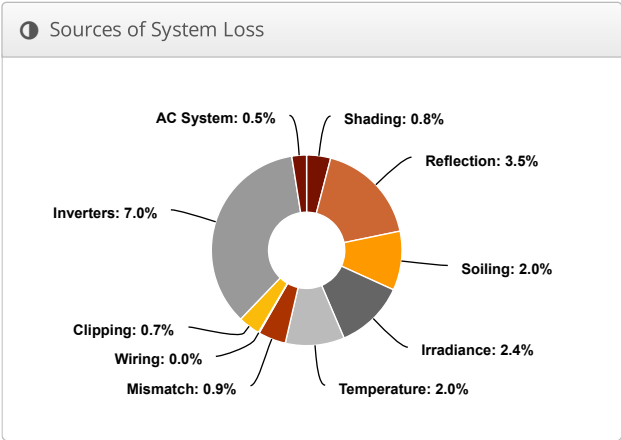
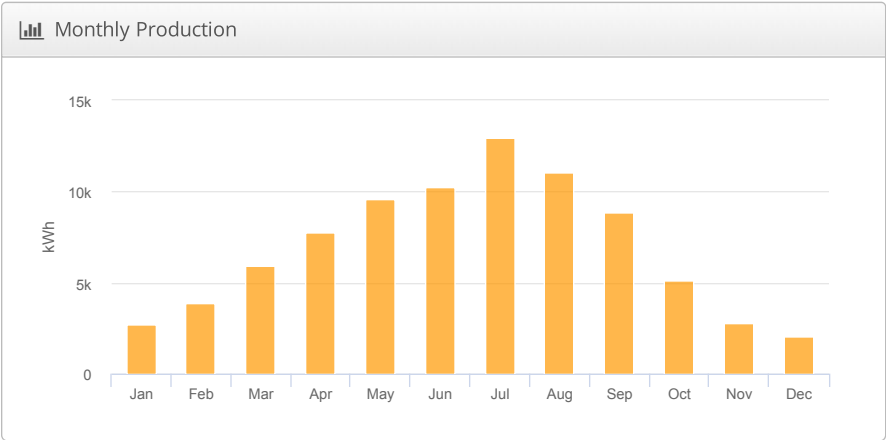
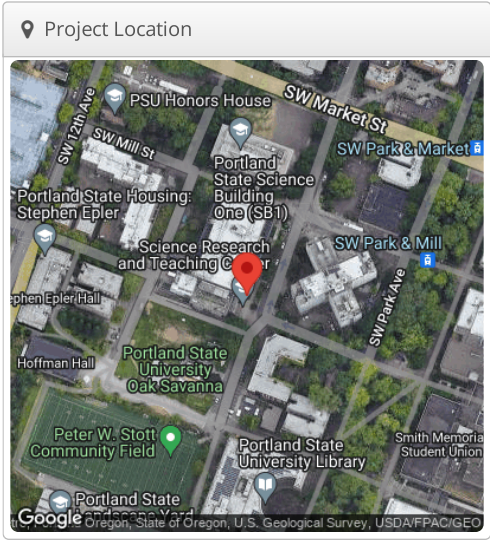


## STRC PDX Solar, 1719 SW 10th Ave, Portland, OR 97201

Report	
Project Name	PDX Solar
Project Description	STRC
Project Address	1719 SW 10th Ave, Portland, OR 97201
Prepared By	Lorin Basche lbasche@pdx.edu

System Metrics	
Design	STRC
Module DC Nameplate	71.8 kW
Inverter AC Nameplate	58.5 kW Load Ratio: 1.23
Annual Production	82.89 MWh
Performance Ratio	81.8%
kWh/kWp	1,154.3
Weather Dataset	TMY, 10km grid (45.55,-122.65), NREL (prospector)
Simulator Version	8716a40dd1-36458414d6-5d33bc25d0-71a0d471a2



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,284.6	
	Adjusted Global Horizontal Irradiance	1,311.6	2.1%
	POA Irradiance	1,411.9	7.7%
	Shaded Irradiance	1,400.5	-0.8%
	Irradiance after Reflection	1,351.0	-3.5%
	Irradiance after Soiling	1,324.0	-2.0%
	Total Collector Irradiance	1,324.0	0.0%
Energy (kWh)	Nameplate	95,282.3	
	Output at Irradiance Levels	93,038.2	-2.4%
	Output at Cell Temperature Derate	91,176.7	-2.0%
	Output After Mismatch	90,321.7	-0.9%
	Optimal DC Output	90,295.9	0.0%
	Constrained DC Output	89,624.5	-0.7%
	Inverter Output	83,307.1	-7.0%
	Energy to Grid	82,890.5	-0.5%
Temperature Metrics			
Avg. Operating Ambient Temp		13.3 °C	
Avg. Operating Cell Temp		20.8 °C	
Simulation Metrics			
Operating Hours		4659	
Solved Hours		4659	

☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km grid (45.55,-122.65), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Spectral Adjustment Model (CdTe cells only)	First Solar Spectral Adjustment by Dew Point Temperature											
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	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%											
Trackers	Maximum Angle							Backtracking				
	60°							Enabled				
Module Characterizations	Module					Uploaded By		Characterization				
	FS-6430-PA October2020 (First Solar)					HelioScope		FS-6430A-P CdTe October2020_v687.PAN, PAN				
Component Characterizations	Device					Uploaded By		Characterization				
	SG1.5KTL (Sungrow)					HelioScope		Default Characterization				

🗄 Components		
Component	Name	Count
Inverters	SG1.5KTL (Sungrow)	39 (58.5 kW)
Strings	10 AWG (Copper)	100 (4,675.4 ft)
Module	First Solar, FS-6430-PA October2020 (430W)	167 (71.8 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-2	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	180°	2.0 ft	1x1	167	167	71.8 kW

📍 Detailed Layout

