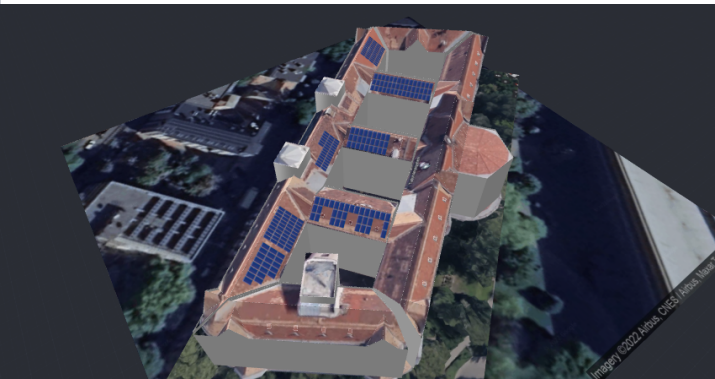
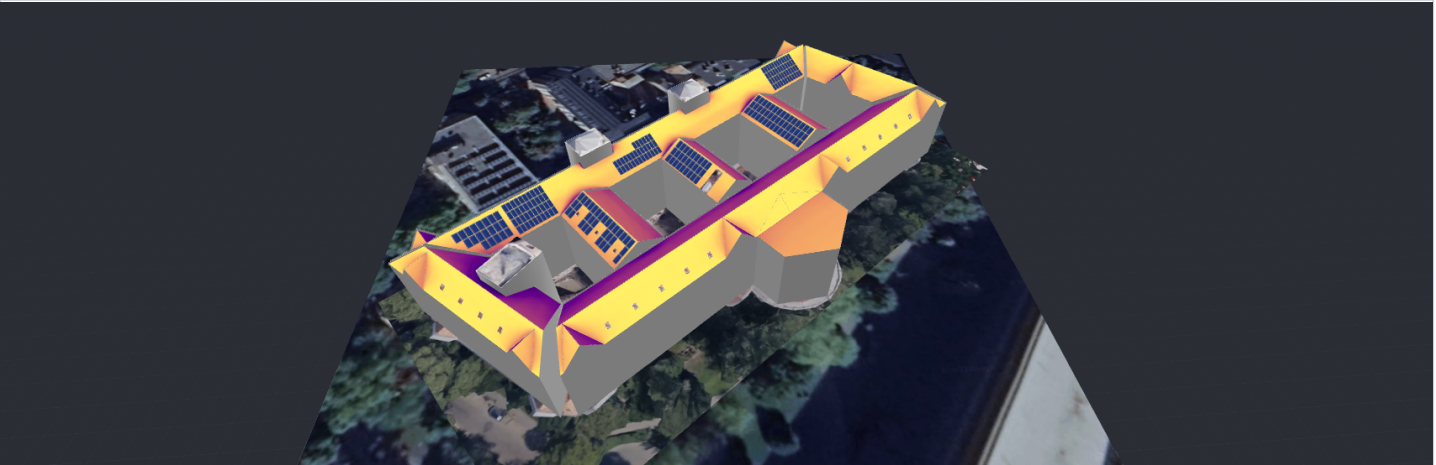


SZTE BTK

Egyetem utca 2, Szeged, 6722, Hungary | Nov 15, 2022



SYSTEM OVERVIEW



245 PV modules



2 Inverters



245 Optimizers

SIMULATION RESULTS



Installed DC Power

81.25 kWp



Max Achieved AC Power

74.73 kW



Annual Energy Production

103.54 MWh



CO2 Emission Saved

26.92 t



Equivalent Trees Planted

1,236



Max Achieved DC Power

79.49 kW



DC/AC Oversizing

106 %



Max Active AC Power

75.00 kW



Performance Ratio

84 %



Performance Index

1,274 kWh/kWp

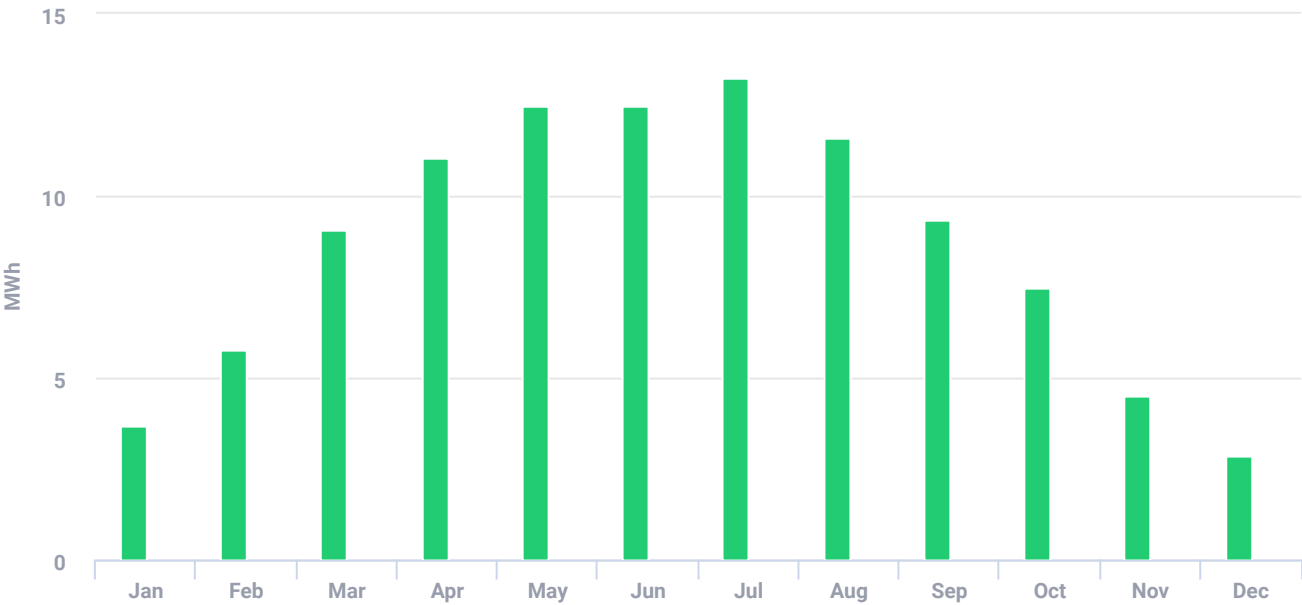
SZTE BTK

Egyetem utca 2, Szeged, 6722, Hungary | Nov 15, 2022



ESTIMATED MONTHLY ENERGY

Solar Production Clipped Energy



Total clipped energy: 0.05%

PV MODULES






# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
20	Risen Energy Co. Ltd., RSM40-8-410M	8.2 kWp			142°	35°
27	Risen Energy Co. Ltd., RSM40-8-410M	11.1 kWp			232°	32°
120	SunPower, X20-250-BLK	30 kWp			142°	35°
78	Risen Energy Co. Ltd., RSM40-8-410M	32 kWp			232°	29°
Total:	245	81.3 kWp				

SZTE BTK

Egyetem utca 2, Szeged, 6722, Hungary | Nov 15, 2022

















BILL OF MATERIALS (BOM)

Items	Quantity	Price (Ft)	Total (Ft)
 SE25K	1	1026000.00	1,026,000.00
 SE50K Manager	1		
 S440	245		
 X20-250-BLK	120		
 RSM40-8-410M	125		

Total Price: Ft 1,026,000.00

ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 x SE50K Manager 49.55kW 99%	Center		
	⌋ 1 x string	 20 x S440	 20
	⌋ 2 x strings	 22 x S440	 22
	Left		
	⌋ 1 x string	 18 x S440	 18
	⌋ 1 x string	 27 x S440	 27
 1 x SE25K 29.94kW 120%	⌋ 1 x string	 16 x S440	 16
	⌋ 3 x strings	 40 x S440	 40

SZTE BTK

Egyetem utca 2, Szeged, 6722, Hungary | Nov 15, 2022



SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT+1 (Budapest)
Weather station	Szeged (3.17 km away)
Station altitude	74 m
Station data source	Meteonorm 7.1
Grid	400V L-L, 230V L-N



LOSS FACTORS

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