

Project Name: Ravenscroft - 9 Henry Crabb Road

6712/10/2023

Your PV system

Address of Installation

Henry Crabb Road
Littleport
Ely
CB6 1SE



Project Overview



Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System with Electrical Appliances

Climate Data	Ely, GBR (1996 - 2015)
Values source	Meteonorm 8.1(i)
PV Generator Output	67 kWp
PV Generator Surface	318.2 m ²
Number of PV Modules	134
Number of Inverters	1

Ravenscroft - 9 Henry Crabb Road

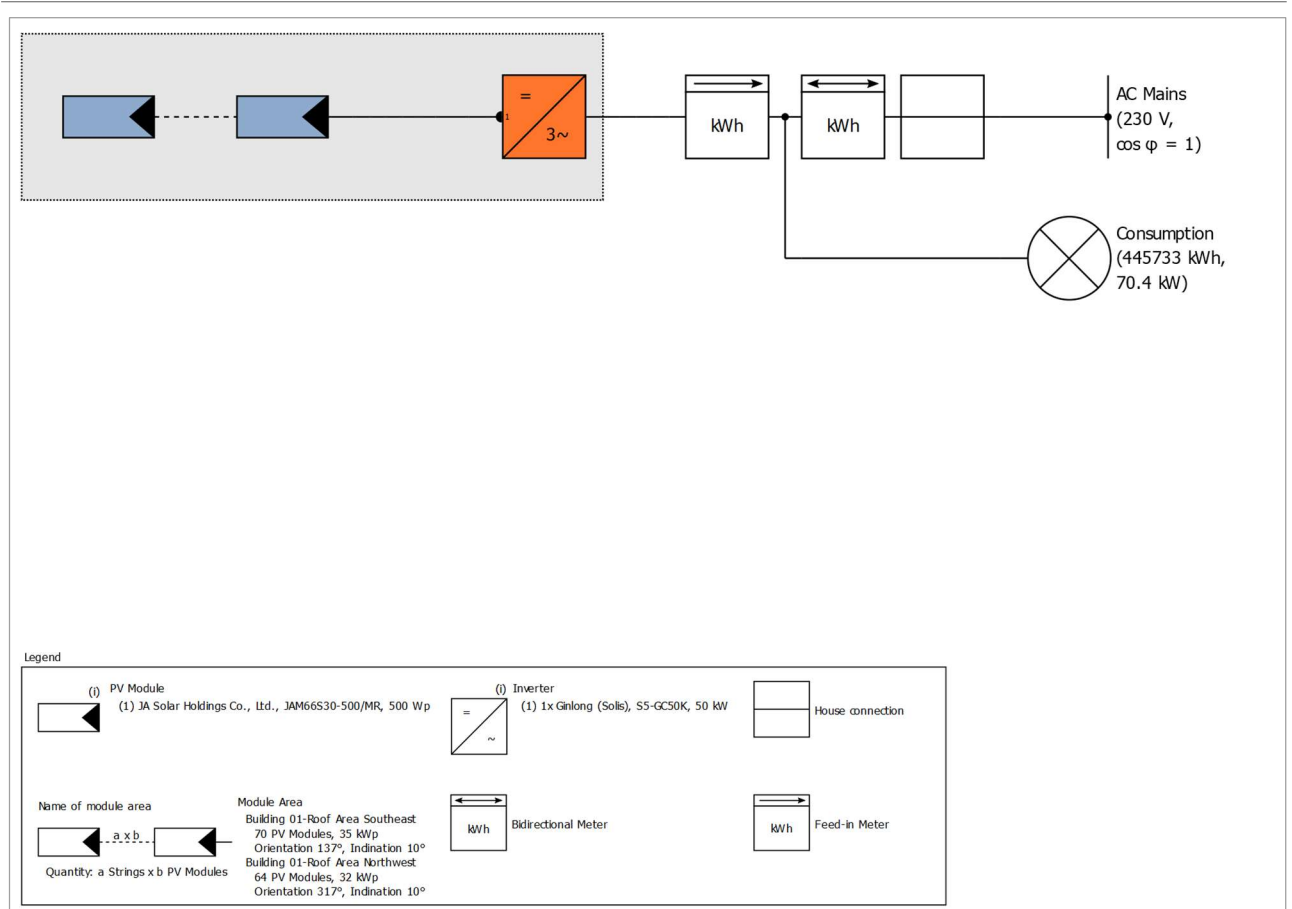


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	67.00 kWp
Spec. Annual Yield	939.61 kWh/kWp
Performance Ratio (PR)	87.95 %
Yield Reduction due to Shading	0.0 %
PV Generator Energy (AC grid)	62,967 kWh/Year
Own Consumption	62,728 kWh/Year
Down-regulation at Feed-in Point	0 kWh/Year
Grid Export	239 kWh/Year
Own Power Consumption	99.6 %
CO ₂ Emissions avoided	14,668 kg / year
Level of Self-sufficiency	14.1 %

The results have been calculated with a mathematical model calculation from Valentin Software GmbH (PV*SOL algorithms). The actual yields from the solar power system may differ as a result of weather variations, the efficiency of the modules and inverter, and other factors.

Set-up of the System

Overview

System Data

Type of System	3D, Grid-connected PV System with Electrical Appliances
Start of Operation	09/10/2023

Climate Data

Location	Ely, GBR (1996 - 2015)
Values source	Meteonorm 8.1(i)
Resolution of the data	1 h
Simulation models used:	
- Diffuse Irradiation onto Horizontal Plane	Hofmann
- Irradiance onto tilted surface	Hay & Davies

Consumption

Total Consumption	445733 kWh
Oct2022-Sept2023	445733 kWh
Load Peak	70.4 kW

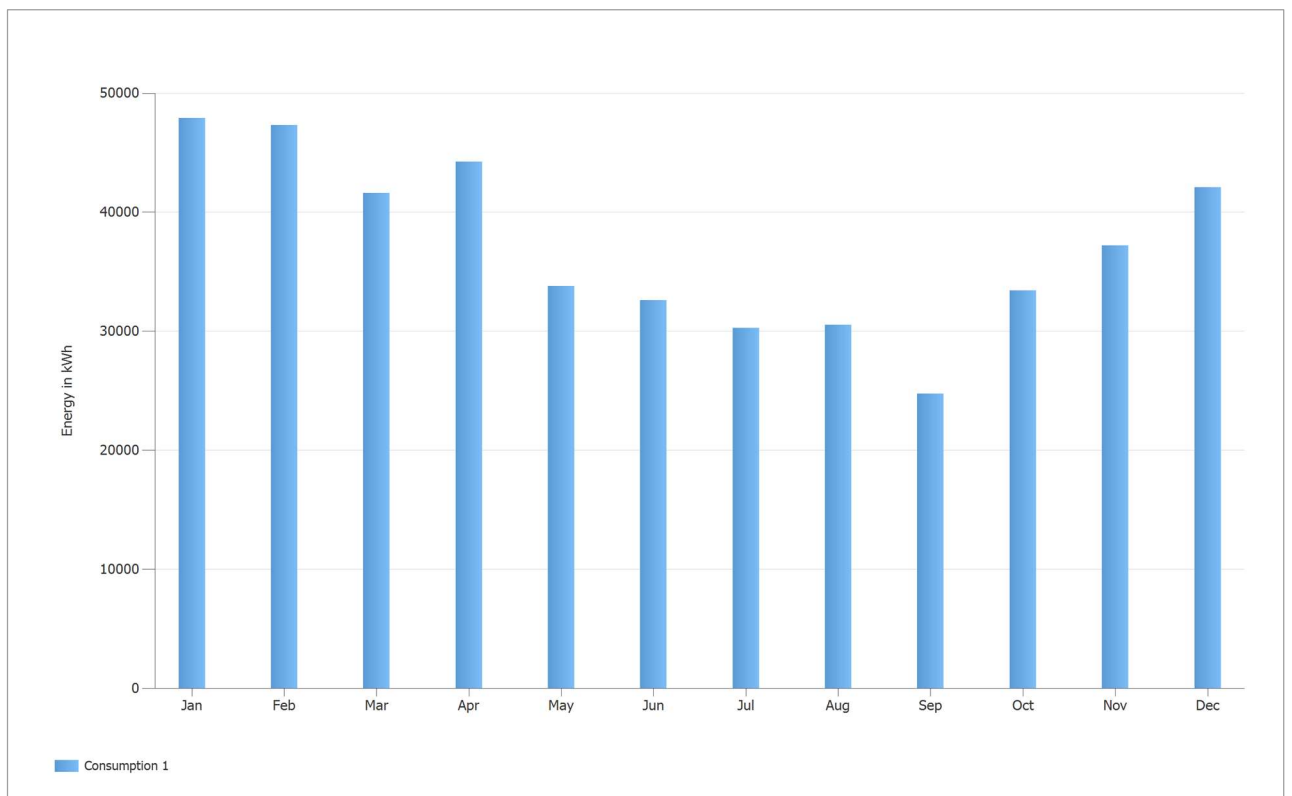


Figure: Consumption

Module Areas

1. Module Area - Building 01-Roof Area Southeast

PV Generator, 1. Module Area - Building 01-Roof Area Southeast

Name	Building 01-Roof Area Southeast
PV Modules	70 x JAM66S30-500/MR (v3)
Manufacturer	JA Solar Holdings Co., Ltd.
Inclination	10 °
Orientation	Southeast 137 °
Installation Type	Roof parallel
PV Generator Surface	166.2 m ²

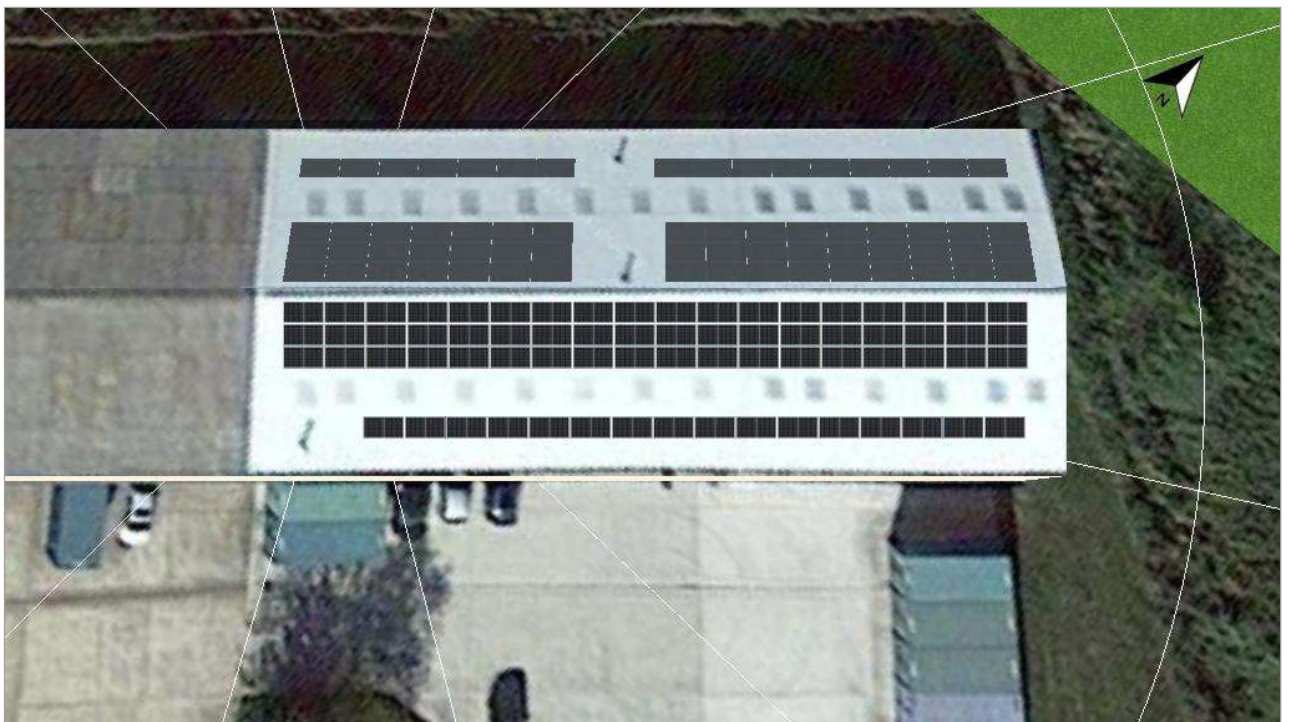


Figure: 1. Module Area - Building 01-Roof Area Southeast

2. Module Area - Building 01-Roof Area Northwest

PV Generator, 2. Module Area - Building 01-Roof Area Northwest

Name	Building 01-Roof Area Northwest
PV Modules	64 x JAM66S30-500/MR (v3)
Manufacturer	JA Solar Holdings Co., Ltd.
Inclination	10 °
Orientation	Northwest 317 °
Installation Type	Roof parallel
PV Generator Surface	152.0 m ²

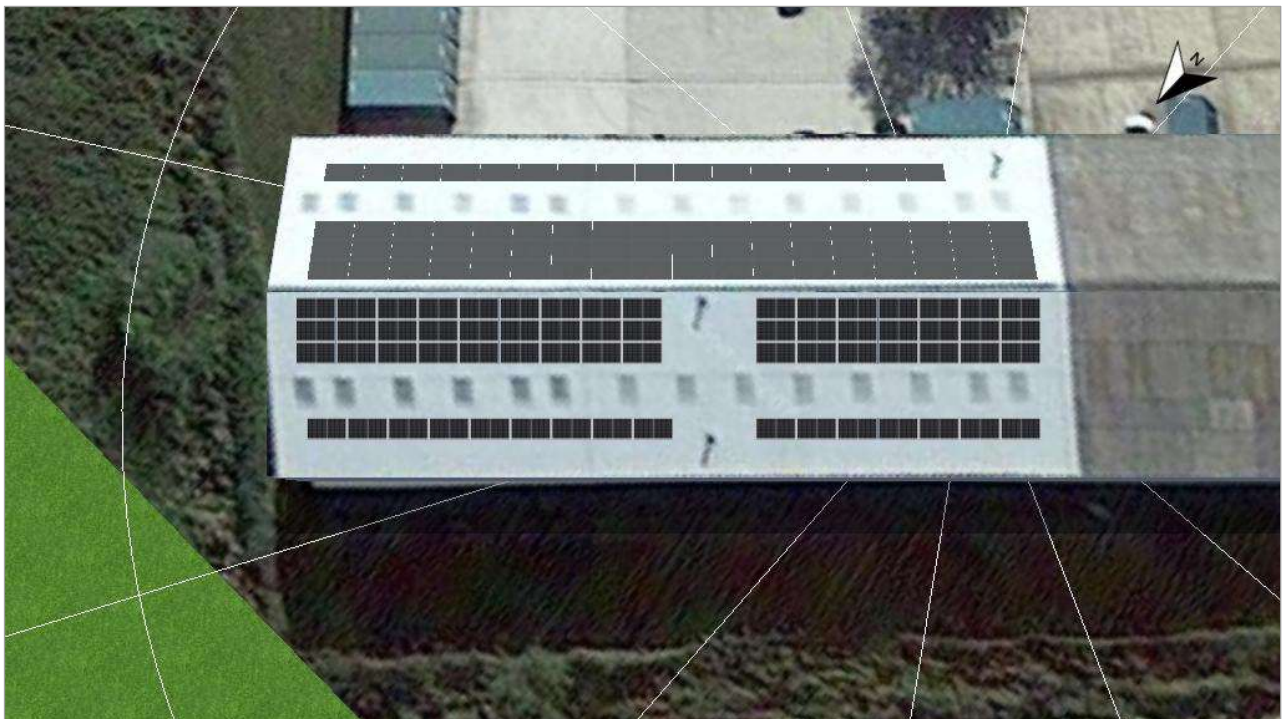


Figure: 2. Module Area - Building 01-Roof Area Northwest

Inverter configuration

Configuration 1

Module Areas	Building 01-Roof Area Southeast + Building 01-Roof Area Northwest
Inverter 1	
Model	S5-GC50K (v2)
Manufacturer	Ginlong (Solis)
Quantity	1
Sizing Factor	134 %
Configuration	MPP 1: 2 x 15 MPP 2: 2 x 15 MPP 3: 1 x 10 MPP 4: 2 x 16 MPP 5: 2 x 16

AC Mains

AC Mains

Number of Phases	3
Mains voltage between phase and neutral	230 V
Displacement Power Factor (cos phi)	+/- 1

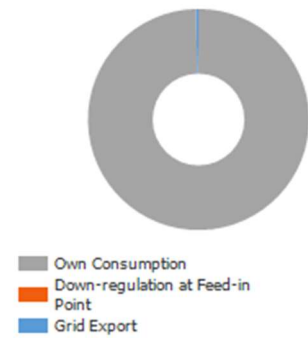
Simulation Results

Results Total System

PV System

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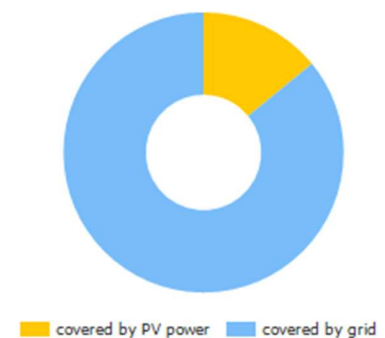
PV Generator Energy (AC grid)



Appliances

Appliances	445,733 kWh/Year
Standby Consumption (Inverter)	13 kWh/Year
Total Consumption	445,746 kWh/Year
covered by PV power	62,728 kWh/Year
covered by grid	383,018 kWh/Year
Solar Fraction	14.1 %

Total Consumption



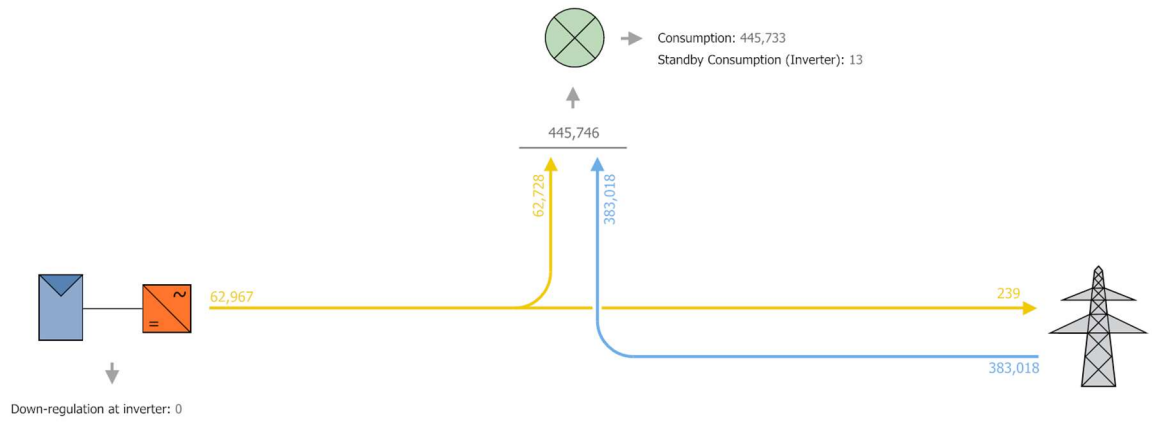
Level of Self-sufficiency

Total Consumption	445,746 kWh/Year
covered by grid	383,018 kWh/Year
Level of Self-sufficiency	14.1 %

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Energy Flow Graph

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All values in kWh
Small deviations in the totals can occur due to rounding
created with PV*SOL.

Figure: Energy flow

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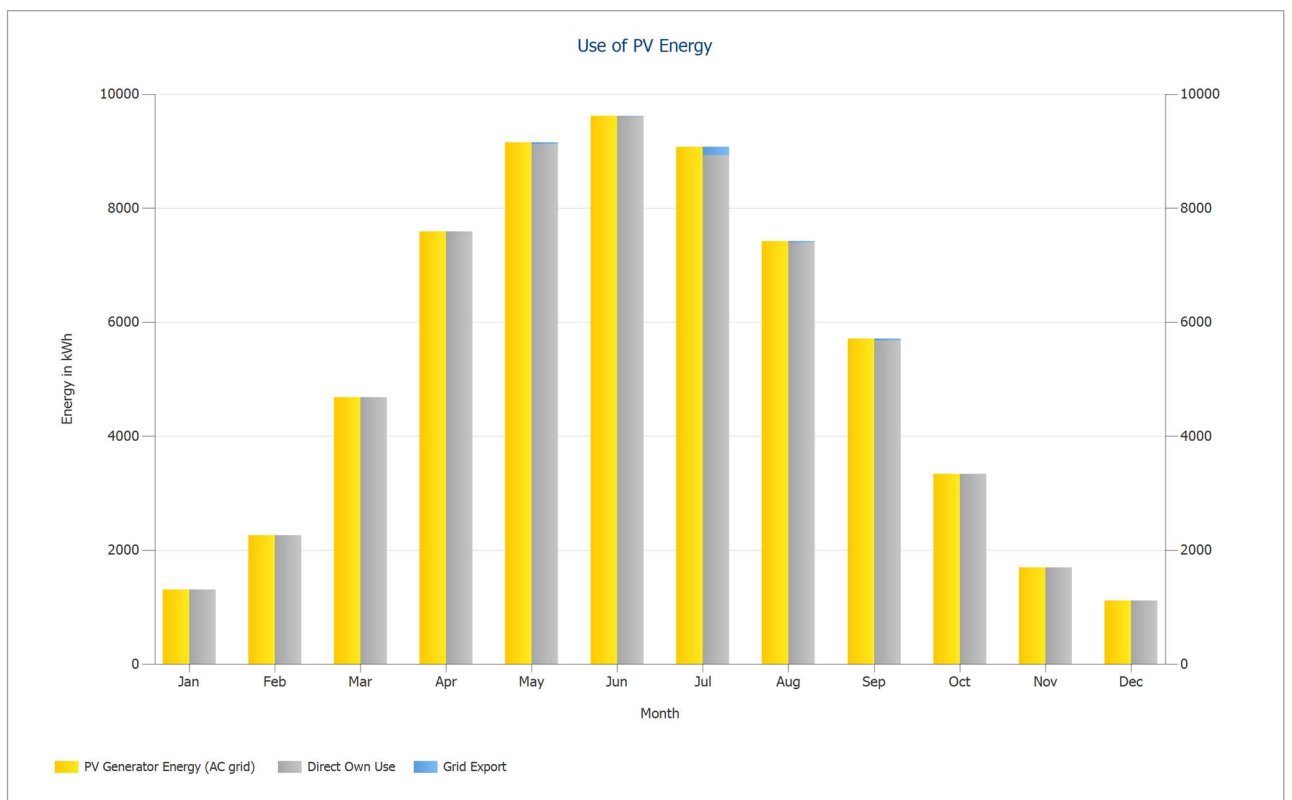


Figure: Use of PV Energy

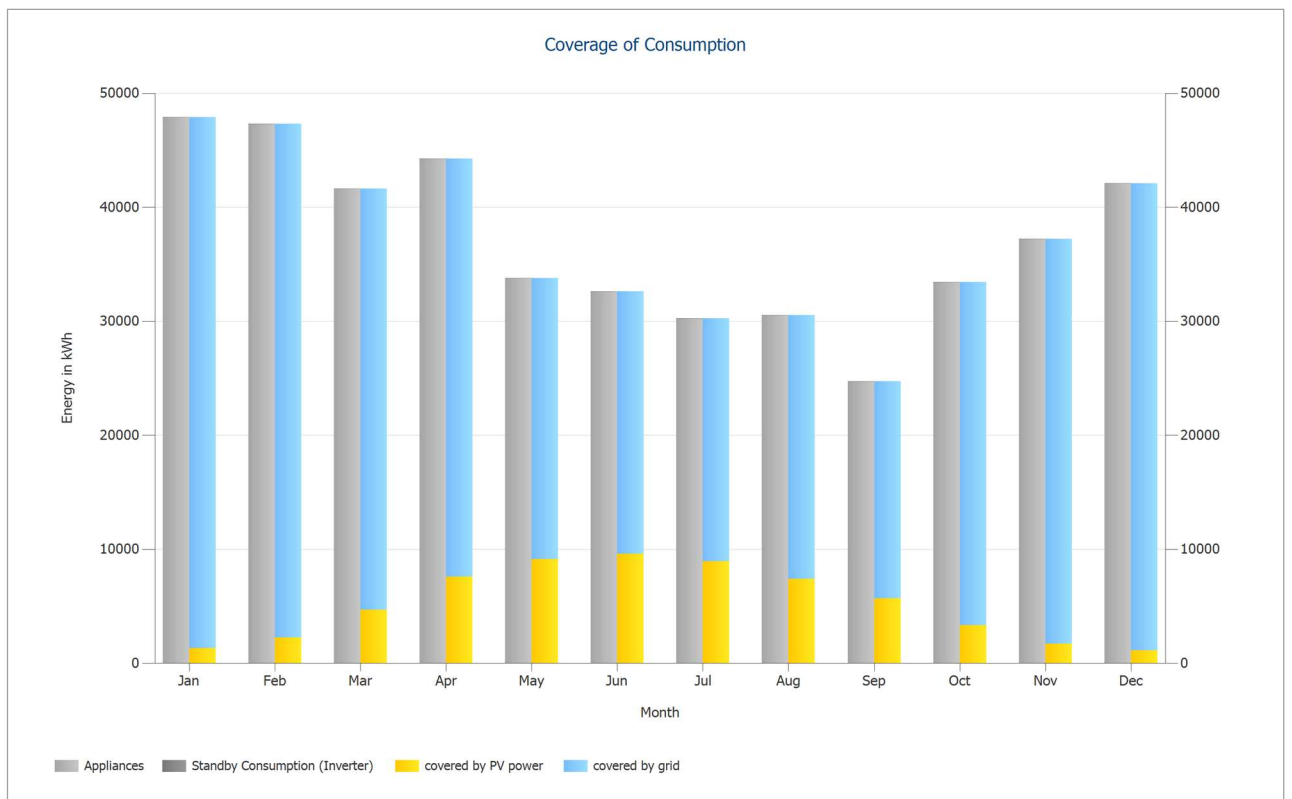


Figure: Coverage of Consumption

Plans and parts list

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		JA Solar Holdings Co., Ltd.	JAM66S30-500/MR	134	Piece
2	Inverter		Ginlong (Solis)	S5-GC50K	1	Piece
3	Components			Feed-in Meter	1	Piece
4	Components			House connection	1	Piece
5	Components			Bidirectional Meter	1	Piece