

**Format for Query / Clarification / Deviation (QCD)**

Tender No: TPNODL/OT/2022-23/25N44  
 Package Name: RATE CONTRACT FOR SUPPLY OF 11KV RING  
 MAIN UNIT IN TPNODL AREA  
 The said format to be used only for any Pre-bid Query / Clarification/ Deviation on any of the Tender documents

S.No	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation	TPNODL Response
1	2	3	4	5
1	General		Kindly Specify if Metering Unit is required or not	Not Required
2	Pg. No 07 of 118 1.7 Qualification Criteria S.No: 1.7.1	The bidder should have average Annual Turnover of Rs. 3.00 Cr. In last 3 financial years from(FY17 To FY22). Copy of audited P&L account to be submitted in this regard with UDIN.	We will be bidding this tender under the name of Company, as we are manufacturers of RMUs under the license agreement with M/s. Schneider Electric up to 22 kV voltage level . For complying the QR criteria of annual turnover, we would like to use the credentials of our group company M/s. company - Kindly Confirm	Accepted subject other QR norms.
3	Pg. No 26 of 118 3.0 Climatic Conditions of Installation of RMU	1.Maximum ambient air temperature 50°C	The Offered RMU is designed for 630A at max ambient temp of +40 Deg C with temperature rise as per relevant IEC. The suitable current derating is applicable at higher temperature.	Bidder to comply as per relevant clause mentioned in tender documents.
4	Pg. No 54 of 118 4.0. GENERAL TECHNICAL REQUIREMENTS	41. Testing of Cable- If doors are opened then earth switch shall be in closed position with necessary interlocks and cable test rod fixing provision in bolt head which can be fixed on terminations through boot cap/opening for testing purpose AND if doors are opened it shall not be possible to operate, Isolator, E/Switch or CB through interlocks	Kindly clarify, is it mandatory to have a designed where, separate test bushing is provided without opening cable box.	This shall be as per Tender Specification
5	Pg. No 55 of 118 4.0. GENERAL TECHNICAL REQUIREMENTS	50.Fault passage indicator FPI on each LBS as a part of each RMU with specified default setting.	Kindly note, as per previous supply & tender specification it was observed that 1 FPI is provided for 2 LBS, kindly reconfirm that FPI to be provided on each LBS.	1 FPI per 2 LBS
6	Pg. No 58 of 118 5.1.5 Circuit Breaker for Transformer Local Feeder Control	The operating mechanism shall be compatible for remote/SCADA operation	We understand LBS to be motorized, kindly reconfirm	LBS is motorised
7	Pg. No 59 of 118 5.1.7 Bushings and Cable terminations:	2 runs, of 3CX400 Sq. mm, OR 1R of 3 NO. 1CX630 Sq. mm shall be used for cable termination.	Kindly note, due to compactness of the unit 2 run cable is not possible, we can provide 1Rx3Cx400 Sq.mm or 1Rx1Cx630 Sq.mm of cable.	Bidder to comply as per relevant clause mentioned in tender documents.

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8	Pg. No 61 of 118 5.1.12 Remote Control of the RMU	5.1.12 Preferred Communication protocol for FRTU shall IEC-60870-5-104. Signal requirement for field RTU (which shall be mounted near RMU) is attached (refer Annexure1). Bidder shall quote the cost of field RTU (FRTU) separately with all technical details for acquisition of the signal as described in Annexure-1.	Kindly clarify, RMU to be supplied with FRTU or FRTU will be procure separately. Kindly share the specification of FRTU. Also, share the revised price schedule with FRTU & clarify its impact in revised acution.	FRTU is not required. However, provision for interfacing (I/Os) must be given
9	Pg. No 62 of 118 7.0 TESTS FOR RMU	Type Test i) Salt Spray Test	Please clarify, if this is mandatory	YES
10	Pg. No 63 of 118 9.0 Pre Dispatch Inspection		Final inspection of the RMU shall be conducted at our Factory. All cost towards the To & Fro, lodging, boarding, local conveyance will have to be borne by TPWODL.	Accepted. Or the same may be done via VideoCon
11	ENG-ELC-54 dated 15.01.2022/Point No 46A/ CI No 4/Page No 54 of 118	Cable Termination Kit & Termination Boot in scope of Supplier. Cable Size in detailed Engineering Stage	Our offer is included with cable boot, kindly clarify on the supply of cable termination kit	Cable Termination Kit/ termination Boot shall be in Supplier's scope. <b>Make : 3M/ Raychem</b>
12	ENG-ELC-54 dated 15.01.2022/Point No 68/ CI No 4/Page No 56 of 118	a. LBS – ON/off b. ES- Open/ close c. CB disconnector- ON/off d. CB earth switch- Open/ close	We are unable to co-relate please clarify	PI ignore this clause
13	ENG-ELC-54 dated 15.01.2022/Point No 5(e)/ CI No 4/Page No 57 of 118	Aux Trnsformer : 24VDC from Battery Charger and 230 VAC from Aux PT in scope of Supplier (Aux PT is optional and to be Quoted Separately)	Where the price of Aux Transformer need to be quoted. Request you to please provide the revised price schedule containing space for unit rate of Aux transformer & spares ( which shall not be included in Price of RMU.)	Please refer the Annexure-1 (price schedule)
14	ENG-ELC-54 dated 15.01.2022/ CI No 5.1.5/Page No 58 of 118	An operating mechanism can be used to manually close the circuit breaker and charge the mechanism in a single movement.	The mechanism being used is stored energy, spring charged mechanism for manual charging it takes 8-9 stokes of handle to charge the spring. The closing operation is through a push button.	Accepted
15	ENG-ELC-54 dated 15.01.2022/CI No 7.0/Page No 62 of 118.(Type Test)	Test to check the total time taken to clear the faults (relay pick up+ Trip coil pick up + breaker trip) for instantaneous & time delay modes.under various settings of relay and trip coil thru secondary current injection.	This test shall be conducted as routine test in our factory.	Accepted. The same shall be done in presence of TPNODL representative.

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16	ENG-ELC-54 dated 15.01.2022/CI No 7.0/Page No 62 of 118 (Routine Test)	Sf-6 chamber pressure withstands/leakage test.	Pressure withstand test shall be type test & leakage test can be done as routine test.	OK
<b>A</b>	<b>TECHNICAL SPECIFICATION REF: ENG-ELC-054 (SPECIFICATION FOR 11KV RMU MOTORISED OUTDOOR TYPE)</b>			
1	ENG-ELC-54 dated 15.01.2022/Point No 13/ CI No 4/Page No 3.	Rated cable charging interrupting current of incomer load break switch	It shall be 26.5A instead of 10A.	Higher rating is accepted
2	ENG-ELC-54 dated 15.01.2022/Point No 32/ CI No 4/Page No 5.	Hermetically/robotically sealed unpainted stainless steel enclosure with SF6 Gas. Sealed pressure system by Laser welding so that no refilling of gas is required for 30 years. No gas work at site. Complete body shall be tamperproof to prevent access to live parts. No gaskets shall be used. No bolts shall be provided.	We will provide the same with TIG & MIG welding.	Bidder to comply as per relevant clause mentioned in tender documents.
3	ENG-ELC-54 dated 15.01.2022/Point No 35/ CI No 4/Page No 5.	Moving contacts of earthing switch shall be visible in closed position thru transparent covers AND closing shall be possible only when Isolator is open	As the contact are inside SS tank, the contacts are not visible but the mimic shows the true position of contacts as it is mounted on the contact operating shaft. Request you to accept the same.	Bidder to comply as per relevant clause mentioned in tender documents.
4	ENG-ELC-54 dated 15.01.2022/Point No 39/ CI No 4/Page No 5.	Make of Self-powered Relay & Offered Model - For TPNODL , Odisha - ABB, Ashida, Schneider, Siemens.	Only make is mentioned in this clause. Request to you, Please provide the complete model no of the Relay.	Ashida Relay - ADR241S-AM-761-09-01-28-01-00-10
6	ENG-ELC-54 dated 15.01.2022/Point No 42/ CI No 4/Page No 6.	Protection against theft Design of RMU shall be tamper & arc proof. Anti vandal screws shall be provided. Cable covers shall be pad lockable.	Padlocking arrangement is not available in Cable cover.However, cable cover are tamper & arc proof and shall be mechanical interlocked and can be opened in only earth positions.	Bidder to comply as per relevant clause mentioned in tender documents.
8	ENG-ELC-54 dated 15.01.2022/Point No 55/ CI No 4/Page No 7.	The mounting frame should be moveable up and down or to and fro but shall be fixed at coaxial position with base plat holes and bushing terminal bolts. The CT settings shall be adjustable between 50-150-300/1 Amp at terminal block. CT ratio is 50-150-300/1A, Burden is 2.5 VA, Class - 5P20.	To & Fro movement is not possible. Kindly note, due to compactness of unit we will provide CTs 50-150-300/1A, 5P10 instead of 5P20. Please accept the same.	Fixed type is acceptable . But there should be ample space for Cable upto 630sqmm.

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9	ENG-ELC-54 dated 15.01.2022/Point No 68/ CI No 4/Page No 8.	a. LBS – ON/off b. ES- Open/ close c. CB disconnecter- ON/off d. CB earth switch-Open/ close	We are unable to co-relate please clarify	Pl ignore this clause
10	ENG-ELC-54 dated 15.01.2022/Point No 5(e)/ CI No 4/Page No 9.	Aux Trnsformer : 24VDC from Battery Charger and 230 VAC from Aux PT in scope of Supplier (Aux PT is optional and to be Quoted Separately)	Where the price of Aux Transformer need to be quoted. Request you to please provide the revised price schedule containing space for unit rate of Aux transformer & spares ( which shall not be included in Price of RMU.)	Please refer the Annexure-1 (price schedule)
11	ENG-ELC-54 dated 15.01.2022/Point CI No 5.1.2/Page No 10.	The RMU shall be completed with all connection and tinned copper bus bar with continuous current carrying capacity of 630A at 40 Deg C ambient.	As the busbar is inside the SF6 insulated medium so busbar shall be of bare copper.	Bidder to comply as per relevant clause mentioned in tender documents.
12	ENG-ELC-54 dated 15.01.2022/Point CI No 5.1.3/Page No 10.	Circuit breaker shall not be closed in case Earth Switch is closed.	As our Disconnecter is on busbar side & Earthing is through breaker. Earthing is always through braker closed.	Bidder to comply as per relevant clause mentioned in tender documents.
13	ENG-ELC-54 dated 15.01.2022/ CI No 5.1.5/Page No 10.	An operating mechanism can be used to manually close the circuit breaker and charge the mechanism in a single movement.	The mechanism being used is stored energy, spring charged mechanism for manual charging it takes 8-9 stokes of handle to charge the spring. The closing operation is through a push button.	Accepted
14	ENG-ELC-54 dated 15.01.2022/ CI No 5.1.5/Page No 10.	The circuit breaker shall be associated with an integrated protection unit that will operate without any auxiliary power supply and shall include three toroid transformers incorporated in the transformer tee-off bushings,	CT shall be mounted on cable in the cable compartment	Accepted in case of RMU without metering unit
15	ENG-ELC-54 dated 15.01.2022/CI No 5.1.8/Page No 12.	The size of earth busbar of GI Strip (75X12 sq.mm) shall be as per IEC/IS. Provision shall be made on end of RMU for connecting the earth bus to the earth grid by erecting suitable 2 earth pipes of 50mm dia. M.S. rod of 3 meter in Pits. Both the earth pipes are also to be connected in a grid formation. Necessary terminal clamps and connectors shall be included in the scope of supply.	External earthing is not in company scope . We shall provide 25x05 sq mm copper earthing Bus in RMU	Bidder to comply as per relevant clause mentioned in tender documents

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16	ENG-ELC-54 dated 15.01.2022/CI No 5.1.11/Page No 12.	The unit shall have Short Circuit and Earth fault adjustable to different settings with separate Current transformer. They shall be fully field-programmable and shall have at least 16 settings for Earth Fault + 4 settings for Phase-Phase	Please define the FPI Make and Model.  FPI not available with same setting	Siemens,C&S, EMG
17	ENG-ELC-54 dated 15.01.2022/CI No 5.1.12/Page No 13.	Bidder shall quote the cost of Field RTU (FRTU) separately with all technical details for acquisition of the signal as described I Annexure-1.	Where the price of FRTU need to be quoted. Request you to please provide the revised price schedule containing space for unit rate of FRTU & spares ( which shall not be included in Price of RMU.)	Please refer the Annexure-1 (price schedule)
18	ENG-ELC-54 dated 15.01.2022/CI No 5.1.132/Paint/Page No 13.	Note: - Suitable Canopy arrangement shall be provided for RMU.	Offered RMU is type tested for IP 54 without any canopy & extra cover.	Canopy required
19	ENG-ELC-54 dated 15.01.2022/CI No 7.0/Page No 14.(Type Test)	Test to check the total time taken to clear the faults (relay pick up+ Trip coil pick up + breaker trip) for instantaneous & time delay modes.under various settings of relay and trip coil thru secondary current injection.	This test shall be conducted as routine test in our factory.	Accepted. The same shall be done in presence of TPNODL representative
21	GCC, CI No 8.0/Page No 08	5% of the RC value in case of Rate Contract. This shall remain valid till the Guarantee periods plus one month.	Initially PBG shall be submitted 36 months. Then, it will be extended till the warranty periods. Please accept the same.	Bidder to comply as per relevant clause mentioned in tender documents.
1	General	11KV RMU	We are participating in 11KV RMU Tender only	ok
2	Spec ENG-ELC-054 – Page no. 4 of 23 – Clause 4.25	The RMU metal parts shall be greater than 2mm thickness high tensile steel/CRCA. The overall paint thickness shall be not less than 70 microns.	Clause 4.25 – says RMU metal parts shall be greater than 2mm thickness high tensile steel/CRCA, but clause 5.1.1 says to provide minimum of 2mm CRCA.	Accepted . Salt Spray test is mandatory.
3	clause 5.1.1	The switchgear and bus bar shall be contained in a stainless steel tank filled with SF6 gas and the outer body shall be made of minimum CRCA of 2mm or GI high tensile steel 2mm thick	<b>We will provide RMU enclosure with minimum 2mm thick CRCA as per Type Test</b>	
4	Spec ENG-ELC-054 – Page no. 5 of 23 – Clause 4.35	Moving contacts of earthing switch shall be visible in closed position thru transparent covers AND closing shall be possible only when Isolator is open	The same is not possible, Earth switch ON/OFF indications are available in front mimic plate.	Bidder to comply as per relevant clause mentioned in tender documents.

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5	Spec ENG-ELC-054 – Page no. 5 of 23 – Clause 4.36	The electrical interlock of cable charge with earth switch is preferred.	Kindly confirm whether it is mandatory requirement as it is mentioned preferred.	Bidder to comply as per relevant clause mentioned in tender documents.
6	Spec ENG-ELC-054 – Page no. 5 of 23 – Clause 4.37	In view of safety each VCB shall be assisted with feeder side disconnecter having 3 positions, open disconnected, closed, and earth	We will provide bus side off load type disconnecter with all the necessary and required interlocks. Kindly accept.	Bidder to comply as per relevant clause mentioned in tender documents.
7	ENG-ELC-054 – Page no. 5 of 23 – Clause 4.39	For TPNODL, ODISHA – ABB ,Ashida, Schneider, Siemens	we are considering Ashida make relay model no. ADR241S-AM-460-09-01-36-01-00-10 in line with past supplies to M/s. TPCODL.	OK
8	ENG-ELC-054 – Page no. 6 of 23 – Clause 4.42	Design of RMU shall be tamper & arc proof. Anti vandal screws shall be provided. Cable covers shall be pad lockable. All live parts and internal parts etc. shall be covered with antitheft covers.	Cable cover is not pad lockable but with tamper and arc proof. It cannot be accessed without special tools which are supplier with RMU.	It is required.
9	ENG-ELC-054 – Page no. 6 of 23 – Clause 4.46A	Cable Termination Kit & Termination Boot in scope of Supplier. Cable Size in detailed Engineering Stage	Please note that we will consider cable boots in our scope but cable termination kits is not in our scope of supply.	Cable Termination Kit/ ermination Boot shall be in Supplier's scope. <b>Make : 3M/ Raychem</b>
10	Spec ENG-ELC-054 – Page no. 6 of 23 – Clause 4.46	Suitable for cable sizes a. 11kV 3CX400 sq.mm having dia of 92mm in all compartment and b. For three way with two CB the LBS shall be suitable for 11kV 1CX630 sq.mm cable having diameter of 51mm in incomer LBS- the necessary cleat and nonmagnetic base plate cable entry arrangement and 15mm longer bolt than other compartment shall be provided.	We will provide 630sqmm bimetallic lug along with silicon cable boots for this requirement. Kindly accept. Also we understood that the 630sqmm cable termination required for LBS feeder only, For CB feeder, the cable size shall be 1R:3Cx400sqmm	Bidder to comply as per relevant clause mentioned in tender documents.
11	Spec ENG-ELC-054 – Page no. 7 of 23 – Clause 4.50	FPI on each LBS as a part of each RMU with specified default setting.		
12	Page no 9 of 23	3 Way/4 Way Non Extensible Type (For Outdoor application): 3 Way RMU: 2 LBS 1 VCB with Self powered O/C & E/F Relay and 1 FPI 4 Way RMU: 2 LBS 2 VCB with Self powered O/C & E/F Relay and 1 FPI	FPI on each LBS as part of each RMU. Please note that as per past supplies to TPCODL, we had provided FPI in LHS LBS (1no. LBS per RMU) only. Also page no. 9 of 23 in specs shows as below i.e. 1 FPI. So we have considered 1no. FPI per RMU which will be provided in LHS side LBS.	One FPI per two LBS

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13	Spec ENG-ELC-054 – Page no. 7 of 23 – Clause 4.55	CT settings shall be adjustable between 50- 150-300/1 Amp at terminal block. CT ratio is 50-150-300/1A, Burden is 2.5 VA, Class - 5P20.	CT accuracy class shall be 5P10 instead of 5P20 due to dimension limitation in RMU. Kindly accept.	Bidder to comply as per relevant clause mentioned in tender documents.
14	Spec ENG-ELC-054 – Page no. 8 of 23 – Clause 4.73	MCB for LT AC incomer and TB connection of all CT, Aux switches and relay wiring	External 230VAC supply will be provided by the customer, we will provide battery and battery charger for 24VDC RMU control supply.	Accepted
15	Spec ENG-ELC-054 – Page no. 9 of 23 – Clause For motorized RMU point no. 2	Harting Plug arrangement for individual isolator as well as breaker motor connections, which will be fitted on RMU body itself	We will wired out all the RMU signals up to terminal block in line with past supplies to TPCODL. Harting plug arrangement will be difficult to provide in RMU due to space limitation.	Bidder to comply as per relevant clause mentioned in tender documents.
16	Spec ENG-ELC-054 – Page no. 9 of 23 – Clause For motorized RMU point no. 5.e.–	24VDC from Battery Charger and 230 VAC from Aux PT in scope of Supplier (Aux PT is optional and to be Quoted Separately)	External 230VAC supply will be provided by the customer, we will provide battery and battery charger for 24VDC RMU control supply. We have not considered Aux PT in our scope.	This shall be as per tender Specification
17	Spec ENG-ELC-054 – Page no. 10 of 23 – Clause 5.1.2	The RMU shall be completed with all connection and tinned copper bus bar	As the main busbar will be inside the SF6 tank, we will provide bare copper main busbar.	Bidder to comply as per relevant clause mentioned in tender documents.
18	Spec ENG-ELC-054 – Page no. 10 of 23 – Clause 5.1.3	Mechanical interlocking systems shall prevent access to the operating shaft to avoid all operator errors such as closing the earth switch when cable is charged	Kindly confirm whether it is mandatory requirement	YES ,It is Mandatory requirement.
19	Spec ENG-ELC-054 – Page no. 10 of 23 – Clause 5.1.4 –	Any accidental over pressure inside the sealed chamber shall be limited by the opening of a pressure limiting device provided in the rear part of the tank. Gas shall be released to the rear of the RMU away from the operator. Bidder shall provide type test report to prove compliance to the Internal fault IAC AFLR as per IEC 62271-200. An anti-reflex mechanism on the operating lever shall prevent any attempts to reopen immediately	Please note that the IAC pressure release shall be rear bottom inside trench away from the operator. It is AFLR design which is better than AFL design.	Bidder to comply as per relevant clause mentioned in tender documents.
20	Spec ENG-ELC-054 – Page no. 10 of 23 – Clause 5.1.5	cable test rod shall be provided which can be fixed on the terminations to facilitate testing.	Cable test rod is not in our scope of supply and Cable cover is not pad lockable but with tamper and arc proof. It cannot be accessed without special tools which are supplied with RMU.	Bidder to comply as per relevant clause mentioned in tender documents.

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21	Spec ENG-ELC-054 – Page no. 11 of 23 – Clause 5.1.6	Mechanical Interlock should be provided for Earth switch, If cable is back charged Earth switch should not be closed	Kindly confirm whether it is mandatory requirement	YES
22	Spec ENG-ELC-054 – Page no. 11 of 23 – Clause 5.1.7	cable shall be held by HDPE (fire retardant) cleat. 2 runs, of 3CX400 Sq mm, OR 1R of 3 NO. 1CX630 Sq mm shall be used for cable termination.(It shall be finalized during detailed engineering)	We have considered the cable size for all the feeders as 1R of 3Cx400sqmm in line with clause 4.46. and for KVV(1LBS,2CB) RMU - 630sqmm cable for LBS feeder and 1R:3Cx400sqmm for CB feeders.	Subject to change during detailed engineering -: 11kV : 3C 400,3C 300
23	Spec ENG-ELC-054 – Page no. 12 of 23 – Clause 5.1.8	The size of earth busbar of GI Strip (75X12 sq.mm)	We will provide 90sqmm copper earth busbar as per company type tested design.	Bidder to comply as per relevant clause mentioned in tender documents.
24	Spec ENG-ELC-054 – Page no. 12 of 23 – Clause 5.1.11	Electrically reset from remote with at least 2-spare potential free Contacts.	Please note that FPI will have 1 potential free contact for remote reset	One for remote reset and two Potential free contact for remote signalling.
25	Spec ENG-ELC-054 – Page no. 12 of 23 – Clause 5.1.11	at least 16 settings for Earth Fault + 4 settings for Phase-Phase.	Please note the FPI will be provided with approx. 8-10 steps for S/C trip current and 4-5 steps approx. for E/F trip current	FPI and O/C are two different equipment. Query is irrelevant.
26	Spec ENG-ELC-054 – Page no. 22 of 23 – Annexure-1	Phase voltage and power factor	Phase voltage and power factor signals are not applicable as there is no voltage input.	In RMUs with Metering Cubicle it is required.
27	Spec ENG-ELC-054 – Page no. 22 of 23 – Annexure-1	Scope of FRTU	FRTU related signals are not applicable <b>as FRTU is not in our scope.</b>	Potential Free contact for interfacing with FRTU in scope of supplier
28	FPI make and Model	FPI Make & Model	For the past supplies, we had considered EMG make EKL8000 FPI. Kindly confirm the same is to be considered for this tender also or C&S make CSFPI is acceptable.	Siemens,C&S, EMG