


## Aldinga Building G - AS Built Aldinga Superschool, Port Rd, Aldinga SA 5173, Australia

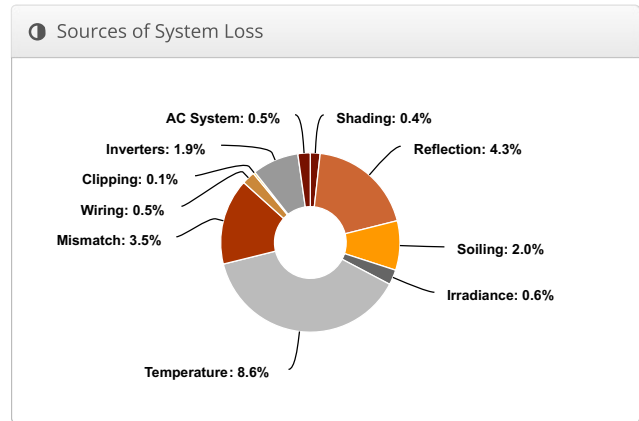
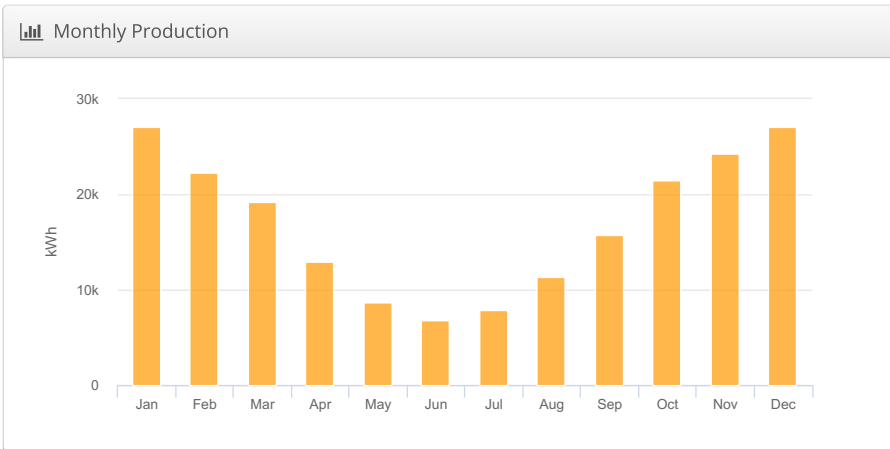
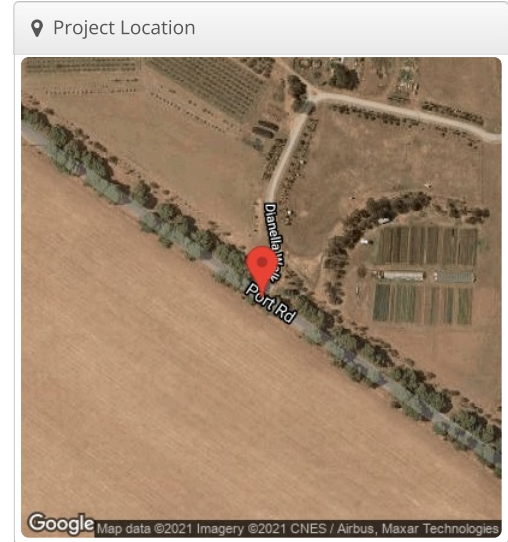
**Report**

Project Name	Aldinga Superschool
Project Address	Port Rd, Aldinga SA 5173, Australia
Prepared By	Peter Smith chris.bull@westsidegroup.com.au



**System Metrics**

Design	Aldinga Building G - AS Built
Module DC Nameplate	150.3 kW
Inverter AC Nameplate	119.6 kW Load Ratio: 1.26
Annual Production	204.7 MWh
Performance Ratio	79.5%
kWh/kWp	1,361.9
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	f32791ae32-2bc0e40f0c-8e3c28cfc5-f831c3d7b8



**Annual Production**

	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,780.3	
	POA Irradiance	1,713.5	-3.7%
	Shaded Irradiance	1,706.7	-0.4%
	Irradiance after Reflection	1,632.8	-4.3%
	Irradiance after Soiling	1,600.1	-2.0%
	<b>Total Collector Irradiance</b>	<b>1,600.1</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	240,648.7	
	Output at Irradiance Levels	239,177.3	-0.6%
	Output at Cell Temperature Derate	218,566.2	-8.6%
	Output After Mismatch	210,950.7	-3.5%
	Optimal DC Output	209,835.7	-0.5%
	Constrained DC Output	209,667.6	-0.1%
	Inverter Output	205,723.4	-1.9%
	<b>Energy to Grid</b>	<b>204,694.8</b>	<b>-0.5%</b>
<b>Temperature Metrics</b>			
	Avg. Operating Ambient Temp		17.1 °C
	Avg. Operating Cell Temp		33.9 °C
<b>Simulation Metrics</b>			
	Operating Hours	4575	
	Solved Hours	4575	

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

## Components

Component	Name	Count
Inverters	SG30CX (Sungrow)	4 (119.6 kW)
Strings	10 AWG (Copper)	20 (1,938.1 m)
Module	Longi Solar, LR4-72HPH-450(2019) (450W)	334 (150.3 kW)

## Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	15-19	Along Racking

## Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	78	78	35.1 kW
Field Segment 1 (copy)	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	100	100	45.0 kW
Field Segment 1 (copy 1)	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	52	52	23.4 kW
Field Segment 1 (copy 2)	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	64	64	28.8 kW
Field Segment 1 (copy 3)	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	8	8	3.60 kW
Field Segment 1 (copy 4)	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	12	12	5.40 kW
Field Segment 1 (copy 5)	Flush Mount	Landscape (Horizontal)	5°	177°	0.0 m	1x1	20	20	9.00 kW

Detailed Layout

