment due at the end of the loan			Federal Tax Rate=35%					kW: Kilowatt A unit of pwer			