

Firas Balasmeh Corporation For Control Systems

Corporation Profile

January 2023



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



- Planned maintenance.
- Preventive maintenance.
- Spares management programs.

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



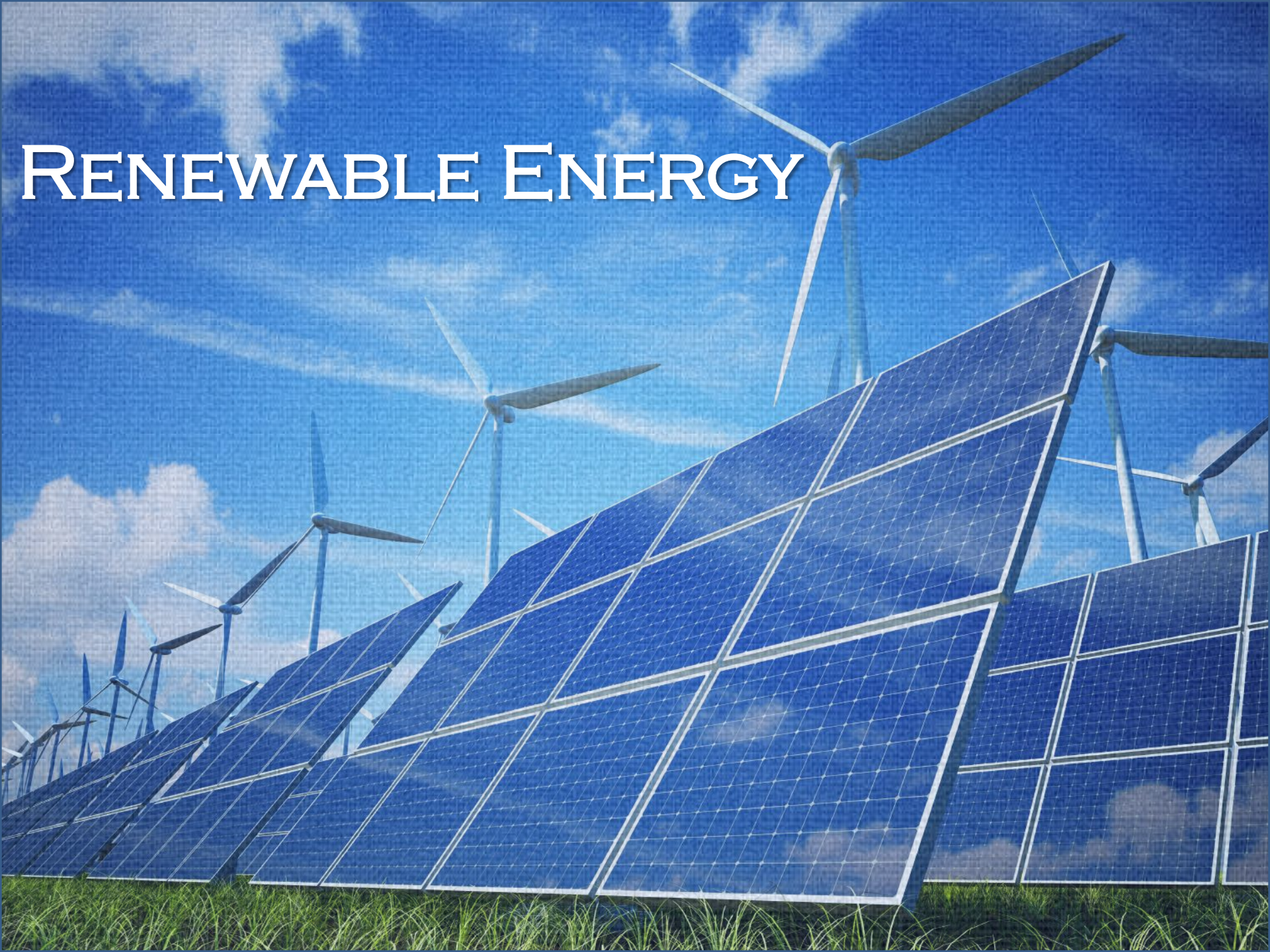
- Pre and post Audit of control systems.
- Financial evaluation of installations.
- Assessment of upgrade, modification & replacement costs.
- Techno Economic Analysis.

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
رقم الرخصة (1)

المملكة الأردنية الهاشمية
التاريخ: 2023/2/8

تجديد
رخصة ممارسة أنشطة توريد وتركيب وتشغيل وصيانة وفحص نظم مصادر الطاقة المتجددة
مستوى (أ)

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

استنادا الى احكام المادة (ب/6) 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 السعايدة

مجلس المفوضين

* على صاحب الرخصة التقيّد التام بالتشريعات النافذة وبالشروط 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

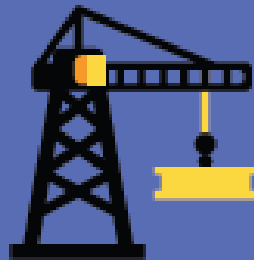
RENEWABLE ENERGY

OUR SERVICES...



PROJECT DEVELOPMENT

We commercialize your projects



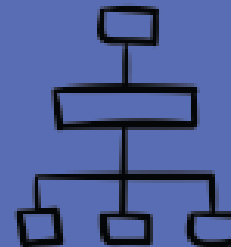
FULL EPC SOLUTION

Engineering
Procurement
Construction



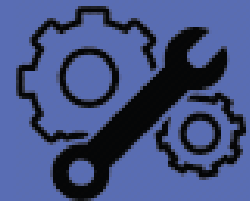
FINANCIAL SOLUTIONS

Build
Operate
Transfer



PROJECT MANAGEMENT

Dedicated In House
Project Management
Team



OPERATION & MAINTENANCE

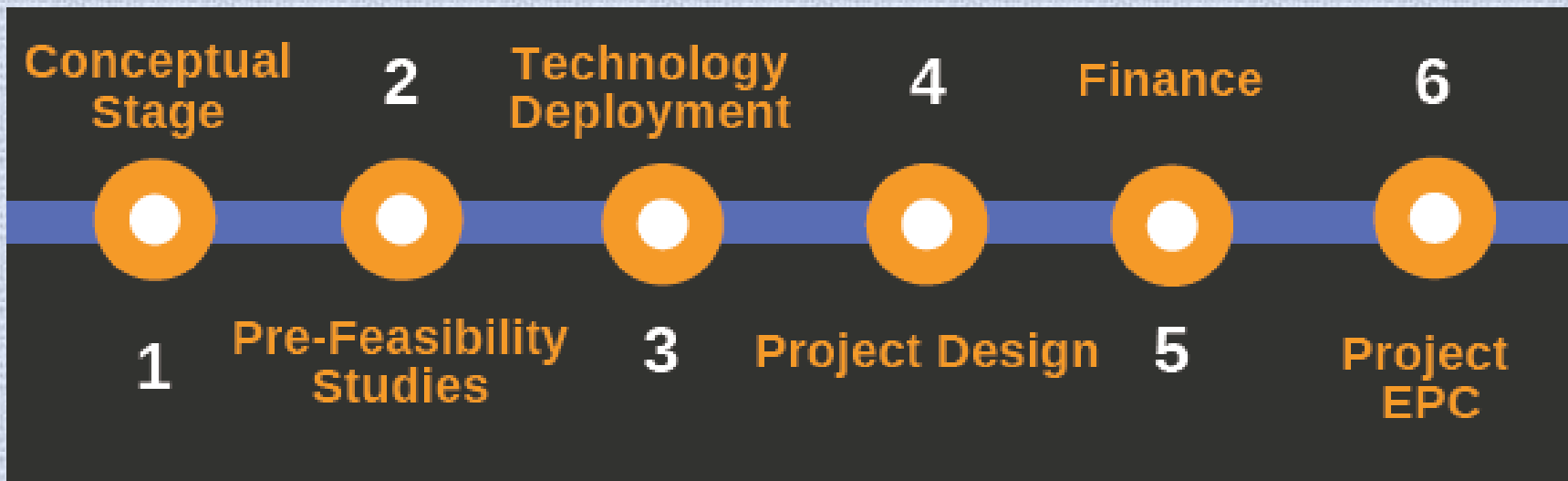
We sustain the projects' production for 25 years

RENEWABLE ENERGY

OUR SERVICES...

(1) Project Development

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



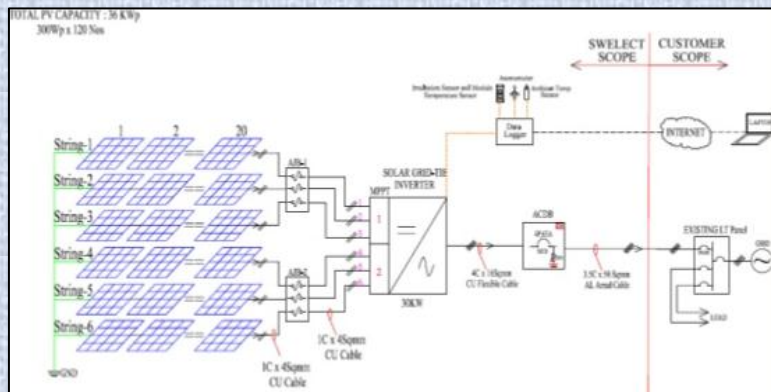
RENEWABLE ENERGY SOLUTIONS

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.



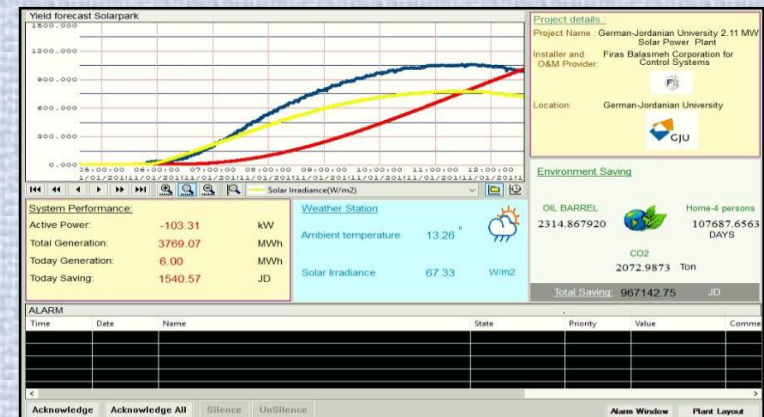
RENEWABLE ENERGY

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...

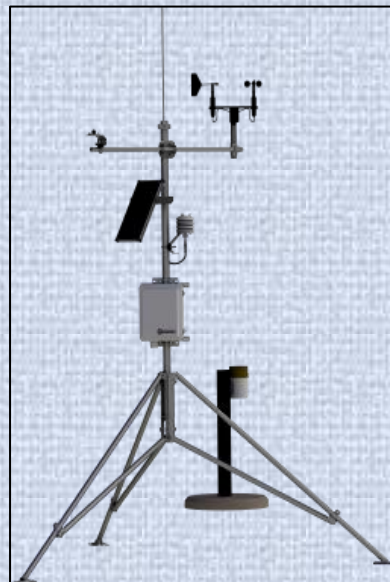
SCADA Systems



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

Hydrometric & Environmental Solutions



HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

INTRODUCTION...

FB GROUP is considered one of the most important key players in Jordan for the hydrometric and environment sector, having long history of projects and strong references with most of the important clients including, but not limited to: Ministry of Water and Irrigation, Water Authority of Jordan, most of the public universities, as well as national and international agricultural, environmental and water research centers.

We offer high quality and performance integrated solutions across a wide variety of fields, including: agricultural systems, meteorological systems, water systems, industrial systems.

Our integrated instrumentation is well known for its flexibility, precision measurements, and dependability even in harsh and remote environments.

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

PARTNERS...

PICARRO – USA:

Picarro is a leading provider of solutions to measure greenhouse gas (GHG) concentrations, trace gases and stable isotopes (water, Nitrogen, and Carbon) across many scientific applications for air, water and soil, as well as industrial markets including: food and beverage, health and safety, petrochemical and pharmaceutical.

The logo for Picarro, featuring the word "PICARRO" in a bold, sans-serif font. The letter "A" is stylized with a green horizontal bar through its center. To the right of the text is a blue graphic element consisting of several overlapping, curved shapes that resemble a stylized mountain range or a series of peaks.

Scentroid – Canada:

Scentroid is the world leader in air pollution and odour measurement equipment and services, and the premier manufacturer of odour sampling and analysis equipment, as well as the developer of state-of-the-art instrumentation for environment, nuclear, and medical industries.

The logo for Scentroid, featuring the word "SCENTROID" in a bold, blue, sans-serif font. The letter "I" is stylized with a dot above it, resembling a lowercase "i".

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

SOLUTIONS...



Rain Fall Stations



Ground Water Stations



Ground Water Stations



Water Quality Stations

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

SOLUTIONS...



Data loggers & Data Acquisition Systems



Measurement & Control Peripherals



Softwares



Sensors

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

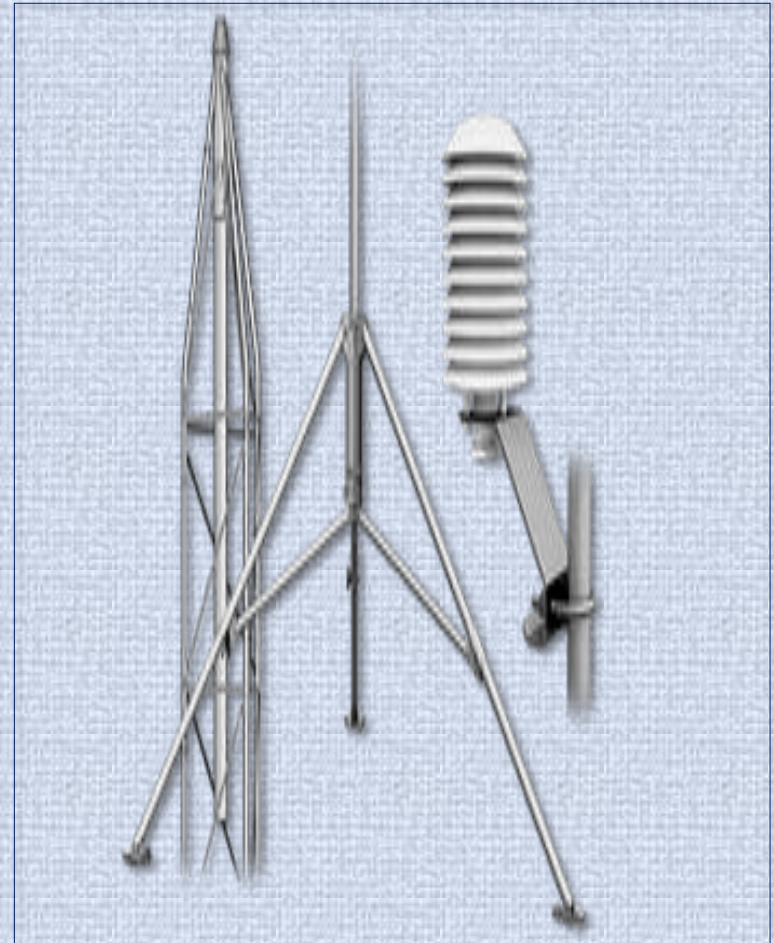
SOLUTIONS...



Power Supply



Enclosures



Tripods, Towers and Mounts

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

SOLUTIONS...



Analyzers & Peripherals



Sampling Equipment



Olfactometers



Chemical Analyzers



Analytical and Sampling Lab Equipment

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

List of References ...

Client	Project
2020 - 2022	
Water Authority of Jordan	Water Analysis Equipment, $\delta^{13}C$ analysis in DIC (liquids) and carbonates (solids) >> Operation and maintenance
2019 - 2022	
University of Jordan	Automatic Weather Station (Water, Energy and Environment Center) >> Operation and maintenance
2017 - 2018	
Ministry of Water and Irrigation	Telemetric Water Resources Observation Network; >> Operation and maintenance of 145 stations
2017	
Al Hussein Technical University	Automatic Weather Station for Researches Purposes - Donation >> Supplying, installation, commissioning, operation and maintenance
Irbid Specialized Hospital	Automatic Weather Station - Integrated with 0.80 MWp solar power plant >> Supplying, installation, commissioning, operation and maintenance
Civil Defense Directorate	Automatic Weather Station - Integrated with 1.1 MWp solar power plant >> Supplying, installation, commissioning, operation and maintenance
German Jordanian University	Automatic Weather Station - Integrated with 2.11 MWp solar power plant >> Supplying, installation, commissioning, operation and maintenance
Al Hussein Bin Talal University	Automatic Weather Station - Integrated with 3 MWp solar power plant >> Supplying, installation, commissioning, operation and maintenance

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

List of References ...

Client	Project
2016	
International Center for Agricultural Researches in Dry Area, Egypt	Simultaneous Conductivity Magnetic Susceptibility Meter
Hashemite University	Automatic Weather Station - Integrated with 5 MW solar power plant >> Supplying, installation, commissioning, operation and maintenance
2015 - 2016	
Ministry of Water and Irrigation	Telemetric Water Resources Observation Network; >> Operation and maintenance of 130 stations
2015	
Water Authority of Jordan	Water Analysis Equipment, $\delta^{13}\text{C}$ analysis in DIC (liquids) and carbonates (solids) >> Supplying, installation, commissioning, operation and maintenance
2014	
The University of Jordan	Automatic Weather Station (Program of MSc in Climatic Environment) >> Supplying, installation, commissioning, operation and maintenance
Water Authority of Jordan	PV Water Pumping Systems
International Center for Agricultural Researches in Dry Area, Jordan	Automatic Weather Station >> Supplying, installation, commissioning, operation and maintenance

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

List of References ...

Client	Project
2013	
Yarmouk University	Wireless Sensor Network Components >> Supplying, installation, commissioning, operation and maintenance
The University of Jordan	Automatic Weather Station (Water, Energy and Environment Center) >> Supplying, installation, commissioning, operation and maintenance
Tabuk University - KSA	Water Quality Station, Phase 2
2012	
Tabuk University - KSA	Water Quality Station, Phase 1
Ministry of Water & Irrigation	Telemetric Water Resources Observation Network, Phase 3; >> Supplying, installation, commissioning, operation and maintenance of 30 stations
Ministry of Water & Irrigation	Telemetric Water Resources Observation Network; >> Operation and maintenance of 105 stations
BGR - Ministry of Water & Irrigation	Operation and maintenance of 11 stations at Al Disi (Ground water, supplied by OTT)
2011	
Ministry of Water & Irrigation	Telemetric Water Resources Observation Network, Phase 2; >> Supplying, installation, commissioning, operation and maintenance of 35 stations

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

ICONIC PROJECTS

A large dam structure with water flowing through its spillways, set against a backdrop of mountains and a clear sky.

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

ICONIC PROJECTS...



**Ground Water Station Mahasi, AL-Ramtha
TeWaRON 3**



**Ground Water Station Wadi Al Walah,
Madaba, TeWaRON 2**



**Rain Fall Station Wadi Mousa School
TeWaRON 3**

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

ICONIC PROJECTS...



Water Quality Station Red Sea, Tabuk University, KSA.



Turbidity & Chlorine In Water Spring Measuring Station, Ajloun.



Automatic Weather Station, University Of Jordan, Amman.

HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

ICONIC PROJECTS...

**Automatic Weather Station - Hashemite University, Az-Zarqa
Integrated with 5 MW Solar Energy Plant**



HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

ICONIC PROJECTS...

Automatic Weather Station
Al Hussein Bin Talal University, Ma'an
Integrated with 3 MW Solar Energy Plant



Automatic Weather Station
German Jordanian University, Madaba
Integrated with 2.11 MW Solar Energy Plant



HYDROMETRIC & ENVIRONMENTAL SOLUTIONS

ICONIC PROJECTS...



Isotopic CO₂ System $\delta^{13}\text{C}$ Analyzer.

Water Authority of Jordan – Labs & Quality Affairs.

Education & Training Solutions



EDUCATION & TRAINING SOLUTIONS

INTRODUCTION...

FB GROUP is dedicated to supplying, installing and commissioning of didactic engineering, medical and natural science equipment and laboratories.

We propose flexible systems that ensure maximum compliance with current state-of-the art technologies and the skills demands of local industrial markets.

The didactic equipment are meant to cover a wide range of the technology courses described in the curricula of universities and technical, vocational and medical institutes.

EDUCATION & TRAINING SOLUTIONS

OUR SERVICES...

(1) Pre-Sales

- Technical consultation.
- Pre-bid preparation.



(2) Supply

We are keen to provide the best solutions for our clients through a solid worldwide network of partners from different origins; USA, Europe, Korea and India.

EDUCATION & TRAINING SOLUTIONS

OUR SERVICES...

(3) Installation, Commissioning, Operation and Maintenance.

Performed at site by our well experienced and trained engineers.



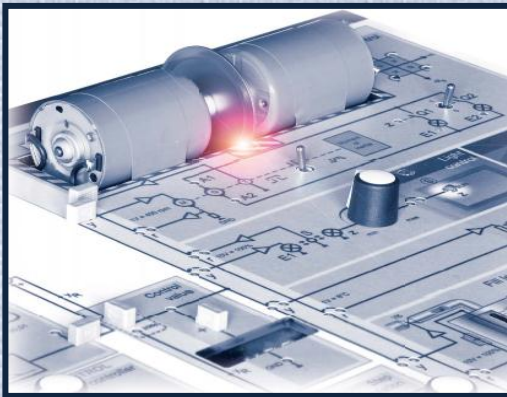
(4) Training

Client's staff get trained on the newly installed equipment by our professional engineers, make sure that the client is capable to use and operate the equipment.

EDUCATION & TRAINING SOLUTIONS

OUR SOLUTIONS...

(1) ENGINEERING LABS



Electrical



Mechanical



Construction



Mechatronics

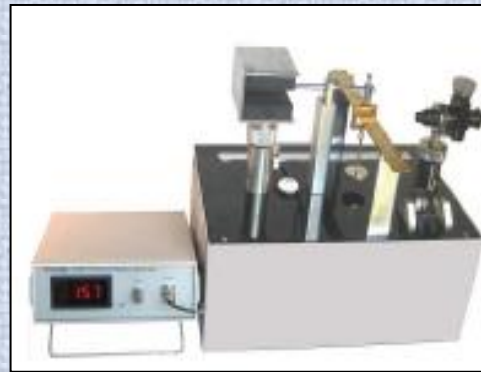
EDUCATION & TRAINING SOLUTIONS

OUR SOLUTIONS...

(2) NATURAL SCIENCE LABS



Chemistry



Biology



Physics

(3) TECHNOLOGY LABS



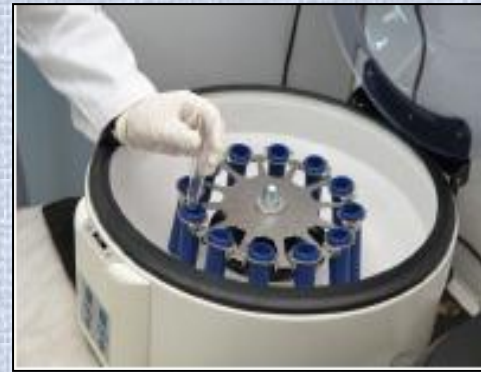
EDUCATION & TRAINING SOLUTIONS

OUR SOLUTIONS...

(4) MEDICAL LABS



Biomedical



Testing

(5) E-LEARNING LABS



EDUCATION & TRAINING SOLUTIONS

OUR SOLUTIONS...

(6) VOCATIONAL TRAINING LABS



(7) TESTING AND MEASURING EQUIPMENT



EDUCATION & TRAINING SOLUTIONS

OUR CLIENTS...



EDUCATION & TRAINING SOLUTIONS

LIST OF EXECUTED PROJECTS ...

Year	Client	Capacity
2019 - 2021	Hashemite University	Structural systems lab equipment and devices
	University of Jordan	Civil lab equipment
	University of Jordan	Mechanical lab equipment
2019 - 2020	Hashemite University	Engineering Faculty labs equipment
	Mutah University	Medical lab equipment
	Jordan Meteorological Department	Barometers
2018	Al Hussein Technical University	Mechanics and hydraulics lab equipment
	Al Hussein Technical University	Construction technology lab equipment
2017	Al Hussein Technical University	Full automation lab consists of: <ul style="list-style-type: none"> – Basic learning center kits – GROOV, Remote Monitoring and Controlling >> Supplying, installation, commissioning, and training for staff engineers.
	Al Hussein Technical University	Full automation lab consists of: <ul style="list-style-type: none"> – Advanced and professional training kits – GROOV, Remote Monitoring and Controlling – Redundancy and networking applications – Energy monitoring unit kit >> Supplying, installation, commissioning, and training for staff engineers.
	Al Hussein Technical University	6 KW _p off-grid photovoltaic system (3 systems - 2 kW _p each: fixed tilt, single axis tracking and double axis tracking), for education and research. >> Supplying, installation, commissioning, and training for staff engineers.
	Al Hussein Technical University	Biology lab equipment
	Al Hussein Technical University	Biology lab equipment

EDUCATION & TRAINING SOLUTIONS

LIST OF EXECUTED PROJECTS ...

Year	Client	Project
2014	The University of Jordan	Electrical meters laboratory
	The University of Jordan, Industrial Engineering Dept.	Full automation lab - Basic learning center kits >> Supplying, installation, commissioning and training for staff engineers.
	Jordanian Royal Medical Services	Ultrasonic nebulizer
2013	Jordan University for Science and Technology	Photovoltaic lab equipment
	The University of Jordan	Scientific devices and equipment
	Aal Al-Bayt University	Anatomy and physiology laboratory equipment
2012	Jordanian Royal Medical Services	Portable vascular hand held doppler
	Yarmouk University	Scientific devices and equipment
	Jordan University for Science and Technology	Science labs devices and equipment
2011	Ministry of Education, USAID	Biology labs equipment for 28 new schools
	German Jordanian University	Electronic circuits lab equipment

EDUCATION & TRAINING SOLUTIONS

CORPORATE SOCIAL RESPONSIBILITY

We are committed to improve university students and fresh graduates' technical skills and experience by providing latest technology equipment compatible with the outside markets, giving them confidence to fulfill employers needs and better employment opportunities.

Donations

8,000 \$	<ul style="list-style-type: none">• Two Biology Labs• Hussein Technical University
14,000 \$	<ul style="list-style-type: none">• Electrical Lab• University of Jordan
42,000 \$	<ul style="list-style-type: none">• Industrial Automation Lab• University of Jordan
150,000 \$	<ul style="list-style-type: none">• Industrial Automation Labs (Basic & Advance)• Hussein Technical University
44,000 \$	<ul style="list-style-type: none">• 12 Biology Labs• Different Public and Private Schools

Industrial Automation Solutions



INDUSTRIAL AUTOMATION SOLUTIONS

- A complete industrial automation supplier and systems Integrator, providing not only Industrial automation systems, but also telecommunication media, instrumentation, installation, maintenance and support services.
- FB GROUP through PIS represents **OPTO22** company as a regional office in the MENA.



OPTO 22
Middle East and North Africa

INDUSTRIAL AUTOMATION SOLUTIONS



- **OPTO 22**, based in USA-Temecula, is a developer and manufacturer of hardware and software for applications in industrial automation for more than 40 years.
- Opto22s' systems are designed using a PAC technology (Programmable Automation Controller) including the telecommunication media.
- Our regional office includes a well equipped training center 100% copied from the one in OPTO22, in which training courses are conducted by our certified engineers.



SNAP PAC Learning Center

INDUSTRIAL AUTOMATION SOLUTIONS

LIST OF EXECUTED PROJECTS ...

Client	Capacity
Isam Khairy Kabbani Glass Works Co., Jeddah - KSA	SCADA System with GROOV Remote Monitoring and Controlling - Integrated with 1.4058 MW _p PV solar plant
Hussein Technical University	Basic Industrial Automation lab - Donation: <ul style="list-style-type: none">– Basic learning center kits– GROOV, Remote Monitoring and Controlling
Hussein Technical University	Advance Industrial Automation lab - Donation: <ul style="list-style-type: none">– Advanced and professional training kits– GROOV, Remote Monitoring and Controlling– Redundancy and networking applications– Energy monitoring unit kit
Irbid Specialized Hospital	SCADA System with GROOV Remote Monitoring and Controlling - Integrated with 0.8 MW solar power plant
German Jordanian University	SCADA System with GROOV Remote Monitoring and Controlling - Integrated with 2.11 MW solar power plant
Civil Defense Directorate	SCADA System with GROOV Remote Monitoring and Controlling - Integrated with 1.1 MW solar power plant
Al Hussein Bin Talal University	SCADA System with GROOV Remote Monitoring and Controlling - Integrated with 3 MW solar power plant
Hashemite University	SCADA System with GROOV Remote Monitoring and Controlling - Integrated with 5 MW solar power plant
Amra Salts Factory	Control System for a new production line

INDUSTRIAL AUTOMATION SOLUTIONS

LIST OF QUOTED PROJECTS ...

Client	Capacity
Civil Defense Directorate	Server Room Monitoring System
General Supplies Department	Computer to Plate (CTP) - Royal Jordanian Geographic Center.
General Supplies Department	Magnetic Flow Meter.
Jordan University for Science & Technology	Micro/Nano manipulator - IT Faculty.
Jordan University for Science & Technology	Monitoring & Control Systems for Refrigerating Rooms and an Electronic System to Prevent Locking of Personnel in Refrigerating Rooms.
Jo Petrol	Design of PLC for Ground Supplying System at Queen Alia International Airport.
Public Security Directorate	Control & Alarming Systems.
Aqaba Special Economic Zone Authority	Electronic Systems for Controlling Refrigerating Units.
Ministry of Agriculture	GPS Devices.
Amra Salt Factory	Supply, Testing & Commissioning of SNAP PAC Control Systems.
Civil Defense Directorate	Outdoor Early Warning System.
Aqaba Special Economic Zone Authority	Energy Monitoring System.
Ministry of Agriculture	Control System for Green Houses – 1.
Vocational Training Corporation	PLC Learning Centers.
Ministry of Agriculture	Control System for Green Houses – 2.
Ministry of Agriculture	Control System for Green Houses – 3.

Power & Energy Solutions



POWER & ENERGY SOLUTIONS

INTRODUCTION...

FB GROUP's Power and Energy business line is one of the leading suppliers of a wide range of products, solutions and services in the field of energy technology, related to generating, transmitting and distributing of electrical power at the highest levels of efficiency.

POWER & ENERGY SOLUTIONS

OUR SOLUTIONS...



Transformers: Distribution,
Current, Power & Special



Smart Meters



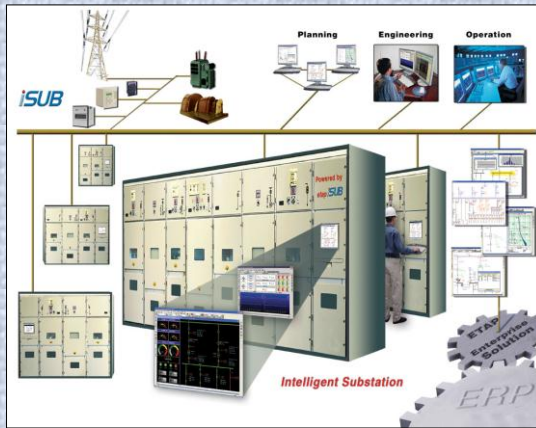
Turnkey Substations



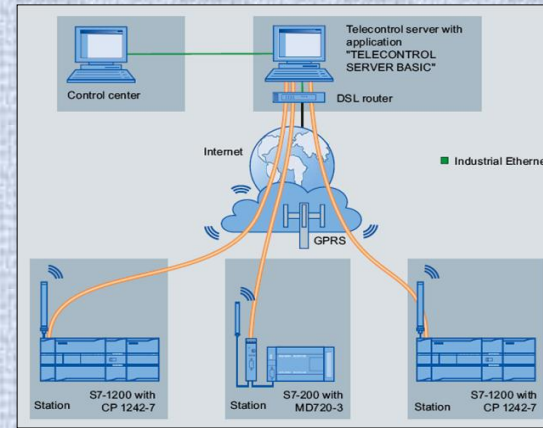
Generators

POWER & ENERGY SOLUTIONS

OUR SOLUTIONS...



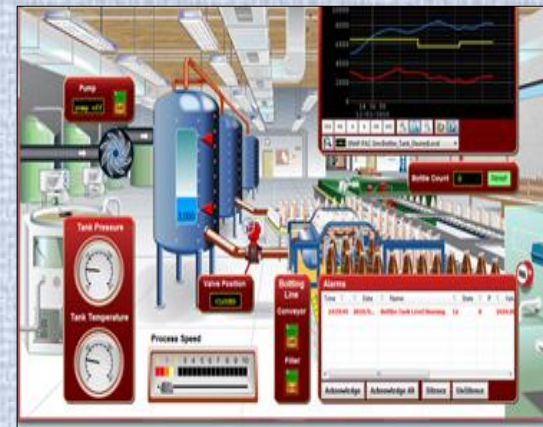
Substation Automation



Telecontrol



Loose Protection Relays



SCADA

POWER & ENERGY SOLUTIONS

OUR CLIENTS...



POWER & ENERGY SOLUTIONS

LIST OF QUOTED PROJECTS...

No.	Client	Project
01	CEGCO	Turbine Supervisory System for Unit 1 & 2 Project.
02	EDCO	System Control & Data Acquisition of Disi Water Drawing Project.
03	EDCO	Single Phase Hand Held Power Quality Analyzer.
04	EDCO	Pilot Cable.
05	EDCO	Fault Indicator with CT.
06	JEPCO	11 KV Feeder and Bus Section Circuit Breakers.
07	JEPCO	33 KV Outdoor Distributions Transformers.
08	IDECO	Portable Energy Analyzer & Portable Load Analyzer.
09	NEPCO	132 KV Switchgear & Ancillary Equipment for New Bayader Extension 132/33KV GIS Substation.
10	NEPCO	Earthing Resistance and Dielectric Testing Equipment.
11	NEPCO	NEPCO AMR and Metering System.
12	NEPCO	400 KV Current Transformers.
13	NEPCO	Transformers & Associated Equipments for Al-Hezam & Extension of New Bayader 132/33 KV Substations.
14	NEPCO	400 KV Current Transformers.
15	SEPCO	Current Transformers & Voltage Transformers.

POWER & ENERGY SOLUTIONS

LIST OF QUOTED PROJECTS...

No.	Client	Project
16	MWI	Cables and Electrical Panels.
17	EDCO	Supply of Three Phase KWH Static Meters with Accessories.
18	EDCO	Supply of LV Current Transformers & Photo Cell.
19	JEPCO	Three Phase Electronic Meters Operated with Current Transformers.
20	JEPCO	33 KV CT / VT Units for 3 Phase Metering.
21	JEPCO	Electronic Single Phase L.V. Meters.
22	JEPCO	Fiber Modems.
23	JEPCO	Remote Terminal Units.
24	JEPCO	Electronic Three Phase L.V Meters.
25	JEPCO	Hand Held Units.
26	JEPCO	11/0.415KV Distribution Transformers as a Part of Package Substations.
27	JEPCO	Split Core Current Transformers.
28	JEPCO	Contract for billing services to subscribers, including meter reading on a monthly basis and billing at the site and delivered to subscribers.
29	JEPCO	33/0.415 & 11 KV Outdoor Distribution Transformers.

POWER & ENERGY SOLUTIONS

LIST OF QUOTED PROJECTS...

No.	Client	Project
30	JEPCO	11/0.415 KV Indoor/Outdoor Ground Mounted Distribution Transformers.
31	MIYAHUNA	Supply of Electrical Auto Transformer Panel Starter.
32	EDCO	Two-Years Call-Off Contract for Supply of KWH Static Meters.
33	EDCO	Monitoring and Control System of OHL and Underground Cable Protection Equipment.
34	JEPCO	33KV Outdoor Distribution Transformers.
35	JEPCO	Three - Phase Electronic Meters Class 0.5S (LT – CT).
36	JEPCO	11 KV Indoor Switchgear.
37	JEPCO	33 KV Indoor Switchgear.
38	JEPCO	11/0.415 KV Indoor / Outdoor Ground Mounted Distribution Transformers.
39	JEPCO	High Tension CT/VT Three Phase Electronic Meters.
40	NEPCO	Supplying of Diesel Generator.
41	IRD	Diesel Generators.
42	IRD	64 KVA Portable Diesel Generator.
43	NRC	Electrical Generator(50, 60 KVA).
44	NEPCO	Green Corridor Project - High Voltage Substations, Ma'an (400/132KV).
45	NEPCO	Green Corridor Project - High Voltage Transmission Lines (400 KV and 132 KV) lines in two Separate Lots

Installation, Maintenance & Rehabilitation Works



Installation, Maintenance & Rehabilitation Works

INTRODUCTION...

- FB GROUP provides services of Installations, Maintenance and Rehabilitation related to civil, electrical and mechanical works for any industrial, residential, or commercial project, under engineering and technical methods within highest levels of professionalism, to ensure the end customer of a truly quality services.

Installation, Maintenance & Rehabilitation Works

OUR SOLUTIONS...



Cabling



Electrical Installations



UPS



Concrete & Civil Work



Generators Works

Installation, Maintenance & Rehabilitation Works

OUR SOLUTIONS...



Wells Rehabilitation



Outside/Inside Lighting



Fencing



Piping



Structures



Data Cabling & Works

Installation, Maintenance & Rehabilitation Works

LIST OF EXECUTED PROJECTS ...

Year	Client	Capacity
2017	Chart General Contractor Co.	Supply, installation and commissioning of Solar lighting poles
2016	General Directorate of the Gendarmerie Forces	Supply, installation and commissioning of Solar lighting poles
2015	United Nations High Commissioner for Refugees	Supply and Installation of Electrical Works at Irbid Registration Center and Cyber City Camp
	United Nations High Commissioner for Refugees	Emergency Rectification Works after Sudden Electrical Failures at Irbid Registration Office
2014	United Nations High Commissioner for Refugees	Electrical Installation of UPS Power Distribution
	United Nations High Commissioner for Refugees	Cabling Works in Irbid Office
	United Nations High Commissioner for Refugees	Electrical Works in the Registration Office
	United Nations High Commissioner for Refugees	Low Voltage Works in Irbid Offices, Registration Office, KAP and Cyber City

Aerospace & Aviation Solutions



Aerospace and Aviation Solutions

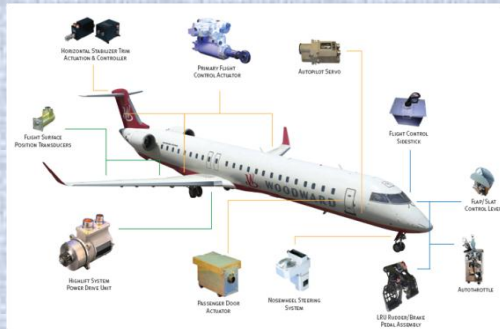
INTRODUCTION...

We provide complete services covering the aeronautical industry, airports and air transport for operational processes, flight procedures design, aerial imagery acquisition, message handling systems, infrastructure design, systems development and integration, aircraft systems, airfield solutions, airport operations and systems and consultancy services.

Aerospace and Aviation Solutions

OUR SOLUTIONS...

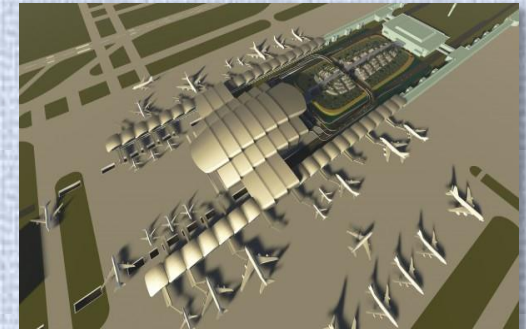
Aeronautical Industry



Aircraft Systems



Industrial Operations



Aeronautical Infrastructures

Airfield Solution



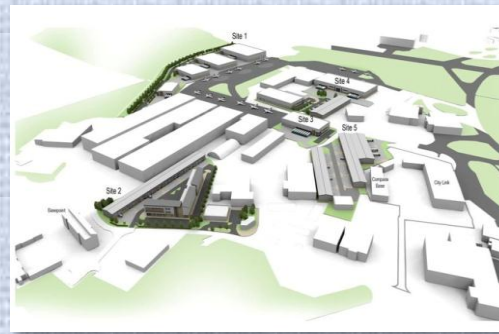
Aerospace and Aviation Solutions

OUR SOLUTIONS...

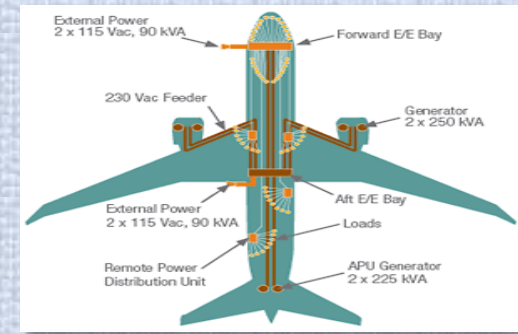
Industrial & Technological Spaces



Industrial Space



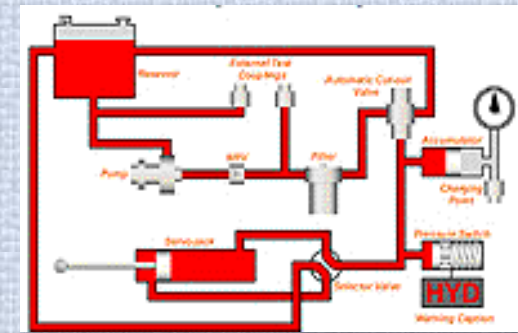
Industrial Plants



Electrical Systems

Airports:

Consultancy and Airport Operations & Systems.



Energy Systems

Aerospace and Aviation Solutions

OUR CLIENTS...



Aerospace and Aviation Solutions

List of References ...

Awarded Projects	
Client	Project
2022 - 2023	
Civil Aviation Regulatory Commission	Flight procedures Design Review for Queen Alia International Airport, Amman Civil Airport and King Hussein International Airport
2022	
Civil Aviation Regulatory Commission	Upgrade of AMHS (Air Traffic Message Handling System)
Quoted Projects	
Client	Project
2013	
Civil Aviation Regulatory Commission	Procedure for ILS Cat 1 System, Aqaba RWY 19
2012	
Civil Aviation Regulatory Commission	Procedure for ILS Cat 1 System, Aqaba RWY 19
Civil Aviation Regulatory Commission	Pans-OPS Software
Airport International Group	CCS Design and Install the Systems in Queen Alia International Airport

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...

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