

Project: Replacement of Diesel Generators at George Airport
Project No: RA7307/2023/RFP
Date: 2024/07/26
Revision: 0



BILL 1: PRELIMINARY AND GENERAL

Item	Description	Unit	Quantity	Rate (Rands)	Amount (Rands)
1	General Requirements and Provisions				
1.2	Fixed Obligations				
1.2.1	Establishment of Construction site facilities & De-Establishment	Sum	1		
1.2.2	Risk Analysis and Safety Plan to comply with Health and Safety Specification	Sum	1		
1.2.3	Quality Assurance Obligation	Sum	1		
1.2.4	Location of underground services	Provisional Sum	1	R 10 000,00	
1.2.4(a)	Contractor's charges in respect of Item 1.2.4	%			
1.2.5	Provisional Sum for Airside Permit and security requirements - refer to Part C4, Annexure 4. Claim on proven cost at no mark-up.	Provisional Sum	1	R 20 000,00	
1.3	Time related obligations				
1.3.1	Operation/maintenance of facilities/site	month	7		
1.3.2	Contractor personnel travelling cost to/from site & Accommodation	month	7		
1.3.3	Compliance with OHS Act requirements	month	7		
1.3.4	Compliance with Environmental requirements	month	7		
1.3.5	Operate and maintain Quality Control and Quality Assurance System	month	7		
1.3.6	Provision of full time Construction Safety Officer	month	7		
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BILL 2: PROFESSIONAL SERVICES (PROJECT MANAGEMENT, ENGINEERING SERVICES, SITE SUPERVISION & CLOSEOUT)

No	Description	Unit	Qty	Unit Cost	Total Cost
2.0	Professional Services (Design Refinement & Project Administration)				
2.1	Review existing Designs, revise where applicable and submit design report with drawings & project specification to the consultant and client/ employer for review and approval/ acceptance. Including attendance of design meetings with the Employer & Consultant Team.	Sum	1		
	Measure the current load, utilisation and calculate future projected loads to establish whether the proposed capacity of the generator sets will be able to carry the load for the airport and meet future demands.				
	Verify the structural integrity of the plinths/ platforms for the existing 500kVA Diesel Generators.				
	Investigate the feasibility of housing the 200kVA generator in the proposed Terminal Building room and provide recommendations/ alternatives.				
2.2	Project Management & Works Supervision Including Site weekly, Ad-hoc and monthly Project Progress meetings, minute taking, distribution of minutes, monthly progress report and construction programme.	Month	7		
2.3	Close-Out Documentation, Including As-Built Report (List of Assets) & Drawings, Operating, Instruction and Maintenance Manuals	Sum	1		
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Bill 3: Main Substation 2 x 500kVA GENERATORS

ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
3	MAIN SUB: 2 x 500kVA Prime Rated Generators				
3.1	Any remedial work / upgrade / replacement of existing inlet and outlet louvres, <u>if required</u> , based on pre-tender Site Inspection	Sum	1		
3.2	Any remedial work / upgrade / replacement of existing concrete platforms for the generators, <u>if required</u> , based on pre-tender Site Inspection	Sum	1		
3.3	Any remedial work / upgrade / replacement of 2 x existing Day Tanks, Bulk Diesel Tank, interconnecting pipework, fuel system, cable reticulation & connections - <u>if required</u> , based on pre-tender Site Inspection	Sum	1		
3.4	Decommission & Disconnect the existing 2 x 500kVA Standby Generator Sets. Including Transportation to a designated ACSA storage and make provision for water proof covers. Including Removal and Safe Disposal of all other items.	Prov. Sum	1	R	100 000,00
3.4(a)	Contractor's charges in respect of Item 3.4	%			
3.5	Supply & Install 2 x 500kVA Prime Rated Open Diesel Generators as specified, and connect to the Diesel Tank. Exhaust system included.	Sum	2		
3.6	Disconnect & remove the existing LV Generator Control	Sum	1		
3.7	Supply & Install new LV Generator Control Panel, with the appropriate combination of Deep Sea "Auto Transfer Switch (ATS) control module" that has Load Sharing & Synchronising capabilities, Deep Sea "Auto Mains Failure (Utility) control modules" (AMF per generator), motorised circuit breakers, generator protection relays, etc - Refer to Tender Scope of Works	Sum	1		
3.8	Loading, Delivery & Offloading to Site	Sum	1		
3.9	Full Tank of Diesel - 2000L	Sum	1		
3.10	Devalco Day Tank Polishing System	Sum	1		
3.11	1 x Hand & Electric Fuel Pump	Sum	1		
3.12	Power and control cable runs between the alternator and Standby Generator Control panel	Sum	1		
3.13	Spare parts and tools	Sum	1		
3.14	Testing & Commissioning (including Diesel required for FAT & SAT) and all applicable compliance certificates.	Sum	1		
3.15	Allow for travelling & accommodation of ACSA and appointed Engineer to observe & approve the Factory Tests of the generator sets and control panel at the premises of the manufacturer, if not situated within the Garden Route District Municipality.	Prov. Sum	1	R	10 000,00
3.15(a)	Contractor's charges in respect of Item 3.15	%			
3.16	SMA Fuel Save System to provide an interface between the two new 500kVA Diesel Generators and the existing 750kWp Solar Photovoltaic (PV) Plant	Prov. Sum	1	R	850 000,00
3.16(a)	Contractor's charges in respect of Item 3.16	%			
3.17	4 Wire metering configuration and Time-of-use bulk meter	Sum	1		
3.18	Upgrade of SCADA System and Centralised Operating Desk with a modern system.	Prov. Sum	1	R	560 000,00
3.18(a)	Contractor's charges in respect of Item 3.18	%			
3.19	DayWorks	Prov. Sum	1	R	50 000,00
3.20	Training of Client Staff	Sum	1		
3.21	Defects Liability Period (Quarterly Maintenance for a period of 1 x year)	Sum	1		
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BILL 4: TERMINAL BUILDING 200kVA GENERATOR

ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
4	TERMINAL BUILDING: 200kVA Prime Rated Generator				
4.1	Supply & Install 1 x 200kVA Prime Rated Open Diesel Generator as specified, with AMF control Panel, including motorized air circuit breaker and 1000LT Diesel Tank. Exhaust system included.	Sum	1		
4.2	Supply & Install Plant Room Sound Attenuated <u>Inlet & Outlet Louvres</u>	Sum	1		
4.3	Loading, Delivery & Offloading to Site	Sum	1		
4.4	Full Tank of Diesel - 1000L	Sum	1		
4.5	Devalco Day Tank Polishing System	Sum	1		
4.6	1 x Hand & Electric Fuel Pump	Sum	1		
4.7	Power and control cable runs between the alternator and Standby Generator Control panel	Sum	1		
4.8	Spare parts and tools	Sum	1		
4.9	Testing & Commissioning (including Diesel required for FAT & SAT tests) and all applicable compliance tests	Sum	1		
4.10	Provisional sum for the interfacing to the existing SCADA system	Prov. Sum	1	R 5 600 000,00	
4.10(a)	Contractor's charges in respect of Item 4.10	%			
4.11	DayWorks	Prov. Sum	1	R 50 000,00	
4.12	Training of Client Staff	Sum	1		
4.13	Defects Liability Period (Quaterly Maintenance for a period of 1 x year)	Sum	1		
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BILL 5: TERMINAL BUILDING SUBSTATION EXTENSION TO HOUSE THE NEW 200kVA GENERATOR

ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
5	TERMINAL BUILDING SUBSTATION EXTENSION				
5.1	Supply and Install all materials, labour and equipment for completion of extension to the Terminal Building substation for the accommodation of the new 200kVA generator, in accordance with SANS 10400, SANS 204, municipal by-laws and the generator manufacturer specifications. The works include making provision for decanting of adjacent offices to suitable alternate accommodation. Completion of all necessary compliance certificates to allow Client occupation of the building, Detailed BoQ to be provided by the contractor.	Prov. Sum	1	R 4 000 000,00	
5.1(a)	Contractor's charges in respect of Item 5.1	%			
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**BILL 6: RATES FOR DAYWORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL
6	DayWorks Rates				
6.1	Foreman/ Supervisor				
(a)	Normal Working Hours	Hour	1		Rate Only
(b)	Overtime	Hour	1		Rate Only
(c.)	Sunday Time	Hour	1		Rate Only
6.2	Qualified Artisan		1		
(a)	Normal Working Hours	Hour	1		Rate Only
(b)	Overtime	Hour	1		Rate Only
(c.)	Sunday Time	Hour	1		Rate Only
6.3	Labourer		1		
(a)	Normal Working Hours	Hour	1		Rate Only
(b)	Overtime	Hour	1		Rate Only
(c.)	Sunday Time	Hour	1		Rate Only
6.4	Engineer				
(a)	Normal Working Hours	Hour	1		Rate Only
(b)	Overtime	Hour	1		Rate Only
(c.)	Sunday Time	Hour	1		Rate Only

*Note: Dayworks rates will only be considered for additional work instructed by the Engineer/ ACSA not related to any aspect of the Specified Scope of Works

Generator Bill of Quantities

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**SUMMARY OF GENERATOR BILL OF QUANTITIES**

ITEM	DESCRIPTION	TOTAL RAND
1.	BILL 1: PRELIMINARY AND GENERAL <i>(Carried forward)</i>	
2.	BILL 2: PROFESSIONAL SERVICES (PROJECT MANAGEMENT, ENGINEERING SERVICES, SITE SUPERVISION & CLOSEOUT) <i>(Carried forward)</i>	
3.	Bill 3: Main Substation 2 x 500kVA GENERATORS <i>(Carried forward)</i>	
4.	BILL 4: TERMINAL BUILDING 200kVA GENERATOR <i>(Carried forward)</i>	
5.	BILL 5: TERMINAL BUILDING SUBSTATION EXTENSION TO HOUSE THE NEW 200kVA GENERATOR <i>(Carried forward)</i>	
6.	SUB-TOTAL 1 (EXCLUDING VAT)	
8.	Add 15% VAT	
9.	TOTAL FOR ELECTRICAL INSTALLATION (INCLUDING VAT)	