Case Study 9 - My Home , Van Nuys, USA Case Study 9 - My Home, Van Nuys , USA, 15755 SATICOY ST APT 407

Report

Project Name	Case Study 9 - My Home, Van Nuys , USA
Project Address	15755 SATICOY ST APT 407
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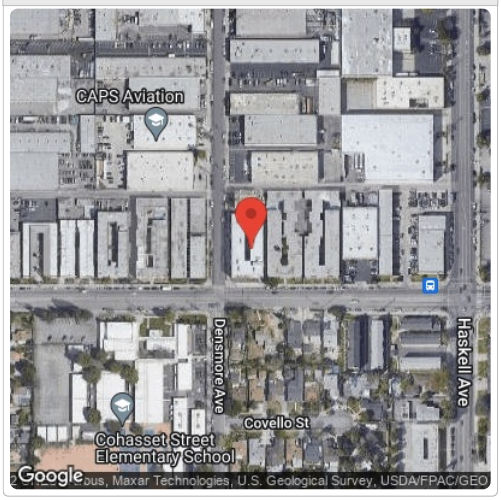
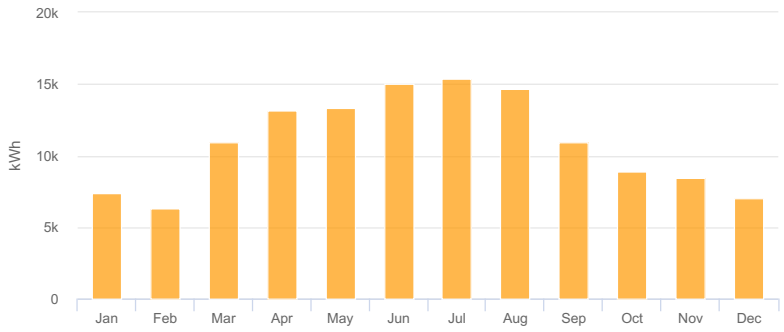
System Metrics

Design	Case Study 9 - My Home , Van Nuys, USA
Module DC Nameplate	81.9 kW
Inverter AC Nameplate	75.0 kW Load Ratio: 1.09
Annual Production	131.6 MWh
Performance Ratio	78.4%
kWh/kWp	1,606.4
Weather Dataset	TMY, VAN NUYS AIRPORT, NSRDB (tmy3, II)
Simulator Version	77eaf2cdb5-02f2a7f506-20068b956b-d70d5f9ff0

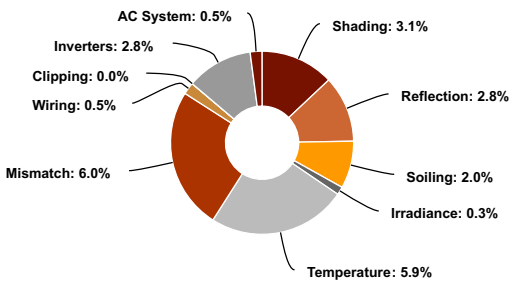
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,912.0	
	POA Irradiance	2,049.3	7.2%
	Shaded Irradiance	1,985.8	-3.1%
	Irradiance after Reflection	1,930.1	-2.8%
	Irradiance after Soiling	1,891.5	-2.0%
	Total Collector Irradiance	**1,891.3**	**0.0%**
Energy (kWh)	Nameplate	154,986.9	
	Output at Irradiance Levels	154,462.5	-0.3%
	Output at Cell Temperature Derate	145,420.3	-5.9%
	Output After Mismatch	136,727.9	-6.0%
	Optimal DC Output	136,035.5	-0.5%
	Constrained DC Output	136,035.4	0.0%
	Inverter Output	132,226.4	-2.8%
	Energy to Grid	**131,565.3**	**-0.5%**
Temperature Metrics			
	Avg. Operating Ambient Temp		21.3 °C
	Avg. Operating Cell Temp		32.4 °C
Simulation Metrics			
	Operating Hours		4337
	Solved Hours		4337

Condition Set

Description	Condition Set 1
Weather Dataset	TMY, VAN NUYS AIRPORT, NSRDB (tmy3, II)
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
TSM-DE15M(II) 420W (2021) (Trina Solar)	Folsom Labs	Spec Sheet Characterization, PAN

Component Characterizations

Device	Uploaded By	Characterization

Components

Component	Name	Count
Inverters	SG25CX-SA (Sungrow)	3 (75.0 kW)
Home Runs	12 AWG (Copper)	6 (340.4 ft)
Combiners	1 input Combiner	3
Combiners	3 input Combiner	3
Strings	10 AWG (Copper)	12 (710.5 ft)
Module	Trina Solar, TSM-DE15M(II) 420W (2021) (420W)	195 (81.9 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	6-20	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	180°	1.0 ft	1x1	220	195	81.9 kW

Detailed Layout