Angle Vale School Building G AS Built Angle Vale School Building G AS Built, 23 Riverbanks Rd, Angle Vale SA 5117, Australia

## 🔧 Report

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Project Name	Angle Vale School Building G AS Built
Project Address	23 Riverbanks Rd, Angle Vale SA 5117, Australia
Prepared By	Peter Smith chris.bull@westsidegroup.com.au

Westside Energy

📊 System Metrics

Design	Angle Vale School Building G AS Built
Module DC Nameplate	150.3 kW
Inverter AC Nameplate	119.6 kW Load Ratio: 1.26
Annual Production	205.4 MWh
Performance Ratio	78.8%
kWh/kWp	1,366.3
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	f32791ae32-2bc0e40f0c-8e3c28cfc5-f831c3d7b8

📍 Project Location

📊 Monthly Production

◑ Sources of System Loss
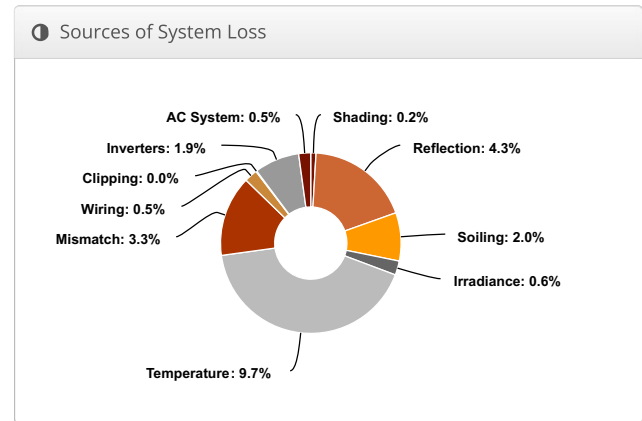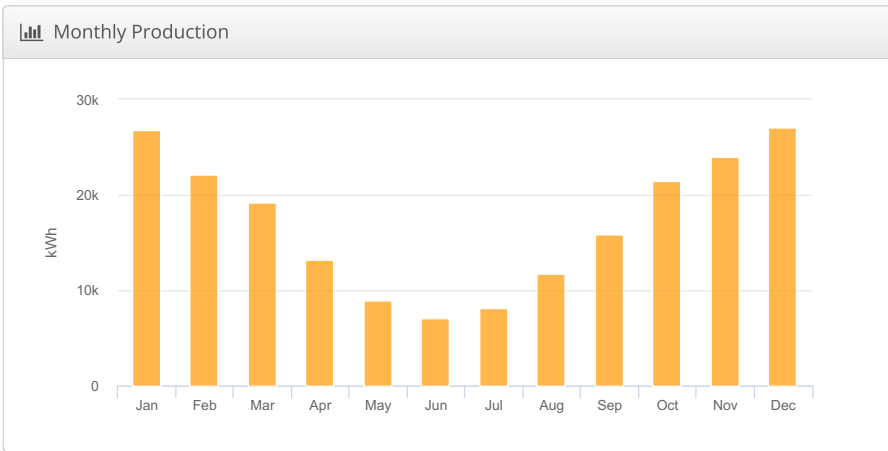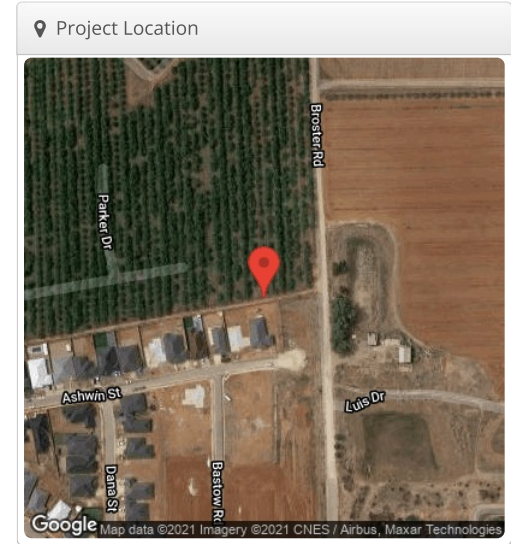
⚡ Annual Production

	Description	Output	% Delta
Irradiance (kWh/m^2)	Annual Global Horizontal Irradiance	1,799.3	
	POA Irradiance	1,732.9	-3.7%
	Shaded Irradiance	1,729.2	-0.2%
	Irradiance after Reflection	1,654.7	-4.3%
	Irradiance after Soiling	1,621.6	-2.0%
	Total Collector Irradiance	**1,621.6**	**0.0%**
Energy (kWh)	Nameplate	243,871.0	
	Output at Irradiance Levels	242,444.6	-0.6%
	Output at Cell Temperature Derate	218,845.4	-9.7%
	Output After Mismatch	211,531.4	-3.3%
	Optimal DC Output	210,386.2	-0.5%
	Constrained DC Output	210,312.9	0.0%
	Inverter Output	206,387.4	-1.9%
	Energy to Grid	**205,355.5**	**-0.5%**
Temperature Metrics			
	Avg. Operating Ambient Temp		19.5 °C
	Avg. Operating Cell Temp		36.6 °C
Simulation Metrics			
	Operating Hours		4583
	Solved Hours		4583

☁ 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
	LR4-72HPH-450(2019) (Longi Solar)	Folsom Labs	Spec Sheet Characterization, PAN
Component Characterizations	Device	Uploaded By	Characterization
	SG30CX (Sungrow)	Folsom Labs	Default Characterization

🖨 Components

Component	Name	Count
Inverters	SG30CX (Sungrow)	4 (119.6 kW)
Strings	10 AWG (Copper)	20 (2,021.2 m)
Module	Longi Solar, LR4-72HPH-450(2019) (450W)	334 (150.3 kW)

⊓ Wiring Zones

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

⊞ Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	78	78	35.1 kW
Field Segment 1 (copy)	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	52	52	23.4 kW
Field Segment 1 (copy 1)	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	64	64	28.8 kW
Field Segment 1 (copy 2)	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	100	100	45.0 kW
Field Segment 1 (copy 3)	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	20	20	9.00 kW
Field Segment 1 (copy 4)	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	12	12	5.40 kW
Field Segment 1 (copy 5)	Flush Mount	Landscape (Horizontal)	5°	178.5°	0.0 m	1x1	8	8	3.60 kW