



ELECTRICITY SUPPLY CORPORATION OF MALAWI LIMITED

MALAWI ELECTRICITY ACCESS PROJECT

RFB No MW-ESCOM-196024-GO-RFB

Contract Title: Supply and Delivery of Cables, Conductors, and Clamps

Amendment No. 01

Date: 29 March 2021

Amendment 01 to Request for Bid

This amendment is being issued on 29 March 2021 and will be called Amendment No. 01 for RFB No: MW-ESCOM-196024-GO-RFB. Bidders are requested to take note of this Amendment and take into consideration where applicable during preparation of their bids.

Amendment 01 amends the following:

No	Page	Specifications Type	Tender Requirement (Description)	Bidders Question	ESCOM's Response
1	Page 76 & 86 Technical specifications (Item No 1).	Manufacturer Credentials & Documentation & ROUTINE & TYPE TESTS	<p>MID accredited manufacturer CE (Certificate European) accredited manufacturer and</p> <p>Attach routine and type test certificates approved by an independent authority of international reputation</p> <p>Pre-shipment inspection to include but not limited to 1. Viewing of original CE certificates for the meter type being shipped (ESCOM employees to verify with CE</p>	As a professional metering supplier, we are ISO9001, ISO14001, ISO17025, ISO27001 and OSHA18001 certified manufacturer, can you please confirm if those ISO and OSHA certificate is acceptable as a replacement of MID and CE certificate?	Please note that MID and CE are a minimum requirement hence alternative submissions are not subject to clarification as long as they are internationally accepted standards and meet at least the minimum requirements.

			of Europe) or other internationally accredited certificates 2. Viewing of original MID Certificates for the meter type (ESCOM employees to verify authenticity of MID certificates) or other internationally accredited certificates		
2	Page 79 Technical specifications (Item No 1).	Guarantees:	Not less than 15 years life expectancy	Please clarify if any life certificate mandatorily required from a supplier for 15 years life expectancy.	Bidders to provide certificate as evidence demonstrating that the meter has not less than 15 year life expectancy.
3	Page 78 Technical specifications (Item No 1).	Default Settings:	Meter must require meter specific commissioning code	The meters have specific commissioning (a same) code for our own meters, Is this what you need?	Yes, the supplier must provide a code to enable commissioning, no plug and play. The supplier to provide universal code for all the meters.

4	Page 79 Technical specifications (Item No 1).	Mechanical & Constructional	External outlet for Field Support Device (Describe)	Please kindly detail the requirement with example as we don't fully understand what kind of description ESCOM might prefer.	A brief description on interfacing with other devices such as, but not limited to these, optical interfacing ports for data extraction, hard wired terminals for controlling devices e.g. transmission of a signal to any device by the use of rs485 or rs323 etc.
5	Page 80 Technical specifications (Item No 1).	Mechanical & Constructional	In addition to having a super-capacitor, meter should also have a lithium ion battery of more than 10 years life expectancy	Our battery is designed to support more than 10 years life expectancy, which is serving the same purpose energy back up, in this case please kindly confirm if the super-capacitor and lithium ion battery requirement can be disregarded.	Bidders must comply to the technical specification.
6	Page 82 Technical specifications (Item No 1).	Display indicators, Facilities & Capacities	Easily changeable communication module	Normally the communication module for Din-Rail meter is built in design and not be able to change. Please kindly clarify if the Easily	This is correct. The CIU must be replaceable and should be usable on other meters.

				changeable communication module means the CIU(customer interface Unit) can be changed in the event the CIU is not working properly or broken or loss.	
7	Page 90 Technical specifications (Item No 2).	Single Pole 63A hydraulic magnetic miniature circuit breaker (Guarantees)	Not less than 20,000 on-off electrical operations at rated load or higher loads Not less than 20,000 on-off mechanical operations	According to the IEC 60947-2 standard, 63A MCB the mechanical operations can reach 20,000 times, the electrical operations should reach 10000 times, will 10,000 on-off electrical operations also acceptable?	10000 times electrical operations, with 20000 mechanical operations as per IEC 60947-2 standard is acceptable.
8	Page 92 Technical specifications (Item No 2).	Single Pole 63A hydraulic magnetic miniature circuit breaker (Mechanical Construction)	Terminal screws able to withstand fastening torque of not	As we know, the rated current is 63A, for 63A MCB the maximum of the cable is 16mm ² , and the fastening torque of 4.5N.m is	Please comply with the technical specification.

			less than 4.5 Nm	exceed the screw's maximum value, and it can destroy the screw, so please confirm if it is acceptable if we provide terminal screws' fastening torque no less than 2.0 N.m that fulfills the standard.	
9	Page 90 Technical specifications (Item No 2).	Single Pole 63a Hydraulic Magnetic Miniature Circuit Breaker		What's the pole number for the MCB, from the Meter Box's dimension and requirement, we suppose 1P, is it right? Shall we provide 1P MCB	The 1P(Pole) is Correct
10	Page 98	Ready Board > System	Type of Miniature circuit breakers (MCB) B	Is the B type Miniature circuit breakers include the 32A RCCB ? Is it include all of the MCB in the ready board?	The type B includes all the 4nos MCB and NOT the 32A RCCB since the trip characteristics of this is defined by the leakage current.

11		Section 4 - ready board	Protection: light chamber IP67	<p>For light chamber, IP65 is more than enough for the protection due to its common application as an indoor devices. Even working as an outdoor device, IP65 is enough for the water shielding. According to the ingress protection level: IP65 is dust tight and water project from a nozzle. IP67 will require a water immersion for 30minutes at 150mm~1000mm deep which is completely overshoot considering its application. Thus, we suggest using IP65 as the light chamber protection level.</p>	Bidders to comply according to specification
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12	Page 45-46	Financial Capability	Average Annual Turnover & Financial Resources & Debt Ratio.	Do you have standard forms for us to fill in order to demonstrate these financial capability?	Bidders are expected to provide audited annual financial statements.
13		Section 4 - ready board.	Protection: outdoor protection IP54	<p>From our experiences, the ready board is largely used indoor or under sufficient water shielding cover where IP41 is usually enough. Moreover, a device like ready board which has one or two sockets on its front panel, IP54 is hardly achievable due to the natural opening of the socket.</p> <p>Thus, we kindly ask ESCOM to accept a lower IP standard such as IP41.</p>	Bidders to comply to specification
14	Page 142	GCC 28.3	The period of validity of the Warranty shall be: 12 Months	On Page 76(GCC), it mentioned" 24 months warranty from day of installation" and on page 142(SCC) it	Confirmed. The warranty period is 12 months.

				specified the period of validity of the Warranty shall be: 12 Months, we understand the warranty shall be 12 month from the date of delivery, please kindly clarify and confirm if our understanding is correct.	
16	Page 76 & 86 Technical specifications (Item No 1).	Manufacturer Credentials & Documentation & ROUTINE & TYPE TESTS	Viewing of original CE certificate for the meter type being shipped (ESCOM employees to verify with CE of Europe)	Do Not have CE, and we have EU country sales records and user reports.	Bidders must comply to specification as minimum requirement
17			Viewing of original MID certificate for the meter type (ESCOM employees to verify authenticity of MID)	Do Not have MID certificates, but we have KEMA reports.	Bidders must comply to specification as minimum requirement

			certificates) or other internationally accredited certificates		
18			Randomly picked meters tested for IP56	Not supported, our meter is designed with IP54	Bidders must comply to specification as minimum requirement
19			The supplier should interface the MDM system and DCU.	Please clarify the DCU manufacturer and system supplier, It is better to use our DCU and HES to interface the utility MDM. It will reduce lot of interface cost.	Bidders must comply to specification as minimum requirement
20		Communication	Measurement control unit (MCU) minimum IP56 to ensure no water ingress in semi-outdoor situations (When meter is in pole-top enclosure)	The MCU case is ultrasonic welding, the terminals are located at the bottom of MCU with terminal cover, and the MCU is installed in meter box, the protection class IP54 can meet the requirement to ensure no water ingress in operation, Could you please confirm is IP54 acceptable?	Bidders must comply to specification as minimum requirement

21		Display Indicators, Facilities & Capabilities	Credit low warning acknowledgement	<p>The buzzer and LED alarm are configurable to remind customer in case of the credit low warning, The customer can then confirm the warning by pressing the key of UIU to stop buzzer alarm.</p> <p>Could you please confirm if the above function meets requirement?</p> <p>If not, could you please clarify that the meaning of "Credit low warning acknowledgement?"</p>	This is correct understanding
22		Mechanical & Constructional	Non-membrane type keypad with audio feedback upon key press. Keypad configuration, telephone standard	<p>Could you please confirm that is it mandatory the keypad in telephone standard form?</p> <p>Does 4*3 display also works?</p>	Comply to the technical specifications

23		Display Indicators, Facilities & Capabilities	Supply to load connection indicator, Consumption rate LED.	<p>On UIU, there are Power supply status LED, Remaining credit warning LED and Relay status LED.</p> <p>On the MCU, there are Energy pulse output LED, Remaining credit warning LED, Communication LED and Power supply status LED.</p> <p>Could you please confirm if it meets requirement?</p>	Bidders must comply to specification as minimum requirement
24				<p>According to the functions listed in this section, Could you please confirm that if the meter need to be equipped with an upstream AMR/AMI communication module (RF/PLC etc), and need to meet these functions in the sample demonstration provided later?</p> <p>If yes, is it required to provide data concentrator and HES?</p>	Bidders must comply to specification as minimum requirement

25		Display Indicators, Facilities & Capabilities	Display the estimated time to disconnection on the CIU	Does it means that calculating the estimated disconnect time based on current remaining credit? For example, estimate the daily electricity consumption based on the electricity consumption in the past 7 days or one month, and then calculate the number of remain days or hours the customer can use electricity.	Yes, the meter should display on the CIU the estimated time to disconnection for the remaining credit, based on consumption history.
26	Page 95	System	Configuration 1 phase /3 phase &neutral plus earth -yes	In this tender request, there is no requirement for three phases, could you please confirm?	Yes. Single phase application only
27	Page 95	System	Overcurrent protection Device required -10A	Could please clarify the number of MCB`s, the number reserved MCB positions and the electrical connection relationship between MCB and socket and lamp?	Provide 1*10A MCB for sockets and 1*5A MCB for lights and 2 reserved MCB positions for future expansion
28	Page 96	Bus bars	Arrangement of socket outlets	Could you please provide the related	This has been amended. Please see amendment 1

			and circuit breakers to be in accordance with sun clause 4.6.1.2 of SANS 1619? - Yes	specification in the sub-clause 4.6.1.2 of SANS 1619? Could you please confirm does the below arrangement of socket outlet and circuit breakers meet the requirement? 1*32A RCCB +2*1POS 10A MCB in the ready board upper left corner 2*G&M Sockets are evenly distributed in the lower panel of the Ready board.	
29	Page 96	Bus bars	Number of sockets –2 Sockets Types – G&M	Could you please confirm the sockets selection for ready boards 1*TYPE G socket and 1*TYPE M or 2*TYPE G or 2*TYPE M	The sockets selection for ready boards is 1*type G and 1*type M
30	96	Bus bars	Bus Bar, Page 96 Rated short time (1s) withstand current for bus bars –15KA	According to standard BS EN61439-1 Clause 9.3.2 – “Information concerning short-circuit withstand strength”, & Clause	Yes these two tender requirements are not applicable to the ready boards.

			Rated peak withstand current for bus bars—17KA	10.11.2 – “Circuits of ASSEMBLIES which are exempted from the verification of the short-circuit withstand strength”, A verification of the short-circuit withstand strength is not required for the following: 1) ASSEMBLIES having a rated short-time withstand current (see 5.3.5) or rated conditional short-circuit current (see 5.3.6) not exceeding 10 KA r.m.s. 2) ASSEMBLIES protected by current-limiting devices having a cut-off current not exceeding 17 KA at the maximum allowable prospective short-circuit current at the terminals of the incoming circuit of the ASSEMBLY 3) Auxiliary circuits of ASSEMBLIES	
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				<p>intended to be connected to transformers whose rated power does not exceed 10 KVA for a rated secondary voltage of not less than 110 V, or 1,6 KVA for a rated secondary voltage less than 110 V, and whose short-circuit impedance is not less than 4%.</p> <p>The ready board short-circuit protective device (SCPD) incorporated in the incoming unit (32A RCCB), and the interrupting capacity is less than 17 KA at the maximum allowable prospective short-circuit current. It is used by household user.</p> <p>Could you please confirm these two tender requirement (Rated short time (1s)</p>	
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				withstand current for bus bars – 15KA, Rated peak withstand current for bus bars – 17KA) are not applicable for this ready board?	
31		Display Indicators, Facilities & Capabilities	Display instantaneous <i>power consumption</i> on a bar graph; Continuous <i>power consumption</i> accounting, value can be negative or positive.	Could you please confirm if the "power consumption" is the "Total KW power"? Is it required to display a bar graph symbol on LCD to indicate instantaneous KW power?	Correct it refers to total kw power being drawn. The bar graph should only display credit values and not instantaneous consumption.
32				The bidding document only stated that the incomer aluminum cable shall be 25mm ² and didn't mention on the exiting aluminum cable size (ALU cable from meter box to customer). Considering that a 16mm ² aluminum cable can withstand maximum 80A, and the maximum current rating for meter is	Bidders must comply to the bidding document specification as minimum requirement.

				<p>80A, we reckon 16mm² is enough for exiting aluminum cable.</p> <p>The picture below is showing the 16mm² exiting aluminum cable connect the meter well through the copper to aluminum terminal.</p>  	
33	96	Enclosure	Enclosure, Page 96 Provision of two pre punched knock out holes at the bottom and sides -- Yes	The ready board support up to 9 knockout holes on the side and bottom, could you please confirm whether we need knockout before shipment?	Please comply with the technical specification. No need for knock out before shipment. Knocking out will be done on site based on the individual requirements.
34		Part 2. Busbars Page.94	To be fitted with incoming and outgoing bimetallic terminal blocks	For bimetal terminal blocks, we suggest using bimetal (copper - aluminum) terminal block (or understand as	Bidders must comply to the bidding document specification as minimum requirement.

				<p>busbars) for incoming wiring. While for outgoing wiring, we propose to use 4 (2 for each meter output LN) bimetal terminals instead of terminal blocks.</p> <p>Through the proposed way, it will be easier for the installer to fit the incoming & outgoing wires and also prevent copper - aluminum corrosion. Moreover, the solution we provide is the most cost-effective solution. Since the bimetal terminals are much cheaper than bimetal terminal blocks (busbars), as It is clear that 2 busbars + 4 terminals will be cheaper than 2 incoming busbars + 4 outgoing busbars. (2 incoming busbars are referring to L&N)</p> <p>The picture below is showing the copper – aluminum terminal.</p>	
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				 <p data-bbox="1041 430 1333 651">Please kindly confirm if our proposal of 2 incoming bimetal busbars + 4 outgoing wiring of copper – aluminum terminals will be accepted?</p>	
35		Part 2. Enclosure Properties Page.92	Enclosure material : Thermo-compressed polyester or Polypropylene or Glass reinforced polyester	<p data-bbox="1041 721 1346 1036">For polyester and polycarbonate, both are durable materials. However, polyester is flammable and has poor heat performance, while polycarbonate is fire retardant and has better heat performance property.</p> <p data-bbox="1041 1040 1352 1263">For an enclosure to contain electrical component, we therefore suggest accepting fire retardant material of polycarbonate for better safety purpose.</p> <p data-bbox="1041 1295 1339 1393">Please kindly confirm if procuring entity accepts polycarbonate as well.</p>	Bidders must comply by meeting the specification as minimum requirement.

36	96	Enclosure	Enclosure, Page 96 Protection: Outdoor ingress protection IP54 (IEC 60529) – Yes Enclosure material IP – IP31	The requirements of Enclosure IP54 conflict with the requirements of Enclosure material IP31. Since the Ready Board products are used indoors, in our understanding IP31 can meet the requirements, could you please confirm?	Maintain IP54.
37		Section 4 - ready board.	Protection: outdoor protection IP54	From our experiences, the ready board is largely used indoor or under sufficient water shielding cover where IP41 is usually enough. Moreover, a device like ready board which has one or two sockets on its front panel, IP54 is hardly achievable due to the natural opening of the socket. Thus, we kindly ask ESCOM to accept a lower IP standard such as IP41.	Bidders to comply to specification

38	96	Mounting Indelible Marking	Mounting Indelible Marking, Page 96 Provision of mounting brackets -- see attached diagram -- Yes	The diagram for mounting brackets in Tender sheet is not attached. We provide 4 self-tapping screw mounting holes on two sides of the product shell, if the ready board can be installed on the wall or on the bracket, could you please confirm it is acceptable?	The diagram has now been provided. (See amendment No 1)
39	93		Meter Enclosure-Bus bar Termination type on busbars ; cage clamp	Is screw type acceptable?	Bidders shall comply to what was specified.
40	94		Meter Enclosure-Cable entry Number of entry points (minimum) Four (4)	Understand that the number of entry points required is for convenience of installation. Does two large size of entry points equipped with cable glands acceptable?	Bidders shall comply to what was specified.

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