

BUSINESS PROFILE

ABOUT US

THE COMPANY'S OVERVIEW

Mbalisto Energy Solutions (MES) is a leading service provider of electrical infrastructure, solar technologies, power generation, energy efficiency technologies, and renewable energy solutions to both private and public sectors within the South African market.

We have become the preferred provider of energy-efficient solutions, providing comprehensive solutions ranging from design, installation, maintenance, testing, retrofitting, and commissioning.

LEADERSHIP

Mbalisto Energy Solutions (MES) is a Level One B-BBEE contributor, a 100% black woman-owned company under the leadership of Ms. Precious Mbali Mnguni.

MANAGEMENT

The company employs qualified, experienced, accredited, and licensed engineers, architects, trade-tested electricians, and project management experts with a balanced skills mix ranging from electrical engineers, electricians, plumbers, and project managers to provide a strong operational and management team that enables Mbalisto Energy Solutions (MES) to work in various environments in and around South Africa.

VISION & MISSION

Our Vision

To serve our communities with cutting-edge services.

The Best Digital Company

We engineer the best solutions for any projects

Our Mission

Mbalisto Energy Solutions (MES) is committed to providing comprehensive solutions in a cost-effective and innovative manner. This will be achieved through safe, environmentally friendly engineering and project management services to Clients' requirements.

We regard our work ethics in the highest nature, to be productive and proactive in our projects to be accountable for all work undertaken by Mbalisto Energy Solutions (MES). We pride ourselves in the quality that speaks for itself without compromising safety and reliability. We respect that each project deserves our attention to detail attitude.



OUR VALUES

Our Values

Our core values are integrity, transparency and honesty, reliability, affordability, innovative thinking, professionalism, and excellent workmanship.

OUR PROFESSIONAL SERVICES

Sustainable Energy

We meet the needs of our society using the most environmentally friendly methods without compromising future generations. Doing it today for tomorrow, We do not see this as a trend but as an obligation to every responsible entity.

Electrical Reticulation Engineering

We provide personalized bespoke electrical services. We pride ourselves in delivering prompt, efficient, and creative solutions by successfully combining the best to offer in traditional and cutting-edge technology.

Supplier

Hybrid Inverters
Grid Tied Inverters
Residential Racked Battery
Residential Wall-Mounted
Battery Solar Water Heaters
Solar PV Panels Energy Saving
Lights Home Solar Kits
Portable Power Stations

Civil Engineering

Civil Engineering firm undertaking a broad range of heavy civil, infrastructure, roads, and earthworks contracts for both public and private clients.
Water Pipelines (including Blasting and Drilling)
Sea Piling
Sewer and stormwater reticulation
Bulk Earthworks

Project Management

Management of turnkey electrical reticulation projects
Management of electrical maintenance projects
Management of community-based contractors in electrical
Infrastructure Development projects.

Telecommunications

Optic fibre (Duct, OPGW, ADSS) installation, testing, and commissioning
Splicing OTDR analysis
Base station mast erection and container replacement
Design, installation, maintenance, support, configuration, and troubleshooting of base stations.
microwave, radio frequency, and wireless broadband radios.

WHAT WE PROVIDE

Home Solar Kit Solutions

Solar lighting solutions provide the safety and security of having light when you need it most.

Green Energy Solutions

We make clean energy accessible to homeowners, businesses, schools, non-profits, and government organizations at a lower cost than they pay for energy generated by fossil fuels like coal, oil, and natural gas. We provide backup power systems ranging from rooftop solar photovoltaic systems, inverters (hybrid, AC coupled, Off-grid, and battery), energy storage lithium batteries, smart portable power stations, smart meters, and rechargeable smart energy-saving LED light bulbs.



WHAT WE PROVIDE

Solar Water Heaters Solutions

We provide water-heating solutions to households, non-profits, and government organizations to help reduce the household's and government facilities' energy bills and to lessen the burden on the power grid.



LED Floodlighting and LED Solar High Mast Lighting Solutions

We provide lighting solutions to government facilities to help reduce electricity usage, lowers maintenance expenses, and with a guaranteed long life span on LED lighting bulbs and the negative impact of weather and temperature fluctuations.



WHY CHOOSE US



We offer bespoke energy solutions for enterprises as well as households that are looking for consistent and uninterrupted power supply, tailor-made solutions to suit everyone's needs and budget.

We offer solar and power energy solutions that come with a number of real benefits and investment into solar and power energy solutions can provide a variety of benefits to homeowners and businesses alike. This including:

1. **Cost savings** – There are significant benefits in investing in solar and wind energy, from the abundant wind and sun prevalent in South Africa. Generating electricity this way means you can reduce your reliance on electricity from the grid, resulting in lower electricity bills.
2. **Increases home value** – Solar panels are becoming more popular, and many home buyers are willing to pay a premium for a home with solar panels already installed. A study by the National Renewable Energy Laboratory found that homes with solar panels in America sell for about 20% more than homes without them. South Africa is quickly following suit considering the power generation challenges the country is facing.
3. **Provides energy independence** – By generating your own electricity, you can reduce your dependence on the electricity grid and the utility companies that provide it. This can provide a sense of independence and control over your energy use.
4. **Tax incentives** – There are tax incentives available for homeowners who install solar panels. The government has declared in the 2023 budget speech, that persons who pay personal income tax can claim a rebate of 25% of the cost of installing new and unused solar panels against their tax liability, up to the maximum of R15000 per individual, for a limited time only, now is the time to invest.



SOLAR SOLUTIONS



Solar Inverter

- Charging Protection
- Working Without Battery
- Supports A Variety Of Batteries
- Low Noise
- Max PV Voltage
- Parallel Machine



Hybrid Solar Inverter

- Grid electricity and battery power priority is optional
- 90-280V AC wide input voltage
- Higher charging current and adjustable
- Bypass charging function, AC charge available, when the unit off
- Intelligent protection
- Higher class of security
- Communicate with our MPPT charge controller
- Built-In MPPT controller



Life P04 Battery System

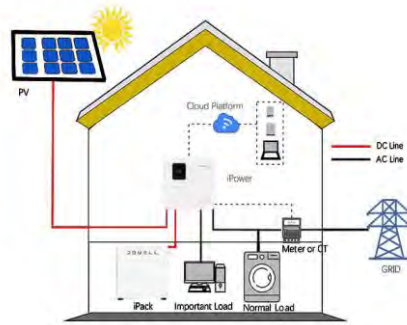
- Iron phosphate-lithium power battery
- Long warranty period: 5 years
- Higher energy density, smaller volume for household
- Support connected in parallel mode for expansion
- Expandability: This battery pack can be easily expanded by adding expansion battery packs in parallel connection
- Battery management system (BMS): The battery pack built-in BMS monitors its operation and prevents the battery from operating outside design limitations
- Photovoltaic system: This battery pack is designed for household photovoltaic systems

RESIDENTIAL, INDUSTRIAL & COMMERCIAL SOLAR SOLUTIONS

Residential BESS Solution

Based on the low carbon concept, and thanks to the competitiveness of the energy storage technology, the commercial application of PV + ESS will be gradually realized in developed areas. Our residential hybrid system solutions can quickly respond to EMS dispatching instructions, and from an intelligent and friendly power supply system with rooftop PV, making electricity safer. The system is designed to operate perfectly with the grid to realize an uninterrupted power supply for the users.

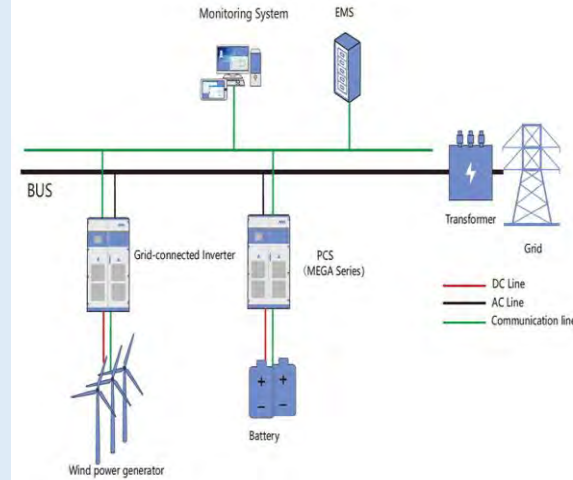
- Compatible with lithium-ion batteries;
- Compatible with high and low-voltage batteries;
- Compatible with house intelligent energy management system;
- Compatible with grid power dispatching instructions; and
- Compatible with virtual power plant instructions.



AC-BUS Solution

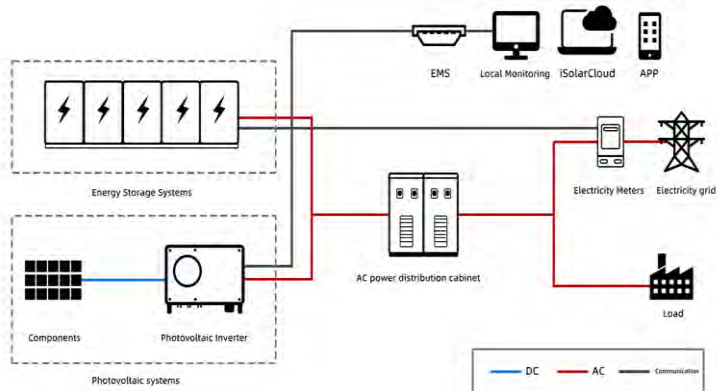
The AC bus of integrated PV & storage and charging power station is a common solution at present. The MEGA series inverters can be widely used in the charging station for system power expansion and multi-function power complementary scenarios.

- Integrated container solution of PV, energy storage, and battery can be realized;
- Large access power range and flexible design;
- Can be used for power supply in areas without electricity, integrated application of PV & storage and charging, electricity trade in industrial parks, large charging stations, and other micro-grid applications; and
- ESS peak shaving, reducing power grid distribution capacity, solving the problem of power distribution expansion.



C & I ESS Solution

Industrial and commercial energy storage systems cannot only realize peak shaving but also reduce transformer capacity costs. MEGA energy storage systems can achieve 98.7% conversion efficiency, and increase the return on investment (ROI) for users.

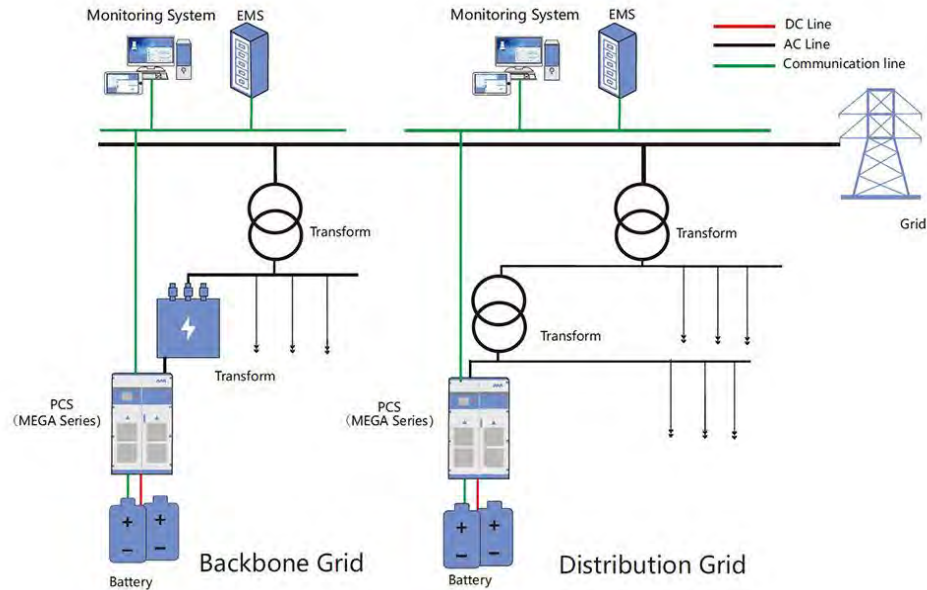


- Power expansion due to transformer limitation;
- Reactive power compensation and APF function;
- Built-in transformer, high load tolerance, and high reliability;
- Flexible for all kinds of grid instructions such as peak shaving; and
- Integrated energy efficiency management.

GRID SOLAR SOLUTIONS

Grid-side energy storage solution

With the large-scale installation of renewable energy, the power grid will face high pressure of reliability. Energy storage is considered to be the best way for this issue. The solution from our company's millisecond response is well-designed for grid power dispatching instructions.

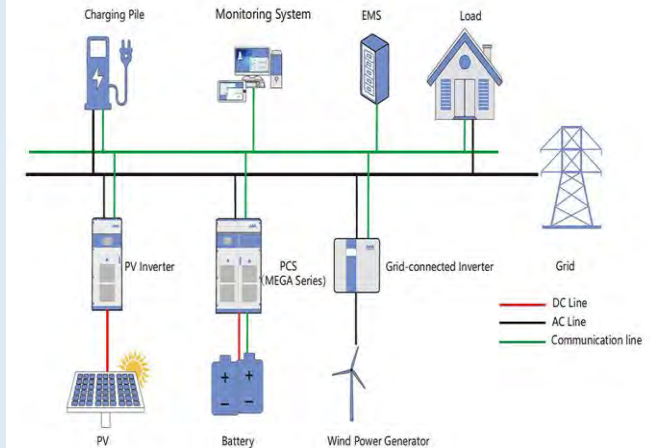


- Support IEC61850 communication protocol;
- Peak shaving and other grid instructions;
- Independent participation in grid power services; and
- Secondary frequency modulation, AVC, rotary standby, cold standby, black start.

Large micro-grid off-grid solution

It is difficult to cover the traditional power grid in remote areas, but the local solar resources or wind resources are usually abundant. This solution can provide a high-power (above MW level) independent micro-grid solution, which can combine various input power sources, improve the reliability of power supply, so that local residents can realize an independent off-grid system.

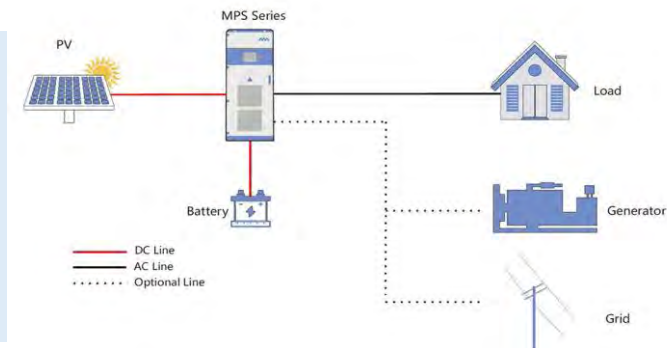
- High power (above MW level) independent micro-grid, AC bus topology to reduce the input source coupling, and improve reliability;
- The system operates under an off-grid mode, with energy storage systems or diesel generators providing voltage and frequency support for the entire micro-grid; and
- EMS analyses and predicts PV, wind power, and load to realize the safe, reliable, and economic operation of the micro-grid system.



Medium micro-grid solutions

The medium micro-grid solution adopts the outdoor cabinet structure, which is suitable for scenarios without a power grid or unstable power grid. Multiple MPS are paralleled and redundant for each other, which improves the reliability of the power supply while improving the load capacity of the system, and supports dynamic capacity expansion and the mixing of old and new batteries.

- Master/slave control function, all machines work in V/F mode;
- Redundancy. The failure of one or more machines does not affect the normal operation of other machines;
- Current balance control, current unbalance < 5%; and
- SOC equalization control to protect the batteries.



WIND POWER SOLUTIONS



A ground-breaking, cutting-edge renewable energy solution. Our wind power is not only aesthetically pleasing, it's complementary to any residential or commercial structure, and has the potential to outperform and/or be an improvement over other renewable energy solutions. The advantages of wind power are numerous. This including:

- Cost saving to the monthly electricity bill
- Low maintenance
- Environmental friendly
- Safe for the end user – 120km/h + wind speeds
- Charges battery sizes from 12 volts to 48 volts
- 4x power of conventional blades
- Delivers more energy capacity – peak performance of 600 watts

Range of applications for wind power solutions:

▪ Off Grid Solution

A larger system using multiple panels of 3000w; a large battery bank of 8kwh; a hybrid grid-tied inverter of 5kva and a wind turbine. Adequate for a medium-sized household.

▪ Mini Backup Solution

This consists of a small battery bank; a turbine and a UPS-type 1200-watt inverter with an additional 300-watt solar panel. The system would ensure a charged battery bank for emergency backup power during outages.

▪ Grid Tied Backup Solution

Consists of the same specifications as the Mini Backup Solution, but with a hybrid grid-tied inverter for seamless backup power as well as energy bill reduction.

▪ Stand-Alone Solution

This solution is the simplest and is aimed at reducing energy bills. The turbine is connected via a microgrid inverter to an existing grid and simply adds power to the system when the wind blows.

PREVIOUS & CURRENT PROJECTS/PROJECT REFERENCES

NO.:	DESCRIPTION & TENDER NUMBER	RFQ	MUNICIPALITY/COMPANY NAME	START & FINISH STATE	CONTACT PERSON	STATUS
1	PANEL OF ENGINEERING, PROCUREMENT AND CONSTRUCTION PANEL OF SERVICE PROVIDERS TO SUPPLY, INSTALL AND COMMISSION SOLAR PHOTOVOLTAIC AND BATTERY STORAGE SYSTEMS AT GAUTENG PROVINCIAL GOVERNMENT FACILITIES (CIDB 4 EB/EP OR HIGHER) FOR A PERIOD OF THREE (3) YEARS - TENDER NUMBER: RFP 15/06/2023		GAUTENG DEPARTMENT OF INFRASTRUCTURE DEVELOPMENT	OCTOBER 2023 - JUNE 2025	Mr. Mluleki Hlatshwayo/Project Manager/082 080 7724	COMPLETED
2	SUPPLY, DELIVERY, OFFLOADING, INSTALLATION, COMMISSIONING AND RETROFITTING OF LED FLOODLIGHTS FOR MIDVAAL LOCAL MUNICIPALITY		MIDVAAL LOCAL MUNICIPALITY	JUNE 2021 - JUNE 2023	Ms. Philiswa Zulu Assistant/Director/010 496 2903	COMPLETED
3	THE APPOINTMENT OF SERVICE PROVIDERS TO REPAIR AND MAINTAIN SOLAR HOME LIGHTING SYSTEMS FOR INFORMAL SETTLEMENTS ON AN AS-AND-WHEN REQUIRED BASIS FROM DATE OF AWARD UNTIL 30 JUNE 2025 - TENDER NUMBER: A-EE 01-2023		CITY OF EKURHULENI	AUGUST 2023 - JUNE 2025	Ms. Jabulile Kgomo/Project Manager/011 999 2544	CURRENT
4	THE APPOINTMENT OF CONTRACTORS FOR THE DESIGN, SUPPLY, INSTALL, DELIVERY, OFFLOADING, TEST, COMMISSIONING AND RETROFIT OF AN EXISTING FLOODLIGHTING LUMINARIES' CONVENTIONAL TYPES HIGH INTENSITY DISCHARGE (HID) WITH LIGHT EMITTING DIODES (LED) ON AN AS AND WHEN REQUIRED BASIS FROM THE DATE OF AWARD UNTIL 30 JUNE 2022		CITY OF EKURHULENI	JUNE 2019 - JUNE 2022	Ms. Jabulile Kgomo/Project Manager/011 999 2544	COMPLETED
5	APPOINTMENT OF A SERVICE PROVIDER TO SUPPLY, DELIVER, INSTALL AND MAINTAIN A SOLAR PV SYSTEM FOR ABIE'S SUPERMARKET - REFERENCE NUMBER: AB-07-2019		ABIE'S SUPERMARKET	SEPTEMBER 2019 - OCTOBER 2020	Mr. Abraham Singh/Manager/078 157 1336	COMPLETED

OUR CORPORATE PARTNERS, ACCREDITATIONS & MEMBERSHIPS



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THANK YOU, AND WE LOOK FORWARD TO WORKING WITH YOU!!