
FLUCON
Engineering Flow
POWER
SOURCE

POWER SOURCE

INDEX

1. INTRODUCTION

Due to the Kingdom's recent trend and the increase in interest in renewable energy sector, and due to the many benefits of the renewable energy sector on the environment and the Saudi economy, and its future importance. Flucon, the leading company in the energy sector, decided to add a new branch to take over the tasks of executing renewable energy projects in the Kingdom. This is after the official departments in the Kingdom issued the regulatory legislation for the sector.

FLUCON benefits from the experience of its sister company in Jordan "**POWER SOURCE** Jordan For Renewable Energy Systems", a leading company in the field of renewable energy in Jordan. Our sister company has supplied the Jordanian market with hundreds of renewable energy projects during the past seven years for various sectors, whether domestic, commercial, industrial, or governmental.

POWER SOURCE has extensive experience in the design, installation, and operation of renewable energy projects, that enabled it to obtain a quality certificate from the "Joints Forces of Solar (by Euro Research)", as one of the best renewable energy companies operating in Jordan.

2. OUR CAPABILITIES

- **Our team**

  The success of the company depends on the success of the staff to deliver the best service to clients. Flucon believes in the continuous development of staff, especially in the fast-developed renewable energy field. Our Staff has been a function of continues training generally provided by Specialist institutes in Saudi Arabia, and have been certified by the Saudi Electricity Company to execute PV solar system projects.

Wasfi Certificate

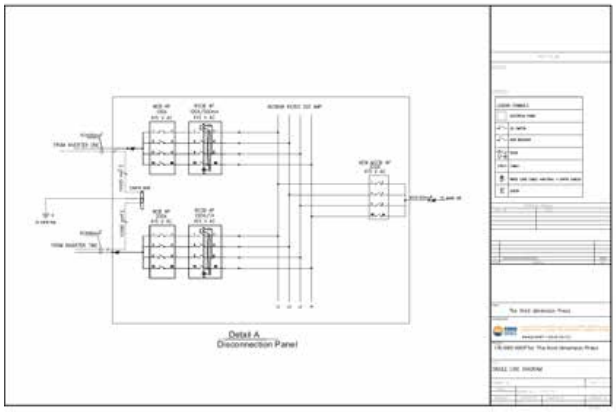
Abdulkareem certificate

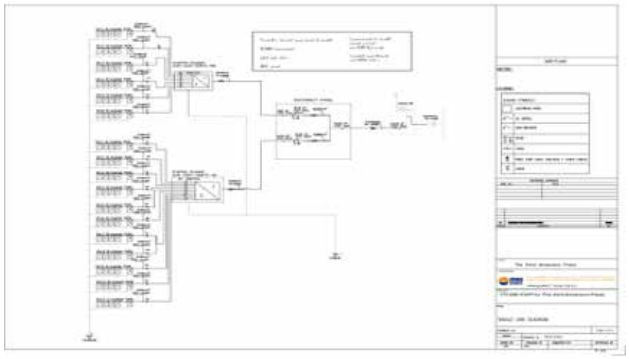
DESIGN CAPABILITIES

We have a dedicated team for the design of PV Solar systems with long experience. Our designs have been applied in projects since 2015, though actual feedback, we had the chance to develop improve many design aspects.

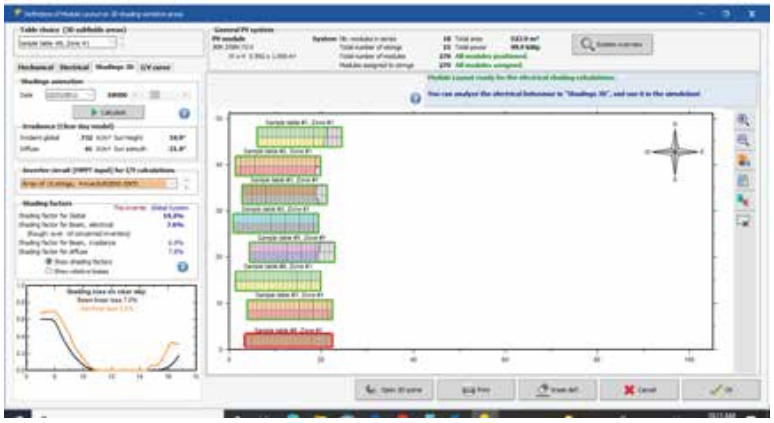
Our team use the latest and specialized software applications which they mastered though years in experience. Applications like PVsyst, 3D SketchUp. Staad, AutoCAD etc.

Single Line Diagram

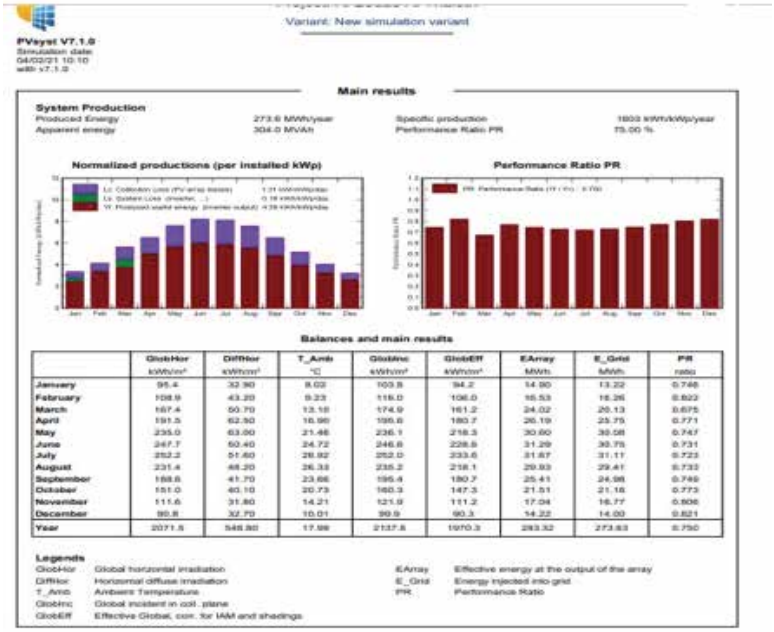




Pv Syst. Shading Study



Pv Syst. Production Study



Variant: New simulation variant

PVsyst V7.1.0
Simulation date:
04/02/21 10:10
with v7.1.0

Main results

System Production

Produced Energy	273.6 MWh/year	Specific production	1800 kWh/kWp/year
Apparent energy	304.0 MVAh	Performance Ratio PR	75.00 %

Normalized productions (per installed kWp)

Performance Ratio PR

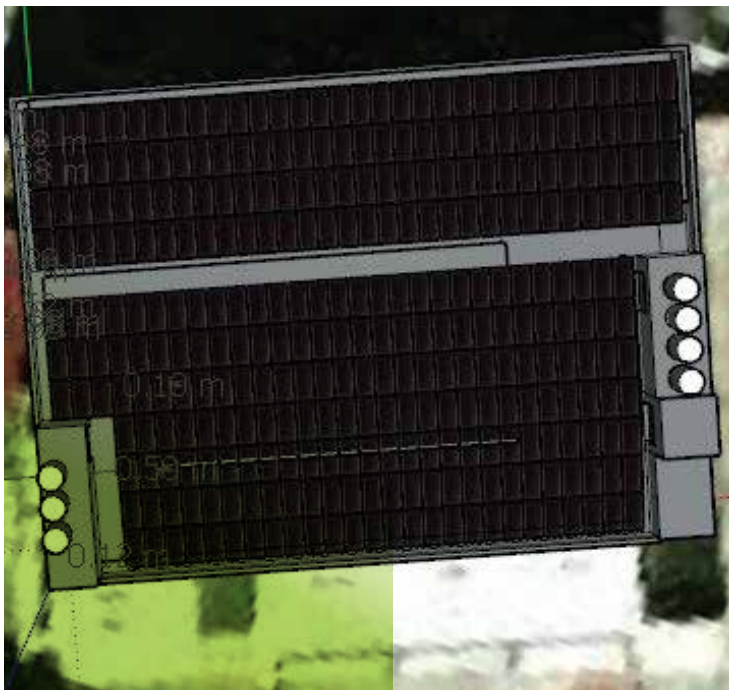
Balances and main results

	GlobHor kWh/m²	DiffHor kWh/m²	T_Amb °C	GlobInc kWh/m²	GlobEff kWh/m²	EArray MWh	E_Grid MWh	PR ratio
January	95.4	32.90	8.02	103.8	94.2	14.90	13.22	0.748
February	108.9	43.20	9.23	116.0	106.0	16.53	15.26	0.822
March	167.4	50.70	13.10	174.9	161.2	24.02	20.13	0.675
April	191.5	62.50	16.96	195.6	180.7	26.19	23.75	0.771
May	235.0	63.00	21.46	236.1	218.3	30.60	28.58	0.747
June	247.7	60.40	24.72	246.6	228.6	31.29	30.75	0.731
July	252.2	51.60	26.92	252.0	233.6	31.67	31.11	0.723
August	231.4	48.20	26.33	235.2	218.1	29.93	29.41	0.733
September	188.6	41.70	23.66	195.4	180.7	25.41	24.98	0.749
October	151.0	40.10	20.73	160.3	147.3	21.51	21.16	0.773
November	111.6	31.80	14.21	121.0	111.2	17.04	16.77	0.806
December	90.8	32.70	10.01	99.9	90.3	14.22	14.00	0.821
Year	2071.5	548.80	17.99	2137.8	1970.3	293.32	273.63	0.750

Legends

GlobHor	Global horizontal irradiation	EArray	Effective energy at the output of the array
DiffHor	Horizontal diffuse irradiation	E_Grid	Energy injected into grid
T_Amb	Ambient Temperature	PR	Performance Ratio
GlobInc	Global incident in coll. plane		
GlobEff	Effective Global, corr. for IAM and shadings		

Sketch Up For 3d Design



Execution capabilities

FLUCON have experienced Team working in Saudi Arabia since 2016 in the Power Projects, together with the experience of Power Source our sister company and our new members specialized in the PV system we can deliver projects using best installation testing and commissioning practices.

Below some projects executed in Jordan

3D Dimention Printing

3D Dimention Printing

• **Testing and commissioning:**

we have an experienced technician specialized in the testing of PV solar system using the latest specialized testing tools such as:

- PV 200: To measure IV curve, voltage, current, irradiation, temp, Riso, ...etc.
- General electrical testing tools such as Multimeters Grounding earth tester etc

Operation and Maintenance:

After each project we provide our clients with the following:

- Operation and maintenance trainings.
- detailed O&M manuals including regular maintenance requirements and supplier standard manuals for PV modules and inverters etc.
- manual for cleaning for pv modules and visual inspection check list & simple troubleshooting procedure.

We also offer for our client Long term maintenance contracts where we handle all system requirement such as regular cleaning, regular maintenance, system monitoring though WEB, and answer to emergencies.

Our offering

We Offer out Clint Various types of PV Solar systems including ON-Grid, Off- Grid and Hybrid Systems. We offer complete Design, Supply, installation testing, commissioning & Maintenance of PVsolar systems.

Our scope of work includes.

1. Site survey:

Our team make a site survey and collect information from the site about local conditions and available area. The information collected is pass on to design & proposal team with customer consumption & electricity bills to make a final proposal.

2 Design:

Our specialized design team will prepare a preliminary design including proposed system details and capacity, system productivity simulation, layout drawings and 3D general arrangement drawings, and feasibility study.

3. Complete installation:

After signing contract with client, we provide complete detailed design, procurement, installation testing and commissioning. Including all required submission and approval follow up to authorities.

We also offer our client a long-term maintenance contracts including regular cleaning of panels, regular maintenance and answering to emergences.

5. Projects.

PV system for 3D dimension printing

Project status: Connected
Location: Amman
Type of installation: Canopy
System Power: 171 Kwp
Modules: Longi- 540W
Inverters: Huawei 100, 50 KW

PV system for Hekaya Restaurant

Project status: Connected
Location: Madaba
Type of installation: Roof Top
System Power: 80.64 KWp
Panels: Seraphim 320 W
Inverter: Kaco 50+20+10 kw (Germany)

PV system for Al Wehdat Camp Community Service Center

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 15.27 KWp
Panels: Seraphim 325 W
Inverter: Kaco 15 kw (Germany)

PV system for Annour Hospital(USAID) - Tender

Project status: Connected
Location: Al Mafraq
Type of installation: Roof Top
System Power: 18.8 KWp
Panels: Seraphim 325 W
Inverter: SMA 10 kw (Germany) QTY: 2

PV system for Community Rehabilitation Association – Amman - Tender

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 29.25 KWp
Panels: Seraphim 325 W
Inverter: ABB 27.6 kw (Italy)

PV system for Princess Basma center - Tender

Project status: Connected
Location: Irbid
Type of installation: Roof Top
System Power: 35.5 KWp
Panels: Seraphim 325 W
Inverter: ABB 27.6 + 8.5 kw (Germany)

PV system for Um Abhara School- Ministry of public works and housing – Amman

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 21.76KWp
Panels: Seraphim 320 W
Inverter: Kostal 20 kw (Italy)

PV system for Iskan Al Kahrba School – Ministry of public works and housing

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 61.8 KWp
Panels: Seraphim 325 W
Inverter: ABB 27.6 kw (Italy) QTY:2

PV system for Community Rehabilitation Center

Project status: Connected
Location: Al Baqaa
Type of installation: Roof Top
System Power: 24.75 KWp
Panels: Seraphim 330 W
Inverter: Kostal 20 kw (Italy)

PV system for Sewar Al-Yasmeen– In cooperation with USAID

Project status: Connected
Location: Beren
Type of installation: Canopy
System Power: 60+60KWp
Panels: JA 330 W &540 W
Inverter: ABB- 27.6

PV system for Al Hasanya School - Ministry of public works and housing

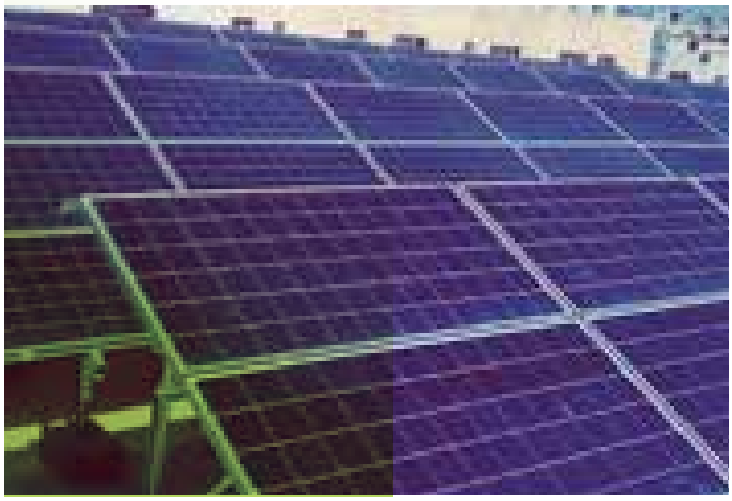
Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 60 Kw Ac
Panels: JA 545W
Inverter: Huawei-10KW QTY: 6

PV system for Thahibah School - Ministry of public works and housing

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 60KW Ac
Panels: Jinko 545W
Inverter: Kostal 30 KW (Kostal) QTY: 2

PV system for Um Saleem Mosque-Amman

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 41KWp
Panels: Seraphim 330 W
Inverter: ABB 20KW (Italy) QTY: 2



PV system for Mohammad Al-Absi Company -

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 87.7KWp
Panels: JA 545 W
Inverter: Huawei 30KW QTY:2

PV system for the Giant for men clothes

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 39 Kwp
Panels: Jinko 535W
Inverter: Huawei 20KW + 10KW

PV system for save the children organization – Amman

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 33KWp
Panels: Longi 540W
Inverter: Huawei-SUN2000-30KTL

PV system for The Islamic charity center society

Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 113KWp
Panels: Seraphim 400 W
Inverter: Huawei + ABB

PV system for The Al Sheikh Chalet

Project status: Connected
Location: The Dead Sea
Type of installation: Roof Top
System Power: 101KWp
Panels: LONGI-540W
Inverter: Huawei 20 KW QTY: 4

PV system for Room Cooling

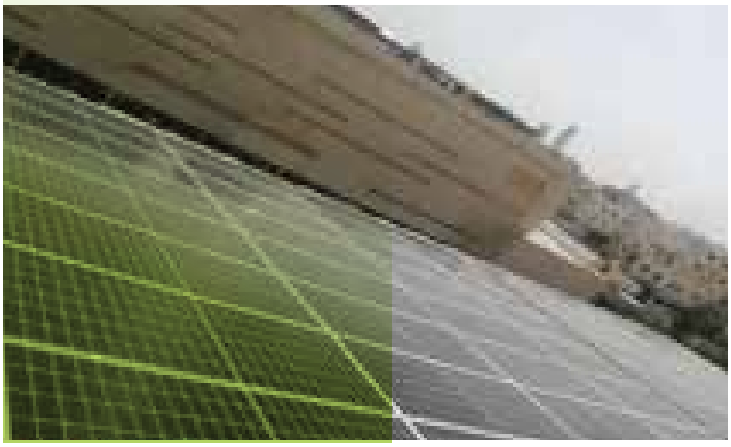
Project status: Connected
Location: Amman
Type of installation: Roof Top
System Power: 62.4KWp
Panels: Seraphim 325 W
Inverter: ABB 27.6KW QTY: 2

Al Wehdat Sport club

Project status: Connected
Location: Amman
Type of installation: Pitched roof
System Power: 80 Kwp
Panels: Seraphim 325 W
Inverter: Kostal 20

Al Yarmouk sport club

Project status: Connected
Location: Amman
Type of installation: Pitched roof
System Power: 64KWp
Panels: Seraphim 450 W
Inverter: ABB 27.6KW QTY: 2



CERTIFICATES

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