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Planning Sheet for Stand Alone PV Systems

Commission number: _____

Please return the completed Planning Sheet to your contact person. Solara will contact or send you an offer within 2 to 5 days. Please consider that every stand alone system is a customised system.

Date: _____ Signature of the planing person: _____

Contactdetails

Company	Answer required until
Street	Realization period
ZIP, City	Project status
Phone	Price association (possible budget)
E-Mail	

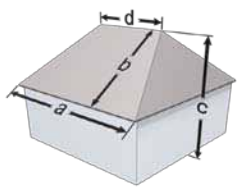
Location

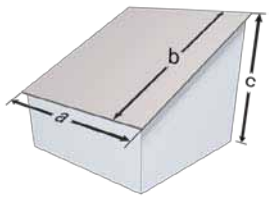
Projectname	Plant operator
Street	Phone/E-Mail
ZIP, City	Absolute altitude

Roof composition

☐ Foor mounting

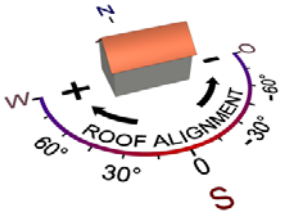
☐ Ridge roof ☐ Hip roof ☐ Shed roof ☐ Flat roof





Roof meassure

a	Roof width:	_____
b	Roof height:	_____
c	Ridge height:	_____
d	Ridge length:	_____



Roof pitch [°]: _____

Roof alignment [°]: _____

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Planning Draft

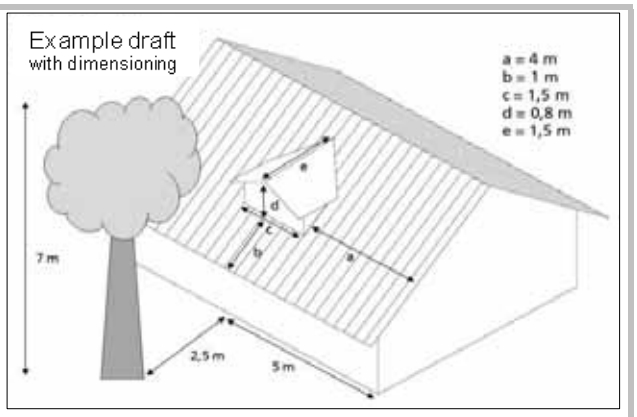
Further planning documents

Enclosed further planning documents: ☐ Ground plan ☐ Photos/Drawings ☐ Site plan

Draft of the building conditions

Roof integrated objects (pitched dommer, chimney, lightpanels etc.)

Shadowing of the modules (in-roof objects, trees, surrounding buildings etc.)



N

Notes: _____

_____

_____

Project description

What should be operated?
E.g. house supply, illumination, cooling, electrical system/engine, caravan, boat, etc.

_____

_____

_____

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Utilisation time of the system

☐ Whole year usage ☐ Usage during a specific period from: _____ to: _____

☐ Just weekend usage

Mainly consumption during the ☐ day (daytime usage) ☐ night (nighttime usage)

Utilisation days per month

☐ January ☐ February ☐ March ☐ April

☐ May ☐ June ☐ July ☐ August

☐ September ☐ October ☐ November ☐ December

Daily electricity consumption

Calculation of the daily energy requirement (24h):

Power input [W] x number of power consuming devices x duty cycle [h]

Power consuming devices	Watt* [W]	Watt if variational	Voltage		number of devices	Duty cycle per day [h]	Energy requirement [Wh]
			DC	AC			
Energy saving lamp	11						
Standard lamp	60						
Radio	20						
Hi-Fi system	100						
Video/DVD	50						
Televisor	100						
Computer	100						
Computer monitor	100						
Color-Laserprinter	170						
Telephone charger	0,5						
Refrigerator	80						
Freezer	100						
Ventilator	100						
Mikrowave	1200						
Dishwasher	1200						
Kitchenware	200						
Coffee machine	1000						
Washing machine	1000						
Vacuum cleaner	1000						
Water pump	300						

Total daily energy requirement (24h): _____ Wh

*Average power input

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System data

Loads

Max. and min. loads and when do they occur?		Daily	Summer	Winter
Necessary for sizing the inverter and/or diesel generator.	max. load	_____ kW	_____ kW	_____ kW
	min. load	_____ kW	_____ kW	_____ kW

Inverter

Required power drain of the inverter

Continuous output at 25°C _____ W

Maximum output (5sec.) at 25°C _____ W

Other energy sources

	DC-Voltage	DC-Power	AC-Voltage	AC-Power
☐ No other energy sources				
☐ Dieselgenerator	_____ V	_____ W	_____ V	_____ W
☐ Wind	_____ V	_____ W	_____ V	_____ W
☐ Other: _____	_____ V	_____ W	_____ V	_____ W

Sizing of the energy storage

Autonomous time

The definition of the energy availability time (autonomous time) is important fot the dimensioning of the battery.

Pleas fill out:

how long should the system be autonomous? _____

Should the system work even in longer bad weather periodes? _____

Depending on the usage time and the usage intensity per year (summer/winter), the autonomous time can variegate.

Specification:

	Summer	Winter
Availability in days (autonomy)	_____	_____
Availability all year round	☐ yes	☐ No

Battery dimension/ type (not strictly required)

Battery type: ☐ liquid acid ☐ gel

For dimensioning the battery, the daily energy requirement (Wh) will be divided by the system voltage (e.g. 12V). At average temperatures, it is possible to discharge a battery up to ca. 50% (deep discharge thresholds). So the necessary daly energy requirement is the doubled result of the division. The finaly battery size will be achived by multiplying the defined autonomous days.

Daily energy requirement	/	System Voltage	x 2 x	Autonomous days	=	Battery size
⇩		⇩		⇩		⇩
_____ Wh	/	_____ V	x 2 x	_____ days	=	_____ Ah