



South East Solar & Electrical Ltd

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ME1 3QY

Cricklade Manor Prep - Thames/Saxon
Cricklade Manor Prep School
Calcutt Street
Swindon
SN6 6BB

Contact person:

Jon Webb

Customer No.: [REDACTED]

Project Name: [REDACTED]

Offer no.: [REDACTED]

30/05/2025

Your PV system from South East Solar & Electrical Ltd

Address of Installation

Cricklade Manor Prep School
Calcutt Street
Swindon
SN6 6BB



Project Description:

Forecasting reports are calculated assuming a rate of inflation slightly below the prevailing rate reported by The Office of National Statistics's Consumer Price Index.

Project Overview



Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System with Electrical Appliances

Climate Data	Swindon, GBR (2001 - 2020)
Values source	Meteonorm 8.2(i)
PV Generator Output	49.98 kWp
PV Generator Surface	217.2 m ²
Number of PV Modules	98
Number of Inverters	1

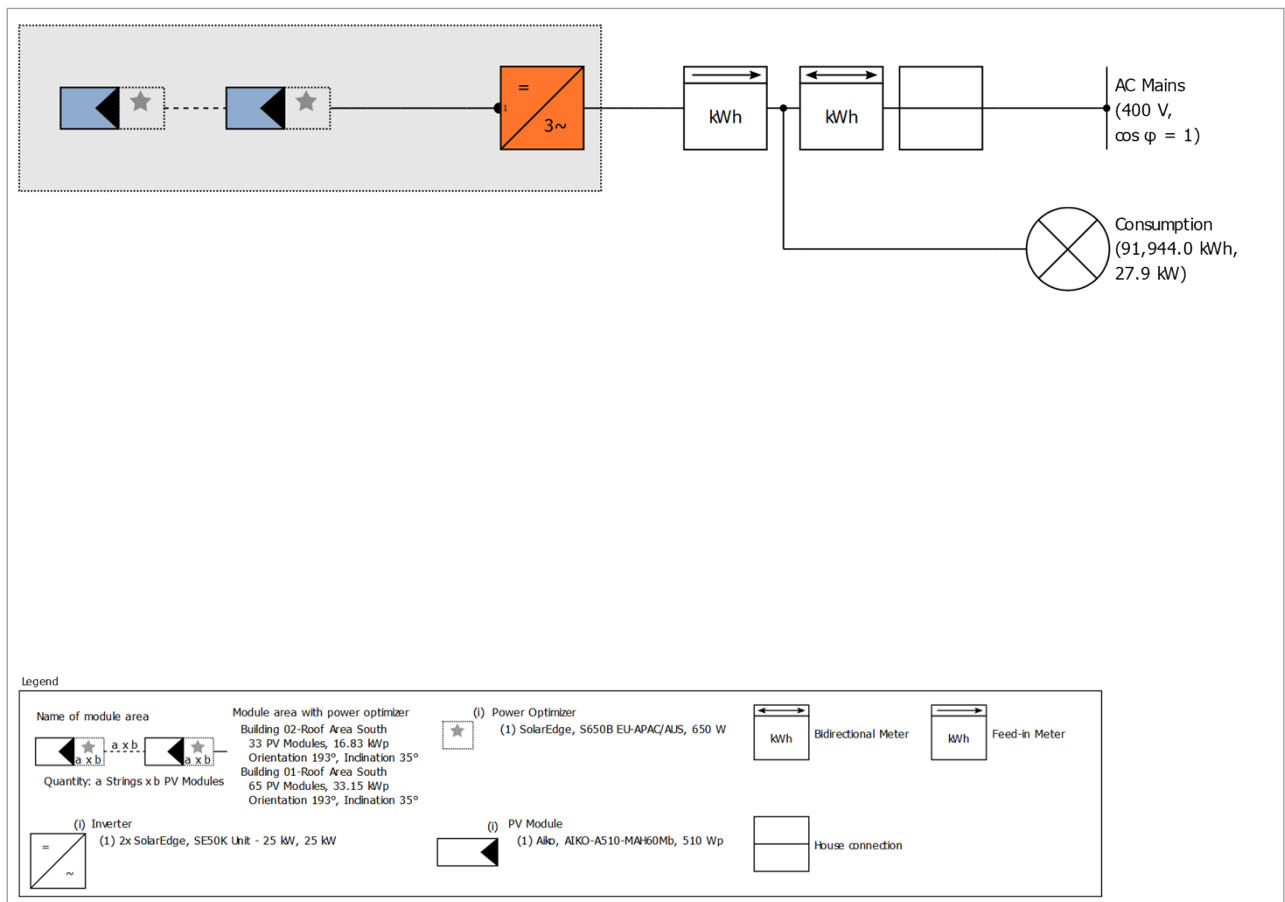


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	49.98 kWp
Spec. Annual Yield	1,126.90 kWh/kWp
Performance Ratio (PR)	91.90 %
Yield Reduction due to Shading	0.3 %
PV Generator Energy (AC grid)	56,374 kWh/Year
Own Consumption	41,649 kWh/Year
Clipping at Feed-in Point	0 kWh/Year
Grid Export	14,725 kWh/Year
Own Power Consumption	73.9 %
CO ₂ Emissions avoided	12,954 kg / year
Level of Self-sufficiency	45.3 %

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

Climate Data

Location	Swindon, GBR (2001 - 2020)
Values source	Meteonorm 8.2(i)
Data resolution	1 h
Simulation models used:	
- Diffuse Irradiation onto Horizontal Plane	Hofmann
- Irradiance onto tilted surface	Hay & Davies

Consumption

Total Consumption	91944 kWh
School	91944 kWh
Load Peak	27.9 kW

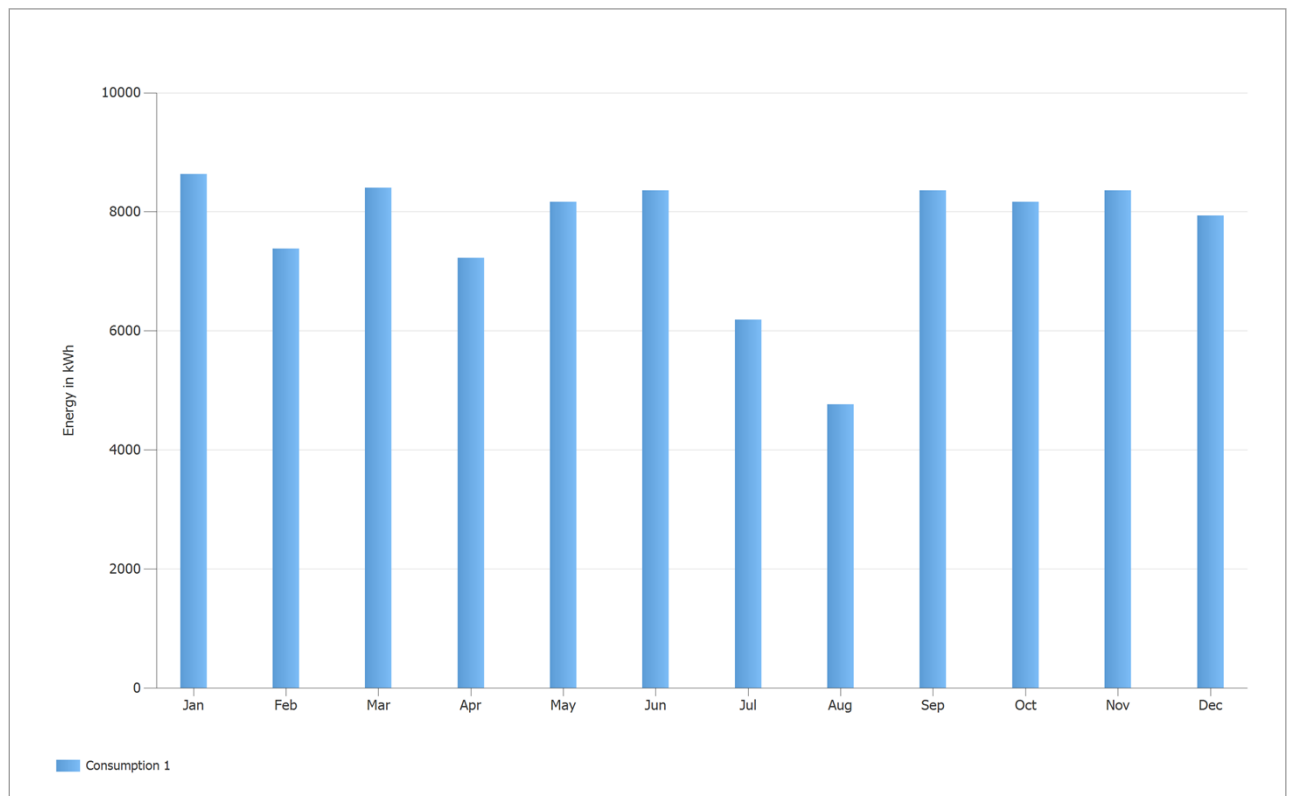


Figure: Consumption

Module Areas

1. Module Area - Building 02-Roof Area South

PV Generator, 1. Module Area - Building 02-Roof Area South

Name	Building 02-Roof Area South
PV Modules	33 x AIKO-A510-MAH60Mb (v3)
Manufacturer	Aiko
Inclination	35 °
Orientation	South 193 °
Installation Type	Roof parallel
PV Generator Surface	73.1 m ²

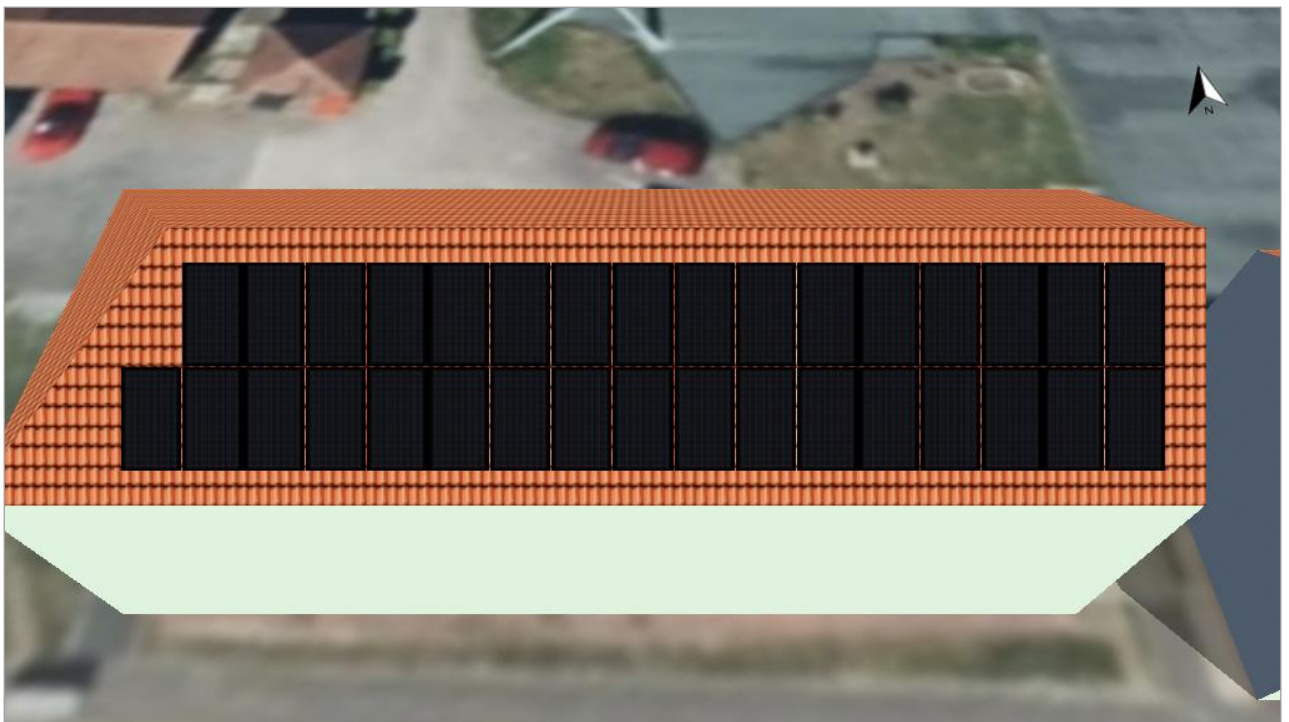


Figure: 1. Module Area - Building 02-Roof Area South

2. Module Area - Building 01-Roof Area South

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

Name	Building 01-Roof Area South
PV Modules	65 x AIKO-A510-MAH60Mb (v3)
Manufacturer	Aiko
Inclination	35 °
Orientation	South 193 °
Installation Type	Roof parallel
PV Generator Surface	144.0 m ²

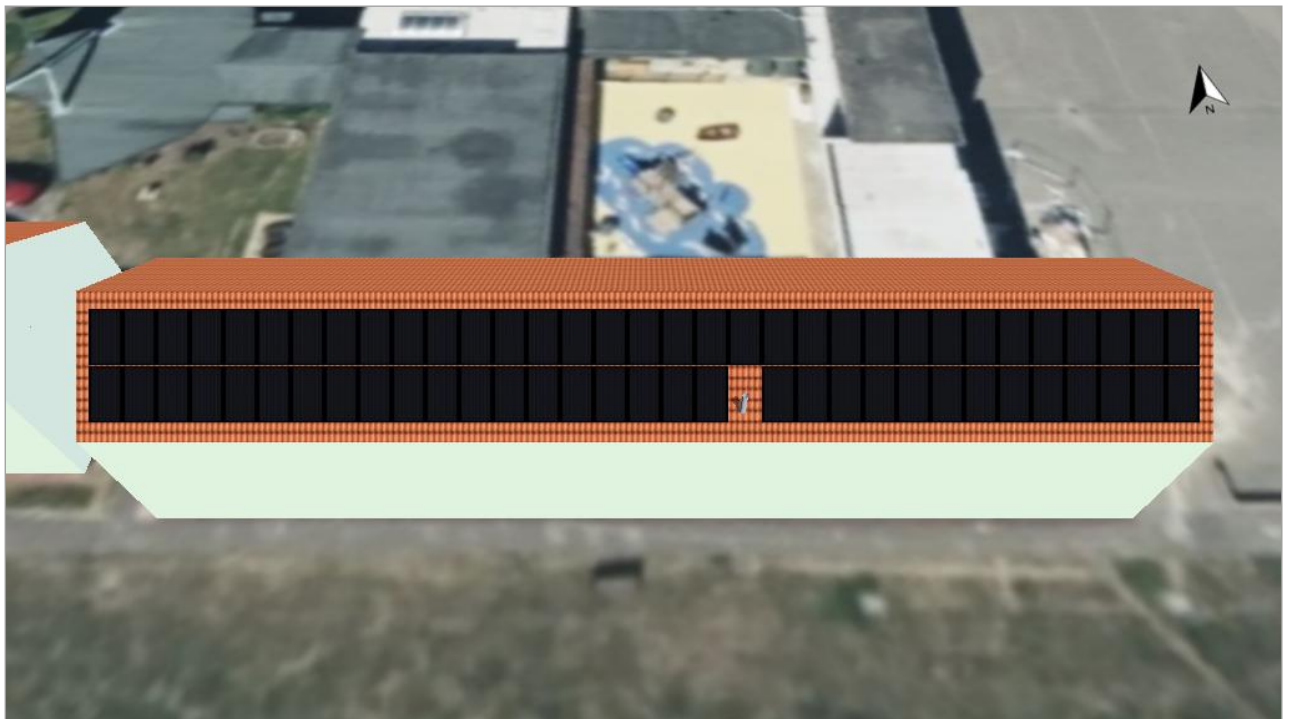


Figure: 2. Module Area - Building 01-Roof Area South

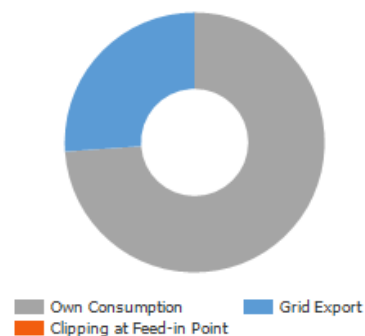
Simulation Results

Results Total System

PV System

PV Generator Output	49.98 kWp
Spec. Annual Yield	1,126.90 kWh/kWp
Performance Ratio (PR)	91.90 %
Yield Reduction due to Shading	0.3 %
PV Generator Energy (AC grid)	56,374 kWh/Year
Own Consumption	41,649 kWh/Year
Clipping at Feed-in Point	0 kWh/Year
Grid Export	14,725 kWh/Year
Own Power Consumption	73.9 %
CO ₂ Emissions avoided	12,954 kg / year

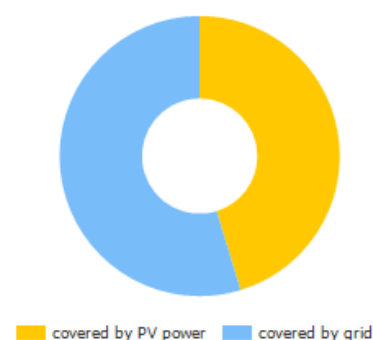
PV Generator Energy (AC grid)



Appliances

Appliances	91,944 kWh/Year
Standby Consumption (Inverter)	52 kWh/Year
Total Consumption	91,996 kWh/Year
covered by PV power	41,649 kWh/Year
covered by grid	50,347 kWh/Year
Solar Fraction	45.3 %

Total Consumption

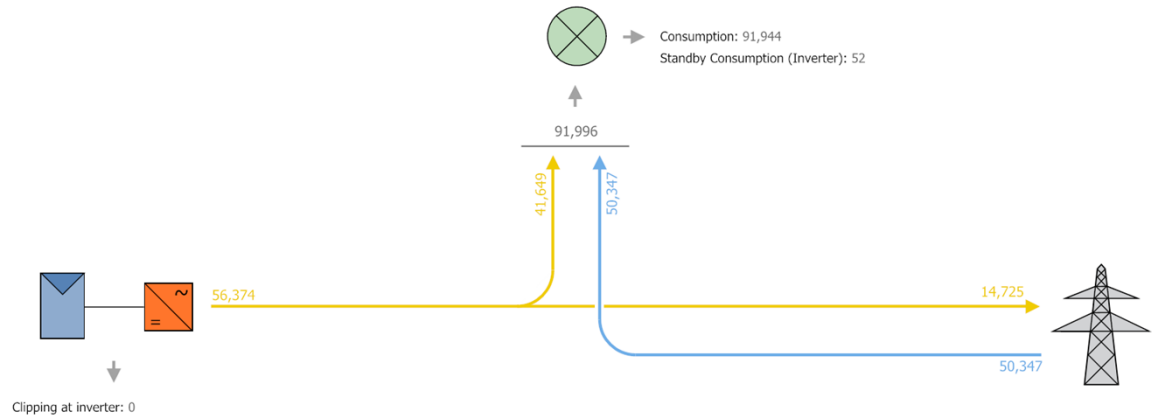


Level of Self-sufficiency

Total Consumption	91,996 kWh/Year
covered by grid	50,347 kWh/Year
Level of Self-sufficiency	45.3 %

Energy Flow Graph

Project: SOL7941



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

Figure: Energy flow

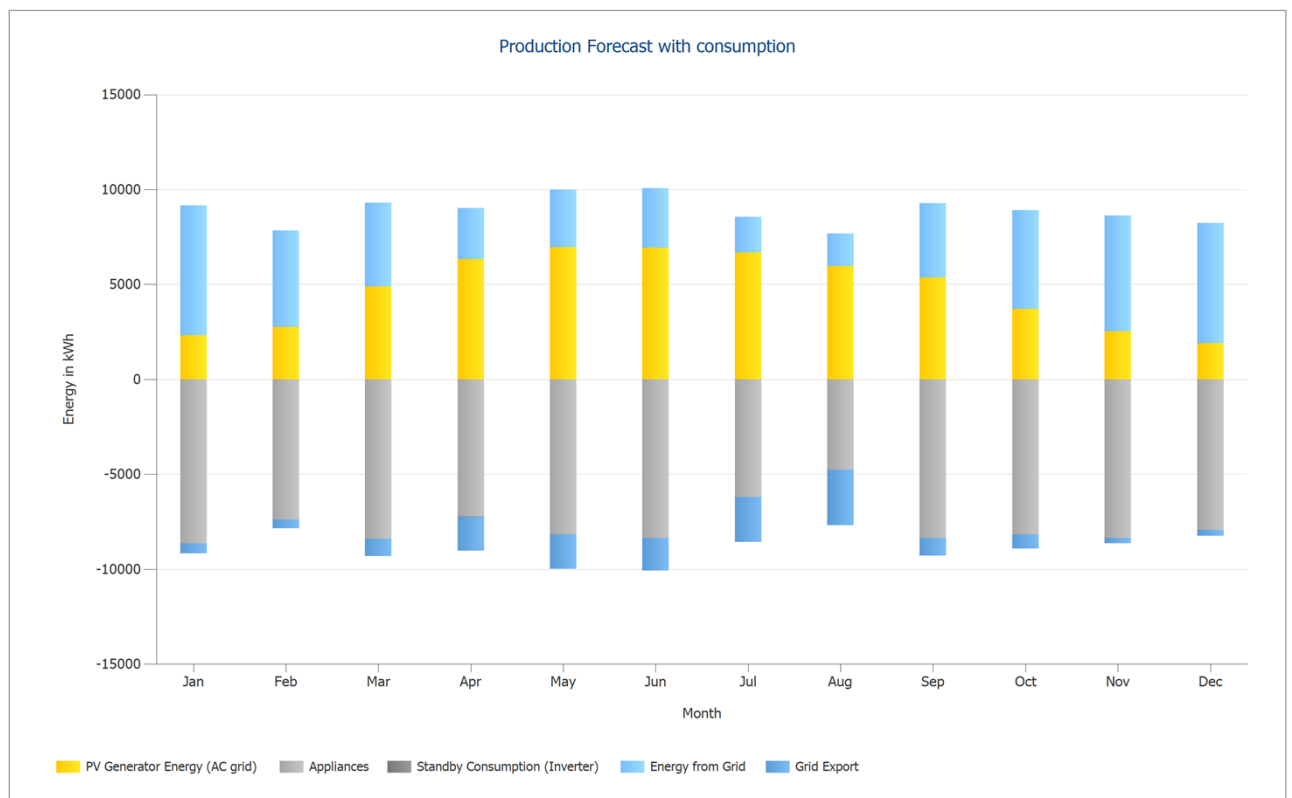


Figure: Production Forecast with consumption

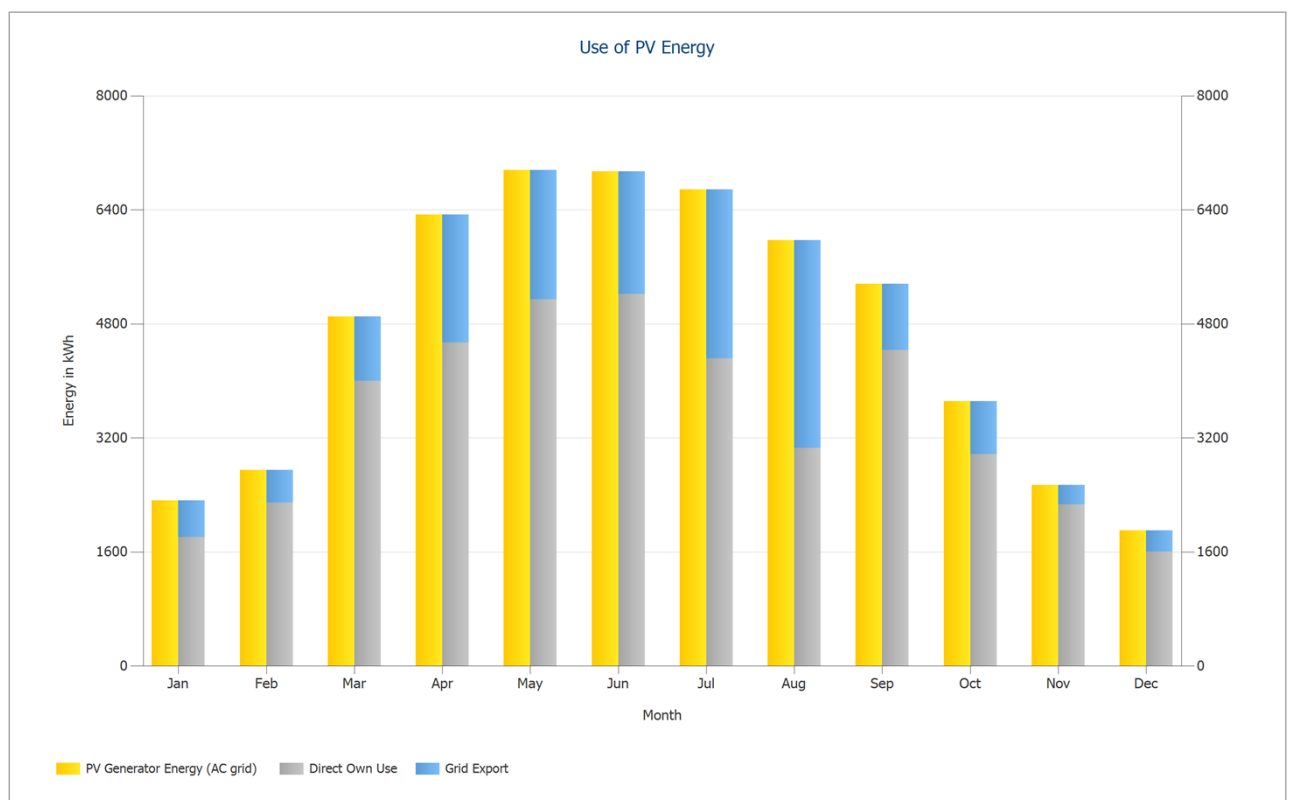


Figure: Use of PV Energy

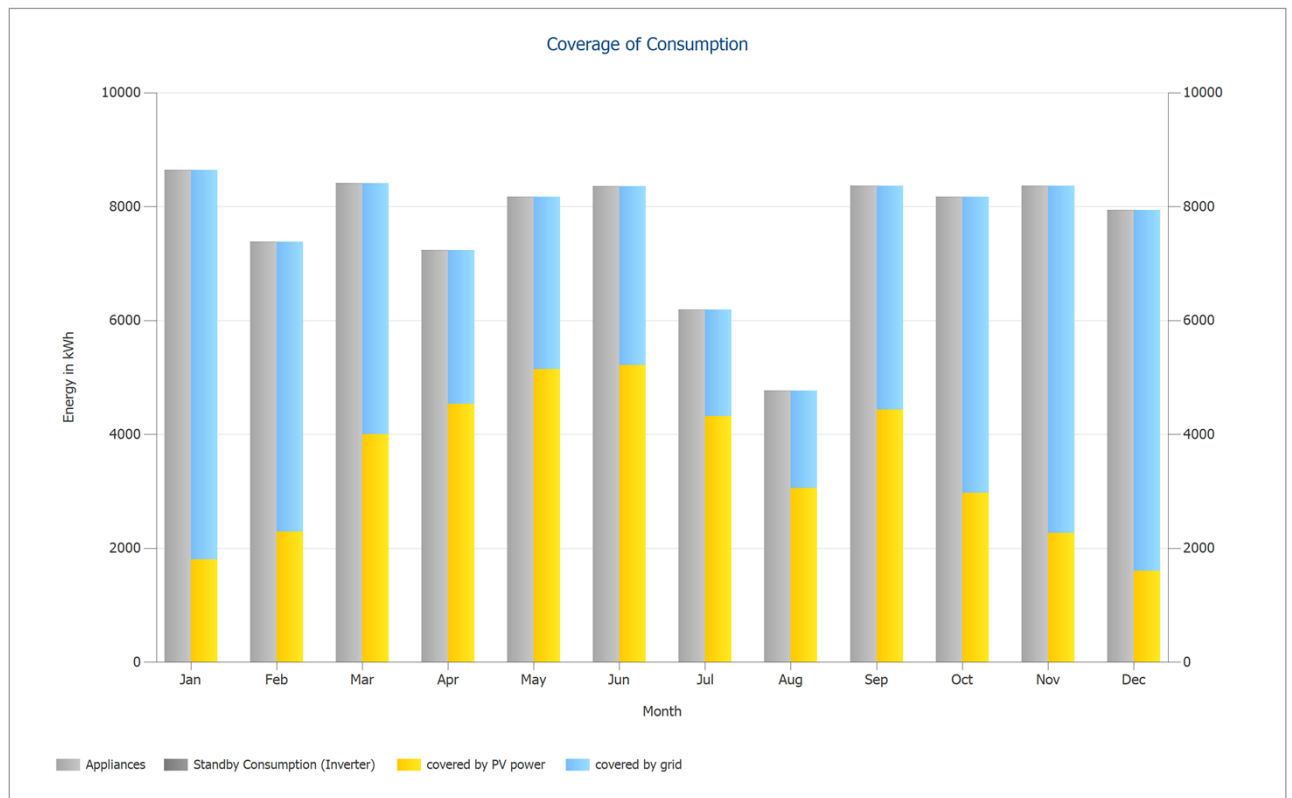


Figure: Coverage of Consumption

Plans and parts list

Circuit Diagram

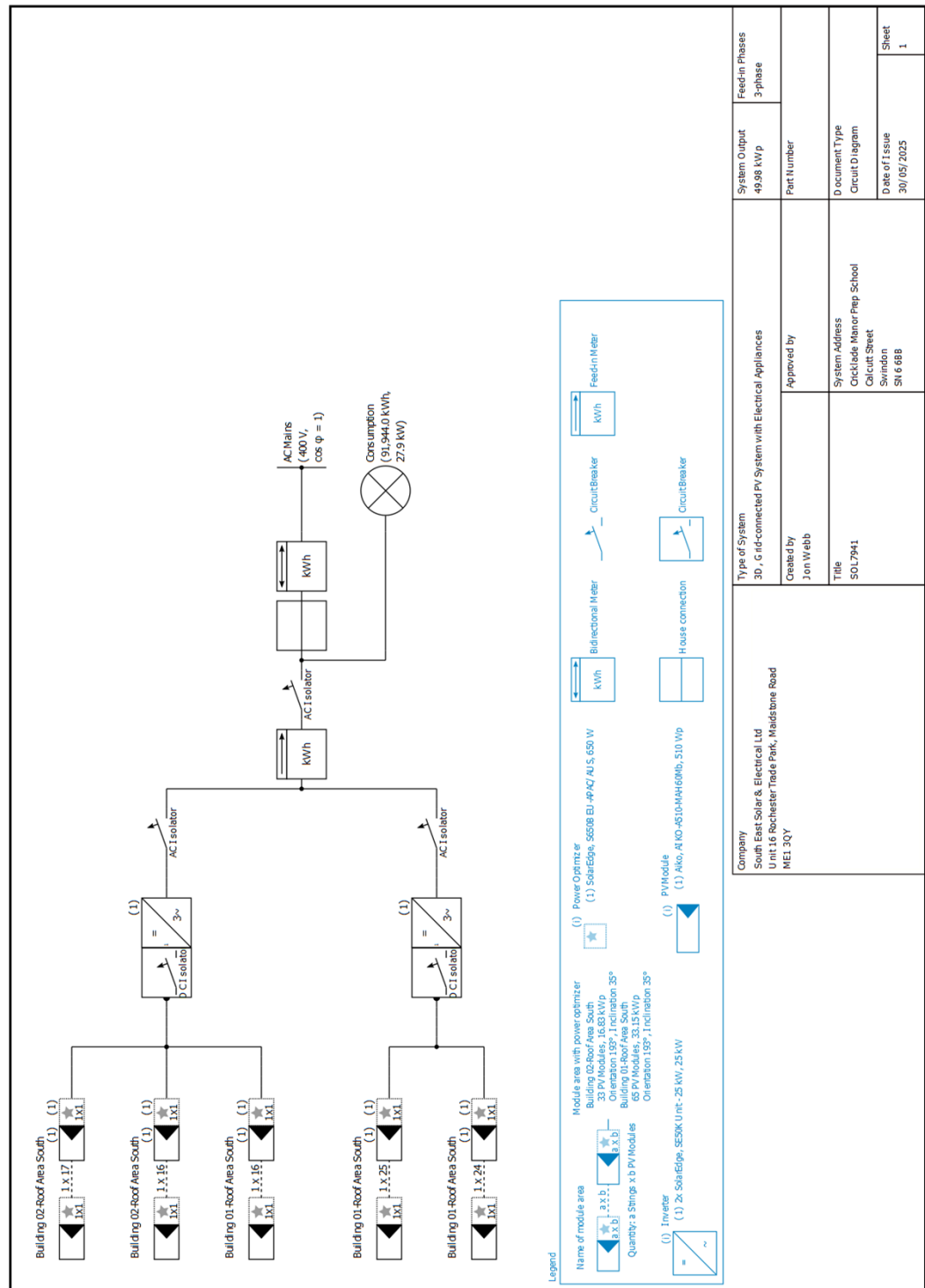


Figure: Circuit Diagram

String Plan

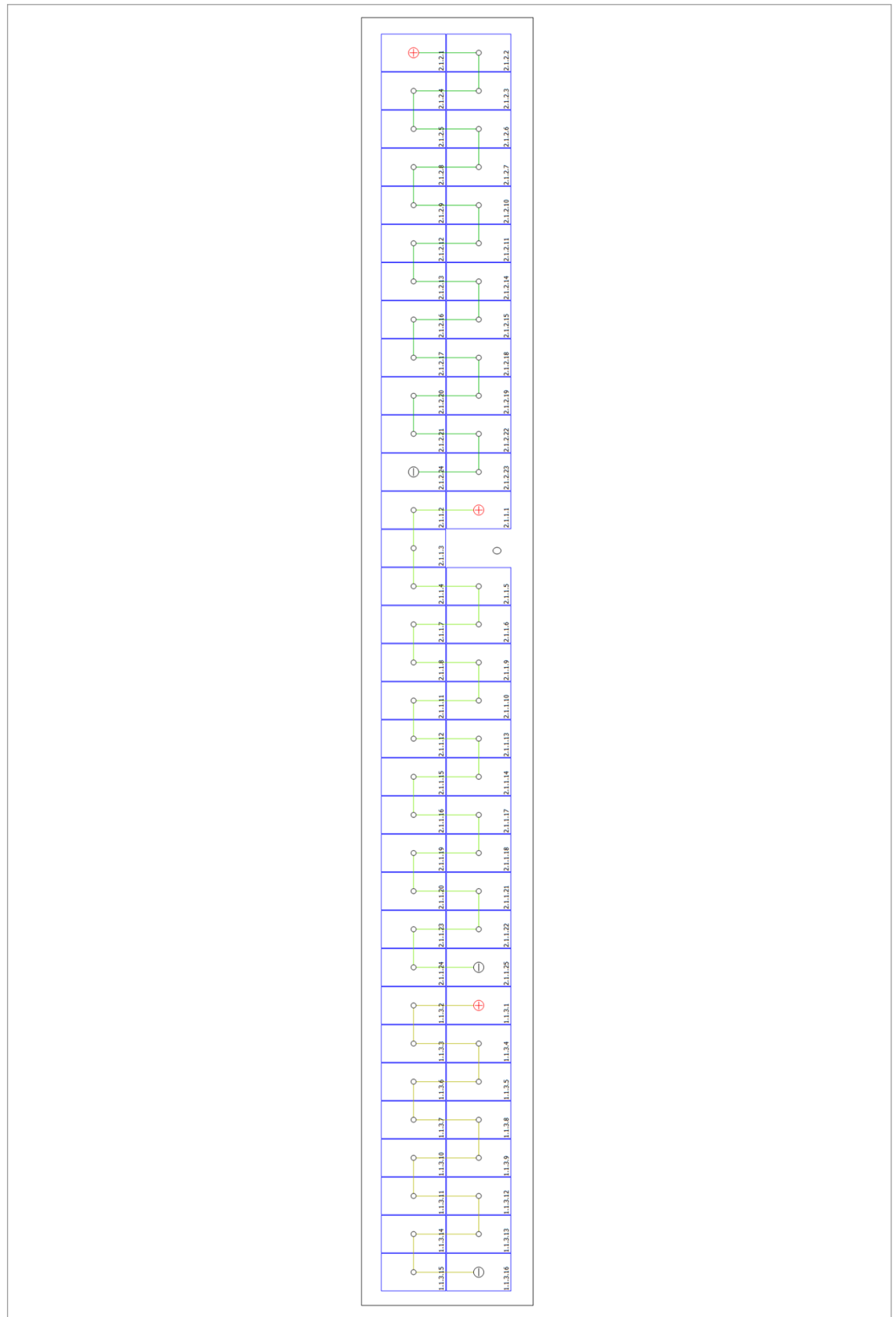


Figure: Building 01 - Roof Area South

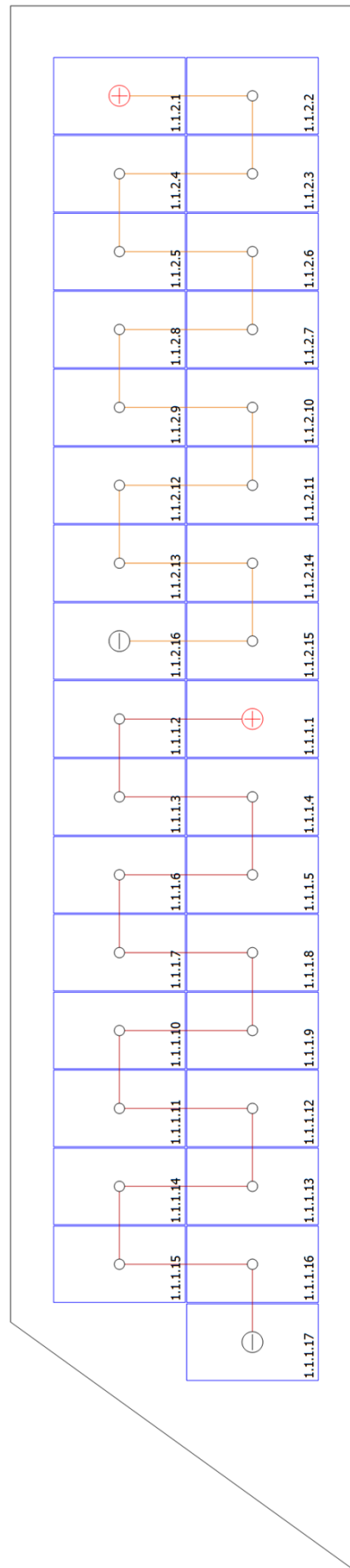


Figure: Building 02 - Roof Area South

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		Aiko	AIKO-A510-MAH60Mb	98	Piece
2	Inverter		SolarEdge	SE50K Unit	1	Piece
3	Power Optimizer		SolarEdge	S650B EU-APAC/AUS	98	Piece
4	Components			Feed-in Meter	1	Piece
5	Components			Circuit Breaker AC Isolator	3	Piece
6	Components			House connection	1	Piece
7	Components			Bidirectional Meter	1	Piece

Screenshots, 3D Design Environment

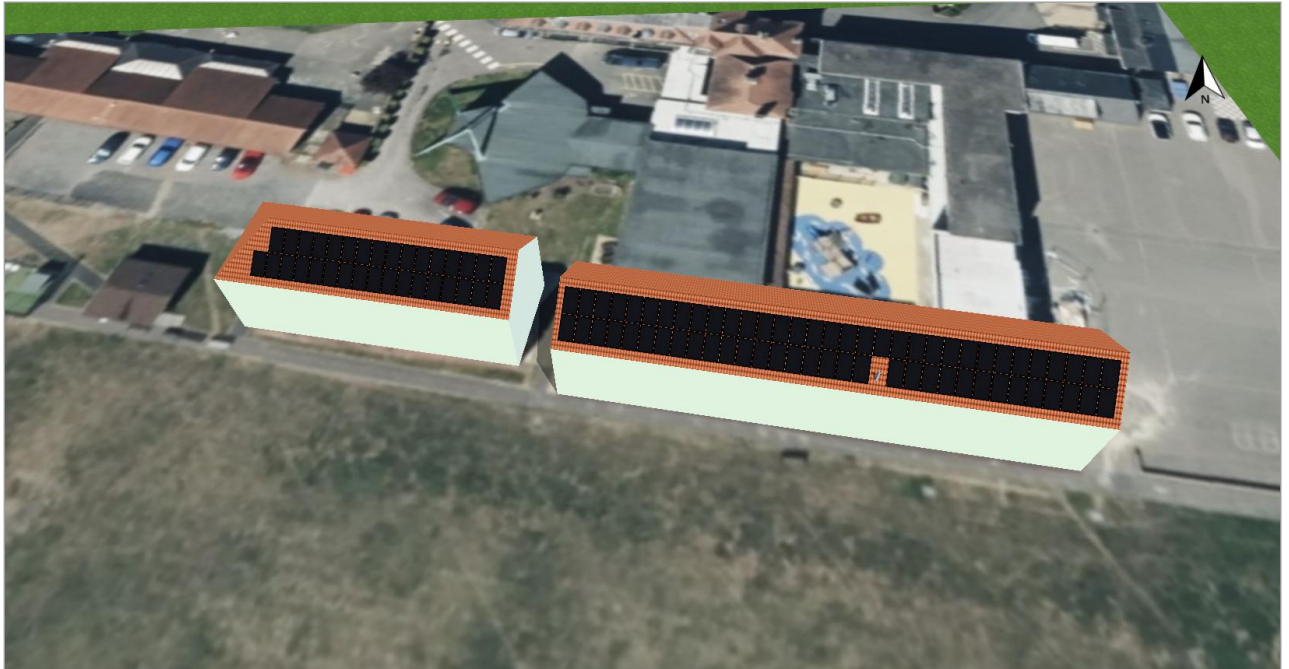


Figure: Screenshot01