GATECH-BUNGER-HENRY GeorgiaTech Lab, 778 Atlantic Dr NW, Atlanta, GA 30339

Report

Project Name	GeorgiaTech Lab
Project Address	778 Atlantic Dr NW, Atlanta, GA 30339
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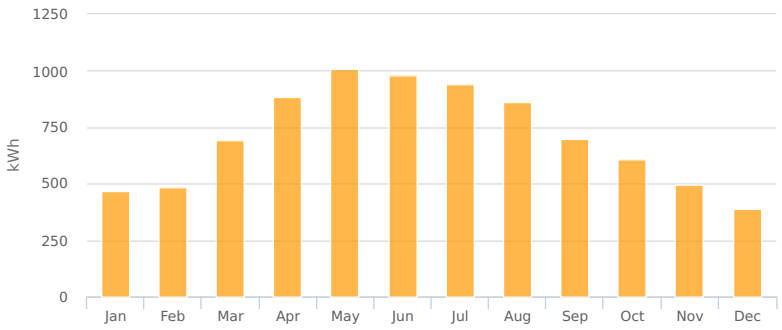
System Metrics

Design	GATECH-BUNGER-HENRY
Module DC Nameplate	6.72 kW
Inverter AC Nameplate	10.8 kW Load Ratio: 0.62
Annual Production	8.501 MWh
Performance Ratio	71.6%
kWh/kWp	1,265.0
Weather Dataset	TMY, 10km grid (33.75,-84.35), NREL (prospector)
Simulator Version	a0e5f29d1e-f5fec127fc-fefe05aae2-c2304f0ce1

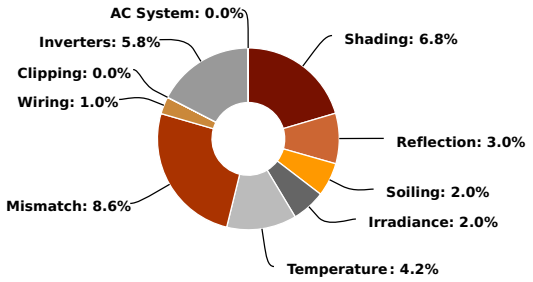
Project Location

Monthly Production



Month	GHI (kWh/m²)	POA (kWh/m²)	Shaded (kWh/m²)	Nameplate (kWh)	Grid (kWh)
January	84.1	101.3	90.5	579.4	465.7
February	99.1	113.9	100.2	644.3	483.6
March	134.4	145.7	132.7	857.1	694.4
April	167.7	174.3	163.7	1,059.8	883.8
May	195.4	197.1	188.2	1,218.0	1,005.2
June	194.2	194.1	186.9	1,210.7	981.6
July	186.6	187.7	181.0	1,171.3	937.6
August	171.9	177.1	168.7	1,091.8	862.9
September	139.5	149.0	139.4	900.4	697.2
October	118.8	134.1	120.4	777.0	605.4
November	90.4	107.3	97.2	624.0	493.8
December	70.3	84.7	76.6	489.1	389.5

Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,652.3	
	POA Irradiance	1,766.3	6.9%
	Shaded Irradiance	1,645.5	-6.8%
	Irradiance after Reflection	1,596.1	-3.0%
	Irradiance after Soiling	1,564.2	-2.0%
	Total Collector Irradiance	**1,564.2**	**0.0%**
Energy (kWh)	Nameplate	10,622.8	
	Output at Irradiance Levels	10,410.1	-2.0%
	Output at Cell Temperature Derate	9,976.9	-4.2%
	Output After Mismatch	9,120.4	-8.6%
	Optimal DC Output	9,027.5	-1.0%
	Constrained DC Output	9,026.4	0.0%
	Inverter Output	8,502.5	-5.8%
	Energy to Grid	**8,500.6**	**0.0%**
Temperature Metrics			
	Avg. Operating Ambient Temp		18.1 °C
	Avg. Operating Cell Temp		26.2 °C
Simulation Metrics			
	Operating Hours		4698
	Solved Hours		4698

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km grid (33.75,-84.35), NREL (prospector)											
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	Characterization										
	SW 280 MONO BLACK (SolarWorld)	Default Characterization, PAN										
Component Characterizations	Device	Characterization										
	PVI-3.6-OUTD-S-US-A (277V) (ABB (Power-One))	CEC 2014-08-16										

Components

Component	Name	Count
Inverters	PVI-3.6-OUTD-S-US-A (277V) (ABB (Power-One))	3 (10.8 kW)
AC Panels	1 input AC Panel	3
AC Home Runs	10 AWG (Copper)	6 (292.3 ft)
Combiners	1 input Combiner	3
Strings	10 AWG (Copper)	3 (1,205.2 ft)
Modules	SolarWorld, SW 280 MONO BLACK (280W)	24 (6.72 kW)

Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
FRONT-8	1	8-8	Along Racking
MIDDLE-8	1	8-8	Along Racking
BACK-8	1	8-8	Along Racking

Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
FRONT	Fixed Tilt	Horizontal (Landscape)	10°	180°	1.5 ft	1x1	8	8	2.24 kW
MIDDLE	Fixed Tilt	Horizontal (Landscape)	10°	180°	1.5 ft	1x1	8	8	2.24 kW
BACK	Fixed Tilt	Horizontal (Landscape)	10°	180°	1.5 ft	1x1	8	8	2.24 kW

Detailed Layout