

Project Planning Sheet for Stand alone PV Systems

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Commission: _____

The next steps are: Send the Planning Sheet back to your contact person, then CentroSolar will contact you or send an offer within 2-5 days. Please consider, every stand alone system is an individual product.

Company: _____

Answer required until: _____

Street: _____

Realization period: _____

Post Code: _____

Project status: _____

Phone: _____

Price association: _____

E-mail: _____

(possible budget)

1. Location

Country: _____

Post Code/City: _____

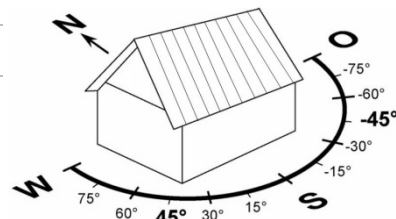
Longitude: _____ Latitude: _____

Agricultural building Type of use: _____

Apartment house Industrial building Other type of building: _____

Altitude above sea level [m]: _____

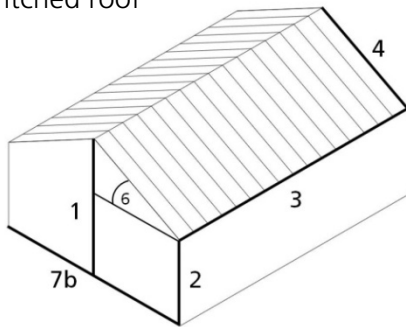
Alignment (azimuth) [°] _____



2. Building

Floor mounting

Pitched roof



1 Ridge height [m]: _____

2 Eaves height [m]: _____

3 Eaves length [m]: _____

4 Gableboard [m]: _____

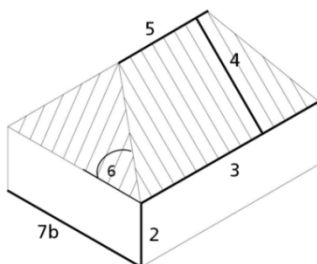
5 Ridge length [m]: _____

6 Inclination [°]: _____

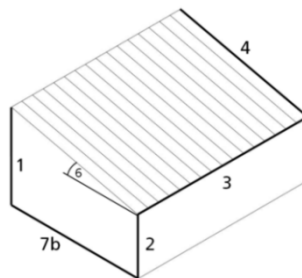
7a Length [m]: _____ 7b Width [m]: _____

Please remark obstructions (e.g. windows, chimneys), on the next page!

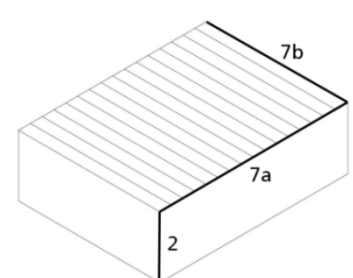
Hipped end roof



Single-pitch roof



Flat roof

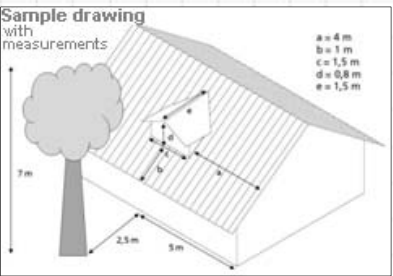


Other (open land, barrel-shaped roof, etc.): _____

3. Drawings of structural situations


E.g. objects which are integrated into the roof (dormers, chimneys, skylights, etc.)

Shadowing on the solar module area (objects in or next to the area, growing trees, other buildings, etc.)



Sample drawing with measurements

- a = 4 m
- b = 1 m
- c = 1,5 m
- d = 0,8 m
- e = 1,5 m



Notes: _____

4. Project description

What should be operated?

E.g. house supply, illumination, cooling, electrical system/engine, caravan, boat etc.

5. Utilisation time of the system

Please fill in the utilisation days per month.

- Please mark with a cross:
- Whole year usage
 - Usage while a defined period from: _____ to: _____
 - Just weekend usage:
 - Daytime usage (i.e. consumption just during the day)
 - Nighttime usage (i.e. consumption just during the night)

| | | | | | | |
|----------------------------|---------|----------|-----------|---------|----------|----------|
| Utilisation time per month | January | February | March | April | May | June |
| | July | August | September | October | November | December |

7. System data

A) Loads

Max. and min. loads and when do they occur?

Necessary for sizing the inverter and/or diesel generator.

| | Daily | Summer | Winter |
|-----------|-------|--------|--------|
| max. load | kW | kW | kW |
| min. load | kW | kW | kW |

B) Inverter

Required power drain of the Inverter

| | |
|--------------------------------|---|
| Continuous output at 25 °C | W |
| Maximum output (5sec.) at 25°C | W |

C) Other energy sources

If existing, please mark with a cross.

| | Existing | | DC - Voltage | DC - Power | AC - Voltage | AC - Power |
|-------------------------|----------|----|--------------|------------|--------------|------------|
| | yes | no | | | | |
| No other energy source: | | | | | | |
| Diesel generator: | | | V | W | V | W |
| Wind: | | | V | W | V | W |
| Other: | | | V | W | V | W |

8. Sizing of the energy storage

A) Autonomous time

The definition of the energy availability time (autonomous time) is important for the dimensioning of the battery. Depending on the usage time and the usage intensity per year (summer/winter), it can variegate the autonomous time.

Please think about: How long should the system be autonomous?
Should the system work even in longer bad weather periodes?

Please note: Large battery sizes are not cost effective. Fill in only the absolute necessary autonomous time.

Specification

| | summer | winter |
|---------------------------------|--------|--------|
| Availability in days (autonomy) | | |
| Availability all year | yes no | |

B) Battery: dimension/type *(not strictly required)*

Please mark with a cross:
Battery type: liquid acid gel

For dimensioning the battery, it will be divided the daily energy requirement (Wh) through the system voltage (e.g. 12V). A battery can be discharged up to ca. 50%, at average temperatures. Therefore, the result of the division will be doubled for the energy requirement of one day in Ah. The final battery size will be get by multiplying these result with the defined autonomous days.

| | | | |
|--|---------------|--------------|----------|
| Daily Energy Requirement [Wh] / System Voltage [V] x 2 x Autonomous Days = Battery Size [Ah] | | | |
| ↓ | ↓ | ↓ | ↓ |
| _____ Wh / | _____ V x 2 x | _____ days = | _____ Ah |