## **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		Project Costs
Trina Solar TSM-295	DEG5C.07(II)	Total installed cost
Cell material	Mono-c-Si	Salvage value
Module area	1.65 m²	Analysis Paramete
Module capacity	295.11 DC Watts	Project life
Quantity	176	Inflation rate
Total capacity	51.94 DC kW	Real discount rate
Total area	290 m <sup>2</sup>	
		Financial Targets

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

Two subarrays:	1	2
Strings	4	4
Modules per string	22	22
String Voc (DC V)	877.80	877.80
Tilt (deg from horizontal)	0.00	0.00
Azimuth (deg E of N)	180	180
Tracking	1 axis	1 axis
Backtracking	yes	yes
Self shading	yes	yes
Rotation limit (deg)	60	45
Shading	no	no
Snow	no	no
Soiling	yes	yes
DC losses (%)	4.44	4.44

Performance Adjustments	
none	
none	
none	

Annual Results (in Year 1)		
GHI kWh/m²/day	2.96	2.96
POA kWh/m²/day	95.00	94.00
Net to inverter	67,660 DC	kWh
Net to grid	62,780 AC	kWh
Capacity factor	13.8	
Performance ratio	0.84	

Project Costs		
Total installed cost	\$53,375	
Salvage value	\$0	
Analysis Parameters		
Project life	25 years	

2.5%

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	63.3 cents/kWh
PPA price (year one)	63.8 cents/kWh
Project IRR	11% in Year 20
Project NPV	\$33,300





