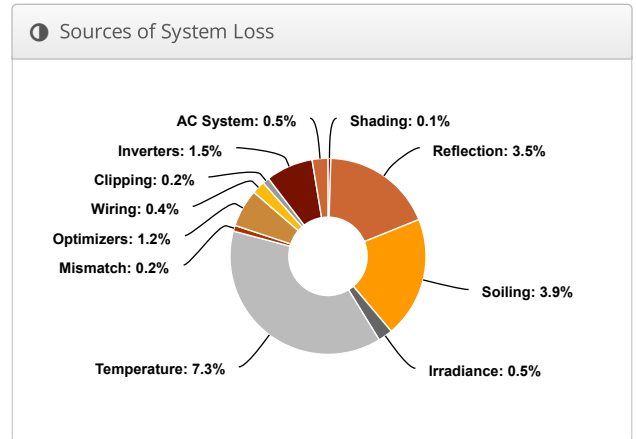
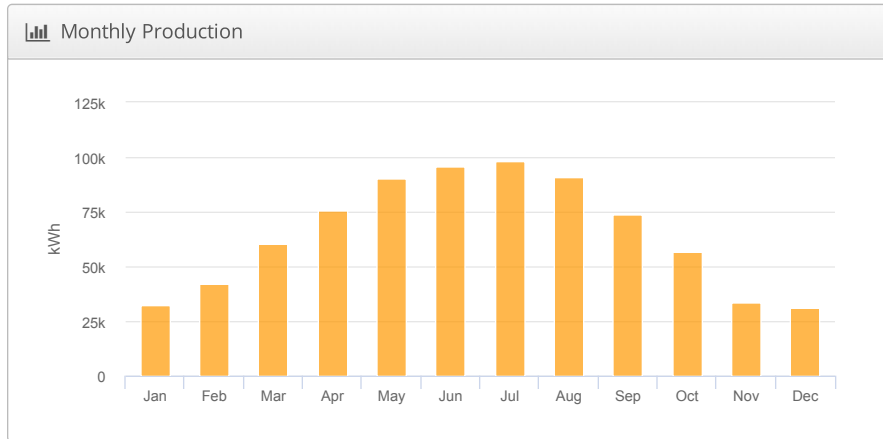
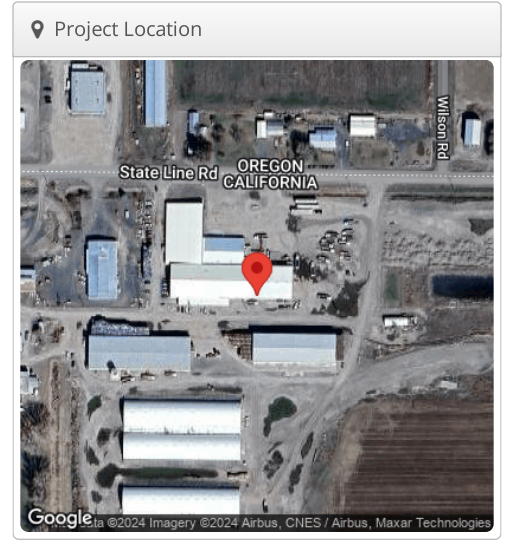


Design 1 Cal-Ore Produce, 19912 State Line Rd, Tulelake, CA 96134, USA



Report	
Project Name	Cal-Ore Produce
Project Address	19912 State Line Rd, Tulelake, CA 96134, USA
Prepared By	Anurag Tripathi contact@ekanshservices.com

System Metrics	
Design	Design 1
Module DC Nameplate	500.3 kW
Inverter AC Nameplate	400.0 kW Load Ratio: 1.25
Annual Production	780.1 MWh
Performance Ratio	82.3%
kWh/kWp	1,559.1
Weather Dataset	TMY, 10km Grid (41.95,-121.55), NREL (prospector)
Simulator Version	e9108000ef-a449be9a3b-7829820f5d-ebd473105f



⚡ Annual Production				
	Description	Output	% Delta	
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,746.4		
	POA Irradiance	1,895.6	8.5%	
	Shaded Irradiance	1,893.9	-0.1%	
	Irradiance after Reflection	1,826.6	-3.5%	
	Irradiance after Soiling	1,756.3	-3.9%	
	Total Collector Irradiance		1,756.3	0.0%
Energy (kWh)	Nameplate	880,328.8		
	Output at Irradiance Levels	876,247.1	-0.5%	
	Output at Cell Temperature Derate	812,224.7	-7.3%	
	Output After Mismatch	810,734.0	-0.2%	
	Optimizer Output	800,980.7	-1.2%	
	Optimal DC Output	797,637.8	-0.4%	
	Constrained DC Output	795,945.0	-0.2%	
	Inverter Output	783,991.1	-1.5%	
	Energy to Grid		780,071.1	-0.5%
	Temperature Metrics			
	Avg. Operating Ambient Temp		10.4 °C	
	Avg. Operating Cell Temp		29.3 °C	
Simulation Metrics				
	Operating Hours	4698		
	Solved Hours	4698		

☁ Condition Set												
Description		Condition Set 1										
Weather Dataset		TMY, 10km Grid (41.95,-121.55), 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	
	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	
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		
	BVM7612M-530-H-HC (1500V) (Boviet Solar)							HelioScope		Spec Sheet Characterization, PAN		
	BVM7612M-530-H-HC-BF-DG (1000V) (2023) (Boviet Solar)							HelioScope		Spec Sheet Characterization, PAN		
	BVM7612M-530-H-HC-BF-DG (1500V) (2023) (Boviet Solar)							HelioScope		Spec Sheet Characterization, PAN		
Component Characterizations	Device						Uploaded By		Characterization			
	SE80KUS (2022) (SolarEdge)						HelioScope		Spec Sheet			
	S1201 (SolarEdge)						HelioScope		Mfg Spec Sheet			

📦 Components		
Component	Name	Count
Inverters	SE80KUS (2022) (SolarEdge)	5 (400.0 kW)
Strings	10 AWG (Copper)	30 (7,967.6 ft)
Optimizers	S1201 (SolarEdge)	480 (576.0 kW)
Module	Boviet Solar, BVM7612M-530-H-HC (1500V) (530W)	416 (220.5 kW)
Module	Boviet Solar, BVM7612M-530-H-HC-BF-DG (1000V) (2023) (530W)	380 (201.4 kW)
Module	Boviet Solar, BVM7612M-530-H-HC-BF-DG (1500V) (2023) (530W)	148 (78.4 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	13-32	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	10°	180.77116°	0.0 ft	1x1	208	208	110.2 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	10°	0.80315924°	0.0 ft	1x1			0
Field Segment 3	Flush Mount	Portrait (Vertical)	10°	180.70299°	0.0 ft	1x1	255	255	135.2 kW
Field Segment 4	Flush Mount	Portrait (Vertical)	10°	180.02924°	0.0 ft	1x1	125	125	66.3 kW
Field Segment 5	Flush Mount	Portrait (Vertical)	10°	0.94567984°	0.0 ft	1x1			0
Field Segment 6	Flush Mount	Portrait (Vertical)	10°	1.3427906°	0.0 ft	1x1			0
Field Segment 7	Flush Mount	Portrait (Vertical)	10°	180.72946°	0.0 ft	1x1	148	148	78.4 kW
Field Segment 8	Flush Mount	Portrait (Vertical)	10°	0.7347905°	0.0 ft	1x1			0
Field Segment 9	Flush Mount	Portrait (Vertical)	2°	270.50366°	0.0 ft	1x1			0
Field Segment 10	Flush Mount	Portrait (Vertical)	10°	180.53978°	0.0 ft	1x1			0
Field Segment 11	Flush Mount	Portrait (Vertical)	10°	0.9840459°	0.0 ft	1x1			0
Field Segment 12	Flush Mount	Portrait (Vertical)	10°	180.22629°	0.0 ft	1x1			0
Field Segment 13	Flush Mount	Portrait (Vertical)	10°	180°	0.0 ft	1x1			0
Field Segment 1 (copy)	Flush Mount	Portrait (Vertical)	10°	180.77116°	0.0 ft	1x1	208	208	110.2 kW
Field Segment 2 (copy)	Flush Mount	Portrait (Vertical)	10°	0.80315924°	0.0 ft	1x1			0

📍 Detailed Layout



📍 Shading Heatmap



☰ Shading by Field Segment

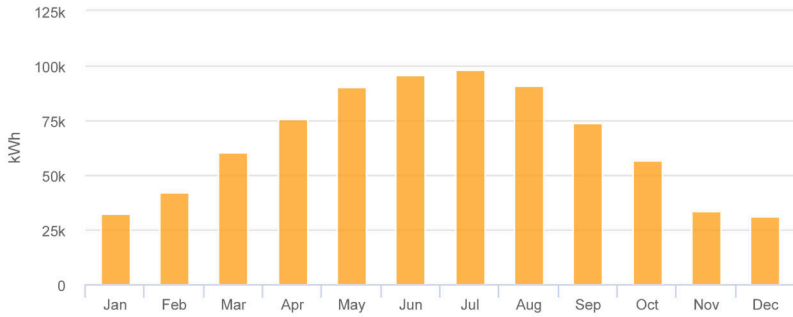
Description	Tilt	Azimuth	Modules	Nameplate	Shaded Irradiance	AC Energy	TOF ²	Solar Access	Avg TSRF ²
Field Segment 1	10.0°	180.8°	208	110.2 kWp	1,894.0kWh/m ²	171.9 MWh ¹	91.7%	99.9%	91.7%
Field Segment 3	10.0°	180.7°	255	135.2 kWp	1,895.6kWh/m ²	210.8 MWh ¹	91.7%	100.0%	91.7%
Field Segment 4	10.0°	180.0°	125	66.3 kWp	1,895.7kWh/m ²	103.4 MWh ¹	91.7%	100.0%	91.7%
Field Segment 7	10.0°	180.7°	148	78.4 kWp	1,886.9kWh/m ²	122.0 MWh ¹	91.7%	99.5%	91.3%
Field Segment 1 (copy)	10.0°	180.8°	208	110.2 kWp	1,895.5kWh/m ²	172.0 MWh ¹	91.7%	100.0%	91.7%
Totals, weighted by kWp			944	500.3 kWp	1,893.9kWh/m²	780.1 MWh	91.7%	99.9%	91.6%

¹ approximate, varies based on inverter performance
² based on location Optimal POA Irradiance of 2,066.5kWh/m² at 38.3° tilt and 181.8° azimuth

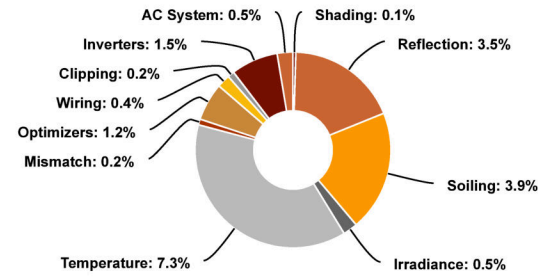
Solar Access by Month

Description	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Field Segment 1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Field Segment 7	99%	99%	99%	100%	100%	100%	100%	100%	100%	100%	99%	98%
Field Segment 1 (copy)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
AC Power (kWh)	32,163.1	41,959.7	60,256.0	75,533.7	90,487.0	95,567.4	98,025.7	90,724.0	73,707.7	56,811.1	33,727.2	31,108.4

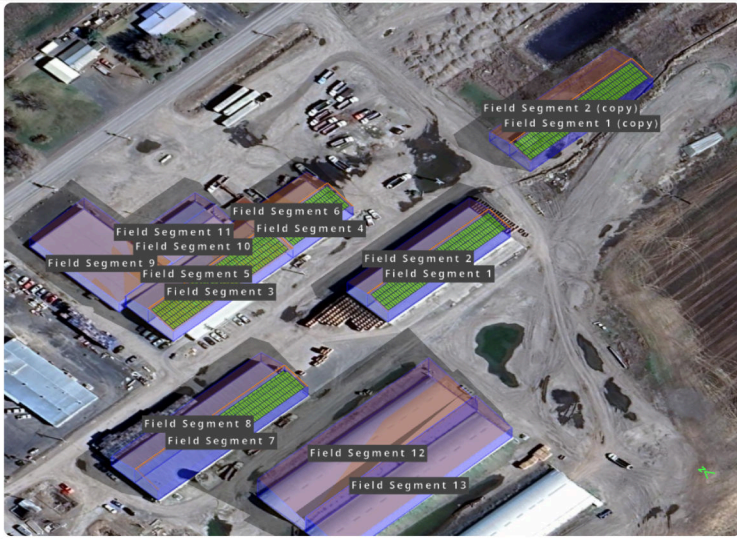
Monthly Production



Sources of System Loss



Southwestern Angle



Southeastern Angle

