

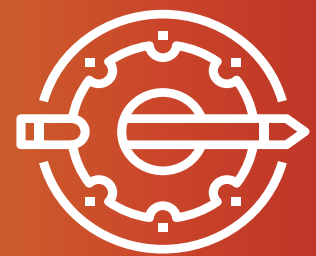
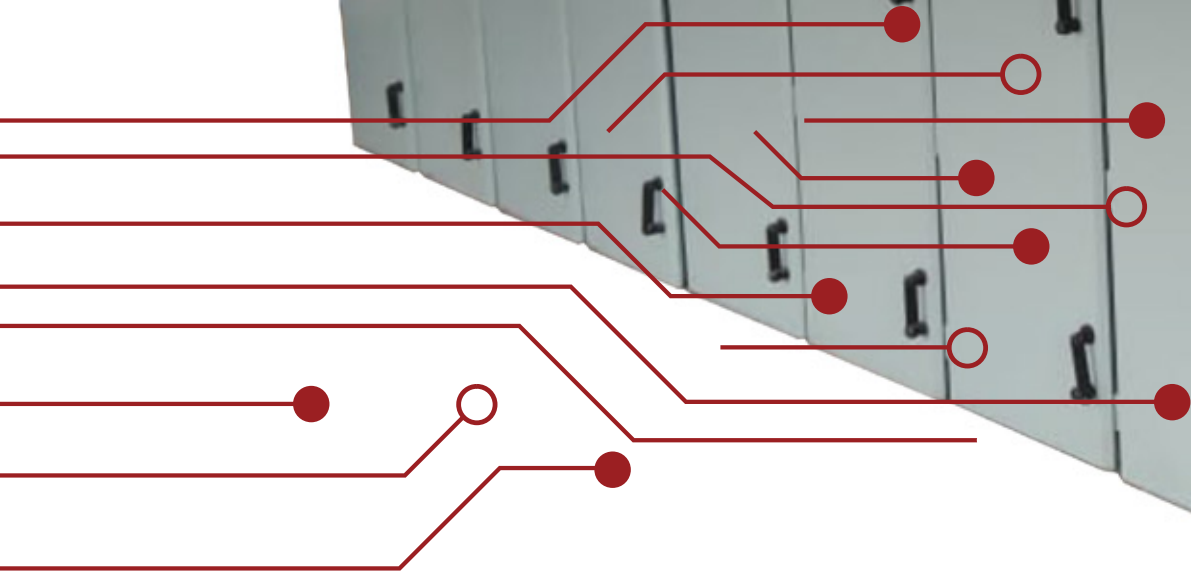


Proven Reliable Power Solutions



# COMPANY PROFILE

MANUFACTURERS OF THE  
VSI/VTD HAWKER SIDDELEY  
RANGE OF SWITCHGEAR



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# OVERVIEW OF KHULIO



Only South African  
manufacturer of  
Switchgears

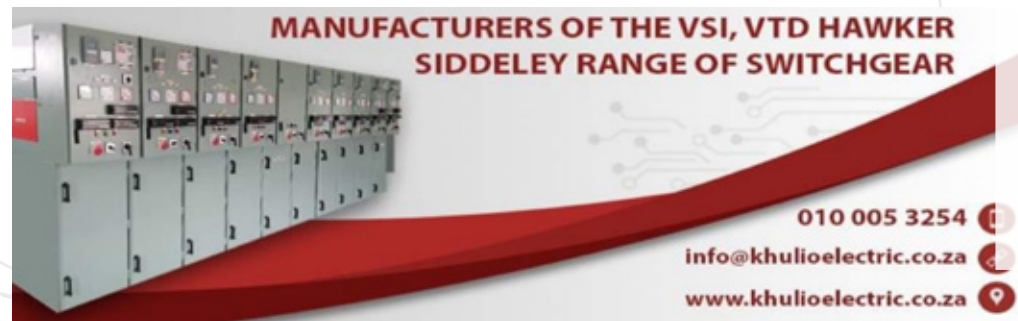


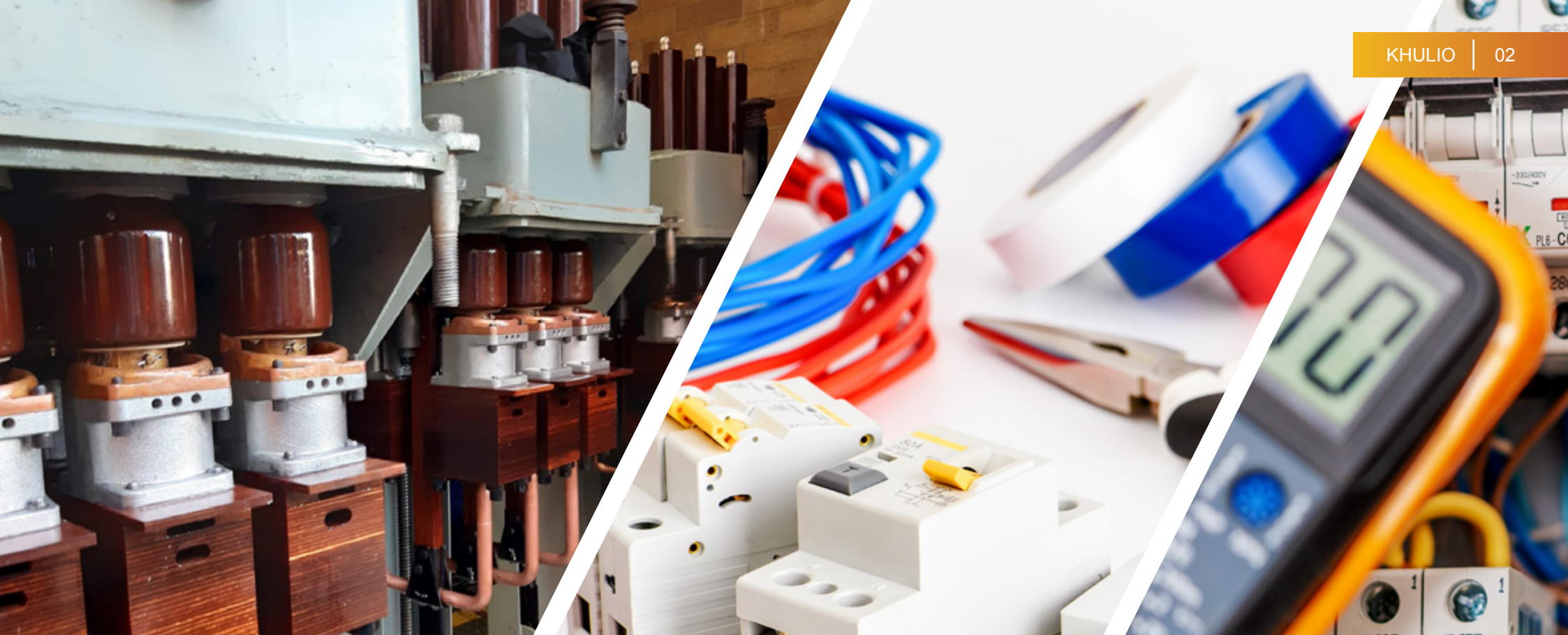
Trusted Hawker  
Siddeley range  
of Switchgears



Level 1 BBEE  
contributor status

- Khulio (Pty) Ltd (“Khulio” or the “Company”) was founded in 2013 by black professionals.
- Khulio started as an electrical solutions provider with a special focus on CAD drawings for Control Panels.
- The Company is the Original Equipment Manufacturer (“OEM”) of the VSI, VTD Hawker Siddeley Range of Switchgear following a management buy-out of the Hawker Siddeley Africa Switchgear assets by the Khulio management team.
- The Company exports panels and breakers to Botswana, Namibia, and other Sub Sahara African Countries.
- Our switchgear is 100% locally manufactured.
- Khulio is committed to upholding the Codes of Good Practice and as such holds a Level 1 BEE rating.





## MANUFACTURE

- Manufacturing and Installation of 6.6 to 12kV Switchgear panels (630A to 2500A)
- Spares – supplier of critical spares for VSI/NVL/VTD Hawker Siddeley Ranges of Switchgear

## SERVICE

- Schematic Designs
- Upgrading LV-MV Control Equipment
- ARC Protection
- 6.6kV – 12kV Mobile substation hire
- 500kVA Backup Generator hire
- Supply of Generators
- Supply of Transformers

## MAINTENANCE

- Maintenance of Vacuum Circuit Breakers
- Maintenance of Busbars up to 2500A
- Maintenance of Generators
- Maintenance of Transformers

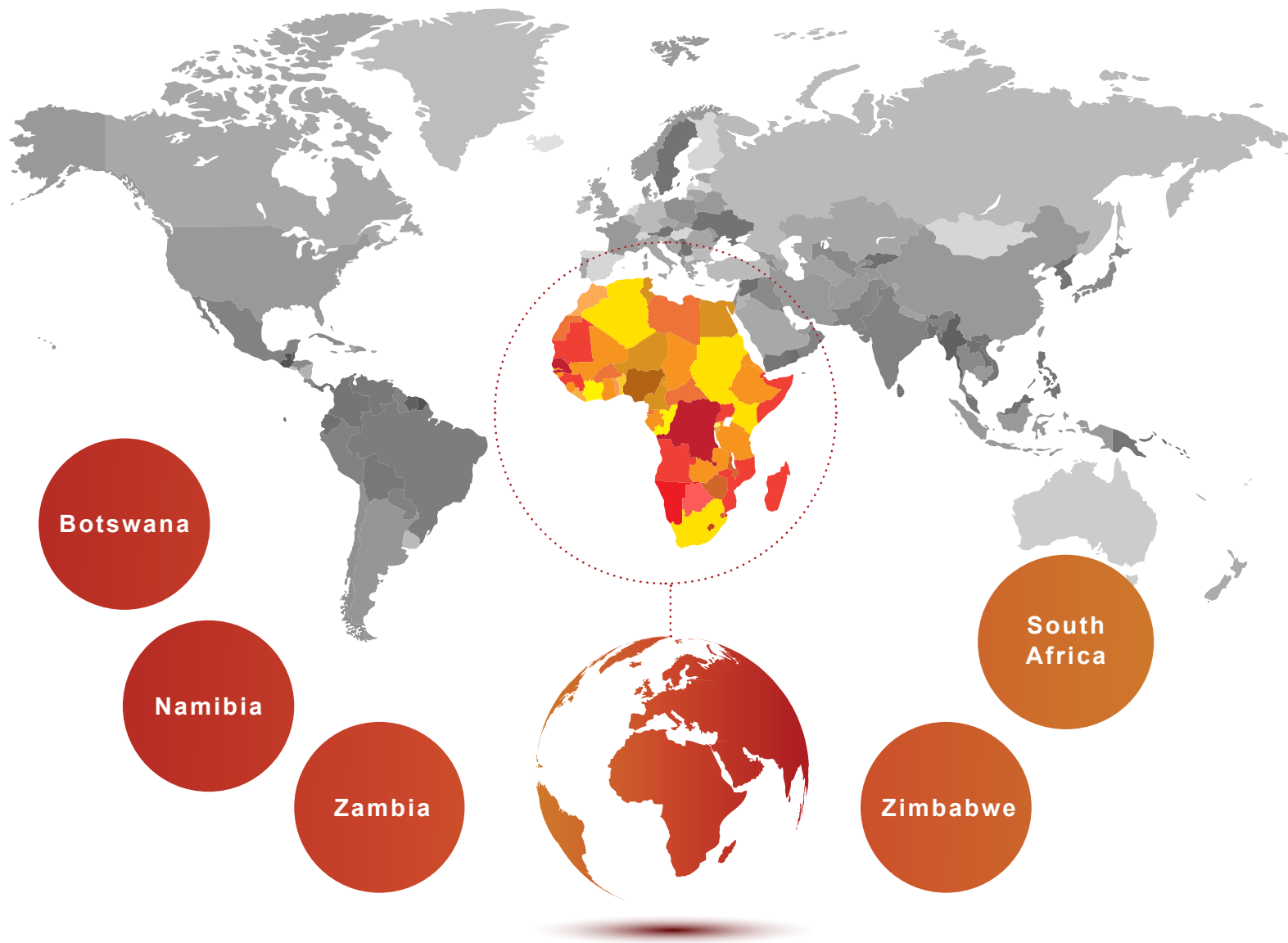
# PRODUCT AND SERVICE OFFERING



# GEOGRAPHICAL FOOTPRINT

*Khulio is headquartered in Johannesburg, with geographical presence throughout Africa*

*Khulio is the strategic hub for Hawker Siddeley range of Switchgears throughout Africa*



# WHY KHULIO?



## OEM

Original Equipment Manufacturer of the VSI, VTD Hawker Siddeley Range of Switchgear



## BBBEE

Khulio is 100% black owned and managed; and is a level 1 contributor toward BEE



## REPUTABLE BRAND

Proven reliable and high-quality power solutions



## TEAM

The team has a combined professional experience of over 50 years



## LOCAL PRESENCE

Khulio has a local presence thus allowing quick turn-around



## COST-SAVING

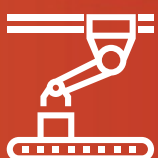
Retrofit from oil to vacuum and competitively priced

# PROCESS FLOW



## SCHEMATIC DESIGNS

Schematic designs are utilised in the design phase of a panel (switchgear) or for upgrading substations to the latest protection standards



## MANUFACTURING

**Manufacture of 6.6 – 12KV Medium Voltage Switchgear**

- 630A to 2500A
- Single and Double Busbar arrangements

- Option for Non Internal Arc or Internal Arc
- Air-Insulated Vacuum Circuit Breaker



## INSTALLATION

**Switch gear installation**

- installation, testing and commissioning.
- 12 months warranty period on our Switchgears if installed by Khulio Electric

- 24 months warranty period if installation is done by Khulio.
- Installation of generators
- Installation of transformers



## SERVICING

**Servicing of worn out parts and re-greasing of clusters annually:**

- Replacement of outdated oil circuit breakers by installation of VSI Breakers; and

- Servicing of VSI Breakers
- Service of medium voltage switchgears
- Servicing and hiring of generators.
- Testing of protection relays



## MAINTENANCE

- Adjustment of operating shutters
- Busbar maintenance annually - This should be done to eliminate any partial discharge

- Supply of critical spares
- Maintenance of Generators
- Maintenance of Transformers



## KHULIO PRODUCTS

- Current Ratings up to 2500A
- Single and Double Busbar Arrangements
- Integral Earthing Systems or Earthing Trucks
- Air-Insulated Vacuum Circuit Breakers
- Option for Non-Internal Arc or Internal Arc

## THE DOWNSIDE OF OIL CIRCUIT BREAKERS

- Oil spills cause environmental damage.
- Oil is a non-renewable resource.
- Oil breaker spares are scarce.
- Opening more oil rigs will increase global warming.
- The inflammability of oil poses a risk of fire.
- Oil may form an explosion mixture with air.
- The arcing products (e.g. carbon) remain in the oil and its quality deteriorates with successive operations. This necessitates periodic checking and oil replacement.
- Long arcing time. - Due to the decomposition of the oil in the arc, the oil becomes polluted by carbon particles, which reduces its electric strength thus periodical maintenance and replacements are required.



## ALIGNMENT WITH GOVERNMENT OBJECTIVES

Government Strategic Objectives	Khulio Alignment
• Manufacturing sector a key enabler in achieving inclusive growth	✓
• Black industrialists to achieve economic transformation	✓
• Export Market	✓
• Fourth Industrial Revolution	✓
• Job Creation and Women & Youth Empowerment	✓

# CLIENT OPTIONS

Khulio provides tailor made customer solutions. Needs analysis and advice. Solution driven



Purchase of new Switchgear panel - either for a new installation or a full replacement of existing panels



**KEM22 Electro Magnetic Breaker**



Upgrade or retrofit old oil circuit breakers



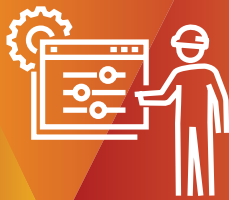
Maintain existing panels which will require annual servicing



**VSI Breaker**



Option 2 – Upgrade or retrofit old or oil circuit breakers.



Savings could range between 70k and 280k

This offers options offers significant savings for clients with existing Hawker Siddeley panels.

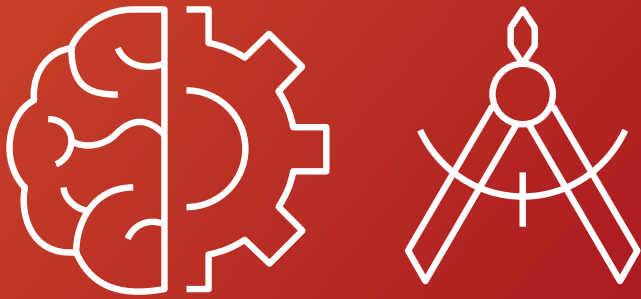
# UPGRADE OR RETROFIT

- Only SABS approved dealer to retrofit or upgrade Hawker Siddeley range of Switchgears.
- Provide a 24 month warranty for all our upgrades and retrofit.
- Low voltage compartment upgrade.
- Provide type test certification for all our upgrades or retrofits.
- Upgrade to latest specification.
- ARC protection in all 4 compartments.
- Schematic drawings for all previous Hawker Siddeley installations available in our archives.

# KEEP EXISTING PANELS

Option 3 – Keep existing panels to increase lifespan

Current oil breakers are not up to spec



- Service of existing Vacuum Circuit Breakers
- Provision of spares directly to clients or client appointed maintenance
- servicing firms
- Carry Out Bus Bar Maintenance
- Provide spare breakers in cases where the breaker needs a major
- service and repair



# TESTING SERVICES OFFERED



## PANEL TESTING OFFERING

- Continuity Tests
- Insulation Breakdown Tests 2KV
- Functional Tests ( Electrical & Mechanical )
- Ductor Tests
- Pressure Tests
- CT Magnetising Tests
- Primary Current Injection Tests
- Relay Secondary Tests
- Relay Programming



## VACUUM CIRCUIT BREAKER TEST OFFERING

- Electrical & Mechanical Tests
- Interlocks Integrity
- Penetration Tests
- Ductor Tests
- Pressure Tests
- Speed Tests
- Insulation Breakdown Tests 2KV



# SUPPLY AND MAINTANANCE OF TRANSFORMERS & MINI-SUBSTATIONS



- OIL ANALYSIS
- GASKET REPLACEMENT
- SERVICE & MAINTENANCE
- REFURBISH

# WE SUPPLY ,INSTALL AND MAINTAIN THE LEADING DIESEL GENERATORS BRANDS



- 12KVA to 1500KVA GENERATORS
- Silent Canopy Type (Weatherproof Mild-steel)
- ATS ( Auto Transfer Switch )
- Weatherproof Exhaust

## ENGINE TYPES OFFERED

- SCANIA
- FAW
- CUMMINS
- SDEC
- VOLVO
- YTO
- HONDA



# OUR CLIENTS

Since inception Khulio has created valuable relationships with its clientele, these include some of our recent:



# STRATEGIC PARTNERSHIP - RENEWABLE ENERGY

Khulio has a strategic relationship with O&L Nexentury that represents the energy branch of the O&L Group and focuses on the development and implementation of renewable energy infrastructure systems. Nexentury is an experienced EPC contractor and vertically integrated IPP developer with in-house engineering, project finance, legal and assets management teams. The services and offerings include:

## In-house Engineering & Development

- PV/Diesel Hybrid (Off-Grid Utility Scale)
- PV mini-grids (Rural Off-Grid Utility Scale)
- PV (On-Grid Utility Scale)

## Comprehensive Solar Solutions

- IPP Development
- IPP Equity (strategic investments)
- EPC Services
- O&M Services

## Deep Market Knowledge & Expertise

- Business and project development across Africa & Europe
- PV development throughout Europe & in 21 Sub-Saharan African markets
- Offices in Germany, South Africa, Namibia & Ivory Coast

## Broad Spectrum of Clients

- Private Sector Enterprise (C&I and Mining)
- State and Private Utilities
- Rural Electrification Authorities

## Official Partner

- KfW/DEG and Nexentury have partnered to support the proliferation of PV and socio-economic capacity building throughout 20 African countries


## Project Example: IPP


- Capacity: 10MWp
- Location: Namibia
- Technology: Single-Axis Tracking with BiFacial Modules
- Estimated Specific Yield: 2680 kWh/kWp
- Estimated Price Range: 0.64-0.68 NAD/kWh excl. VAT


# GET IN TOUCH

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