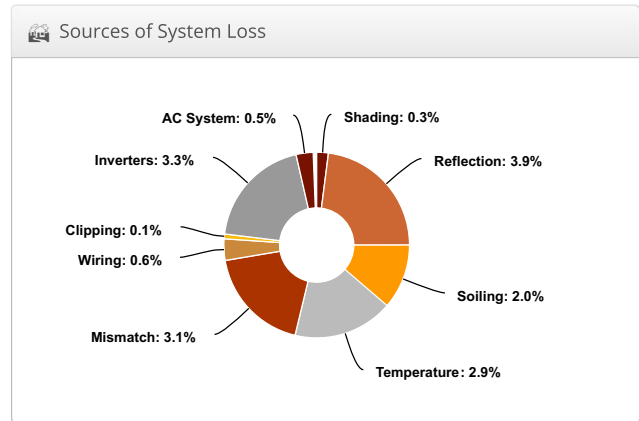
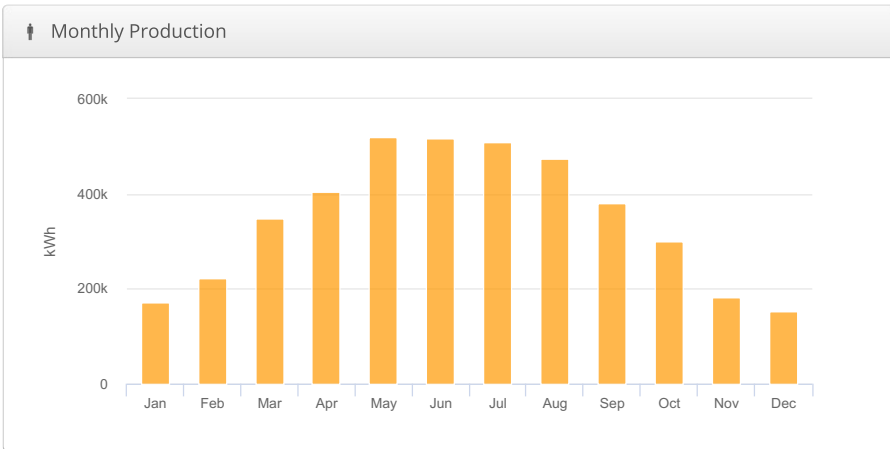
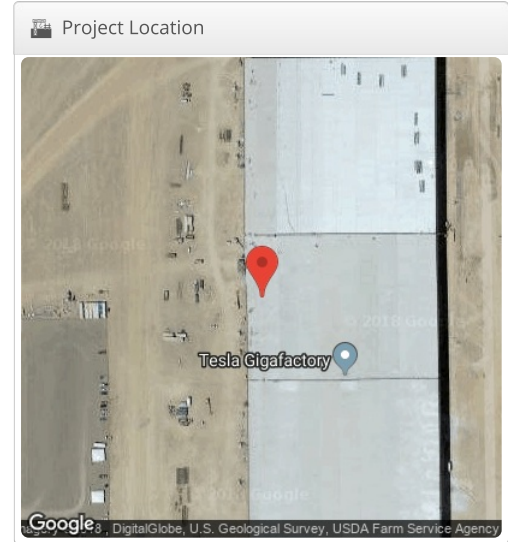


Design 1 Gigafactory, 1 Electric Ave, Sparks, NV 89434

Report	
Project Name	Gigafactory
Project Address	1 Electric Ave, Sparks, NV 89434
Prepared By	John Weaver commercialsolarguy@gmail.com

System Metrics	
Design	Design 1
Module DC Nameplate	2.59 MW
Inverter AC Nameplate	2.10 MW Load Ratio: 1.24
Annual Production	4.179 GWh
Performance Ratio	84.3%
kWh/kWp	1,611.4
Weather Dataset	TMY, 10km Grid (39.55,-119.45), NREL (prospector)
Simulator Version	9c02b5deb1-388eda1f11-1a6f592b1e-c8d7445e4b



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,920.5	
	POA Irradiance	1,910.4	-0.5%
	Shaded Irradiance	1,903.9	-0.3%
	Irradiance after Reflection	1,830.3	-3.9%
	Irradiance after Soiling	1,793.7	-2.0%
	Total Collector Irradiance	1,793.7	0.0%
Energy (kWh)	Nameplate	4,649,437.4	
	Output at Irradiance Levels	4,654,138.7	0.1%
	Output at Cell Temperature Derate	4,517,417.0	-2.9%
	Output After Mismatch	4,376,116.8	-3.1%
	Optimal DC Output	4,348,590.2	-0.6%
	Constrained DC Output	4,342,536.1	-0.1%
	Inverter Output	4,200,070.0	-3.3%
	Energy to Grid	4,179,070.0	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.8 °C
	Avg. Operating Cell Temp		22.8 °C
Simulation Metrics			
	Operating Hours	4700	
	Solved Hours	4700	

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (39.55,-119.45), 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								
	East-West	-3.56	-0.075	3°C								
	Carport	-3.56	-0.075	3°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	Characterization										
	Q.PLUS L-G4.2 350 (Hanwha Q Cells)	Hanwha_Qcells_QPLUS_L-G4.2_350_64.pan, PAN										
Component Characterizations	Device	Characterization										
	PVI 100kW-480 Premium (Solectria)	Default Characterization										

Components

Component	Name	Count
Inverters	PVI 100kW-480 Premium (Solectria)	21 (2.10 MW)
Strings	10 AWG (Copper)	708 (164,351.2 ft)
Module	Hanwha Q Cells, Q.PLUS L-G4.2 350 (350W)	7,410 (2.59 MW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	9-11	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	East-West	Landscape (Horizontal)	10°	180.341°	1.6 ft	1x1	3,705	7,410	2.59 MW

Detailed Layout

