

**TRANS-AFRICA PROJECTS
PROJECT LIST**



Project:	350 kV, 950 km, Zambezi-Gerus HVDC Line Engineering	Country:	Namibia
Project location within country:	Northern (Caprivi)	Professional staff provided by your firm / entity:	12
Name of Client:	NamPower	No. of Staff:	15
Address:	14 Luther Street Windhoek	No. of Man-months:	80
Start date (month/year):	January 2006	Completion date (month/year):	December 2007
Approximate value of project:	USD 300 million	No. of Man-months of professional staff provided by associated firm:	
Name of associated firm, if any:			
Senior staff involved and functions performed :			
R Smith	Project Manager	J Diez Serrano	Mechanical Design
V Naidoo	Profiling (Tower Spotting)	D Muftic	Integration
A Burger	Electrical Design	J Mokoena	Review
W Combrinck	Foundations	R Singh	Conductor Optimisation
Summary description of project :			
The project is required to link the network of Namibia with the network of Zimbabwe, as well as ultimately with Zambia. Due to the remoteness of the area, an HVDC link of 950 km provides the best techno-economic solution.			
Synopsis of services rendered :			
TAP was appointed by NamPower to provide consulting services for the design of the HVDC line, operating at 350 kV.			
Services Provided			
<ul style="list-style-type: none"> • 350 kV HVDC line concept and detail design • Conductor Optimisation • Specifications and tender documents for line • Profiling (Tower Spotting) • Technical Support during Construction 			

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Project:	Zambezi & Gerus AC Substations Engineering	Country:	Namibia
Project location within country:	Northern (Caprivi)	Professional staff provided by your firm / entity:	6
Name of Client:	NamPower	No. of Staff:	10
Address:	14 Luther Street Windhoek	No. of Man-months:	60
Start date (month/year):	January 2006	Completion date (month/year):	December 2007
Approximate value of project:	USD 110 million	No. of Man-months of professional staff provided by associated firm:	20
Name of associated firm, if any:			
Senior staff involved and functions performed :			
R Smith	Project Manager		
AJS Groenewald	Substation Design		
C van der Merwe	Specifications		
L du Plessis	Integration		
Summary description of project :			
The project is required to link the network of Namibia with the network of Zimbabwe, as well as ultimately with Zambia. Due to the remoteness of the area, an HVDC link of 950 km provides the best techno-economic solution.			
Synopsis of services rendered :			
TAP was appointed by NamPower to do concept and detail design of the Gerus Substation (400/220kV) and Zambezi Substation (330/220 kV).			
Services Provided			
<ul style="list-style-type: none"> • Station Electric and Concept Layout • Civil works • Specifications for tendering • Detail layout • Technical Support during Construction 			

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Project:	765 kV Expansion – Eskom Mercury-Perseus 765 kV line Hydra-Perseus 765 kV line Mercury-Zeus 765 kV line	Country:	South Africa
Project location within country:	South Africa- central network	Professional staff provided by TAP:	Engineers
Name of Client:	Eskom - CED	No. of Staff:	15
Address:	PO Box 1091, Johannesburg, 2000	No. of Man-months:	120 Months
Start date (month/year):	June 2006	Design Completion Date:	November 2007
		Construction Completion Date:	Various
Approximate value of project:	\$ 350 million	No. of Man-months of professional staff provided by associated firm:	
Name of associated firm, if any:			
Senior staff involved and functions performed :			
A. Burger	Electrical Engineering.	R Singh	Electrical Engineering
B. Jacobs	Mechanical Engineering.	A Lyall	QA & QC
J. Diez-Serrano	Structural Engineering.	P Venter	Environmental
W. Combrinck	Geotechnical & civils	B Smalberger	Risk Management
C. Semmelink	Civil Engineering	L Peter	Insulation
V Naidoo	Line Design	D Muftic	Specialist
S Le Roux	Profiling		
Summary description of project :			
The construction of 750 km of 765 kV lines by Eskom to expand their transmission system in the central part of the country.			
Synopsis of services rendered :			
Engineering Services			
Services Provided:			
<ul style="list-style-type: none"> • Assist client in the line servitude selection. • Lines design according to Client's requirements • Development of new structures: 705 A • Lines profiling • Structure concept and detail design and testing • Lines hardware design. • Assistance in the preparation and implementation of H&S, Quality and Environmental plans • Material inspection and testing • Assist the Client in Project management: preparation of tender document, tender evaluation, provision of site supervisors. 			

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Project:	765 kV Expansion – Eskom Beta-Hydra-Gamma-Kappa-Omega 765 kV lines	Country:	South Africa
Project location within country:	South Africa	Professional staff provided by TAP:	Engineers
Name of Client:	Eskom - CED	No. of Staff:	15
Address:	PO Box 1091, Johannesburg, 2000	No. of Man-months:	100 Months
Start date (month/year):	January 2007	Design Completion Date:	Various
		Construction Completion Date:	Various
Approximate value of project:	\$ 300 million	No. of Man-months of professional staff provided by associated firm:	
Name of associated firm, if any:			
Senior staff involved and functions performed :			
A. Burger	Electrical Engineering.	R Singh	Electrical Engineering
B. Jacobs	Mechanical Engineering.	A Lyall	QA & QC
J. Diez-Serrano	Structural Engineering.	P Venter	Environmental
W. Combrinck	Geotechnical & civils	B Smalberger	Risk Management
C. Semmelink	Civil Engineering	L Peter	Insulation
V Naidoo	Line Design & Profiling	S Le Roux	Profiling
Summary description of project :			
The construction of four new portions of 765 kV lines by Eskom (totaling 700 km) to expand their transmission system throughout the Western Cape.			
Synopsis of services rendered:			
Engineering Services			
Services Provided:			
<ul style="list-style-type: none"> • Assist client in the line servitude selection. • Lines design according to Client's requirements • Lines profiling • Lines hardware design. • Assistance in the preparation and implementation of H&S, Quality and Environmental plans • Material inspection and testing • Assist the Client in Project management: preparation of tender document, tender evaluation, provision of site supervisors. 			

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Project:	765 kV Expansion – Eskom Majuba-Umfolozi 765 kV line	Country:	South Africa
Project location within country:	South Africa	Professional staff provided by TAP:	Engineers
Name of Client:	Eskom - CED	No. of Staff:	15
Address:	PO Box 1091, Johannesburg, 2000	No. of Man-months:	40 Months
Start date (month/year):	August 2007	Design Completion Date:	March 2008
		Construction Completion Date:	June 2010
Approximate value of project:	\$ 80 million	No. of Man-months of professional staff provided by associated firm:	
Name of associated firm, if any:			
Senior staff involved and functions performed :			
A. Burger	Electrical Engineering.	R Singh	Electrical Engineering
B. Jacobs	Mechanical Engineering.	A Lyall	QA & QC
J. Diez-Serrano	Structural Engineering.	P Venter	Environmental
W. Combrinck	Geotechnical & civils	B Smalberger	Risk Management
C. Semmelink	Civil Engineering	L Peter	Insulation
S Rhamadhin	Conductor Selection	S Le Roux	Profiling
P Pretorius	Electrical Specialist		
Summary description of project :			
The construction of 210 km, 765 kV line by Eskom to expand their transmission system in the Kwa-Zulu Natal Province.			
Synopsis of services rendered:			
Engineering Services			
Services Provided:			
<ul style="list-style-type: none"> • Assist client in the line servitude selection. • Lines design according to Client's requirements • Lines profiling • Lines hardware design. • Assistance in the preparation and implementation of H&S, Quality and Environmental plans • Material inspection and testing • Assist the Client in Project management: preparation of tender document, tender evaluation, provision of site supervisors. 			

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Project:	Medupi Power Station 400 kV Integration	Country:	South Africa
Project location within country:	Limpopo Province	Professional staff provided by TAP:	Engineers
Name of Client:	Eskom - CED	No. of Staff:	12
Address:	PO Box 1091, Johannesburg, 2000	No. of Staff-months:	180 Months
Start date (month/year):	January 2009	Design Completion Date:	Various
		Construction Completion Date:	Various, June 2015
Approximate value of project:	\$ 250 million	No. of Man-months of professional staff provided by associated firm:	
Name of associated firm, if any:			
Senior staff involved and functions performed :			
A. Burger	Electrical Engineering.	R Singh	Electrical Engineering
B. Jacobs	Mechanical Engineering.	A Lyall	QA & QC
J. Diez-Serrano	Structural Engineering.	P Venter	Environmental
W. Combrinck	Geotechnical & civils	B Smalberger	Risk Management
C. Semmelink	Civil Engineering	L Peter	Insulation
S Rhamadhin	Conductor Selection	S Le Roux	Profiling
P Pretorius	Electrical Specialist		
Summary description of project :			
The construction of six new 400 kV lines by Eskom (totaling 1300 km) to integrate their new 4800 MW Medupi Power Station.			
Synopsis of services rendered:			
Engineering Services			
Services Provided:			
<ul style="list-style-type: none"> • Assist client in the line servitude selection. • Lines design according to Client's requirements • Lines profiling • Lines hardware design. • Assistance in the preparation and implementation of H&S, Quality and Environmental plans • Material inspection and testing • Assist the Client in Project management: preparation of tender document, tender evaluation, provision of site supervisors. 			

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Project:	Duvha-Leseding 400kV Transmission Line	Country:	South Africa
Project location within country:	Mpumalanga and Limpopo	Professional staff provided by TAP:	Engineers, Project Managers and Site Supervisors
Name of Client:	ESKOM	No. of Staff: ±15 (variable)	
Address:	PO Box 1091, Johannesburg, 2000	No. of Man-months:	150
Start date (month/year):	June 2006	Completion date (month/year):	August 2009
Approximate value of project:	R 250m (\$ 25 million)	No. of Man-months of professional staff provided by associated firm:	None
Name of associated firm, if any: None			
Senior staff involved and functions performed :			
Bertie Jacobs	Design Leader	Barrie Badenhorst	Operations Manager
Viven Naidoo	Profiles		
Peter Appleyard	Project and Construction Management		
Gus Fouche	Senior Site Supervisor		
John Mokoena	Engineering Manager		
Summary description of project : Duvha-Leseding 400kV transmission line ±205kms long.			
Synopsis of services rendered : Detailed Engineering Design Project / construction management and site supervision.			
Services Provided: Design, project / construction management and site supervision			

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Project:	Spencer Tabor 275 kV Line	Country:	South Africa
Project location within country:	Limpopo	Professional staff provided by TAP:	Engineers and Project Management
Name of Client:	Eskom CED	No. of Staff:	14
Address	PO Box 1091, Johannesburg, 2000	No. of Man-months:	24 Months
Start date (month/year):	November 2008	Completion date (month/year):	November 2009
Approximate value of project:	R 85 million	No. of Man-months of professional staff provided by associated firm:	20
Name of associated firm, if any: BABCOCK (Main Line Construction Contractor)			
Senior staff involved and functions performed :			
F. Mokhonoana	Design leader	S Fernandes	Finance
B. Jacobs	Mechanical eng.	L Manders	Cost Control
J. D. Serrano	Structural eng.	L Kristiansen	Project Scheduler
W. Combrinck	Geotechnical & civils	B Smalberger	Risk Management
C. Semmelink	Civil eng	M Ramiah	H & S
A. Meintjies	Structure draughtsman	A Lyall	QA & QC
T. D'Amico	Project Manager	P Venter	Environmental
Summary description of project : The Construction of the Spencer Tabor 275 kV Line, 86 km in length.			
Synopsis of services rendered : Design, Procurement and Project Management.			
Services Provided:			
<ol style="list-style-type: none"> 1. Assist client in the line servitude selection. 2. Line design according to Client's requirements 3. Line profile 4. Structure design and testing 5. Line hardware design. 6. Assistance in the preparation and implementation of H&S, Quality and Environmental plans 7. Material inspection and testing 8. Assist the Client in Project management: preparation of tender document, tender evaluation, contract management, material management, site supervisors, cost control and payments, final project records. 			

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Project:	Trekopje Mine Integration into NamPower Network	Country:	Namibia
Project location within country:	Swakopmund	Professional staff provided by TAP:	
Name of Client:	UraMin Namibia (Pty) Ltd	No. of Staff:	10
Address:	c/o Otavi & Leutwein Streets, Swakopmund Namibia	No. of Man-months:	75
Start date (month/year):	October 2007	Completion date (month/year):	December 2009
Approximate value of project:	R 500 million (\$ 50 million)	No. of Man-months of professional staff provided by associated firms:	50
Name of associated firm, if any: Matrex and Van Den Ende & Associates			
Senior staff involved and functions performed :			
Matrex (1)	Substation Primary Plant Layout and Designs	Lindsay Esterhuyzen	Project Management
Van Den Ende & Assoc. (1)	Substation Civil Designs	Mike Nagel	Project management
WC vd Merwe	Substation Engineering	S Le Roux	Line Design
Summary description of project : Project consists of four substations (one x 220/132/33kV and three x 132/33kV subs) and 105km of 220kV and 132kV transmission lines to integrate Areva's Trekkopje mine into the NamPower network.			
Synopsis of services rendered : Engineering and construction management.			
Services Provided On the transmission lines, engineering consists of the complete line specifications, structure designs and profiling. Substation engineering consists of the primary and secondary plant specifications and layout, civil and building designs, the station ancillary equipment designs and the protection and automation design and commissioning. Project management encompassed the complete scope of Health, Safety, Environmental and Quality monitoring of contractor activities.			

**TRANS-AFRICA PROJECTS
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Project:	Khan Substation – 220kV Extensions	Country:	Namibia
Project location within country:	Swakopmund	Professional staff provided by TAP:	
Name of Client:	NamPower	No. of Staff:	10
Address:	3 Goethe Street Windhoek Namibia	No. of Man-months:	30
Start date (month/year):	October 2007	Completion date (month/year):	December 2009
Approximate value of project:	R 800 million (\$ 80 million)	No. of Man-months of professional staff provided by associated firms:	20
Name of associated firm, if any: Matrex and Van Den Ende & Associates			
Senior staff involved and functions performed :			
Matrex (1)	Substation Primary Plant Layout and Designs	Lindsay Esterhuyzen	Project Management
Van Den Ende & Assoc. (1)	Substation Civil Designs	Mike Nagel	Project management
WC vd Merwe	Substation Engineering		
Summary description of project : Project consists of a new 220kV substation with 7 bays for Nampower next to the existing Khan substation. This substation will function as a switch station on the Nampower grid and the new Uramin mine will be fed from this substation.			
Synopsis of services rendered : Engineering and construction management.			
Services Provided Substation engineering consists of the primary and secondary plant specifications and layout, civil and building designs, the station ancillary equipment designs and the protection and automation design and commissioning. Project management encompassed the complete scope of Health, Safety, Environmental and Quality monitoring of contractor activities.			

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Assignment name:	Inga III Power Station Feasibility Study	Approximate value of construction contract:	US\$ 3 500 million
Country:	DRC, Southern African Power Pool	Duration of assignment (months):	9
Location within country:	Entire Southern African Power System		
Name of Client:	Ingerop Africa (Beneficiaries - World Bank and DRC Government)	No. of staff-months:	10
Address:		Approximate value by consultant:	US\$ 100 000
Start date:	March 2008	No. of staff-months of professional staff provided by associated firm:	
Completion date:	January 2009		
Name of associated firm, if any:			
Senior staff involved and functions performed :			
P Rubbers	Project Lead, Tariff studies		
L du Plessis	Power System Studies, Costing		
Summary description of project :			
<p>The Inga III Power Station will be a 'run-of-river' hydro-electric power station in the DRC. It would be capable of generating 4320 MW. The power would be used in the DRC for the domestic demand growth, and furthermore be sold to large prospective customers inside the DRC and also to Southern African countries as far as South Africa, over a distance of up to 3500 km.</p>			
Synopsis of services rendered :			
<p>Ingerop/TAP was sub-contracted by BNP Paribas to provide the following analysis:</p> <ul style="list-style-type: none"> ➤ Provide an analysis of the 20 year SAPP Load and Generation forecast ➤ Review the Pre-feasibility Study of the Inga III Power Station done by SNC Lavalin in 2007 ➤ Derive a forecast of potential capacity allocations from Inga III, which include required exports from DRC, giving three possible future scenarios ➤ Conduct load flow analysis to integrate Inga III into the SAPP network for each of the three scenarios ➤ Provide an estimate of the cost and phasing of the transmission infrastructure for use in the bankability document ➤ Determine at a high-level the cost-reflective generation and transmission tariffs of the entire Inga III scheme, taking consideration of the wheeling arrangements in the SAPP countries 			
Services Provided			
<ul style="list-style-type: none"> ➤ Southern Africa Market Analysis, Load Forecast and associated Generation Development Plan ➤ Load Flow Studies ➤ Transmission Line and Substation costing ➤ NPV and annual costs calculations ➤ Cost-reflective tariff study 			

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Project: Isang	400/220kv substation	Country:	Botswana
Project location within country:	Near Gaborone	Professional staff provided by TAP: and designs of substation	Project Management
Name of Client:	Botswana Power Corporation	No. of Staff:	3 from TAP 5 From KEC (Consortium)
Address:	Botswana Power Corporation Botswana	No. of Man-months:	27
Start date (month/year):	September 2008	Completion date (month/year):	30 March 2011
Approximate value of project:	Pula 330 (\$ 30 million)	No. of Man-months of professional staff provided by associated firm:	Duration of project
Name of associated firm, if any: KE Consulting			
Senior staff involved and functions performed :			
Norman Ford	Project Manager		
Wayne Ford	Assistant Project Manager		
Beppe Antoniol	Construction Manager		
Summary description of project : New 400/220kV substation Design ,compile tender documents, evaluate tender on behalf of BPC and provide all project management services Fees based on SAACE SCALES			
Services Provided Project management services.			

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Project:	Ruashi 220kV Substation & Transmission Line	Country:	DRC
Project location within country:	Lubumbashi	Professional staff provided by TAP:	3
Name of Client:	Ruashi Mining	No. of Staff:	7
Address:	DRC	No. of Man-months:	15
Start date (month/year):	June 2006	Completion date (month/year):	September 2008
Approximate value of project:	USD 4,720,000.00	No. of Man-months of professional staff provided by associated firm:	6
Name of associated firm, if any: Matrex, Van Der Ende & Associates			
Senior staff involved and functions performed :			
Ronnie Morton	Site Rep		
Frik Schoeman	Site Rep		
Pierre Rubbers	Facalitator		
Ron Smith	Advisor		
Chris vd Merwe	Primary Equipment Design		
Hantie vd Walt	Secondary Equipment Design		
Viven Naidoo	Line Design		
Summary description of project : The design, procurement, construction & management of a 220/15kV plant substation at the copper mine to supply their new SX/EW process plant as well as their phase 1 crusher and mining operation. The substation included two 50MVA , 220/15kV transformers and a 8km, 220kV overhead line from the utility to supply the plant substation.			
Synopsis of services rendered : Feasibility study, recommendations, high level cost estimation and EPCM functions.			
Services Provided Full EPCM services rendered.			

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Project:	Anvil Mining	Country:	DRC
Project location within country:	Lubumbashi	Professional staff provided by TAP:	1
Name of Client:	SNEL	No. of Staff:	5
Address:	DRC	No. of Man-months:	8
Start date (month/year):	August 2006	Completion date (month/year):	October 2008
Approximate value of project:	USD 5,200,000.00	No. of Man-months of professional staff provided by associated firm:	0
Name of associated firm, if any: N/A			
Senior staff involved and functions performed :			
Frik Schoeman	Site Rep		
Mike Nagel	Project Manager		
Chris vd Merwe	Transformer Specification		
Pierre Rubbers	Facalitator		
Ron Smith	Advisor		
Summary description of project :			
The design, construct & management of two 150MVA, 220/120kV transformers for NR substation. These transformers were installed at the new NR substation to strengthen the SNEL 120kV network and to supply Anvil Mining's new process plant.			
Services Provided			
EPCM services rendered.			

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Project:	AMCK/Ruashi JV	Country:	DRC
Project location within country:	Lubumbashi	Professional staff provided by TAP:	5
Name of Client:	AMCK/Ruashi JV (SNEL)	No. of Staff:	
Address:	DRC	No. of Man-months:	30
Start date (month/year):	August 2006	Completion date (month/year):	June 2009
Approximate value of project:	USD 24,167,000.00	No. of Man-months of professional staff provided by associated firm:	10
Name of associated firm, if any: Matrex, Van Der Ende & Associates			
Senior staff involved and functions performed :			
Ronnie Morton	Site Rep		
Frik Schoeman	Site Rep		
Ron Smith	Advisor		
Pierre Rubbers	Facilitator		
Mike Nagel	Project Manager		
Chris vd Merwe	Primary equipment design		
Hantie vd Walt	Secondary equipment Design		
Summary description of project : The design, construct & management of the new 220/120kV NR substation, consisting of 5 220kV bays, double busbar, 6 120kV bays and double 120kV busbar. A 13km 220kV double circuit transmission line forms part of the project and connects the new NR substation with the existing Karavia substation, thus extending the 220kV Snel network. A line bay extension at Karavia substation also forms part of the project.			
Synopsis of services rendered : Feasibility study, Recommendations, Design, High level cost estimation and EPCM services.			
Services Provided Full EPCM services rendered.			

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Project:	Indonesia 150kV Line Deviation (with Fluor Daniel)	Country	Indonesia
Project location within country:	Indonesia	Professional staff provided by TAP:	5
Name of Client:	PT Newmont	No. of Staff:	
Address:	PT Newmont Nusa Tenggara JL Sriwijaya 258 Mataram, 83125 Indonesia	No. of Man-months:	14
Start date (month/year):	12 July 2006	Completion date (month/year):	30 October 2008
Approximate value of project:	US \$ 160,000	No. of Man-months of professional staff provided by associated firm:	NA
Name of associated firm, if any: NA			
Senior staff involved and functions performed :			
Barrie Badenhorst	Business Manager	Pierre Marais	Design Leader
Bak Potgieter	Project Manager	Viven Naidoo	Profiler
Willem Combrink	Foundation Specialist	Bertie Jacobs	Hardware Specialist
Basie Smalberger	Quality		
Summary description of project : Design approximately 1.6 km line deviation route of the existing 150kV power line and perform Construction Management.			
Synopsis of services rendered : Design and Construction Management			
Services Provided			
<ol style="list-style-type: none"> 1. Deviation route selection. 2. Design new route 3. Compile tender enquiry documents 4. Assist evaluating tenders 5. Quality inspections of towers being manufactured for client 6. Site supervision of construction works 7. Project management of project 8. As-built documentation 			