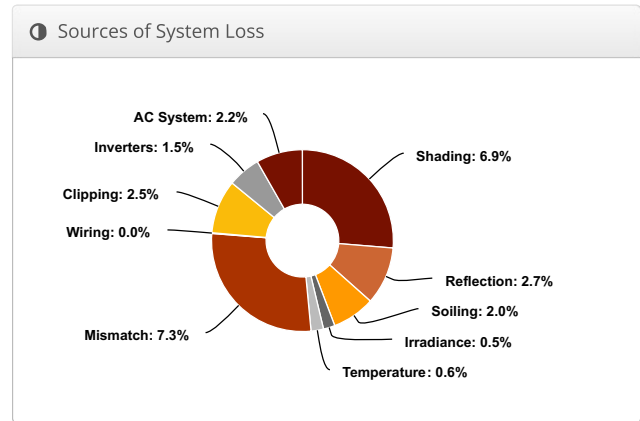
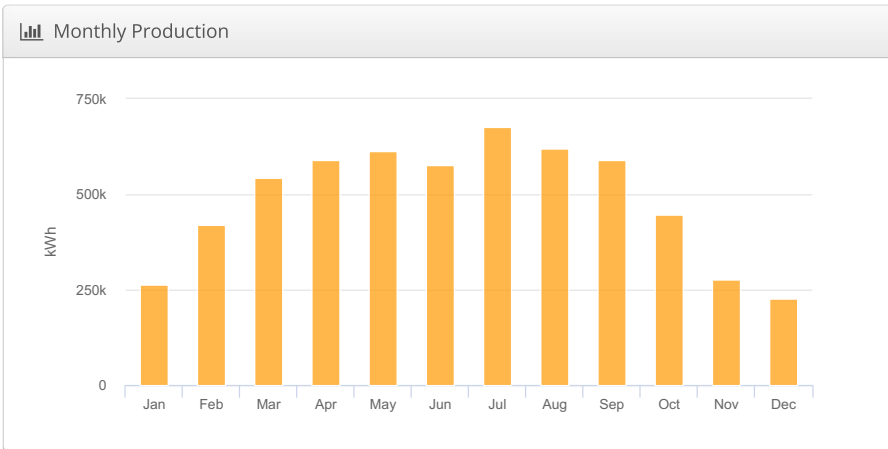


## 3.5 MW AC PV Site

Report	
Project Name	3.5MW AC PV Site Design
Project Address	Undisclosed
Prepared By	CUSA Consulting LLC

System Metrics	
Design	Fixed Tilt PV Site
Module DC Nameplate	4.46 MW
Inverter AC Nameplate	3.50 MW Load Ratio: 1.27
Annual Production	5.846 GWh
Performance Ratio	76.5%
kWh/kWp	1,310.2
Weather Dataset	NREL
Simulator Version	429f2f6a2c-b1579e1ee6-5d84b2204a-edfb6796f0

Project Location
Undisclosed



Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,425.5	
	POA Irradiance	1,712.4	20.1%
	Shaded Irradiance	1,594.3	-6.9%
	Irradiance after Reflection	1,551.4	-2.7%
	Irradiance after Soiling	1,520.4	-2.0%
	<b>Total Collector Irradiance</b>	<b>1,520.4</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	6,789,060.3	
	Output at Irradiance Levels	6,752,563.6	-0.5%
	Output at Cell Temperature Derate	6,713,359.6	-0.6%
	Output After Mismatch	6,224,966.4	-7.3%
	Optimal DC Output	6,222,785.2	0.0%
	Constrained DC Output	6,067,334.3	-2.5%
	Inverter Output	5,974,855.3	-1.5%
	<b>Energy to Grid</b>	<b>5,845,585.3</b>	<b>-2.2%</b>
Temperature Metrics			
	Avg. Operating Ambient Temp		11.4 °C
	Avg. Operating Cell Temp		19.0 °C
Simulation Metrics			
	Operating Hours	4670	
	Solved Hours	4670	

Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (43.15,-70.75), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.075	3°C								
	Flush Mount	-2.81	-0.0455	0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations	Module	Uploaded By		Characterization								
	REC405AA Pure (REC)	Folsom Labs		REC405AA_Pure.pan, PAN								
Component Characterizations	Device	Uploaded By		Characterization								

## Components

Component	Name	Count
Inverters	Sunny Highpower PEAK3 125-US (2020) (SMA)	28 (3.50 MW)
AC Home Runs	4/0 AWG (Copper)	28 (76,669.6 ft)
Combiners	23 input Combiner	24
Combiners	24 input Combiner	4
Strings	2/0 AWG (Copper)	648 (256,562.4 ft)
Module	REC, REC405AA Pure (405W)	11,016 (4.46 MW)

## Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone 2	24	17-17	Up and Down Racking
Wiring Zone 3	24	17-17	Up and Down Racking

## Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 4	Fixed Tilt	Portrait (Vertical)	32°	180°	10.0 ft	2x1	1,071	2,142	867.5 kW
Field Segment 4	Fixed Tilt	Portrait (Vertical)	32°	180°	10.0 ft	2x1	3,740	7,480	3.03 MW
Field Segment 4	Fixed Tilt	Portrait (Vertical)	32°	180°	10.0 ft	2x1	697	1,394	564.6 kW

## Detailed Layout

