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		REFERENCE	REV
TITLE	**SPECIFICATION FOR A CLOUD BASED, ONLINE STS VENDING SOLUTION.**	**CP_TSSTAN_264**	**1**
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FOREWORD

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2016

1. INTRODUCTION

City Power is currently undergoing a Modernisation initiative, which focuses on transformation of processes, technology, and human capabilities to further enhance current operations, increase operational efficiencies and to improve quality of service offered to its customers. City Power requires proposals for provision of an online STS vending solution, with a cloud based back-end, which includes billing system integration.

2. SCOPE

The scope entails supply, deliver, install, and commissioning of the STS electricity vending solution with a cloud based back-end, that shall integrate with the existing billing system and have a 24 hour 3rd party distributed vending. This specification details requirements, framework and performance parameters of the system. The online pre-paid vending system/solution that will be fully integrated with City Power's existing financial system (SAP) and applications (MDMs) and function on the existing electronic infrastructure.

3. NORMATIVE REFERENCES

The solution offered shall be compliant with SABS 1524, the STS Specifications, and SABS IEC 1036. The following standards reflecting in the table underneath contain provisions which through reference in the SABS 1524 constitute provisions of this specification.

Standard	Description
SABS 1524-1:1994	Single-phase electricity dispensing systems, Part 1: Electricity Dispensers.
SABS IEC 1036:1990	Alternating-current static Watt-hour meters.
NRS 009-4-2:1994	National electricity meter cards and associated numbering standards section two national electricity meter number. (Replacing MCI57).
MC 115	National electricity meter card specification for ED's (will be replaced by a NRS spec in future)
IEC 62055-41/51/52	Standard transfer specification edition 2, STS600-8-6
ESKOM XMLVend 2.1	Eskom's specification for standardization of vending client/server protocols
NRS 009-1:1994	Electricity Sales Systems Part 1: Glossary system overview. Preferred requirements for applications in the electricity supply industry.
IEC 62055-xx	Electricity Payment Metering Systems
STS Part 1,2 and 3	Standard Transfer Specification
NRS 009-2-1:1998	Electricity sales systems - Part 2: Functional and performance requirements - Section 1: System master stations
NRS 009-2-2:1995	Electricity sales systems - Part 2: Functional and performance requirements - Section 2: Credit dispensing units.
NRS 009-6-10 (Online XMLVend 2.1)	the NRS Standard for on-line communication between Vending Servers and Vending Clients
ISO 8583	Financial transaction card originated messages — Interchange message specifications
IEC 61970-301	CIM (Common Information Model) Standard

4. TERMS AND ABBREVIATIONS

Term	Meaning
APN	Access Point Name
ICT	Information and Communications Technology
IP	Internet Protocol
DR	Disaster Recovery
QoS	Quality of Service
SLA	Service level agreement
URL	Uniform Resource Locator
MDM	Meter Data Manager
24 X 7 X 365	24 hour seven days a week for everyday of the year

5. REQUIREMENTS

5.1 Configuration requirements

5.1.1 The system shall be compatible and comply with City Power's ICT's Infrastructural and vending offices minimum requirements as to CP_TSSPEC_

5.1.2 The vending system shall be TCP/IP compliant and functional over Ethernet on a LAN/WAN environment with WIFI, GPRS, ADSL and Diginet lines accommodated.

5.1.3 The vending solution shall serve as a common platform to enable and manage vending to electric STS meters.

5.1.4 The system shall be capable of a single consumer record for each meter that is linked to it.

5.1.5 The system shall have a hosted database configuration set with standby disaster recovery capability for business continuity.

5.1.6 A disaster recovery plan shall be provided with all necessary hardware and infrastructure utilized.

5.1.7 Assurance of business continuity in the event of a catastrophic systems and / or communications system breakdown in the Municipal environment shall be provided.

5.1.8 A description of associated redundancies built into the offered solution shall also be provided

5.2 PHYSICAL LOCATION OF SERVERS AND WORKSTATIONS

5.2.1 The configuration envisaged by the service provider is one where the management and vending server(s) will be located onsite in a high availability environment with redundant power and connectivity. Full disaster recovery and business continuity shall be provided for.

5.2.2 Vending workstations (credit dispensing units) will be required at each of the SDCs. The system shall not be limited to existing workstations and locations.

5.3 SYSTEM CAPACITY

The system shall be designed to ultimately accommodate a minimum of 150 000 consumers/meters. The system shall have the capacity to retain a five (5) year transaction history in the live database and older transactions in an archive database. Any system limitations shall be indicated by the tenderer.

5.4 PERFORMANCE SPECIFICATION

5.4.1 A full detailed functionality description of the system shall be provided by the tenderer.

5.4.2 The tenderer shall not focus on provisioning of computer hardware since City Power will use existing infrastructure where possible. For this reason, it is also imperative that tenderers should be quite clear on where City Power hardware and/or networks lack the capability and/or capacity to function properly with the system proposed by the tenderer and the tenderer should indicate the cost of additional or replacement infrastructure.

5.4.3 The system proposed by the tenderer should at least make sure that different servers are utilized for different applications such as:

5.4.3.1 Database functions
5.4.3.2 Management applications
5.4.3.3 Transactions
5.4.3.4 Encryption/ Security
5.4.3.5 Disaster Recovery

5.4.4 The vending solution should be designed to use a relational database and run as a hosted solution.

5.4.5 In order to simplify the third-party integration, process the system will comply with Eskom XMLVend 2.1 (or later). It would be preferred that the system is native XML i.e. that there is no translation interface between the system and an XML client and that all client/server interfaces are based on the XML standard.

5.4.6 The system shall be a single database solution which from which both management functions and vending take place for all meter and utility types. All updates to customer data shall be immediately available at vending terminals and all transactions made at all sales outlets shall be immediately available for reporting on.

5.4.7 The vending terminal solution shall be web based or a web application that automatically updates from the host server should updates be posted. Security and data encryption will be provided by mutually authenticated SSL between the vending terminal and the server.

5.4.8 The solution should have the capability to provide pre-paid vending services over the internet/intranet. Customers should be able (should City Power wish to activate these options) to purchase prepaid Electricity either via the Internet or a cell phone as follows:

5.4.9 A registered service on the web where the customer registers for the service. This includes providing the required financial information and then simply authenticating on every transaction. City Power's vending and credit management rules shall still be applicable and transactions shall be made against City Power local vending system not an offline copy.

5.4.10 The system should cater for integration to vending mechanisms such as automatic cash handling machines, self-service terminals and other third-party vending networks by providing an API specification to the alternate provider. The tenderer shall assist with implementation and integration testing.

5.4.11 The solution shall be able to function on low-bandwidth requirement between remote vending points (credit dispensing units) and the central prepaid system (system master station) and optimized to run over networks (such as GPRS), with the maximum packet size being minimal and clearly indicated. GPRS/WIFI/ADSL/DIGINET connection points should be created on the City Power infrastructure.

5.4.12 The vending system shall cater for integration with the systems/applications in use. City Power uses SAP as the financial system. The nature of the integration catered for shall include periodic bulk export/import of arrears balances/collections to/from the billing system.

5.4.13 The service provider shall indicate their approach to the requirements of mSCOA with respect to data exchange between systems.

5.4.14 The system shall cater for storage of all information to comply with financial services regulations (e.g. the storage of all sales/vending transactions).

5.4.15 The vending system will provide a web-based interface to allow for management functionality and reporting over City Power Intranet and internet. Connections will be secured by mutually authenticated SSL between the management terminals and the web server. The standard Microsoft edge will be used for this. The system shall ensure that the program supports the latest version of Microsoft Edge r and always keep up with updates by Microsoft. Tamper monitoring and specific technologies to effect notifications in this regard should be catered for in the solution.

5.5 OPERATION REQUIREMENTS

5.5.1 The administrator(s) shall have the option to link directly into the server from their offices for e.g. management, reports, etc. Maintenance staff shall have the option to link into the system over a 3G data connection from remote locations to perform customer maintenance functions.

5.5.2 All licenses required shall be clearly defined and a list provided with license cost. All limitations shall clearly be indicated.

5.5.3 All current data on the current vending systems used by City Power shall be catered for on the proposed vending system. The last 3 years' data shall be migrated into the proposed vending system from the current vending system.

5.6 ACCESS

5.6.1 It shall be possible to allocate access rights into the system into users and user groups.

5.6.2 Access rights allocations shall be transferred during the data migration process and distributed throughout the system.

5.6.3 The vending system shall allow for activation of password ageing functionality.

5.6.4 If this function is activated, the password of the particular user shall expire after a definable amount of time. Early password expiry warnings shall be available.

5.6.5 In addition, a concurrent log-in limit for log-in attempts is also required.

5.6.6 User IDs not used or disabled permanently shall not be able to be removed from transaction history data.

5.6.7 A full audit trail on user IDs and movement shall be kept.

5.6.8 Access rights shall be configured to City Power User Management Policy.

5.7 ARREARS

5.7.1 The vending system offered by tenderer shall make it possible for the municipality to deduct arrears from money tendered by consumers to purchase pre-paid electricity.

5.7.2 The vending system shall be able to define within the applicable arrears scheme and/or credit control policy of the municipality different arrears recovery categories/indexes.

5.7.3 Within each category/index, the system shall allow for various recovery alternatives such as:

5.7.3.1 Fixed percentage of transaction recovery

5.7.3.2 Availability charge recovery on a monthly or daily basis

5.7.3.3 Full arrear payment recovery

5.7.3.4 Partial or percentage-based arrear recovery and limited sales

5.8 BLOCKING

5.8.1 The vending system offered by the tenderer will allow for profiled blocking of purchases by customers based on arrears balances in specific account types.

5.8.2 Blocking will be configurable by account type and will allow for either no sales or limited monthly sales to customers with arrears balances.

5.8.3 Customers with shared service accounts will all be unblocked simultaneously when any one blocked account is paid in full.

5.9 mSCOA

5.9.1 The service provider shall indicate their approach to the requirements of mSCOA with respect to data exchange between systems.

5.9.2 The service provider shall provide proof of at least one on-line integration with a billing system where arrears balances are updated, and transactions are posted to the billing system real-time.

5.10 ENGINEERING

5.10.1 The system shall make provision for the generation of all STS engineering vouchers directly from the management terminal and these vouchers can be printed, viewed (without printing) or sent via SMS.

5.10.2 An Android compactible or similar smart phone-based Engineering application shall be provided.

5.10.3 The application shall allow for issuing of engineering tokens and for field meter replacements with an audit trail including GPS coordinates.

5.11 FREE ISSUES / REPLACEMENT TOKENS

The vending system should allow the issuing of vouchers free of charge with the requirement to add reasons and free text notes to each issue.

5.12 KEY MANAGEMENT

5.12.1 The vending system shall support the upload of key management files (KMF) into the system database to configure and connect encryption devices, for STS encryption algorithms.

5.12.2 This can be used to load details of new area keys into the encryption device.

5.12.3 STS certification is required, in the name of the bidding company, to a minimum of STS Edition2: IEC62055-41 Ed3, including Electricity and Water units and currency vending and Key Management and Engineering tokens, conforming to a minimum of Edition 1.9 of the STS standards.

5.12.4 Security modules in use shall be the Prism STS-6 type module.

5.13 VENDOR CREDIT MANAGEMENT

5.13.1 The vending system should allow a limit for the amount of credit that any individual terminal or group of terminals in the system can issue without re-authorization. This amount can be defined per terminal.

5.13.2 The credit update of a terminal shall be done by a supervisor (or another user with appropriate access rights) updating the credit limit via the management interface.

5.13.3 All updates will be recorded; the records will include the previous credit balance and the user identity, the date and time of the update and a reference field with free text entry.

5.13.4 The update will automatically print for audit purposes.

5.13.5 Electricity and Water token limits will be set at terminal group level. These limits may be exceeded by operators with the input of a password to confirm the transaction value.

5.14 MESSAGES

The vending system should allow the utility to define voucher messages that are printed at the bottom of the printed voucher. The municipality shall have the option to change the messages according to requirements.

5.15 REGISTRATION

The vending system shall be able to track any historical connections between the meter, point of connection and the consumer.

5.16 VENDING

5.16.1 Vending to a consumer shall only be possible when a point of connection and meter are linked to the consumer and a tariff has been selected.

5.16.2 The customer shall still be able to do payments although blocked for pre-paid Electricity and Water sales.

5.16.3 Should the information on the database differs from the information on the meter card, no token shall be generated.

5.16.4 Free Basic Electricity and Water shall be issued to identified indigents based on the Municipalities Indigent policy.

5.16.5 The indigent register is updated monthly and the system shall accommodate these updates monthly or as requested.

5.16.6 Free Basic Electricity and Water tokens shall be SMS'ed to those indigents that have registered mobile numbers immediately the new register becomes available.

5.16.7 The tokens shall also be available to the Indigent customers at all points of sale on request. Additionally, a USSD based service request shall be available for the customers to request their tokens from their mobile phones.

5.17 SEARCH AND FILTER

5.17.1 The vending system should support full search for the following items in registration:

5.7.1.1 Consumer surname,

5.7.1.2 first names,

5.7.1.3 ID number,

5.7.1.4 postal address details,

5.7.1.5 comments, blocking codes, account number,

5.7.1.6 erf number, point of connection, meter serial number.

5.17.2 All of these searches can be incremental searches or full word searches.

5.17.3 Once the search criteria are entered, the system shall display the first record matching the search condition or the closest field at any one time for the search.

5.18 REPORTS

5.18.1 The vending system should support a set of standard reports and the capability to customize and / or create new Reports.

5.18.2 The tenderer undertakes to add or alter reports according to the needs of the Municipality for at least the first six months free of charge.

5.18.3 Printer selection and formatting according to operating system availability shall be supported.

5.18.4 Exporting of all reports to at least Excel or PDF shall be supported.

5.18.5 It should be noted that a Month Management Report is a mandatory requirement and samples of this shall be submitted with the tender.

5.18.6 The reports required should include:

5.18.6.1 <u>Standard operator reports</u>

a) Operator actions between dates grouped by date
b) List of all users registered on the system
c) List of all the user's groups and their functions
d) List of all the groups and their respective functions

5.18.6.2 Standard consumer reports

a) Number of consumers registered by town between dates
b) List of POC'S grouped by system area code
c) List of all STS meters registered on the system
d) List of towns registered on the system
e) List of disconnected meters by POC between dates
f) List of disconnected meters by disconnect reason between dates
g) Consumer information for POC'S
h) Total new connections per town
i) Total installed meters per town
j) Meter replacements per town
k) All consumers in alphabetic order

5.18.6.3 Standard transaction reports

a) List of transactions grouped by date between dates
b) Sum of transactions grouped by transaction type and tariff
c) List of credit and debit card transactions between dates
d) Total Electricity and Water bought between dates by consumer
e) Free issues between dates per meter
f) Cheque List between dates
g) Low purchases of Water over a specified period
h) Total Electricity and Water bought in the last 30 and 90 days
i) Breakdown of consumer's purchase times between dates
j) Balancing report of credit amounts used against physical transactions
k) Reversals between dates
l) Summary of all end of shifts for a user between dates
m) All transactions for a meter between custom dates
n) Arrears owed by consumer
o) Daily cash reconciliation report
p) All transactions for a account between dates
q) Low consumption report
r) Indigent high purchase report
s) Total sales by town
t) Total sales by operator
u) All transactions for one shift on one user
v) Shift details for one user
w) IBT customer purchase breakdown with graph
x) IBT month sales analysis by Tariff Class

5.18.6.4 Engineering Reports

a) Current power limit for a meter
b) Current power limit for all meters
c) Audit trail on Amperage changes
d) Reports in the vending system shall be able to be previewed before printing.
e) Detailed consumption report
f) Do amount of units vending

5.19 SOFTWARE

The vending system should be able to use/support the Windows 11, or latest software/operating systems

5.20 TARIFFS

5.2.1 The vending system shall support the use of vending based tariffs.

5.2.2 The system shall cater for pre-defined tariffs by date to be created in advance.

5.2.3 Tariff structure of current vending systems shall be accommodated.

5.2.4 Meter Tariff Index and Customer Tariff Class shall not be linked in the system in order to avoid key changes when tariffs are changed, for instance from an Indigent to Domestic tariff.

5.21 BLOCK TARIFFS

A block tariff module or stepped tariffs shall be able to be defined.

5.22 VAT

The vending system shall support the use of vending-based VAT where the VAT is calculated at the time of vending.

5.23 SECURITY

5.23.1 The vending system interconnections shall be secured with mutually authenticated SSL certificates.

5.23.2 Passwords shall meet the Auditor General's requirements in terms of complexity and expiry.

5.23.3 An One Time Pin for system administrators shall be provided for password reset purposes

5.24 ACCOUNT PAYMENTS

5.24.1 In vending, it should be possible to pay off arrears amounts or portions thereof separately from the purchase of actual Electricity and Water.

5.24.2 The solution shall also allow for debtor payments and sundry payments as and when required by City Power. This functionality will allow and provide City Power the capability of collecting account payments, arrear amounts as well as sell pre-paid services.

5.24.3 The business rules of the municipality will apply at all times. Current account amounts, arrear amounts, linked account amounts and blocking codes will be transferred from the financial system to the vending system.

5.24.4 The system shall make provision for capturing of debit– and credit cards payments and cancellation of payments (not tokens). Cancellation options shall be linked to access rights.

5.24.5 The system shall work in such a manner that the pre-paid Electricity and Water sales as well as the account payment amount be deducted from the credit amount on the dispensing unit.

5.24.6 The system shall make provision for account payments on conventional meter accounts and rates accounts.

5.24.7 The cashier shall be warned before a transaction is finally accepted.

5.24.8 The system shall allow the cashier different search options but at least the following:

5.24.8.1 Swipe meter card

5.24.8.2 Manually key in meter number

5.24.8.3 Manually key in billing account number

NOTE: The debit card and credit card options shall be configurable for each workstation.

5.25 VENDING AMOUNTS

For each workstation in a vending system, a list of predefined typical purchase amounts shall be able to be setup individually.

5.26 THIRD PARTY VENDING

5.26.1 The service provider shall be integrated with third party vending service providers to provision the Municipality with a broad-based third-party footprint to sell prepaid Electricity locally and nationally.

5.26.2 The footprint shall include retail chain stores, banks, petrol stations web-based sales using credit card and/or EFT, and non-retail vendors.

5.26.3 The service provider shall indicate the process and cost, if any, of deploying additional footprints with non-retail (informal) vendors to areas where there is deemed to be insufficient coverage.

5.26.4 The service provider should indicate the policy and process that they use to deal with non-retail (informal) vendors that are over-charging customers.

5.26.5 The service provider shall describe in detail their remittance process where monies collected are paid across to the municipality within at least 2 to 3 working days.

5.26.6 This shall include payment schedules and administration requirements.

5.26.7 A list of vending sites or proposed vending sites, retail stores, and banks that will be made available shall be provided.

5.26.8 Only one level of aggregation is allowed; no sub-aggregators shall be enabled in order to control the vending footprint effectively.

5.26.9 Please note: the municipality will not allow voucher-based vending to its customers.

5.26.10 A supporting letter from the aggregator(s) is required.

6. TECHNICAL REQUIREMENTS

6.1 WORKFORCE MANAGEMENT TOOL

6.1.1 The Tenderer will provide an Android based audit application downloadable from the Google Play Store, which utilises a phone GPS and camera to record audit data, as well as referencing back to the vending system to validate customer and address details.

6.1.2 Data such as last purchase dates and averages shall be presented to the auditor in order for them to make informed decisions while they are carrying out the audit.

6.1.3 The application shall allow for job card functionality and the scheduling of audits and routes.

6.1.4 The application shall allow for online meter replacements and TID updates and for basic engineering tokens to be made, according to the user profile.

6.1.5 The application shall also allow for offline audit operations as these are data intensive and shall be synchronized when the user is in a Wi-Fi zone.

6.1.6 Audits shall be reported on and reviewed from a web portal which shows the audit activity on a map and is able to present the GIS data to the municipality for updating their GIS system data.

6.1.7 Further to this, the spatial data shall be made available to be incorporated in the mainstream Vending solution once the audits have been completed.

6.1.8 The audit process shall include data cleansing, with updates for account numbers and customer data as a minimum.

6.1.9 Any fines or charges to be levied to the customer for tampering shall be automatically calculated or shall be recorded for approval and implementation at a later stage.

6.1.10 The Management Portal shall store all audit evidence and shall be easily accessible by the municipality's management team. Such audit evidence shall include the audit findings, photos, and vending profiles. The audit evidence shall be exported into both excel and pdf formats.

6.2 AUDIT PROCESS REQUIREMENTS

6.2.1 Stand-by support is required as detailed in this document.

6.2.2 Disaster recovery and business continuity as specified.

6.2.3 It will comprise the provision of data management and revenue protection services for City Power areas.

6.3 OUTPUT REQUIREMENTS

The following shall be provided as a minimum.

6.3.1 A full data cleans up and mapping of all audited meters and customers in the field to the pre-payment and financial database of the municipality.

6.3.2 Detailed GIS data indicating all findings in the field, Meter types, and customers not at home and other additional key information will be required. The GIS field information forms part of the management console required for sustainable management.

6.3.3 Detailed progress reports shall be presented, coupled with feedback/monitoring reports on a weekly/monthly basis.

6.3.4 Data and revenue protection sweep audits and TID Rollover services.

6.3.5 Data and Revenue protection targeted audits and TID Rollover services

6.3.6 Data and Revenue protection remedial actions.

6.3.7 Provision of a detailed reference database.

6.4 Sweep Audit plus TID Rollover Service

6.4.1 Full technical audit of an entire area's meters supervised by a licensed wireman including removing the meters and checking the installation.

6.4.2 Upstream load testing (of for example geysers / stoves on under "no meter load" conditions).

6.4.3 Recording of mandatory information related to each endpoint (linked to a spatial GPS coordinate).

6.4.4 Capturing high-quality photo of installation and ''front of house'' to confirm addresses.

6.4.5 Sealing of the meters with municipality approved seals.

6.4.6 Performing the TID update if the meter is identified as a KRN 1 meter. See TID Rollover for details required in this process.

6.4.7 Importing the information into a central repository.

6.5 Targeted Audit plus TID Rollover Service

6.5.1 Full technical audit of specific statistically identified potential tamper / bypass prepaid meters supervised by a licensed wireman. Including removing the meters and checking the installation.

6.5.2 Upstream load testing (of for example geysers/stoves under "no meter load'' conditions).

6.5.3 Recording of mandatory information related to each endpoint (linked to a spatial GPS coordinate).

6.5.4 Capturing high quality photo of installation and ''front of house'' to confirm addresses.

6.5.5 Sealing of the meters with municipality approved seals.

6.5.6 Performing the TID update if the meter is identified as a KRN 1 meter. See TID Rollover for details required in this process.

6.5.7 Importing the information into a central repository.

6.6 Remedial actions

6.3.3.1 Technical remedial meter disconnections of identified tamper/ bypassed prepaid meters carried out by a suitably qualified technician.

6.3.3.2 Technical remedial actions to remove tamper / bypass of identified tamper / bypassed prepaid meters carried out by a suitably qualified technician.

6.3.3.3 Recording important information related to each action.

6.3.3.4 Capturing photo of installation and importing the information into a central repository.

6.7 TID Rollover

6.7.1 Using the Management Tool, online identification of meters requiring updates.

6.7.2 Confirmation sign-off that there are no tokens outstanding by the customer.

6.7.3 Re-entry of the last five tokens purchased by the technician.

6.7.4 Perform the TID update with a key change token and enter a 0.1kWh test token

6.7.5 Automatic on-line update of the vending system meter record when the TID process has been completed.

6.7.6 Import the information into a central repository.

6.8 Revenue Enhancement Services

Revenue Enhancement Service to improve Revenue Collection and Service Delivery shall include;

6.8.1 Credit Control.

6.8.2 Debt Collection.

6.8.3 Revenue Protection.

6.8.4 Indigent Management.

7. INSTALLATION AND CONFIGURATION.

City Power requires installation and configuration, which entail set-up services, implementation, project management and deployment services. The tender shall have a proven experience and at least five-year track record for providing services of this nature and may be required to demonstrate their solution and provide physical proof of the in-field tools used for these services.

8. TRAINING

8.1 The Service Provider shall clearly outline the layout of the recommended enhanced training

8.2 The Solution Provider shall work closely with City Power's resources during the implementation in a live environment to ensure practical knowledge transfer.

8.3 City power require the necessary training for system administrators. We expect this training to be on-site as part of the implementation process.

8.4 The Service Provider shall also be required to provide training to City Power technical representatives on the system when enhanced features and functionality becomes available as the system is upgraded.

8.5 The suppliers shall provide technical support on system and equipment queries for the duration of the contract.

9. DOCUMENTATION

9.1 Technical product catalogue and operating manuals for all equipment shall be provided.

9.2 A copy of proposed maintenance schedules shall be provided.

9.3 Documentation for all equipment and services rendered shall be provided in both hard and soft copy.

9.4 The Service Provider shall perform and provide City Power with reports detailing performance, diagnostic test and overall functioning and availability of the system and related equipment.

9.5 A comprehensive summary describing each test shall be provided on request.

10.QUALITY MANAGEMENT

A Quality Management System shall be set up in order to assure the quality of the Audit tool archiving solution during design, development, production and servicing. Guidance on the requirements for a quality management system may be found in the following standards: ISO 9001:2015. The details shall be subject to agreement between the City Power and Supplier/Contractor.

11.HEALTH AND SAFETY

A Health and Safety Plan/System shall be set up in order to ensure proper management and compliance of the Audit tool-archiving solution during installation, operation, maintenance, and decommissioning phase/s. Guidance on the requirements of a Health and Safety Plan/System may be found in ISO 14001:2018 standards. This is to ensure that the asset/service conforms to standard operating procedures and City Power SHERQ Policy. The details shall be subject to agreement between City Power and the Supplier/Contractor.

12.ENVIRONMENTAL MANAGEMENT

An Environmental Management Plan/System shall be set up in order to ensure the proper environmental management and compliance of the Audit tool archiving solution during its entire life cycle (i.e. during design, development, production, installation, operation and maintenance, decommissioning as well as Rehabilitation, Recycling or Disposal phase/s). Guidance on the requirements for an environmental management plan/system may be found in ISO 14001:2018 standards. The details shall be subject to agreement between City Power and the Supplier. This is to ensure that the asset created conforms to environmental standards and City Power SHERQ Policy.

Annex - A Bibliography

None

Annex - B Revision information

DATE	REV. NO.	NOTES
APRIL 2019	0	FIRST ISSUE
JULY 2024	**1**	REVISION GENERAL EDITING