



**BION**

- TECHNOLOGIES -





# INTRODUCTION

BION Technologies is a power solutions provider in EastAfrica committed to supply innovative products, ground breaking solutions and unrivaled services to businesses of all shapes and sizes.

Our primary focus is to provide excellent service to our valuable customers. Our priority is to satisfy our clients and give them quality service.

To meet this commitment, BION Technologies has invested on a structured customer support team consisting of well-trained and experienced engineers and technicians dedicated to meet our clients' needs.

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## • VISION •

*To be East Africa's premier provider of high quality  
**Power Solutions.***

## • MISSION •

*To be a major player in **The Energy Industry**  
by provision of the highest quality customer  
services which exceeds the industry standards and  
our customer's expectations.*



### **OBJECTIVES THE COMPANY WAS ESTABLISHED.**

- To provide managed services in power systems
- To supply, install and maintain telecom power systems
- To supply, install, operate & maintain solar power systems
- Solar conceptual design & engineering
- PV Design & Layout
- To provide, supply, install & maintain power back up systems
- To provide training & consultancy services in electrical power systems & solar PV
- To provide design, engineering & construction of power lines
- To provide remote monitoring & management solutions for power systems & peripheral devices



# Services & Solutions

## **POWER SOLUTIONS**

BION Technologies offers a full range of reliable power solutions and services to business premises, residential homes, IT & Telecoms, commercial and industrial applications.

Our offering includes providing one-stop multidisciplinary engineering services in consulting, design, engineering and construction.

# Product Portfolio | Power solutions

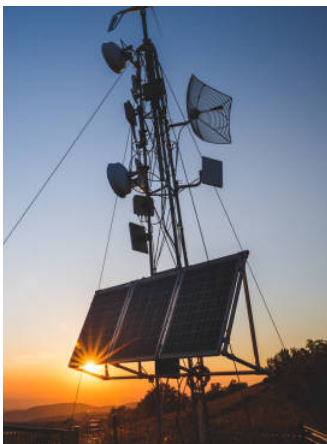
## UPS (UNINTERRUPTIBLE POWER SUPPLY)

We offer a variety of UPS options for continuous supply of power and protection of appliances from power surges.

### They include the following:

- Stand by UPS for small applications 600VA to 1.5KVA
- True online double conversion single phase in - single phase out from 1KVA and up to 20KVA with two systems in parallel
- True online double conversion three phase in - single phase out from 10KVA to 20KVA per unit up to 80KVA with 4 units in parallel
- True online double conversion three phase in-three phase out from 15kVA to 4000KVA





- DC/AC Inverters
- DC/DC converters
- Power cabinets & Telecom Batteries
- Integrated Power management software for management of power supply in base stations and Data centers.
- Hybrid Power solutions incorporating solar and cyclic batteries.

### **AUTOMATIC VOLTAGE STABILIZERS**

We offer a wide range of Automatic voltage stabilizers to match our customer's requirements.

Our products include Servo type with input window of 192Vac to 288Vac for single phase, 332Vac to 498Vac for 3phase.

Static type with input window of 185Vac to 275Vac for single phase, 320Vac to 475vac for 3phase.

The power ranges from 1kva to 3000kva. It is ideal for data center applications and linear loads protection.

### **ESS (ENERGY STORAGE SYSTEMS)**

Working with several manufacturers to meet our

client's specifications and provide warranty, we supply Lithium ion ESS and backup batteries

### **We provide the following energy storage solutions:**

VLRA batteries that feature a captive electrolyte design which prevents spilling even if the case is damaged

### **All in one Lithium-ion energy storage solution;**

This is a complete solution with an inbuilt MMPT charge controller, Inverter and a scalable Lithium-ion battery pack

### **Lithium-ion Batteries;**

These are separate Lithium-ion batteries with a BMS compatible with several inverters in the market like

- Victron
- Sungrow
- Growatt and Deye

### **POWER SYSTEMS MANAGED SERVICES**

The supply of power is indispensable to datacenter operations and Telecom sites.

A stable power supply, redundancy, and a reliable power distribution system that protects equipment, achieves high efficiency and saves energy at the same time are primary considerations when setting up or maintaining a data center or a telecom site.

BION Technologies provides maintenance through; Life cycle management, Reliability programs and power quality management. We apply cost effective, data driven maintenance schedules to:

- Reduce maintenance cost
- Increase asset life
- Make informed decisions and
- Maximize engineering resources

### **ELECTRICAL WORKS AND POWER LINES**

- Electrical installation works; Design, Engineering and installation of electrical power systems for both domestic and commercial applications
- Power Lines; Design, Engineering and construction of powerlines both LT and HT up to 132KV, including clearance and maintenance services

### **TELECOM POWER SUPPLY**

We offer end-to-end power solutions to telecom companies by providing a complete system solution in system dimensioning supply, Installation and commissioning

Our solutions are tailored to meet specific customer needs which may include; system redundancy, modular redundancy or long backup time.

### **We supply the following products and solutions**

- Rectifiers



# Product Portfolio | Solar Energy solutions

*At BION Tech we provide a complete system solution in PV systems from design, system sizing to implementation, operation and maintenance in the following categories.*

## **OFF-GRID SYSTEMS**

This product is ideal for people in the rural areas who have no access to Grid power or those with a need to reduce/eliminate their ever increasing electricity bills.

BION Technologies will provide a solution for basic lighting all day and for 4-5 hours through the night, plus run a few appliances.

## **MINI-GRID SYSTEMS**

These are a set of electricity generators and may include energy storage systems interconnected to a distribution network that supplies electricity to a localized group of customers.

They involve small-scale electricity generation (10KW to 10MW) which serves a limited number of consumers via a distribution grid that can operate in isolation from national electricity transmission networks.





### SOLAR WATER HEATING SOLUTIONS

This is the conversion of sunlight into renewable energy for water heating using a solar thermal collector.

Our solar water heating systems find applications in major residential and industrial setups

### SOLAR WATER PUMPING SOLUTIONS

Solar water pumps perform equally well in irrigation projects and for wide area of drinking water applications where they reliably meet the most demanding requirements, economically and without the use of fossil fuels or a grid connection.

BION Technologies designs, supplies, installs and operates

standard energy systems from 8 up to 100kWp.

Thanks to our experience and partnership with Arconi Solutions, we are capable of generating isolated energy, connected to the grid or hybrid systems anywhere in East and Central Africa.

### CONSTRUCTION OF PHOTOVOLTAIC PROJECTS

In collaboration with developers and EPC of photovoltaic projects, BION Technologies offers variety of services adapted to the need of each client.

Our multi-disciplinary team consists of Engineers (Civil, Mechanical, Electrical and ICT) as well as Technicians with excellent experience in installation and operation of PV systems.

### SOLAR STREET LIGHTING

BION Technologies applies proven technologies to achieve best results in solar street lighting.



### We provide a complete system with the following;

- LED DC Streetlights
- Solar Panels
- Charge controllers with timers or photo sensors
- Steel poles
- Cabling
- Batteries

### SOLAR CONCEPTUAL DESIGN AND ENGINEERING

#### Conceptual Design

As the first stage of our solar design and engineering services, conceptual design is conducted to maximize function and offer cost-savings benefits to our clients.

#### Feasibility Studies

Setting the pace for the future of your solar project's success.

#### We carry out feasibility studies through the processes;

- Assess the potential energy available and factor in costs
- Location and topography
- Shading analysis
- Geotechnical data
- Proximity of utilities
- Potential risks
- Site configuration & equipment size

The scope of our feasibility study services includes an assessment and documentation of all the information needed to begin and complete a successful solar energy project. This includes detailed design and engineering.

We also prepare site plan to achieve the best layout and optimal energy production for our clients.

**PV Design and Layout**

Designing an efficient PV system is a very critical issue in solar projects.

Small changes can largely affect renewable energy production, return on investment and insight into a system's future performance. Therefore, optimizing the layout and design for each project becomes paramount.

BION Technologies factor in many unique optimization drivers during each project's PV Design & Layout phase such as:

- Shade Tolerance; Factoring in availability of direct sunlight and angles of shade
- Panel Layout; Considering solar tilt and direction, module spacing,
- Inverter Design- Optimizing new technologies to maximize the project's future success

**TRAINING AND CONSULTANCY SERVICES**

BION Technologies and its partners offer training services on behalf of our clients in various power systems and renewable energy.



The trainings range from solar energy solutions, power backup solutions, telecom power and industrial automation.

The training is on multivendor technologies and its ultimate aim is to:

- Improve customer service quality and competitiveness
- Create consistency and a common service language
- Measurably improve customer satisfaction
- Increase customer referrals and reduce operational costs

We also offer consultancy services to businesses on sourcing, utilizing and managing resources in power.

**We help organizations with:**

- Understanding and analyzing the power requirements of the organization and the underlying environment
- Advising on power solutions and services based on requirements

- Managing and supervising the implementation processes in electrical installations
- Helping the organizations and employees with change management process



# Product Portfolio | Remote Monitoring & Mang't Solutions

*BION Technologies offers remote monitoring and management solutions for power systems and peripheral devices installed on site to allow customers to easily and efficiently manage sites and reduce OPEX.*

**Key Features:**

- Site Management
- Alarm Management
- Battery Performance Report
- Energy Distribution Report
- Power Usage Report
- Inventory Report
- Role-based Access Control



# Partners & Clients



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