

029-2023 SE DSO GROSUPLJE 3 (ZADNJA)
Ob Grosupeljščici 28, Grosuplje, 1290, Slovenia | Feb 15, 2024



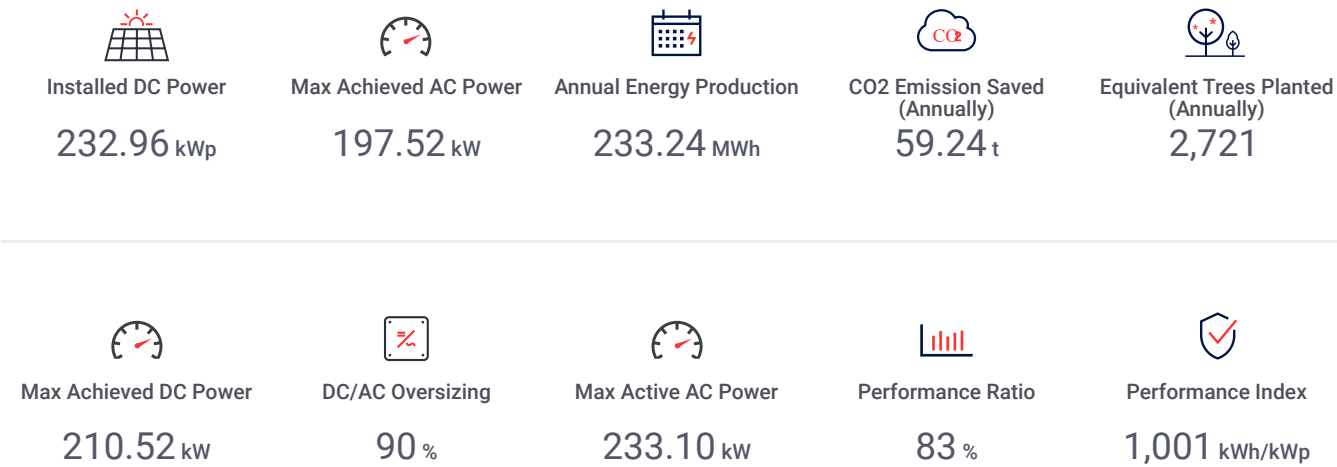
SYSTEM OVERVIEW

512 PV modules

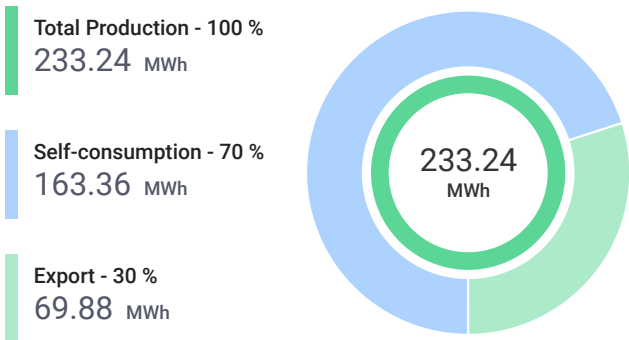
3 Inverters

259 Optimizers

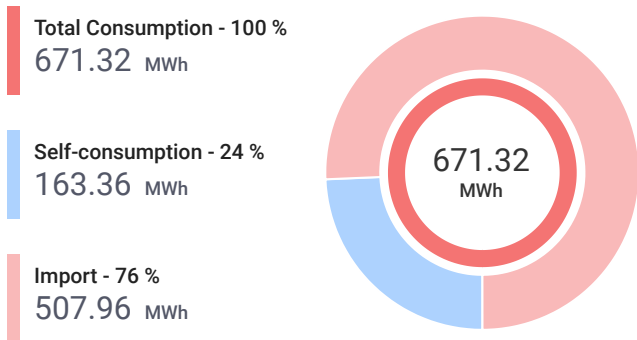
SIMULATION RESULTS



SYSTEM PRODUCTION



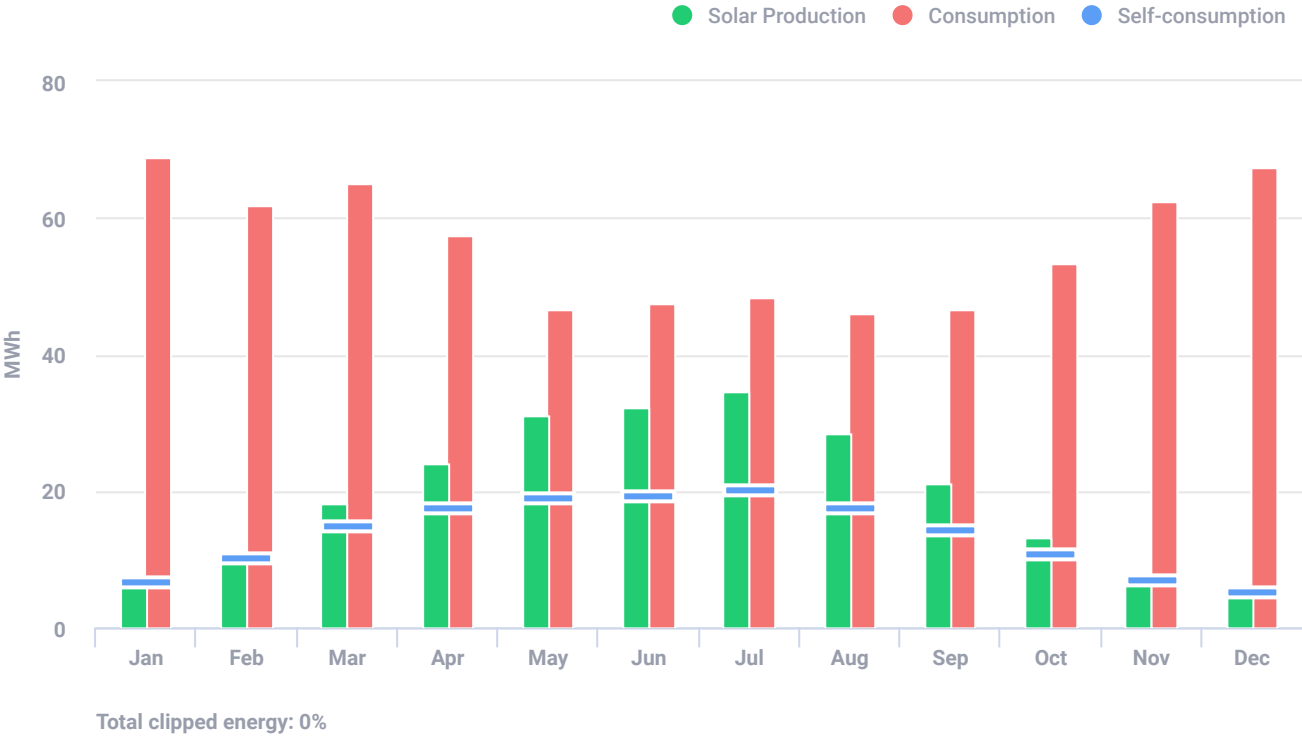
CONSUMPTION



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ESTIMATED MONTHLY ENERGY





















PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
30	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	13.7 kWp			281°	30°
9	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	4.1 kWp			101°	10°
34	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	15.5 kWp			234°	6°
31	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	14.1 kWp			234°	25°
10	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	4.6 kWp			143°	9°
23	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	10.5 kWp			234°	25°
39	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	17.7 kWp			234°	6°




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PV MODULES (CONTINUED)


# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
2	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	0.9 kWp			234°	6°
18	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	8.2 kWp			101°	30°
54	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	24.6 kWp			278°	29°
10	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	4.6 kWp			323°	9°
60	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	27.3 kWp			53°	9°
42	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	19.1 kWp			54°	6°
34	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	15.5 kWp			54°	5°
59	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	26.8 kWp			233°	9°
57	Risen Energy Co. Ltd., RSM144-7-455M (user-defined)	25.9 kWp			102°	30°
Total:	512	233 kWp				

BILL OF MATERIALS (BOM)

Items	Part Number	Quantity	Price (€)	Total (€)
 SE100K Synergy Manager		1		
 SE66.6K Synergy Manager		2		
 P950		259		

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BILL OF MATERIALS (BOM) (CONTINUED)

Items	Part Number	Quantity	Price (€)	Total (€)
	RSM144-7-455M	512		
		1		

SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT+1 (Ljubljana)
Weather station	Ljubljana (31.38 km away)
Station altitude	368 m
Station data source	Meteonorm 7.1
Grid	400V L-L, 230V L-N


















LOSS FACTORS

Near shading	Enabled
Albedo	0.20
Bi-Facial Albedo	0.30
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%

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ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
<div><div></div><div>1 xSE100K Synergy Manager Center Unit 88kW 88% Oversizing</div></div>	⌚ 1 x string	<div> 14 x P950 (2:1)</div>	<div> 28</div>
	⌚ 1 x string	<div> 18 x P950 (2:1)</div>	<div> 36</div>
	Left Unit		
	⌚ 1 x string	<div> 18 x P950 (2:1), 1 x P950 (1:1)</div>	<div> 37</div>
	⌚ 1 x string	<div> 18 x P950 (2:1)</div>	<div> 36</div>
	Right Unit		
	⌚ 2 x strings	<div> 17 x P950 (2:1)</div>	<div> 34</div>
<div><div></div><div>1 xSE66.6K Synergy Manager Center Unit 64.04kW 96% Oversizing</div></div>	⌚ 1 x string	<div> 14 x P950 (2:1), 1 x P950 (1:1)</div>	<div> 29</div>
	⌚ 1 x string	<div> 14 x P950 (2:1)</div>	<div> 28</div>
	⌚ 1 x string	<div> 18 x P950 (2:1)</div>	<div> 36</div>
	Left Unit		
	⌚ 1 x string	<div> 19 x P950 (2:1), 1 x P950 (1:1)</div>	<div> 39</div>
	⌚ 1 x string	<div> 18 x P950 (2:1)</div>	<div> 36</div>
<div><div></div><div>1 xSE66.6K Synergy Manager Center Unit 58.47kW 88% Oversizing</div></div>	⌚ 3 x strings	<div> 13 x P950 (2:1), 1 x P950 (1:1)</div>	<div> 27</div>
	Left Unit		
	⌚ 1 x string	<div> 15 x P950 (2:1)</div>	<div> 30</div>
	⌚ 1 x string	<div> 14 x P950 (2:1)</div>	<div> 28</div>