## **System Advisor Model Report**

Detailed Photovoltaic 13 DC kW Nameplate 35.05, -106.64

Single Owner \$1.03/W Installed Cost UTC -7

## **Performance Model**

## Financial Model

Modules		Project Cost	s
Canadian Solar Inc.	CS6K-275M	Total installed	o b
Cell material	Mono-c-Si	Salvage value	е
Module area	1.62 m²	Analysis Par	
Module capacity	275.44 DC Watts	Project life	
Quantity	48	Inflation rate	
Total capacity	13.22 DC kW	Real discount	t ra
Total area	77 m²		
_		Financial Tar	rg

Inverters	
SMA America: STP15000TL-US-10	
Unit capacity	15 AC kW
Input voltage	300 - 800 VDC DC V
Quantity	1
Total capacity	15 AC kW
DC to AC Capacity Ratio	0.88
AC losses (%)	1.00

Two subarrays:	1	2
Strings	2	2
Modules per string	12	12
String Voc (DC V)	459.60	459.60
Tilt (deg from horizontal)	35.00	35.00
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 Adjustmen	nts
Availability/Curtailment	none
Degradation	none
Hourly or custom losses	none

Annual Results (in Year 1)			
GHI kWh/m²/day	5.55	5.55	
POA kWh/m²/day	149.00	149.00	
Net to inverter	25,950 DC	kWh	
Net to grid	24,660 AC I	kWh	
Capacity factor	21.3		
Performance ratio	0.78		

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Total installed cost	\$13,586	
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 defin	
	with no bounus depreciation

Results	
Nominal LCOE	139 cents/kWh
PPA price (year one)	140.8 cents/kWh
Project IRR	11% in Year 20
Project NPV	\$30,600





