## **System Advisor Model Report**

Detailed Photovoltaic 52 DC kW Nameplate 55.7, 12.1 Single Owner \$1.03/W Installed Cost UTC +1

## **Performance Model**

## Financial Model

Modules		Pr	oject Costs
Trina Solar TSM-295	DEG5C.07(II)	To	tal installed c
Cell material	Mono-c-Si	Sa	alvage value
Module area	1.65 m²	Ar	nalysis Paran
Module capacity	295.11 DC Watts		oject life
Quantity	176	l I I	flation rate
Total capacity	51.94 DC kW		eal discount ra
Total area	290 m²		
Invertors		——————————————————————————————————————	nancial Targe

Inverters	
Custom (Inverter Datasheet Model)	
Unit capacity	55 AC kW
Input voltage	250 DC V
Quantity	1
Total capacity	55 AC kW
DC to AC Capacity Ratio	0.94
AC losses (%)	1.00

Two subarrays:	1	2
Strings	4	4
Modules per string	22	22
String Voc (DC V)	877.80	877.80
Tilt (deg from horizontal)	25.00	25.00
Azimuth (deg E of N)	180	180
Tracking	no	no
Backtracking	-	-
Self shading	yes	yes
Rotation limit (deg)	-	-
Shading	no	no
Snow	no	no
Soiling	yes	yes
DC losses (%)	4.44	4.44

Performance Adjustments	
Availability/Curtailment	none
Degradation	none
Hourly or custom losses	none

Annual Results (in Year 1)		
GHI kWh/m²/day	2.96	2.96
POA kWh/m²/day	82.00	82.00
Net to inverter	58,780 DC	kWh
Net to grid	54,060 AC	kWh
Capacity factor	11.9	
Performance ratio	0.83	

Total installed cost	\$53,375
Salvage value	\$0
Analysis Parameters	
Project life	25 years
Inflation rate	2.5%
Real discount rate	6.4%

Financial Targets and Constraints		
Solution mode	Calculate PPA Price	
Target IRR	11% in Year 20	
PPA escalation rate	1%/year	

Tax and Insurance Rates	
Federal income tax	21 %/year
State income tax	7 %/year
Sales tax (% of indirect cost basis	) 5%
Insurance (% of installed cost)	0.5 %/year
Property tax (% of assessed val.)	0 %/year

Incentives		
Federal ITC	26%	
Depreciation	Depreciation allocations defined	
	with no bounus depreciation	

Results	
Nominal LCOE	73.5 cents/kWh
PPA price (year one)	74.1 cents/kWh
Project IRR	11% in Year 20
Project NPV	\$33,300





