



POWER, INDUSTRIAL & WATER: INVESTOR DAY

S. HARRISON

23 JUNE 2021



PRESENTATION OVERVIEW

Steve Harrison	<p>Platform overview & Strategy</p> <p>Market overview</p> <p>Key opportunities</p> <p>Key risks</p> <p>Presentation takeaways</p>
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SSA

Johannesburg

Cape Town

Market focus:

- **Sub-Saharan Africa:** Power, industrial and water markets

Market conditions:


- Limited investment in sub-Saharan Africa

Order book:

- December 2020: R0,4 billion

Platform prospects:

- No projects of any significant value recently secured and opportunity for new sizeable project awards within the next six-month period is limited
- Recently announced infrastructure plan by the South African Government to stimulate the economy should present opportunity in the medium term
- Green shoots are presenting in the power sector and REIPP Window 5 as the sector opens to further private participation. We are likely to see awards and revenue generation within the next 9 -12 months
- Several transmission tenders invited by Eskom are currently under adjudication
- Mining sector opportunities are seeing signs of a recovery with prospects for the platform, in respect to construction opportunities in the next 12 months
- Investment in the South African water sector continues to be muted in the short term

Office	Location	Businesses
Murray & Roberts Power & Energy	Johannesburg, South Africa	 
Murray & Roberts Water	Johannesburg, South Africa	 
OptiPower Projects	Cape Town, South Africa	
Wade Walker	Johannesburg, South Africa	
Wade Walker Solar	Johannesburg, South Africa	

DIVISION / COMPANY

KEY FOCUS FY2022



CORPORATE

- Integration of the Optipower business with the Wade Walker business to form a single Electrical OHL, HV, MV and LV service offering across the value chain and sectors

SOUTH AFRICA

- Award of SKA Meerkat and Golomomti PV projects underway
- BESS projects for Eskom likely to awarded in current financial year
- REIPPP Round 5 under bidding process with Round 6 and 7 bids expected to kick off during FY2022
- Eskom restructure and unbundling progress is key to unlocking of Transmission Line projects
- Eskom's increased investment in maintenance and integrity of South African grid likely to see R100BN over 10 years
- With the increase in self generation cap from 1MW – 100MW likely to see more investment in the power generation sector for private and commercial PPAs including municipalities
- Data Centres continue to be a small scale revenue source

OUTSIDE OF SOUTH AFRICA - SSA

- Award of project in Malawi and near awards in Botswana
- Opportunities in T&D range between ZAR15 – 30 BN in the medium term
- Typical EPC + F contracting model
- International IFC/World Bank funding – typically difficult to meet the prequalification requirements and compete with entrenched international contractors
- We will seek to diversify outside of South Africa through innovative financing and partnering models starting with smaller scaled distribution networks rather than the mega scaled interconnection transmission
- Focus on Angola, Botswana, Namibia, Kenya, Ethiopia, Malawi, Tanzania

DIVISION / COMPANY

KEY FOCUS FY2022



Murray & Roberts
Power & Energy
Engineers and Constructors

POWER:

- With the increased drive for private participation in the power generation sector as related to the IRP 2019 and the 100MW self generation cap together with the demand for cheaper, greener and reliable energy, the business focus is to target the power generation sector in the near term
- This will entail the integration of EPC solutions within a partnering strategy that includes international EPCs and specialist technology suppliers.
- Includes REIPPP (PV Solar and Wind), Gas to Power, Biomass, Heat to Energy, Green/Blue Hydrogen
- Focused on both government led procurement programmes as well as private developments for commercial PPAs

OIL & GAS:

- Oil & Gas projects over the short term are muted due to lower demand.
- Refining production in South Africa being reconsidered in favour of import storage terminals – expect more terminals projects in the short to medium term
- Majors such as Sasol relooking at petroleum production strategies
- Repair and Maintenance still seeing smaller continuous opportunity

RESOURCES AND INDUSTRIAL:

- The commodity revenue mix has been stable even through Covid19
- A new commodities super cycle is expected with majors positioning for expansion projects
- Increase in emerging miners taking on smaller concessions. Capital expenditure for greenfield developments
- With the unlocking of self generation power options, likely to unlock investment in the sector over the medium term
- Community / Labour Unrest however still a major risk that plagues South Africa industry and blocks investment decisions

DIVISION / COMPANY

KEY FOCUS FY2022



Murray & Roberts
Water
Engineers and Constructors

SOUTH AFRICA

- Tough market conditions persist resulting from lack of available Public Sector funding
- R333bn funding gap over 10years – National Water & Sanitation Masterplan
- CoCT - implementation of Drought Resilience Strategy pipeline of projects has commenced
- eThekweni Municipality Waste Water Treatment PPP projects have been initiated
- Subdued Private sector investment until confidence in sector is restored – likely post Covid19

SHORT TERM

- Focus on excellence in delivery of awarded projects – Relocation of Organica demo plant to V&A and Athlone C-works for CoCT
- Bid and win further work coming out of CoCT – Potsdam MBR / Cape Flats Regional Sludge Handling Facility / Athlone D-works

MEDIUM TO LONGER TERM

- Leverage Organica plant in commercial operation at V&A to secure additional Organica opportunities
- Participate in developing PPP's which provides an opportunity to offer Organica solution and generate annuity income
- Leverage track-record from CoCT contracts to bid and win strategic projects in other provinces / metro's

DIVISION / COMPANY

KEY FOCUS FY2022



NEW VENTURE

- Commercial PV solar roof installations are gaining momentum in South Africa and SSA as the legislation is more relaxed to allow self generation up to 10MW and the increasing risks of load shedding and increasing electricity tariffs
- Multiple very small players, but few niche larger contractors who can offer full EPC + F solutions
- Opportunity exists to take up space on the supply value chain as there are limited local suppliers and distributors

FOCUS ON COMMERCIAL CLIENTS

- Electrical, Instrumentation & Control and Integration Solutions
- Solar PV Industrial
- Solar PV Rooftop
- Solar PV Ground Mount
- Solar PV Carports
- Hybrid Renewable Energy Solutions

OFFERING

- EPC -Engineering, Procurement and Construction
- LSTK –Lump Sum Turn Key
- PM–Project Management
- ENG–Engineering
- QC/QA–Quality Control & Quality Assurance
- Commissioning & Hand Over

Eskom have launched 3 packages for Battery Energy Storage Systems at their existing generation plants:

1. Package 1: Skaapvlei Sub-station, Sere Windfarm. BESS 80MW/320MWh EPC + 5 year O&M
2. Package 2:
 - a. Lot A: Eskom Melkhout (35MW/140MWh) Substation. Coega Local Municipality, Eastern Cape, South Africa
 - b. Lot B: Eskom Pongola (40MW/160MWh) and Elandskop (8MW/32MWh) Substation, Pongola Municipality Local Municipality and Msunduzi Local Municipality Respectively, KwaZulu-Natal, South Africa
3. Package 3:
 - a. Lot A: Eskom Paleisheuvel (9.5MW/45MWh) and Graafwater (5MW/30MWh) Substations in Cederberg Local Municipality, Western Cape, South Africa;
 - b. Lot B: Eskom Hex (20MW/100MWh) Substation in Breede Valley Local Municipality, Western Cape, South Africa

The funding is from the IFC and Eskom are under pressure to use it or “lose it”

There are multiple EPCs predominately Asian (Chinese, Korean), European and US vying to submit bids – closes June 2021 and expect awards by August 2021

We are bidding as a subcontractor for the HV Substation and Electrical Balance of Plant works to multiple EPCs. It seems that all the EPCs have a strategy to subcontract the HV Substation and EBOP works. We hope that we are able to secure some works considering the volume and parallel timing of all 5 sites.



Department of Minerals Resources and Energy has gazetted its Integrated Resources Plan 2019 for which it is expected in the short-medium procurement of:

1. 2600 MW Renewable Energy from PV Solar and Wind – Bid Window 5 – Currently in Bid Phase – Closes in August 2021
 2. 2600 MW Renewable Energy from PV Solar and Wind – Bid Window 6 – September 2021 - RFP
 3. 513 MW Storage – August 2021 - RFP
 4. 1500 MW Thermal Coal – December 2021 - RFP
 5. 3000 MW Gas to Power – December 2021 - RFP
 6. 1600 MW Renewable Energy from PV Solar and Wind – January 2022 - RFP
- All of the above are seeking Private investments through Independent Power Producers. The market will lack the capacity for EPCs to undertake all of the works as these might all be executed concurrently at a given point.
 - MRPIW is positioning both as EPC and as standalone EBOP / SMP / HV Substations and Interconnection contractor through multiple strategies with multiple IPPs and international EPCs / OEMs



Typical PV Plant



Typical Wind Farm



Typical Combined Cycle Gas Turbine

President Cyril Ramaphosa announced on 10 June 2021 that the licence-exemption cap on self- or distributed-generation plants would be raised from 1 MW to 100 MW:

What is expected?

- This reform is expected to unlock significant investment in new generation capacity in the short and medium term, enabling companies to build their own generation facilities to supply their energy needs.
- Plants developed to power mining facilities, industrial facilities and farming operations would be allowed to wheel electricity through municipal and Eskom networks and sell surplus electricity to nonrelated buyers (back to the grid).
- Minerals Council of South Africa say that there is potentially 1.6GW, representing R27 billion, that miners could invest to power generation projects
- This is likely to subsequently unlock investment in mining development and expansion projects.
- In the medium term – 15GW of projects could be developed, representing over R150bn of investments.

Murray & Roberts' role:

- Developer – Participate as developer within a consortium of development partners – supply power to private user on long term power purchasing agreements – secure engineering, procurement & construction (“EPC”) and generate annuity income.
- EPC / Operations & Maintenance (“O&M”) – participate as the local EPC to execute the projects on behalf of the IPPs. Undertake O&M over the duration of the term.



- The new WW Solar JV business with Phoenix Squared targeting 1 – 10MW industrial and commercial Solar PV (panels, inverters, batteries).
- Supply chain participation in JV with Aardent – short / medium / long term
- Agreement with Energy Capital for EPC / PPA medium / long term.

Focus on commercial clients:

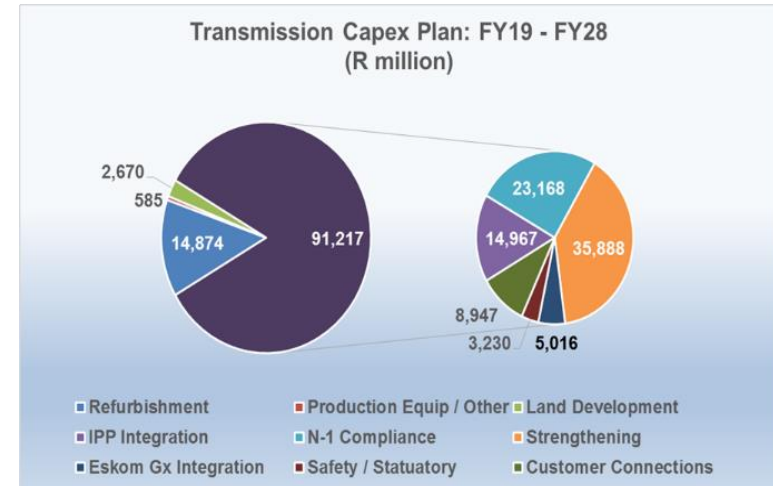
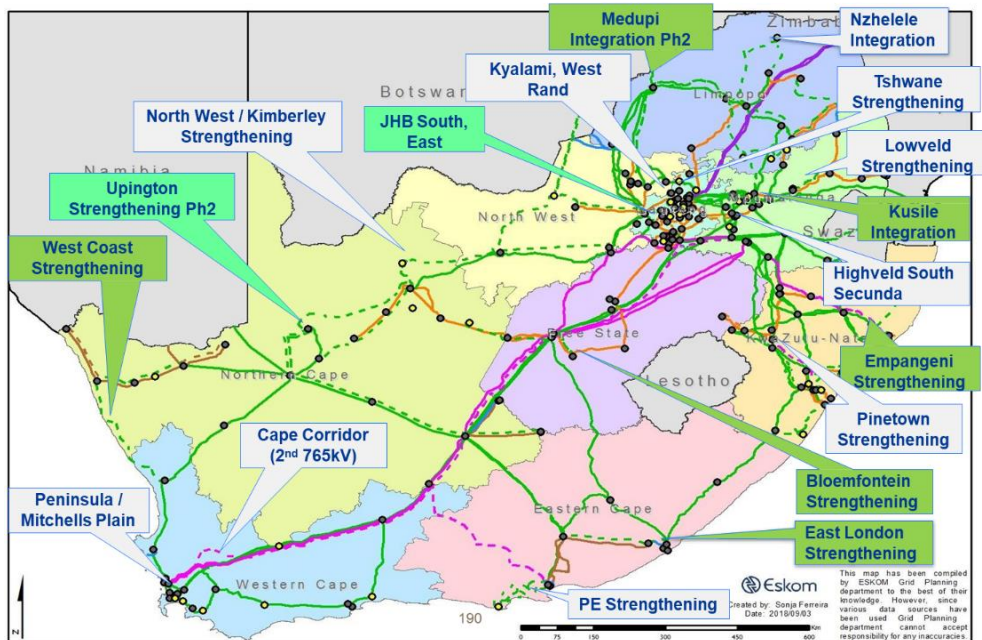
- Electrical, Instrumentation & Control and Integration Solutions
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KEY OPPORTUNITIES

TRANSMISSION LINES



Transmission Assets: National View	New Assets expected in	New Assets expected in	Total New Assets
	2019 - 2023	2024 - 2028	
Power lines (km)			
765kV	98	300	398
400kV	2235	3422	5657
275kV	114	99	213
220kV	94	0	94
132kV	90	83	173
Total length (km)	2631	3904	6535
Transformers			
Number of units	43	72	115
Total capacity (MVA)	16630	29270	45900

KEY RISKS

- The platform's main market is the public sector, where investments in projects have been very slow and delayed
- The platform is reliant on market conditions (macro) to reach sufficient scale order book/pipeline. Current market insufficient to support a sustainable business
- Breaking into other market sectors to extend service offering to other areas is difficult (e.g. power station maintenance work is historically serviced by local entities)
- Continuous delays in the realisation of pipeline projects
- Challenge to compete in sub-Saharan against global companies, specifically transmission lines (low cost). The absence of large projects opens the market for small to medium contractors who compete aggressively on cost

PRESENTATION TAKEAWAYS

- Platform to focus on achieving stability and sustainability over a three-year horizon of FY2022 to FY2024. Current market insufficient to support a sustainable business

- **Murray & Roberts Power & Energy:**

- **Short to medium term:** Ongoing mechanical maintenance and outages at Kusile and Medupi
- **Medium to long term:** Further bidding into Eskom on other stations, industrials boiler outage and maintenance and EPC/SMP opportunities on minerals processing and industrial plant and storage terminals

- **Water:** The platform has secured both the Athlone wastewater C works and the V&A relocation of the Organica demo plant, but does not make the water business sustainable.
 - **Short to medium term:** The City of Cape Town project pipeline, however, continued delays to anticipated tenders
 - **Long term:** PPP progress is slow to mature and delays in projects coming to market

- **OptiPower Projects:** Presents the strongest pipeline for transmission line and high voltage substations. Able to provide electrical balance of plant services into the Renewable Energy Independent Power Producer programme (wind and solar), battery energy storage and embedded generation

- **Wade Walker Solar:** **Wade Walker** has established a solar JV business with Phoenix Square, a photovoltaic system integrator delivering sustainable energy production solutions. The joint venture is targeting targeting 1 – 10MW industrial and commercial opportunities through the implementation of solar PV (panels, inverters, batteries) solutions. Start-up business/small scale.
 - **Short to long term:** Supply chain participation in JV with Aardent
 - **Medium to long term:** Agreement with Energy Capital for EPC / PPA



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This presentation is available on www.murrob.com