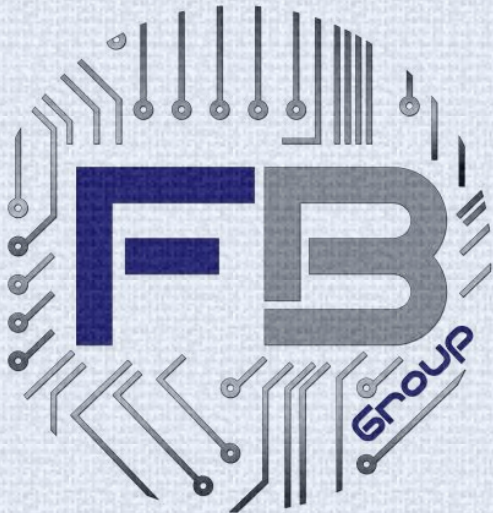


Firas Balasmeh Corporation For Control Systems

Corporation Profile

January 2023

Renewable Energy Business Line



INTRODUCTION

ABOUT US...

Firas Balasmeh Corporation for Control Systems "FB GROUP", is a Jordanian individual corporation operating in Jordan since 2010.

FB GROUP is run by a professional team of well experienced and multi-disciplinary engineers. We work as a system integrator that provides services for business organizations and people to find quality vendors of reliable and high quality hardware, software, service, training & support.

Services provided are: Turnkey solutions, design, engineering, supplying, installation, commissioning, testing, training, and operation and maintenance.

INTRODUCTION

OUR VISION...

1

Provide the Kingdom of Jordan & the Middle East region based Supply, Engineering and Services to the Industrial & Commercial Sectors.

2

Develop the Kingdom of Jordan & the Middle East region based cores of Technology for improving the productivity and environmental compliance of Jordan & the ME region industries.

3

Enhance the viability of the Kingdom & the ME region installed systems, reduce life cycle costs and increase return on investment by enhanced support and technology transfer.

INTRODUCTION

OUR MISSION...

Continually exceed our customer's expectations as well as continually improve our capabilities in doing so.



OUR OBJECTIVE...

Our main OBJECTIVE is increasing the engineering support, services and training business.



INTRODUCTION

WHAT WE VALUE...

Integrity, Honesty and Fairness...

- We are a company that keeps its promises.

Customer Satisfaction...

- We exceed customer expectations through continuous improvement in quality, service, productivity and time compression.

Our Employees...

- We provide our people with the tools, training and support to achieve excellence in customer satisfaction.

Improvement & Innovation...

- Which we seek in every element of our business.

Social Responsibility...

- We actively recognize the central role we occupy in the structure of society to improve the quality of life and the environment of a broad community.

INTRODUCTION

WHAT WE DO...

Pre-Engineering

Design

Manufacturing

Integration

Upgrading

Installation

Support & Maintenance

Training

Auditing

INTRODUCTION

WHAT WE DO...

Pre-Engineering



- Building of existing drawings.
- Preparation of preliminary drawings.
- Bid packages.
- Assistance in evaluation of bids and bid verification.
- Reports on compliance.

Design



- Detailed Specification of a Proposed Solution.
- Detailed Design Preparation.
- Procurement Services.
- Design Verification.

Manufacturing



- Manufacturing of panels as per design documents.
- Wiring of Terminations, Isolation and I/O Cards.
- Preparation of systems, mounting of equipment.
- Testing.

INTRODUCTION

WHAT WE DO...

Integration



- Integration of Multiple Systems.
- Specification of Protocols and Communications.

Upgrading



- Modification to meet Process Changes.
- Hot Change Out.
- Re-Programming , Re-Configuration and Re-Tuning.
- Expansion of Control Systems .

Installation



- Installation and testing of our systems.
- Field Wiring.
- Termination.
- Demobilization of Equipment.
- Mobilization of New Equipment.

INTRODUCTION

WHAT WE DO...

Support & Maintenance



- Planned Maintenance.
- Preventive Maintenance.
- Spares Management Programs.

Training



- For all systems provided and supported by us.
- In House Training.
- Onsite Training.
- Maintenance Manuals.

Auditing



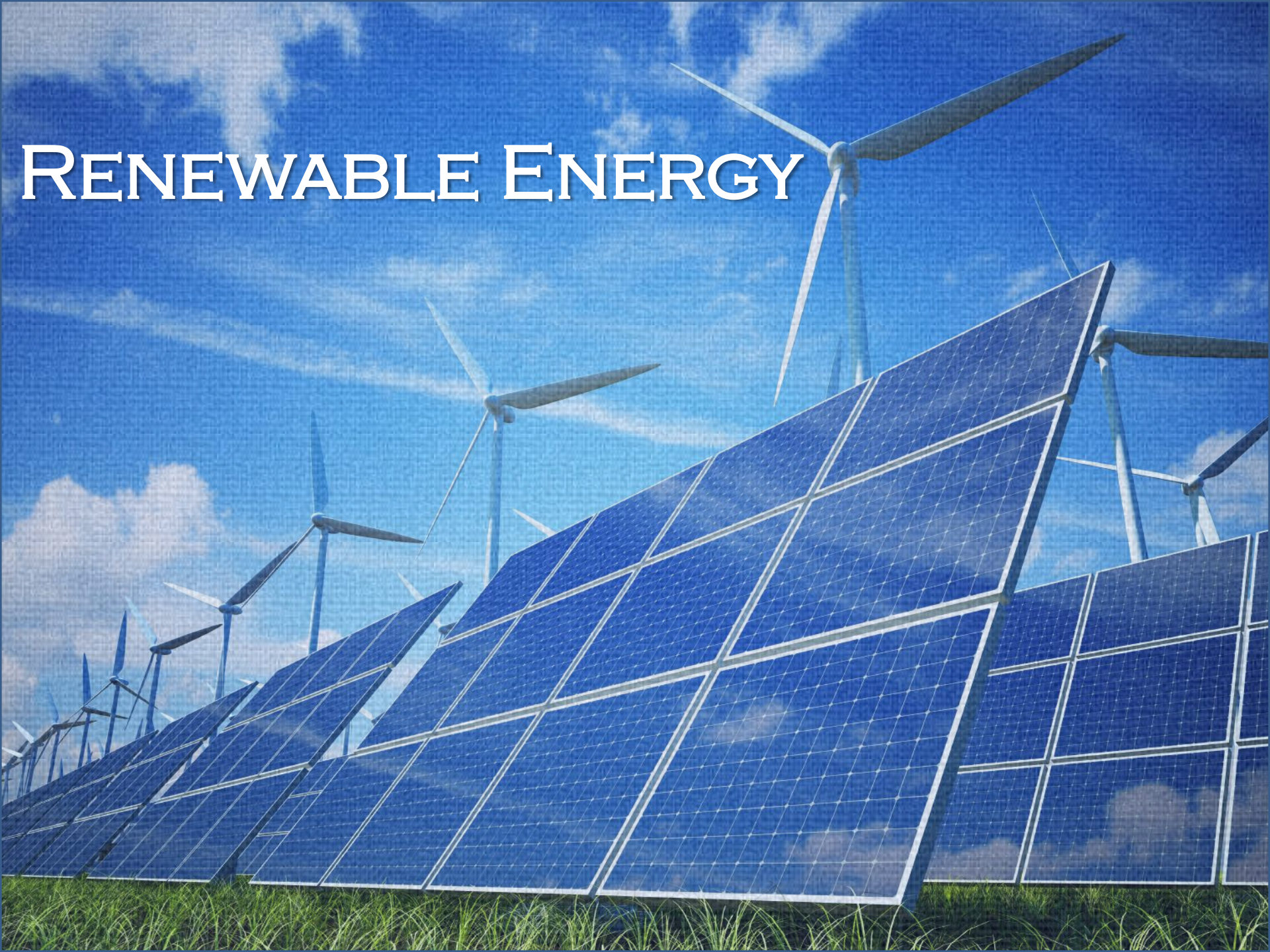
- Pre and post Audit of control systems.
- Financial evaluation of installations.
Assessment of upgrade, modification & replacement costs.
- Techno Economic Analysis.

INTRODUCTION

OUR CORE BUSINESS LINES



RENEWABLE ENERGY



RENEWABLE ENERGY

INTRODUCTION...

FB GROUP is considered one of the top leaders in the renewable energy sector in Jordan since 2013.

Our track record:

- Taking part in developing projects with total capacity of 422 MW.
- Execution of 16 MW, installed and operated iconic solar energy projects.
- Operation and maintenance of 19 MW solar energy projects.

We design, develop and deliver innovative renewable energy solutions that produce an optimum system, making sure of providing quality and cost effective services to our valuable clients. Not only in Jordan; we explore opportunities of renewable energy projects and expand its reach to the whole MENA region, specially KSA, Lebanon, Iraq, and Libya.

Our vision is to successfully advance the renewable energy into the Jordanian markets, working with developers to make the process commercially viable for all concerns. From that belief we have engrossed ourselves with all what renewable sources have to offer for producing energy.

RENEWABLE ENERGY


هيئة تنظيم قطاع الطاقة والمعادن


المملكة الأردنية الهاشمية

رقم الرخصة (1)

التاريخ: 2023/2/8

تجديد

رخصة ممارسة أنشطة توريد وتركيب وتشغيل وصيانة وفحص نظم مصادر الطاقة المتجددة

مستوى (أ)

اسم المؤسسة: فراس بلاسمه لأنظمة التحكم/فراس قاسم محمد بلاسمه
الرقم الوطني للمنشأة وفق السجل التجاري: 100359875

استنادا الى احكام المادة (6/ب) من تعليمات ترخيص الاشخاص العاملين في مجال توريد وتركيب وتشغيل وصيانة وفحص نظم مصادر الطاقة المتجددة لسنة 2016 وبناء على موافقة مجلس مفوضي هيئة تنظيم قطاع الطاقة والمعادن الصادرة بموجب قراره رقم (2023/187) جلسة رقم (9) تاريخ (2023/2/8)، نقرر تجديد الرخصة الممنوحة لكم ضمن المستوى (أ) لممارسة الأنشطة التالية:

(توريد، تركيب، تشغيل، صيانة، فحص) نظم مصادر الطاقة المتجددة
ولمدة سنتين اعتبارا من تاريخ (2023/2/8) ولغاية (2025/2/7).

رئيس مجلس المفوضين
الرئيس التنفيذي
المهندس زياد السعيدة


مجلس المفوضين

* على صاحب الرخصة التأكد التام بالاشتراطات النظامية والشروط الواردة خلف الصفحة.

FB GROUP was the first renewable energy specialist in Jordan that was licensed Grade (A), by the Energy & Minerals Regulatory Commission (EMRC) for the activities of supplying, installation, commissioning, maintenance and testing of renewable energy systems.



RENEWABLE ENERGY

SOLUTIONS...



Solar Energy

Wind Energy

**Gas & Oil
Thermal
Energy**

**Energy
Storage
Batteries**

**Solar
Pumping
Stations**

Solar Lighting

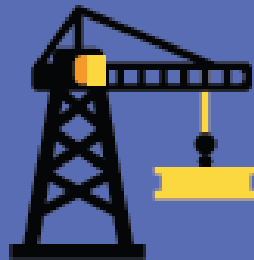
RENEWABLE ENERGY

OUR SERVICES...



PROJECT DEVELOPMENT

We commercialize your projects



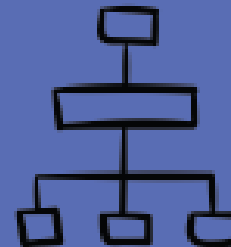
FULL EPC SOLUTION

Engineering
Procurement
Construction



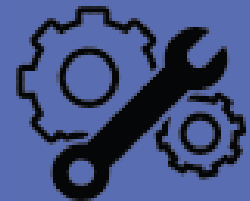
FINANCIAL SOLUTIONS

Build
Operate
Transfer



PROJECT MANAGEMENT

Dedicated In House
Project Management
Team



OPERATION & MAINTENANCE

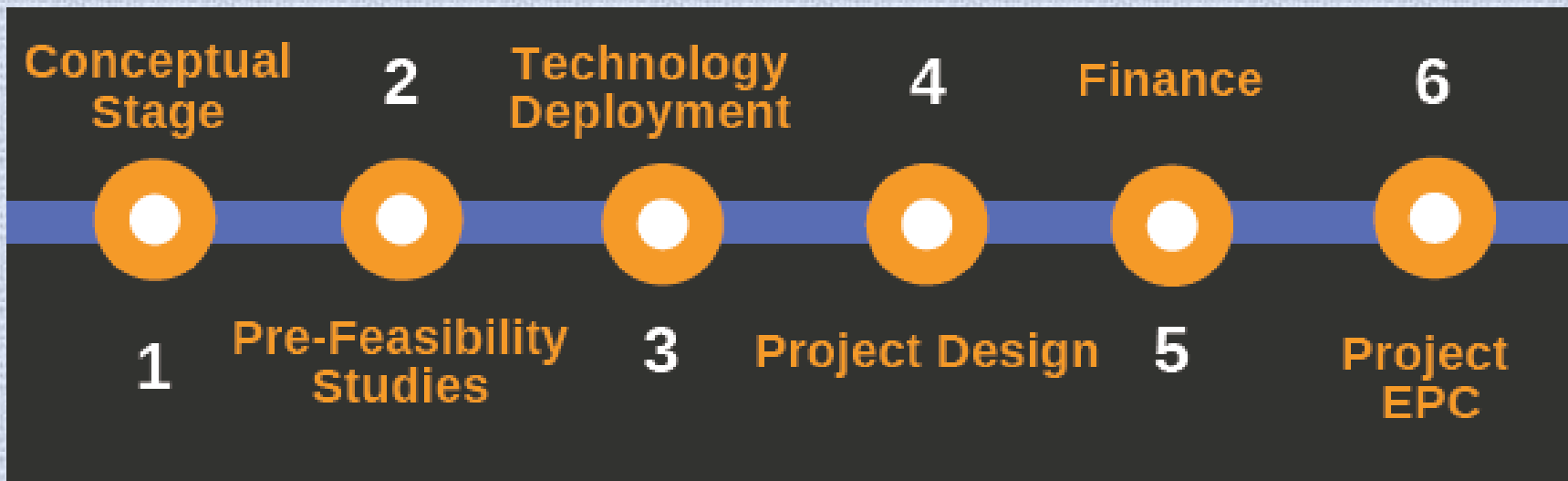
We sustain the projects' production for 25 years

RENEWABLE ENERGY

OUR SERVICES...

(1) Project Development

We develop the project starting from the conceptual stage, study its feasibility, deploy the needed technology, design the project and secure needed financing.



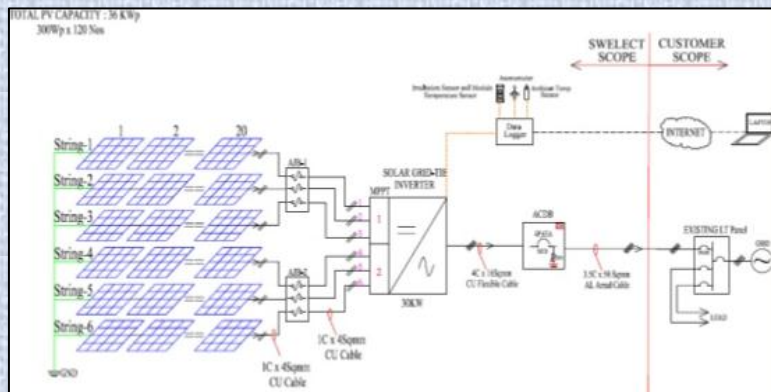
RENEWABLE ENERGY SOLUTIONS

OUR SERVICES...

(2) EPC

We have full technical and financial capabilities to provide turnkey solutions and handle the project until final handing over to the clients by our in house resources.

Engineering



Procurement



Construction



RENEWABLE ENERGY

OUR SERVICES...

(3) BOT – Build, Operate, Transfer

We finance, design, construct, own, operate and maintain the project up to 10 years through local banks financing (supported by Central Bank of Jordan), and up to 20 years by international financing. Ownership transfers to the client at the end of the contract.



RENEWABLE ENERGY

OUR SERVICES...

(4) Project Management

We have a dedicated in house project management team with experiences in managing projects planning, designing and implementation, of more than 10 - 25 years on personnel's level, and over 12 years on corporation level.



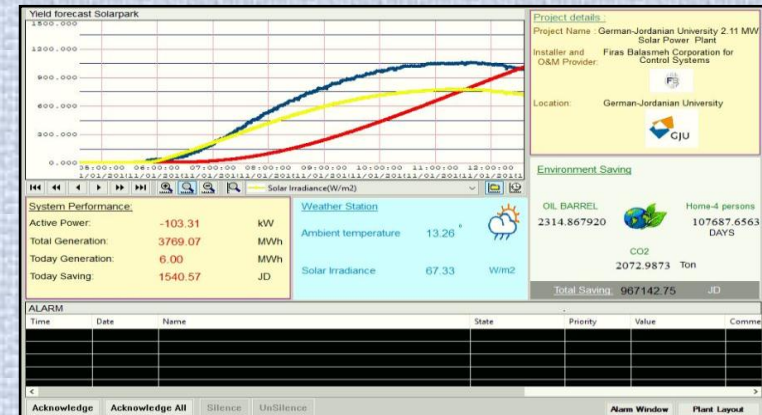
RENEWABLE ENERGY

OUR SERVICES...

(5) Operation and Maintenance

a) Remote Monitoring & Controlling:

For the plant components, activities, power generation, performance ratio, specific yield, faults, warnings and error messages, through our advanced and specialized SCADA system.



b) Corrective Maintenance:

All faults acknowledged by the SCADA monitoring systems or during periodical inspections, promptly checked on site.

RENEWABLE ENERGY

OUR SERVICES...

(5) Operation and Maintenance

c) Preventive Maintenance (planned and scheduled):

Advance planning of technical activities, related to plant components and surrounding environment, periodically performed according to the best practices, components operations and manufacturers instructions, environmental, health and Safety laws and all prescriptions applicable to the plant.

- **Planned Visual/Instrumental Checks:**

Strictly related to plant components visual inspection and checking plant parameters using top market testing equipment.

- **Environmental Operations:**

- **Solar modules cleaning:** Scheduled cycles using specialized cleaning machines.
- **Weeding:** Removal of unwanted plants to avoid shading on the solar modules and loss of efficiency.
- **Rodent control**



RENEWABLE ENERGY

OUR SERVICES...

(5) Operation and Maintenance

Testing Equipment:



Earth Resistance, Fluke



Pv 200 Kit, Pv Check Ht
Instruments Seaward



Insulation Tester, Hioki



APPA 138



Thermal Imaging Camera, Fluke



High Voltage Test Set, b2



Infrared Thermometer, Fluke

RENEWABLE ENERGY

SUPPLYING PARTNERS...

Solar Panels



Solar Inverters



RENEWABLE ENERGY

SUPPLYING PARTNERS...

Mounting Structure



AC/DC Cables



الشركة الوطنية لصناعة الكوابل والأسلاك الكهربائية م.ع.م.
NATIONAL CABLE & WIRE MANUFACTURING CO.

Medium Voltage Cables



RENEWABLE ENERGY

SUPPLYING PARTNERS...

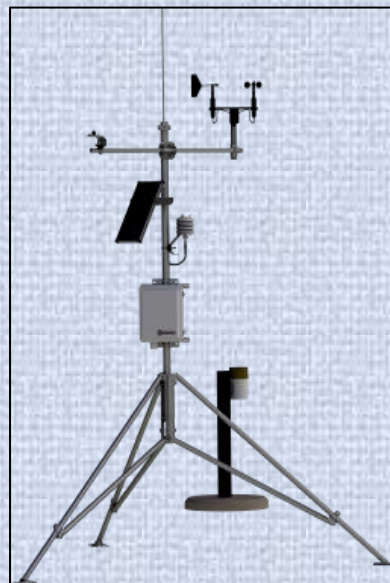
SCADA Systems



OPTO 22
Automation made simple.

FB GROUP is the regional
office since 2010

Weather Stations



 **CAMPBELL
SCIENTIFIC**
WHEN MEASUREMENTS MATTER

Cleaning Machines



FB GROUP is the distributor
in Jordan since 2017

RENEWABLE ENERGY

PROJECTS FINANCING...OUR FINANCIAL PARTNER

We have full capabilities to finance projects through our financial partner, "Jordan Commercial Bank".

Financing renewable energy projects is supported by the Central Bank of Jordan under its special Renewable Energy

Program which provides very low and flexible interest rates for local EPC projects and BOT projects up to 10 years.



RENEWABLE ENERGY

LIST OF PROJECTS...

Experience in Projects Development Under the International Basis

Client / Project	Capacity	Position	Agreement	Status
Ministry of Energy, Industry and Mineral Resources/ Saudi National Renewable Energy Program – Round 2, KSA	115 MW, Solar	Technical Partner, Consortium Member	BOO	Pre-qualified
Rural Areas Electricity Company, 11 Sites, Oman	42 MW, Solar	Technology Partner, Consortium Member	IPP	Expression of Interest
Jordan Armed Forces	100 MW, solar	Consortium member, 15% share	PPA	Pre-qualified
Ministry of Energy & Mineral Resources Investment Opportunities in Renewable Energy Projects - Stage 3, Jordan	50 MW, Wind	Consortium member, 40% share	PPA	Pre-qualified, MOU Signed
Al Hussein Bin Talal University, Ma'an	20 MW, Solar	Developer, 20% share	PPA with MEMR BOT (20 yrs)	Awarded in February 2016
Ministry of Energy & Mineral Resources Investment Opportunities in Renewable Energy Projects - Stage 2, Jordan	50 MW, Solar	Developer partner, 18% share	PPA	Pre-qualified
Ministry of Energy & Mineral Resources Investment Opportunities in Renewable Energy Projects - Stage 1, Jordan	45 MW, wind	Local Partner of the Developer	PPA	Awarded in 2016

RENEWABLE ENERGY

LIST OF PROJECTS...

Under Execution

Client	Capacity	Mounting System	Agreement Type	Connection	COD
Amazon Distribution Hub, Jeddah - KSA	1.75 MW _p , Solar	Rooftop	Engineering	Net Metering	

Projects Executed and Handed Over Since 2013 up to Date (Megawatt Scale)

Client	Capacity	Mounting System	Agreement Type	Connection	COD
Isam Khairy Kabbani Glass Works Co., Jeddah - KSA	1.4058 MW _p	Rooftop	EPC	Net Metering	
Irbid Specialized Hospital, Irbid	0.804 MW _p , Solar	Carports, Canopies & Rooftops	EPC	Net Metering	October 2017
German Jordan University, Madaba	2.11 MW _p , Solar	Carports, Canopies & Rooftops	EPC	Net Metering	October 2017
Civil Defense Directorate, Al Tafila	1.13 MW _p , Solar	Ground Mounted	BOT (43 mth)	Wheeling	September 2017
Al Hussein Bin Talal University, Ma'an	3 MW _p , Solar	Ground Mounted	BOT (10 yrs)	Net Metering	June 2017
Hashemite University, Az Zarqa	5.063 MW _p , Solar	Ground Mounted, Carports & Canopies	EPC	Net Metering	June 2016

RENEWABLE ENERGY

LIST OF PROJECTS...

Projects Executed and Handed Over Since 2013 up to Date
(Kilowatt Scale)

Client	Capacity	Mounting System	Agreement Type	Connection	COD
Private Resident Extension - villa, Assalt	3.78 KW _p , Solar	Rooftop	EPC	Net Metering	February 2019
Private Resident Extension - villa, Amman	1.89 KW _p , Solar	Rooftop	EPC	Net Metering	February 2019
Private Resident - villa, Amman	4.73 KW _p , Solar	Rooftop	EPC	Net Metering	January 2019
Ramadan Mosque, Amman	22.68 KW _p , Solar	Rooftop	EPC	Net Metering	March 2018
Private Resident - villa, Irbid	9.45 KW _p , Solar	Rooftop	EPC	Net Metering	November 2017
Jumha Mosque, Irbid	13.23 KW _p , Solar	Rooftop	EPC	Net Metering	September 2017
Private Resident - villa, Amman	9.45 KW _p , Solar	Rooftop	EPC	Net Metering	August 2017
Private Resident - villa, Amman	22.05 KW _p , Solar	Rooftop	EPC	Net Metering	February 2017
Ministry of Energy & Mineral Resources, Amman	35 KW _p , Solar	Rooftop	EPC	Net Metering	April 2015
Water Authority of Jordan, Amman	PV Water Pumping Station	-----	EPC	-----	July 2014
Ministry of Education - Swefieh Girls School, Amman	4 KW _p	Rooftop	EPC	Net Metering	2013

RENEWABLE ENERGY

LIST OF PROJECTS...

Operation and Maintenance Projects (Executed)

Client	Capacity (Solar)	Mounting System	Connection	O&M Period	End of O&M
German Jordanian University, Madaba	2.11 MW _p	Carports, Canopies & Rooftops	Net Metering	5 Years	October 2022
Civil Defense Directorate, Al Tafila	1.13 MW _p	Ground Mounted	Wheeling	5 Years	September 2022
Aal Al Bayt University	3 MW _p	Ground mounted	Net Metering	2 years	July 2022
UNHCR, Azraq Refugees Camp	5 MW, Solar	Ground mounted		Backup O&M, 2 yrs	July 2022
Ramadan Mosque, Amman	22.68 KWp	Rooftop	Net Metering	1 Year	March 2019
Private Resident - villa, Irbid	9.45 KWp	Rooftop	Net Metering	1 Year	November 2018
Jumha Mosque, Irbid	13.23 KWp	Rooftop	Net Metering	1 Year	September 2018
Private Resident - villa, Amman	9.45 KWp	Rooftop	Net Metering	1 Year	August 2018
Private Resident - villa, Amman	22.05 KWp	Rooftop	Net Metering	1 Year	February 2018
Irbid Specialized Hospital, Irbid	0.804 MW _p	Carports, Canopies & Rooftops	Net Metering	3 Years	October 2020
Hashemite University, Az Zarqa	5.063 MW _p	Ground Mounted, Carports & Canopies	Net Metering	3 Years	June 2019
Ministry of Energy & Mineral Resources, Amman	35 KWp	Rooftop	Net Metering	2 Years	April 2017
Ministry of Education - Swefieh Girls School, Amman	4 KWp	Rooftop	Net Metering	1 Year	2013

RENEWABLE ENERGY

LIST OF PROJECTS...

Operation and Maintenance Projects (Executed)

Client	Capacity (Solar)	Mounting System	O&M Period	Connection	COD
Ramadan Mosque, Amman	22.68 KWp	Rooftop	1 Year	Net Metering	March 2018
Private Resident - villa, Irbid	9.45 KWp	Rooftop	1 Year	Net Metering	November 2017
Jumha Mosque, Irbid	13.23 KWp	Rooftop	1 Year	Net Metering	September 2017
Private Resident - villa, Amman	9.45 KWp	Rooftop	1 Year	Net Metering	August 2017
Private Resident - villa, Amman	22.05 KWp	Rooftop	1 Year	Net Metering	February 2017
Irbid Specialized Hospital, Irbid	0.804 MWp	Carports, Canopies & Rooftops	3 Years	Net Metering	October 2017
Hashemite University, Az Zarqa	5.063 MWp	Ground Mounted, Carports & Canopies	3 Years	Net Metering	June 2016
Ministry of Energy & Mineral Resources, Amman	35 KWp	Rooftop	2 Years	Net Metering	April 2015
Water Authority of Jordan, Amman	PV Water Pumping Station	-----	1 Year	-----	July 2014
Ministry of Education - Swefieh Girls School, Amman	4 KWp	Rooftop	1 Year	Net Metering	2013

RENEWABLE ENERGY

ICONIC PROJECTS

RENEWABLE ENERGY

5 MW PV PLANT – HASHEMITE UNIVERSITY

- **Total capacity is 5 MW**, divided as follows:
 - 4 MW ground mounted solar farm.
 - Medium voltage connected.
 - 1 MW canopies and carports.
 - Low voltage connected.
- **Net metering basis.**
- **Scope:** EPC contract and operations and maintenance for 3 consecutive years.
- **Commercial Operation Date:** June 2016
- **Components:**
 - Modules – Yingli Solar, China
 - Inverters – ABB, Italy
 - Mounting Structure – Schletter, Germany
 - AC, DC Cables – Cableco, Jordan
- Capacity installed covered the 100% of electricity consumption, where value of electricity bill became JOD 1 since July 2016.



RENEWABLE ENERGY

5 MW PV PLANT – HASHEMITE UNIVERSITY

The project is considered the first of its kind in the kingdom and among all universities in the Middle East and North Africa.

It received a special royal interest and was launched in June 2016 with a huge opening ceremony under the patronage of his Royal Highness Prince El Hassan Bin Talal.



RENEWABLE ENERGY

5 MW PV PLANT – HASHEMITE UNIVERSITY

Awards:

- Bestowed by His Majesty King Abdullah II the **Order of Independence** of the **First Class**, May 2016.
- The **Emirates Energy Award** for **Large Energy Projects**, Oct 2017.



RENEWABLE ENERGY

3 MW PV PLANT – AL HUSSEIN BIN TALAL UNIVERSITY

- Total capacity : 3 MW, 2 plants.
- Ground mounted solar farm.
- Medium voltage connected.
- Net metering basis.
- Scope: BOT contract for 10 years.
- Commercial Operation Date: June 2017
- Components:
 - Modules – Jinko Solar, China
 - Inverters – ABB, Italy
 - Mounting Structure – Schletter, Germany
 - AC, DC Cables – Cableco, Jordan



RENEWABLE ENERGY

1.1 MW PV PLANT – CIVIL DEFENSE DIRECTORATE

- Total capacity : 1.1 MW
- Ground mounted solar farm.
- Connected on EDCO overhead lines.
- Wheeling basis.
- Scope: BOT contract for 43 months.
- Commercial Operation Date: Sept 2017
- Components:
 - Modules – Jinko Solar, China
 - Inverters – KACO, Germany
 - Mounting Structure – Schletter, Germany
 - AC, DC Cables – Cableco, Jordan



RENEWABLE ENERGY

2.11 MW PV PLANT – GERMAN JORDANIAN UNIVERSITY

- Total capacity : 2.11 MW, 6 areas
- Carports and rooftops.
- Low voltage connected..
- Net metering basis.
- Scope: EPC and Operation and maintenance for 5 consecutive years.
- Commercial Operation Date: Oct 2017
- Components:
 - Modules – Jinko Solar, China
 - Inverters – ABB, Italy
 - Mounting Structure – Schletter, Germany
 - AC, DC Cables – Cableco, Jordan



RENEWABLE ENERGY

0.804 MW PV PLANT – IRBID SPECIALITY HOSPITAL

- Total capacity : 0.804 MW, 7 areas
- Canopies, carports and rooftops.
- Low voltage connected..
- Net metering basis.
- Scope: EPC and Operation and maintenance for 3 consecutive years.
- Commercial Operation Date:
Oct 2017
- Components:
 - Modules – Jinko Solar, China
 - Inverters – ABB, Italy
 - Mounting Structure – Schletter, Germany
 - AC, DC Cables – Cableco, Jordan



RENEWABLE ENERGY

35 kW PV PLANT – MINISTRY OF ENERGY AND MINERAL RESOURCES

One of the very first in Jordan!

- Total capacity : 35 KW
- Rooftop.
- Low voltage connected..
- Net metering basis.
- Scope: EPC and Operation and maintenance for 2 consecutive years.
- Commercial Operation Date: April 2014
- Components:
 - Modules – Philadelphia Solar, Jordan
 - Inverters – SMA, Germany
 - Mounting Structure – Philadelphia Solar, Jordan



RENEWABLE ENERGY

CORPORATE SOCIAL RESPONSIBILITY

We are committed to empower our community and fresh engineers, and enhance the engineering environment in the kingdom in order to build a highly competent and generation and improve their technical skills and capabilities for better employment opportunities.

Engineering Community Empowerment

Renewable energy training partner for Al Hussein Technical University and Al Zaytoonah University

Energy Labs

Energy lab supply, commission and training for Al Hussein Technical University

Internship Programs

Average of 5 engineering interns per year being trained in our renewable energy projects

SUMMARY

OUR ADVANTAGES

- Diversity of business. We provide our solutions in many different sectors and capable to perform the best among others, having the best confident capacities and abilities.
- Having the most powerful political relations and influences in the Kingdom with both private and public sectors, coming from our diversity of business during the past years.
- Having a powerful financial situation built during the past years with especially with our financial partners and developers.
- Being an agent and a distributor for many reputable manufacturers.
- Commitment, trustable and comfortable to deal with.
- Providing innovation and customer satisfaction.
- Providing highly reputable and well established brands which cater to the exact requirement of clients, within budget and on-time.

WE AT FB GROUP...

Strongly Believe that We Have the Capabilities, Knowledge and Strength to Satisfy Our Client's Requirements and Exceed Their Expectations...

SUMMARY

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