

Design 1 Aberfoyle RC, 3 The Mall, Aberfoyle Park

Report

Project Name	Aberfoyle RC
Project Address	3 The Mall, Aberfoyle Park
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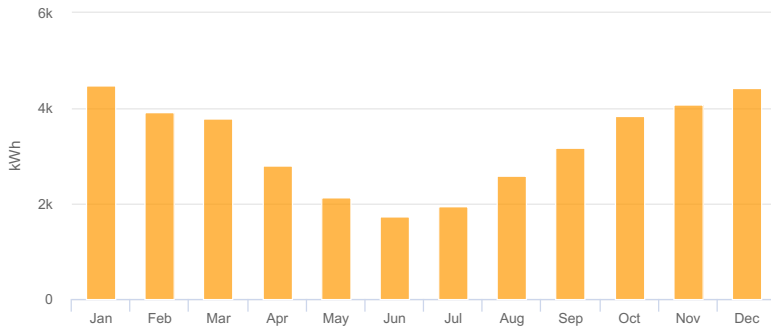
System Metrics

Design	Design 1
Module DC Nameplate	26.6 kW
Inverter AC Nameplate	17.5 kW Load Ratio: 1.52
Annual Production	38.91 MWh
Performance Ratio	73.1%
kWh/kWp	1,460.4
Weather Dataset	TMY, 10km Grid, meteonorm (meteonorm)
Simulator Version	125ee4a60d-4598ccbfde-ddff206053-649f60a15b

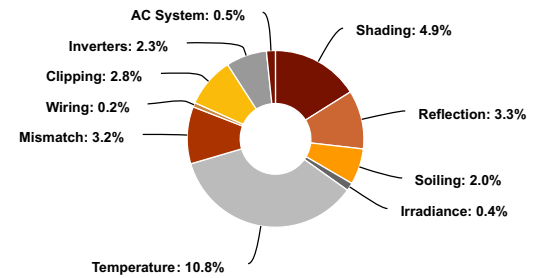
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,790.2	
	POA Irradiance	1,996.5	11.5%
	Shaded Irradiance	1,899.2	-4.9%
	Irradiance after Reflection	1,837.4	-3.3%
	Irradiance after Soiling	1,800.6	-2.0%
	Total Collector Irradiance	1,800.4	0.0%
Energy (kWh)	Nameplate	47,962.2	
	Output at Irradiance Levels	47,752.0	-0.4%
	Output at Cell Temperature Derate	42,601.2	-10.8%
	Output After Mismatch	41,250.3	-3.2%
	Optimal DC Output	41,150.0	-0.2%
	Constrained DC Output	40,006.7	-2.8%
	Inverter Output	39,101.4	-2.3%
	Energy to Grid	38,905.9	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		18.9 °C
	Avg. Operating Cell Temp		38.4 °C
Simulation Metrics			
	Operating Hours	4573	
	Solved Hours	4573	

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							
	LR6-72PH-370M (Longi Solar)	Folsom Labs			Spec Sheet Characterization, PAN							
Component Characterizations	Device	Uploaded By			Characterization							
	SYMO 20.0-3-M (400V) (Fronius)	Folsom Labs			Spec Sheet							

Components		
Component	Name	Count
Inverters	SYMO 20.0-3-M (400V) (Fronius)	1 (17.5 kW)
Strings	10 AWG (Copper)	4 (163.2 m)
Module	Longi Solar, LR6-72PH-370M (370W)	72 (26.6 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	6-19	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	20°	1.5°	0.0 m	1x1	18	18	6.66 kW
Field Segment 1 (copy)	Flush Mount	Portrait (Vertical)	20°	1.5°	0.0 m	1x1	23	23	8.51 kW
Field Segment 1 (copy 1)	Flush Mount	Portrait (Vertical)	20°	1.5°	0.0 m	1x1	25	25	9.25 kW
Field Segment 1 (copy 2)	Flush Mount	Landscape (Horizontal)	20°	1.5°	0.0 m	1x1	6	6	2.22 kW

