

Greenlite Solar

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Five Guys

Five Guys
Reading Road
Winnersh
Wokingham, Berkshire
RG41 5HG

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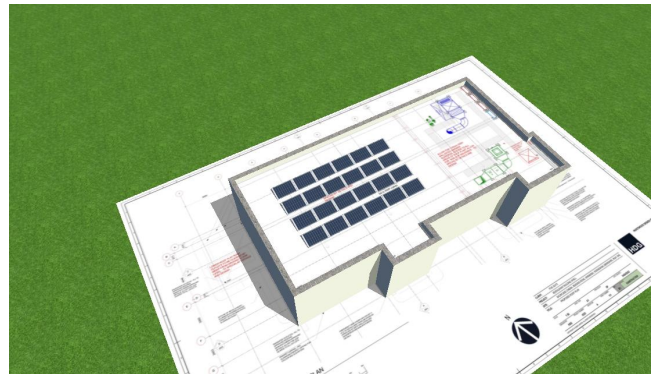
Project Name: Five Guys, Reading - Solar PV Installation
Offer no.: RevE

02/10/2025

Your PV system from Greenlite Solar

Address of Installation

Five Guys
Reading Road
Winnersh
Wokingham, Berkshire
RG41 5HG



Project Description:
Solar PV Installation

Project Overview

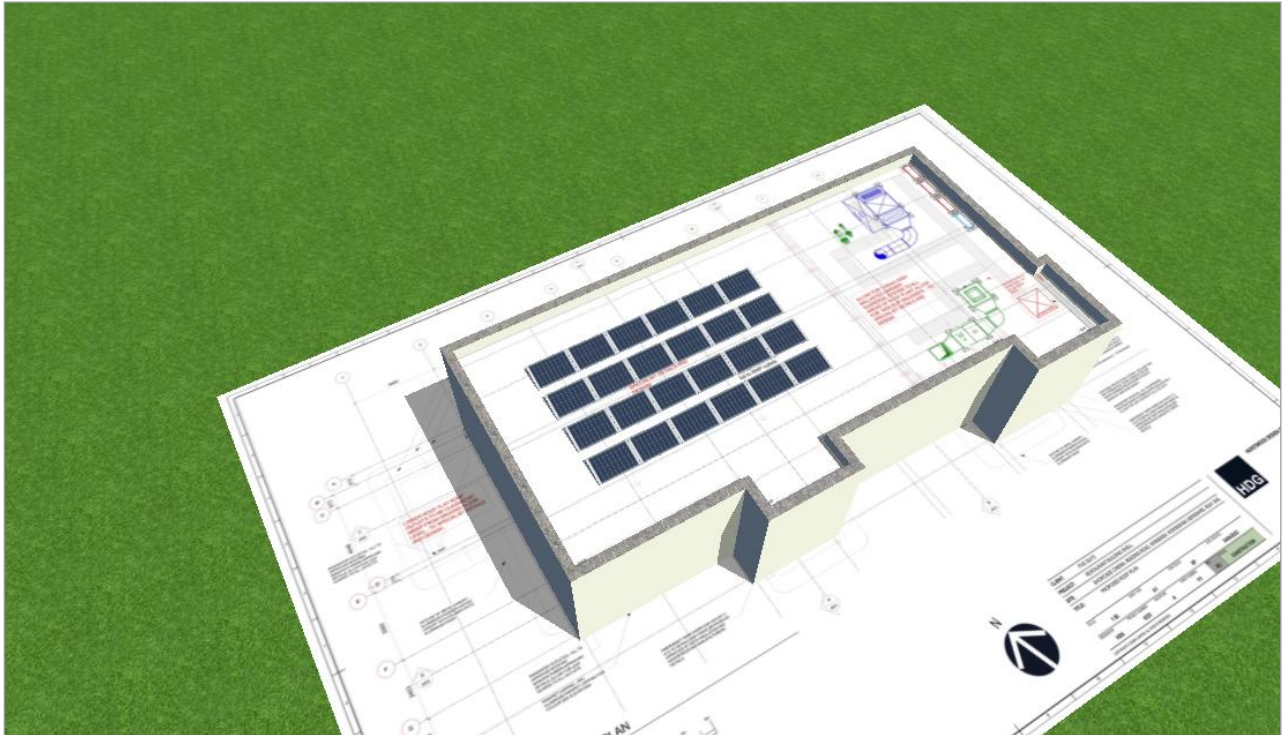


Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System with Electrical Appliances

Climate Data	Reading, GBR (2001 - 2020)
Values source	Meteonorm 8.2(i)
PV Generator Output	10.44 kWp
PV Generator Surface	48.0 m ²
Number of PV Modules	24
Number of Inverters	1

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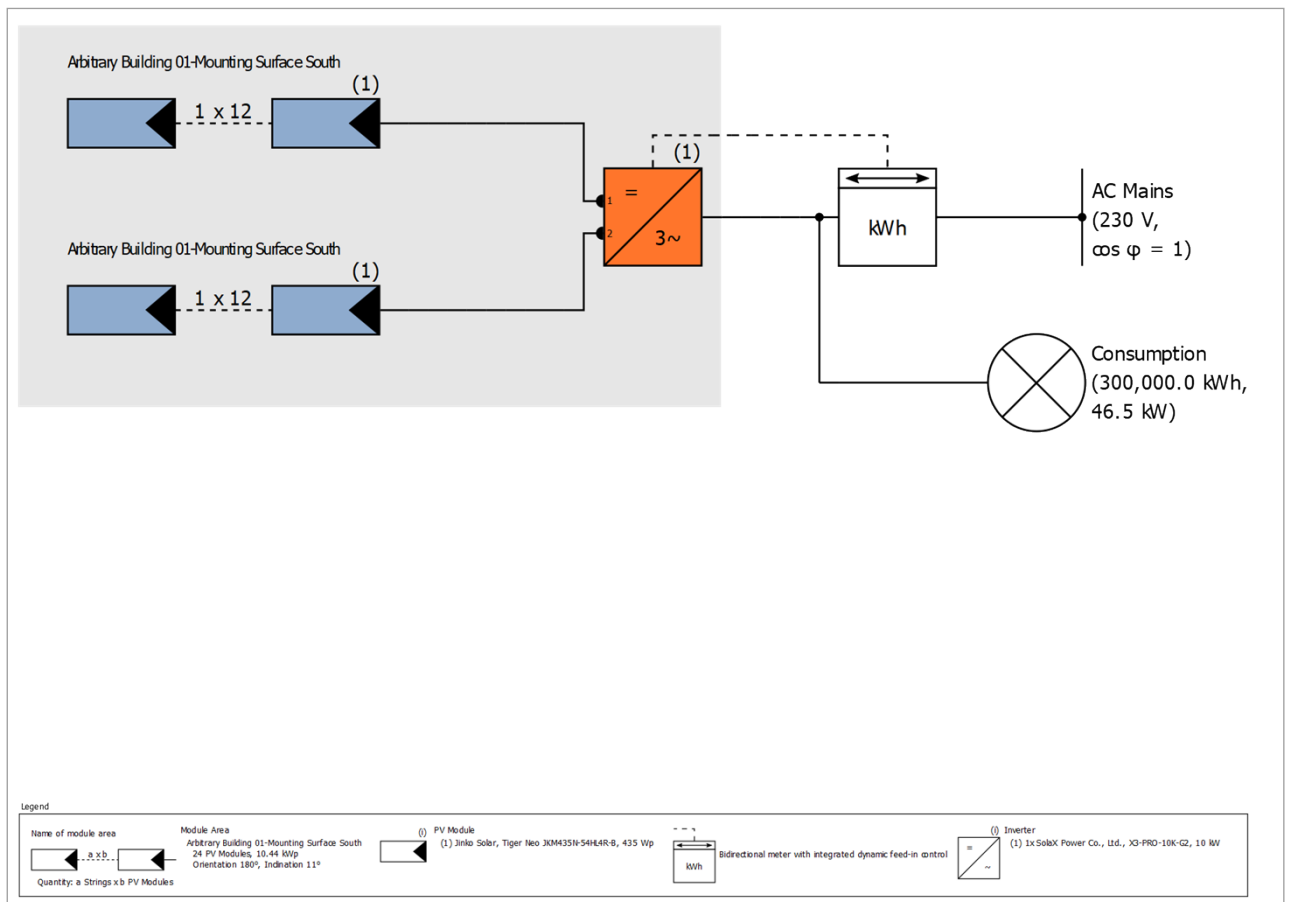


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	10.44 kWp
Spec. Annual Yield	976.32 kWh/kWp
Performance Ratio (PR)	90.57 %
Yield Reduction due to Shading	2.1 %
PV Generator Energy (AC grid)	10,203 kWh/Year
Own Consumption	10,203 kWh/Year
Clipping at Feed-in Point	0 kWh/Year
Grid Export	0 kWh/Year
Own Power Consumption	100.0 %
CO ₂ Emissions avoided	4,791 kg / year
Level of Self-sufficiency	3.4 %

Financial Analysis

Your Gain

Total investment costs	13,990.00 £
Internal Rate of Return (IRR)	22.38 %
Amortization Period	5.5 Years
Electricity Production Costs	0.0623 £/kWh
Energy Balance/Feed-in Concept	Surplus Feed-in

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
Climate Data	
Location	Reading, GBR (2001 - 2020)
Values source	Meteonorm 8.2(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	300000 kWh
BDEW load profile business (G3)	300000 kWh
Load Peak	46.5 kW

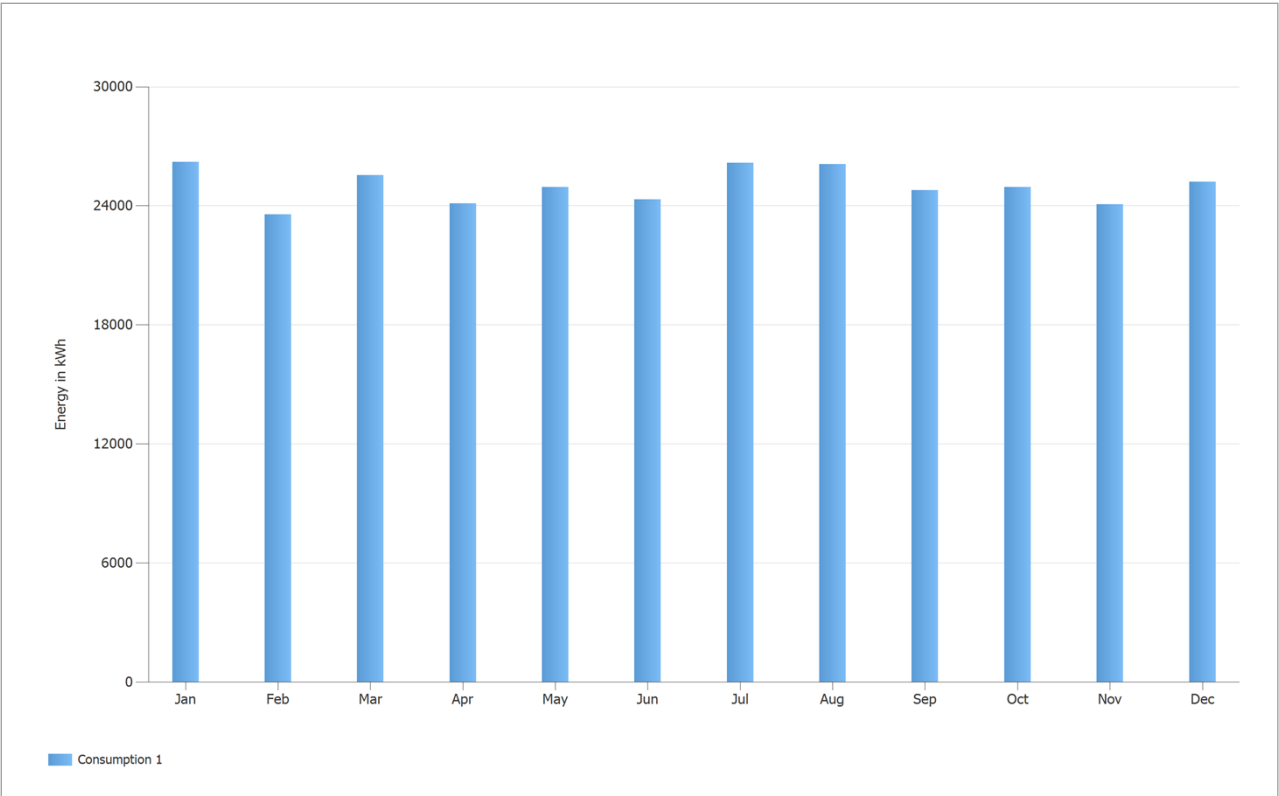


Figure: Consumption

Horizon Line, 3D Design

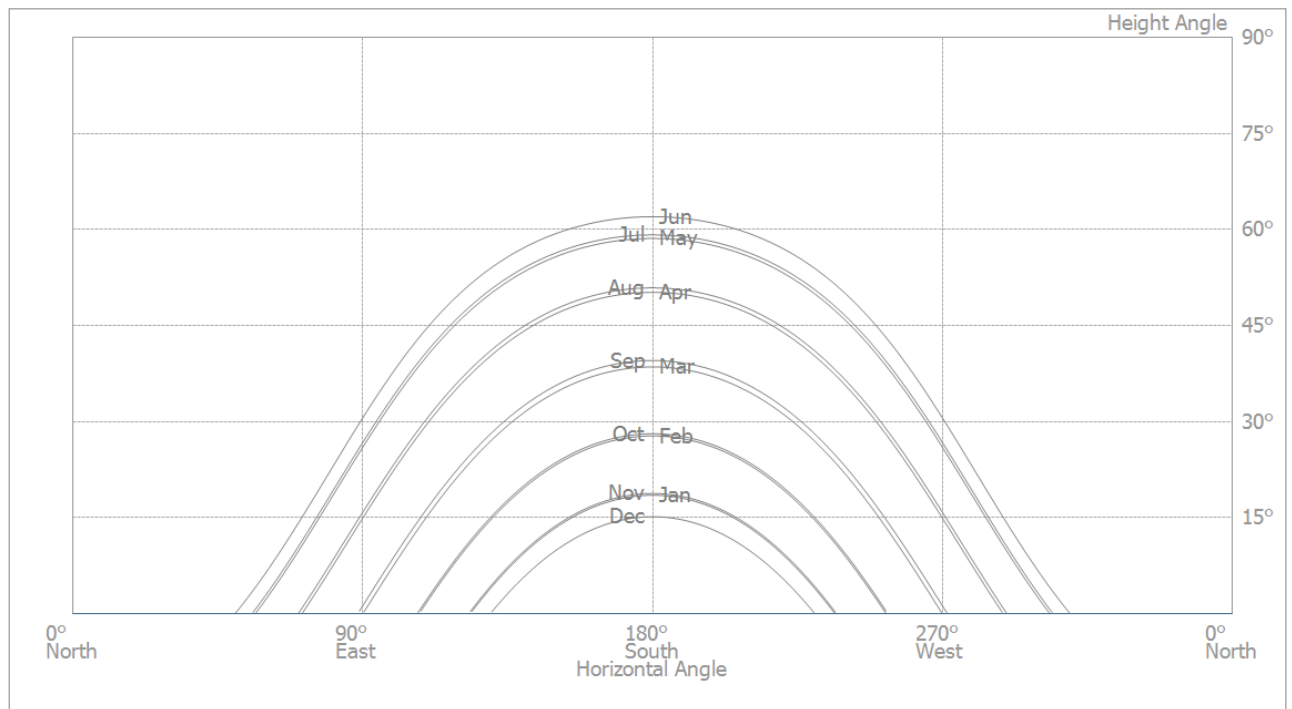


Figure: Horizon (3D Design)

Inverter configuration

Configuration 1

Module Area	Arbitrary Building 01-Mounting Surface South	
Inverter 1		
Model	X3-PRO-10K-G2 (v2)	
Manufacturer	SolaX Power Co., Ltd.	
Quantity	1	
Sizing Factor	104.4 %	
Configuration	MPP 1: 1 x 12	
	MPP 2: 1 x 12	

AC Mains

AC Mains

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

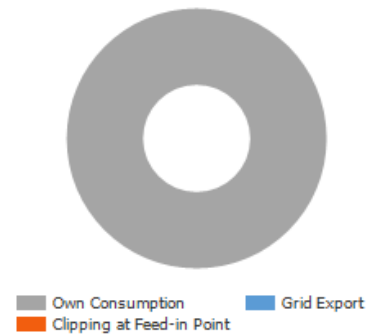
Simulation Results

Results Total System

PV System

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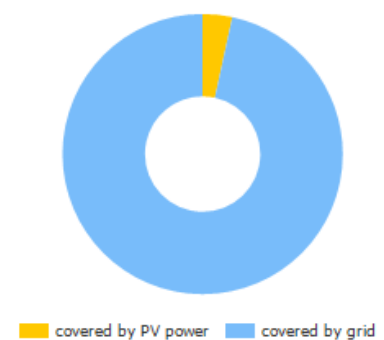
PV Generator Energy (AC grid)



Appliances

Appliances	300,000 kWh/Year
Standby Consumption (Inverter)	11 kWh/Year
Total Consumption	300,011 kWh/Year
covered by PV power	10,203 kWh/Year
covered by grid	289,807 kWh/Year
Solar Fraction	3.4 %

Total Consumption



Level of Self-sufficiency

Total Consumption	300,011 kWh/Year
covered by grid	289,807 kWh/Year
Level of Self-sufficiency	3.4 %

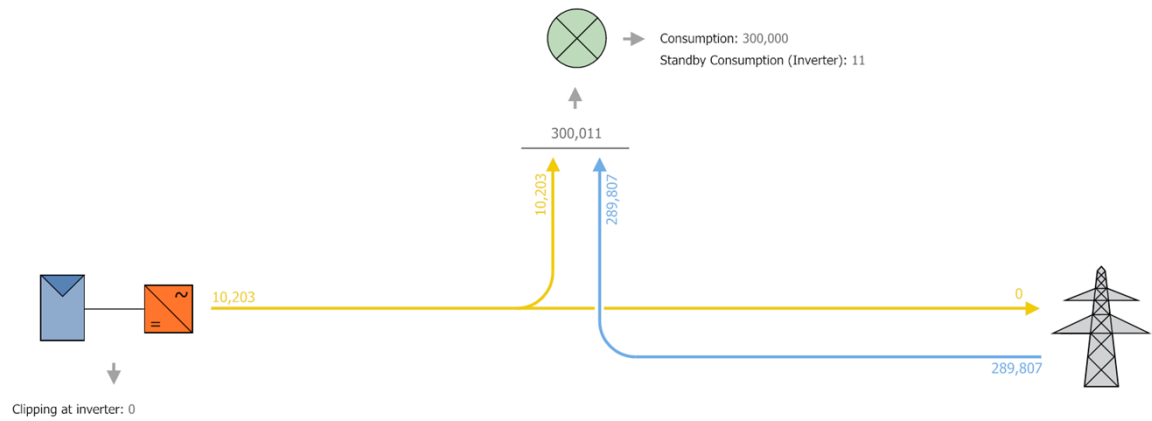
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Energy Flow Graph

Project: Five Guys, Reading - Solar PV Installation



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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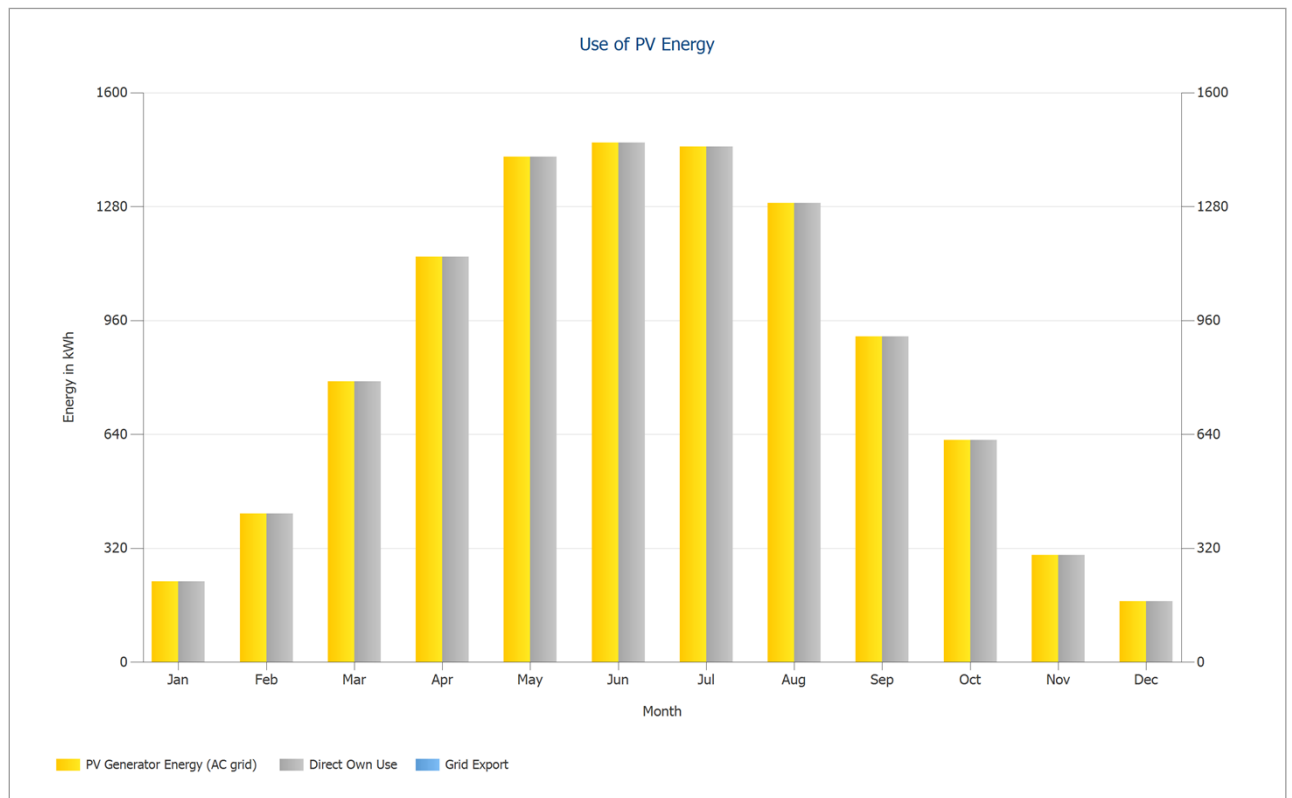


Figure: Use of PV Energy

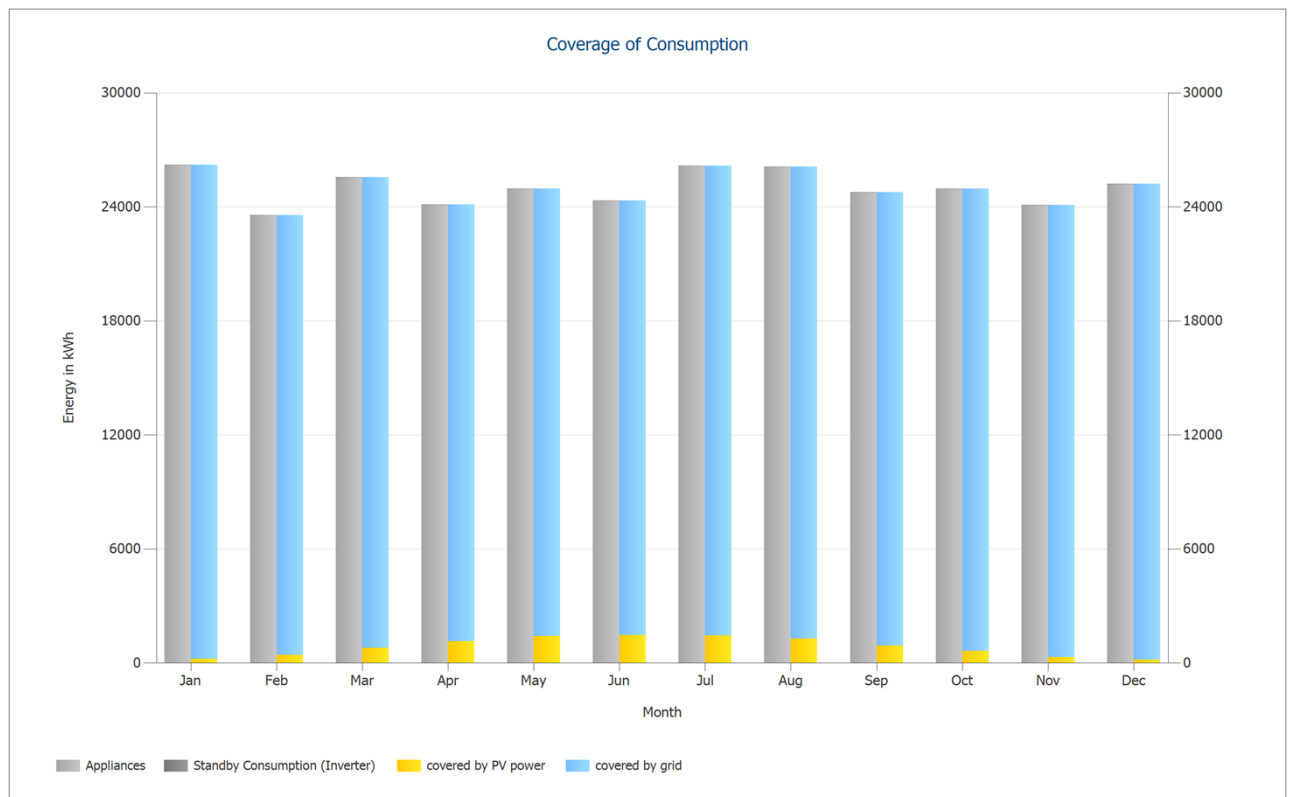


Figure: Coverage of Consumption

Financial Analysis

Overview

System Data

Grid Export in the first year (incl. module degradation)	0 kWh/Year
PV Generator Output	10.4 kWp
Start of Operation of the System	02/10/2025
Assessment Period	25 Years
Interest on Capital	1 %

Economic Parameters

Internal Rate of Return (IRR)	22.38 %
Accrued Cash Flow (Cash Balance)	106,804.49 £
Amortization Period	5.5 Years
Electricity Production Costs	0.0623 £/kWh

Payment Overview

Specific Investment Costs	1,340.04 £/kWp
Investment Costs	13,990.00 £
One-off Payments	0.00 £
Incoming Subsidies	0.00 £
Annual Costs	0.00 £/Year
Other Revenue or Savings	0.00 £/Year

Remuneration and Savings

Total Payment from Utility in First Year	0.00 £/Year
First year savings	2,242.40 £/Year

BPG (Example)

Energy Price	0.22 £/kWh
Base Price	700 £/Month
Inflation Rate for Energy Price	7 %/Year

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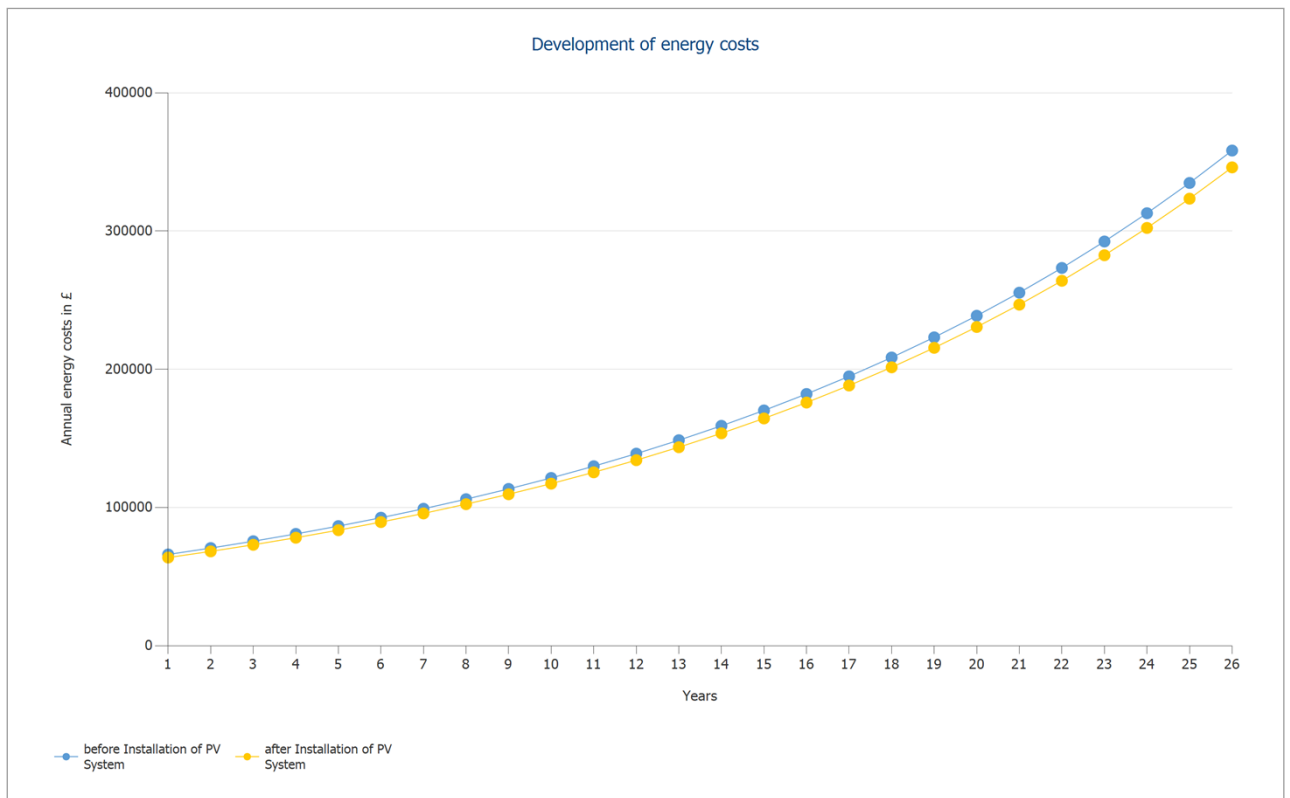


Figure: Development of energy costs

Cash flow

Cash flow

	Year 1	Year 2	Year 3	Year 4	Year 5
Investments	-£13,990.00	£0.00	£0.00	£0.00	£0.00
Electricity Savings	£2,218.61	£2,352.10	£2,491.82	£2,639.85	£2,796.68
Annual Cash Flow	-£11,771.39	£2,352.10	£2,491.82	£2,639.85	£2,796.68
Accrued Cash Flow (Cash Balance)	-£11,771.39	-£9,419.29	-£6,927.47	-£4,287.62	-£1,490.94

Cash flow

	Year 6	Year 7	Year 8	Year 9	Year 10
Investments	£0.00	£0.00	£0.00	£0.00	£0.00
Electricity Savings	£2,962.82	£3,138.82	£3,325.29	£3,522.83	£3,732.11
Annual Cash Flow	£2,962.82	£3,138.82	£3,325.29	£3,522.83	£3,732.11
Accrued Cash Flow (Cash Balance)	£1,471.88	£4,610.70	£7,935.99	£11,458.82	£15,190.92

Cash flow

	Year 11	Year 12	Year 13	Year 14	Year 15
Investments	£0.00	£0.00	£0.00	£0.00	£0.00
Electricity Savings	£3,953.82	£4,188.70	£4,437.53	£4,701.15	£4,980.42
Annual Cash Flow	£3,953.82	£4,188.70	£4,437.53	£4,701.15	£4,980.42
Accrued Cash Flow (Cash Balance)	£19,144.74	£23,333.43	£27,770.97	£32,472.11	£37,452.53

Cash flow

	Year 16	Year 17	Year 18	Year 19	Year 20
Investments	£0.00	£0.00	£0.00	£0.00	£0.00
Electricity Savings	£5,276.29	£5,589.73	£5,921.79	£6,273.58	£6,646.27
Annual Cash Flow	£5,276.29	£5,589.73	£5,921.79	£6,273.58	£6,646.27
Accrued Cash Flow (Cash Balance)	£42,728.82	£48,318.55	£54,240.35	£60,513.93	£67,160.20

Cash flow

	Year 21	Year 22	Year 23	Year 24	Year 25
Investments	£0.00	£0.00	£0.00	£0.00	£0.00
Electricity Savings	£7,041.10	£7,459.38	£7,902.52	£8,371.97	£8,869.32
Annual Cash Flow	£7,041.10	£7,459.38	£7,902.52	£8,371.97	£8,869.32
Accrued Cash Flow (Cash Balance)	£74,201.30	£81,660.69	£89,563.20	£97,935.17	£106,804.49

Degradation and inflation rates are applied on a monthly basis over the entire observation period. This is done in the first year.

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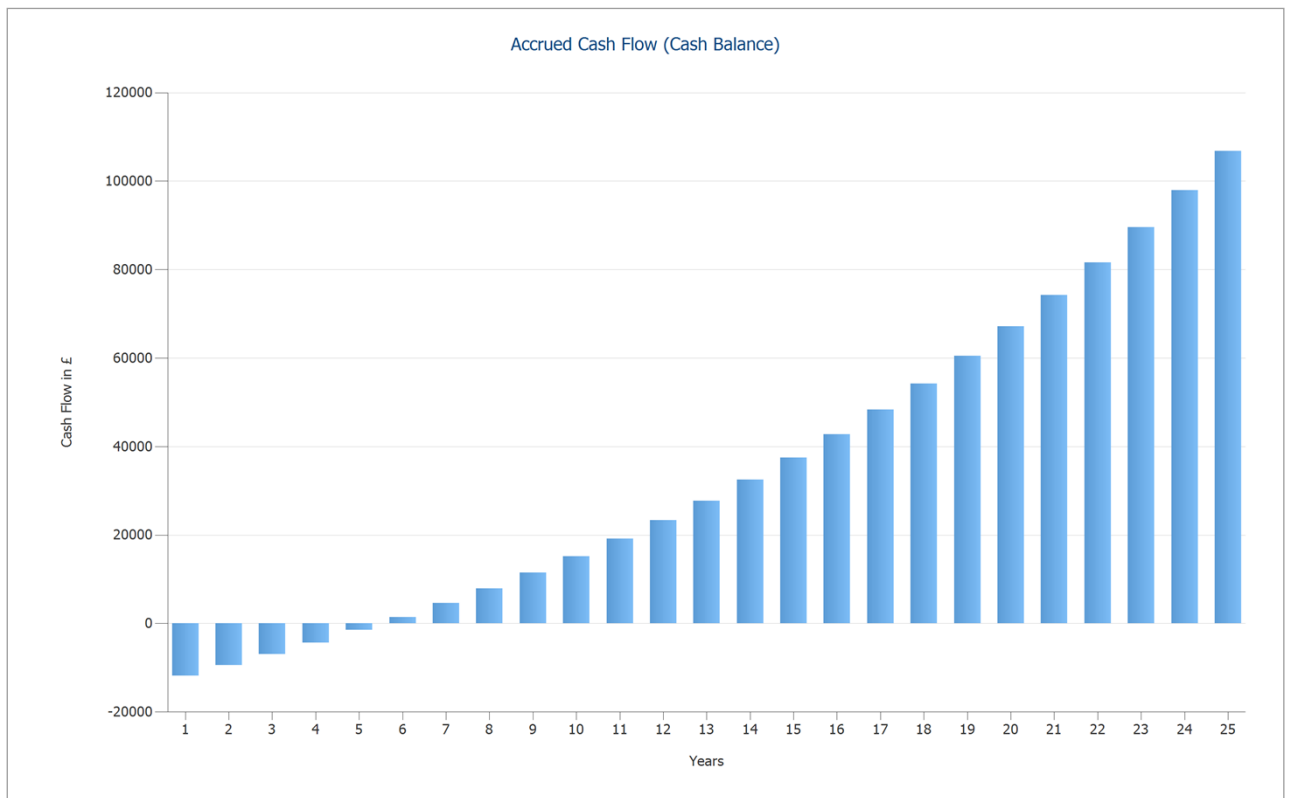


Figure: Accrued Cash Flow (Cash Balance)

Plans and parts list

Circuit Diagram

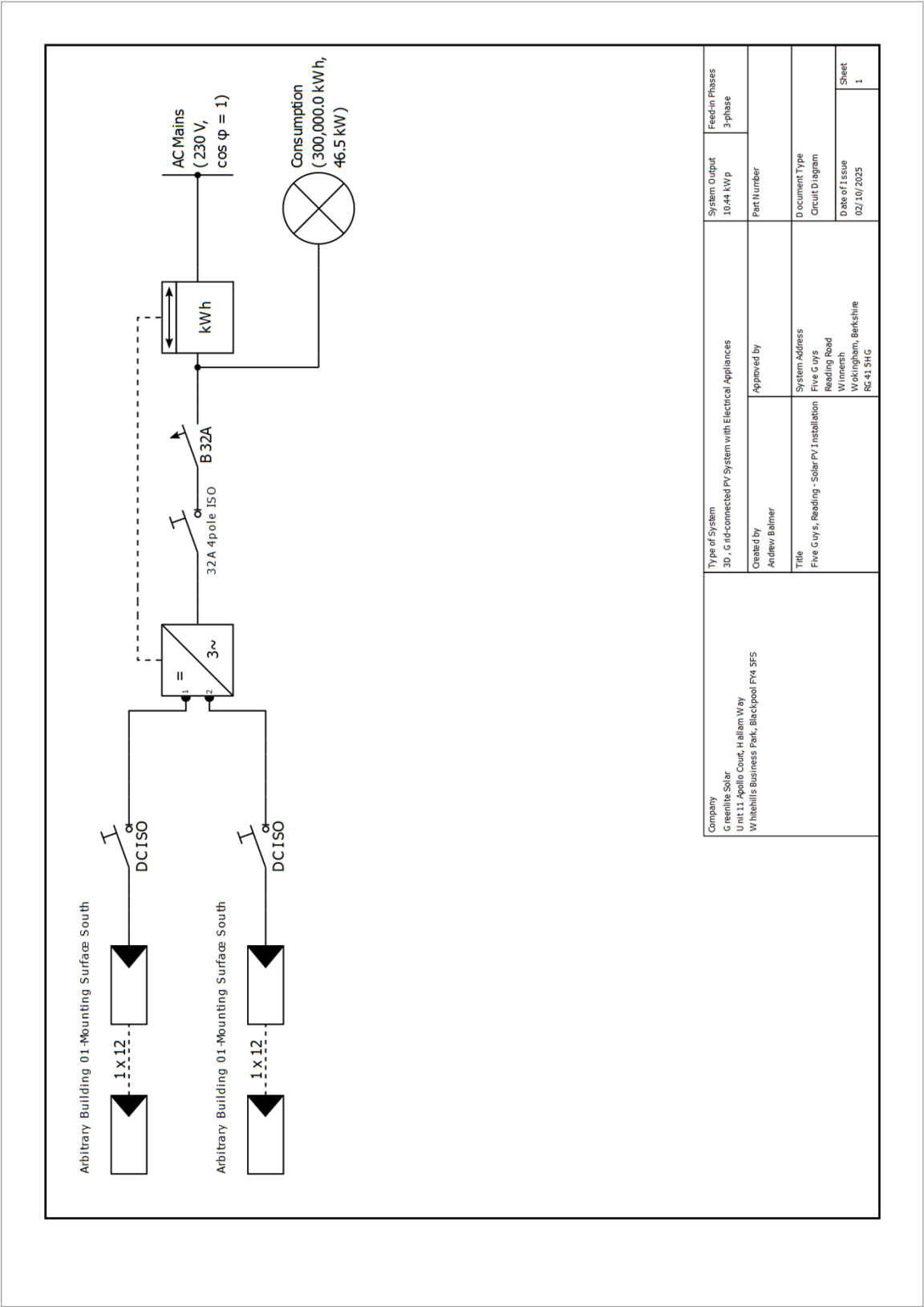


Figure: Circuit Diagram

Overview plan

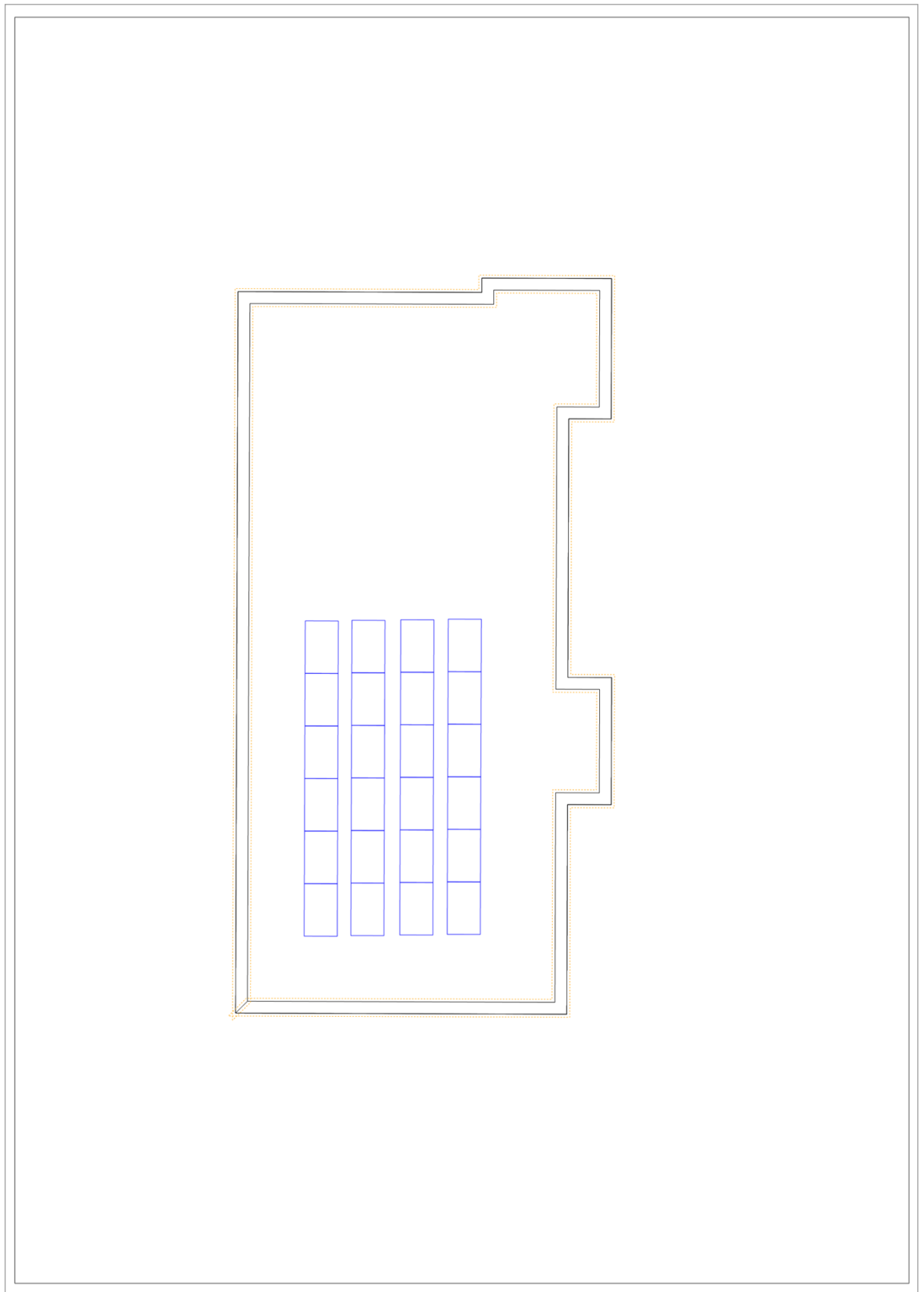


Figure: Overview plan

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		Jinko Solar	Tiger Neo JKM435N-54HL4R-B	24	Piece
2	Inverter		SolaX Power Co., Ltd.	X3-PRO-10K-G2	1	Piece
3	Components			Bidirectional meter with integrated dynamic feed-in control	1	Piece
4	Components			Load-break switch 32A 4pole ISO	1	Piece
5	Components			Circuit Breaker B 32A	1	Piece
6	Components			Load-break switch DC 2 ISO		Piece

Screenshots, 3D Design Environment

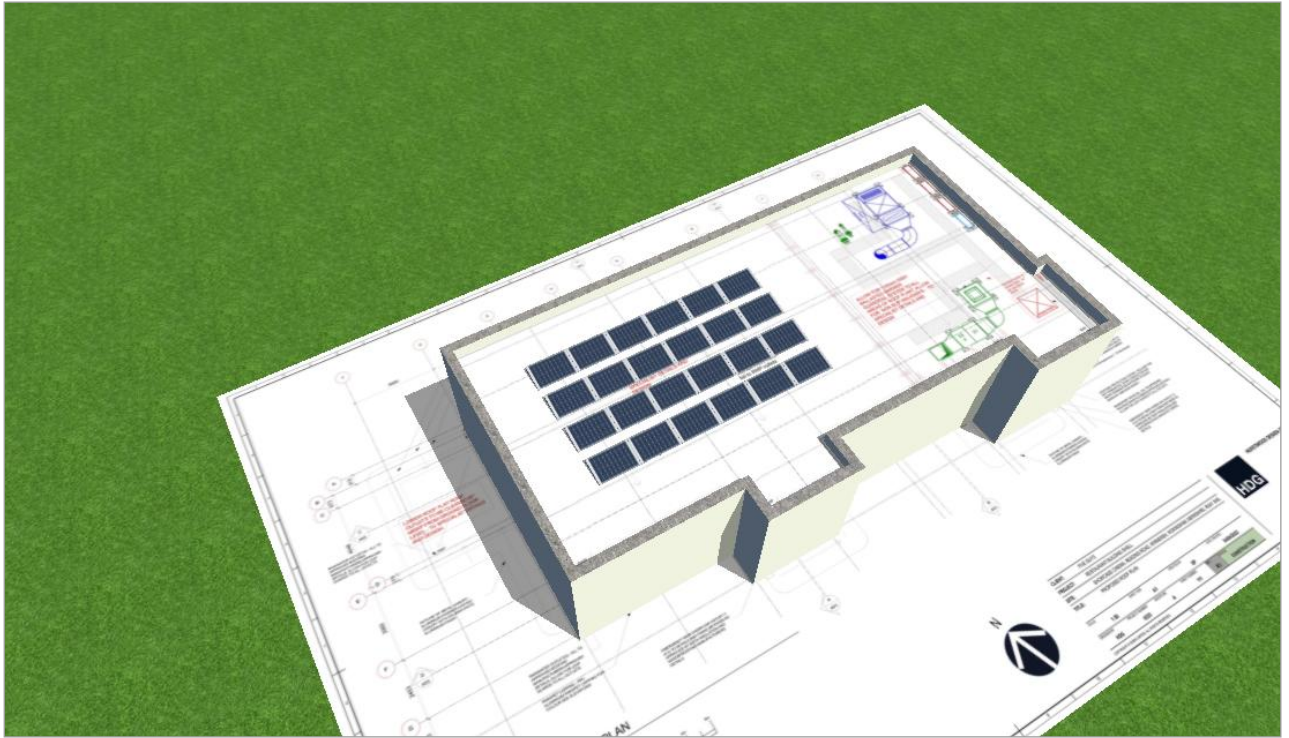


Figure: Screenshot01