

## Pré-dimensionnement système isolé

### Site géographique

Brest/Guipavas

Pays France

### Situation

Temps défini comme

Latitude 45.97° N

Longitude -10.22° W

Temps légal Fus. horaire TU+1

Altitude 99 m

### Orientation plan capteurs

Inclinaison 0°

Azimut 0°

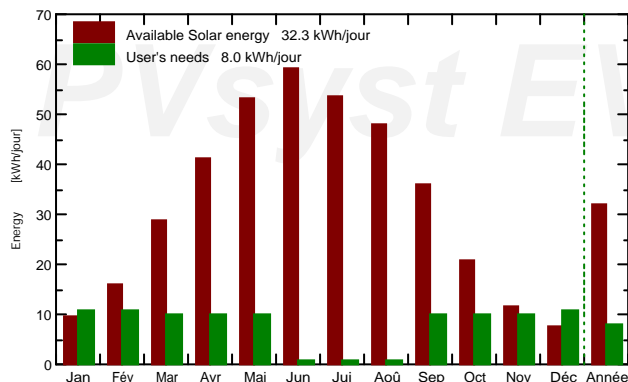
### Horizon / Far shadings

Average height 2.5°

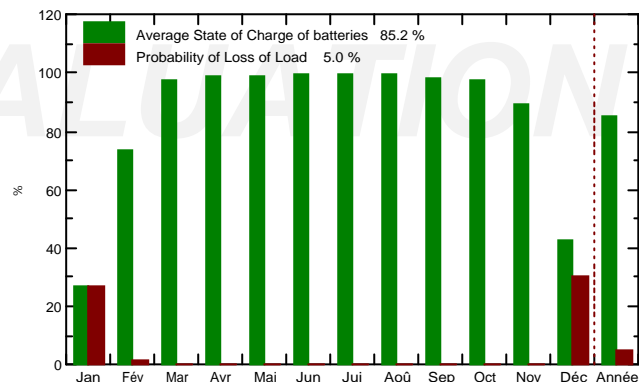
### System pre-sizing evaluation

Average use of energy	Daily	8.0 kWh/day	Yearly	2936 kWh
Autonomy	Winter	4.0 days	Summer	4.0 days
Loss-of-Load	Time fraction	5.0 %	Missing energy	121 kWh
Battery system	Voltage	48 V	Capacity	1073 Ah
PV array	Nominal power	13.32 kWc	Nominal Current	213 A
Economic gross evaluation	Investment	52878 EUR	Energy price	1.63 EUR/kWh

### PV energy yield and user's needs



### Battery SOC and Loss-of-Load Probability



	Incid. kWh/m².jr	PV avail. kWh	Demand kWh	Excess kWh	Missing kWh	SOC %	Pr. LOL %	Fuel liter
Jan.	0.9	305.2	339.2	0.0	52.4	27	27.2	35.0
Fév.	1.5	445.7	306.4	70.1	1.5	73	1.3	1.0
Mars	2.7	896.3	314.4	557.9	0.0	98	0.0	0.0
Avr.	3.9	1235.7	304.3	917.7	0.0	99	0.0	0.0
Mai	5.0	1645.6	314.4	1319.3	0.0	99	0.0	0.0
Juin	5.6	1777.7	28.3	1746.5	0.0	100	0.0	0.0
Jui.	5.0	1658.4	29.2	1627.3	0.0	100	0.0	0.0
Août	4.5	1494.5	29.2	1463.2	0.0	100	0.0	0.0
Sep.	3.4	1079.3	304.3	761.2	0.0	98	0.0	0.0
Oct.	1.9	642.8	314.4	310.2	0.0	97	0.0	0.0
Nov.	1.1	354.3	304.3	33.0	0.0	89	0.0	0.0
Déc.	0.7	239.2	339.2	0.0	67.5	43	30.2	45.0
Année	3.0	11774.	2927.6	8806.3	121.4	85	5.0	81.0