



SAMPLE PLANNING and OFFER

With Solplansolution into a sustainable future



Thanks to state-of-the-art technologies, an intelligently networked and optimally coordinated system and first-class employees, you are ideally equipped for the future with us. Choose our smart solutions today, which can be flexibly adapted to your individual and technical requirements of tomorrow.

Your address, telephone number & email

Date 19-Mar-25
 Offernr. 100
 Client-ID ABC123
 Created by: Editor

Offer for:

Offer valid till: 29-Mar-25

Max Mustermann
 Musterstrasse 4
 00000 Muster

Comments or special instructions:
 This offer is a sample

QUANTITY	DESCRIPTION	SINGLE PRICE	TAXES	AMOUNT
23	PV system with 10.12kwp - Trina Solar - maximum rated power 445W , double glass - 25-year product warranty on workmanship and 30 years performance guarantee - 21kg - 1762*1134*30mm (H*W*D)	- €		- €
2	Storage: Battery-Box Premium HVS 5.1 - Usable capacity : 5.12 kWh - Max. Output current : 25 A - Peak output current : 50 A, 3 s - Nominal voltage: 204 V - Voltage range: 160~230 V -Dimensions (H/W/D): 762 x 585 x 298 mm)	- €		- €
1	Inverter: Fronius Symo GEN 24 10.0 Plus - Number of MPP trackers: 2 - Max. Input current (Idc max): 25 / 12.5 A - Max. Short-circuit current module field: 40.0 / 20.0 A - DC input voltage range (Udc min - Udc max): 80-1000 V - Feed-in start voltage (Udc start): 80 V - Nominal input voltage (Udc,r): 610 V - MPP voltage range (Umpp min - Umpp max): 278-800 V	- €		- €
1	AC assembly & electrical installation - Electrical materials included - Ground works - Meter cabinet - included cables	- €		- €
1	Registration with the grid operator incl. activation - Entry in the market master data register	- €		- €
1	Substructure - Additional costs for slate & prefabricated roofs - Hip roofs, flat roofs	- €		- €
1	Flat fee for scaffolding (optional)	- €		- €
1	Wallbox (optional)	- €	YES	- €
1	Power supply replacement package (optional)	- €	YES	- €
INTERIM TOTAL				- €
TAX RATE				19,00%
VALUE ADDED TAX				- €
OTHER				- €
TOTAL				- €

If you have any questions about this offer, please contact [name of contact], call [telephone number] or send an e-mail to [e-mail address].

THANK YOU FOR YOUR INTEREST!

'The products listed are based on the information provided in the PV*Sol planning software and by the respective manufacturer. We would like to expressly point out that this list only serves as an example of how a product description can be structured. In individual cases, it depends on your respective company guidelines as to how product data is presented and handled.'

(your company)
your address

Customer name
Customer address

Contact person:

Phone: your phone number
E-Mail: your e-mail address

19.03.2025

Your PV system from (your company)

Address of Installation

Customer address



(your company)

Project Overview

PV System

Grid-connected PV System with Electrical Appliances and Battery Systems

Climate Data	Leipzig, DEU (1995 - 2012)
Values source	DWD TMY3 (Valentin Software)
PV Generator Output	10,12 kWp
PV Generator Surface	46,0 m ²
Number of PV Modules	23
Number of Inverters	1
No. of battery systems	1

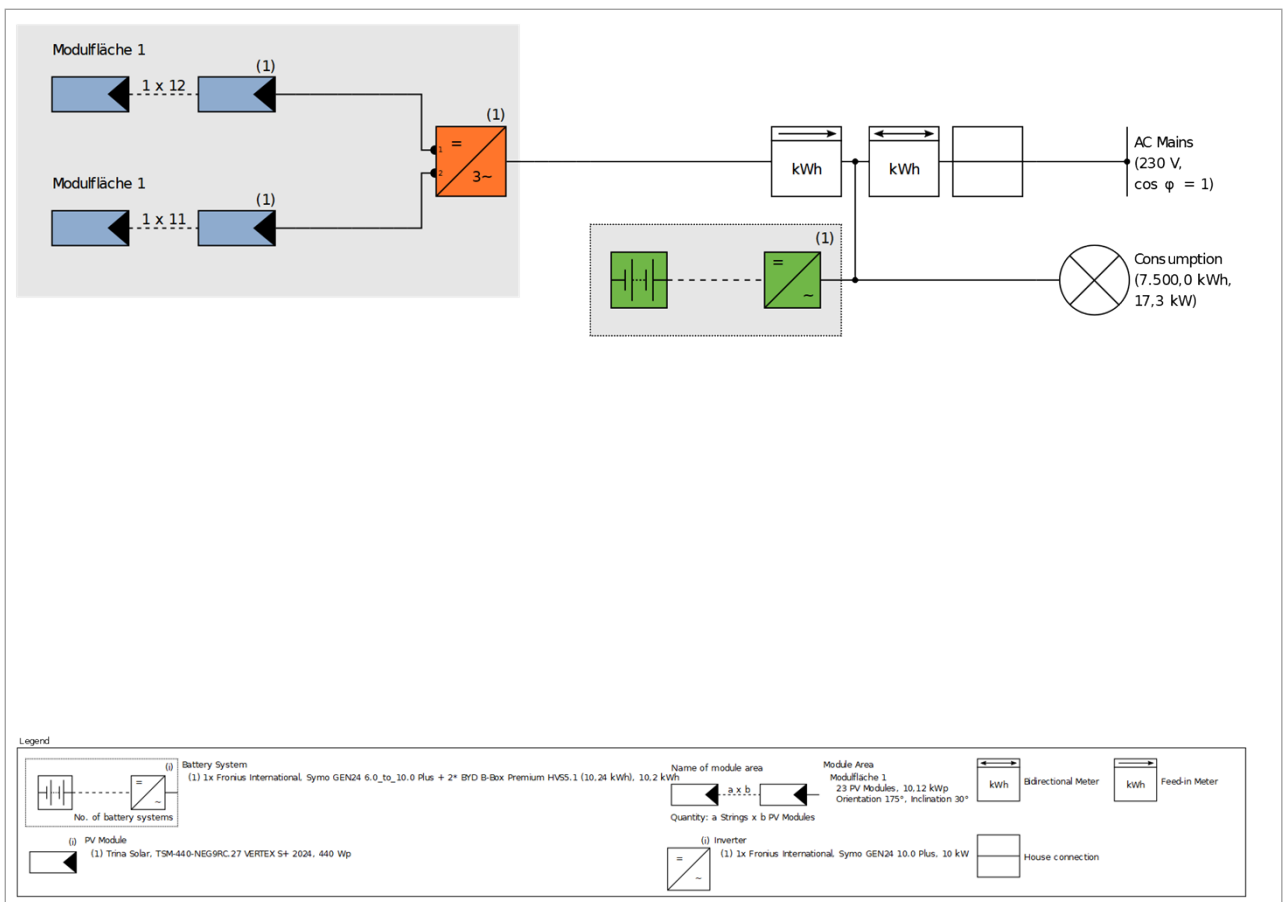


Figure: Schematic diagram

(your company)

Production Forecast

Production Forecast

PV Generator Output	10,12 kWp
Spec. Annual Yield	1.170,23 kWh/kWp
Performance Ratio (PR)	95,68 %
PV Generator Energy (AC grid)	11.887 kWh/Year
Direct Own Use	2.447 kWh/Year
Battery Charge	2.964 kWh/Year
Clipping at Feed-in Point	0 kWh/Year
Grid Export	6.476 kWh/Year
Own Power Consumption	45,3 %
CO ₂ Emissions avoided	5.465 kg / year
Level of Self-sufficiency	69,0 %

Financial Analysis

Your Gain

Total investment costs	20.000,00 €
Internal Rate of Return (IRR)	6,78 %
Amortization Period	12,5 Years
Electricity Production Costs	0,1064 €/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	Grid-connected PV System with Electrical Appliances and Battery Systems
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Climate Data

Location	Leipzig, DEU (1995 - 2012)
Values source	DWD TMY3 (Valentin Software)
Data resolution	1 h
Simulation models used:	
- Diffuse Irradiation onto Horizontal Plane	Hofmann
- Irradiance onto tilted surface	Hay & Davies

Consumption

Total Consumption	7500 kWh
2 Personen mit 2 Kindern	7500 kWh
Load Peak	17,3 kW

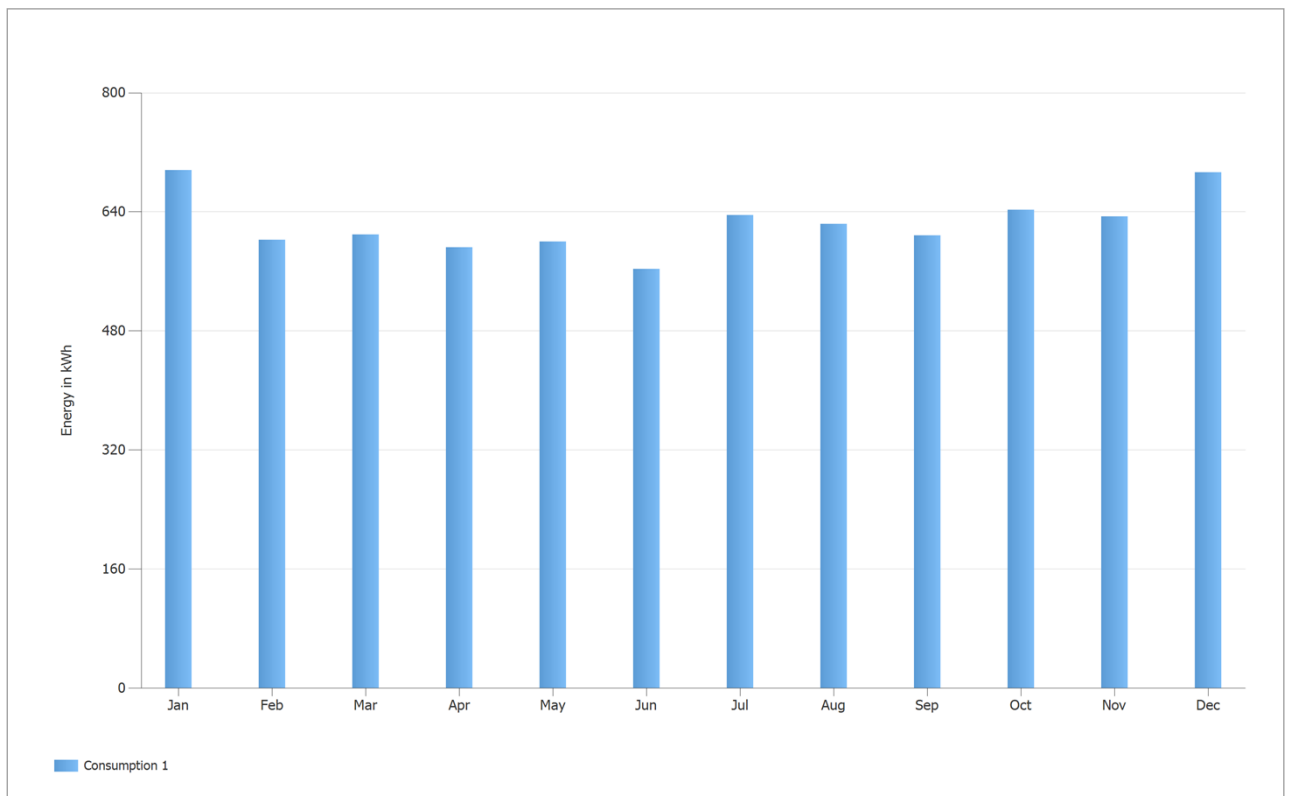


Figure: Consumption

(your company)

Module Areas

1. Module Area - Modulfläche 1

PV Generator, 1. Module Area - Modulfläche 1

Name	Modulfläche 1
PV Modules	23 x TSM-440-NEG9RC.27 VERTEX S+ 2024 (v2)
Manufacturer	Trina Solar
Inclination	30 °
Orientation	South 175 °
Installation Type	Roof parallel
PV Generator Surface	46,0 m ²



Figure: Photo Preview, 1. Module Area - Modulfläche 1

Shading, 1. Module Area - Modulfläche 1

Shading	4,9 %
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(your company)

Inverter configuration

Configuration 1

Module Area	Modulfläche 1
Inverter 1	
Model	Symo GEN24 10.0 Plus (v6)
Manufacturer	Fronius International
Quantity	1
Sizing Factor	101,2 %
Configuration	MPP 1: 1 x 12 MPP 2: 1 x 11

Battery Systems

Battery System - Gruppe 1

Model	Symo GEN24 6.0_to_10.0 Plus + 2* BYD B-Box Premium HVS5.1 (10,24 kWh) (v1)
Manufacturer	Fronius International
Quantity	1
Battery Inverter	
Type of Coupling	AC coupling
Nominal output	4,48 kW
Battery	
Manufacturer	BYD Company Ltd.
Model	HVS (v1)
Quantity	4
Battery Energy	10,2 kWh
Battery Type	Lithium iron phosphate

(your company)

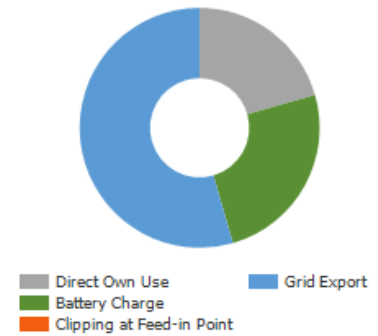
Simulation Results

Results Total System

PV System

PV Generator Output	10,12 kWp
Spec. Annual Yield	1.170,23 kWh/kWp
Performance Ratio (PR)	95,68 %
PV Generator Energy (AC grid)	11.887 kWh/Year
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Battery Charge	2.964 kWh/Year
Clipping at Feed-in Point	0 kWh/Year
Grid Export	6.476 kWh/Year
Own Power Consumption	45,3 %
CO ₂ Emissions avoided	5.465 kg / year

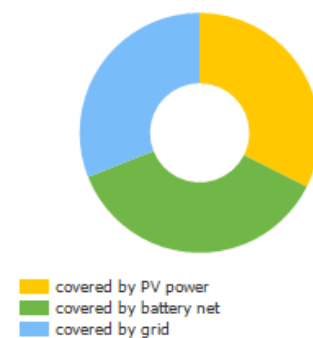
PV Generator Energy (AC grid)



Appliances

Appliances	7.500 kWh/Year
Standby Consumption (Inverter)	44 kWh/Year
Total Consumption	7.544 kWh/Year
covered by PV power	2.447 kWh/Year
covered by battery net	2.759 kWh/Year
covered by grid	2.338 kWh/Year
Solar Fraction	69,0 %

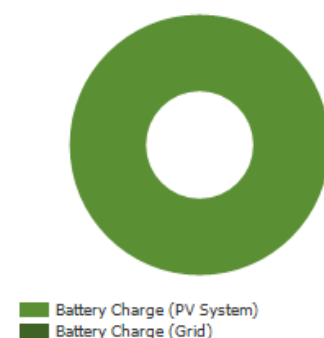
Total Consumption



Battery System

Charge at beginning	10 kWh
Battery Charge (Total)	2.964 kWh/Year
Battery Charge (PV System)	2.964 kWh/Year
Battery Charge (Grid)	0 kWh/Year
Battery Energy for the Covering of Consumption	2.759 kWh/Year
Battery discharge into the grid	0 kWh/Year
Losses due to charging/discharging	117 kWh/Year
Losses in Battery	98 kWh/Year
Cycle Load	6,3 %
Service Life	16 Years

Battery Charge (Total)



Level of Self-sufficiency

Total Consumption	7.544 kWh/Year
covered by grid	2.338 kWh/Year
Level of Self-sufficiency	69,0 %

(your company)

Energy Flow Graph

Project: Adverbs

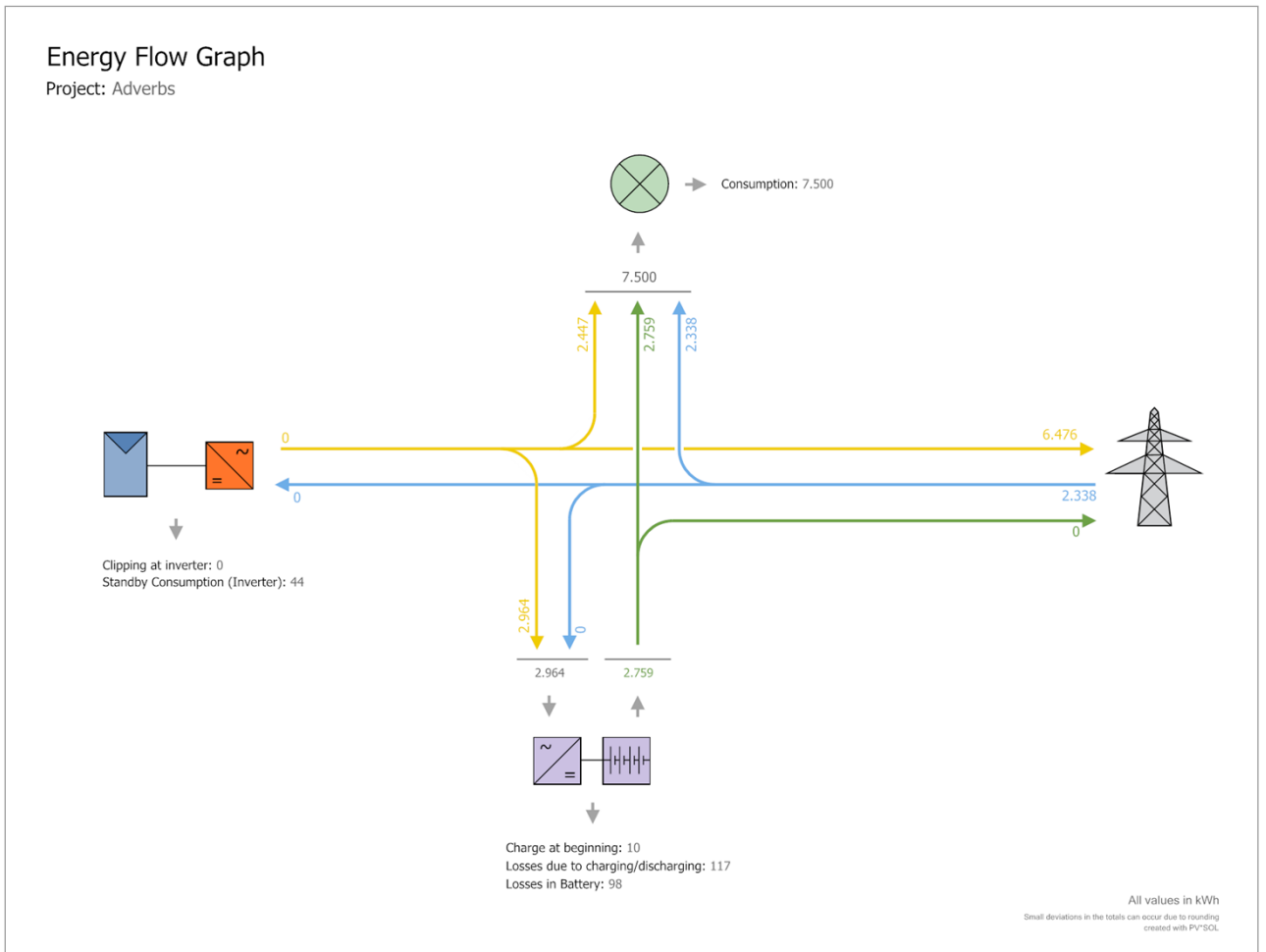


Figure: Energy flow

(your company)

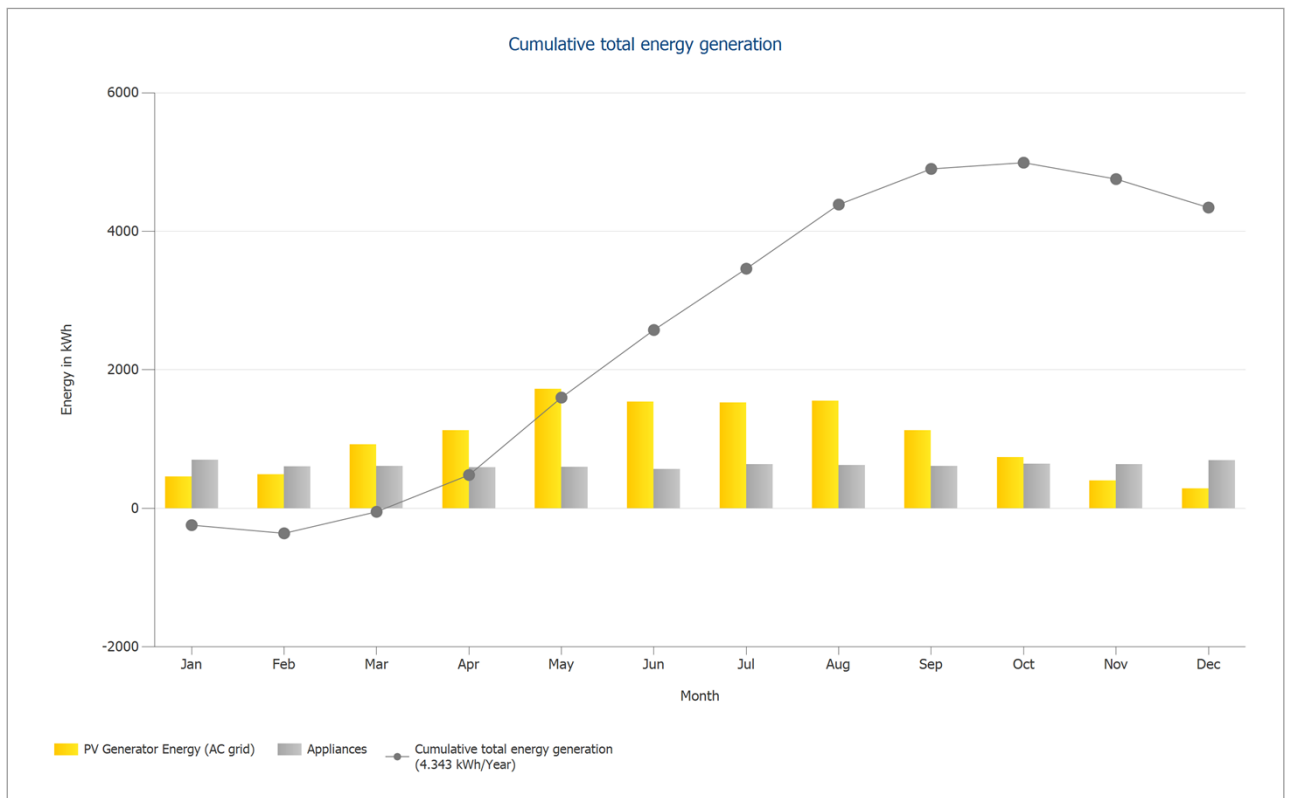


Figure: Cumulative total energy generation

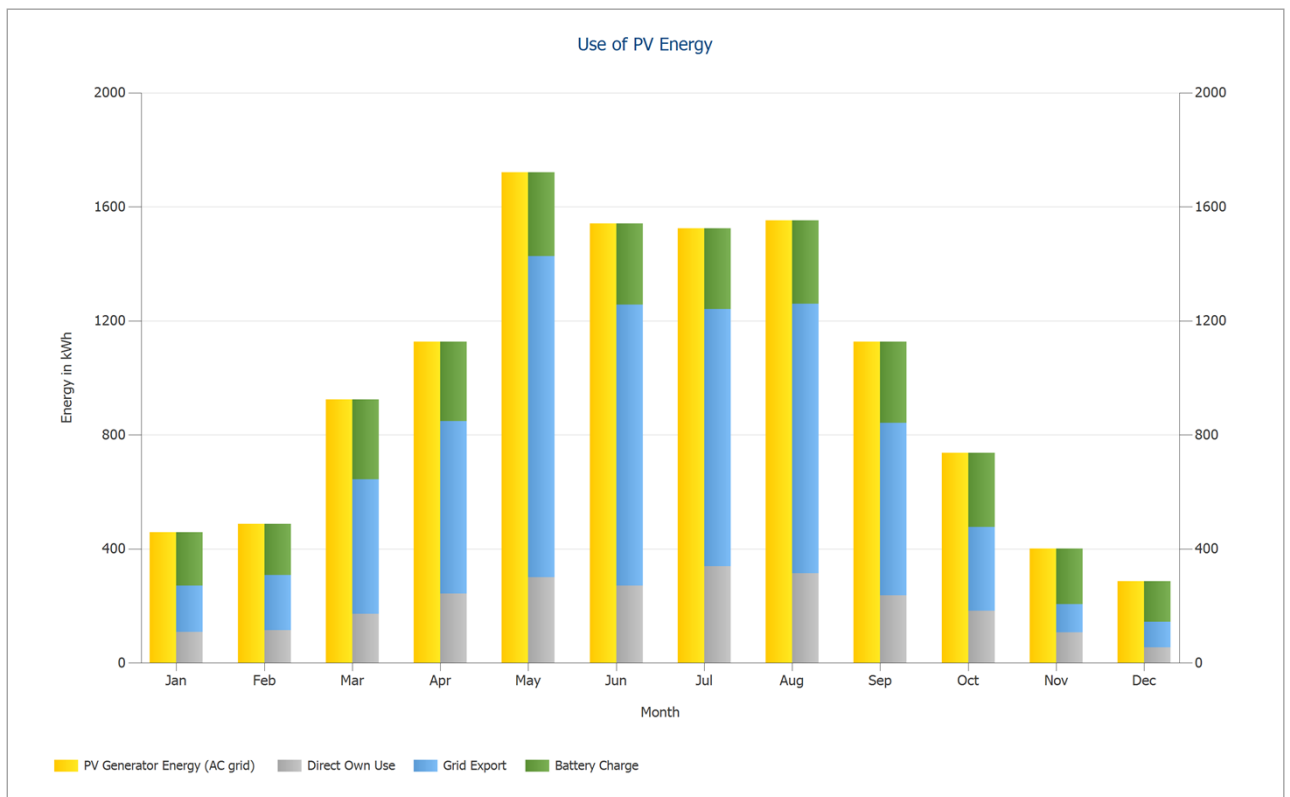


Figure: Use of PV Energy

(your company)

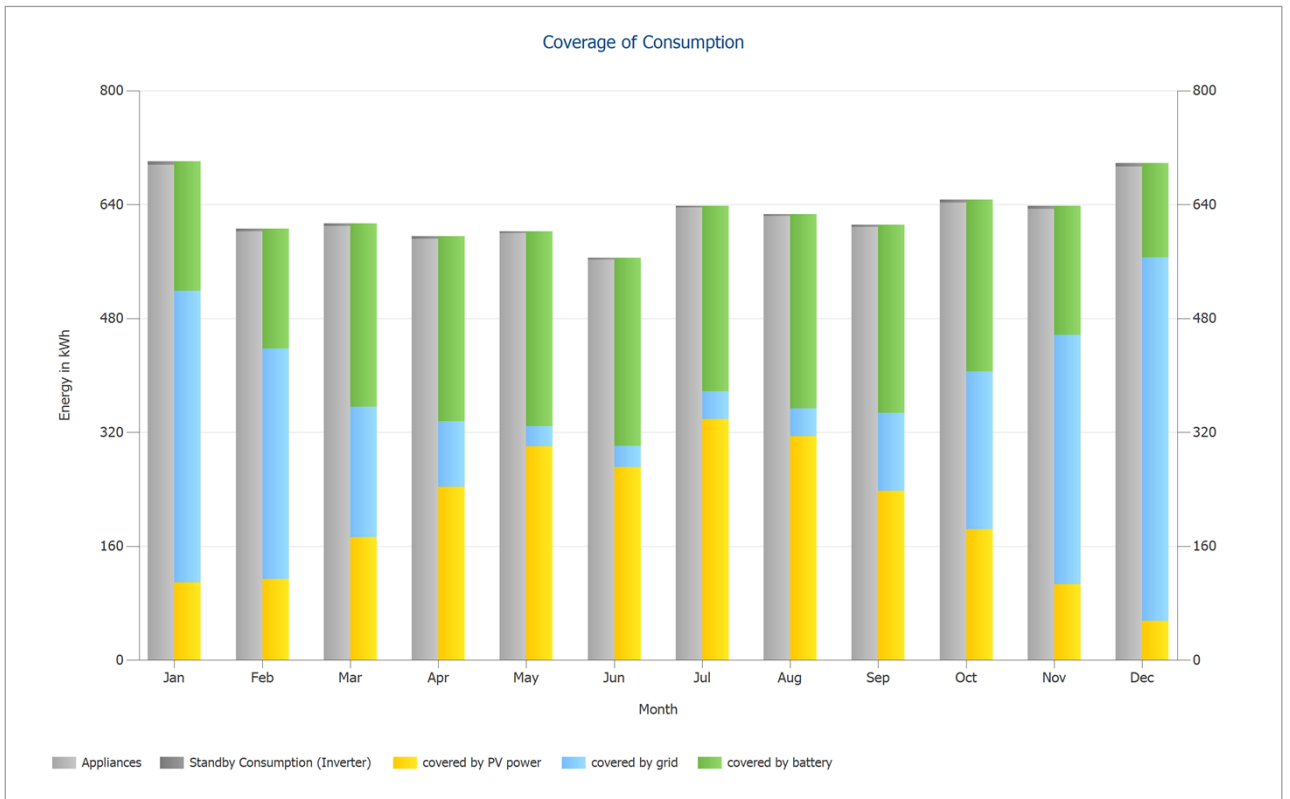


Figure: Coverage of Consumption

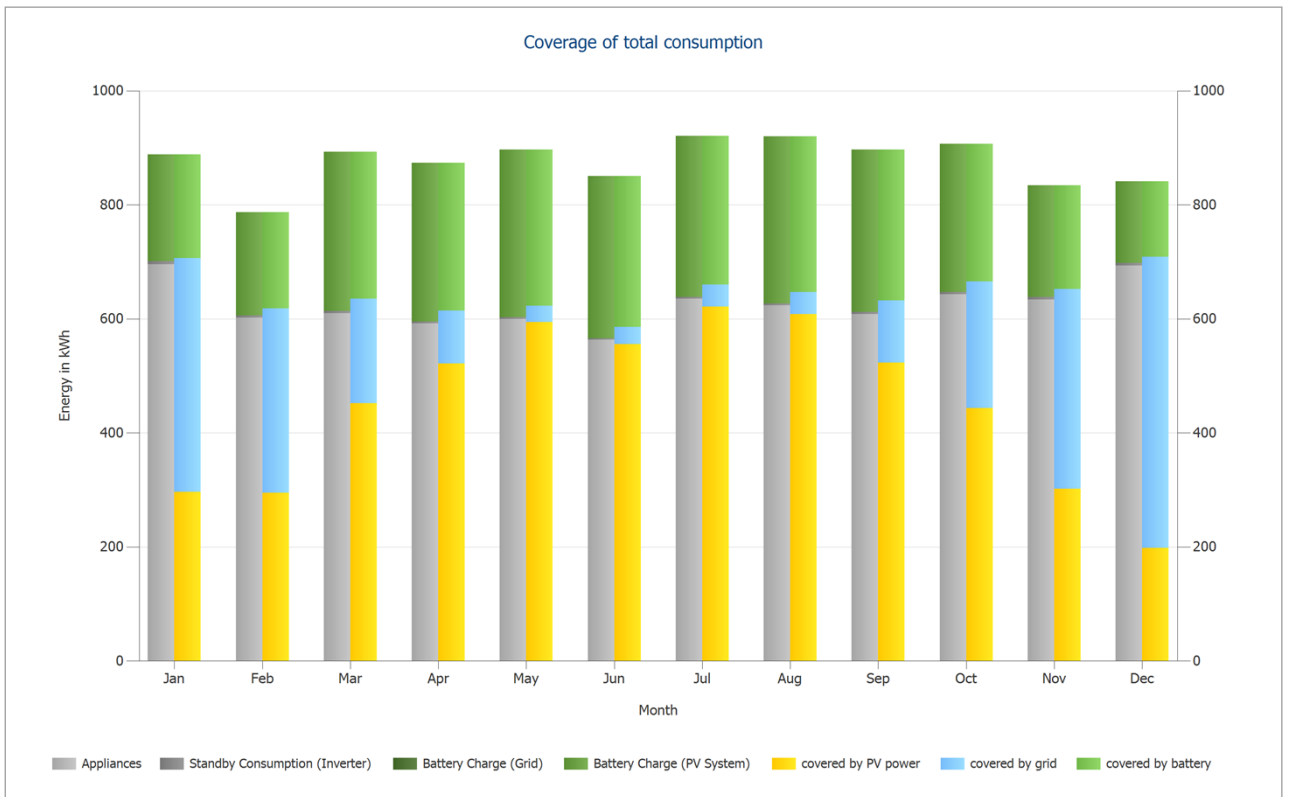


Figure: Coverage of total consumption

(your company)

Energy yield for GEG

Energy yield according to DIN V 18599-9

January	282,3 kWh
February	280,5 kWh
March	683,3 kWh
April	1185,9 kWh
May	1298,8 kWh
June	1317 kWh
July	1174,6 kWh
August	1123,7 kWh
September	858 kWh
October	621,2 kWh
November	224,1 kWh
December	146,8 kWh
Annual Value	9.196,2 kWh

Boundary Conditions:

Climate Data according to DIN V 18599-10

MODULFLÄCHE 1

System Output: 10,12

System Power Factor: 0,75

Orientation: South

Inclination: 30°

(your company)

PV System Energy Balance

PV System Energy Balance

Global radiation - horizontal	1.113,54 kWh/m²	
Deviation from standard spectrum	-11,14 kWh/m ²	-1,00 %
Ground Reflection (Albedo)	29,54 kWh/m ²	2,68 %
Orientation and inclination of the module surface	152,90 kWh/m ²	13,51 %
Shading	-62,96 kWh/m ²	-4,90 %
Reflection on the Module Surface	0,00 kWh/m ²	0,00 %
Irradiance on the rear side of the module	0,00 kWh/m ²	0,00 %
Global Radiation at the Module	1.221,89 kWh/m²	
	1.221,89 kWh/m ²	
	x 45,956 m ²	
	= 56.153,58 kWh	
Global PV Radiation	56.153,58 kWh	
Bifaciality (80 % of back irradiance)	0,00 kWh	0,00 %
Soiling	0,00 kWh	0,00 %
STC Conversion (Rated Efficiency of Module 22,04 %)	-43.775,73 kWh	-77,96 %
Rated PV Energy	12.377,85 kWh	
Low-light performance	31,65 kWh	0,26 %
Deviation from the nominal module temperature	-211,72 kWh	-1,71 %
Diodes	0,00 kWh	0,00 %
Mismatch (Manufacturer Information)	0,00 kWh	0,00 %
Mismatch (Configuration/Shading)	0,00 kWh	0,00 %
PV Energy (DC) without inverter clipping	12.197,78 kWh	
Failing to reach the DC start output	-1,44 kWh	-0,01 %
Clipping on account of the MPP Voltage Range	0,00 kWh	0,00 %
Clipping on account of the max. DC Current	0,00 kWh	0,00 %
Clipping on account of the max. DC Power	0,00 kWh	0,00 %
Clipping on account of the max. AC Power/cos phi	0,00 kWh	0,00 %
MPP Matching	-3,66 kWh	-0,03 %
PV energy (DC)	12.192,67 kWh	
Energy at the Inverter Input	12.192,67 kWh	
Input voltage deviates from rated voltage	-21,59 kWh	-0,18 %
DC/AC Conversion	-284,57 kWh	-2,34 %
Standby Consumption (Inverter)	-43,79 kWh	-0,37 %
Total Cable Losses	0,00 kWh	0,00 %
PV energy (AC) minus standby use	11.842,72 kWh	
PV Generator Energy (AC grid)	11.886,51 kWh	

Energy balance Sankey-Diagram

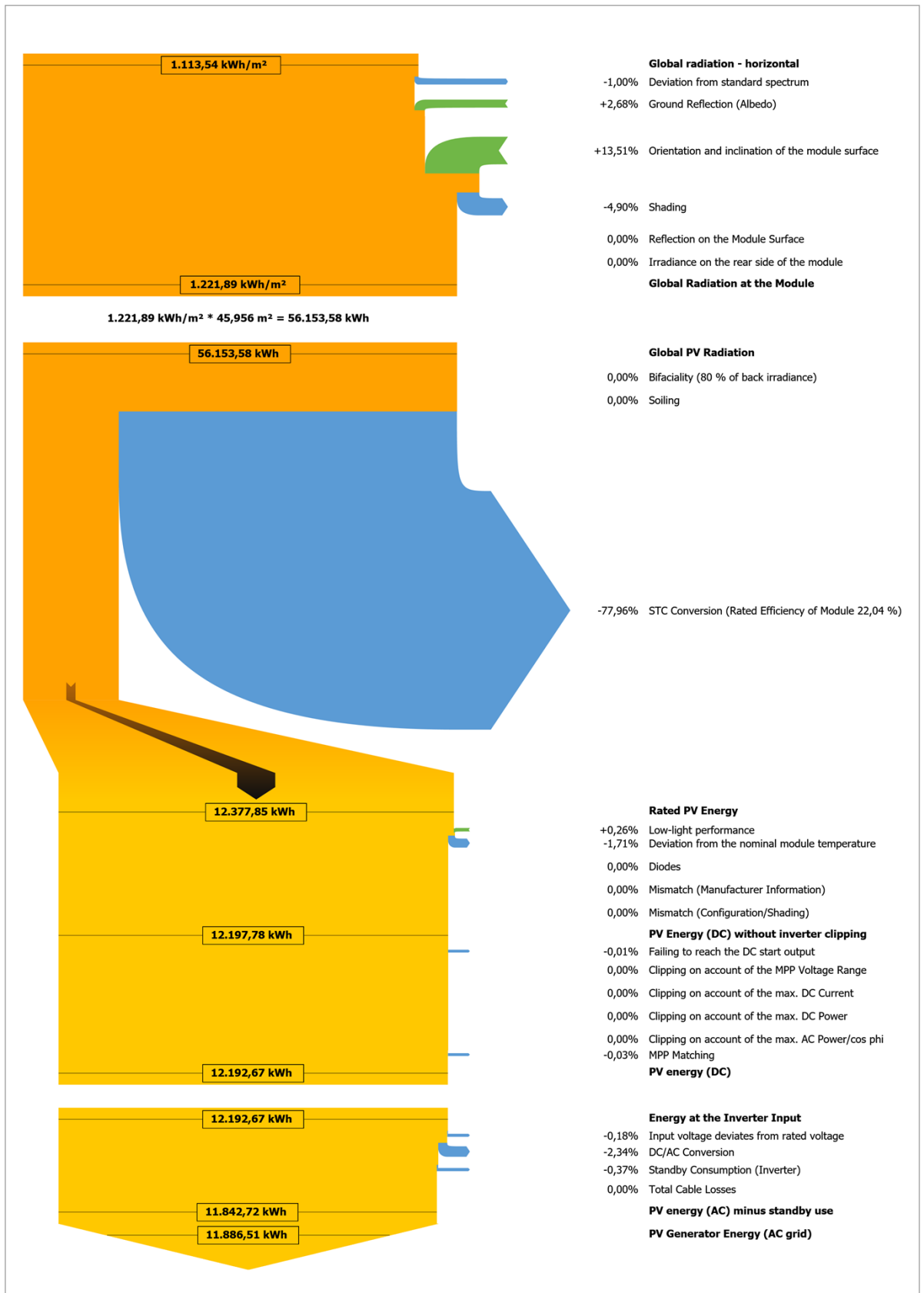


Figure: Energy balance Sankey-Diagram

(your company)

Financial Analysis

Overview

System Data

Grid Export in the first year (incl. module degradation)	6.476 kWh/Year
PV Generator Output	10,1 kWp
Start of Operation of the System	17.03.2025
Assessment Period	20 Years
Interest on Capital	1 %

Economic Parameters

Internal Rate of Return (IRR)	6,78 %
Accrued Cash Flow (Cash Balance)	16.569,53 €
Amortization Period	12,5 Years
Electricity Production Costs	0,1064 €/kWh

Payment Overview

Specific Investment Costs	1.976,28 €/kWp
Investment Costs	20.000,00 €
One-off Payments	0,00 €
Incoming Subsidies	0,00 €
Annual Costs	200,00 €/Year
Other Revenue or Savings	0,00 €/Year

Remuneration and Savings

Total Payment from Utility in First Year	513,36 €/Year
First year savings	1.144,97 €/Year

EEG, Februar 2025 - Juli 2025, (Teileinspeisung) - Gebäudeanlagen

Validity	01.02.2025 - 31.12.2045
Specific feed-in / export Remuneration	0,0793 €/kWh
Feed-in / Export Tariff	513,3552 €/Year

Example Private (Example)

Energy Price	0,2218 €/kWh
Base Price	6,9 €/Month
Inflation Rate for Energy Price	3.5 %/Year

(your company)

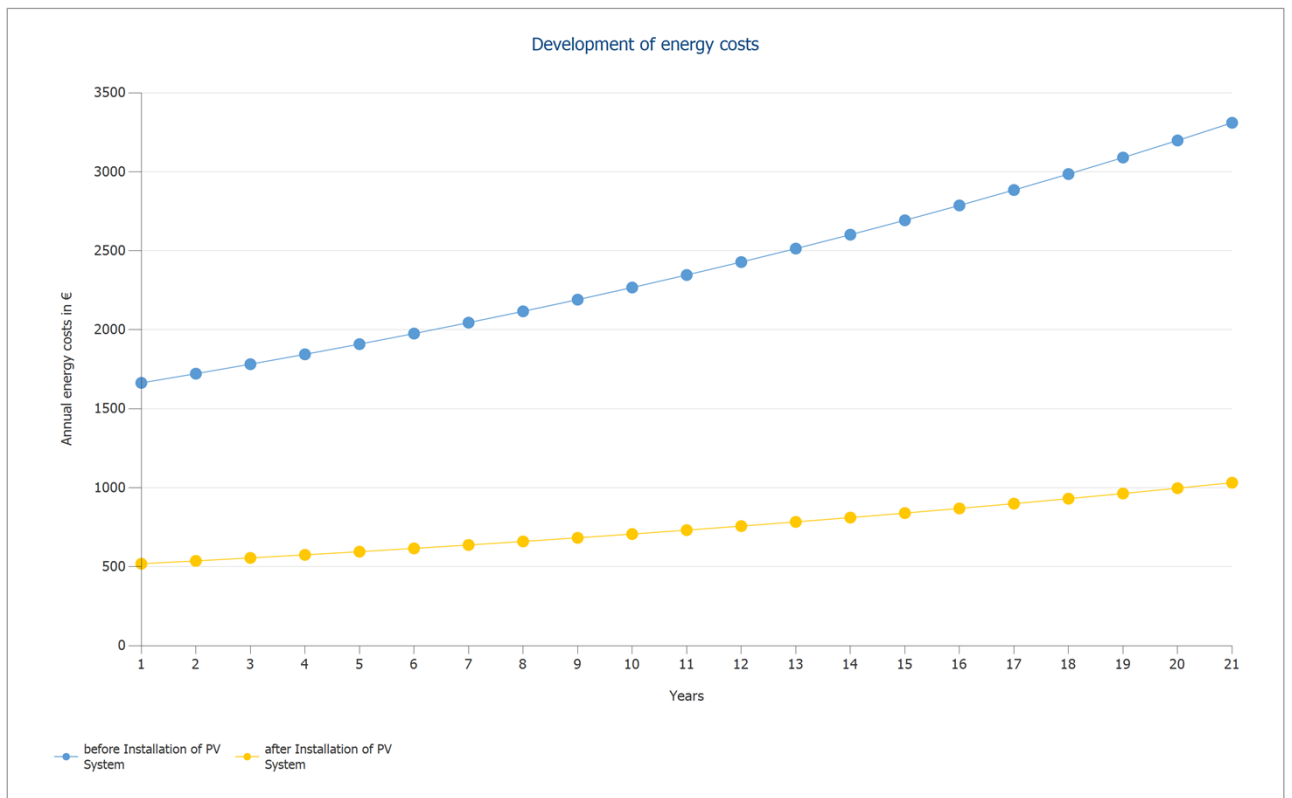


Figure: Development of energy costs

(your company)

Cash flow

Cash flow

	Year 1	Year 2	Year 3	Year 4	Year 5
Investments	-20.000,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Operating costs	-198,02 €	-196,06 €	-194,12 €	-192,20 €	-190,29 €
Feed-in / Export Tariff	489,15 €	503,24 €	498,26 €	493,32 €	488,44 €
Electricity Savings	1.101,19 €	1.161,70 €	1.190,45 €	1.219,92 €	1.250,12 €
Annual Cash Flow	-18.607,68 €	1.468,88 €	1.494,59 €	1.521,05 €	1.548,26 €
Accrued Cash Flow (Cash Balance)	-18.607,68 €	-17.138,80 €	-15.644,21 €	-14.123,16 €	-12.574,90 €

Cash flow

	Year 6	Year 7	Year 8	Year 9	Year 10
Investments	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Operating costs	-188,41 €	-186,54 €	-184,70 €	-182,87 €	-181,06 €
Feed-in / Export Tariff	483,60 €	478,82 €	474,07 €	469,38 €	464,73 €
Electricity Savings	1.281,06 €	1.312,77 €	1.345,26 €	1.378,56 €	1.412,68 €
Annual Cash Flow	1.576,25 €	1.605,04 €	1.634,64 €	1.665,08 €	1.696,36 €
Accrued Cash Flow (Cash Balance)	-10.998,64 €	-9.393,60 €	-7.758,96 €	-6.093,88 €	-4.397,52 €

Cash flow

	Year 11	Year 12	Year 13	Year 14	Year 15
Investments	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Operating costs	-179,26 €	-177,49 €	-175,73 €	-173,99 €	-172,27 €
Feed-in / Export Tariff	460,13 €	455,58 €	451,07 €	446,60 €	442,18 €
Electricity Savings	1.447,65 €	1.483,49 €	1.520,21 €	1.557,83 €	1.596,40 €
Annual Cash Flow	1.728,52 €	1.761,57 €	1.795,54 €	1.830,44 €	1.866,30 €
Accrued Cash Flow (Cash Balance)	-2.669,00 €	-907,43 €	888,11 €	2.718,55 €	4.584,86 €

Cash flow

	Year 16	Year 17	Year 18	Year 19	Year 20
Investments	0,00 €	0,00 €	0,00 €	0,00 €	0,00 €
Operating costs	-170,56 €	-168,88 €	-167,20 €	-165,55 €	-163,91 €
Feed-in / Export Tariff	437,80 €	433,47 €	429,17 €	424,92 €	420,72 €
Electricity Savings	1.635,91 €	1.676,40 €	1.717,90 €	1.760,42 €	1.803,99 €
Annual Cash Flow	1.903,15 €	1.940,99 €	1.979,87 €	2.019,80 €	2.060,80 €
Accrued Cash Flow (Cash Balance)	6.488,00 €	8.428,99 €	10.408,86 €	12.428,66 €	14.489,46 €

Cash flow

	Year 21
Investments	0,00 €
Operating costs	-162,29 €
Feed-in / Export Tariff	393,71 €
Electricity Savings	1.848,65 €
Annual Cash Flow	2.080,07 €
Accrued Cash Flow (Cash Balance)	16.569,53 €

Degradation and inflation rates are applied on a monthly basis over the entire

(your company)

observation period. This is done in the first year.

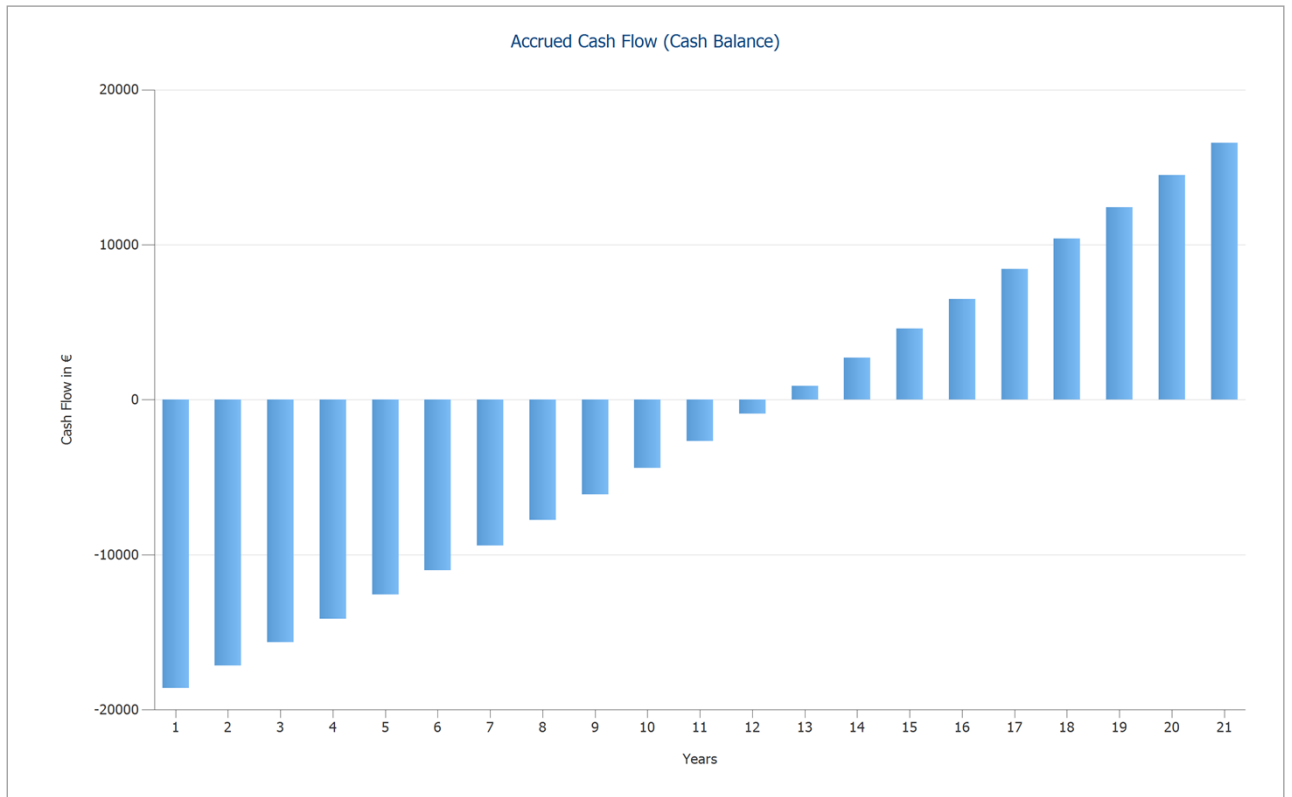


Figure: Accrued Cash Flow (Cash Balance)

Plans and parts list

Photo from Photo Plan



Figure: Photo Preview, 1. Module Area - Modulfläche 1

Circuit Diagram

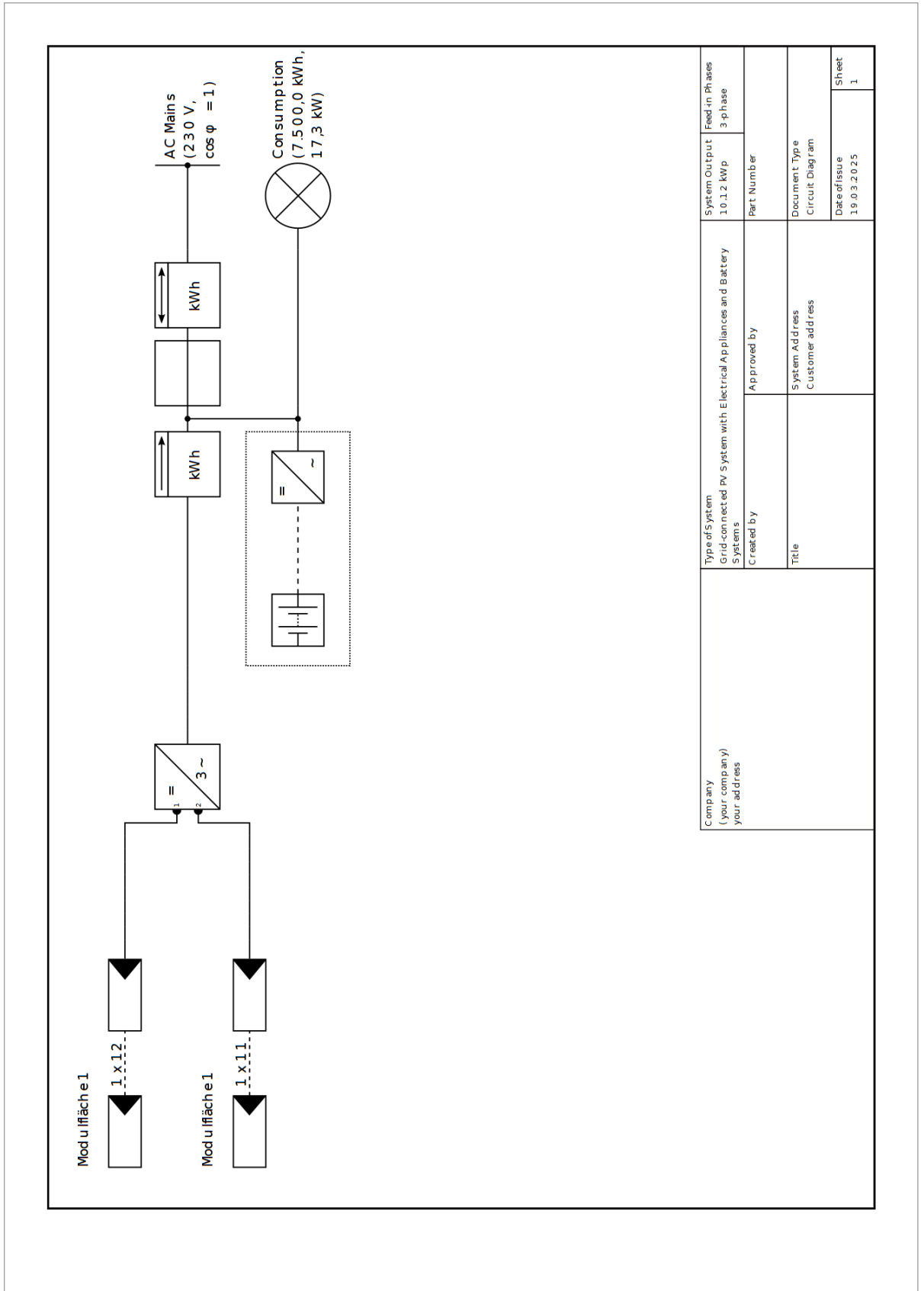


Figure: Circuit Diagram

(your company)

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		Trina Solar	TSM-440-NEG9RC.27 VERTEX S+ 2024	23	Piece
2	Inverter		Fronius International	Symo GEN24 10.0 Plus	1	Piece
3	Battery System		Fronius International	Symo GEN24 6.0_to_10.0 Plus + 2* BYD B-Box Premium HVS5.1 (10,24 kWh)	1	Piece
4	Components			Feed-in Meter	1	Piece
5	Components			House connection	1	Piece
6	Components			Bidirectional Meter	1	Piece