

FCES

Lakeview Court 101, Frankfort, Kentucky, 40601, United States | Apr 3, 2023




SYSTEM OVERVIEW


 **169** PV modules


 **4** Inverters


 **169** Optimizers


SIMULATION RESULTS


 Installed DC Power
59.15 kWp





 Max Achieved AC Power
44.20 kW

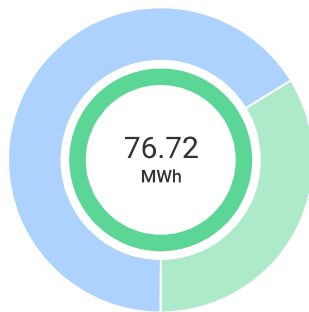

 Annual Energy Production
76.72 MWh


 CO2 Emission Saved
54.24 t





 Equivalent Trees Planted
2,491

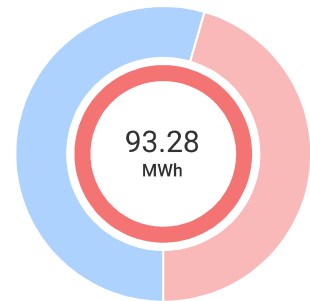
SYSTEM PRODUCTION

-  Total Production - 100 %
76.72 MWh
-  Self-consumption - 66 %
50.86 MWh
-  Export - 34 %
25.86 MWh



CONSUMPTION

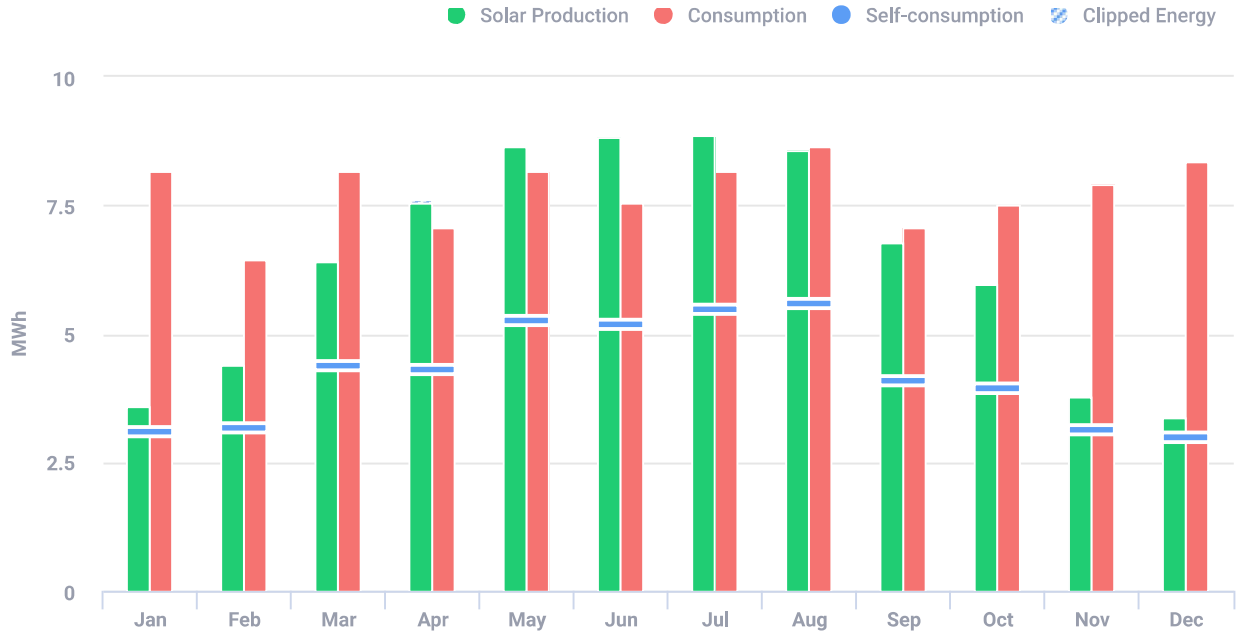
-  Total Consumption - 100 %
93.28 MWh
-  Self-consumption - 55 %
50.86 MWh
-  Import - 45 %
42.42 MWh



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ESTIMATED MONTHLY ENERGY



Total clipped energy: 0.28%

Month	Solar Production (kWh)	Consumption (kWh)	Self-consumption (kWh)	Clipped Energy (kWh)
Jan	3,594	8,174	3,099	-
Feb	4,408	6,439	3,193	-
Mar	6,410	8,174	4,408	36
Apr	7,537	7,083	4,318	77
May	8,643	8,174	5,286	36
Jun	8,837	7,543	5,213	38
Jul	8,851	8,174	5,481	13
Aug	8,555	8,650	5,615	-
Sep	6,766	7,083	4,101	11
Oct	5,978	7,509	3,960	-
Nov	3,782	7,911	3,167	-
Dec	3,357	8,365	3,014	-





PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
59	REC Solar AS, REC 350 TP2S 72 (TwinPeak 2S)	20.7 kWp			286°	25°

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PV MODULES (CONTINUED)

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
54	REC Solar AS, REC 350 TP2S 72 (TwinPeak 2S)	18.9 kWp			196°	19°
56	REC Solar AS, REC 350 TP2S 72 (TwinPeak 2S)	19.6 kWp			106°	27°
Total:	169	59.2 kWp				

ESTIMATED BILL SAVINGS YEAR 1


Annual			
Current Annual Bill	Annual Bill with SolarEdge	Net Bill Annual Savings	Bill Offset
\$ 10,526.56	\$ 3,091.04	\$ 7,435.52	70.64 %

Estimated Net Lifetime Bill Savings **\$ 152,556**

Utility Provider: **Kentucky Utilities Co** | Utility Rate: **General Service (Single Phase) (1) edit 1-06-2023 (0.11255 \$/kWh) (from 1/31/2020)**

Export Rate: **NMS-2 (0.0736 \$/kWh) (9/23/2021 - 2/16/2049)**











ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 xSE11400H-US 15.05kW 132% Oversizing	∩ 2 x strings	 14 x P401	 14
	∩ 1 x string	 15 x P401	 15
 1 xSE11400H-US 14.37kW 126% Oversizing	∩ 1 x string	 11 x P401	 11
	∩ 2 x strings	 16 x P401	 16

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ELECTRICAL DESIGN (CONTINUED)

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 x SE11400H-US 13.79kW 121% Oversizing	∅ 1 x string	 13 x P401	 13
	∅ 1 x string	 14 x P401	 14
	∅ 1 x string	 17 x P401	 17
<hr/>			
 1 x SE10000H-US 13.57kW 136% Oversizing	∅ 3 x strings	 13 x P401	 13

SYSTEM LOSS DIAGRAM



*This value is calculated based on custom input

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SIMULATION PARAMETERS



LOCATION & GRID

Time zone	EDT (New_York)
Weather station	Lexington (27.93 km away)
Station altitude	296 m
Station data source	Meteonorm 7.1
Grid	240V split phase



LOSS FACTORS

Near shading	Enabled
Albedo	0.20
Soiling/Snow	0.5%
Incidence angle modifier (IAM), ASHRAE b0 param.	0.05
Thermal loss factor U _c (const) Flush mount	20
Thermal loss factor U _c (const) Tilted	29
LID loss factor	0%
System unavailability	0%