

San Jose University , CA, USA Case Study 2 - San Jose University, USA, San jose University

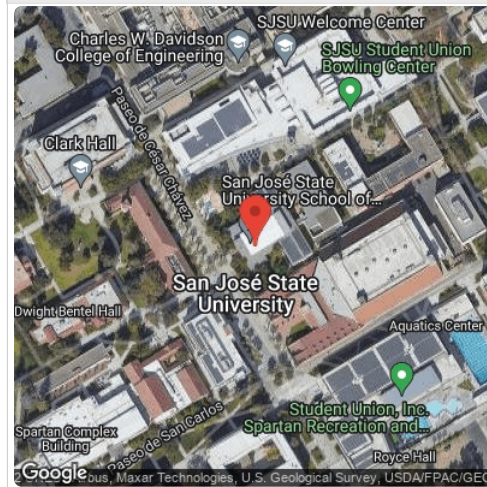
Report

Project Name	Case Study 2 - San Jose University, USA
Project Address	San jose University
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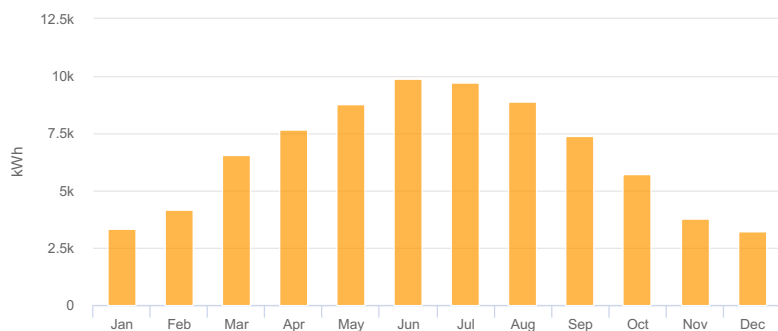
System Metrics

Design	San Jose University , CA, USA
Module DC Nameplate	46.6 kW
Inverter AC Nameplate	40.0 kW Load Ratio: 1.16
Annual Production	79.16 MWh
Performance Ratio	85.4%
kWh/kWp	1,700.5
Weather Dataset	TMY, 10km grid (37.35,-121.85), NREL (prospector)
Simulator Version	77eaf2cdb5-02f2a7f506-20068b956b-d70d5f9ff0

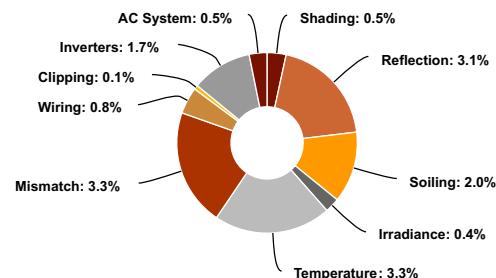
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,876.6	
	POA Irradiance	1,991.1	6.1%
	Shaded Irradiance	1,980.5	-0.5%
	Irradiance after Reflection	1,919.4	-3.1%
	Irradiance after Soiling	1,881.1	-2.0%
	Total Collector Irradiance	1,881.1	0.0%
Energy (kWh)	Nameplate	87,635.6	
	Output at Irradiance Levels	87,275.2	-0.4%
	Output at Cell Temperature Derate	84,406.9	-3.3%
	Output After Mismatch	81,642.6	-3.3%
	Optimal DC Output	81,028.5	-0.8%
	Constrained DC Output	80,934.9	-0.1%
	Inverter Output	79,557.5	-1.7%
	Energy to Grid	79,159.7	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		16.0 °C
	Avg. Operating Cell Temp		26.0 °C
Simulation Metrics			
	Operating Hours	4657	
	Solved Hours	4657	

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km grid (37.35,-121.85), 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				
	CS3L-350MS (1000V) (Canadian Solar)	Folsom Labs						Spec Sheet Characterization, PAN				
Component Characterizations	Device	Uploaded By						Characterization				
	SG40CX (Sungrow)	Folsom Labs						Spec Sheet				

Components

Component	Name	Count
Inverters	SG40CX (Sungrow)	1 (40.0 kW)
Home Runs	12 AWG (Copper)	2 (126.5 ft)
Combiners	3 input Combiner	1
Combiners	4 input Combiner	1
Strings	10 AWG (Copper)	7 (827.3 ft)
Module	Canadian Solar, CS3L-350MS (1000V) (350W)	133 (46.6 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	6	19-19	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	149.14348°	2.5 ft	1x1	135	135	47.3 kW

 Detailed Layout

