



ENERGY YIELD REPORT

Project Name: example

Iteration: example

for

example

Date: 2025-05-03

Disclaimer

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1.1 Project Summary

Site Parameters

PARAMETER	VALUE
Latitude [°]	35.798828
Longitude [°]	137.167714
Altitude [m]	668.0
Time Zone	UTC
Maximum Temperature [°C]	32.05
Minimum Temperature [°C]	-13.33
Average Temperature [°C]	12.1
Meteorological Data Source	ERA5
Solar Resource TMY	PVGIS-ERA5
TMY Years	2005-2023

System Parameters

PARAMETER	VALUE
Plant Architecture	String Inverter
Pitch [m]	6.004
Ground Coverage Ratio	0.397
Tracker Width [m]	2.384
Tracker Height [m]	1.5
MV Voltage [kV]	33
Albedo	0.2
Axis Tilt [°]	0
Axis Azimuth [°]	0
Backtracking	True
Max Backtracking Angle [°]	+/-55
Bifaciality Factor	0.7

Models

PARAMETER	VALUE
Transposition Model	Hay-Davies
IAM Model	Ashrae
Temperature Model	PVSyst
DC Model	PVWatts
AC Model	PVWatts
Losses Model	PVWatts

1.2 Equipment Details

PV Module

PARAMETER	VALUE
Manufacturer	TrinaSolar
Model	TSM-DEG21C.20-665
Power (@STC) [Wp]	665
PV Modules in Series	28
Total PV Strings	2,025
Total PV Modules	56,700
Total PV Power [kWp]	37,705.5

String Inverter

PARAMETER	VALUE
Manufacturer	Sungrow
Model	SG125HV-1
Rating (30°C) [kVA]	125
Total Inverter Count	100
Total Inverter Power [kVA]	12,500

PTS

PARAMETER	VALUE
Manufacturer	Sungrow
Model	SG6250HV-MV-56
Rating [kVA]	6,250
Total PTS Count	5
Total PTS Power [kVA]	31,250

1.3 Losses

Collection Losses

PARAMETER	VALUE
Shading [%]	-3.00
IAM [%]	-1.19
Soiling [%]	-2.00
Snow [%]	0.00
Degradation [%]	0.00
Temperature [%]	-4.638
Module Quality [%]	+1.00
Light-Induced-Degradation [%]	-1.50
Module Mismatch [%]	-2.00
Connections [%]	0.00
DC Wiring [%]	-1.00
Availability [%]	0.00

System Losses

PARAMETER	VALUE
Inverter [%]	-11.63
AC Wiring [%]	-1.00
MV Line [%]	-0.40
Transformer Constant [%]	-0.10
Transformer Resistive [%]	-1.00

1.4 Results

Results Summary

PARAMETER	VALUE
Annual Energy Production [MWh/year]	48,432
Specific Production [kWh/kWp/year]	1,317
Performance Ratio [%]	74.51

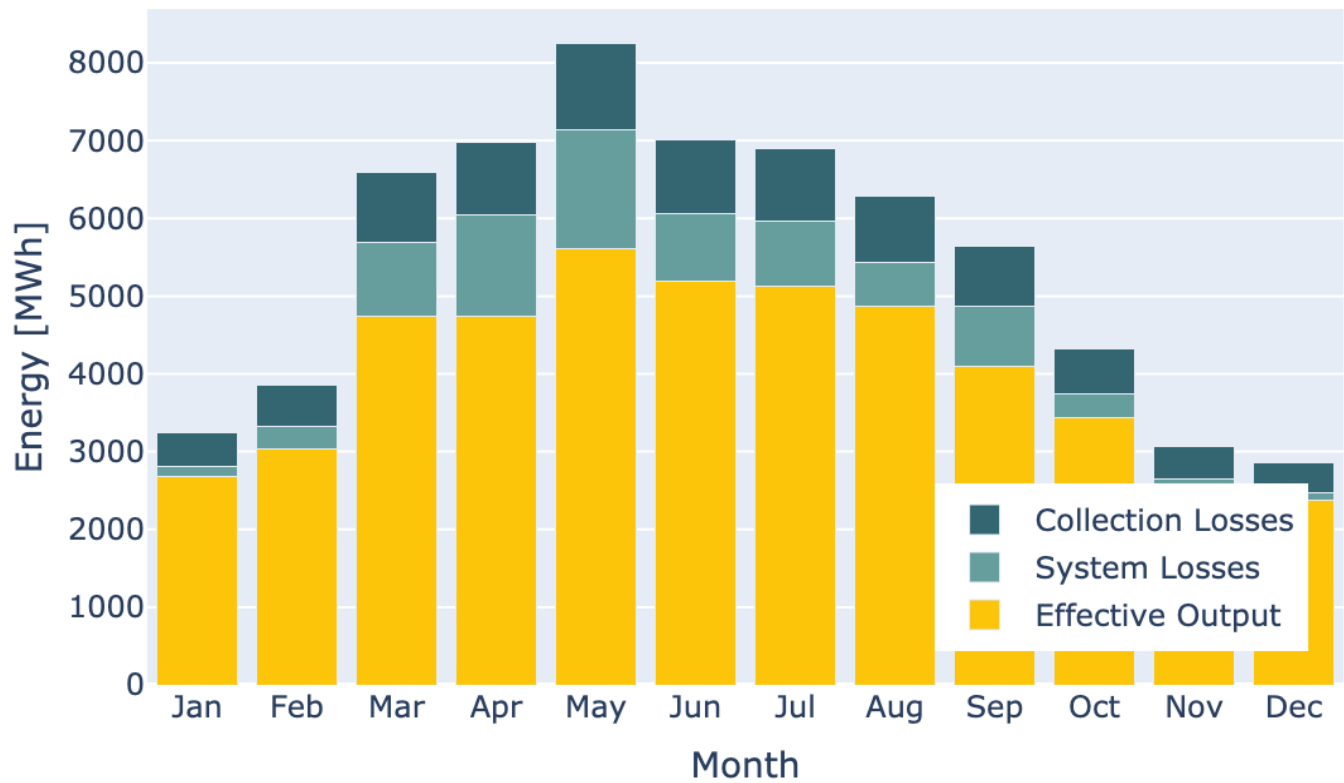
Monthly Averages

	TEMP	GHI	DNI	DHI	G_POA	G_EFF	E_ARR	E_GRID	PR
	°C	kWh/m ²	kWh/m ²	kWh/m ²	kWh/m ²	kWh/m ²	MWh	MWh	%
Jan	0.591	71.16	85.29	30.59	85.14	83.21	2,803	2,684	82.79
Feb	-0.439	82.5	83.27	35.97	101.4	100.0	3,328	3,040	78.97
Mar	5.164	138.4	142.4	45.79	175.2	173.9	5,696	4,746	72.04
Apr	11.55	146.6	134.0	49.81	186.0	185.5	6,038	4,738	67.84
May	16.4	179.4	143.5	67.0	219.6	219.4	7,139	5,618	68.03
Jun	19.33	153.4	107.2	68.57	184.2	184.1	6,064	5,198	74.1
Jul	22.8	149.6	113.1	60.32	181.4	181.2	5,970	5,119	74.13
Aug	23.18	133.9	103.0	56.5	164.2	163.9	5,433	4,863	77.39
Sep	19.97	116.5	112.9	40.46	149.0	148.3	4,871	4,096	72.69
Oct	15.47	93.25	92.77	37.23	113.3	112.0	3,736	3,435	79.49
Nov	6.946	67.01	73.47	30.11	80.14	78.66	2,649	2,521	82.29
Dec	3.314	62.34	84.58	24.49	75.28	73.27	2,474	2,376	83.05
Year	12.02	1,394	1,276	546.8	1,715	1,703	56,198	48,432	76.07

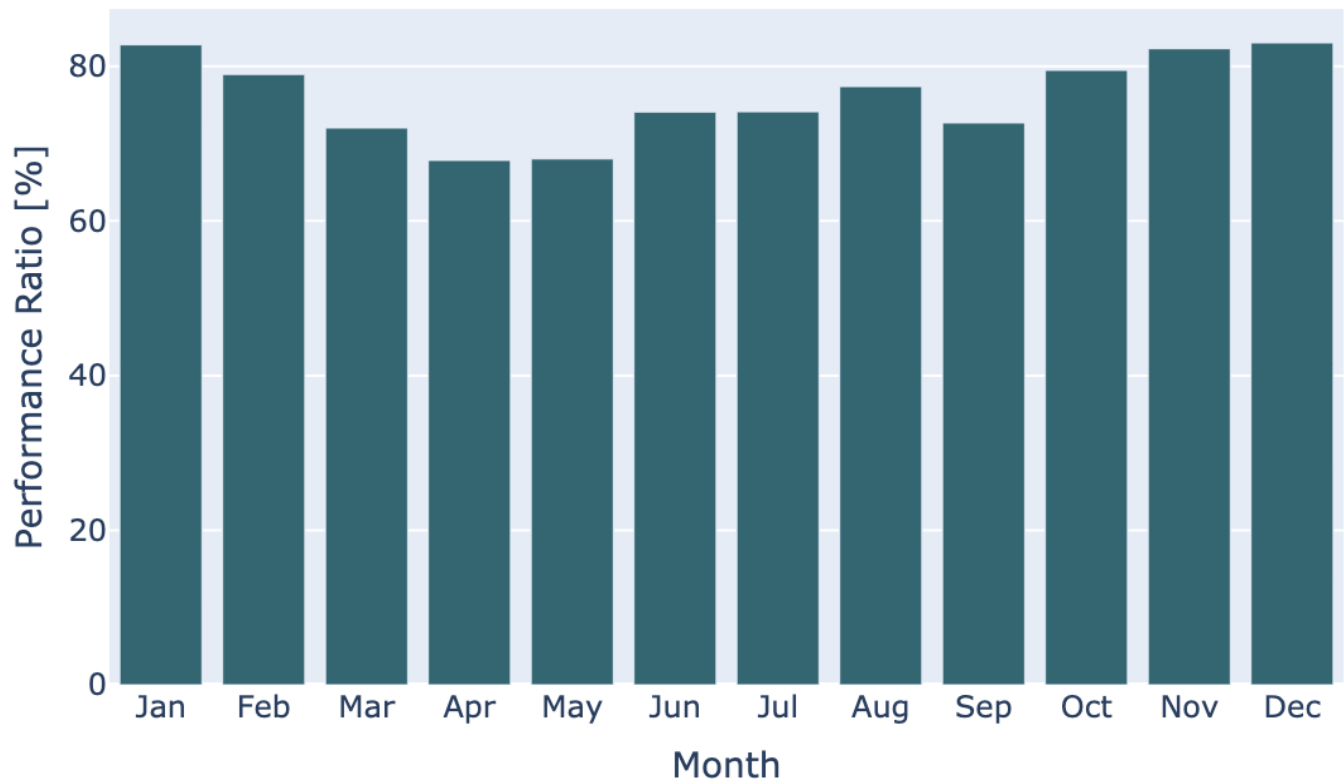
Legend

TEMP	Ambient Temperature	G_EFF	Global Effective Irradiation
GHI	Global Horizontal Irradiation	E_ARR	Effective Output Energy of Array
DNI	Direct Normal Irradiation	E_GRID	Effective Input Energy to the Grid
DHI	Diffuse Horizontal Irradiation	PR	Performance Ratio
G_POA	Global Plane of Array Irradiation		

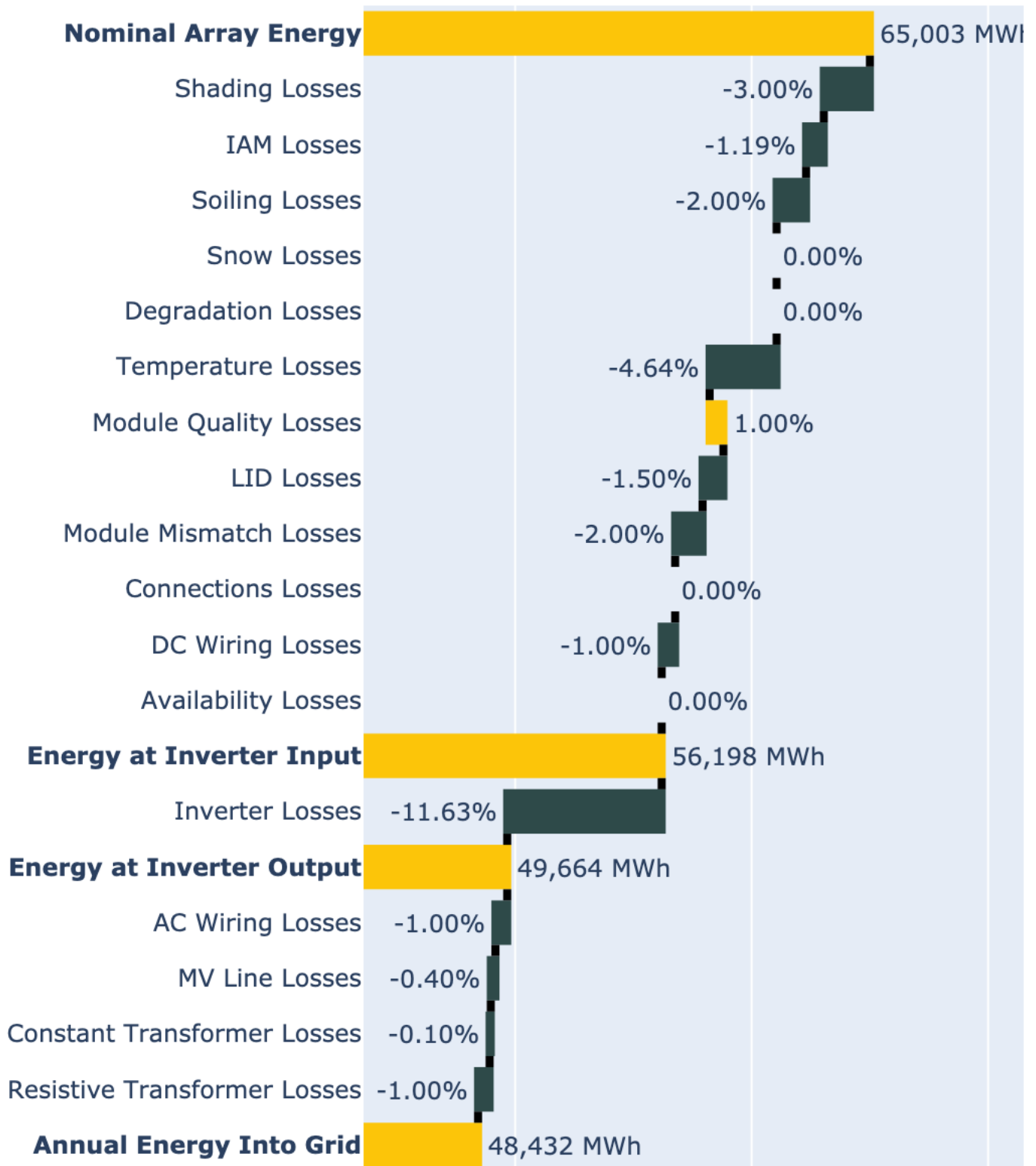
Monthly Energy Production



Performance Ratio



1.5 Losses Diagram





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