Patrik Frimodig

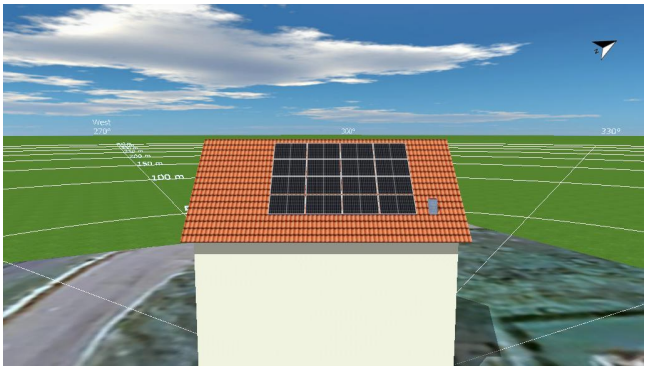
Customer No.: DAggstigen 18

2024-11-13

Your PV system

Address of Installation

Daggstigen 18



Project Overview

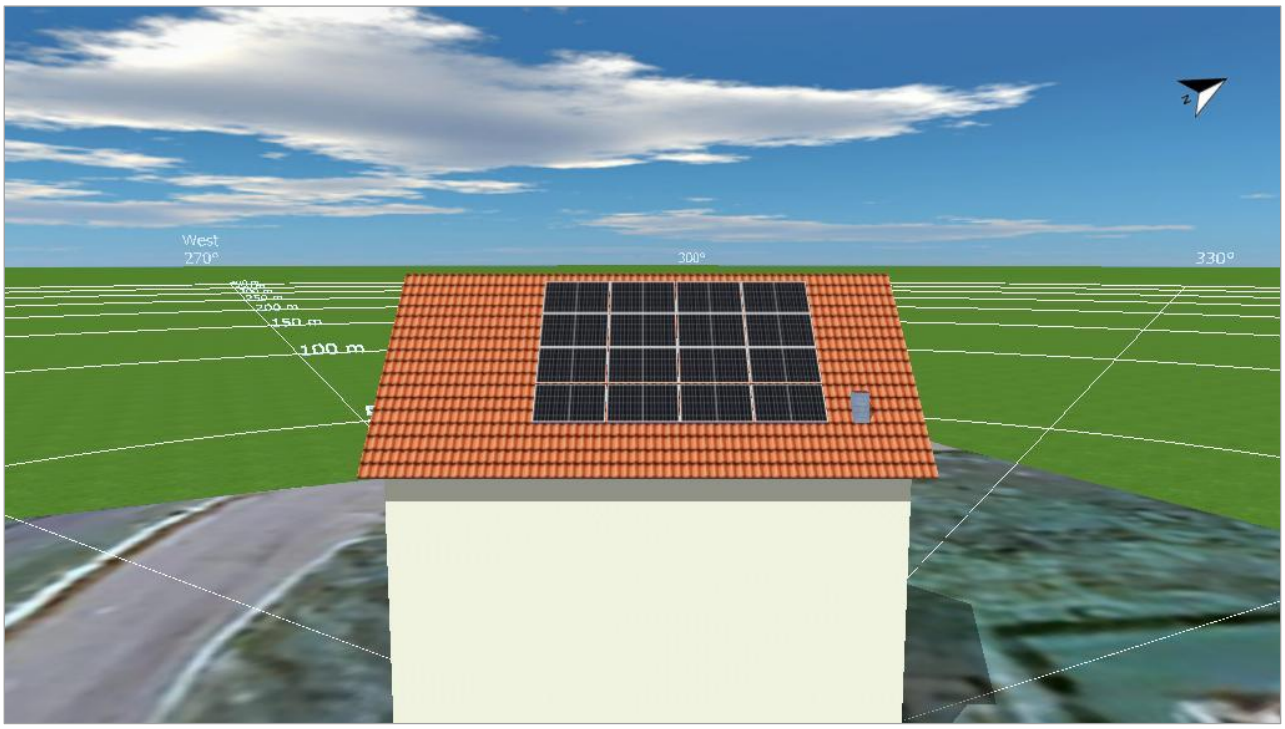


Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System with Electrical Appliances

Climate Data	Halmstad (AFB), SWE (1996 - 2015)	
Values source	Meteonorm 8.1	
PV Generator Output	6,96	kWp
PV Generator Surface	31,2	m²
Number of PV Modules	16	
Number of Inverters	1	

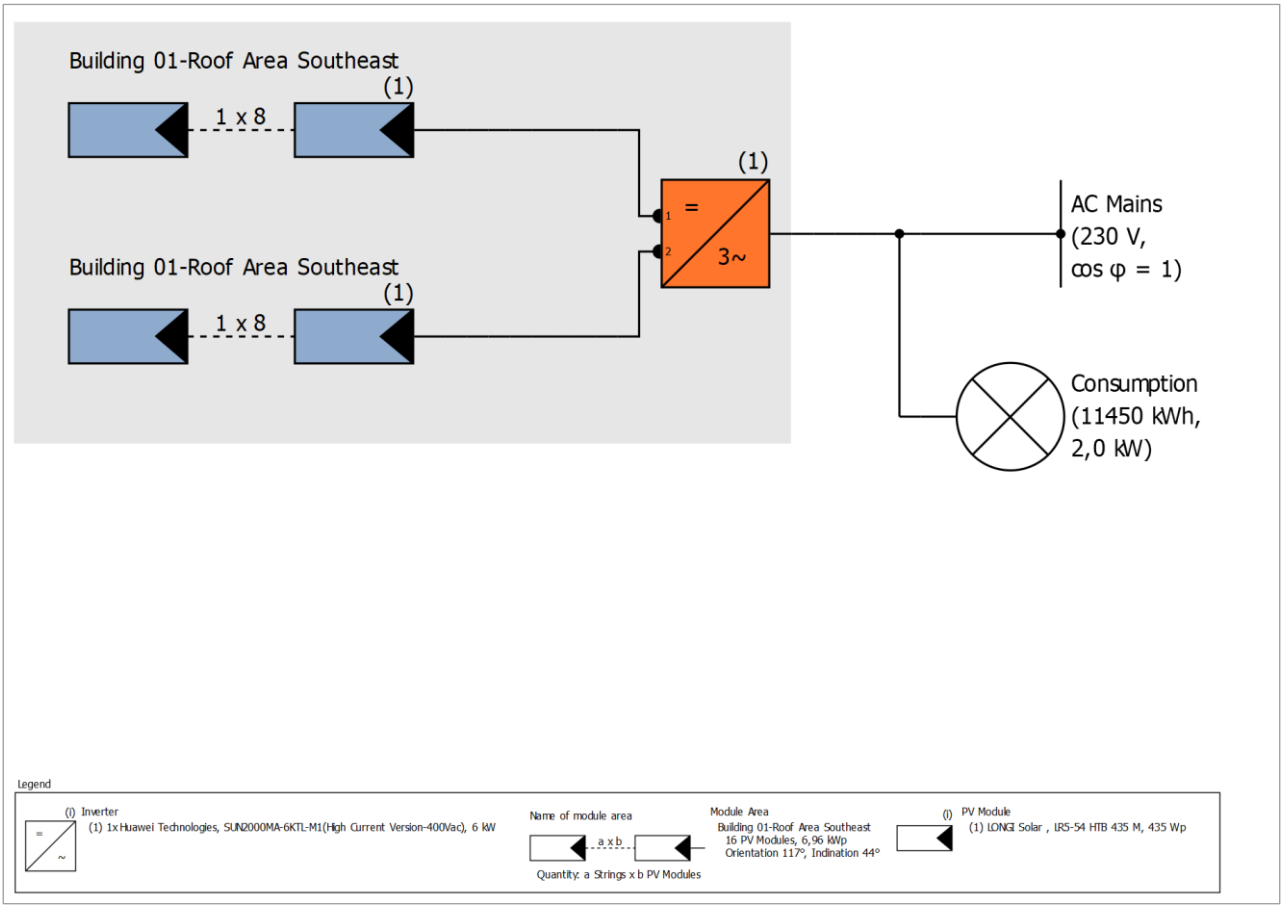


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	6,96 kWp
Spec. Annual Yield	956,22 kWh/kWp
Performance Ratio (PR)	93,48 %
Yield Reduction due to Shading	0,2 %
PV Generator Energy (AC grid)	6 689 kWh/Year
Own Consumption	2 952 kWh/Year
Down-regulation at Feed-in Point	0 kWh/Year
Grid Export	3 737 kWh/Year
Own Power Consumption	43,9 %
CO_2 Emissions avoided	3 128 kg / year
Level of Self-sufficiency	25,7 %

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

Consumption

Total Consumption	11450 kWh
New	11450 kWh
Load Peak	2 kW

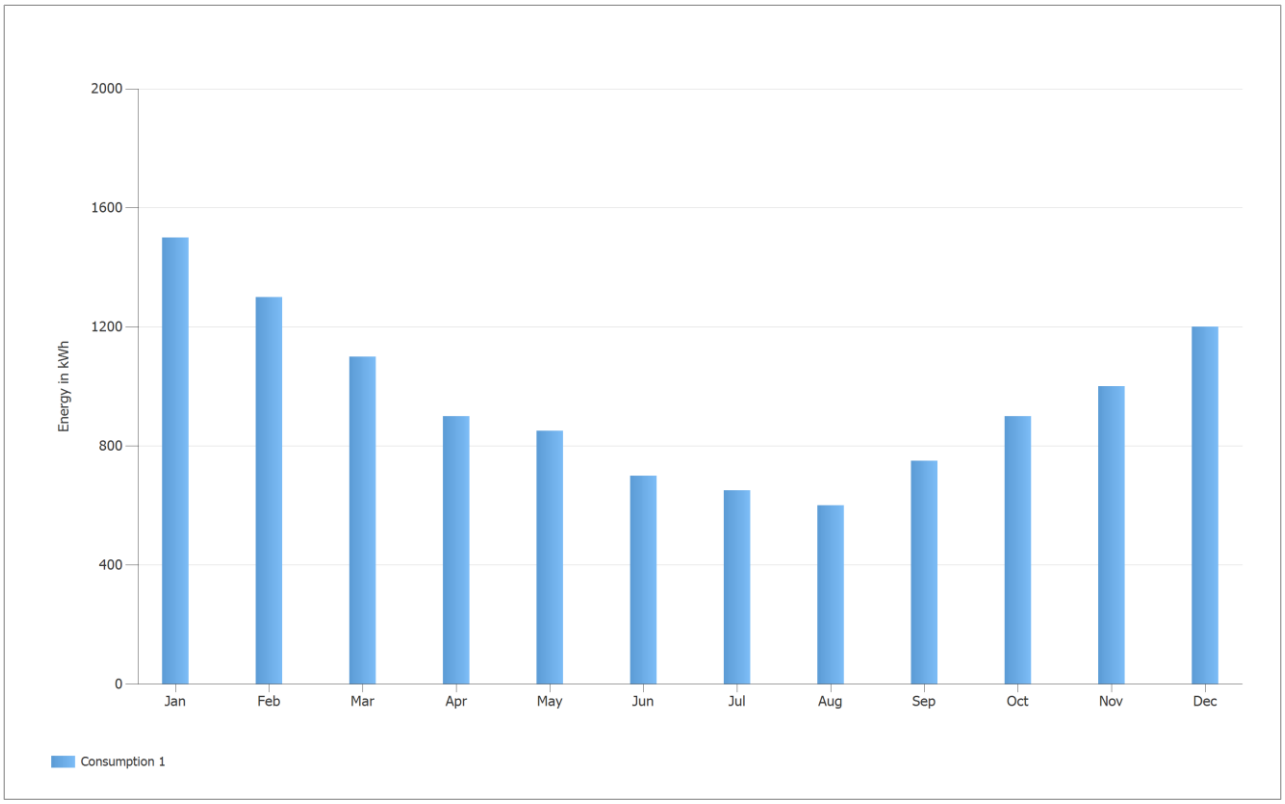


Figure: Consumption

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	16 x LR5-54 HTB 435 M (v3)
Manufacturer	LONGI Solar
Inclination	44 °
Orientation	Southeast 117 °
Installation Type	Roof parallel
PV Generator Surface	31,2 m²

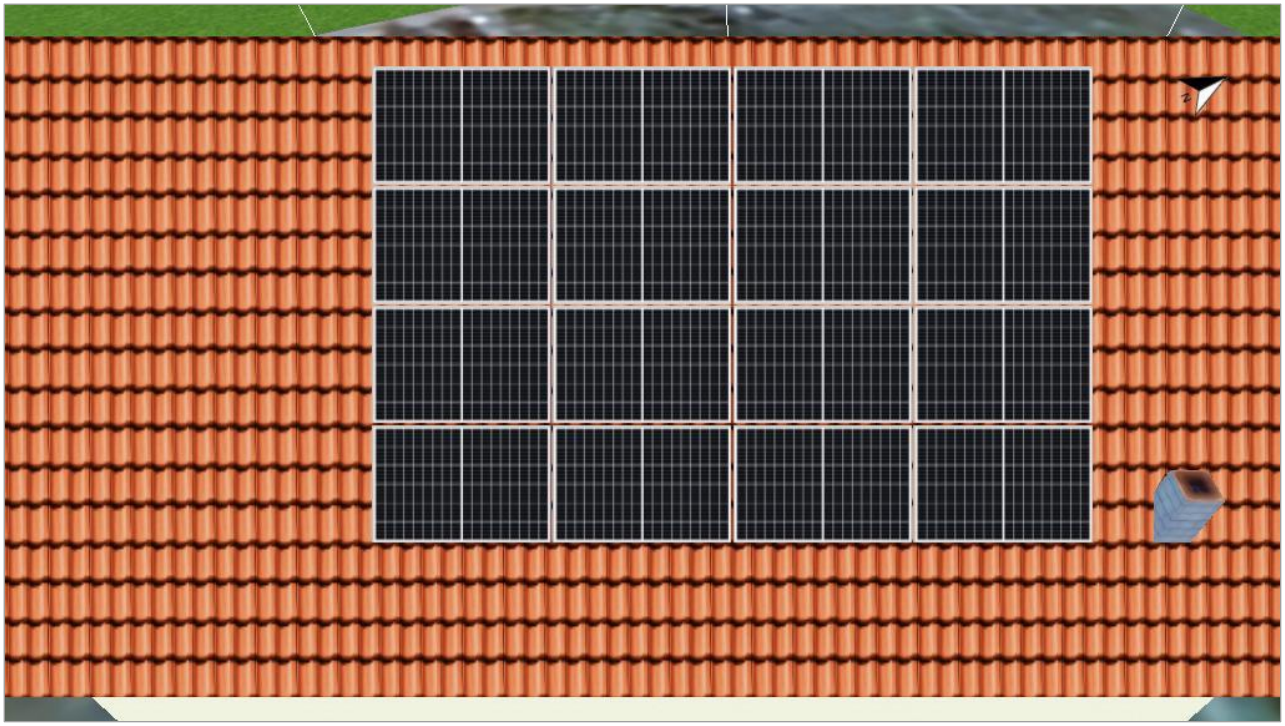


Figure: 1. Module Area - Building 01-Roof Area Southeast

Horizon Line, 3D Design

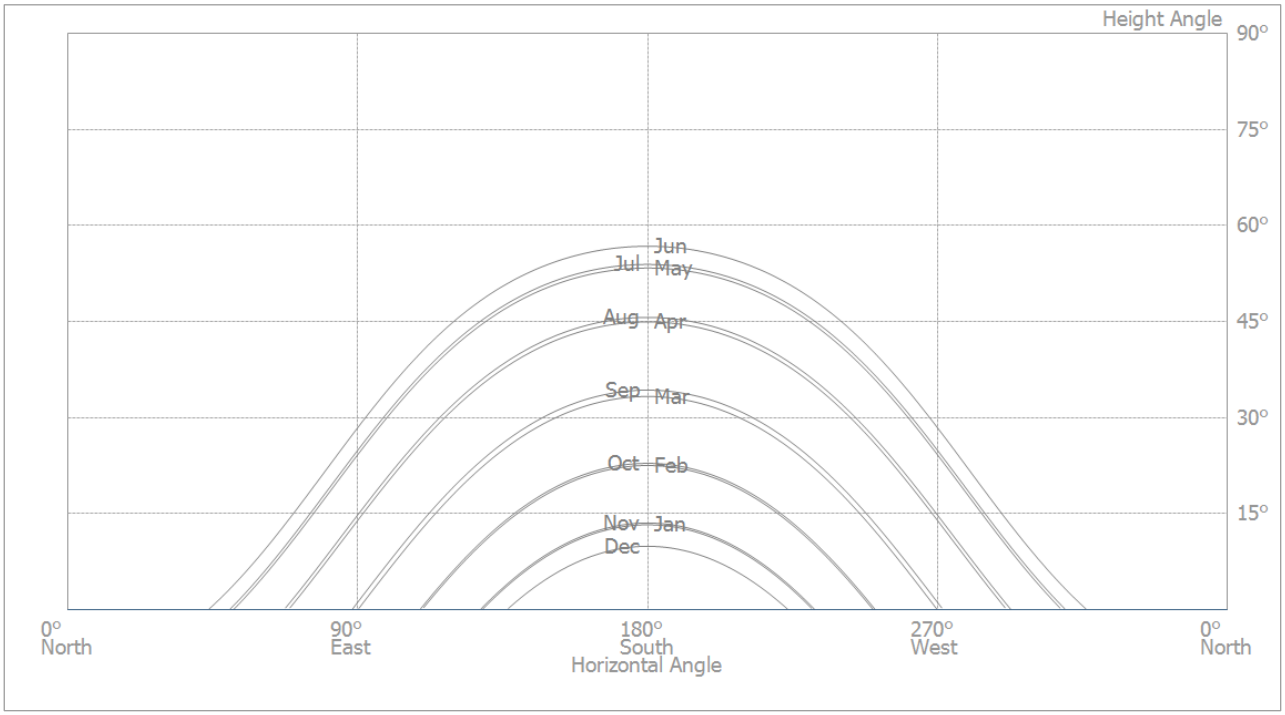


Figure: Horizon (3D Design)

Inverter configuration

Configuration 1	
Module Area	Building 01-Roof Area Southeast
Inverter 1	
Model	SUN2000MA-6KTL-M1(High Current Version-400Vac) (v1)
Manufacturer	Huawei Technologies
Quantity	1
Sizing Factor	116 %
Configuration	MPP 1: 1 x 8
	MPP 2: 1 x 8

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

PV Generator Output	6,96	kWp
Spec. Annual Yield	956,22	kWh/kWp
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PV Generator Energy (AC grid)	6 689	kWh/Year
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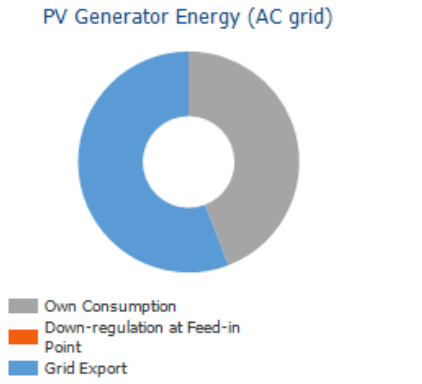
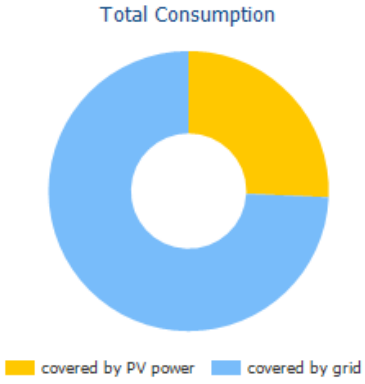
CO_2 Emissions avoided	3 128	kg / year



Appliances

Appliances	11 450	kWh/Year
Standby Consumption (Inverter)	33	kWh/Year
Total Consumption	11 483	kWh/Year
covered by PV power	2 952	kWh/Year
covered by grid	8 531	kWh/Year
Solar Fraction	25,7	%



Level of Self-sufficiency

Total Consumption	11 483	kWh/Year
covered by grid	8 531	kWh/Year
Level of Self-sufficiency	25,7	%

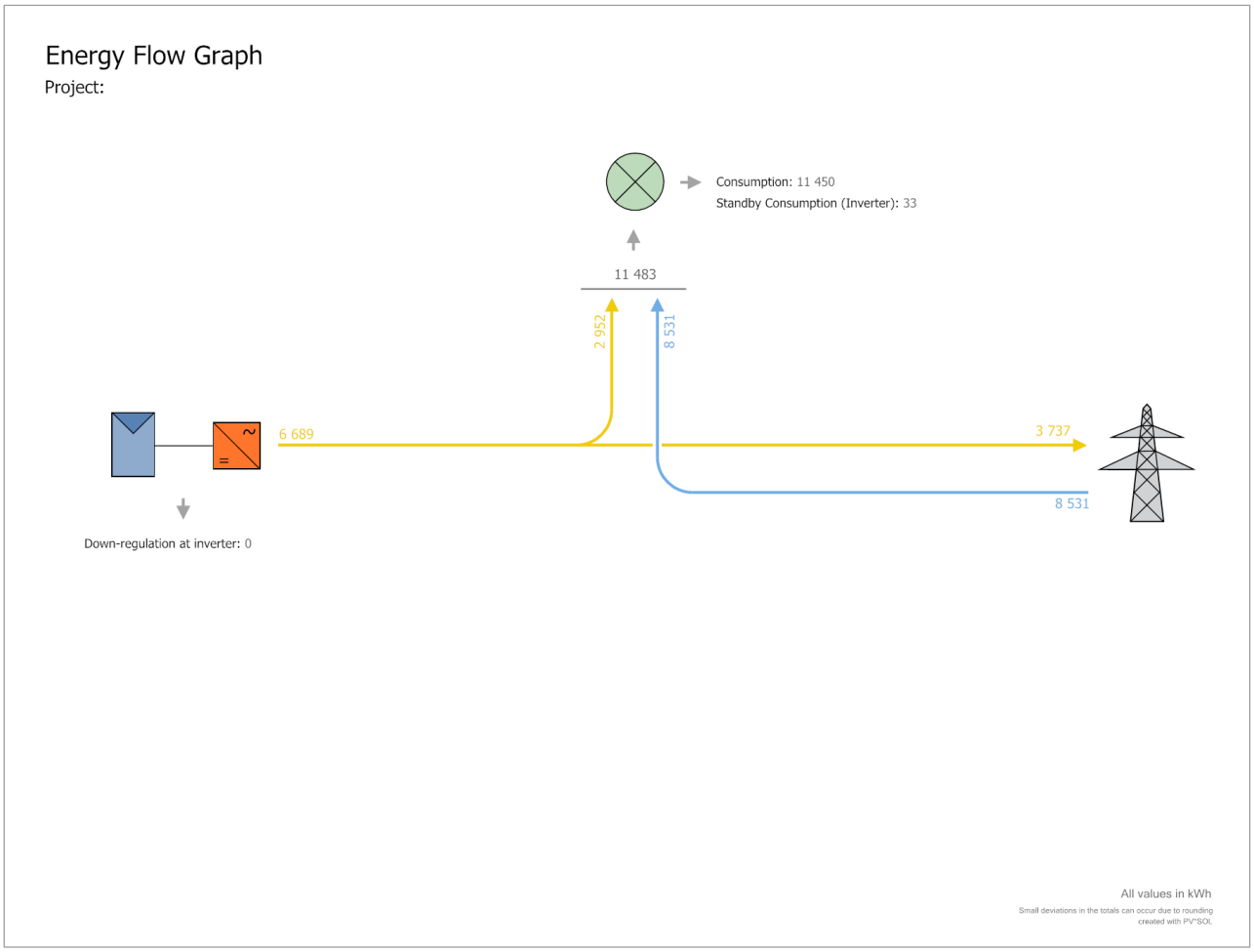


Figure: Energy flow

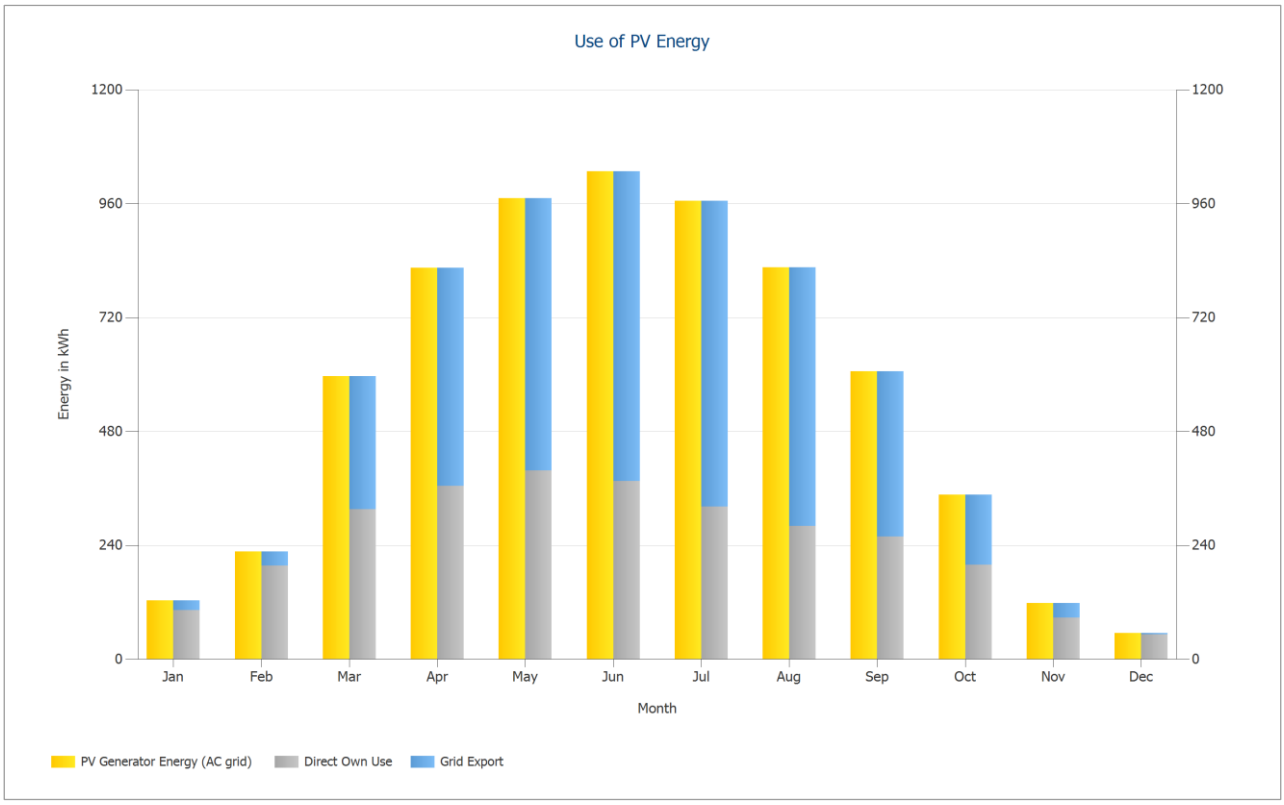


Figure: Use of PV Energy

Plans and parts list

Circuit Diagram

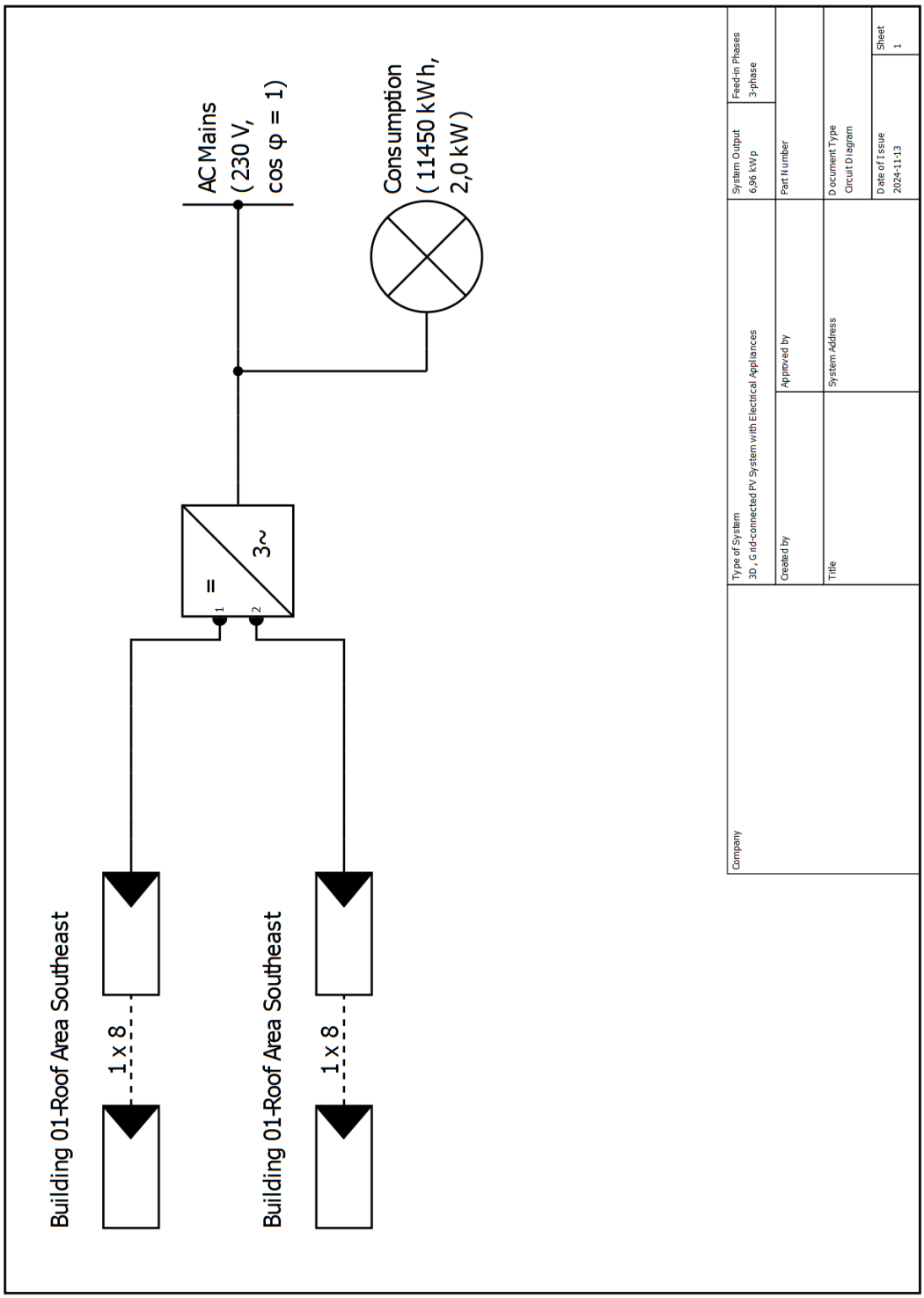


Figure: Circuit Diagram

Overview plan

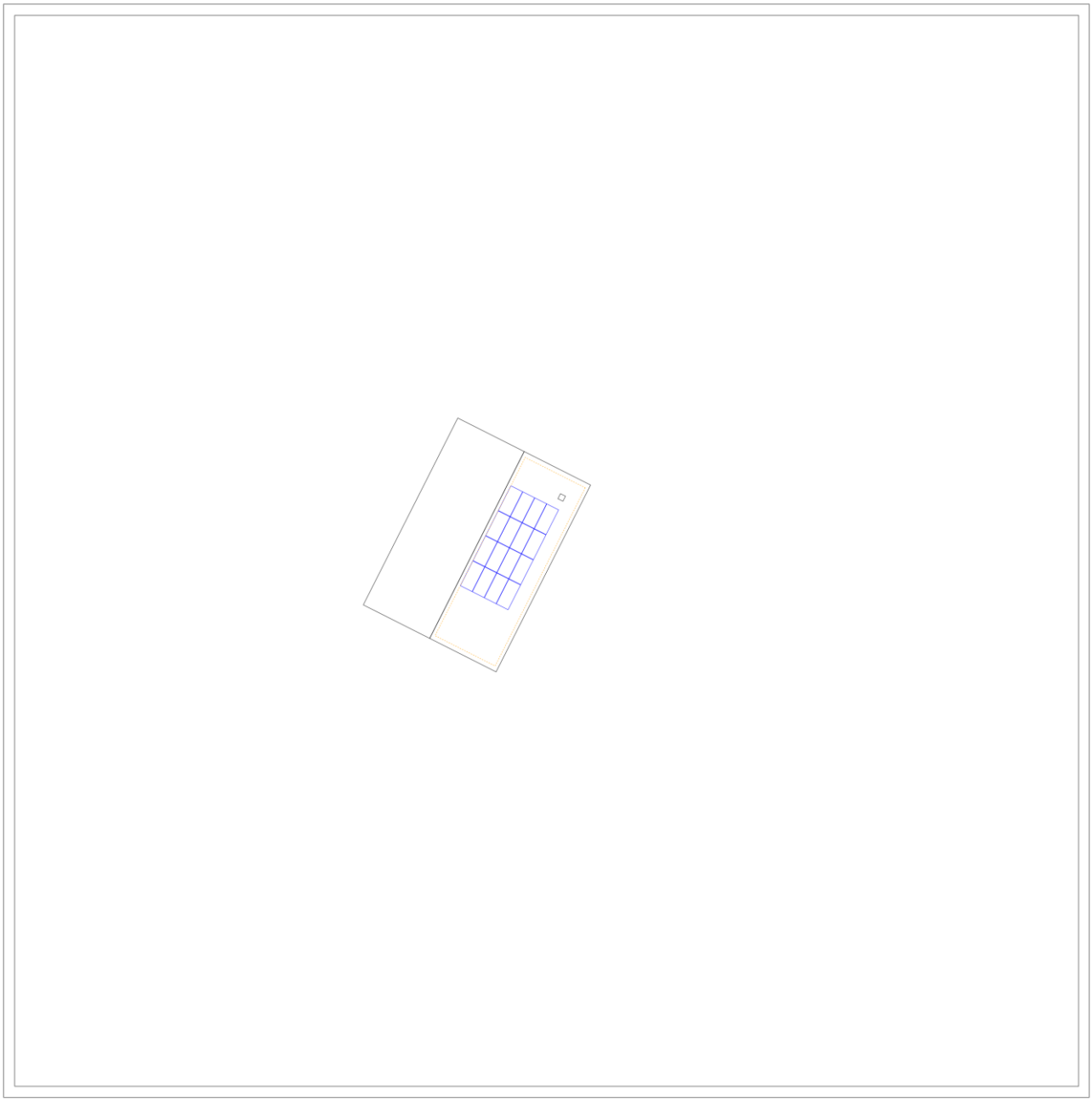


Figure: Overview plan

Dimensioning Plan

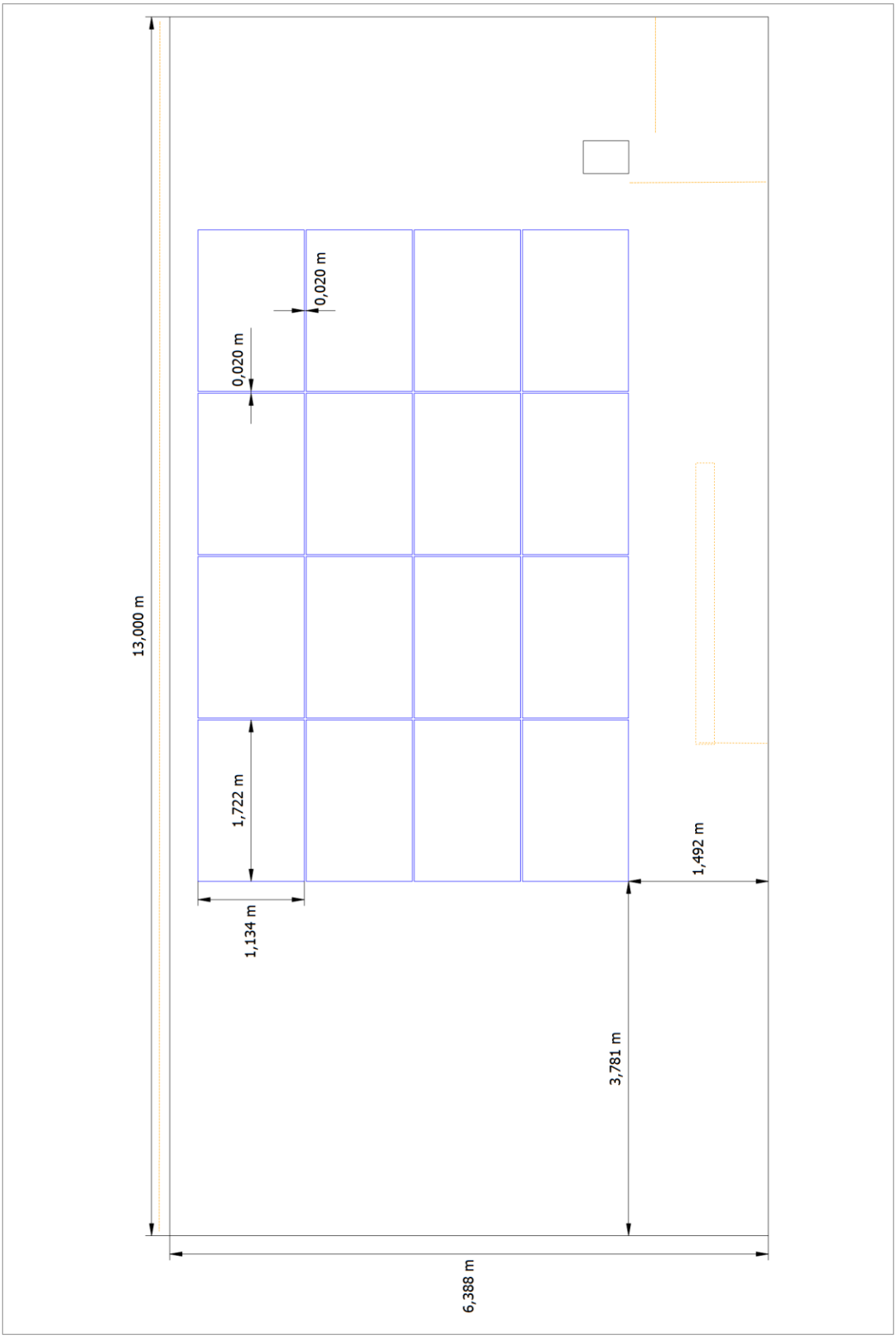


Figure: Building 01 - Roof Area Southeast

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		LONGI Solar	LR5-54 HTB 435 M	16	Piece
2	Inverter		Huawei Technologies	SUN2000MA-6KTL-M1(High Current Version-400Vac)	1	Piece