



CD34/2024

**SUPPLY, DELIVERY, INSTALLATION, MAINTENANCE OF
SECURITY EQUIPMENT AND RELATED SOFTWARE AT
CENTLEC (SOC) LTD PREMISES AND SITES**

Contents

1.	INVITATION	3
2.	MINIMUM SUBMISSION REQUIREMENTS	3
3.	ABBREVIATIONS.....	4
4.	SCOPE OF WORK.....	4
5.	TECHNICAL SPECIFICATION.....	5
6	SPECIAL CONDITIONS	12
7	EVALUATION CRITERIA	12
8	PRICING	15
9	CONTACT DETAILS	17

1. INVITATION

CENTLEC (SOC) Ltd, hereafter referred to as CENTLEC, a Municipal Entity distributing electricity in Mangaung and other neighbouring Municipalities in the Free State, hereby, invites prospective service providers for the supply, delivery, installation, maintenance of security equipment and related software at CENTLEC (SOC) Ltd premises and sites for a period of thirty-six (36) months.

It is of utmost importance to note that CENTLEC is classified as a national key point in terms of the National Key Points Act 102 of 1980 and therefore all services to be rendered through this submission must be in compliance with the said Act.

2. MINIMUM SUBMISSION REQUIREMENTS

NB. Failure to meet the minimum requirements will lead to disqualification of the BID.

- 2.1 Supply a unique security personal identification number (PIN) from SARS 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 ninety (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.
- 2.3 Submit proof of registration on the National Treasury Centralized Supplier's Database.
- 2.4 Submit a valid letter of good standing from the Compensation Commissioner, Department of Labour, and all other related authorities.

3. ABBREVIATIONS

Table 1: Abbreviations

SAQA	South African Qualifications Authority
NQF	National Qualifications Framework
SARS	South African Revenue Services
CSD	Central Supplier Database
NKP	National Key Point
COIDA	Compensation for Occupational Injuries and Diseases Act
SABS	South African Bureau of Standards
UIF	Unemployment Insurance Fund
UPS	Uninterruptible power supply
POPI	Protection of Personal Information (Act)
MTTA	Meantime to acknowledge
MTTR	Meantime to repair
NVR	Network Video Recorders
CCTV	Closed Circuit Television
VMS	Video management system
SOC	State owned company
FOV	Field of view
SANS	South African National Standards

4. SCOPE OF WORK

The supply, delivery, installation, maintenance of security equipment and related software at CENTLEC (SOC) Ltd premises and sites for thirty-six (36) months.

- 4.1 Procure, install, and configure all necessary CCTV equipment, including cameras, recording devices, network infrastructure, and supporting hardware ensuring seamless integration with existing security infrastructure at CENTLEC sites.
- 4.2 Conduct thorough testing and commissioning of the CCTV camera system, including fine-tuning camera angles, adjusting settings, and verifying functionality.
- 4.3 Supply, delivery and Installation of cameras and alarms at various CENTLEC premises and sites.
- 4.4 Supply, delivery, and Installation of security guard patrol equipment at CENTLEC premises and sites.

- 4.5 Supply, deliver and install Access Control System i.e., an electronic system that controls and manages access to all secured areas, it must include biometric devices (fingerprint scanners), door locks, and access control management software.
- 4.6 Alarm Management System i.e., an electronic system that receives and manages alarms from various security devices, such as intrusion detection systems, fire alarm systems, or panic buttons.
- 4.7 Incident Management Software i.e., a software application that enables operators to record, track, and manage security incidents. It provides a centralized platform for incident reporting, workflow management, and documentation.
- 4.8 Supply, deliver and install all other security equipment as per pricing schedule listed on table 3.

5. TECHNICAL SPECIFICATION

5.1 CAMERA

- 5.1.1 The cameras must be IP cameras with infrared or thermal capability to capture (day and night) good quality, visible, useful, sharp, high-resolution, undistorted, and meaningful footage of the overall activities occurring in and around the premises and sites of CENTLEC.
 - 5.1.1.1 **Resolution**
 - a) VGA (640 X480)
 - b) HD (720p,1080p)
 - c) Full HD (1080i,1080p)
 - d) 4K(2160p)
 - 5.1.1.2 **Field of view (FOV)**
 - a) Wide angle (90-120) degrees
 - b) Narrow angle (30 -60) degrees
 - 5.1.1.3 **Lens**
 - a) Fixed lens
 - b) Varifocal lens
 - c) Zoom lens.
 - 5.1.1.4 **Night Vision**
 - a) Infrared (IR) LEDs
 - b) Night Vision range(e.g.100m)
 - 5.1.1.5 **Connectivity**
 - a) Ethernet (RJ-45)
 - b) Wi-Fi (802.11b/g/n)
 - c) ONVIF (Open Network video Interface Forum) compliance
 - 5.1.1.6 **Power**
 - a) POE (Power over Ethernet)

5.1.1.7 Weather resistance

- a) IP66 (dust and water resistant)
- b) IP67 (dust and weatherproof)

5.1.1.8 Meteorological conditions at CENTLEC supply area

Table 2:

1. Outdoor temperatures in degrees Celsius	Annual mean – 24.4; Maximum = 40; Minimum = -10
2. Average relative humidity	At 8h00 = 76%; at 14h00 = 33%; at 20h00 = 48% Minimum = 7% and Maximum = 98%
3. Thunderstorm activity	Severe Thunderstorms

5.1.1.9 Storage

- a) SD card slot
- b) Cloud storage integration

5.1.1.10 Security

- a) user authentication (username/password)
- b) HTTPS encryption
- c) SSL/TLS encryption

5.1.1.11 Other features

- a) Motion detection
- b) Object detection.
- c) Audio input/output

5.1.2 The footage must be time stamped in all the cameras (monitors) must be synchronised in such a manner that it can be used as admissible evidence in a court of law.

5.2 Electric Fencing

5.2.1 General Scope of Works

5.2.1.1 Electric fences shall conform to the following specifications:

5.2.1.1.1 They may not be any higher than 450 mm.

5.2.1.1.2 They must be at least 1,8 m above the level of natural ground at any point.

5.2.1.1.3 They may only be erected on top of walls and fences or attached to them.

5.2.1.1.4 They may not encroach over site boundaries.

5.2.1.1.5 Comply with Regulation 11 of the Electrical Machinery Regulations promulgated in terms of the Occupational Health and Safety Act, no 85 of 2003 must be fully complied with.

5.2.1.1.6 Regulation 11 of the above Act gives information in terms of how electric fences operate in terms of the shock they impart. For instance, the peak value of voltage is 10 kV; the maximum duration of the electrical impulse it puts out is 50 ms; the minimum interval allowed between impulses is 0.75s; the maximum quantity of electricity per impulse.

5.3.1 Material Specification

- 5.3.1.1 Specification of the energizer will be in accordance with IEC 60335-2-76 the International
- 5.3.1.2 Standard Peak value of input voltage must be above 7.5kV, but not exceeding 10kV.
- 5.3.1.3 Maximum energy delivered to a load of 500Ω must not be less than 7.5 Joule.
- 5.3.1.4 Minimum interval between impulses should not be less than 0,75 seconds.
- 5.3.1.5 Impulse duration must not exceed 50ms.
- 5.3.1.6 Shock energy delivered anywhere on the fence should not be less than 3-5 Joules depending upon the energizer selected.
- 5.3.1.7 For multi-zone systems the energizer must be able to energize the fence from both ends. This will ensure that the fence will still be live and able to deliver a shock when a fence wire is cut from any point on the perimeter.
- 5.3.1.8 Multiple energizers must synchronize their output to be regarded as one energizer with multiple outputs, all firing at the same time, as one single pulse.
- 5.3.1.9 To provide optimum protection against lightning, all energizers must be installed in a dedicated lockable room inside the building.
- 5.3.1.10 The energizer must have its own stand-by DC power and be programmable for up to 20 zones.

5.3.2 WIRES

- 5.3.2.1 For larger perimeter and corrosive environment all conductor wires must be manufactured from aluminum 1.6mm, as it has a very good corrosion resistance by building up its own protection with an oxide layer, and in addition has a very low Electrical resistance (33Ω/km), resulting in optimum energy availability with a maximum deterrence effect, along the energized

perimeter fence, together with the highest degree of resistance to all inclement weather/atmospheric conditions.

5.3.2.2 Places where higher tensile strength is desirable, 1.6mm² high tensile hot dipped galvanized steel wire is the option.

5.3.2.3 Each fence conductor wire must be pulled in position with a force of about 20kg but not exceeding 25kg.

5.3.3 Insulators

5.3.3.1 The insulators should be made from a UV resistant material.

5.3.3.2 The insulator surface should not be damaged by flash over.

5.3.3.3 The insulators should retain their rated mechanical strength over the temperature range of -10°C to +60°C. The insulators should not become brittle or soft under any ambient temperature conditions.

5.3.3.4 The insulator should be designed as such that the fence wire cannot be removed once installed.

5.3.3.5 Tested to withstand a minimum arcing voltage of 15kV when applied between the mounting screw and the 1.6mm² aluminum conductor wire.

5.3.4 Lightning Protection

5.3.4.1 The electric fence should be fitted with the appropriate lightning protection system in accordance with SANS 62305 Protection against lightning.

5.3.4.2 Protection should be provided on both the high voltage output as well as the 230V AC input.

5.3.4.3 Common earth points at the enclosure for both the high voltage and 230V AC input lightning protection systems.

5.3.5 Installation Procedure:

Design and Planning:

5.3.5.1 Conduct a site survey to determine the perimeter to be fenced and potential security risks.

5.3.5.2 Design the electric fence layout considering factors such as height, wire spacing, and energizer placement.

5.3.5.3 Obtain necessary approvals and permits from relevant authorities.

5.3.5.4 Installation of Components:

5.3.5.4.1 Install fence posts at regular intervals (e.g., 4 to 6 meters apart) using suitable anchoring methods.

5.3.5.4.2 Attach insulators to fence posts according to the designed layout.

5.3.5.4.3 Install earth rods at intervals recommended by the energizer manufacturer and connect them to the energizer unit.

5.3.6 Wiring and Connections:

5.3.6.1 Install electric fence wires on insulators, maintaining proper spacing as per design (e.g., 150mm to 300mm between wires).

5.3.6.2 Connect wires to the energizer output terminals, ensuring proper insulation and secure connections.

5.3.6.3 Connect the earth wire from the energizer to the earth system, ensuring low impedance grounding.

5.3.7 Earthing

5.3.7.1 Earth rods must be used at the beginning or end of each zone, at a maximum distance of 50m apart.

5.3.7.2 Earth rods must be connected to the main earth rod, the fence posts, and the earth conductors of the fence.

5.3.7.3 Three (3) earth rods, 1.8m apart in a triangle layout, must be installed at both sides of the Access Control Building (ACB).

5.3.7.4 The rods must be connected to the main earth rod and the first post on each side of the fence.

5.3.8 Intermediate posts

5.3.8.1 All intermediate posts will be manufactured from 25mm x 25mm square tubing.

5.3.8.2 Intermediate posts should be fully galvanized/powder-coated.

5.3.8.3 All holes should be pre-drilled before galvanizing/coating.

5.4 NETWORKING

- 5.4.1** The installation must be run on a secured dedicated CENTLEC network, provided and managed by the CENTLEC ICT Division.
- 5.4.2** Secure VPN connections must be established to and from the security control room across the Internet.
- 5.4.3** All log data and management activities must be conducted across that link. The link will terminate at the CENTLEC Data Centres.
- 5.4.4** It is required that connectivity and reliability of the system to the security control room must be available 24/7 and 365 days for the duration of the contract.
- 5.4.5** Service providers are required to indicate how the proposed solution will be provisioned using a detailed architecture diagram and description of how this will be managed.

5.5 TESTING AND COMMISSIONING

- 5.5.1** The successful bidder shall conduct testing in advance prior to final testing to confirm if the system is working and the installation was done in accordance with the terms of reference, and if all installed cameras are as per the requirements.
- 5.5.2** The successful bidder shall in writing notify CENTLEC of the completion of the installation and testing and propose the final testing date.
- 5.5.3** The final testing of the integrated CCTV camera system shall be conducted in the presence of Security and ICT employees, and to their satisfaction.

5.6 MAINTENANCE AND WARRANTY

- 5.6.1** The successful bidder must include a thirty-six (36) months' warranty for all equipment supplied, and render a maintenance service of the system for the duration of the contract.
- 5.6.2** The successful bidder shall provide support, repairs, and maintenance (proactive and reactive) directly after completion and handing over of the installation and expected to respond to logged calls within 30 minutes.
- 5.6.3** During the entire period of the contract the successful bidder shall be responsible for any repairs and maintenance of any faulty equipment.

5.7 BACK-END SYSTEMS:

- 5.7.1** 24/7 responding to an emergency service request on-site if and when required.
- 5.7.2** Meantime to acknowledge (MTTA) – 30 minutes on all calls.
- 5.7.3** Meantime to repair (MTTR) – 48 hours.

5.8 PERIPHERAL DEVICES - CAMERA, ALARM AND BIOMETRIC DEVICES:

- 5.8.1** 24/7 responding to emergency service requests on site if and when required. Meantime to acknowledge (MTTA) – 30 minutes on all calls.
- 5.8.2** Meantime to repair (MTTR) – 48 hours (troubleshooting; equipment and software including repairing/replacement on site).
- 5.8.3** Drone Specification:
- 5.8.4** Wing Span/Diameter Unfolded, propellers excluded – 470 x 585 x 215 mm
Folded, propellers included – 365 x 215 x 195 mm Maximum Take-Off Mass (kg) 3.998 kg Propulsion Type Electric Brushless Motor, Number of Motors 4, Motors Flight Battery TB30 Intelligent Battery, Flight Control System (Autopilot), Flight Control System Software and Aircraft Firmware, Transmitter Enterprise Receiver with Enterprise RPA Control Frequency of 2.400-2.4835 GHz up to 5.725-5.850 GHz.

6 SPECIAL CONDITIONS

- 6.3.1** The successful bidder must at all times comply with CENTLEC policies and procedures as well as maintain a high level of confidentiality of information.
- 6.3.2** The successful bidder must ensure that the information provided by CENTLEC during the contract period is not transferred/copied/corrupted/amended in whole or in part by or on behalf of another party.
- 6.3.3** The successful bidder shall be required to provide training & skills transfer for the services to CENTLEC ICT and security staff.
- 6.3.4** The successful bidder shall provide CENTLEC with all the license documentation that the entity is entitled to as per the costing of the licenses.
- 6.3.5** The successful bidder shall within seven (7) days of commencement of the contract, provide CENTLEC with a list of all employees appointed for this contract including supervisor(s) and site manager for vetting to be done by CENTLEC as the work will be carried out in a National Key Point area.

7 EVALUATION CRITERIA

All proposals submitted will be evaluated in accordance with the criteria set out in the policy of Supply Chain Management of the Entity. The most suitable candidate (s) will then be selected. Please take note that CENTLEC (SOC) Ltd is not bound to select any of the bidders' submitting proposals and reserves the right to appoint more than one bidder.

Furthermore, technical competence is the principal selection criteria, CENTLEC (SOC) Ltd will evaluate the technical criteria first and will only look at the price and specific goals if it is satisfied with the technical evaluation. As a result of this, CENTLEC (SOC) Ltd does not bind itself in any way to select the bidder offering the lowest price.

The relative technical weighting criteria / Qualification Parameters will be as follows:

7.1 Technical Evaluation

Table 3: Evaluation criteria

No	Criteria	Description	Points
7.1.1	Track Record	Submit stamped reference letters on referring company's letterhead confirming previous similar supply and installation, and maintenance services related to the scope of work. Letters must be signed by a duly authorized person. Two (2) reference letters = 30 Points Three (3) or more reference letters = 40 Points	40
7.1.2	Competency	Abbreviated Curriculum Vitae (CVs) of electronic technicians with a National Certificate (minimum SAQA NQF level 4 qualification) in Electronic Security Installations and a Qualified Installation Electrician with Wireman's License One Electronic Technician with one (1) to three (3) years' experience with a minimum SAQA registered NQF level 4 qualification = 20 Points One Qualified Installations Electrician with a valid Wireman's License = 20 points	40
7.1.3	Local South Africa (RSA) operational capability and economic investment	Does the bidder have an established local office in (the CENTLEC distribution area) = 20 Points If not, but within RSA = 10 points	20
	Points		100

A bidder who gets a minimum of 80 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 7.1.1 – 30 points

Item 7.1.2 – 40 points

Item 7.1.3 – 10 points

7.2 PRICE AND PREFERENTIAL POINTS SCORING – STAGE 2 (PRICE AND SPECIFIC GOALS)

All Bidders that have passed the technical evaluation threshold of eighty (80) points would also be scored based on the 80/20 principle where 80 points is for the price and 20 points for specific goals as per detail given below.

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

7.3 Points awarded for specific goals requirements.

In terms of Regulation 3.(1) An organ of state must, in the tender documents, stipulate— (a) the applicable preference point system as envisaged in regulations 4, 5, 6 or 7; (b) the specific goal in the invitation to submit the tender for which a point may be awarded, and the number of points that will be awarded to each goal, and proof of the claim for such goals in accordance with the table below;

Table 3: Specified Goals for Preferential Point System

Specified Goals	Points Allocation
50% Black owned (attach a detailed CSD report)	10
50% Women owned(attach a detailed CSD report)	5
50% Youth owned <35 years(attach a detailed CSD report)	5
Total Points	20

8 PRICING

8.1 Price Schedule

Prices proposed shall include all types of costs to be borne for the performance of the framework contract. All amounts must be quoted **in (R) Value and excluding VAT**.

Table 4: Pricing Schedule

Item No.	Category	Details	Unit of measure	Price (VAT excl)
1	Motion Sensors	Supply and install Motion Sensor	1	R
2	Fence	Supply, install and commissioning electric fence and issuing of Certificate of Compliance (Inclusive of labour, transport and material)	m ²	R
3	Patrol system	Guard patrol system (Inclusive of labour, transport and material)	1	R
4	Camera	4-MP WDR Infra-red Turret Network Dome Camera	1	R
5	Camera	Infra-red Fisheye Camera 6MP	1	R
6	Camera	Infra-red Fisheye Camera 3MP	1	R
7	Camera	3MP EXIR 50M Bullet 12mm	1	R
8	Cable	Cabling	Per meter	R
9	NVR (Network Video Recorder)	64 channel Professional Embedded NVR, HDMI output at 4K & VGA 1output @ 2K resolution; HDMI2 / VGA2 output resolution @1080p; Incoming / Outgoing bandwidth: 320 / 256 Mbps; Hard disk: 8 SATA interfaces (with expansion bracket); 1 x two-way audio input	1	R
10	NVR (Network Video Recorder)	16 channel embedded NVR with PoE. 16 Independent PoE network interfaces; HDMI and VGA output at up to 1920x1080P resolution, Bandwidth: In / Out: 160 / 256. Mbps; 2 HDMI outputs, 1 VGA port, 1 CVBS output; 4 SATA	1	R

		HDD; Two-way audio: 1 – channel. Alarm I/O: 16/4 with 6 months storage		
11	NVR (Network Video Recorder)	32 channel Professional Embedded NVR, Incoming / Outgoing bandwidth: 320/256 Mbps: H.264/MPEG4, HDMI, VGA & CVBS output: Hard disk: 8 SATA interfaces (with expansion bracket); Alarm I/O's: 16-Ch POS feature; two-way Audio	1	R
12	Cameras	Gate station Video Module with Surface Mounting Accessories, CMOS 2MP HD Colorful Camera, Fisheye, 1 Call Button, 1-ch Indoor station with 7" Touch-Screen Indoor Station. 7" Colorful TFT LCD	1	R
13	Camera	2 MP IP bullet camera	1	R
14	Camera	Dome Camera, 4MP IR 2.8mm, built in Mic, Infra-red, Fix lens 30m, face detection and event triggering;	1	R
15	Camera	1080P HD, Smoke detector, Wi-Fi Spy Camera, Wireless, IP Camera	1	R
16	Alarms	IDS X64	1	
17	Alarms	Installation, setup, commissioning, repairs, maintenance and labour for the alarm system.	Per hour	R
18	Alarm system monitoring software	Supply, deliver install alarm system monitoring software	Annually	R
19	Power Supply (PTZ)	Power supply for PTZ camera	1	R
20	Power Supply (Alarm)	Power Supply for the alarms 12 V battery	1	R
21	Terminal	Face and palm recognition terminal, 7-inch LCD touch screen, 2 Megapixel wide-angle lens, built-in mi fare card reading module	1	R
22	Biometric Reader	Finger biometric reader	1	R
23	Override keys	Override key	1	R
24	Exit buttons	No touch exit button	1	R

25	Emergency Exit	Resettable green call point	1	R
26	Locks	Magnetic lock	1	R
27	Door	Door Closer	1	R
28	Door contacts	Passive and door contact	1	R
29	CCTV Monitors	50-inch monitor	1	R
30	CCTV Monitors	32-inch monitor	1	R
31	CCTV System	Supply, installation, setup, commissioning, repairs, maintenance and labour for the CCTV camera system.	1	R
32	Panic Buttons	Mobile panic buttons	1	R
33	Panic Buttons	Panic buttons	1	R
34	Metal detectors	Supply, deliver, and install Walkthrough metal detectors	1	R
35	Metal detectors	Handheld metal detectors	1	R
36	Scopes	Belly scopes	1	R
37	HDD-WD-8TB	Digital Surveillance 8 TB 3.5" SATA Hard Drive	1	R
38	Drone	As per specification item no. 5.8.4	1	R
39	Gate	Repair turnstiles and gate Motors	P/h	R
40	Gate Motors	Supply delivers and installation new gate motors	1	R
41	Call out	Call out Fee	Per call	R

9 CONTACT DETAILS

9.1 For any further technical information regarding the document contents please contact Mr Brian Leserwane by e-mail: Brian.Leserwane@centlec.co.za, such queries must be done in writing, the email address provided serves this purpose. The answer to one question will be sent to all the other prospective bidders that have bought the bid documents.

9.2 For Supply Chain related questions, please contact Me Palesa Makhele at 051 412 2753 or at Palesa.Makhele@centlec.co.za