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Technical project overview

CWC MCC - Woodville Sure Start

Building project	CWC MCC - Woodville Sure Start
Date	10.10.2024
In-house project no.	PA_241010_626819
Editor	System Electrial Ltd
Link to configurator	Open link
Number of modules	44
Rated output	22 kWp

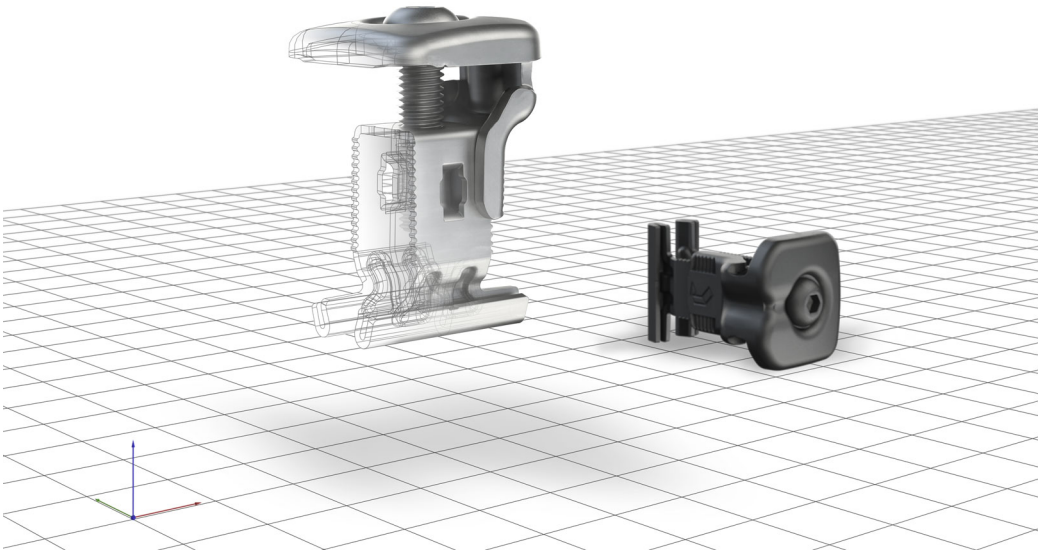


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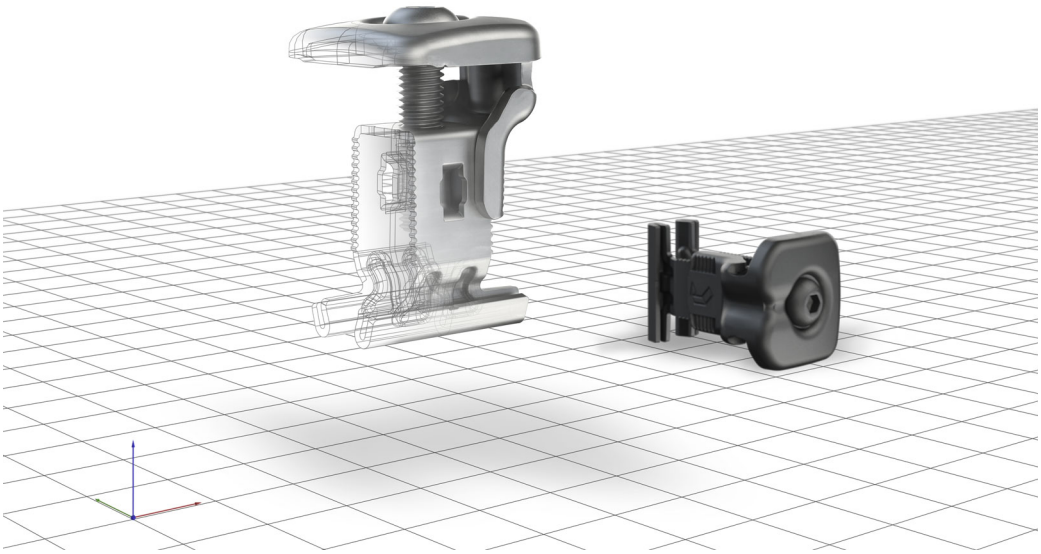
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Technical project overview

CWC MCC - Woodville Sure Start

Building project	CWC MCC - Woodville Sure Start
Address	Shirley Road 92, M8 0NE
Country	United Kingdom
Module Type	Shanghai JA Solar Technology Co. Ltd. - JAM66S30-500/MR (1500V)
Number of modules	44
Rated output	22 kWp
Mounting system	VarioSole+
Editor	System Electrial Ltd



LOCATION

Street	Shirley Road 92
City	M8 0NE
Country	United Kingdom

SURROUNDINGS

Code	Eurocode NA GB
Terrain height above sealevel	67,00 m
Snow load zone	Zone 3
Use Pressure coefficients from BRE 489 2014 roof pitch 0 -45°	yes
Terrain category	Country
Distance to coast	40,00 km
Surroundings	normal
Service life of PV system	25 years
Failure consequence class	2

LOAD CALCULATION RESULT

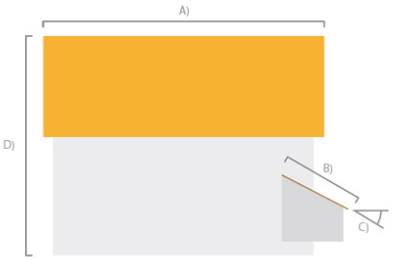
Peak velocity pressure	0,72 kN/m^2
Snow load	0,46 kN/m^2
Snow load on roof	0,45 kN/m^2
Base wind speed ($V_{b,0}$)	22,50 m/s

TOPOGRAPHY

Topography	Not exposed

ROOF PROPERTIES

Roof type	Gable roof
Coverage type	Plain tile roof
Batten spacing	0,15 m
First batten at	0,10 m
Batten height	30,00 mm
Batten width	50,00 mm
A) Roof length	30,37 m
B) Roof segment width	6,82 m
C) Roof pitch	25,00 º
D) Building height	7,50 m

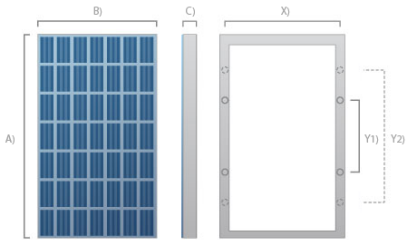


SUBSTRUCTURE

Substructure type	Rafters
Material of substructure	Wood
Spacing of substructure	450,00 mm
First substructure at	300,00 mm
Substructure thickness	200,00 mm

MODULE PARAMETERS

Manufacturer	Shanghai JA Solar Technology Co. Ltd.
Name	JAM66S30-500/MR (1500V)
Length	2094 mm
Width	1134 mm
Height	35 mm
Weight	26.3 kg
Rated output	500 W_{peak}
Datasheet	Open datasheet



Please check the compatibility of clamping positions with module manufacturer advice.

The module data was taken from a database. Please check whether this data corresponds to your actual module order. If necessary, please correct the data using the editing function.

SYSTEM

System	VarioSole+



Please check the entered row distance for an ideal yield calculation with a correct calculation including consideration of the shading.

FASTENER DETAILS

Mounting direction of modules	Portrait
Fastener type	Roof hook RH Flat (without wood screw)
Screw	Automatic

MODULE RAIL

Fastening rails	Single layer
Mounting rail	50x37 mm
Fixations only under module surface	No
Use alternating roof hooks	No
Rail length	3600mm, 4400mm
Maximum cantilever length	300,00 mm
Rail colour	silver
Rail count per module	2
Optimize fasteners	Roof wise

CLAMPS

Clamp type	Mid clamps+ / End clamps+
Clamp colour	silver
Max value middle clamps	41 %
Max value end clamps	26 %

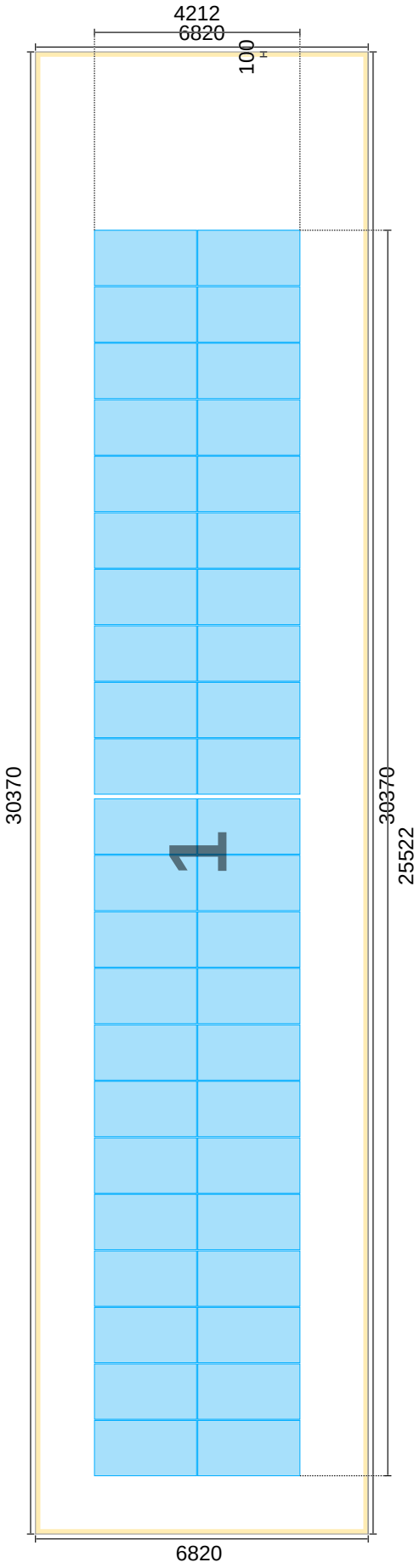
STATIC VALIDATION

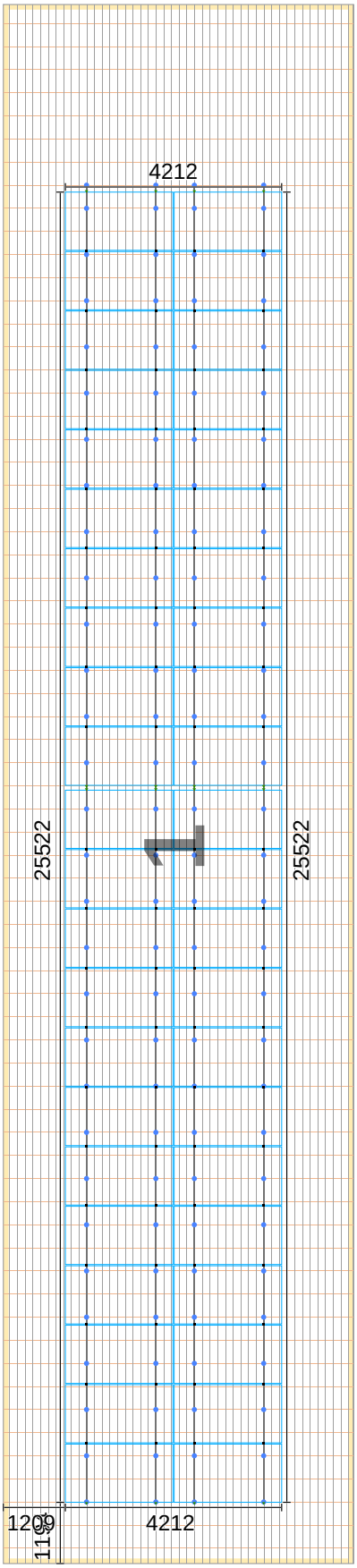
Your project was validated by our statics check successfully.

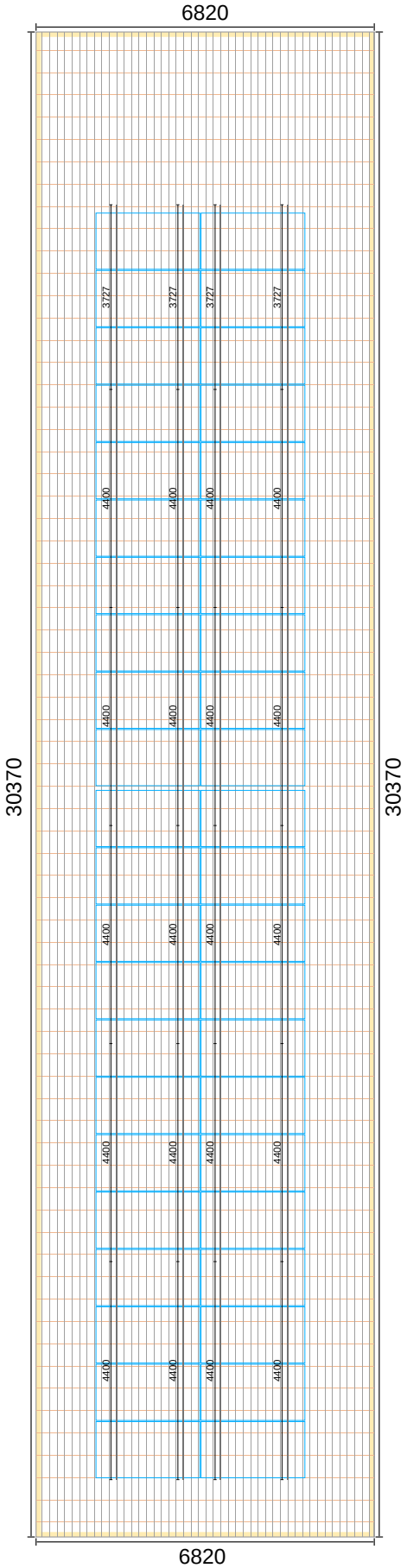
Static utilization factor: 82%

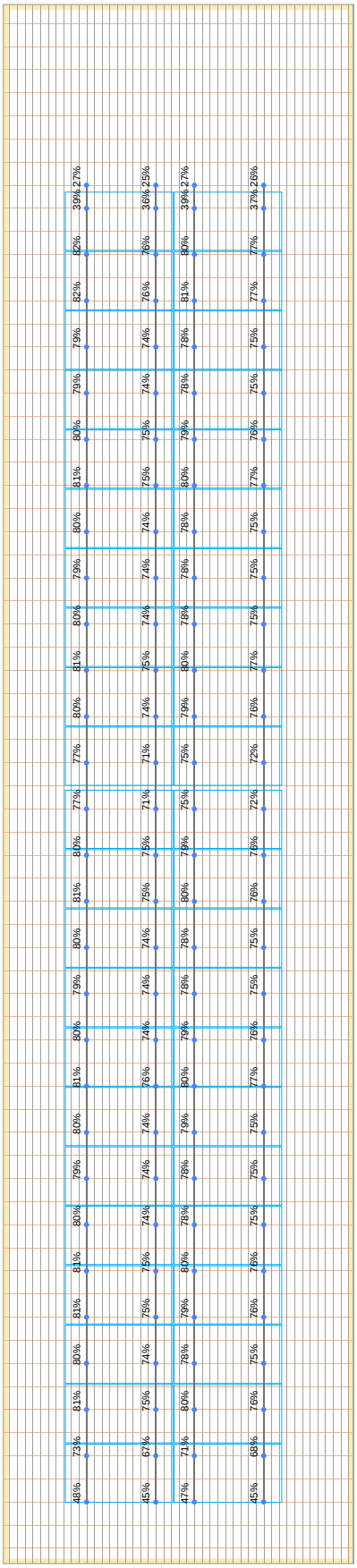
Static utilization fastener: 82%
Static utilization clamp: 41%
Static utilization base rail: 40%

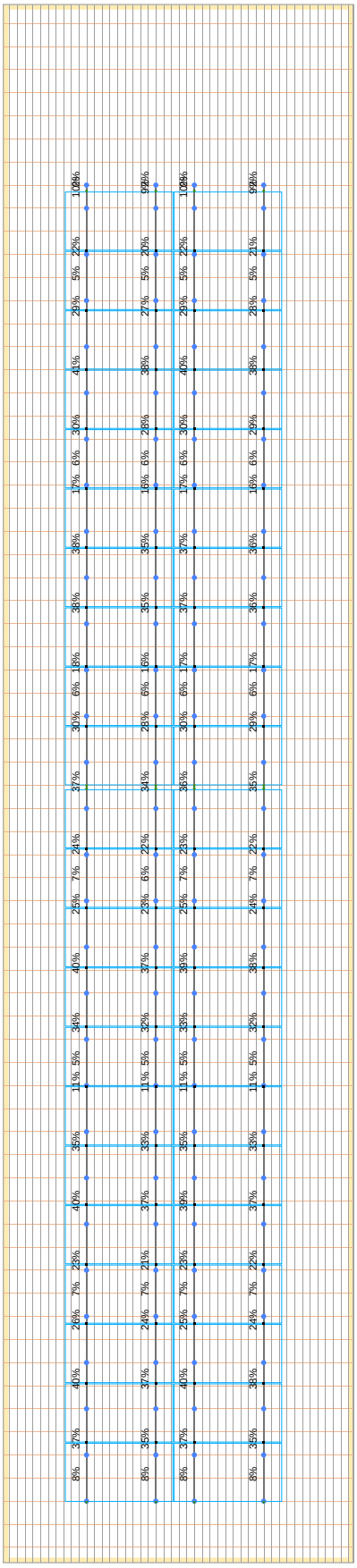
The predefined default values for input fields have to be compared with the conditions of the project. Necessary changes to adapt to local conditions must be carried out. The following relevant input fields contain their default value:
• Service life of PV system: 25 years
• Failure consequence class: 2

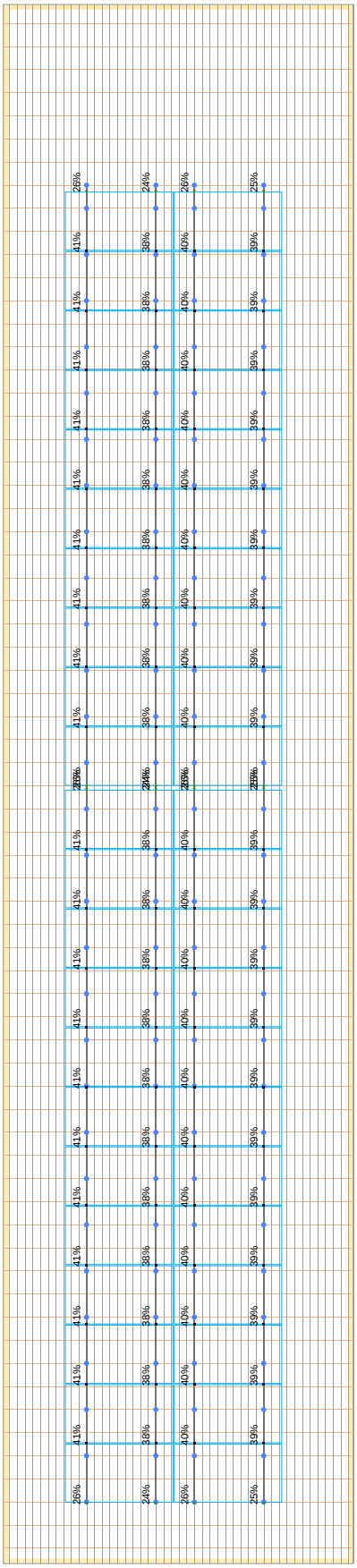

4212
6820
100
30370
30370
25522
6820


4212
25522
25522
1209
119
4212


6820
30370
30370
6820
3727
4400







BILL OF MATERIAL

Article No.	Article	Quantity	Ordering Unit	Weight/Piece	Weight
R400529	VS+ Mounting rail 50 x 37 x 4400 mm	24	1	2,952 kg	70,858 kg
R400532	VS+ Rail connector 50 x 37	20	1	0,193 kg	3,860 kg
R420081	End clamp+	16	1	0,064 kg	1,024 kg
R420082	Middle clamp+	80	1	0,063 kg	5,040 kg
R420172	Roof hook RH Flat (without wood screw)	120	1	0,465 kg	55,800 kg
R900333	Wood screw pan head 6 x 80	3	100	0,009 kg	2,700 kg
R920044	End Cap RIGHT / LEFT (grey) 50x37	4	1	0,015 kg	0,060 kg
				Total Weight:	139,342 kg

IMPORTANT NOTES

The Project Report is a result of information provided by the Customer ("Customer" means customer of Renusol ordering this Project Report from the technical service of Renusol or user of the PV Configurator creating this Project Report himself). Renusol has neither verified the accurateness nor the completeness of the information and data provided by the Customer, which form the basis of this Project Report. It is the responsibility of the Customer to check and verify all input variables (including but not limited to those input variables which had been pre-set with proposed values) and assumptions used in the Project for their accuracy and correctness.

These verifications shall include but not be limited to the following aspects: (a) Wind and snow loads are proposed by the PV Configurator using respective wind and snow load maps. It should be verified that the local conditions do not deviate from the values used in the Configuration (e.g. location on mountain with higher snow load). (b) The Customer shall check and verify the Failure Consequence Class ("CC"). Typical residential and commercial buildings require CC 2. The Customer shall use higher CC in sensitive local environment (e.g. public building, high frequency of visitors, vicinity with potential for severe damages). (c) The service lifetime of the PV installation shall be verified by the Customer depending on the expectation of the ultimate user of the PV installation as well as the lifetime of the other components used in the installation. If the lifetime is expected beyond the service lifetime used for this Project Report, all relevant structural properties as well as input variables and assumptions shall be re-checked using the then expected service lifetime. (d) For flat roof systems: The Customer shall in any case measure and document the friction coefficient of the PV system on the location-specific roof cover it is placed on. The measurement shall be performed in various, at least three roof areas. (e) For flat roof systems: The PV Configurator proposes a ballast calculation. The ballast forms, together with the weight of the PV mounting system itself and the weight of the module, the total weight of the system. The actual ballast applied may in no case be lower than the values proposed by the PV Configurator. The ballast applied shall furthermore be documented. If the ballast applied cannot be precisely determined, a safety factor increasing the ballast is to be applied.

To the extent values of input variables measured or observed by the Customer differ from values used in this Project Report, the configuration of the PV installation shall be re-iterated using the respective correct values.

To the extent this Project Report includes a data concerning structural properties, it is the responsibility of the Customer to professionally verify (have verified) the structural data with regards to its compliance with the applicable local laws and properties of the location for which the Project Report has been prepared.

Furthermore the Terms of Use of the Renusol PV Configurator ({https://www.pv-configurator.com/pages/terms}) and the General Terms and Conditions (https://www.renusol.com/files/content/Downloads/Rechtliche%20Dokumente/Renusol_AGB_EN_110406.pdf) apply. The General Installation Guidelines of Renusol as well as the Installation Manuals and Data Sheets of the respective Renusol products, have likewise to be complied to.

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