Independent Communications Authority of South Africa
350 Witch-Hazel Avenue, Eco Point Office Park Eco
Park, Centurion.
Private Bag X10, Highveld Park 0169
Telephone number: (012) 568 3000/1

INSTALLATION & COMMISSIONING OF TWO (2) GENERATORS AT ICASA'S NEW PREMISES AT 350 WITCH-HAZEL AVENUE, ECOPARK, CENTURION

1. INTRODUCTION

ICASA relocated to its new premises (i.e. 350 Witch Hazel Avenue, Eco Park, Centurion) on 26 October 2018. The Authority relocated with two (2) of its generators, which are:

1 x 600KVA SB generator set, H9457: PERKINS 2800 SERIES, SS7227; 1 x SDMO 275 KVA diesel-powered generator

2. OBJECTIVE

ICASA would like to appoint a service provider that will install and commission these two generators, as per scope of work below. The generators must be commissioned and tested for functionality to ensure uninterrupted power supply in the event of a power outage.

3. SCOPE OF WORK

ICASA would like to appoint a service provider for the following services:

3.1. Installation and commissioning of the generators at ICASA's premises (i.e. 350 Witch-Hazel Avenue, Eco Park, Centurion);

3.2. Wiring, commissioning and testing at ICASA's new premises, which includes but not limited to connection of the incoming cable, outgoing feeder cables, connecting of the cable and control cabling to the generator and the control terminals etc.;

3.3. The design of the control system to comply with the requirements for automatic starting, stopping, interlocking and isolation;

3.4. Circuit breakers, isolators and wiring to be correctly sized for each unit as per SANS 10142 wiring regulations or latest regulations;

3.5. The service provider must ensure that fuel is provided for testing and commissioning;

3.6. The service provider is responsible to provide cable routes, (power, charging & signal) cabling, civil work and re-instalment/installation thereof from each new change over panel to each generator set;

3.7. Earth continuity shall be maintained throughout the complete installation;

3.8. Submission of detailed drawings and wiring diagrams of the generators and the switchgear;

3.9. The generator must automatically start not later than one (1) minute during the power outage and must easily start, even during cold days, without the use of any special ignition devices (i.e. in summer and winter conditions). Note that in its current set-up, both existing generators currently operate in this manner.

3.10. The generator must have the option to be started manually. Note that in its current set-up, both existing generators currently operate in this manner.

3.11. A fully automatic change-over system for each generator must be provided to isolate the mains supply and connect the standby set to the outgoing feeder in case of a mains failure and reverse this procedure on return of the mains;

3.12. The service provider shall ensure adequate provision of cabling, subject to full measurement on site. Service providers will be granted access to do site assessment. Appointments must be made 24 hours in advance;

3.13. The generators must be connected to ensure full business operation, including air-conditioning, during power failures. As soon as power is restored, the generators must automatically switch back to main supply.

3.14. It is recommended that the generators must be connected as follows:

3.14.1. 1 x 600KVA SB generator set, H9457: PERKINS 2800 SERIES, SS7227 to be connected to Block C;

3.14.2. 1 x SDMO 275 KVA diesel-powered generator to be connected to Block B

3.15. Installation of warning notices related to the generator, as required by the Occupational Health and Safety Act, in and around the generators location,

using the correct material (e.g. non-corrodible and non-deteriorating material, preferable plastic);

3.16. All work and equipment shall be in accordance with the approved SABS Standards and shall comply with the Occupational Health and Safety Act, No 85 of 1993 and current regulations of all other codes applicable to this work;

3.17. Service provider to submit Certificate of compliance (COC) after installation, testing and commissioning, as well as installation circuit diagram;

3.18. The service provider shall commission the existing generators and ensure that both the generators are commissioned and fully operational at the new site

3.19. The project rollout must include the allowance to test the power requirements of each block (i.e. Block B & C) for six (06) days only (e.g. 3 days for each block)Please include this test in your total quote

3.20. The generator for Block B must be connected to a 60KVA UPS.

4. BRIEFING SESSION

A compulsory briefing session will be held at 350 Witch Hazel Avenue, Eco Point Office Park, Centurion.

Venue: ICASA,350 Witch Hazel Avenue, Eco Point Office Park, Centurion.

Date:

Time: 12:00pm

5. MANDATORY REQUIREMENTS

5.1. The service provider must be registered in terms of the Electrical Contractors' Association of South Africa [ECA (SA)] – attach valid proof of registration.

6. REGULATIONS

The commissioning, installation, and testing must be done according to prescribed and approved Acts and regulations, which include but not limited to:

6.1. The latest issue of SABS SANS10142-1: "Code of Practice for the Wiring of Premises",

6.2. The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended,

6.3. The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority,

6.4. The Fire Brigade services Act 1993 Act 99 of 1987 as amended,

6.5. The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as emended,

6.6. The Post Office Act 1958 (Act 44 of 1958) as amended,

6.7. The Electricity Act 1984 (Act 41 of 1984) as amended and

6.8. The Regulations of the local Gas Board where applicable.

7. COMPANY PROFILE

A brief company profile must be submitted to assist ICASA in assessing your capabilities, capacity and competitive advantages.

8. TECHNICAL APPROACH

8.1. The service provider must submit a detailed technical plan, demonstrating technical competency, clear planning, project management, and quality controls, as well as a project rollout plan for the installation of the generators.

8.2. The service provider must attach a project plan, which includes but not limited to timelines, milestones and activities, showing how the project is going to be achieved (i.e. commissioned and operational generators by 15th October 2019).

8.3. Service providers may need to allow for a portion of the implementation to be completed outside of normal business hours, to ensure readiness of the project by 15 September 2019.

9. MATERIALS AND WORKMANSHIP

9.1. The work throughout shall be executed to the highest standards and to ICASA's satisfaction.

9.2. ICASA reserves the right to reject any work and materials, which, in its judgement, is not in full accordance therewith. All condemned material and workmanship shall be replaced or rectified, as directed, by the service provider, at its own cost.

9.3. All work must be executed by a qualified tradesman, with relevant experience.

9.4. The service provider shall warrant that the materials and workmanship shall be of the highest grade, that the equipment shall be installed in a practical and first-class manner in accordance with the best practices and ready and complete for full operation.

9.5. It is specifically intended that all material or labour which is usually provided as part of such equipment as is called for and which is necessary for its proper completion and operation shall be provided without additional cost whether or not shown or described in the tender response document.

9.6. All components and their respective adjustment, which do not form part of the installation work, but influence the optimum and safe operation of the generators shall be considered to form part of and must be included in the service provider's scope of works.

9.7. All control equipment and serviceable items shall be installed and positioned such that they will be accessible and maintainable.

9.8. The service provider shall make sure that all safety regulations and measures are applied and enforced during the installation and guarantee periods to ensure the safety of the public and user client (ICASA).

9.9. The service provider is to include for all scaffolding required to complete the work required.

10. WORKS COMPLETION

10.1. A service provider was appointed to decommission and transport the generators to ICASA's premises but was not able to complete the work assigned. Attached, as Annexure A, is a close out report for reference.

11. INSPECTIONS & HAND-OVER

The following tests are to be carried out:

11.1. After completion of the works and before the generators are handed over to ICASA, a full test, in the presence of ICASA's representatives, must be carried out for a period of sufficient duration, to determine the satisfactory working of the generator(s).

11.2. During this period the installation will be inspected, and the contractor shall make good, to the satisfaction of ICASA's Representative/Agent, any defects which may arise.

11.3. The service provider will be liable for any other damages to the building resulting from the installation and commissioning of the generators.

11.4. The Contractor shall, at its own cost, provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installation at completion.

11.5. Test report(s) as specified under 10.1 is to be submitted to ICASA.

12. GUARANTEE

12.1. The equipment shall be installed with a twelve months manufacturer's warranty/guarantee on the work done (refer to scope of work). The service provider shall provide a 6-month guarantee on the workmanship on the work undertaken (refer to scope of work).

12.2. If during this period the equipment is not in good working order, or not working satisfactorily owing to faulty material, design or workmanship, the service provider will be notified and immediate steps must be taken by the service provider to rectify the defects and/or replace the affected parts on site, at no cost to ICASA

13. PROJECT MANAGEMENT

13.1. The appointed service provider will be expected to complete the project and hand-over a fully functional generators by 31 August 2020.

13.2. The following minimum project management deliverables are required as part of this project:

13.2.1. Activities and tasks;

13.2.2. Timeframes;

13.2.3. Deliverables

13.2.4. Project Initiation Document;

13.2.5. Project Kick-off Meeting;

13.2.6. Project Reports;

13.2.7. Risk & Issue Register;

13.2.8. Project Close-out Report

14. PROJECT TEAM

NAME	POSITION	PROJECT ROLE	RELEVANT PROJECT EXPERIENCE

Note: you can attach as supporting documents if space provided above is not sufficient.

15. PROJECT EXCLUSIONS

The service provider must clearly specify any exclusions, as part of the RFQ response.

16. EXPERIENCE

Details of the service provider's current and past experience in rendering projects of similar nature and scale must be specified below:

CLIENT'S NAME	PROJECT DESCRIPTION	PROJECT COST	PROJECT START & END DATE	NAME, TITLE & CONTACT DETAILS OF CLIENT

17. EVALUATION CRITERIA

Description		Weight
Functionality		
Relevant skills and experience and industry exposure:		
a. Technical Approach	The service provider must submit: A detailed technical project plan which demonstrate technical competency Project plan with start and end dates - **25** Deliverable dates mentioned (e.g. Generator connection date, testing date, and generator handover project date) - **25**	**50**
b. Capability	A minimum of 3 CVs of key personnel that will be involved in executing the project with a minimum of 3-year qualification **-10** Attach valid proof of qualifications (certified copies of engineering trade test or engineering qualification). **-10** The CV's should include a minimum of 5 years relevant experience. **-10**	**30**
c. Track record and previous experience	A minimum of 5 years relevant company's experience in delivering projects of a similar nature and scale. **-10** Proposal should include minimum **3 reference** letters of corporate or public-sector organizations **-10**	**20**
NB: Minimum **70**% qualification on functionality		
Total		**100**

18. LOCAL PRODUCTION & CONTENT

a. ICASA promotes Local Production and Content. In the case of designated sectors, only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

b. ICASA reserves the right at its sole discretion to set minimum thresholds for sectors which may not have been declared as designated sectors by the

Department of Trade & Industry (the DTI), in an effort to stimulate local production and content where relevant.

c. Bidders are required to assess their product and /or service offering against the designated sector lists as published by the Department of Trade and Industry (the DTI) and to ensure full compliance to the minimum local content threshold, if relevant, before submitting its response to this tender. The DTI's latest list of designated sectors can be accessed on: http://www.dti.gov.za/industrial_development/ip.jsp.

19. SERVICE LEVELS & PERFORMANCE

a. In instances of transgression of a more serious nature, should ICASA during the contract period for any reason regard the service provider's service levels and performance against this contract as being inadequate or not to ICASA's satisfaction, the details will be reduced to writing and sent to the service provider.

b. In the event that the service provider is unable to remedy the complaints to ICASA's satisfaction within agreed days of such notice of inadequate performance, ICASA reserves the right to terminate the services of the appointed service provider.

c. Notice of such termination shall either be in writing, hand-delivered or sent by email.

d. ICASA reserves the right to

i. decrease quantities and/or items due to budget constraints,

ii. invite service provider to present or otherwise demonstrate their proposed solution to clarify aspects that are required as part of the evaluation process, at the service provider's own cost,

iii. not to award the bid to the lowest RFQ quote, but to the one representing the best value for money.

20. PRICE SCHEDULE

Item	Description	Unit Price (excl. VAT)
1.	Commission, installation & testing	
2.	New Changeover Panel B (ICASA 275kVA Generator B)	
3.	New Changeover Panel C (ICASA 600kVA Generator C)	
4.	Wiring & consumables	
Item	**Description**	**Unit Price (excl. VAT)**
5.	Warning notices/signage	
Please specify any other additional work below:		
	Sub-total (A):	

For comparison purpose, service providers must specify number of hours to be worked

Activity/Deliverable	Rate/Hour per resource	Number of hours	Total cost (excl. VAT)
Working Hours (08:00 – 17:00)			
After-hours, Weekends and Public Holidays			
Sub-Total (B)			
Total Price (A+B) (excl. VAT)			
VAT			
Total Price (A+B) (incl. VAT)			

ANNEXURE A

Accomplished work and achievements

The following has been completed successfully and invoiced: -

- Construction of plinths at new ICASA offices (x 2 plinths);
- Decommission and/or de-install two (2) x diesel generators at ICASA's old premises at 164 Katherine Street, Sandton, Pinmill;
- Insulate and secure disconnections (x 2 generators);
- Transportation and installation at ICASA's new premises at 350 Witch-Hazel Avenue, Eco Park, Centurion (x 2 generators);

Outstanding work as per scope of work

Work not completed involves the following:

- Wiring, commissioning and testing at ICASA's new premises, which includes but not limited to connection of the incoming cable, outgoing feeder cables, connecting of the cable and control cabling to the generator and the control terminals etc.;
- The design of the control system to comply with the requirements for automatic starting, stopping, interlocking and isolation;
- Circuit breakers, isolators and wiring to be correctly sized for each unit as per SANS 10142 wiring or latest regulations;
- Provide fuel for testing and commissioning;
- Provide Cable routes and cabling from each new Change Over panel to each generator set.
- Earth continuity throughout the complete installation;
- Submission of detailed drawings and wiring diagrams of the generators and the switchgear;
- The generator must automatically start not later than one (1) minute during the power outage and must easily start, even during cold days, without the use of any special ignition devices (i.e. in summer and winter conditions).
- The generator must have the option to be started manually. Note that in its current set-up, both existing generators currently operate in this manner.
- A fully automatic change-over system must be provided to isolate the mains supply and connect the standby set to the outgoing feeder in case of a mains failure and reverse this procedure on return of the mains;
- Ensure adequate provision of cabling, subject to full measurement on site. Service providers will be granted access to do site assessment. Appointments must be made 24 hours in advance;
- The generators must be connected to ensure full business operation, including air-conditioning, during power failures. As soon as power is restored, the generators must automatically switch back to main supply.
- Installation of warning notices related to the generator, as required by the Occupational Health and Safety Act, in and around the generators location, using the correct material (e.g. non-corrodible and non-deteriorating material, preferable plastic);
- All work and equipment shall be in accordance with the approved SABS Standards and shall comply with the Occupational Health and Safety Act, No 85 of 1993 and current regulations of all other codes applicable to this work;
- To submit Certificate of Compliance (COC) after installation, testing and commissioning, as well as installation circuit diagram;
- Civil work & re-instatement thereof to cater for the cabling installation.

Comprehensive Bill of Quantities for pending works:
From the budget and financial viewpoint, it must be emphasized that suspending the work left the following residual bill of quantities to be taken into consideration on takeover.

Miscellaneous & General

Description	**Qty**
Earthing and bonding	2
Safety File	1
Signage Statutory Basic	2
Labelling	2
Commissioning & Testing	2
COC	2
Site handover	2
Clients training	2

275kVA Generator Cables:

Qty	**Unit**	**Description**
110	metre	Cable PVC SWA 120 x 4C
55	metre	Wire Bare copper earth 120mm
55	metre	Cable SWA 2.5 x 12 core
55	metre	Cable PVC SWA 2.5 x 4C

5	Each	Term Block 11-way grey
13	Each	Circuit B 10A 6kA 1P DIN
3	Each	Circuit B16A 6kA 1 ph DIN
5	Each	Circuit B 20A 6kA 1P DIN
1	Each	Earth Leakage 25A 1P&Neutral
1	Each	Industrial single socket 16Amp
1	Each	Emergency Button Red Twist
1	Each	Contact Block and Fixing collar Red/Green 1 N/C &1 N/C
1	Each	E-stop Label Yellow
120	Each	Panel Wire Numbers
1	Each	Meter-Amp: 50x50
3	Each	Current Transformer 400/5A
80	Each	Terminal Block: Rail mount
14	Each	Terminal End Stops for Rail mounted
16	Each	Terminal End Plates for 4mm Rail
1.1	100m roll	Panel Flex Wire 1.5mm Black
1.1	100m roll	Panel Flex Wire 1.5mm Grey
1.1	100m roll	Panel Flex Wire 1.5mm Brown
1.1	100m roll	Panel Flex Wire 1.5mm Red
1.1	100m roll	Panel Flex Wire 1.5mm Blue
1.1	100m roll	Panel Flex Wire 1.5mm White
1.1	100m roll	Panel Flex Wire 1.5mm Green/Yellow
1.1	100m roll	Panel Flex Wire 2.5mm Black
1	100m roll	Panel Flex Wire 2.5mm Brown
1	100m roll	Panel Flex Wire 2.5mm Red
1	100m roll	Panel Flex Wire 2.5mm White
1	100m roll	Panel Flex Wire 2.5mm Blue

1	100m roll	Panel Flex Wire 2.5mm Black
1	100m roll	Panel Flex Wire 4mm Grey
1	100m roll	Panel Flex Wire 2.5mm Green/Yellow
1	Each	trunking Narrow slot 40X40 Gray
4	Each	Ferrules Bootlace Black 1,5mm
1	Each	Ferrules Bootlace Grey 2,5mm
1	Each	Ferrules Bootlace Double black 1,5mm
1	Each	Ferrules Bootlace Double 2,5mm
1	Each	Ferrules Bootlace Orange 4mm
1	Each	Ferrules Bootlace Double Orange 4mm
1	Each	Switch-Oil Pressure
1	Each	Sender-Oil Pressure
1	Each	Sender Temperature
1	Each	Switch-Temperature
1	Each	Sender-Float Arm Adjustable
1	Each	Misc: Sundries
1	Each	Water Level Sensor (Radiator)
1	Each	Body Solenoid 12VDC
2	Each	NSH body fuse holder
2	Each	NSH Fuse 32amp
30	Each	Self lock Conduit Black 20mm
20	Each	Self lock couplers Black 20mm
25	Metre	Self lock conduit Black 25mm
12	Each	Self lock couplers Black 25mm
1	Each	Service technical key switch head
1	Each	Service technical key switch contact block
1	Each	Pilot light red 220V AC
2	Each	Pilot light white 220V AC
2	Each	Pilot light blue 220V AC
1	Each	Busbar copper 40x10 300mm 800amp 15xM10
2	Each	Busbar Insulator 10mm Black

600kVA Generator:- Cables:

Qty	Unit	Description
180	Metre	Cable PVC SWA 150 x 4C
90	Metre	Wire Bare copper earth 150mm
45	Metre	Cable SWA 2.5 x 12 core
45	Metre	Cable PVC SWA 2.5 x 4C

600kVA Generator:- Termination 150mm x 4C Armored Cable (x8):

Qty	Unit	Description
8	each	Gland No 6 BW (CCG 050306)
8	Each	Shroud no 6
32	each	Lugs Non-Insulated 150x12mm
0.8	Metre	Heat shrink 38mm (19.1mm) Black
0.8	Metre	Heat shrink 38mm (19.1mm) Blue
0.8	Metre	Heat shrink 38mm (19.1mm) Red
0.8	Metre	Heat shrink 38mm (19.1mm) White
1.6	Metre	Heat shrink 12.7mm (6.4mm) Clean
16	Pack of 100	Cable Tie T50I
64	Each	Flat Washer M10

600kVA Generator:- Termination Insulated Earth wire 150mm (x4):

Qty	Unit	Description
4	Each	Lugs Non-Insulated 150x12mm
0.4	Metre	Heat shrink 38mm (19.1mm) Green/yellow
4	Each	Bush brass Female 32mm
4	Each	Bush brass Male 32mm
4	Each	Locknut 32mm
8	Each	Flat Washer M12
4	Each	Spring Washer M12

600kVA Generator:- Termination 2.5mm x 12C Armored Cable (x2):

Qty	Unit	Description
2	Each	Gland No 2 BW (CCG 050302)
0.24	Pack of 100	Bootlace Ferrule 2.5 ins
4	Pack of 100	Cable Tie T50I

. 600kVA Generator:- Termination 2.5mm x 4C Armored Cable (x2):

Qty	Unit	Description
2	Each	Gland no 1
8	Each	Lugs Non-Insulated 2.5x8mm
2	Each	Shroud no 1
0.2	Metre	Heat shrink 4.8mm (2.4mm) Black
0.2	Metre	Heat shrink 4.8mm (2.4mm) White
0.2	Metre	Heat shrink 4.8mm (2.4mm) Blue
0.4	Metre	Heat shrink 12.7mm (6.4mm) Clean
4	Pack of	Cable Tie T30R
16	Each	Washer Flat M12

. Wire-ways:

Qty	Unit	Description
3	6m	Cable Ladder HD Tray 600mm x 130mm
1	Each	Cable Ladder HD Int Bend 600mm x 130mm
2	Each	Cable Ladder HD Ext Bend 600mm x 130mm
1	Each	Cable Ladder HD Tee 600mm x 130mm
3	Each	Splice Sets For Straight Ladders
2	Each	Tee fastener Sets
3	Each	Bend & Riser/Dropper Fastener Set
3	Metre	Unistrut 41mm x 41mm x 1.6mm
6	Each	Rod Threaded M10 M/Steel
28	Each	M10 Drop in Anchor
28	Each	Strut nuts

ANNEXURE B – NEW CHANGE OVER PANELS SPECIFICATION & LANDLORD REQUIREMENTS

1. Each new generator change-over panel mentioned in item 20 and Annex A should be like the existing panels in the Landlord generator rooms including correctly sized Schneider U/A controller interlocked change over, generator controller and all required to complete the installation.

2. Note that the existing change-over panels remain the Landlord's (M&T Development) property and may not be re-used.

3. The existing cables between alternators and change-over panels as well as the changeover panels themselves should remain as is. The proposed work has been diagrammatically presented below to give more clarity.

4. The 600kVA genset's hot radiator air will be blowing into the fresh air intake of the SDMO genset. This will probably cause the SDMO genset to overheat under full load conditions, for extended periods. We recommend the 600kVA genset's orientation be turned around.

5. The copper bus bar and batteries on the 600kVA genset are missing. The cable should be connected directly to the panel, therefore nullifying the need for termination bus bar. The batteries will have to be replaced.

6. All required civil work, installation of sleeves, trenching and re-instatement of the landscaping, kerbs, paving and ramp into basement to be re-instated to the Landlord's satisfaction. All the preceding items should form part of the price schedule and confirmed on site before tendering. No deviation to appointed tendered amount shall be accepted.

7. The general condition of the gensets needs to be checked. Confirm if they run and have no underlying issues.