



RFP 43/2022

**THE SUPPLY, DELIVERY,
INSTALLATION, COMMISSIONING,
SUPPORT AND MAINTENANCE OF AN
EXISTING DIGITAL TWO WAY RADIO
SYSTEM**

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1. Invitation

CENTLEC (SOC) Ltd a Municipal Entity distributing electricity in Mangaung and other Municipalities invites digital radio communication professionals to submit their proposals for information and communication, for a period of thirty-six (36) months.

2. Minimum Requirements

- 2.1. Supply unique security personal identification number (PIN) and/or original TAX Clearance Certificate for TAX compliant status.
- 2.2. Supply municipal services (water, sanitation, rates and electricity) clearance certificate or Lease Agreement with a current Bill and rates clearances, or Current Bill of Account not owing more than 90 days. In a case where the services are paid by the Landlord, the signed lease agreement and statement of account must be submitted by the bidder.
 - 2.2.1. In an event, that the Bidder utilizes prepaid services (e.g. Water or electricity) a valid municipal clearance certificate(s) must still be provided.
- 2.3. The bidder must be registered on the National Treasury Centralized Suppliers Database
- 2.4. Please note that the Special Conditions table as per point 3 below, needs to be met. All supporting documents needs to be submitted where applicable.

3. Special Conditions of the contract

Table 1: Special Conditions

Special Conditions	Yes	No	Supporting Documentation
ICT Service Providers are invited to submit their proposals to improve the services.			Yes
CENTLEC should be provided with the annual licensing agreement from ICASA.			Yes
Price change based on the market rate should be done in writing for annual increase.			N/A
It is the responsibility of the bidder to supply new brand with correct specification as per request. CENTLEC will provide the specification based on its preferences.			N/A
All service providers should provide CENTLEC with a monthly report on all work done for CENTLEC.			N/A
All and any files, document, documentary evidenced, and any aspect of the matter associated with the file shall at all times remain the property of CENTLEC.			N/A

Special Conditions	Yes	No	Supporting Documentation
The successful bidder will be expected to enter into a Service Level Agreement with CENTLEC for a period thirty-six (36) months.			N/A
Implement the latest Push-To-Talk (PTT) technology on the current digital radio infrastructure.			N/A
All channel configurations, programming and integrations should be done by the service provider.			N/A
Service provider for Push-To-Talk (PTT) radios should provide the high specification server and software with Uninterrupted Power Supply (UPS).			N/A
All the equipment should be provided with batteries backups.			N/A

4. LOCAL CONTENT PRE-QUALIFICATION

Preferential Procurement Regulations 2017 section 8 (Local production and content) states that:

(2) An organ of state must, in the case of a designated sector, advertise the invitation to tender with a specific condition that only locally produced goods or locally manufactured goods, meeting the stipulated minimum threshold for local production and content, will be considered.

(5) A tender that fails to meet the minimum stipulated threshold for local production and content is an unacceptable tender.

NB!!! Bidders are required to complete Annexure C, D & E for declaration of Local Content %.

These designated sectors include the following (But are not limited) with the minimum threshold:

Table 2: Local Content requirement

Designated Sector	Minimum Threshold
Portable Radio	60%
Mobile Radio	60%
Repeater	60%
Rail Signalling	65%
Components	20% - 100%

5. Scope of work

CENTLEC will consider bidders for appointment on the following telecommunication services with supply, commissioning, maintenance and support of the existing digital two-way radios (DP4601e, DM4600e, and DP4401) and integrate with PTT technology.

Bidder to supply two-way radios and propose latest technology on the following:

- 5.1 Digital portable two-way radio devices – similar to DP4601e, devices must be compatible to current digital infrastructure.
- 5.2 Digital base station two-way radio devices with standby chargeable batteries – DM4600e and latest.
- 5.3 Digital mobile two-way radio devices – DP4401 and latest.

- 5.4 Two-way radio devices antennas.
- 5.5 Digital repeaters system with generator and battery for the existing high site.
- 5.6 Digital radio signal boosters for devices to cover low signal at substation.
- 5.7 Digital two-way radio handset for replacement.
- 5.8 New technology solution to extend the radio technology to CENTLEC area of supply (PTT two-way radios) to integrate with digital two-way radio system to avoid the building of repeater infrastructure.
- 5.9 Mobile Microphones and earpiece for the existing DM 4000 series.
- 5.10 Batteries for the existing DP 4000 series.

6. Technical Specification

CENTLEC current radio communication devices are office base station (DM 4600e), portable radio (DP4601), vehicle stations radios (DM4401) with normal standard frequencies and four channels.

- 6.1. Required network coverage to Southern Free State areas (Dewetsdorp, Wepener, Reddersburg, Edenburg, Trompsburg, Van Stadensrus, Springfontein, Bethany Bethulie, Gariiep Dam, Phillippolis, Faurismith, Jagersfontein, Zastron, Rouxville, Soutpan and Smithfield) should be able to communicate to CENTLEC Bloemfontein offices and vice versa. Bidder must note that there are no high site towers in these areas. Latest technology required to cover these areas of supply (PTT radio integrations)
- 6.2. Required network coverage for Bloemfontein areas including Thaba Nchu and Botshabelo. Where signal is not available in the norths area of Bloemfontein or Botshabelo. Service provider should provide signal boosters to the two-way digital radios where necessary. CENTLEC has existing high site towers in Botshabelo and Bloemfontein.
- 6.3. Two-way radio must have the ability to integrate with the PTT technology to cover areas where signals are not available.
- 6.4. Radio communication recording capability for the control room and between the radios themselves.
- 6.5. The system must operate on the high band frequency range. CENTLEC already has the ICASA licenses available for this frequency band. Additional

licenses may be required.

- 6.6. The mobile radios should be interchangeable between the vehicles. It will be required that the bidder to assist with the re-installation and commissioning thereof.
- 6.7. Improve on the current fluency and channel on frequency range: 136-174 MHz and channel spacing: 12,5kHz. Bidder to provide better
- 6.8. Training of the CENTLEC personnel on the functionality, programming and installation of the units.
- 6.9. The successful service provider shall provide all equipment, materials associated hardware, labour, transportation and incidentals and all the work needed for the installation and testing of the system.
- 6.10. The successful bidder is responsible for verifying all site dimensions, layout plans, overseeing product orders, deliveries and installations on approval.

7. Support and maintenance

The support and maintenance should cover the following:

- 7.1 Restore the basic services in the event of damages beyond repair.
- 7.2 Support, installation, maintenance and management of all antennas and coaxial cables at high sites.
- 7.3 24/7 maintenance and support services.
- 7.4 Submit written records (layout of commissioned network drawings) on all work done in the communication network.
- 7.5 Refresher on-site training for ICT personnel on required systems and equipment annually.
- 7.6 Maintain the existing digital radio base station (DM 4600e), portable radio (DP4601), vehicle stations radios (DM4401).

8. Digital Systems requirements

Service provider is required for site meeting and presentation on the latest digital two-way radio on request for proposal (RFP). RFP on various technology solution to improve on the following

8.1 Digital Mobile Radios not limited to the following:

Led indicators for clear, visible feedback of calling, volume adjustable knob, Powerful, front-projecting speaker that transmits 12.5 kHz digital, TDMA audio, Compact and ergonomically friendly microphone, Antenna, 24-12V converters (if needed), car antennas connection, earpiece bluetooth handset comparability.

8.2 Digital Portable Radios not limited to the following:

Flexible menu-driven interface with user-friendly icons or two lines of text for ease of reading text messages and navigating through the menus, LED indicator for clear, visible feedback of calling, emergency button, navigation button, submersible in 1 meter of fresh water for at least 30 minutes, powerful, front projecting speaker that transmits digital TDMA audio large, textured push-to-talk button, charger at 231V, reachable batteries.

8.3 Digital Base Station not limited to the following:

LED indicators for clear, visible feedback of calling, scanning and monitoring features, volume adjustable knob, powerful, front projecting speaker that transmits 12.5kHz digital TDMA , audio, easy-to-use navigation buttons allow easy to access to intuitive, menu-driven interfaces, compact and ergonomically friendly microphone, Power supply 231V, antenna, standby batteries pow107BBT-MKI 13.8VDC @10-12AMPS fully regulated.

8.4 Digital Repeater not limited to the following:

100% continuous duty at 40W/UHF and 45W/VHF or better based on the bidder latest technology ,supports more than two simultaneous voice or data paths in digital TDMA mode, integrated power supply, operates in digital mode, LED's clearly indicate transmit and receive modes in both channel slots, Rack- or wall-mounted, automated battery back-up (lithium-ion)

8.5 Generator and batteries

100% adequate capacity to cater two-way radio supplied by the bidder with automated battery back-up (lithium-ion) or better

9. Technical Evaluation

9.1 Evaluation criteria

Table 3: Evaluation Criteria

No.	Criteria	Description	Max Points
9.1.1	Company experience, support and services Smart technology Radio and digital radio communication	Have they provided these services in the last four years? A maximum of 3 reference letters of confirmation is required. Two (2) letter = 10 points Three (3) letters = 20 points	20
9.1.2	Radio integration presentation	Live demonstration of the implemented and configured solution on existing digital and PTT radios = 20 points No PowerPoint presentation	20
9.1.3	Communication assurance of radio communication network	Attach proof of certified copy of ICASA accreditations certificates for UHF license radio frequencies = 10 points Attach proof of licensing for electronic communications network service (ECNS) license industry on two-way radio = 10 points	20
9.1.4	Warrantee and Guarantee	Provide warrantee and guarantee of the unit including the wiring of antennas or devices. 2 or more years' warrantee and guarantee = 20 Points 1year warrantee and guarantee = 10 Points (Warranty and guarantee certification from supplier)	20

No.	Criteria	Description	Max Points
9.1.5	Local (Mangaung) operational capability and economic investment	Does the bidder have a local office with operational capability and will they use local resources and procure from local businesses? Or what is their plan to do this during the duration of this project? Existing and established local office (CENTLEC distribution area) = 10 points If not (Within South Africa) = 5 points	10
9.1.6	Lead delivery time	The bidder must have the ability to deliver equipment to CENTLEC as and when requested. Supplier letter of commitment be attached as a proof Less than 1 week delivery after placement of purchase order = 10 points 1-2 weeks' delivery after placement of purchase order = 5 points	10
	TOTAL		100

A bidder who gets a minimum of 70 points and above will qualify to the next stage. Individual tenders would have to be evaluated according to the preferential point system. The bidder must score minimum points as follows:

- Item 9.1.1 – 10 points
- Item 9.1.2 – 20 points
- Item 9.1.3 – 20 points
- Item 9.1.4 – 10 points
- Item 9.1.5 – 5 points
- Item 9.1.6 – 5 points

9.2 PRICE AND REFERENTIAL POINTS SCORING – STAGE 2 (Price and B-BBEE status)

All Bidders that have passed the technical evaluation threshold of 70 points would also be scored based the 80/20 principle where 80 Points is for the Price and 20 points for B-BBEE as per the detail given below.

9.3 Points awarded for price

A maximum of 80 Points is allocated for price on the following basis:

$$\text{Where } P_s = 80 \left[1 - \frac{P_t - P_{\min}}{P_{\min}} \right]$$

P_s = Points Scored for comparative price of bid under consideration

P_t = Comparative Price of bid under consideration

P_{\min} = Comparative Price of lowest acceptable bid

9.4 Points awarded for B-BBEE Status Level of Contribution

In terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below;

Table 4: B-BBEE Status level

B-BBEE Status Level of Contributor	Number of Points (80/20 System)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-Compliant Contributor	0

10. Pricing Schedules

Pricing schedule – Quote each item specification on the right in technical Specification (cost exchange in return with the current digital radio for refurbishment)

Table 5: Pricing (price can be on the proposed and latest series of two-way)

ITEMS	DESCRIPTION	Hourly Rate	
-	Implementation and Configuration of portable radios with a PTT technology		
-	Device Installation and configuration		
-	After hours call out fee		
-	Weekend call out fee		
ITEMS	DESCRIPTION	QUANTITY PER ITEM	UNIT PRICE
10.1	Portable digital two-way radio DP4601 or latest series	1	
10.2	Base station digital radio with batteries systems - DM4600e or latest series	1	
10.3	Digital two-way radio vehicle based DM4401 or latest series	1	
10.4	Two way radio antennas for DM4401	1	
10.5	Two way radio Antenna UHF Co-linear Base Radio Antenna 3db Gain Frequency: 430470 Mhz	1	
10.6	Two way radio Antenna VHF Two Stack Folded Base Radio Antenna Gain 3db Frequency: 136 - 74 Mhz	1	
10.7	Two way radio Antenna Mid-Band 66 - 80 Mhz	1	

ITEMS	DESCRIPTION	QUANTITY PER ITEM	UNIT PRICE
10.8	Two way radio Antenna VHF-Band 136 - 174 Mhz	1	
10.9	Two way radio Antenna UHF-Band 430 - 470 Mhz WCDMA (Cellular Band) GPS Band	1	
10.10	Radio communication server with UPS and software	1	
10.11	Radio repeater that cater (minimum 200 unit radios devices) more than 3 channel or better	1	
10.12	Generator with batteries (to carry the load for supplied repeater) or better	1	
10.13	Radio System software configurations (Hour rate)	1	
10.14	Bluetooth earpiece to connect portable radios for (DP4601e, DM4600e, and DP4401)	1	
10.15	PTT portable implementations and setup with integrations	1	
10.16	PTT radios supply Smart PTT SE800 Sim Card Dual radio	1	
10.17	Smart PTT Hytera MNC580 Base/Vehicle Sim Card Two-Way Radio	1	
10.18	Digital radio signal boosters for low signalling (if available)	1	
10.19	Two-way hand set talk device for DM4401 or latest preferably	1	

ITEMS	DESCRIPTION	QUANTITY PER ITEM	UNIT PRICE
10.20	Mobile Microphones for the DM 4000 or latest preferably	1	
10.21	Battery for the DP 4000 series or similar Capacity 2100mAh	1	
10.22	Two-way DP 4601e - 136-174 MHz or latest preferably	1	
10.23	Station battery POW107BBT-MK1 13.8VDC@10-12A MPS FULLY REGULATED	1	

Table 6: Support and Maintenance

Item Description	Unit Price	Hourly Rate
Repeater Maintenance		
Please list all possible material necessary with your price		
Radio Maintenance		
Please list all possible material necessary with your price		
Any material not listed above and required, the bidder will need to obtain a third part quote for that item and allowed 10 - 15% mark-up.		

Evaluation price will be based on point 10.1 to 10.23 including Repeater and Radio maintenance costs.

11. Contact Details

- 10.1 For any further technical information regarding the document contents please contact Daniel Malokase, e-mail daniel.malokase@centlec.co.za . Such queries must be done in writing, the email address provided serves for this purpose. The answer to any one question will be shared to all the other prospective bidders that have bought the bid documents.
- 10.2 For supply chain related questions, please contact Me Palesa Makhele at 051 412 2753 or at Palesa.Makhele@centlec.co.za