PR No - 446953 RFQ - 62651

Amendment No. 1

Tender Ref No: UGVCL/GPRD/CPC/RP 104/1.1 kV Power Distribution / 86

Bidders are hereby requested to note that following amendments & clarifications are made in **Various Clauses of Tender Conditions, Detail Technical Specification as well as Time Limit Extension** of "Turnkey Based work for Supply, Installation, commissioning, Testing of Pole Mounted Smart Power Distribution Boxes to be erected in the utility distribution network to supply electric power to the single phase consumers under UGVCL, MGVCL & DGVCL".

Sr. No.	Clause No.	Existing Provision of Clause	Proposed Amendment
1	Technical Specifications Clause No. 8.10 & Page No. 11 of 35	**EARTHING:** All non-current carrying parts of the enclosure shall be earthed to a common earth conductor at two points with minimum 40x3 sq mm GI strip running all along the periphery of the Enclosure. Two nos. earthing terminals/studs shall be provided on the enclosure at each side wall which shall be internally connected to the common earth conductor/strip provided for the Enclosure. The diameter of the stud shall be at least ½" with minimum length of 2" with two nos of plain and one spring washer and nut and shall be able to connect and terminate the external earth conductor. The connecting point shall be marked with the "Protective earth" symbol as per IEC. Separate earthing conductor/strip shall be provided for transformer Neutral and the same shall be insulated from the body earth and suitably brought out from the enclosure for connecting to external system earth through LV bushing. All hinge doors shall be earthed to the enclosure with the green color copper flexible wire of size 2.5 sq mm (min).	All non-current carrying parts of the enclosure shall be earthed by a common earth conductor. Two nos. earthing terminals (i.e. 1. transformer neutral earthing 2. body/equipment earthing) shall be provided on the enclosure. Transformer neutral earthing terminal shall be insulated from the body earth and suitably brought out from the enclosure for connecting to external system earth through LV bushing and shall be provided on transformer compartment wall of enclosure. Body/equipment earthing terminal shall be provided on metering compartment wall of enclosure. The transformer neutral earthing internal termination cable shall be of 6 mm2 PVC insulated flexible copper. The diameter of the stud shall be at least ½" with minimum length of 2" with two no's of plain and one spring washer and nut and shall be able to connect and terminate the external earth conductor. The connecting point shall be marked with the "Protective earth" symbol as per IEC. All hinge doors shall be earthed to the enclosure with the green colour copper flexible wire of size 2.5 sq. mm (min). Two Nos of Pipe In Cage (PiC) type earthing as per attached annexure No-01 shall be provided for each power distribution boxes. The connections from the earth electrode to the equipment shall be done using minimum 25X3 mm GI strip with sufficient length required as per the site conditions. **Total 42 Nos. of PIC earthing considering two earthing per location shall be in the bidder's scope.**

2	Technical Specifications Clause No. 9.2.1 & Page No. 17 of 35	The magnetic core shall be built of very low loss Silicon steel, Cold Rolled Grain Oriented (CRGO) steel. Core should be of stack/wound core type	The magnetic core shall be built of very low loss Silicon steel, i.e. of M4 grade cold rolled grain-oriented (CRGO) steel. Core should be of stack/wound core type
3	Technical Specifications Clause No. 11.2 & Page No. 16 of 35	All power contactors specified shall be flush mounted in dust-proof cases and shall match the appearance of the instruments mounted on the same panel. Each contactor shall be identified with the relay number indicated in the approved control scheme	Clause No. 11.2 shall be read as deleted/removed
4	Technical Specifications Clause No. 12.1.3 & Page No. 17 of 35	The DCU shall provide for additional field interfaces through 8 relay input with Dry/Potential Free Contacts and with isolation up to 2000 Vrms and at least five relay outputs with isolation up to 4000 Vac. The relay output shall be capable of handling 230 VAC, currents up to 5 A, electrical endurance of at least 100,000 cycles and mechanical endurance of at least 10,000,000 cycles.	The DCU shall be compatible to provide with six relay outputs with isolation up to 4000 Vac. The relay output shall be capable of handling 230 VAC, currents up to 5 A, electrical endurance of at least 100,000 cycles and mechanical endurance of at least 10,00,000 cycles.
5	Technical Specifications Clause No. 12.1.11 & Page No. 18 of 35	**Over the air (OTA) capability:** The DCU shall have OTA capability to update the DCU's firmware and configuration with prior approval of DISCOM, add/ rectify configuration files of meters change data formats, change communication destination locations, troubleshoot software bugs (if any) in a secured manner.	**Over the air (OTA) capability:** The DCU shall have OTA capability to update the DCU's configuration with prior approval of DISCOM, add/ rectify configuration files of meters change data formats, change communication destination locations, troubleshoot software bugs (if any) in a secured manner
6	Technical Specifications Clause No. 12.1.15 & Page No. 18 of 35	The DCU shall be provided with 4 Nos of Digital inputs with isolation up to 2000 Vac	The DCU shall be provided with 8 Nos of Digital inputs (5+1 for energy meter relay, 01 for Door sensor, 01 spare) with isolation up to 2000 Vac

7	Technical Specifications Clause No. 12.1.6 & Page No. 17 of 35	DCU shall have Ethernet Connectivity to communicate via MODBUS TCP protocol with local PC for Meter Data Acquisition using LAN: 10/100 BASE Ethernet Connectivity and shall be Protected up to 1500 Vrms magnetic isolation (IEEE 802.3 compliant	The DCU shall be equipped with the Wi-Fi mandatorily. Access to this Wi-Fi shall be through a hand-held device such a mobile phone with both read & write access. The Bidder shall provide an appropriate mobile application (the "Mobile App" or "App") to connect with this Wi-Fi in a secure Password-protected manner to connect with the DCU. Both meter reading & DCU writing shall be allowed over Wi-Fi; i.e. the capability of programming the DCU over Wi-Fi shall be enabled. The authentication for Wi-Fi Communication with IoT Gateway shall be with secured HTTPS protocol. One additional RS 485 port shall be provided for Local connectivity. However, the bidder may provide RJ45 port to access of the data for monitoring and downloading through wired connections.
8	Technical Specifications Clause No. 21.1 & Page No. 26 of 35	**Distribution Transformer:** The Distribution transformer shall be Type tested as per IS 11171 /IEC standards in any International Lab, Accredited Cooperation (ILAC) or an external NABL accredited laboratory or any govt. lab 1 Measurement of winding resistance 2 Measurement of voltage ratio and check of voltage vector relationship 3 Measurement of impedance voltage short-circuit impedance and load losses 4 Measurement of no-load losses and current 5 Separate-source voltage withstand test 6 Induced overvoltage withstand test 7 Lightning impulse test 8 Temperature-rise test	Clause No. 21.1 shall be read as deleted/removed

9	Technical Specifications Clause No. 21.3 & Page No. 27 of 35	Type Tests for Completer Power distribution Console shall be type carried out as per relevant IS/IEC standards. 1 Verification of Temperature rise Limit 2 Verification of Dielectric Properties for HV and LV circuits. 3 Verification of Short Circuit withstands Test 4 Protection against electric shock and Integrity of Protective circuit 5 Verification of Clearance and Creep age distance 6 Verification of Mechanical Operation 7 Verification of Degree of Protection 8 Any other type tests not specified above but covered as per amendment /latest edition of relevant IS/IEC	Clause No. 21.3 shall be read as deleted/removed
10	Technical Specifications Clause No. 8	New Added	Temperature sensor of following specifications shall be provided in each power distribution box to measure temperature of transformer compartment. Temperature range: 0 to 120 Degree. Accuracy: +/- 0.5°C.

11	Technical Specifications Clause No. 8.8	Transformer and Metering compartments shall be accessible on the front sides of the enclosure through double doors equipped with lock & key facility and nitrile/neoprene rubber seal. The doors shall be padlocked and/or lock protected to ensure the theft-prone locking arrangement. Heavy-duty hinges shall be provided for each door such that they are not visible from outside and hence not removable. The outgoing of the distribution transformer shall be connected directly to the Incomer of LV distribution through PVC insulated 4mm2, single-core, copper conductor, flexible Cable. The transformer and Metering compartment should be isolated from each other internally. Also, the locking arrangement shall be such that the transformer chamber door cannot be opened when HT is energized. Two No. lifting arrangements shall be provided on both sides of the compartment. The bidder may suggest electrical interlock hence to confirm that the door of the enclosure cannot be opened when HT of transformer is energized.	Transformer and Metering compartments shall be accessible on the front sides of the enclosure through double doors equipped with lock & key facility and nitrile/neoprene rubber seal. The doors shall be padlocked and/or lock protected to ensure the theft-prone locking arrangement. Heavy-duty hinges shall be provided for each door such that they are not visible from outside and hence not removable. The outgoing of the distribution transformer shall be connected directly to the Incomer of LV distribution through PVC insulated 4mm2, single-core, copper conductor, flexible Cable. The transformer and Metering compartment should be isolated from each other internally. Bidder shall arrange and provide one LED indication for the confirmation of the voltage availability from the LV side of the transformer. The LED shall have very less internal power loss and shall be installed within the enclosure in the metering compartment so that, in the event of opening of the door for any inspection or trouble shooting. The Transformer compartment shall also be provided with transparent insulated acrylic sheet on the front side of the compartment. So that the line staff personal shall no accidently touched any part of the transformer. The acrylic sheet shall be embossed with standard danger sign and essential safety instructions in the local language as given by GPRD/UGVCL in due course.
12	Technical Specification Clause No. 16.2 & Page No. 23 of 36	Entire Intelligent power distribution box System should be guaranteed for satisfactory operation and good workmanship at least for a contract period of one year and six months after the date of award of contract	Entire Intelligent power distribution box System should be guaranteed for satisfactory operation and good workmanship at least for a guarantee & CMC period of one year after the date of work completion as well as during work completion period.

13	GCC Clause No. 2.1(g) & Page No. 3 of 92	The contract period shall be initially for One year	The contractual period for execution of work stated in Schedule: B of this project consist of 1 (one) month commencement period and 6 (six) months execution period. The guarantee & CMC period of one year after the date of work completion.
14	GCC Clause No. 38.1 & Page No. 23 of 92	The Contractor shall warrant that the whole project, in accordance with the Contract documents and free from defects in material/equipment and workmanship for a period of three year (36) calendar months for whole project for all the components of the Smart Distribution Boxes viz. distribution transformer, energy meters, IoT based DCU with SMPS, relays, connectors, terminal blocks, its wiring, display units, SMC Boxes and its accessories etc. commencing immediately upon the satisfactory commissioning of the project and issuance of Taking Over Certificate (TOC). The Contractor's liability shall be limited to the replacement of any defective parts in the equipment of his own manufacture or those of his Sub-Contractors under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at the site and are not in meantime essential in the commercial use of the equipment. Such replaced/defective parts shall be returned to the Contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by the Engineer when the equipment is under the supervision of the Contractor's Supervisory Engineer. The whole installed & commissioned system for Smart Power Distribution Boxes 1.1/0.240 kV system has to be guaranteed for minimum 12 Months from the date of handing over to DISCOM against any type of damages/fault. The contractor has to arrange inspection of all equipments for satisfactory performance at a regular interval of 3 months in consultation with concern Engineer of DISCOM/GPRD or whenever called by the DISCOM/GPRD authority.	The Contractor shall warrant that the whole project, in accordance with the Contract documents and free from defects in material/equipment and workmanship for a period of one year (12) calendar months for whole project for all the components of the Smart Distribution Boxes viz. distribution transformer, energy meters, IoT based DCU with SMPS, relays, connectors, terminal blocks, its wiring, display units, SMC Boxes and its accessories etc. commencing immediately upon the satisfactory commissioning of the project and issuance of Taking Over Certificate (TOC). The Contractor's liability shall be limited to the replacement of any defective parts in the equipment of his own manufacture or those of his Sub-Contractors under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at the site and are not in meantime essential in the commercial use of the equipment. Such replaced/defective parts shall be returned to the Contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by the Engineer when the equipment is under the supervision of the Contractor's Supervisory Engineer. The whole installed & commissioned system for Smart Power Distribution Boxes 1.1/0.240 kV system has to be guaranteed for minimum 12 Months from the date of work completion against any type of damages/fault. The contractor has to arrange inspection of all equipments for satisfactory performance at a regular interval of 3 months in consultation with concern Engineer of DISCOM/GPRD or whenever called by the DISCOM/GPRD authority.

The Due date of on line submission as well as submission of documents physically is extended, which is as under.

Online Preliminary, Technical & Price bid i.e. On line (e-tendering) tender/offer submission last date (This is mandatory)	07.06.2021 up to 18.00 Hrs. **Instead of** 26.05.2021 up to 18.00 HRs.
Relevant documents Physically Submission Date (By registered post or speed post only)	On or before date 11.06.2021 up to 17.00 Hrs. **Instead of** On or before date 31.05.2021 up to 17.00 Hrs.
Date of opening of Tender Fee & EMD COVER Documents & Verification with Physically submitted documents	14.06.2021 at 12.00 Hrs. **Instead of** 02.06.2021 at 12.00 Hrs.
Date of On line Opening of Technical Bid (Tentative, if possible)	16.06.2021 at 12.00 Hrs. **Instead of** 04.06.2021 at 12.00 Hrs.
Date of On line Opening of Price Bid (Tentative, if possible)	19.06.2021 at 12.00 Hrs. **Instead of** 07.06.2021 at 12.00 Hrs.

This amendment duly signed and sealed to be submitted along with technical bid.
All other terms & Condition of tender remains same.
Documents are available on website http://ugvcl.nprocure.com
(For view, download & on line submission)

Addl. Chief Engineer (P&Re)
R&C Office, Mehsana