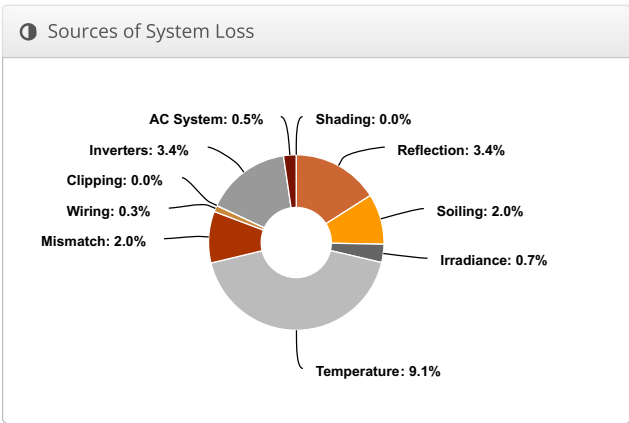
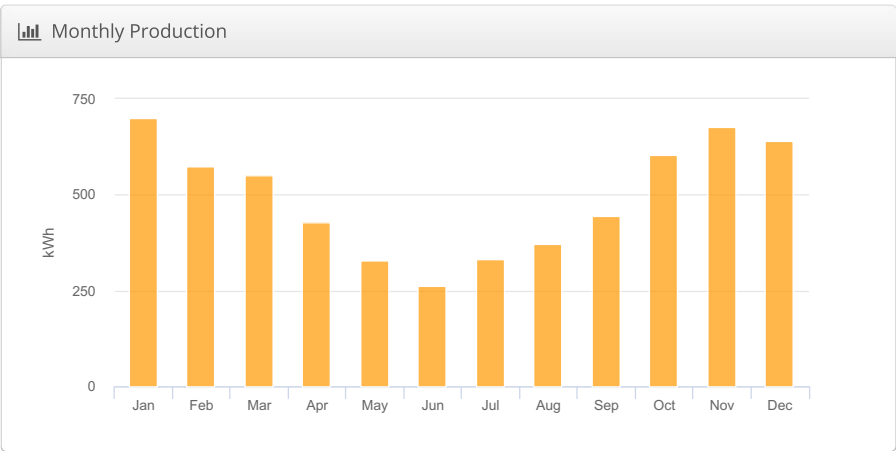
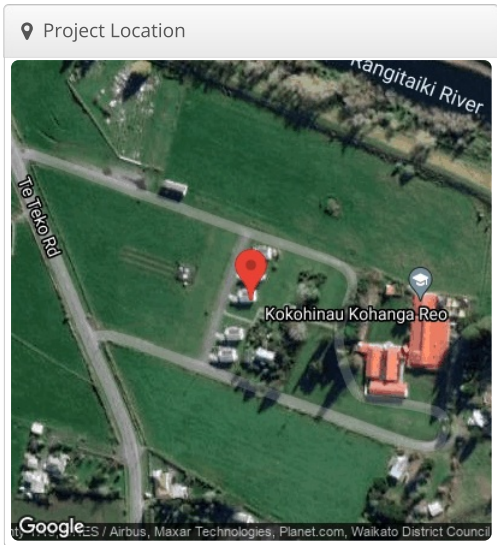


Design 1 Kokohinau Marae, Kokohinau Marae Te Teko 3193

Report	
Project Name	Kokohinau Marae
Project Address	Kokohinau Marae Te Teko 3193
Prepared By	ASIF NASIM asif@tmre.nz

System Metrics	
Design	Design 1
Module DC Nameplate	4.80 kW
Inverter AC Nameplate	4.60 kW Load Ratio: 1.04
Annual Production	5.911 MWh
Performance Ratio	80.2%
kWh/kWp	1,231.5
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	aefb703db8-36b21dfb41-c46179cfd5-d26d482e39



Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,387.3	
	POA Irradiance	1,535.3	10.7%
	Shaded Irradiance	1,535.3	0.0%
	Irradiance after Reflection	1,482.5	-3.4%
	Irradiance after Soiling	1,452.9	-2.0%
	Total Collector Irradiance	1,452.9	0.0%
Energy (kWh)	Nameplate	6,976.9	
	Output at Irradiance Levels	6,926.6	-0.7%
	Output at Cell Temperature Derate	6,293.0	-9.1%
	Output After Mismatch	6,164.4	-2.0%
	Optimal DC Output	6,148.8	-0.3%
	Constrained DC Output	6,148.7	0.0%
	Inverter Output	5,941.1	-3.4%
	Energy to Grid	5,911.4	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		16.2 °C
	Avg. Operating Cell Temp		32.5 °C
Simulation Metrics			
	Operating Hours	4563	
	Solved Hours	4563	

☁ Condition Set													
Description	Condition Set 1												
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)												
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						
	STP300-20/Wfh (Suntech)				Folsom Labs		Spec Sheet Characterization, PAN						
Component Characterizations	Device						Uploaded By		Characterization				
	GW5048D-ES (Jiangsu Goodwe Power Supply Technology)						Folsom Labs		Default Characterization				

📦 Components		
Component	Name	Count
Inverters	GW5048D-ES (Jiangsu Goodwe Power Supply Technology)	1 (4.60 kW)
Strings	10 AWG (Copper)	2 (45.5 m)
Module	Suntech, STP300-20/Wfh (300W)	16 (4.80 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	4-14	Along Racking

🏗 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	18.4°	0°	0.0 m	1x1	16	16	4.80 kW
Field Segment 1 (copy)	Flush Mount	Portrait (Vertical)	18.4°	180°	0.0 m	1x1			0

Detailed Layout

