

**TPCODL**

TP Central Odisha Distribution Limited

**TPNODL**

TP Northern Odisha Distribution Limited

**TPSODL**

TP Southern Odisha Distribution Limited

**TPWODL**

TP Western Odisha Distribution Limited

**CENTRALIZED CONTRACTS GROUP**

NIT No.: TPCODL/CCG/23-24/024

## Open Tender Notification

for

**RC for supply and Installation of Data Centre Infrastructure  
required for TPCODL, TPWODL, TPNODL and TPSODL.**

**Tender Enquiry No.: TPCODL/CCG/23-24/024,  
Due Date for Bid Submission: 26<sup>th</sup> July 2023 [18:00 Hrs.]**

**Centralized Contracts Group  
(A TATA Power and Odisha Government Joint Venture)  
TP Central Odisha Distribution Limited  
1<sup>st</sup> Floor, Anuj Building, Plot No.29, Satya Nagar, Bhubaneswar –  
751007**

**CENTRALIZED CONTRACTS GROUP**

NIT No.: TPCODL/CCG/23-24/024

**Tender Enquiry No - TPCODL/CCG/23-24/024**

| <b>Tender Enquiry No.</b> | <b>Work Description</b>  | <b>EMD (Rs.) *</b> | <b>Tender Fee (Rs.) **</b> | <b>Last Date and Time for payment of Tender Fee</b> |
|---------------------------|--|--------------------|----------------------------|---|
| TPCODL/CCG/23-24/024      | Rate Contract for SITC of Optical Fiber Cable for TPWODL Area. | Rs 6 Lakhs         | 5,000                      | 17.07.23,<br>17:00Hrs                               |

\* EMD is exempted for MSMEs registered in the State of Odisha.

\*\* MSMEs registered in the State of Odisha shall pay tender fee of Rs. 1,000/- including GST. For details of MSME norms, pls refer "Annexure A" below.

## **INFORMATION TO THE BIDDERS TO PARTICIPATE IN E-OPEN TENDER SYSTEM OF TPCODL**

### **-: Steps for E-tender submission:-**

**Bids are to be submitted only through online e-procurement platform, ARIBA. Any other form of bid submission will not be accepted. Online Link for submission of bid through ARIBA will be sent only after confirmation of payment of tender fee from bidder.**

**Step 1:** The bidder can get primary information about the tender from the Newspaper advertisement / TPCODL/TPWODL/TPNODL/TPSODL website <www.tpcentralodisha.com> and can download the tender document from the above website.

**Step 2:** Non-Refundable Tender Participation Fee, as indicated in tender document, to be submitted before last date of tender fee payment, in the form of direct deposit/NEFT/RTGS in the following bank account.

Account Name: TP Central Odisha Distribution Limited

Bank Name: State Bank of India,  
IDCO Towers, Bhubaneswar

Bank Account No. : 10835304915

IFSC Code : SBIN0007891

**Step 3:** Eligible and Interested bidder to send an email to TPCODL attaching duly signed and stamped letter on Bidder's letterhead, with following details, expressing their intend to bid against above tender:

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| SI No | Description                                    | Bidder's Response |
|-------|--|-------------------|
| i)    | Tender Enquiry No.                             |                   |
| ii)   | Description of materials / Works Tendered      |                   |
| iii)  | Name and address of the bidding company        |                   |
| iv)   | Name of the authorized contact person          |                   |
| v)    | Contact No. authorized person                  |                   |
| vi)   | E-mail Id of the where online ARIBA link to be |                   |
| vii)  | Tender Fee details (Amount / NEFT-RTGS UTR     |                   |
| viii) | GST No.of bidder                               |                   |
| ix)   | MSME Certificate, wherever applicable          |                   |
| x)    | Postal address of bidder for return of EMD BG  |                   |

E-mail has to be sent to <rajib.bhattacharya@tpwesternodisha.com> with copy to <vipin.chauhan@tpnodl.com> before "Last date and time for payment of Tender Participation Fee".

**Step 4:** On receipt of the document as mentioned in Step 3 above and after due verification of the same, ARIBA link for participation in the tender will be sent to bidder's mail address from ARIBA system.

**Step 5:** In this mail there will be an online link as **Click Here** to participate in the tender.

**Step 6:** Click "**Click Here**" to access this event.

**Step 7:** If bidder is bidding first time for CCG through ARIBA site then please "Sign UP" by creating User Name and password as mentioned in Sign Up page. Please follow the process, as mentioned in the Sign Up page, during creation of User Name and password. Also a simple one-page registration screen will open for first time user. All \* mark mandatory field to be filled in.

Those who are already having User Name and password for accessing TPCODL / TPNODL / TPWODL / TPSODL events, they can LOGIN using same User Name and password.

If bidder has got User name and password for their other customer, same will not be applicable for TPCODL/TPWODL/TPNODL/TPSODL.

**Step 8:** You will be able to see the RFQ

**Step 9:** After review and downloading of all documents click on "**Review Pre-requisites**"

**Step 10:** Review and accept "**Bidder Agreement**".

**Step 11:** You can see attached pdf tender document against clause no 1.1.1 (Introduction).

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**Step 12:** Vendor has to attach pdf version of technical bid in clause no. 2.1 and 2.2. In this field do not attach any price document.

Price schedule is attached in clause no.3.2. Same has to be downloaded and price and tax details to be filled in as per the format given, print to be taken in vendor's letter head and signature and seal to be made by authorised person. PDF version of this price bid to be attached in clause 3.2 For Price Bid put all the unit price and taxes and duties in provided field. Put "0" (ZERO) in not applicable field.

**Step 13:** After successfully putting Techno commercial offer and price part then click on **"Submit Entire Response"**

**Note: Once user ID and password created, bidder can also login to ARIBA site through the following URL:**

<https://service.ariba.com/Sourcing.aw/124997008/aw?awh=r&awssk=oxt0s1BN&dard=1>

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**Annexure-A****Preferential norms for procurement from MSMEs registered in the State of Odisha****1) Tender Fees**

To participate in the tender, MSMEs registered in the State of Odisha shall pay Rs.1,000/- including GST towards cost of tender paper.

**2) Earnest Money Deposit (EMD)**

EMD shall be exempted for MSME registered in the State of Odisha. However, Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract.

**3) Qualification Requirement for Open Tenders**

Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.

For past experience, instead of relying on the volumes / value of earlier Supplies / Projects, assessment of the Bidder shall be done on the basis of feedback from Customers. Past performance experience at Tata Power and its Group Companies shall supersede feedback from other Customers.

**4) Reservation for MSME**

It shall be mandatory to procure at least 20% of the total volume of the procurement from MSME registered in the State of Odisha (however, it shall not apply where goods/services are not available with the MSME), subject to matching L1 discovered prices and meeting technical specifications including quality requirements.

**5) Performance Bank Guarantees**

Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed.

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**CONTENTS OF THE ENQUIRY**

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**Definition & Introduction of Centralized Contracts Group**

The Centralized Contracts Group (CCG) is a shared group of 4 Discom (TPCODL, TPNODL, TPSODL & TPWODL) in Odisha. The contract finalized by CCG shall be used by 4 Discoms to execute the work.

**1.0 Event Information****1.1. Scope of work**

Rate contract for Supply, Installation and Maintenance supply and Installation of Data Center Infrastructure for TPCODL, TPNODL, TPWODL and TPSODL. The detail SOW will be as below :-

| <b>Electrical /UPS/Batter/IPDU</b> |  |      |     |
|------------------------------------|--|------|-----|
| SI.No                              |  | Unit | Qty |
|                                    | LT SWITCHBOARDS/ PANELS :  |      |     |
|                                    | UPS Isolator   | Nos. | 4   |
|                                    | PDU-1 & 2  |      |     |
|                                    | Supplying, Installation, Testing and Commissioning of Power Distribution Unit (As per SLD & Specifications Attached)   |      |     |
| 1.3                                | <b>INCOMER</b>   |      |     |
|                                    | One number 400 Amps.4 Pole, MCCB type isolator.  |      |     |
|                                    | <b>One number Intelligent multifunction digital meter to read V, A, KVA, KWH,THD, PF Hz, kVARh, Vah, VARh, MD, and RS 485 port etc. with 3 Nos. resin cast CTs of 400/5 A class 1.0 accuracy and 15 VA burden</b>  |      |     |
|                                    | One set of Phase indication LED lamps with 2 Amps. Back up MCB, breaker ON/OFF indicating light with MCB, test terminal block set, circuits as per standard practice and auxiliary contact contactors for positive electrical  |      |     |
|                                    | interlocking of breakers etc. as required  |      |     |
|                                    | <b>BUSBAR:-</b>  |      |     |
|                                    | 4P Copper bus bars (having 100% Neutral) of minimum of 400 Amps. Capacity with heat shrinkable colored sleeves and i/c DMC/SMC bus bar supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 25 KA for 1Sec. |      |     |

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|       |   |      |      |
|-------|---|------|------|
|       | <b>OUTGOINGS:</b>   |      |      |
|       | 36 Nos x 32 Amps. 10 kA, DP 'C' curve MCBs  |      |      |
|       | <b>PDU - 1 &amp; 2 ( As described above )</b>   | Nos  | 2    |
|       | AC Inrow Panel ( DC Block )   |      |      |
|       | Incomer 2 Nos x 400 A TPN MCCB & 1 Nos x 400 A 4 P MCCB as bus coupler with 1 set of Indication lamp with Ammeter & Volt Meter - 1 set  |      |      |
| 1.7   |   |      |      |
|       | 2 set Intelligent multifunction digital meter to read V, A, KVA, KWH,THD, PF Hz, kVARh, Vah, VARh, MD, and RS 485 port etc. with 3 Nos. resin cast CTs of 160/5 A class 1.0 accuracy and 15 VA burden |      |      |
|       | Al Bus Bar 4pole 400 A - 1 set  |      |      |
|       | Out Going Feeders :   |      |      |
|       | 63 A TPN MCCB - 18 Nos  |      |      |
|       | 40 A TPN MCCB - 2 Nos   |      |      |
|       | Spare 63 A TPN MCCB - 2 Nos   |      |      |
|       | AC Inrow Panel ( DC Block ) as described  | Nos  | 1    |
| D - 1 | <b>4 Cx 185 Sq.mm Al.Ar FRLS XLPE</b>   | Rmt  | 20   |
|       | End Termination   | Nos. | 2    |
| 2     | 2R, 3.5C x 120 Sq.mm Al. Ar FRLS XLPE   | Rmt  | 55   |
| 1.1   | End Termination   | Nos. | 10   |
|       | 3CX 4 Sq.mm Copper cable  | Rmt  | 1200 |
|       | End termination with lugs & sleeves only.   | Nos. | 130  |
| 2.1   | 4CX10 Sq.mm Copper FRLS   | Rmt  | 1350 |



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|     |   |            |            |
|-----|---|------------|------------|
|     | <b>End termination</b>  | Nos.       | 80         |
| 4.1 | 1CX120 Sq.mm Copper FRLS flexible   | Rmt        | 800        |
|     | End termination   | Nos.       | 120        |
| 3.3 | Supply and implementation of 32 A 2P+E single phase 250 volts, Mobile industrial grade Male & Female plug-in NEMA or IEC power connectors   | Nos        | 58         |
| 3.4 | SITC of 25 mm MS conduit  | RM         | 100        |
|     | Supply, Unloading, Handling, Installation, Testing, Commissioning & Handing Over of 600 x 600 x 3.15 mm thick tined copper plate electrode, with 2 Nos 32 x 6 mm copper strips from earth plate electrode to inspection chamber, 50 mm dia medium class GI pipe, CI funnel with 20 gauge GI wire mesh, masonry chamber 450 x 450 mm with concrete base C I heavy duty / chequered plate manhole cover with frame painted with bit mastic paint and packing with mixture of charcoal and common salt around plate electrode including digging of pit up to permanent moisture level and as per soil condition but not less than 3 meters and back filling as required. The pipe shall have provision for watering through a funnel. It shall also have provision for connecting 25 x 6 mm. Copper Flat on two sides. | Nos.       | 6          |
|     | Note:   |            |            |
| 2   | 1) Earthing stations should contain relevant grade of charcoal/coke and salt packed around the earth plate/earth pipe as called for in the item.  |            |            |
|     | 2) Adequate number of earth strips with proper sized holes shall be provided for extending earthing/looping earth connections at various floors shall be provided and executed as per the requirement.  |            |            |
|     | 3) All earth pits shall be as per IS 3043 with latest amendments.   |            |            |
|     | 4) Earthing shall be done at indicted location by the Consultants. The minimum distance between the two earth station shall be 3 meters and that from the building is 2500 mm.  |            |            |
|     | Earthing Strips   |            |            |
|     | <b>50 x 6 mm GI. Strip for body earthing of panels.</b>   | <b>Rmt</b> | <b>100</b> |

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|          |   |     |     |
|----------|---|-----|-----|
| 4        | 25 x 6 mm GI strip  | Rmt | 200 |
| 4.1      | 25 x 6 mm Copper strip in PVC Sleeve.   | Rmt | 75  |
| 6        | 25 x 3 mm Cu strip  | Rmt | 150 |
| 6.1      | 8 swg GI wire   | Rmt | 20  |
| 7        | RACK & Pedstal Earthing for 29 racks  | Lot | 1   |
| <b>I</b> | <b>Perforated type cable tray</b>   |     |     |
|          | Tray shall be of GI & made out of 2mm thick GI sheet, bent in 'C' shape with adequate load bearing capacity. Quoted rate for supply & installation shall include necessary anchor fasteners and fixing accessories for supporting the cable tray.   |     |     |
|          |   |     |     |
| 1        | Size 450 x 50 x 50 mm   | Rmt | 140 |
| 2        | Size 300 x 50 x 50 mm   | Rmt | 100 |
| 3        | Size 50 X 200 x 50 mm   | Rmt | 100 |
| 3        | First aid kit   | Lot | 1   |
| <b>K</b> | <b>UPS Systems 160 kVA/kW for IT/Server Load:</b>   | Nos | 2   |
|          | Supply , installation, testing & commissioning of IGBT based, Dual Conversion 160 kVA/kW UPS system ,wide input voltage range ( 229 V~478 V ) , 3 phase (415 V ± 15%) Volts input & 3 phase output (415 V ± 1%), 50 Hz, unity power factor ( Output ),TDHi % <3% at full linear load ,Inverter overload capacity :110% for 60 min; 125% 10min; 150% for 1 min ,Online mode efficiency up to 96.4% , Protection level of IP20. |     |     |
|          | Li-ion Battery for IT/Server Load:  |     |     |
|          | Supply , installation, testing & commissioning of Battery total 15 minutes back up along with Battery racks, copper cables between batteries, copper cables between UPS & batteries, DC MCCB Box. The breaker & cable sizing will be done as per the technical specs. Average UPS to battery bank distance shall be 10 meters or as per site requirement. Li-ion Battery total 15 minutes battery backup for each UPS in      | Nos | 4   |

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|          |  |      |    |
|----------|--|------|----|
|          | suitable for (N+N) configuration complete in all respect   |      |    |
|          | INTELLIGENT PDU FOR RACKS  |      |    |
|          | Two IPDU's in each rack with different color chassis, 32A, and 230V with UL certified hybrid outlets (can be utilized as C13 or C19). 3-meter-long and inlet cable with input plug type should be IEC603029 2P+E, Splash proof IP44. Monitoring capability at Strip and circuit/breaker level. With metering accuracy of +/- 1% compliant to ANSI C12.1 and IEC 62053-21 with monitoring capability at strip level, the IPDU should have color coded outlets based on circuit breaker color for easy identification of circuits for quick troubleshooting and ease in maintenance. | Set  | 58 |
| <b>M</b> | <b>Three sensors for each rack (two in the front and one in the back) covering one data point for dew point and air flow along with three data points for temperature-humidity. Sensors should be integral with supplied IPDU's.</b>   | Set  | 29 |
| <b>3</b> | INSTALLATION AND COMMISSIONING CHARGES   | LOT  | 1  |
|          | Modification in Existing Main LT Panel, Existing 125A 4P MCCB is changed to 400A 4P MCCB   | Nos. | 2  |

**HVAC System**

| Sl.No | Description  | Unit | Quantity |
|-------|--|------|----------|
| A.    | EQUIPMENT  |      |          |
|       | Precision air conditioner with horizontal air flow pattern, can be placed in-between the racks or at the ends of rows, ( Depth 300 mm max ) close to the heat source with min 25 kW Nominal capacity. Inside of Cold Aisle should maintain 22+/-1 deg C, 50+/-5% RH. Unit should have Variable Scroll compressor compatible with R410a refrigerant, locking disconnect switches fan, condensate pump, Adjustable baffle system, Heater, Humidifier,G4 (EU4) gravimetric + Clogged Filter. Outdoor Condenser unit shall comprise of Copper coil with Aluminum fins and Axial fan with fan speed controller motor. The microprocessor control system offers should have advanced |      |          |

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|    |  |      |    |
|----|--|------|----|
|    | diagnostic and maintenance support, enabling multiple units to communicate and work together as a team to precisely control temperature and humidity across a room. In addition, the controller network should provide a choice of Teamwork, Lead/Lag and Cascade functions. |      |    |
|    | Base Cooling Unit: Min 25 KW Net Sensible capacity   | Nos. | 10 |
|    | with Matching Air cooled condenser   |      |    |
|    | - R410A refrigerant  |      |    |
|    | - Variable scroll Compressor   |      |    |
|    | - EC Plug Fans   |      |    |
|    | - Locking disconnect   |      |    |
|    | - Adjustable baffle system   |      |    |
|    | - Display with Temperature and Humidity Control  |      |    |
|    | - Electric re-heating  |      |    |
|    | - Electrode humidifier   |      |    |
|    | - Remote racks temperature sensors   |      |    |
|    | - Condensate pump  |      |    |
|    | - G4 (EU4) gravimetric + Clogged Filter  |      |    |
|    | - Condenser with fan speed controller  |      |    |
|    | - Adjustable levelling feet  |      |    |
|    | - Sensor   |      |    |
|    | - WLD  |      |    |
|    | - BMS Card   |      |    |
| B. | Lowside accessories and Installation & Commissioning:  |      |    |

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|   |  |      |     |
|---|--|------|-----|
|   |  |      |     |
| 1 | Installation & commissioning of Precision AC units comprising of   | Nos. | 10  |
|   | - Lifting, shifting & positioning of units to site   |      |     |
|   | - Commissioning of the system  |      |     |
| 2 | Interconnecting 18G Copper piping between indoor & outdoor unit. Copper piping alongwith fittings and accessories and will be duly insulated within the AC space |      |     |
|   | - Hot gas line   | Mtr  | 200 |
|   | - Liquid line  | Mtr  | 200 |
| 3 | Interconnecting flexible copper cabling (1 sqmm X 10 core)between indoor & outdoor unit with flexible PVC conduit  | Mtr  | 200 |
| 4 | Unit to unit communication shielded copper cable (1.5 sq mm x 3C) for Inrow unit Sequencing  | Mtr  | 100 |
| 5 | Condensate drain piping with GI- B class pipes (50 mm)   | Mtr  | 50  |
| 6 | Humidifier water piping with GI-B class pipes (20 mm)  | Mtr  | 50  |
| 7 | Extension kit  | RO   |     |
| 8 | Refrigerant Charge   | Kgs  | 250 |
| 9 | ODU Stands   | Set  | 10  |
|   | <b>AISLE CONTAINMENT</b>   |      |     |
| 1 | Heavy gauge Aluminium Sliding Door with viewing panel and support arrangement  | Nos. | 4   |
| 2 | Aisle containment made of Aluminium panels and Lexan sheet with supporting arrangement.  | set  | 2   |
|   | Civil Works :  |      | 1   |

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|  |  |     |   |
|--|--|-----|---|
|  | Providing necessary civil works as per requirement, including :  | Lot | 1 |
|  | Providing, making up and finishing of Cutouts for passing refrigerant pipes, conduit/ cables, and drainage piping through walls, |     |   |
|  | Chasing, making up and finishing of vertical walls for refrigerant piping, conduit/ cables and drainage piping.                  |     |   |
|  | Wall cutting,  | Lot | 1 |

### IBMS System

| Sl.No | Description   | Unit | Quantity |
|-------|---|------|----------|
| b     | <b>Intelligent Addressable Multi-sensor Smoke detector:</b>   | Nos. | 2        |
|       | Multi-criteria addressable fire detector that incorporates photoelectric and thermal sensors, Polarity insensitive utilizing SureWire™ technology, Tri-color detector status LED with 360° viewing, Field-selectable application profiles, Superior EMI immunity, Remote sensitivity-measurement capability, Automatic environment compensation, UL Listed and ULC Listed; FM (#3230, 3210), CSFM (#7272-0067:0258) Approved, |      |          |
| c     | <b>Intelligent Addressable Type Manual Call Point:</b>  | Nos. | 0        |
|       | Intelligent Manual Fire Alarm Box is constructed of durable, molded and polycarbonate material that is matte finished in red with raised white lettering Single-action, Pull-down lever is down, until manually reset, Polarity insensitive via SureWire™ technology  |      |          |
| d     | <b>Conventional Type Hooter with Strobe:</b>  | Nos. | 1        |
|       | The Series Z Notification Appliances feature an easy snap-on base that is designed to simplify the installation and testing of horns, strobes, and horn/strobes. Wall Mount models feature field selectable candela settings of 15/30/75/110cd and 135/185cd. Ceiling Mount models feature field selectable candela settings of 15/30/75/95cd and 115/177cd. UL Listed, ULC, CSFM, and FM approved. ADA/NFPA Compliant. Red.  |      |          |

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|          |  |       |     |
|----------|--|-------|-----|
| e        | Response Indicator for above false ceiling detector  | No    | 0   |
| f        | <b>Intelligent Addressable Relay control module for Hooter+ Control module for 3rd Party equipment (VRF, Access door trip unit)</b>  | Nos   | 9   |
|          | Interfacing and supervising normally open (N.O) or normally closed (N.C) contacts, Integral single-pole, double-throw (SPDT) relay (up to 4 amps) ,Multi-color light-emitting diode (LED) indicates system status: § GREEN / AMBER / RED ,UL Listed & ULC Listed; FM, CSFM and NYC Fire Dept. Approved |       |     |
| g        | <b>Intelligent Addressable Monitor module</b>  | Nos   | 0   |
|          | Interfacing and supervising normally open (N.O) or normally closed (N.C) contacts, Integral single-pole, double-throw (SPDT) relay (up to 4 amps) ,Multi-color light-emitting diode (LED) indicates system status: § GREEN / AMBER / RED ,UL Listed & ULC Listed; FM, CSFM and NYC Fire Dept. Approved |       |     |
| h        | 2 core x 1.5 sq.mm Armoured FRLS cable   | Mtrs. | 150 |
| i        | Fire Extinguishers   | Nos.  | 2   |
| <b>2</b> | <b>Gas based Automatic fire suppression system</b>   |       |     |
| a        | SITC of CCOE Approved Seamless NOVEC1230 Cylinder and Valve Assembly, 100 Ltrs. capacity, OEM Factory filled with Novec 1230 Suppression Liquid , pressurised to 42 bar .  | Nos   | 4   |
| b        | Master Completer Kit complete with Solenoid, Pneumatic actuators, Pressure Gauge, Low pressure supervisory switch, Discharge hoses, Flexible actuation hoses and connectors. For Multiple cylinder system -VDS/UL approved   | Lot   | 1   |
| c        | Slave Completer Kit complete with Pneumatic actuators, Pressure Gauge, Low pressure supervisory switch, Discharge hoses, Flexible actuation hoses, manual actuator and connectors.-VDS/UL approved   | Lot   | 2   |
| d        | SITC of "Sinorix Gas Agent -NOVEC1230 Fire Protection Fluid, OEM Factory Filled per Kgs.   | Kgs   | 271 |

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|          |   |       |     |
|----------|---|-------|-----|
| e        | SITC of type UL / Vds Listed Nozzles, 360 Deg / 180 Deg Throw, selection as per approved hydraulic flow calculations. | Nos   | 6   |
| f        | Manifold to cater Multiple Cylinder Bank  | Nos   | 1   |
| g        | Cylinder Support  | Nos   | 8   |
| h        | SITC of NOVEC Piping & Manifold as required   | Lot   | 4   |
|          | <b>Detection Systems</b>  |       |     |
| i        | Supply installation Testing & commissioning of Single zone Gas Release Panel  | Nos   | 1   |
| j        | Manual Release Switch   | No    | 1   |
| k        | Abort Switch  | No    | 1   |
| <b>3</b> | <b>CCTV SYSTEM</b>  |       |     |
| a        | 2 megapixel (1920 x 1080) resolution Indore Camera as per specification   | Nos   | 2   |
| f        | Cat-6 Cable   | Mtr.  | 140 |
| <b>5</b> | <b>Rodent Repellant system</b>  |       |     |
| a        | Rodent controller   | Nos   | 1   |
| b        | TRANSDUCERS   | Nos   | 10  |
| c        | Wire Bundle   | Mtrs  | 120 |
| d        | PVC Conduit 20mm  | Mtrs  | 120 |
| <b>6</b> | <b>Water leak detection</b>   |       |     |
| a        | Conventional 4 Zone Water Leak detection panel with Modbus  | Nos   | 1   |
| b        | Water leak detection cable sensor   | Mtrs. | 150 |
| c        | Electronic Hooter   | Nos   | 1   |
| d        | 2 core x 1 sq.mm Armored cable  | Mtrs. | 60  |



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|          |  |      |      |
|----------|--|------|------|
| <b>7</b> | <b>Aspiration Detector (Early warning Detection)</b>   |      |      |
| a        | Single channel Aspirating Detector- 500 Sqm Coverage   | Nos  | 1    |
| b        | Power Supply with Battery backup Unit  | Set  | 1    |
| c        | Air termination Nozzles with Capillary set   | Nos  | 12   |
| d        | Aspiration 25mm OD 21 mm ID PVC Sampling Pipes with accessories  | Mtrs | 90   |
| e        | Electronic Hooter with mounting arrangement  | Nos  | 1    |
| f        | 2C x 1 sq.mm armored cable.  | Mtr. | 60   |
| <b>8</b> | <b>Building Management System</b>  |      |      |
| f        | Integrator for PAC & UPS, DG, EM as per IO Summary   | Set  | 1    |
| g        | FAS soft integration   | Set  | 1    |
|          | <b>Direct Digital Controllers: BACnet/IP</b>   |      |      |
|          | Networkable 32 Bit DDC Controllers with I/O points as per enclosed IO List, inbuilt real time clock, Battery backup. The controllers shall be capable of standalone operation with real time clock and historical database. The DDC's shall be capable of peer to peer communication without help of system interface controller or PC. The DDCs shall be with suitable IP 54 enclosure complete with all wiring and accessories. BTL Approved |      |      |
| h        | DDC  | Set  | 1    |
|          | <b>Field Sensors</b>   |      |      |
| i        | Temperature and RH sensor for server room  | Nos. | 6    |
|          | <b>Cable and Conduit</b>   |      |      |
| j        | 2 Core x 1 sq mm Armored Cable for control cabling   | Mtrs | 1255 |
| k        | Communication cable: CAT6 Cable  | Mtrs | 2415 |
| l        | PVC Raceway  | Mtrs | 100  |

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|           |  |      |    |
|-----------|--|------|----|
| <b>9</b>  | <b>PA System</b>   |      |    |
| b         | 6 W ceiling Speaker  | Nos  | 1  |
| e         | 2 core 1 Sqmm armored cable                                | Mtrs | 60 |
| <b>10</b> | <b>Installation and Commissioning Charges</b>              |      |    |
| a         | Laying, Fixing, Installation and Commissioning and Charges | Ls   | 1  |

| Sl.No | Previous Item | Section | Description   | Unit | Quantity |
|-------|---------------|---------|---|------|----------|
| 1.0   | Previous Item | RACK    | <p>SITC of 42U Server Racks ( 800 mm x 1200 mm ) UL approved/complied; The Rack should be able to with stand a minimum Static load of 1300 Kgs and Rolling load of 1000 Kgs.The unit should have a minimum of IP 20 rating for protection against touch, ingress of foreign bodies, and ingress of water. Rack front door should have minimum 65-70% % of open perforation for efficient air flow.</p> <p>Removal type cable manager rings in rear side of the racks<br/>Min two temperature and RH sensors in each rack<br/>Blanking Panels in each rack -20 nos</p> | Nos  | 29       |

**1.2. Availability of Tender Documents**

Please refer "Procedure to participate in the e-tender".

**1.3. Calendar of Events**

|     |   |                         |
|-----|---|-------------------------|
| (a) | Date of availability of tender documents from TPCODL / TPWODL / TPNODL / TPSODL Website | 15.07.2023              |
| (b) | Last date and time of Payment of Tender Fee   | 17.07.2022, 17:00 Hours |
| (c) | Last Date of receipt of pre-bid queries, if any   | 19.07.2022, 17:00 Hours |

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|     |  |                         |
|-----|--|-------------------------|
| (d) | Last Date of Posting Consolidated replies to all the pre-bid queries as received | 21.07.2022, 17:00 Hours |
| (e) | Last date and time of receipt of Bids  | 26.07.2022, 18:00 Hours |

**Note:** In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for TPCODL's office, the last date of submission of bids and date of opening of bids will be the day following working day at appointed times.

**1.4 Mandatory documents required along with the Bid**

- 1.4.1 EMD of requisite value and validity
- 1.4.2 Tender Fee.
- 1.4.3 Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.
- 1.4.4 Acceptance of Specification, drawing with filled in GTP as per Annexure II.
- 1.4.5 Duly signed and stamped 'Schedule of Deviations' as per Annexure III on bidder's letter head.
- 1.4.6 Duly signed and stamped 'Schedule of Commercial Specifications' as per Annexure IV on bidder's letter head.
- 1.4.7 Duly filled in Annexure V and VI.
- 1.4.8 Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.
- 1.4.9 Copy of PAN, GST registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')

**Please note that in the absence of any of the above documents, the bid submitted by a bidder shall be liable for rejection.**

**1.5. Deviation from Tender**

Normally, the deviations to tender terms are not admissible and the bids with deviation are liable for rejection. Hence, the bidders are advised to refrain from taking any deviations on this Tender. Still in case of any deviations, all such deviations shall be set out by the Bidders, clause by clause in the 'Annexure III - Schedule of Deviations' and same shall be submitted as a part of the Technical Bid.

**1.6. Right of Acceptance/Rejection**

Bids are liable for rejection in absence of following documents:

- i. EMD of requisite value and validity.
- ii. Tender fee of requisite value.
- iii. Price Bid as per the Price Schedule mentioned in Annexure I (BOQ)
- iv. Necessary documents against compliance to Qualification Requirements mentioned at Clause 1.7 of this Tender Document.
- v. Filled in Schedule of Deviations as per Annexure III.
- vi. Filled in Schedule of Commercial Specifications as per Annexure IV.
- vii. Signed and filled in Specification and GTP as per Annexure II.
- viii. Duly filled and signed Annexure V and VI.
- ix. Receipt of Bid within the due date and time.

CCG reserves the right to accept/reject any or all the bids without assigning any reason thereof.

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**1.7 Qualification Criteria**

1) The average annual turnover of the bidder shall be a minimum of Rs. 20.0 Crs for any three of last five financial years. (FY 18-19 ,FY 19-20, FY 20-21, FY 21-22 & FY22-23) Copy of audited Balance Sheet and P&L Account to be submitted in this regard. (UDIN no is mandatory for balance sheet.)

Bidder should also submit Bank Solvency certificate from any Nationalized Scheduled Indian Bank of a minimum of 10 Cr. issued not less than 12 months from the date of the issuance of the tender.

2) Qualification Requirement of Financial Turnover for MSME registered in the State of Odisha shall be reduced to 20% of the existing criteria.

3) The BIDDER should have built at least 5 data center .

Out of 3 Data Centers, at least 1 should be in State/Central Government/PSUs/Govt. Banks.

- 3 Similar completed works each costing not less than Rs. 10 Crs. each OR
- 2 Similar completed works each costing not less than Rs. 15 Crs. each OR
- 1 Similar completed work costing not less than Rs. 25 Crs.

Definition of Similar Works:

- The scope of work should include Data Center Design & Build of minimum 150 or 200kW IT Load including SITC of UPS (in N+N), PACs (in N+1), Electrical Panels(in N+N), Electrical Cables, BBT for Rack Distribution, Complete IBMS system including Fire Suppression System along with BMS software, Generators (optional), passive network cabling (optional) Etc.
- It should not include any IT equipment (servers, storages, networking switches) which are installed in the 42U server racks as part of the scope.
- It should be a turn-key project with the complete end-to-end scope in the name of the bidder only.
- End customer completion certificate should be submitted in case the order is placed by a private firm on behalf of the Govt. end customer.
- The BIDDER should have certified Datacenter Professionals (Min 4 employees CDCP or ATD) & Project Management Personnel (PMP® certified by PMI, 1 employee) who has been certified in the past 2 years and is should be working with the bidder for a minimum of 2 years. A copy of the latest certificate shall be enclosed with the bid along with PF/ESIC deposit slips from the organization verifying the employment of the personnel with the organization for the past 2 years or more as on date of release of RFP.

4) The bidder must have all statutory compliance like valid PAN no, GSTN , MSME certificates etc. The bidder must submit the copy of all these registrations.

**1.8. Marketing Integrity**

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts. Bidders must agree to these rules prior to participating. In addition to other remedies available, CCG reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts. A bidder who violates the

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market place rules or engages in behavior that disrupts the fair execution of the marketplace, may result in restriction of a bidder from further participation in the marketplace for a length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace
- Breach of terms as published in TENDER/NIT

**1.9. Supplier Confidentiality**

All information contained in this tender is confidential and shall not be disclosed, published or advertised in any manner without written authorization from TPCODL/TPWODL/TPNODL/TPSODL. This includes all bidding information submitted to TPCODL/TPWODL/TPNODL/TPSODL. All tender documents remain the property of TPCODL/TPWODL/TPNODL/TPSODL and all suppliers are required to return these documents to TPCODL upon request. Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

**2.0 Evaluation Criteria**

- The bids will be evaluated technically and on qualifying criteria of tender terms and conditions.
- The bids will be evaluated commercially on individual item basis (all-inclusive lowest cost at item level) for the complete tender as calculated in Schedule of Items [Annexure I].
- Bidder has to mandatorily quote against each item of Schedule of Items [Annexure I]. Failing to do so, TPCODL may reject the bids.

**NOTE:** In case a new bidder is not registered with TPCODL/TPWODL/TPNODL/TPSODL, factory inspection and evaluation shall be carried out to ascertain bidder's manufacturing capability and quality procedures. However, TPCODL/TPWODL/TPNODL/TPSODL reserves the right to carry out factory inspection and evaluation for any bidder prior to technical qualification.

*In case a bidder is found as Disqualified in the factory evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of TPCODL/TPWODL/TPNODL/TPSODL shall be final and binding on the bidder in this regard.*

**2.1 Price Basis:** Price will be fixed and firm during the contractual period.

**3.0 Submission of Bid Documents****3.1 Bid Submission**

Bidders are requested to submit their offer in line with this Tender document through e-tendering process.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc. will happen only through TPCODL E-Tender system (Ariba).

No e-mail or verbal correspondence will be responded. All communication will be done strictly with the bidder who have done the above step to participate in the Tender.

Bids shall be submitted in 3(Three) parts:

**FIRST PART: "EMD"** as applicable shall be submitted. The EMD shall be valid for 210 days from the due date of bid submission in the form of Bank Guarantee / Bank Draft / Bankers Pay Order (issued from a Scheduled Bank) online NEFT/ RTGS transfer favoring 'TP Central Odisha Distribution Limited' payable at

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Bhubaneswar. The EMD BG has to be strictly in the format as mentioned in the General Condition of Contract, failing which it shall not be accepted by CCG and the bid as submitted shall be liable for rejection. A separate non-refundable tender fee of the stipulated amount also needs to be transferred online through NEFT/ RTGS in case the tender document is downloaded from our website.

TPCODL Bank Details for transferring Tender Fee and EMD is as below:

**Account Name: TP CENTRAL ODISHA DISTRIBUTION LIMITED**

**Bank Name: SBI, IDCO Towers, Bhubaneswar**

**Bank Account No.: 10835304915**

**IFSC Code: SBIN007891**

**Note-** EMD is preferred in form of Bank Guarantee and to be delivered at the following address. However, in view of present situation if Bidder is finding it difficult to make and submit BG for EMD amount, they can do online transfer of EMD amount in the above mentioned Account and submit proof of the same as part of Bid Submission.

Please note that in such case, Tender Fee and EMD should be strictly 2 separate transactions.

Please note as return of EMD from Bank Account is non-standard practice and the same may take more time than return of EMD BG.

**EMD Original Hard Copy shall be delivered at the following address in Envelope clearly indicating Tender Reference/ Enquiry Number, Name of Tender and Bidder Name**

**Chief –Centralized Contracts Group**

**TP Central Odisha Distribution Limited**

**1<sup>st</sup> Floor, Anuj Building, Plot No. 29, Satya Nagar, Bhubaneswar- 751007**

EMD shall be exempted for MSME registered in the State of Odisha. However, Bidder shall be barred to participate in the tendering process for a period of 2 years in case it backs out post award of the contract.

**SECOND PART: “TECHNICAL BID”** shall contain the following documents:

- a) Documentary evidence in support of qualifying criteria
- b) Technical literature/GTP/Type test report etc. (if applicable)
- c) Qualified manpower available
- d) Testing facilities (if applicable)
- e) No Deviation Certificate as per the Annexure III – Schedule of Deviations
- f) Acceptance to Commercial Terms and Conditions viz Delivery schedule/period, payment terms etc. as per the Annexure IV – Schedule of Commercial Specifications.
- g) Quality Assurance Plan/Inspection Test Plan for supply items (if applicable)
- vii) Copy of PAN, GST registration (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the ‘Schedule of Deviations’)

**The technical bid shall be properly indexed and is to be submitted through CCG/TPCODL E-tender System (Ariba) only. Hard Copy of Technical Bids need not be submitted**

**THIRD PART: “PRICE BID”** shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices and Taxes & duties etc. In case any discrepancy is

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observed between the item description stated in Schedule of Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail.

**Price Bid is to be submitted in soft copy through CCG/TPCODL E-Tendering system (Ariba) only. Hard copy of Price Bid not be submitted**

The EMD in the form of Bank Draft / BG / Bankers Pay Order shall be submitted in original hard copy and then placed in sealed envelope which shall be clearly marked as below:

**EMD**

**“Rate Contract for supply and Installation of Data Centre Infrastructure required for TPCODL, TPWODL, TPNODL and TPSODL.”**

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the TPCODL, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

**SIGNING OF BID DOCUMENTS:**

The bid must contain the name, residence and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature.

The Bid being submitted must be signed by a person holding a Power of Attorney authorizing him to do so, certified copies of which shall be enclosed.

The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with bid.

A bid by a person who affixes to his signature the word 'President', 'Managing Director', 'Secretary', 'Agent' or other designation without disclosing his principal will be rejected.

The Bidder's name stated on the Proposal shall be the exact legal name of the firm.

**3.2 Contact Information**

All the bidders are requested to send their pre-bid queries (if any) against this tender through e-mail within the stipulated timelines. The consolidated reply to all the queries received shall be posted on TPCODL website by the stipulated timelines as detailed in calendar of events.

**Communication Details:****Handling Executive for this Tender:**

Name: Rajib Bhattacharya

Contact No.: 9434210425

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E-Mail ID: rajib.bhattacharya@tpwesternodisha.com

Escalation: Head -CCG:

Name: Mr. Vipin Chauhan

E-Mail ID: [Vipin.Chauhan@tpnodl.com](mailto:Vipin.Chauhan@tpnodl.com)**3.3 Bid Prices**

Bidders need to quote for all items as per the Price schedule attached in Annexure I. The bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total price with taxes, duties & freight up to destination at various sites of TPCODL/TPWODL/TPNODL/TPSODL. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply work, breakup of price constituents.

**Applicable GST to be specified clearly.**

The quantity break up shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

**3.4 Bid Currencies**

Prices shall be quoted in Indian Rupees Only.

**3.5 Period of Validity of Bids**

Bids shall remain valid for 180 days from the due date of submission of the bid.

Notwithstanding clause above, the TPCODL/TPWODL/TPNODL/TPSODL may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and responses thereto shall be made in writing.

**3.6 Alternative Bids**

Bidders shall submit Bids, which comply with the Bidding documents. Alternative bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the bidding documents.

**3.7 Modifications and Withdrawal of Bids**

The bidder is not allowed to modify or withdraw its bid after the Bid's submission. The EMD as submitted along with the bid shall be liable for forfeiture in such event.

**3.8 Earnest Money Deposit (EMD)**

The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect TPCODL against the risk of bidder's conduct which would warrant forfeiture.

The EMD shall be denominated in any of the following form:

- Banker's Cheque/ Demand Draft/ Pay order drawn in favor of TP Central Odisha Distribution Limited payable at Bhubaneswar.
- Online transfer of requisite amount through NEFT/ RTGS.



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- Bank Guarantee valid for 210 days after due date of submission.

**The EMD shall be forfeited in case:**

- a) The bidder withdraws its bid during the period of specified bid validity.

**Or**

- b) The successful Bidder does not
  - a) accept the Purchase Order, or
  - b) furnish the required Performance Security Bank Guarantee

**3.9 Type Tests (if applicable)**

The type tests specified in TPCODL/TPNODL/TPSODL/TPWODL specifications should have been carried out within five years prior to the date of opening of technical bids and test reports are to be submitted along with the bids. If type tests carried out are not within the five years prior to the date of bidding, the bidder will arrange to carry out type tests specified, at his cost. The decision to accept/ reject such bids rests with TPCODL

**4 Bid Opening & Evaluation process.****4.1. Process to be confidential**

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the TPCODL/TPWODL/TPNODL/TPSODL processing of Bids or award decisions may result in rejection of the Bidder's Bid.

**4.2. Technical Bid Opening**

Bids will be opened at CCG/TPCODL Office, Bhubaneswar. All tender bids shall be opened internally by TPCODL. The presence of any bidder will not be allowed during bid opening process. A technical bid must not contain any cost information whatsoever.

First the envelope marked "EMD" will be opened. Bids without EMD/cost of tender (if applicable) of required amount/ validity in prescribed format, shall be rejected.

Next, the technical bid of the bidders who have furnished the requisite EMD will be opened, one by one.

**4.3. Preliminary Examination of Bids/Responsiveness**

TPCODL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order. CCG may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

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Prior to the detailed evaluation, CCG will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

Bid determined as not substantially responsive will be rejected by the TPCODL/TPWODL/TPNODL/TPSODL and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

**4.4. Techno Commercial Clarifications**

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, TPCODL/TPWODL/TPNODL/TPSODL may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the TPCODL/TPWODL/TPNODL/TPSODL specifications and attempt will be made to bring all bids on a common footing. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted owing to any clarifications sought by TPCODL/TPWODL/TPNODL/TPSODL.

**4.5. Price Bid Opening**

Price bids will be opened internally without the presence of any bidder representative. The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of TPCODL/TPWODL/TPNODL/TPSODL without any further correspondence in this regard.

**4.6. Reverse Auctions**

TPCODL/TPWODL/TPNODL/TPSODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products/ services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form attached as Annexure VI as a token of acceptance for the same.

**5 Award Decision**

TPCODL/TPWODL/TPNODL/TPSODL will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said calculation shall be taken as the all-inclusive cost quoted by bidder in Annexure I (Schedule of Items) subject to any corrections required in line with Clause 3.1 above. The decision to place purchase order/LOI solely depends on CCG on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that CCG may deem relevant.

TPCODL/TPWODL/TPNODL/TPSODL reserves the right to award contract to one or more bidders so as to meet the delivery requirement or nullify award decision without assigning any reason thereof.

In case any supplier is found unsatisfactory during the delivery process, the award will be cancelled and TPCODL/TPWODL/TPNODL/TPSODL reserves the right to award contract to other suppliers who are found fit.

**6 Order of Preference/Contradiction**

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In case of contradiction in any part of various documents in tender, following shall prevail in order of preference:

1. Schedule of Items (Annexure I)
2. Technical Specifications (Annexure II)
3. Special Conditions of Contract (Clause 7.0)
4. Submission of Bid Documents (Clause 3.0)
5. Acceptance Form for Participation in Reverse Auction (Annexure VI)
6. General Conditions of Contract (Annexure VIII)

**7 Post Award Contract Administration****7.1. Special Conditions of Contract**

- PO shall be valid for a period of 1 year from the placement of Contract. PO shall be placed as per the requirement of TPCODL/TPSODL/TPWODL/TPNODL. Rate shall be firm and fixed during the validity of the contract.

- Business Associate (BA) shall submit applicable Performance Bank Guarantee as per GCC within 30 days of issuance of purchase order. PBG applicable shall be @ 5% of Rate Contract Value or 10% of PO Value. Validity of BG shall be till expiry date of PO plus delivery period plus warranty period in case of 5% value BG. Validity will be till delivery period plus warranty period for 10% value BG. Claim period will be additional one month for both cases.

Performance Bank Guarantee for MSME registered in the State of Odisha shall be 25% of the value normally prescribed

- Any change in statutory taxes, duties and levies during the contract period shall be borne by TPCODL/TPSODL/TPWODL/TPNODL. However, in case of delay in work execution owing to reasons not attributable to TPCODL/TPSODL/TPWODL/TPNODL, any increase in total liability shall be passed on the Bidder, whereas any benefits arising owing to such statutory variation in taxes and duties shall be passed on TPCODL/TPSODL/TPWODL/TPNODL.
- Statutory Variations: Any changes in existing taxes/ Duties and levies, Introduction of new taxes and duties etc. during the period of the contract shall be paid at actuals to BA subject to BA shall submit the tax break up in details, however, where BA has quoted the all-inclusive prices and not shown the tax break-up, this clause will not be applicable. The date of issue of MDCC shall be used for this purpose.
- Quotation in all BOQ items is mandatory, and bid shall be rejected if any line of found blank in price bid.
- Delivery period shall be 60 days from date of receipt of release order / CAT-A issuance, whichever is later
- Warranty period: As mentioned in technical specification, Annexure-II enclosed.
- Delivery location: as mentioned in price schedule
- Late delivery(LD) clause will be applicable as per GCC.
- All other terms and conditions mentioned in General Conditions of Contract shall be applicable.
- TPCODL or respective discoms shall short close the issued Purchase Order/ Release Order / Rate contract, in case of any quality issues

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**▪ Terms of Payment:**

On delivery of the materials in good condition and certification of acceptance by certified official, Associate shall submit the Bills/ Invoices in original in the name of TP Central Odisha Distribution Limited to Invoice Desk. The payment shall be released within 45 days from the date of submission of certified bills/ invoices.

**7.2 Drawing Submission and Approval**

The relevant drawings need to be submitted within two weeks of receipt of firm purchase order by the successful bidder to TPCODL for approval. In case, re-submission of drawings is required on request of TPCODL, same needs to be submitted back to TPCODL/TPWODL/TPNODL/TPSODL within 5 days of such request.

**7.3 Delivery Terms**

**Completion period:** As per SLA. Release Orders shall be placed against the awarded Rate Contract by TPWODL abased on the requirements arise.

**7.4 Warranty Period**

As per scope of work and SLA

**7.5 Payment Terms**

On delivery of the materials in good condition and certification of acceptance by certified official, Associate shall submit the Bills/ Invoices in original in the name of TPWODL to Invoice Desk. The payment shall be released within 45 days from the date of submission of error free certified bills/ invoices .Any change in statutory taxes, duties and levies during the contract period shall be borne by TPWODL. However, in case of delay in work execution owing to reasons not attributable to TPWODL, any increase in total liability shall be passed on the Bidder, whereas any benefits arising owing to such statutory variation in taxes and duties shall be passed on TPWODL.

**7.6 Climate Change**

Significant quantities of waste are generated during the execution of project and an integrated approach for effective handling, storage, transportation and disposal of the same shall be adopted. This would ensure the minimization of environmental and social impact in order to combat the climate change. Please refer attached Environment Policy and Sustainability Policy, enclosed for more details.

**7.7 Ethics**

TPCODL/TPSODL/TPNODL/TPWODL is an ethical organization and as a policy TPCODL/TPSODL/TPNODL/TPWODL lays emphasis on ethical practices across its entire domain. Bidder should ensure that they should abide by all the ethical norms and in no form either directly or indirectly be involved in unethical practice.

TPCODL work practices are governed by the Tata Code of Conduct which emphasizes on the following:

- We shall select our suppliers and service providers fairly and transparently.

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- We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
- Our suppliers and service providers shall represent our company only with duly authorized written permission from our company. They are expected to abide by the Code in their interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.
- We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gifts and hospitality policy.
- We respect our obligations on the use of third party intellectual property and data.

Bidder is advised to refer Tata Code of Conduct (TCOC) attached for more information.

Any ethical concerns with respect to this tender can be reported to the following e-mail ID:

pradip.sil@tpcentralodisha.com

**8 Specification and standards**

As per Annexure II

**9 General Condition of Contract**

Any condition not mentioned above shall be applicable as per GCC attached along with this tender.

**10 Safety**

Safety related requirements as mentioned in our safety Manual put in the Company's website which can be accessed by: <http://www.tpwesternodisha.com>

All Associates shall strictly abide by the guidelines provided in the safety manual at all relevant stages during the contract period.

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**Annexure-I, Price Schedule**

| Electrical /UPS/Batter/IPDU |  |      |     |           |            |                    |              |
|-----------------------------|--|------|-----|-----------|------------|--------------------|--------------|
| Sl.No                       | LT SWITCHBOARDS/ PANELS :  | Unit | Qty | Unit Rate | Tax Amount | Unit rate with Tax | Total amount |
|                             | UPS Isolator   | Nos. | 4   |           |            |                    |              |
|                             | PDU-1 & 2  |      |     |           |            |                    |              |
|                             | Supplying, Installation, Testing and Commissioning of Power Distribution Unit ( As per SLD & Specifications Attached)  |      |     |           |            |                    |              |
| 1.3                         | <b>INCOMER</b>   |      |     |           |            |                    |              |
|                             | One number 400 Amps.4 Pole, MCCB type isolator.  |      |     |           |            |                    |              |
|                             | <b>One number Intelligent multifunction digital meter to read V, A, KVA, KWH,THD, PF Hz, kVARh, Vah, VARh, MD, and RS 485 port etc. with 3 Nos. resin cast CTs of 400/5 A class 1.0 accuracy and 15 VA burden</b>  |      |     |           |            |                    |              |
|                             | One set of Phase indication LED lamps with 2 Amps. Back up MCB, breaker ON/OFF indicating light with MCB, test terminal block set, circuits as per standard practice and auxiliary contact contactors for positive electrical  |      |     |           |            |                    |              |
|                             | interlocking of breakers etc. as required  |      |     |           |            |                    |              |
|                             | <b>BUSBAR:-</b>  |      |     |           |            |                    |              |
|                             | 4P Copper bus bars (having 100% Neutral) of minimum of 400 Amps. Capacity with heat shrinkable colored sleeves and i/c DMC/SMC bus bar supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 25 KA for 1Sec. |      |     |           |            |                    |              |
|                             | <b>OUTGOINGS:</b>  |      |     |           |            |                    |              |
|                             | 36 Nos x 32 Amps. 10 kA, DP 'C' curve MCBs   |      |     |           |            |                    |              |

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|       |  |      |    |  |  |  |  |
|-------|--|------|----|--|--|--|--|
|       | <b>PDU - 1 &amp; 2 ( As described above )</b>  | Nos  | 2  |  |  |  |  |
|       | AC Inrow Panel ( DC Block )  |      |    |  |  |  |  |
|       | Incomer 2 Nos x 400 A TPN MCCB & 1 Nos x 400 A 4 P MCCB as bus coupler with 1 set of Indication lamp with Ammeter & Volt Meter - 1 set   |      |    |  |  |  |  |
| 1.7   |  |      |    |  |  |  |  |
|       | 2 set Intelligent multifunction digital meter to read V, A, KVA, KWH, THD, PF Hz, kVARh, Vah, VARh, MD, and RS 485 port etc. with 3 Nos. resin cast CTs of 160/5 A class 1.0 accuracy and 15 VA burden |      |    |  |  |  |  |
|       | Al Bus Bar 4pole 400 A - 1 set   |      |    |  |  |  |  |
|       | Out Going Feeders :  |      |    |  |  |  |  |
|       | 63 A TPN MCCB - 18 Nos   |      |    |  |  |  |  |
|       | 40 A TPN MCCB - 2 Nos  |      |    |  |  |  |  |
|       | Spare 63 A TPN MCCB - 2 Nos  |      |    |  |  |  |  |
|       | AC Inrow Panel ( DC Block ) as described   | Nos  | 1  |  |  |  |  |
| D - 1 | <b>4 Cx 185 Sq.mm Al.Ar FRLS XLPE</b>  | Rmt  | 20 |  |  |  |  |
|       | End Termination  | Nos. | 2  |  |  |  |  |
| 2     | 2R, 3.5C x 120 Sq.mm Al. Ar FRLS XLPE  | Rmt  | 55 |  |  |  |  |
| 1.1   | End Termination  | Nos. | 10 |  |  |  |  |

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|     |   |      |      |  |  |  |
|-----|---|------|------|--|--|--|
|     | 3CX 4 Sq.mm Copper cable  | Rmt  | 1200 |  |  |  |
|     | End termination with lugs & sleeves only.   | Nos. | 130  |  |  |  |
| 2.1 | 4CX10 Sq.mm Copper FRLS   | Rmt  | 1350 |  |  |  |
|     | <b>End termination</b>  | Nos. | 80   |  |  |  |
| 4.1 | 1CX120 Sq.mm Copper FRLS flexible   | Rmt  | 800  |  |  |  |
|     | End termination   | Nos. | 120  |  |  |  |
| 3.3 | Supply and implementation of 32 A 2P+E single phase 250 volts, Mobile industrial grade Male & Female plug-in NEMA or IEC power connectors   | Nos  | 58   |  |  |  |
| 3.4 | SITC of 25 mm MS conduit  | RM   | 100  |  |  |  |
|     | Supply, Unloading, Handling, Installation, Testing, Commissioning & Handing Over of 600 x 600 x 3.15 mm thick tined copper plate electrode, with 2 Nos 32 x 6 mm copper strips from earth plate electrode to inspection chamber, 50 mm dia medium class GI pipe, CI funnel with 20 gauge GI wire mesh, masonry chamber 450 x 450 mm with concrete base C I heavy duty / chequered plate manhole cover with frame painted with bit mastic paint and packing with mixture of charcoal and common salt around plate electrode including digging of pit up to permanent moisture level and as per soil condition but not less than 3 meters and back filling as required. The pipe shall have provision for watering through a funnel. It shall also have provision for connecting 25 x 6 mm. Copper Flat on two sides. | Nos. | 6    |  |  |  |
|     | Note:   |      |      |  |  |  |
| 2   | 1) Earthing stations should contain relevant grade of charcoal/coke and salt packed around the earth plate/earth pipe as called for in the item.  |      |      |  |  |  |
|     | 2) Adequate number of earth strips with proper sized holes shall be provided for extending earthing/looping earth connections at various floors shall be provided and executed as per the requirement.  |      |      |  |  |  |



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|          |   |            |            |  |  |  |
|----------|---|------------|------------|--|--|--|
|          | 3) All earth pits shall be as per IS 3043 with latest amendments.   |            |            |  |  |  |
|          | 4) Earthing shall be done at indicted location by the Consultants. The minimum distance between the two earth station shall be 3 meters and that from the building is 2500 mm.  |            |            |  |  |  |
|          | Earthing Strips   |            |            |  |  |  |
|          | <b>50 x 6 mm GI. Strip for body earthing of panels.</b>   | <b>Rmt</b> | <b>100</b> |  |  |  |
| 4        | 25 x 6 mm GI strip  | Rmt        | 200        |  |  |  |
| 4.1      | 25 x 6 mm Copper strip in PVC Sleeve.   | Rmt        | 75         |  |  |  |
| 6        | 25 x 3 mm Cu strip  | Rmt        | 150        |  |  |  |
| 6.1      | 8 swg GI wire   | Rmt        | 20         |  |  |  |
| 7        | RACK & Pedstal Earthing for 29 racks  | Lot        | 1          |  |  |  |
| <b>I</b> | <b>Perforated type cable tray</b>   |            |            |  |  |  |
|          | Tray shall be of GI & made out of 2mm thick GI sheet, bent in 'C' shape with adequate load bearing capacity. Quoted rate for supply & installation shall include necessary anchor fasteners and fixing accessories for supporting the cable tray.   |            |            |  |  |  |
| 1        | Size 450 x 50 x 50 mm   | Rmt        | 140        |  |  |  |
| 2        | Size 300 x 50 x 50 mm   | Rmt        | 100        |  |  |  |
| 3        | Size 50 X 200 x 50 mm   | Rmt        | 100        |  |  |  |
| 3        | First aid kit   | Lot        | 1          |  |  |  |
| <b>K</b> | <b>UPS Systems 160 kVA/kW for IT/Server Load:</b>   | <b>Nos</b> | <b>2</b>   |  |  |  |
|          | Supply , installation, testing & commissioning of IGBT based, Dual Conversion 160 kVA/kW UPS system ,wide input voltage range ( 229 V~478 V ) , 3 phase (415 V ± 15%) Volts input & 3 phase output (415 V ± 1%), 50 Hz, unity power factor ( Output ),TDHi % <3% at full linear load ,Inverter overload capacity :110% for 60 min; 125% 10min; 150% for 1 min ,Online mode efficiency up to 96.4% , Protection level of IP20. |            |            |  |  |  |
|          | Li-ion Battery for IT/Server Load:  |            |            |  |  |  |

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|                    |  |      |    |  |  |  |  |
|--------------------|--|------|----|--|--|--|--|
|                    | Supply , installation, testing & commissioning of Battery total 15 minutes back up along with Battery racks, copper cables between batteries, copper cables between UPS & batteries, DC MCCB Box. The breaker & cable sizing will be done as per the technical specs. Average UPS to battery bank distance shall be 10 meters or as per site requirement. Li-ion Battery total 15 minutes battery backup for each UPS in suitable for (N+N) configuration complete in all respect  | Nos  | 4  |  |  |  |  |
|                    | INTELLIGENT PDU FOR RACKS  |      |    |  |  |  |  |
|                    | Two IPDU's in each rack with different color chassis, 32A, and 230V with UL certified hybrid outlets (can be utilized as C13 or C19). 3-meter-long and inlet cable with input plug type should be IEC603029 2P+E, Splash proof IP44. Monitoring capability at Strip and circuit/breaker level. With metering accuracy of +/- 1% compliant to ANSI C12.1 and IEC 62053-21 with monitoring capability at strip level, the IPDU should have color coded outlets based on circuit breaker color for easy identification of circuits for quick troubleshooting and ease in maintenance. | Set  | 58 |  |  |  |  |
| M                  | <b>Three sensors for each rack (two in the front and one in the back) covering one data point for dew point and air flow along with three data points for temperature-humidity. Sensors should be integral with supplied IPDU's.</b>   | Set  | 29 |  |  |  |  |
| 3                  | INSTALLATION AND COMMISSIONING CHARGES   | LOT  | 1  |  |  |  |  |
|                    | Modification in Existing Main LT Panel, Existing 125A 4P MCCB is changed to 400A 4P MCCB   | Nos. | 2  |  |  |  |  |
| <b>Grand Total</b> |  |      |    |  |  |  |  |

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**HVAC System**

| Sl.No | Description   | Unit | Quantity | Unit Rate | Tax amount | Unit rate with tax | Total |
|-------|---|------|----------|-----------|------------|--------------------|-------|
| A.    | <b>EQUIPMENT</b>  |      |          |           |            |                    |       |
|       | Precision air conditioner with horizontal air flow pattern, can be placed in-between the racks or at the ends of rows, ( Depth 300 mm max ) close to the heat source with min 25 kW Nominal capacity. Inside of Cold Aisle should maintain 22+/-1 deg C, 50+/-5% RH. Unit should have Variable Scroll compressor compatible with R410a refrigerant, locking disconnect switches fan, condensate pump, Adjustable baffle system, Heater, Humidifier,G4 (EU4) gravimetric + Clogged Filter. Outdoor Condenser unit shall comprise of Copper coil with Aluminum fins and Axial fan with fan speed controller motor. The microprocessor control system offers should have advanced diagnostic and maintenance support, enabling multiple units to communicate and work together as a team to precisely control temperature and humidity across a room. In addition, the controller network should provide a choice of Teamwork, Lead/Lag and Cascade functions. |      |          |           |            |                    |       |
|       | Base Cooling Unit: Min 25 KW Net Sensible capacity  | Nos. | 10       |           |            |                    |       |
|       | with Matching Air cooled condenser  |      |          |           |            |                    |       |
|       | - R410A refrigerant   |      |          |           |            |                    |       |
|       | - Variable scroll Compressor  |      |          |           |            |                    |       |
|       | - EC Plug Fans  |      |          |           |            |                    |       |
|       | - Locking disconnect  |      |          |           |            |                    |       |
|       | - Adjustable baffle system  |      |          |           |            |                    |       |
|       | - Display with Temperature and Humidity Control   |      |          |           |            |                    |       |
|       | - Electric re-heating   |      |          |           |            |                    |       |
|       | - Electrode humidifier  |      |          |           |            |                    |       |
|       | - Remote racks temperature sensors  |      |          |           |            |                    |       |
|       | - Condensate pump   |      |          |           |            |                    |       |
|       | - G4 (EU4) gravimetric + Clogged Filter   |      |          |           |            |                    |       |

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|    |  |      |     |  |  |  |  |
|----|--|------|-----|--|--|--|--|
|    | - Condenser with fan speed controller  |      |     |  |  |  |  |
|    | - Adjustable levelling feet  |      |     |  |  |  |  |
|    | - Sensor   |      |     |  |  |  |  |
|    | - WLD  |      |     |  |  |  |  |
|    | - BMS Card   |      |     |  |  |  |  |
| B. | Lowside accessories and Installation & Commissioning:  |      |     |  |  |  |  |
|    |  |      |     |  |  |  |  |
| 1  | Installation & commissioning of Precision AC units comprising of   | Nos. | 10  |  |  |  |  |
|    | - Lifting, shifting & positioning of units to site   |      |     |  |  |  |  |
|    | - Commissioning of the system  |      |     |  |  |  |  |
|    |  |      |     |  |  |  |  |
| 2  | Interconnecting 18G Copper piping between indoor & outdoor unit. Copper piping alongwith fittings and accessories and will be duly insulated within the AC space |      |     |  |  |  |  |
|    | - Hot gas line   | Mtr  | 200 |  |  |  |  |
|    | - Liquid line  | Mtr  | 200 |  |  |  |  |
| 3  | Interconnecting flexible copper cabling (1 sqmm X 10 core)between indoor & outdoor unit with flexible PVC conduit  | Mtr  | 200 |  |  |  |  |
| 4  | Unit to unit communication shielded copper cable (1.5 sq mm x 3C) for Inrow unit Sequencing  | Mtr  | 100 |  |  |  |  |
| 5  | Condensate drain piping with GI- B class pipes (50 mm)   | Mtr  | 50  |  |  |  |  |
| 6  | Humidifier water piping with GI-B class pipes (20 mm)  | Mtr  | 50  |  |  |  |  |
| 7  | Extension kit  | RO   |     |  |  |  |  |
| 8  | Refrigerant Charge   | Kgs  | 250 |  |  |  |  |
| 9  | ODU Stands   | Set  | 10  |  |  |  |  |
|    | AISLE CONTAINMENT  |      |     |  |  |  |  |
| 1  | Heavy gauge Aluminium Sliding Door with viewing panel and support arrangement  | Nos. | 4   |  |  |  |  |
| 2  | Aisle containment made of Aluminium panels and Lexan sheet with supporting arrangement.  | set  | 2   |  |  |  |  |
|    | Civil Works :  |      | 1   |  |  |  |  |
|    | Providing necessary civil works as per requirement, including :  | Lot  | 1   |  |  |  |  |

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|              |  |     |   |  |  |  |  |  |
|--------------|--|-----|---|--|--|--|--|--|
|              | Providing, making up and finishing of Cutouts for passing refrigerant pipes, conduit/ cables, and drainage piping through walls, |     |   |  |  |  |  |  |
|              | Chasing, making up and finishing of vertical walls for refrigerant piping, conduit/ cables and drainage piping.                  |     |   |  |  |  |  |  |
|              | Wall cutting,  | Lot | 1 |  |  |  |  |  |
| <b>Total</b> |  |     |   |  |  |  |  |  |

| IBMS System |   |      |          |           |            |                    |       |
|-------------|---|------|----------|-----------|------------|--------------------|-------|
| Sl.No       | Description   | Unit | Quantity | Unit Rate | Tax amount | Unit rate with tax | Total |
| b           | <b>Intelligent Addressable Multi-sensor Smoke detector:</b>   | Nos. | 2        |           |            |                    |       |
|             | Multi-criteria addressable fire detector that incorporates photoelectric and thermal sensors, Polarity insensitive utilizing SureWire™ technology, Tri-color detector status LED with 360° viewing, Field-selectable application profiles, Superior EMI immunity, Remote sensitivity-measurement capability, Automatic environment compensation, UL Listed and ULC Listed; FM (#3230, 3210), CSFM (#7272-0067:0258) Approved, |      |          |           |            |                    |       |
| c           | <b>Intelligent Addressable Type Manual Call Point:</b>  | Nos. | 0        |           |            |                    |       |
|             | Intelligent Manual Fire Alarm Box is constructed of durable, molded and polycarbonate material that is matte finished in red with raised white lettering Single-action, Pull-down lever is down, until manually reset, Polarity insensitive via SureWire™ technology  |      |          |           |            |                    |       |
| d           | <b>Conventional Type Hooter with Strobe:</b>  | Nos. | 1        |           |            |                    |       |

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|   |  |       |     |  |  |  |  |
|---|--|-------|-----|--|--|--|--|
|   | The Series Z Notification Appliances feature an easy snap-on base that is designed to simplify the installation and testing of horns, strobes, and horn/strobes. Wall Mount models feature field selectable candela settings of 15/30/75/110cd and 135/185cd. Ceiling Mount models feature field selectable candela settings of 15/30/75/95cd and 115/177cd. UL Listed, ULC, CSFM, and FM approved. ADA/NFPA Compliant. Red. |       |     |  |  |  |  |
| e | Response Indicator for above false ceiling detector  | No    | 0   |  |  |  |  |
| f | <b>Intelligent Addressable Relay control module for Hooter+ Control module for 3rd Party equipment (VRF, Access coor trip unit)</b>  | Nos   | 9   |  |  |  |  |
|   | Interfacing and supervising normally open (N.O) or normally closed (N.C) contacts,Integral single-pole, double-throw (SPDT) relay (up to 4 amps) ,Multi-color light-emitting diode (LED) indicates system status: § GREEN / AMBER / RED ,UL Listed & ULC Listed; FM, CSFM and NYC Fire Dept. Approved  |       |     |  |  |  |  |
| g | <b>Intelligent Addressable Monitor module</b>  | Nos   | 0   |  |  |  |  |
|   | Interfacing and supervising normally open (N.O) or normally closed (N.C) contacts,Integral single-pole, double-throw (SPDT) relay (up to 4 amps) ,Multi-color light-emitting diode (LED) indicates system status: § GREEN / AMBER / RED ,UL Listed & ULC Listed; FM, CSFM and NYC Fire Dept. Approved  |       |     |  |  |  |  |
| h | 2 core x 1.5 sq.mm Armoured FRLS cable   | Mtrs. | 150 |  |  |  |  |
| i | Fire Extinguishers   | Nos.  | 2   |  |  |  |  |
| 2 | <b>Gas based Autimatic fire suppression system</b>   |       |     |  |  |  |  |

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|          |  |      |     |  |  |  |  |
|----------|--|------|-----|--|--|--|--|
| a        | SITC of CCOE Approved Seamless NOVEC1230 Cylinder and Valve Assembly, 100 Ltrs. capacity, OEM Factory filled with Novec 1230 Suppression Liquid , pressurised to 42 bar .  | Nos  | 4   |  |  |  |  |
| b        | Master Completer Kit complete with Solenoid, Pneumatic actuators, Pressure Gauge, Low pressure supervisory switch, Discharge hoses, Flexible actuation hoses and connectors. For Multiple cylinder system -VDS/UL approved | Lot  | 1   |  |  |  |  |
| c        | Slave Completer Kit complete with Pneumatic actuators, Pressure Gauge, Low pressure supervisory switch, Discharge hoses, Flexible actuation hoses, manual actuator and connectors.-VDS/UL approved                         | Lot  | 2   |  |  |  |  |
| d        | SITC of "Sinorix Gas Agent -NOVEC1230 Fire Protection Fluid, OEM Factory Filled per Kgs.   | Kgs  | 271 |  |  |  |  |
| e        | SITC of type UL / Vds Listed Nozzles, 360 Deg / 180 Deg Throw, selection as per approved hydraulic flow calculations.  | Nos  | 6   |  |  |  |  |
| f        | Manifold to cater Multiple Cylinder Bank   | Nos  | 1   |  |  |  |  |
| g        | Cylinder Support   | Nos  | 8   |  |  |  |  |
| h        | SITC of NOVEC Piping & Manifold as required  | Lot  | 4   |  |  |  |  |
|          | <b>Detection Systems</b>   |      |     |  |  |  |  |
| i        | Supply installation Testing & commissioning of Single zone Gas Release Panel   | Nos  | 1   |  |  |  |  |
| j        | Manual Release Switch  | No   | 1   |  |  |  |  |
| k        | Abort Switch   | No   | 1   |  |  |  |  |
| <b>3</b> | <b>CCTV SYSTEM</b>   |      |     |  |  |  |  |
| a        | 2 megapixel (1920 x 1080) resolution Indore Camera as per specification  | Nos  | 2   |  |  |  |  |
| f        | Cat-6 Cable  | Mtr. | 140 |  |  |  |  |
| <b>5</b> | <b>Rodent Repellant system</b>   |      |     |  |  |  |  |
| a        | Rodent controller  | Nos  | 1   |  |  |  |  |
| b        | TRANSDUCERS  | Nos  | 10  |  |  |  |  |

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|          |  |       |     |  |  |  |  |
|----------|--|-------|-----|--|--|--|--|
| c        | Wire Bundle  | Mtrs  | 120 |  |  |  |  |
| d        | PVC Conduit 20mm   | Mtrs  | 120 |  |  |  |  |
| <b>6</b> | <b>Water leak detection</b>  |       |     |  |  |  |  |
| a        | Conventional 4 Zone Water Leak detection panel with Modbus   | Nos   | 1   |  |  |  |  |
| b        | Water leak detection cable sensor  | Mtrs. | 150 |  |  |  |  |
| c        | Electronic Hooter  | Nos   | 1   |  |  |  |  |
| d        | 2 core x 1 sq.mm Armored cable   | Mtrs. | 60  |  |  |  |  |
| <b>7</b> | <b>Aspiration Detector (Early warning Detection)</b>   |       |     |  |  |  |  |
| a        | Single channel Aspirating Detector- 500 Sqm Coverage   | Nos   | 1   |  |  |  |  |
| b        | Power Supply with Battery backup Unit  | Set   | 1   |  |  |  |  |
| c        | Air termination Nozzles with Capillary set   | Nos   | 12  |  |  |  |  |
| d        | Aspiration 25mm OD 21 mm ID PVC Sampling Pipes with accessories  | Mtrs  | 90  |  |  |  |  |
| e        | Electronic Hooter with mounting arrangement  | Nos   | 1   |  |  |  |  |
| f        | 2C x 1 sq.mm armored cable.  | Mtr.  | 60  |  |  |  |  |
| <b>8</b> | <b>Building Management System</b>  |       |     |  |  |  |  |
| f        | Integrator for PAC & UPS, DG, EM as per IO Summary   | Set   | 1   |  |  |  |  |
| g        | FAS soft integration   | Set   | 1   |  |  |  |  |
|          | <b>Direct Digital Controllers: BACnet/IP</b>   |       |     |  |  |  |  |
|          | Networkable 32 Bit DDC Controllers with I/O points as per enclosed IO List, inbuilt real time clock, Battery backup. The controllers shall be capable of standalone operation with real time clock and historical database. The DDC's shall be capable of peer to peer communication without help of system interface controller or PC. The DDCs shall be with suitable IP 54 enclosure complete with all wiring and accessories. BTL Approved |       |     |  |  |  |  |
| h        | DDC  | Set   | 1   |  |  |  |  |
|          | <b>Field Sensors</b>   |       |     |  |  |  |  |
| i        | Temperature and RH sensor for server room  | Nos.  | 6   |  |  |  |  |
|          | <b>Cable and Conduit</b>   |       |     |  |  |  |  |



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|                    |  |      |      |  |  |  |  |
|--------------------|--|------|------|--|--|--|--|
| j                  | 2 Core x 1 sq mm Armored Cable for control cabling         | Mtrs | 1255 |  |  |  |  |
| k                  | Communication cable: CAT6 Cable                            | Mtrs | 2415 |  |  |  |  |
| l                  | PVC Raceway  | Mtrs | 100  |  |  |  |  |
| <b>9</b>           | <b>PA System</b>   |      |      |  |  |  |  |
| b                  | 6 W ceiling Speaker  | Nos  | 1    |  |  |  |  |
| e                  | 2 core 1 Sqmm armored cable                                | Mtrs | 60   |  |  |  |  |
| <b>10</b>          | <b>Installation and Commissioning Charges</b>              |      |      |  |  |  |  |
| a                  | Laying, Fixing, Installation and Commissioning and Charges | Ls   | 1    |  |  |  |  |
| <b>Grand Total</b> |  |      |      |  |  |  |  |

**IT & Network RACK**

| Sl.No | Section     | Description  | Unit | Quantity | Unit Rate | Tax amount | Unit rate with tax | Total |
|-------|-------------|--|------|----------|-----------|------------|--------------------|-------|
| 1.0   | <b>RACK</b> | SITC of 42U Server Racks ( 800 mm x 1200 mm ) UL approved/complied; The Rack should be able to with stand a minimum Static load of 1300 Kgs and Rolling load of 1000 Kgs.The unit should have a minimum of IP 20 rating for protection against touch, ingress of foreign bodies, and ingress of water. Rack front door should have minimum 65-70% % of open perforation for efficient air flow.<br><br>Removal type cable manager rings in rear side of the racks<br>Min two temperature and RH sensors in each rack<br>Blanking Panels in each rack -20 nos | Nos  | 29       |           |            |                    |       |
| Total |             |  |      |          |           |            |                    |       |

**NOTE:**

- 1) Bidder should be responsible for strategically place its resources to provide installation of the schedule

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items at different offices of TPWODL as required by TPWODL, meeting the SLAs & Execution Guidelines.

Bidders are advised to quote most competitive rates considering all factors like geographical layout, site conditions, all local conditions and factors, which may have any effect on the execution of the contract safety requirements.

- 2) Unit Rate shall include cost of materials as mentioned in Scope of Work (Annexure-VII).
- 3) The quantities mentioned above are for evaluation purpose only. Actual quantities may vary
- 4) The prices shall be FOR TPWODL Locations.
- 5) Bidder has to mandatorily quote for all line items. Failing to do so, bid will be rejected.
- 6) In case of increase in quantity for any item, the unit rate mentioned above shall be considered for the same.
- 7) HSN/SAC codes for respective line item must be mandatorily provided wherever applicable.
- 8) Selected Party shall supply / install the items mentioned in the Schedule of Items as per the requirement which may exceed up to 35%.

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**TPCODL**

TP Central Odisha Distribution Limited

**TPNODL**

TP Northern Odisha Distribution Limited

**TPSODL**

TP Southern Odisha Distribution Limited

**TPWODL**

TP Western Odisha Distribution Limited

**CENTRALIZED CONTRACTS GROUP**

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**ANNEXURE II**

Technical Specification attached (Separately)

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**CENTRALIZED CONTRACTS GROUP**

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**ANNEXURE III**

**Schedule of Deviations**

*Bidders are advised to refrain from taking any deviations on this TENDER. Still in case of any deviations, all such deviations from this tender document shall be set out by the Bidders, Clause by Clause in this schedule and submit the same as a part of the **Technical Bid**.*

*Unless specifically mentioned in this schedule, the tender shall be deemed to confirm the TPCODL/TPWODL/TPNODL/TPSODL's specifications:*

| S. No. | Clause No. | Tender Clause Details | Details of deviation with justifications |
|--------|------------|-----------------------|--|
|        |            |                       |  |
|        |            |                       |  |
|        |            |                       |  |
|        |            |                       |  |

*By signing this document we hereby withdraw all the deviations whatsoever taken anywhere in this bid document and comply to all the terms and conditions, technical specifications, scope of work etc. as mentioned in the standard document except those as mentioned above.*

**Seal of the Bidder:**

**Signature:**

**Name:**

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**ANNEXURE IV****Schedule of Commercial Specifications**

***(The bidders shall mandatorily fill in this schedule and enclose it with the offer Part I: Technical Bid. In the absence of all these details, the offer may not be acceptable.)***

| <b>S. No.</b> | <b>Particulars</b>  | <b>Remarks</b>                                |
|---------------|---|---|
| 1.            | Prices firm or subject to variation<br>(If variable indicate the price variation clause with the ceiling if applicable) | Firm / Variable                               |
| 1a.           | If variable price variation on clause given   | Yes / No                                      |
| 1b.           | Ceiling   | ----- %                                       |
| 1c.           | Inclusive of GST  | Yes / No (If Yes, indicate % rate)            |
| 1d.           | Inclusive of transit insurance  | Yes / No                                      |
| 2.            | Delivery  | Weeks / months                                |
| 3.            | Guarantee clause acceptable   | Yes / No                                      |
| 4.            | Terms of payment acceptable   | Yes / No                                      |
| 5.            | Performance Bank Guarantee acceptable   | Yes / No                                      |
| 6.            | Liquidated damages clause acceptable  | Yes / No                                      |
| 7.            | Validity (180 days)<br>(From the date of opening of bid)  | Yes / No                                      |
| 8.            | Inspection during stage of manufacture  | Yes / No                                      |
| 9.            | Rebate for increased quantity   | Yes / No (If Yes, indicate value)             |
| 10.           | Change in price for reduced quantity  | Yes / No (If Yes, indicate value)             |
| 11.           | Covered under Small Scale and Ancillary Industrial Undertaking Act 1992   | Yes / No<br>(If Yes, indicate, SSI Reg'n No.) |

**Seal of the Bidder:****Signature:****Name:**

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**ANNEXURE V****Checklist of all the documents to be submitted with the Bid**

Bidder has to mandatorily fill in the checklist mentioned below:

| <b>S. No.</b> | <b>Documents attached</b>   | <b>Yes / No / Not Applicable</b> |
|---------------|---|----------------------------------|
| 1             | EMD of required value   |                                  |
| 2             | Tender Fee as mentioned in this tender  |                                  |
| 3             | Signed copy of this tender as an unconditional acceptance   |                                  |
| 5             | Duly filled schedule of commercial specifications (Annexure IV)   |                                  |
| 6             | Sheet of commercial/technical deviation if any (Annexure III)   |                                  |
| 7             | Balance sheet for the last completed three financial years; mandatorily enclosing Profit & loss account statement |                                  |
| 8             | Acknowledgement for Testing facilities if available (duly mentioned on bidder letter head)                        |                                  |
| 9             | List of Machine/tools with updated calibration certificates if applicable   |                                  |
| 10            | Details of order copy (duly mentioned on bidder letter head)  |                                  |
| 11            | Order copies as a proof of quantity executed  |                                  |
| 12            | Details of Type Tests if applicable (duly mentioned on bidder letter head)  |                                  |
| 13            | All the relevant Type test certificates as per relevant IS/IEC (CPRI/ERDA/other certified agency) if applicable   |                                  |
| 14            | Project/supply Completion certificates  |                                  |
| 15            | Performance certificates  |                                  |
| 16            | Client Testimonial/Performance Certificates   |                                  |
| 17            | Credit rating/solvency certificate  |                                  |
| 18            | Undertaking regarding non blacklisting (On company letter head)   |                                  |
| 19            | List of trained/untrained Manpower  |                                  |

**Seal of the Bidder:****Signature:****Name**

**CENTRALIZED CONTRACTS GROUP**

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**ANNEXURE VI****ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT***(To be signed and stamped by the bidder)*

In a bid to make our entire procurement process more fair and transparent, TPCODL intends to use the reverse auctions as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

**The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:**

1. TPCODL/TPWODL/TPNODL/TPSODL shall provide the user id and password to the authorized representative of the bidder. *(Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).*
2. TPCODL/TPWODL/TPNODL/TPSODL will make every effort to make the bid process transparent. However, the award decision by TPCODL/TPWODL/TPNODL/TPSODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPCODL/TPWODL/TPNODL/TPSODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPCODL/TPWODL/TPNODL/TPSODL.
6. In case of intranet medium, TPCODL/TPWODL/TPNODL/TPSODL shall provide the infrastructure to bidders. Further, TPCODL/TPWODL/TPNODL/TPSODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out-rightly rejected by TPCODL/TPWODL/TPNODL/TPSODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPCODL/TPSODL/TPNODL/TPWODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of auction event shall be considered by TPCODL/TPWODL/TPNODL/TPSODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all-inclusive prices offered during conclusion of the auction event for arriving at Contract amount.
13. Even after RA TPCODL /TPWODL/TPNODL/TPSODL reserves the right to negotiate further to optimize the prices in case aforesaid Discoms are unable to arrive at their benchmark prices or tender committee decided price.

**Signature & Seal of the Bidder**

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**ANNEXURE VII****SCOPE OF WORK / SERVICE LEVEL AGREEMENT****Terms of Agreement**

- a) The onsite comprehensive warranty of the equipment's carries for 7 years warranty. BA shall provide maintenance of the equipment's for a period 7 years as per terms and conditions laid in this document.
- b) BA shall be authorized channel partner of OEM. BA shall submit the authorization certificate form OEM along with this SLA.
- c) Uptime guarantee: Uptime of the equipment's will be 99 %. This will be calculated on monthly basis.
- a) Studying existing network setup in consultant with TPWODL IT Team. Mounting of the appliance in the rack.
- b) Prepare landscape/diagram and deliverable SoW. Complete configuration of the device to integrate with network.
- c) Mounting of the appliance in the rack.
- d) Installing the related hardware/software components and terminating the cables on network.
- e) Complete configuration of the device to integrate with network.
- f) Implement and Documentation of the same.
- g) BA should complete the project as per the agreed time.

This agreement shall remain in force from the date of commencement i.e., <date > till the expiry of the warranty (including extension if any) for the device provided against this order. It shall be open to TPWODL to terminate this agreement any time during its currency by giving one month notice to the BA, in writing.

**Commencement of Warranty Period**

The warranty/support period will start from date of completion of installation and commissioning of devices i.e. from the date on which installation report is signed by TPWODL in TPWODL format.

**Scope of Work**

TPWODL nominated person release RO/ mail for supply and Installation of Data Center Infrastructure in TPWODL.

**Maintenance Services**

BA shall provide maintenance services under this agreement for the equipment listed above on per agreed vide purchase order number for the purchased equipment.

The maintenance services shall include the following: -

**(i) Corrective Maintenance**

Any system failure, service will be attended by BA's engineer and if necessary, by their specialists and consultant. If any spare parts or full system requires replacement, it should be replaced with equivalent model or higher model only. Till the time spare part / services is replaced/restored, entire appliance will be considered to be down.



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### (ii) Preventive Maintenance

TPWODL will allow BA to carry out required Preventive Maintenance of the device. The down time required for Preventive Maintenance will be included in total down time of system to calculate quarterly uptime and also communicated to TPWODL management by the BA.

### Spares Availability/ Support for Patch

BA shall have a back-to-back Business Critical Support arrangement with the <OEM> for spares and escalation support. BA shall also have a formal arrangement with < OEM> for any technical support that may be required on the hardware and the OS.

A copy of agreement between service provider & OEM should be provided to TPWODL The deliveries under system Hardware, software/patches support include: -

- System Software (IOS) updates / upgrades
- Pro-active patch notification & installation on device
- Operating System Bug-fixes
- Flash memory up gradation
- Access to OEM Diagnostic Solutions Database.
- Any other changes beneficial to TPWODL will be done on device through the bidder

### Delivery Time

The devices should be delivered within 4-6 weeks and installation of the same should be done in 1 week from the date of intimation. (Client will intimate date to bidder for installation of equipment's).

### Response and Resolution Time :

| S. No | Activity                          | SLA Timelines                                   |
|-------|-----------------------------------|---|
| 1     | Configuration/ Call Response Time | 2 Hours response time.                          |
| 2     | Resolution Time                   | 4 hours from the time of call registration.     |
| 3     | Spares/Hardware Failure           | NBD or Replacement as per the OEM support terms |

### Method of contact to Engineer

BA should mention contact no, e-mail id and name of concerned engineer.

### Level of specialist assistance to engineer

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The BA will ensure that all required specialist /Technical Support will be provided to his engineer so that the guaranteed uptime will be achieved.

**Level of Escalation (If problems are not resolved as per SLA)**

| Category                           | On call Response | Contact person | Email id |
|------------------------------------|------------------|----------------|----------|
| Support – Initial analysis<br>(L1) | Within 2 hrs     |                |          |
| Account Manager                    | Within 4 Hrs     |                |          |
| Sales Director                     |                  |                |          |

**Reporting**

The BA shall prepare a **Monthly Report** in the prescribed format of TPWODL covering the following:

- Uptime Summary Report

**Liquidated Damages**

In case uptime commitment of device (as mentioned in clause 2 (a), (c), 3, 5, 6, 7, 8)) of this SLA) is not met, the same would attract a **Penalty** @ Rs1000 per hour per device. The penalty money will be recovered from the payment due to BA.

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## Specifications for Hot Swappable Modular UPS

### Addressable Fire Alarm System (AFAS)

- a. Entire facility will have fire detection and alarm system. Different types of detectors such as fire, smoke and heat detectors or combination of all installed and wired to a control panel in a Zonal fashion.
- b. This system must be integrated with the central monitoring system. The fire panel should be addressable and must have battery powered.
- c. The proposed site already has fire hydrant system and pipes are running across the floor. The bidder must disconnect and dismantle the pipes in server farm area only. This area will be replaced by NOVEC clean agent in place of water as a fire suppressant.
- d. The fire hydrant on the people support area side will remain as it is and it will remain connected to the main system.
- e. The AFAS system will have manual call point, hooters and all other accessories for complete fire detection system.
- f. There must be a provision to connect the system to the Building Management System.
- g. Illuminated exit signs must be installed on Fire exit door.
- h. Emergency evacuation laminated chart of A3 size must be displayed at all important location.
- i. Detectors must be placed on all voids.
- j. A detail table of items must be submitted with quantity and type of items.
- k. The design will be as per NFPA and local fire codes whichever is applicable.
- l. Hooter with strobes is to be installed at least 2 points in the Data Center area.

### Aspiration Smoke Detection System or Very Early Smoke Detection System (VESDA)

- a. VESDA system are required in the server farm area for early detection of smoke with a facility of alarm.
- b. The system must be digital and the panel has to be installed inside the Server room.
- c. The sampling pipe has to run over the true ceiling and below the floor

### Gas Based Fire Suppression System

- a. The technical area such as Server Farm Area must have fire suppression system (NOVEC 1230) with an alarm such that in case of fire the gas agent gets released through the nozzles and suppress the fire fully without damaging the electronic devices.
- b. The suppression nozzles must be placed on all voids and including the inside of containment.
- c. The cylinder has to be seamless type.
- d. In case there is a flooding of gas during execution and before the site handover bidder need to replace the gas at its own cost.
- b. e. Placement of cylinder bank is shown on the layout.
- f. The gas-based suppression system must be integrated to Fire Alarm System.
- g. Other area should have "ABC Dry Powder MAP-UL90% Fire Extinguishers with nominal charge of 4 kg (+/- 2%) and CO2 gas cartridge of 120gm as per IS:4947. Constructed of MS Sheet by MIG

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welding process and  
brass forged discharge Valve. Approved Fire ratings 2A:34B with an effective throw of  
about 4 meters  
(Min. 2 m.) and discharge about 96% (Min. 85%).

### Close Circuit Television System (CCTV)

- a. Surveillance of inside and outside of the facility must be done with different type of IP cameras such as Dome / Bullet / PTZ high-definition cameras with facility of motion-based recording for one month in NVR Storage. The CCTV system should cover all the concerned area of Data Center.
- b. The cameras inside the server room to be for all the aisle including the coverage of PAC and entry exit door.
- c. All area of Data Center should have CCTV coverage except Manager Room & Wash rooms.
- d. All cameras have to be powered by CAT6 for PoE Switch.
- e. At least one month recording must be available in NVR in inbuilt HDD
- f. All recording has to be motion based inside the server room, NOC room, BMS room and helpdesk area. However, inside the electrical room has to be continuous.

### NETWORK VIDEO RECORDER (NVR):

- a. New 4.0 user interface
- b. 16-channel decoding@1080p (30 fps); self-adaptive decoding capability
- c. Access, storage or forwarding at 384 Mbps
- d. Simultaneous video output for VGA and HDMI1; 4K heterogeneous output for the 2 HDMI ports
- e. Multiple data mode such as Raid0, Raid1, Raid5, Raid6, and Raid10
- f. Remote configuration and management of IPCs, such as setting parameters, acquiring information and upgrading IPCs of the same model in batches.
- g. AI-by-camera functions such as perimeter protection, face detection and recognition, SMD Plus, video metadata, ANPR and 3D behavior analysis.
- h. N+M cluster. When the host fails, the standby device will continue to record; once the host recovers, video recorded on the standby device will be transmitted back.

### Access Control System

- a. Access to the facility has to be controlled. Dual electronic authentication on each entry to the critical area must be available. Physical access controlled also has to be configured wherever required. The scope will include all the access control system mechanisms including authentication, prioritization and monitoring.
- b. All the doors have to be controlled by access control hardware and software except the manager room.
- c. All doors must have entry and exit card reader.
- d. Server room entry must be with biometric access from the people entry side.
- e. The bidder has to supply and configure at least 100 number of proximity cards.

### Water Leak Detection System

- a. Detection of water and other liquids at the server room floors where there is the possibility of water or liquid leakage with detection and alarm system.
- b. Water leak detection cable must be run near all water pipelines inside the server room and the surrounding of PACs.
- c. Water leak detection system will be Analog / Digital type with hooter connected to the system.
- d. The complete system shall include an electronic system control panel, multiple control modules,

distance type sensing cable and all required auxiliary accessories.

- e. The water leak detection system must have capability to integrate with monitoring tools.
- f. A detail design drawing must be submitted.

### Rodent Repellent System (RRS)

- a. Ultrasonic frequency based electronic system to repel rodents from the floors with help electronic wave emitters.
- b. The satellites of the RRS to be installed in all voids in all area

### Network Passive Infrastructure

- a. Copper cabling as per TIA/EIA guidelines
- b. Tier III complaint design
- c. 25 years certification
- d. Copper cabling will be through different cable tray / busket for all the 16 racks.
- e. A separate wall mount / floor mount rack to be install at staging room for other area as Distribution Rack.
- f. All Server Racks to be supplied are 800mm x 1200 mm with castor wheel and Network Racks to be supplied are 800mm x 1000 mm. All are having perforated door and height will be 42U.
- g. Each rack will have two numbers of PDU with 32 AMP MCB and industrial type socket.
- h. Each row has to be provisioned with a network cum passive rack.
- i. All the BMS/Helpdesk/Manager room network point to be terminated to the Staging Room Distribution Network Rack.

| Technical Specifications for PDU 160kVA |                    |             |
|---|--------------------|-------------|
| Sr. No.                                 | Specifications     | Requirement |
| 1                                       | Capacity (in kVA ) | 160 kVA     |

|          |  |  |
|----------|--|--|
| <b>2</b> | <b>Technology and Capability</b>       | <p>a) Configurable circuit breaker panel</p> <p>b) <b>LCD Display Supporting multiple language</b></p> <p>c)Recording Approx 3000 Event logs.</p> <p>d) Monitoring the current of each branch circuit breaker</p> <p>e) Built in Six dry contact</p> <p>f) Two Built in SNMP Interface increase availability</p> <p>g) Local &amp; Emergency Power off function</p> <p>h) <b>No Rear Access Required.</b> PDC can be Placed against wall.</p> <p>j)<b>Manual Soft starter</b></p> <p><b>k) Alarm threshold should be settable from display</b></p> <p>l) Each Branch Circuit must have kVA, kW, kWh, kW maximum demand &amp; Current Demand &amp; Current parameters</p> |
| <b>3</b> |  |  |
| 3.1      | 160 kVA                                | <b>Make / Model / Part No</b> to be specified by the vendor  |
| <b>4</b> | <b>Input</b>                           |  |
| 4.1      | Input facility -Phases / Wires         | 3-Phase / 3-Wire & Gnd (3Phase + Ground)   |
| 4.2      | Input Voltage Range                    | 216-264/374-456 V (Rated System Voltage is 415±10%)  |
| 4.3      | Nominal Input Frequency                | 50 Hz  |
| 4.4      | Input Frequency Range                  | ±5%  |
| 4.5      | Main Input Protection                  | 400 A 36kA 3P MCCB Microprocessor based release  |
| 4.6      | Rated Input current                    | 231A   |
| <b>5</b> | <b>Output</b>                          |  |
| 5.1      | Total O/P Current Rated                | 231A   |
| 5.2      | O/P Panel Board Protection             | 250 A 36kA 3P MCCB Microprocessor based release  |
| 5.3      | Outgoing feeders                       | <b>As per Rack requirement</b>   |
| 5.5      | Surge Protection                       | 20 kA Minium & 40kA Maximum with 63A 3P I/P MCB.   |
| <b>6</b> | <b>Transformer</b>                     |  |
| 6.1      | Transformer rating (kVA)               | 160  |
| 6.2      | Txr Configuration (Delta/Wye, Wye-Wye) | Delta Star   |
| 6.3      | Txr Wdg. (Cu/Al)                       | Cu   |
| 6.4      | Txr K Type                             | K 13   |
| 6.5      | Soft Start                             | Manual   |
| 6.6      | Class of Insulation                    | H class  |
| 6.7      | Txr Efficiency                         | >98%   |
| 6.8      | Txr Regulation                         | 3~5%   |
| 6.9      | Txr Safety                             | Thermal Protection optional  |
| <b>7</b> | <b>Display Data</b>                    |  |

|           |                                 |   |
|-----------|---------------------------------|---|
| 7.1       | System Level Measure            | <b>System parameter</b> - Ambient Temperature, Ground Current, 3 Phase L2L Voltage, 3 Phase L2N Voltage,  |
|           |                                 | <b>I/P Parameter</b> - 3 Phase L2L Voltage, 3 Phase L2N Voltage, 3 Phase Current, Load%, ITHD, Total kVA, Total kW, Total kWh.                            |
|           |                                 | <b>O/P Parameter</b> - 3 Phase L2L Voltage, 3 Phase L2N Voltage, 3 Phase current, Neutral Current, Frequency, Load%, ITHD, Total kVA, Total kW, Total kWh |
| 7.2       | Branch Level Measure            | Load%, current in each CT, Max & Minimum Current in Each CT, Over current status, under current status, kW, kWh, <b>kW Demand, Current Demand</b>         |
| 7.3       | Alarm Status                    | <b>System Alarm</b> - Ambient Temperature   |
|           |                                 | <b>System I/P Alarm</b> - Over/Under Voltage, Over/Under Current, Over iTHD   |
|           |                                 | <b>System O/P Alarm</b> - Over/Under Voltage, Over/Under Current, Over iTHD, Over VTHD, Under p factor,   |
| 7.3       | <b>Interface/Communications</b> | RS232/485 Converter, REPO , Dry Contact X 6 Nos, SNMP & Ethernet  |
| <b>15</b> | <b>Physical</b>                 |   |
| 15.1      | Operating Temperature           | 0°C ~ 40°C  |
| 15.2      | Storage Temperature             | - 20°C ~ 40°C   |
| 15.3      | Operating Humidity              | < 95%   |
| 15.4      | Operating Altitude              | 0 to 3000m(0 To 10000ft)  |
| 15.5      | Type of Cooling                 | Forced Air  |
| 15.8      | Dimension (w x d x h) in mm     | 1200*900*2000   |
| 15.9      | Weight - in kg                  | To be furnished by the vendor   |

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# **Specifications of Modular Hot Swappable UPS**



## 1 General

### 1.1 Scope

The scope covers supply, installation, testing and commissioning of online Hot Swappable Modular UPS systems. Supply of Battery banks with battery mounting racks/cabinets, Supply of cables and inter connection between battery banks and UPS system.

This specification describes the electrical, mechanical characteristics and requirements of three phases, on-line, double conversion, Modular Hot Swappable Uninterruptible Power Supply (UPS). The UPS should be having VFI (Voltage Frequency Independent) technology, fully DSP controlled power factor corrected rectifier and IGBT inverter capable of providing high quality AC power for sensitive electronic equipment loads. It should also supply clean power without any break in the supply. Under no conditions will the protected system get direct supply from the raw mains unless there is fault in the protected system. The description of the specification includes aspects related to design, manufacturing, fabrication and putting UPS Systems together with all necessary accessories and auxiliaries to make an operational UPS system in a condition acceptable to the end user.

### 1.2 Standards

The UPS shall be designed in accordance with the applicable sections of the current revision of the following standards. Where a conflict arises between these documents and statements made herein, the statements in this specification shall govern.

| Subject                             | Standard Reference | Standard Title   |
|-------------------------------------|--------------------|--|
| Safety                              | IEC/EN 62040-1     | Uninterruptible power systems (UPS) – Part 1: General and safety requirements for UPS          |
| Electromagnetic Compatibility (EMC) | IEC/EN 62040-2     | Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements |
| Performance                         | IEC/EN 62040-3     | UPS – part 3: Method of specifying the performance and test requirements                       |

### 1.3 System Description

#### 1.3.1 General characteristics

1. Online Double Conversion – Transformer less Design with 3 Level Inverter Technology
2. Modular & Scalable UPS with hot swappable Power Module rating of 50kW, with Hot Swappable STS Module, controller & Aux Power Board
3. Redundant System with redundant controller with two controllers, Dual Aux Power Supply.
4. Dual CAN Bus within frame & redundant CAN Bus between parallel systems to enable UPS to be removed or inserted UPS in parallel configuration without need of transferring it to bypass mode
5. Integrated Parallel capability
  - a. Up to Four no. of Power Modules for Vertical redundancy

- b. Up to Eight UPS units for capacity
- 6. DSP (Digital Signal Processor) / Microprocessor based control, using IGBT devices and high switching frequency PWM
- 7. Green mode of operation to improve operational efficiency (>96%) on varying & dynamic loading conditions without compromising the redundancy required in the application.
- 8. Top & Bottom cable Entry options
- 9. Capability of independent or common battery bank operation of the UPS when operated in Parallel Redundant System
- 10. High Charging Current Capability of upto 15A per Power Modules.
- 11. UPS Compatibility & Integration with VRLA & Lithium ion Batteries
- 12. Inbuilt Isolators for Input, output, Bypass & Manual Bypass.

### 1.3.2 System Characteristics

#### A. Input Specifications:

- a. Input voltage & variation limits : 380/220, 400/230, 415/240, Range 305-477VAC Full Load,
- b. Input frequency & variation limits : 40-70Hz
- c. Input Power factor at Rated Load : >0.99
- d. Input power factor at 50% load : >0.99
- e. THD (current) at input for 100% load : <3% at Input Vthd<1%
- f. THD (current) at input for 75% load : <5% at Input Vthd<1%
- g. THD (current) at input for 50% load : <5% at Input Vthd<1%

#### B. Output Specifications:

- a. Output Voltage : 220/380, 230/400, 240/415 V
- b. Output voltage variation limits. : +/- 1%
- c. Transient voltage variation for 100% block loading. : ±5% (10%-90%)
- d. Voltage recovery time : < 20ms
- e. Output frequency variation limit : Synchronized to mains :50Hz/60Hz ± 3Hz  
50Hz/60Hz ± 0.05%
- f. Input to output efficiency at 100% load : >96 %
- g. Input to output efficiency at 75% load : >96 %
- h. Input to output efficiency at 50% load : >96 %

#### C. Bypass

- a. Bypass AC voltage range : ± 15% adjustable.

- 
- b. Bypass frequency range : 50/60Hz Auto selectable,  $\pm$  5Hz Adjustable.
  - c. Short circuit capability : 10 times of rated current for 10ms.

**D. Environmental conditions:**

- a. Temperature:
  - 1. Operating ambient temperature : 0 °C to 40 °C.
  - 2. Storage ambient temperature with batteries : -15 °C to 40 °C.
  - 3. Storage ambient temperature without batteries : -25 °C to 70 °C.
- b. Relative humidity (operating and storage) : 0 percent to 95 percent non-condensing.
- c. Elevation:
  - Operating Altitude : 1000m without derating.
  - 1% derating every 100m above 1000m till 3000m
- d. Audible noise : <75 dBA at 100% load and 1 m from surface.

**2. Modes of operations**

The UPS system shall be designed to operate as a double conversion, on-line system in the following modes

- a. **Normal:** The UPS system shall continuously supply power to the critical load.
- b. **Battery:** Upon failure of the utility AC power source, the critical load shall be supplied by the inverter, which, without any interruption, shall obtain its power from the battery.
- c. **Recharge:** Upon restoration of the utility AC power source (prior to complete battery discharge), the PFC rectifier shall power the inverter and simultaneously recharge the battery.
- d. **Static bypass:** The static bypass switch shall be used to transfer the load to the bypass without interruption to the critical power load. This shall be accomplished by turning the inverter off. Automatic re-transfer or forward transfer of the load shall be accomplished by turning the inverter on.
- e. **Maintenance bypass:** In maintenance, bypass the load is supplied with unconditioned power from the bypass input included in the UPS.

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- f. **ECO mode:** The UPS system is configured to use static bypass operation as the preferred mode under predefined. Transfers to battery operation upon utility failure. Efficiency up to 99%.
  - g. **Green Mode:** UPS is configured for Green Mode to enable automatically transferring some modules to sleep mode in case of applied load is less than certain load percentage. Modules would be switched periodically & in rotational manner under this condition. Once load ramps up to full load or above some load percentage, Modules those were in sleep mode shift to active mode automatically without any command. The Green mode could be activated from front display to improve operational efficiency (>96%) on varying & dynamic loading conditions without compromising the redundancy required in the application
  - h. **Energy Recycle Mode:** UPS should be configurable for Energy Recycle Mode that enables testing of the unit for load testing without external load to test & verify the UPS under site conditions & to help in Load simulation & decreasing the CAPEX, saving in energy cost for test to be done during maintenance.
  - i. **Parallel Mode:** Two or more UPS units (up to 8) of same capacity should be capable of working in parallel mode N+1, N+X & N+N of operation providing same voltage & frequency. The output of parallel UPS system should be shorted to provide common output. The UPS units working in parallel mode of operation should share the load equally. In case of failure of redundant UPS, rest of the UPS units should be able to support the critical load without any interruption.

### 3. System Control & Indicators

Front Panel 10" Color Touch Graphical Display: The UPS control panel shall provide a touch color graphic display for indication of UPS status, metering, battery status, alarm/event log, and advanced operational features.

- a. Access: The display shall provide access to:
  - 1. Mimic diagram indicating UPS power flow.
  - 2. Measurements, status indications, and events.
  - 3. Personalization menu protected by a password, used to make specific settings.
  - d. Event log with time stamping.
  - e. Access to measurements.
- b. System parameters monitored: The visual display shall include, but shall not be limited to, the following system parameters based on true RMS metering:
  - 1. Measurements:
    - 1) Input voltage (Ph-Ph and PH-N).
    - 2) Input current per phase.
    - 3) Bypass voltage.
    - 4) Bypass input frequency.
    - 5) UPS output voltage (Ph-Ph and Ph-N).
    - 6) UPS output current per phase.

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- 7) UPS output frequency.
  - 8) UPS output percent load.
  - 9) UPS output kVA/kW.
  - 10) UPS output power factor.
  - 11) Battery voltage.
  - 12) Battery current.
  - 13) Battery backup time.
- c. Status indications and events:
- 1) Load on battery.
  - 2) Load on UPS.
  - 3) Load on bypass.
  - 4) Low battery warning.
  - 5) General alarm.
  - 6) Remaining back-up time during operation on battery power.
  - 7) Bypass source outside tolerances.
  - 8) Main input switch status
  - 9) Reserve input switch status
  - 10) Manual bypass switch status
  - 11) Temperature Inverter & PFC-Warning & shutdown
  - 12) DC Bus Abnormal
  - 13) INV Output Voltage Abnormal
  - 14) INV Overload Warning
  - 15) INV Overload Shutdown
  - 16) INV Short Circuit
  - 17) INV Static Switch Abnormal
  - 18) Emergency Power Off
  - 19) Inner Communication Fault
  - 20) Outer Communication Fault
  - 21) Power Module Fan Fail
- d. Time-stamped historical events: This function shall time stamp and store important status changes and anomalies.

### 4. Submittals

- a. Vendor to provide UPS rating, configuration along with distribution scheme.
- b. UPS footprints including weights, dimensions, service access, and airflow requirements of each unit (GA drawings required).
- c. Foot prints of battery racks, type of battery including overall weight of battery proposed for installation (typical layout diagram to be provided)

### 5. Vendor qualification criteria

- a. Vendor quoting should be an OEM & have manufacturing facility in India.
- b. Vendor should be certified for ISO 9001(QMS), ISO 14001(EMS) & ISO 18001(OSHAS).
- c. Vendor should have their own service setup across the country to guaranty service support as per service level agreements.

### 6. Pre-Dispatch Inspections:

Before shipment, vendor should completely test the system in its factory. Client or third parties can ask for UPS pre-dispatch inspection on chargeable basis for the major specifications that constitutes routine test.

### 6. Fabrication

**Materials:** Vendor to certify that all materials of the UPS is new, of current manufacture, high grade and free from all defects and will not have been in prior service except as required during factory testing.

**Construction and Mounting:** The UPS unit should comprise of rectifier/charger, inverter, static transfer switch, maintenance bypass switch, and static bypass input switch housed in a free-standing steel enclosure with key-lockable doors. Also, switch gears to be provided at input, output, static bypass & maintenance bypass of UPS. Front access only is required for servicing, adjustments, and installation. The enclosure should be built to comply with IP20. The UPS cabinet should be cleaned, primed, and painted with the manufacturer's standard colour.

## Technical Specifications

| Sr. No. | Specifications                   | Requirement   | Compliance (To be confirmed & filled by Manufacturer) |
|---------|----------------------------------|---|---|
| 1       | <b>Capacity (in kVA )</b>        | 200kVA/200kW  |   |
| 2       | <b>Technology and Capability</b> | <p>a) True Online configuration double conversion UPS with 3-Level Inverter Technology</p> <p>b) Modular &amp; Scalable UPS with hot swappable Power Module of rating of 50kVA or above.</p> <p>c) Hot Swappable STS Module &amp; control Module</p> <p>d) Parallel capability up to Four no. of Power Modules for Vertical redundancy &amp; up to eight UPS units for capacity.</p> <p>e) Redundant System with redundant controller with two controllers, Dual Aux Power Supply.</p> <p>f) Dual CAN Bus within frame &amp; redundant CAN Bus between parallel systems to enable UPS to be removed or inserted UPS in parallel configuration without need of transferring it to bypass mode</p> <p>g) Green mode of operation to improve operational efficiency (&gt;96%) on varying &amp; dynamic loading conditions without compromising the redundancy required</p> |   |

## Guide Specifications

|          |   |   |  |
|----------|---|---|--|
|          |   | in the application.   |  |
|          |   | h) Top & Bottom cable Entry options.  |  |
|          |   | i) DSP (Digital Signal Processor) / Microprocessor based control, using IGBT devices and high switching frequency PWM     |  |
|          |   | j) Capability of independent or common battery bank operation of the UPS when operated in Parallel                        |  |
|          |   | k) Brushless DC Fans with speed control   |  |
|          |   | l) Energy Recycle Mode that enables testing of the unit for load testing without external load & helps in Load simulation |  |
| <b>3</b> | <b>Make &amp; Model</b>                         | **  |  |
| <b>4</b> | <b>Input</b>                                    |   |  |
| 4.1      | <b>Input facility -Phases / Wires</b>           | 3-Phase / 4-Wire & Gnd (R, Y, B<br>-Phases & Neutral + Ground)  |  |
| 4.2      | <b>Nominal Input Voltage</b>                    | 415V AC   |  |
| 4.3      | <b>Input Voltage Range</b>                      | 305 - 477 V AC (Full Load)  |  |
|          |   | 242- 477 V AC (< 70% Loading)   |  |
| 4.4      | <b>Nominal Input Frequency</b>                  | 50 / 60 Hz <b>(Auto selectable)</b>   |  |
| 4.5      | <b>Input Frequency Range</b>                    | 40-70 Hz  |  |
| 4.6      | <b>Input Power Factor</b>                       | > 0.99 on Full resistive load Load  |  |
| 4.7      | <b>Input Current Harmonic Distortion (THDi)</b> | < 3% on Full Load (with Mains Vthd less than 1%)  |  |
| <b>5</b> | <b>Output</b>                                   |   |  |
| 5.1      | <b>Nominal Output Voltage</b>                   | 380 / 400 / 415V AC <b>(Selectable)</b>   |  |
| 5.2      | <b>Output Voltage Regulation</b>                | +/- 1%  |  |
| 5.3      | <b>Nominal Output Frequency</b>                 | 50 / 60 Hz <b>(Selectable)</b>  |  |
| 5.4      | <b>Output Frequency Regulation</b>              | +/- 0.05 Hz (Free Running / Self Clocked Mode)  |  |
|          |   | + / - 5 % (Synchronized to Mains Mode, Selectable)  |  |



## Guide Specifications

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|          |  |  |  |
|----------|--|--|--|
| 5.5      | <b>Output Frequency Slew Rate</b>  | 1 Hz / sec   |  |
| 5.6      | <b>Output Wave Form</b>  | Pure sine wave   |  |
| 5.7      | <b>Output Voltage Distortion (Vthd)</b>  | <= 2% (For 100% Linear / Resistive Load)   |  |
|          |  | <= 5% (For 100% Non-Linear / RCD Load)   |  |
| 5.8      | <b>Crest Factor</b>  | 3 : 1 On Full Load   |  |
| 5.9      | <b>Unbalanced load on phases</b>   | 100% unbalanced load should be allowed   |  |
| 5.1      | <b>Displacement angle for 100% balanced Load</b>                                   | 120 deg +/- 2 deg  |  |
| <b>6</b> | <b>Transient Response/ Recovery</b>  |  |  |
| 6.1      | <b>Transient response: Dynamic regulation for 0% to 90 % step load</b>             | +/- 5%, recovery <20msec   |  |
| <b>7</b> | <b>Transfer Time</b>   |  |  |
| 7.1      | <b>Transfer Time (Mode of operation)</b>   | Nil from Mains mode to Battery Mode  |  |
|          |  | Nil from Battery Mode to Mains mode  |  |
| 7.2      | <b>Transfer Time (Inverter to Bypass/Bypass to Inverter)</b>                       | < 1 ms (Synchronized Mode)   |  |
|          |  | < 10 ms (Asynchronized Mode)   |  |
| 7.3      | <b>Automatic &amp; Bi-directional static by-pass (In-built)</b>                    | Uninterrupted transfer of load from Inverter to bypass (under overload / fault conditions) & automatic retransfer from bypass to inverter (on removal of overload /fault conditions) |  |
| <b>8</b> | <b>Efficiency (At Nominal Voltage &amp; Resistive Load up to kW rating of UPS)</b> |  |  |
| 8.1      | <b>Overall Peak Efficiency (AC to AC) - Online (Double Conversion) at 50% Load</b> | 96.5%  |  |

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|      |  |  |  |
|------|--|--|--|
| 8.2  | <b>Overall Efficiency (AC to AC) - Online (Double Conversion) on 30% Loading</b>                       | 96%  |  |
| 8.3  | <b>Eco mode efficiency</b>   | 99%  |  |
| 9    | <b>Overload</b>  |  |  |
| 9.1  | <b>Inverter Overload capacity (Mains Mode &amp; Battery Mode)</b>                                      | 125% for 10 minutes  |  |
|      |  | 150% for 60 seconds, > 150% for 1 sec  |  |
| 10   | <b>Display Panel (In-build Touch Display)</b>  |  |  |
| 10.1 | <b>Measurements (On Touch Display)</b>   | Input: Voltage /Current/ Frequency   |  |
|      |  | Bypass: Voltage /Current/ Frequency  |  |
|      |  | Output: Voltage / frequency / Current  |  |
|      |  | Battery: Voltage / Capacity  |  |
|      |  | Load: In kVA / kW / Percentage   |  |
|      |  | Temperature: STS/Inverter/PFC  |  |
| 10.2 | <b>Event Logging &amp; Statistical Data (On LCD): UPS should capture and display upto 10000 events</b> | Events Logs ( 10000 events) like: Over temperature / DC Bus Fail / Fan Fail / Fuse Fail / Overload / Short-circuit / Device Fail / Inverter Fail / Rectifier Fail / Bypass Fail, etc |  |
|      |  | Statistical Data: No. of power failures / Transfers to Bypass / Total Running time, etc  |  |
| 10.3 | <b>User Programmable Parameters &amp; Settings (On Touch Display)</b>                                  | Bypass: Voltage / Frequency Range  |  |
|      |  | Inverter: Voltage / Frequency / Eco Mode / Frequency converter   |  |
|      |  | Battery: Type / Banks / Chargers Current / Manual & Automatic Testing  |  |

## Guide Specifications

|       |  |   |  |
|-------|--|---|--|
|       |  | Mode selection : online Mode, Green Mode, ECO Mode, Energy Recycle Mode & Frequency |  |
|       |  | Auto Equalize charge enable/disable option with selectable interval                 |  |
|       |  | Alarms: Buzzer Test / Buzzer Mute   |  |
|       |  | Date & Time Setting   |  |
|       |  | Password: User / Administrator Setting  |  |
|       |  | Information: UPS Serial No. / Firmware  |  |
|       |  | Log & Statistical Data Reset & Firmware upgrade                                     |  |
| 11    | <b>Alarms</b>  |   |  |
|       | <b>Audible Alarms</b>                                | Mains Failure / Battery Low Alarm / UPS Overload / Fault / Short circuit            |  |
| 12    | <b>Battery Bank</b>                                  | <b>Li-Ion (NMC)</b>   |  |
| 12.1  | Backup Required                                      | 2 strings of LG LiB 64AH  |  |
| 12.2  | Make & Model   | Vendor to Furnish   |  |
| 12.3  | Nominal voltage                                      | Vendor to Furnish   |  |
| 12.4  | No. of strings offered                               | Vendor to Furnish   |  |
| 12.5  | DOD  | Vendor to Furnish   |  |
| 12.6  | Nominal Capacity in Ah                               | Vendor to Furnish   |  |
| 12.7  | Is battery circuit breaker included per every string | Vendor to Furnish   |  |
| 12.8  | MS Stand / closed Cabinet offered                    | Vendor to Furnish   |  |
| 12.9  | Overall dimensions of the Battery frame (W x D x H)  | Vendor to Furnish   |  |
| 12.10 | Weight of battery cabinet                            | Vendor to Furnish   |  |

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|           |  |  |  |
|-----------|--|--|--|
| 12.11     | Battery Management System ( BMS) Supplied & considered | Vendor to Furnish  |  |
| 13        | <b>Communication Interfaces</b>                        |  |  |
| 13.1      | <b>Dry contact/ communication Ports</b>                | <p><b>Output Dry contact: 6</b> configurable for 21 events including Battery breaker shunt trip, backfeed protection.</p> <p><b>Input Dry contact: 4</b></p> <p>Parallel Port : 4, REPO, External battery Temperature sensor : 4 ,External switch Breaker status: 4 ,USB Port &amp; RS232 Port ,SMART slot for more no. of Dry contacts, Integrated MODBUS/SNMP card</p> |  |
| 14        | <b>Restart / Testing Capability</b>                    |  |  |
| 14.1      | <b>Automatic Restart</b>                               | UPS should start up automatically on mains resumption after battery low shutdown   |  |
| 14.2      | <b>Battery Self-Test</b>                               | Manual / Scheduled battery test to ensure healthiness of batteries.  |  |
| <b>15</b> | <b>Physical</b>  |  |  |
| 15.1      | <b>Operating Temperature</b>                           | 0 to 40 deg C full load  |  |
| 15.2      | <b>Storage Temperature</b>                             | -25 to 70 deg C  |  |
| 15.3      | <b>Operating Humidity</b>                              | 0 to 95% RH (Non-condensing)   |  |
| 15.4      | <b>Operating Altitude</b>                              | 1000 m (meters above sea level) without derating, Derating 1% for each additional 100m.  |  |
| 15.5      | <b>Protection Class</b>                                | IP – 20  |  |
| 15.6      | <b>Type of Cooling</b>                                 | Forced Air   |  |
| 15.7      | <b>Noise Level</b>                                     | < 75 dB at 1 meter distance  |  |
| 15.8      | <b>Form Factor</b>                                     | Free Standing Floor Mounted UPS  |  |

## Guide Specifications

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|           |  |  |  |
|-----------|--|--|--|
| 15.9      | <b>Dimension (w x d x h) in mm</b>                                     | Vendor to Furnish                                      |  |
| 15.10     | <b>Weight - in kg</b>  | Vendor to Furnish                                      |  |
| 15.11     | <b>Reliability</b>   | MTBF greater than 350000 hours                         |  |
| 15.12     | <b>Connections - Rectifier Input / Output / Bypass Input / Battery</b> | Inbuilt MCCB's for Input,output,bypass & Manual Bypass |  |
| <b>16</b> | <b>Certifications</b>  |  |  |
| 16.1      | <b>Manufacturer</b>  | <b>QMS:</b> As per ISO 9001: 2008                      |  |
|           |  | <b>EMS:</b> As per ISO 14001: 2004                     |  |
|           |  | <b>OSHAS:</b> As per ISO 18001: 2007                   |  |
| 16.2      | <b>Product</b>   | <b>Safety:</b> As per IEC62040-1                       |  |
|           |  | <b>EMC:</b> As per IEC62040-2                          |  |
|           |  | <b>Performance :</b> As per IEC62040-3                 |  |
|           |  | <b>ESD:</b> As per IEC61000-4-2 Level 4                |  |
|           |  | <b>RF:</b> As per IEC61000-4-3 Level 3                 |  |
|           |  | <b>FT/Burst:</b> As per IEC61000-4-4 Level 4           |  |
|           |  | <b>Surge:</b> As per IEC61000-4-5 Level 4              |  |
|           |  | <b>CE Declaration of Conformance</b>                   |  |

### THE POWER CONTROL PANELS

The Low Tension (LT) Panel shall be metal clad, totally enclosed, rigid, floor mounting, air insulated, cubical type for use on 415 volts, 3 phase, 4 Wire 50 cycles system. The equipment shall be designed for operation in high ambient temperature and high humidity tropical atmospheric conditions. Means shall be provided to facilitate ease of inspection, cleaning and repairs, for use in installations where continuity of operation is of prime importance.

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The equipment shall be designed to confirm to the requirements of:

- a. IS 4237 - General requirements for switchgear and control gears for voltages not exceeding 1100 volts.
- b. IS 2147 - Degree of protection provided by enclosures for low voltages switchgear and control gear.
- c. ARE 375 - Marking and arrangements of bus bars
- d. Individual equipment housed in the power control to the following IS specifications:
- e. Air circuit breakers - IS 2516 (Part I & II/Sec.1) 1977
- f. Fuse switch and switch fuse units - IS 4064 : 1978.
- g. HRC fuse links - IS 1108 : 1962 or IS 9114 : 1979.
- h. Current Transformer - IS 2705
- i. Voltage Transformer - IS 3156
- j. Relays - IS 3231.
- k. Indicating Instruments - IS 1248.
- l. Integrating Instruments - IS 711.
- m. Control Switches and push buttons - IS 6875.
- n. Auxiliary contractors - IS 2959.

### CONSTRUCTIONS:

The power control panels shall be:

- a. Of the metal enclosed, indoor, floor mounted free standing type.
- b. It shall be made up of the requisite vertical section, which when coupled together shall form continuous dead front switch boards.
- c. Provide dust and dump protection, the degree of protection being not less than IP 52 to IS - 13947.
- d. Be readily extensible on both sides by the addition of vertical sections after removal of the end covers.

Each vertical section shall comprise:

- a. A front framed structure rolled / folded sheet steel channel section of minimum 3mm thick, rigidly bolted together. This structure shall house the components contributing to the major eight of the equipment, such as circuit breaker cassettes, fuse switch units, main horizontal bus bars, vertical risers and other front mounted accessories.

## Guide Specifications

b. The structure shall be mounted on a rigid base frame of folded sheet steel of minimum 3 mm thick and 100 mm height. The design shall ensure that the weight of the components is adequately supported without deformation or loss of alignment during transit or during operation.

c. A cable chamber shall house the cable end connections of power / control cable termination. The design shall be to ensure generous availability of space for easy installation and maintenance of cabling, and adequate safety for making in one vertical section without coming into accidental contact with live parts in and adjacent sections.

d. A cover plate at the top of the vertical section, provided with a ventilating hood where necessary. Any aperture for ventilation shall be covered with a perforated sheet having less than 1mm diameter perforated to prevent entry of vermin.

e. Front and rear doors shall be fitted with nuts/bolts including neoprene gaskets with fasteners designed to ensure proper compression of the gaskets. When covers are provided in place of doors, generous overlap shall be assured between sheet surfaces with closely spaced fasteners to preclude the entry of dust. The height of the panel should not be more than 2400 mm. The maximum height of any operating mechanism shall not be more than 2100 mm. The total depth should be adequate to cater for proper cabling space.

f. Doors and covers shall be of minimum 14 gauge sheet steel. All sheet steel work forming the exteriors or switchboards shall be smoothly finished, leveled and free from flaws. The corners should be rounded. The apparatus and circuits in the power control panels shall be so arranged as to facilitate their operation and maintenance and at the same time to ensure the necessary degree of safety. Apparatus forming part of the power control panels shall have the following minimum clearances:

- a. Between phases - 25 mm
- b. Between phases and neutral - 25 mm
- c. Between phases and earth - 25 mm
- d. Between neutral and earth - 25 mm

If for any reason, the above clearances are not available suitable insulation shall be provided.

Clearance shall be maintained during normal services conditions. Creep age distances shall comply with those specified in relevant standards. All insulating materials used in the construction of the equipment shall be arranged in multi-tier formation, except that not more than two air circuit breakers shall be housed in a single vertical section. Metallic / insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with:

- a. Main bus bars and vertical risers during operation, inspection or maintenance of functional units and front mounted accessories.

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b. Cable termination of one functional units, where working of those of adjacent unit / units. All covers providing access to live power equipment / circuits shall be provided with tool operated fasteners to prevent unauthorized access. Provision shall be made for permanently earthing the frames and other metal parts of the switch gear by two independent connections.

### METAL TREATMENT AND FINISH:

All steel work used in the construction of the switchboards should have undergone a rigorous metal treatment process as follows:

a. Effective cleaning by hot alkaline degreasing solution followed by cold water rinsing to remove traces of alkaline solution.

b. Picking in dilute sulfuric acids to remove oxide scales and rust formation, if any, followed by cold water rinsing to remove traces of acidic solution.

c. A recognized phosphate process to facilitate durable coating of the paint on the metal surfaces and also to prevent the spread of rusting in the event of paint film being mechanically damaged. This again, shall be followed by hot water rinsing to remove traces of phosphate solution.

d. Passivating in de-oxalate solution to retain and augment the effects of phosphating.

e. Drying with compressed air in a dust free atmosphere.

f. Primer coating, with two coats of highly corrosion resistant primer, applied wet on stove dried under strictly controlled conditions of temperature and time.

g. A finishing coat of stoving synthetic enamel paint to the specified shade of IS.

h. The total thickness of paint should not be less than 25 microns.

### BUS BARS

a. The bus bars shall be air insulated and made of high conductivity, Electrolytic grade high strength aluminium / copper alloy complying with the requirement of grade E91E of IS 5082.

b. High tensile bolts and spring washers shall be provided at all bus bar joints.

c. The main phase bus bars shall have continuous current rating throughout the length of



## Guide Specifications

each power control panel, and the neutral bus bars shall have a continuous rating of at least 100% of the phase bus bars.

d. Bus bars shall be colour coded for easy identification of individual phases and neutral and protective earth.

e. CURRENT TRANSFORMER: Current transformer shall comply with the requirements of IS 2705. They shall have ratios, outputs and accuracy's as specified / required

f. INDICATING / INTERGRATING METERS: All indicating instruments shall be of flush mounting industrial pattern, conforming to the requirements of IS 1248. The instrument shall have non-reflecting dial, clearly divided and legibly marked scales. and shall be provided with adjusting devices in the front

g. CABLE TERMINATION: Cable entries and terminals shall be provided in the switch-board to suit the number, type and size of aluminium conductor, power cable and copper conductor control cable specified in the detailed specifications.

h. Provision shall be made for top or bottom entry of cables as required. Generous size of cabling chambers shall be provided, with the position of cable glands and terminals such that cables can be easily and safely terminated. The minimum depth of the panel shall be restricted to 1600 mm for this purpose.

i. Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit currents without accidentally touching that of another live circuit. Cabling risers shall be adequately supported to withstand the effects of rates short circuit currents without damage and without causing secondary faults. Cable sockets shall be of copper and of the crimping type as specified.

### CONTROL WIRING:

- a. All control wiring shall be carried out with 1100 V grade single core PVC cable conforming to IS 694 / IS 8130 having standard copper conductor of minimum 2.5 Sq mm section for potential circuits and 2.5 mm section for current transformer circuits. Wiring shall bear
- b. Wire shall be identified by numbered ferrules at each end. The ferrules shall be of the ring and of nondeteriorating materials. They shall be firmly located on each wire so as to prevent free movement. All control circuit fuses shall be mounted in front of the panel and shall be easily accessible.

### .TERMINAL BLOCKS:

Terminal blocks shall be of 500 volts grade of finger touch proof type. Insulating barriers shall be provided between adjacent terminals.

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### LABELS:

Labels shall be on anodized aluminum, with white engraving on black background. They shall be properly secured with fasteners.

### TESTS:

Routine tests shall be conducted on each power control panel in accordance with CI 81, 2.2 of IS 8623 and shall comprise:

- a. Inspections of the power and control circuits including inspection of wiring and electrical operational tests where necessary. Dielectric tests.
- b. Checking of protective measures and electrical continuity of the protective circuits.

### STORING:

The panels shall be stored in well ventilated dry places. Suitable polythene covers shall be provided for necessary protection against moisture.

### ERECTION:

Switch boards shall be installed on suitable foundation. Foundation shall be per the dimensions supplied by the panel manufacturer. The foundation shall be flat and level. Suitable grouting holes shall be provided in the foundation. Suitable MS base channel shall be embedded in foundation on which the panel can be directly installed. The switch boards shall be properly aligned and bolted to the foundation by bottom plate or top plates as the case may be, by using brass Siemens type compression glands. The individual cables shall then be led through the panel to the required feeder compartments for necessary terminations. The cables shall be clamped to the supporting arrangements. The switch board earth bus shall be connected to the local earth grid.

### PRE-COMMISSION TESTS:

Panels shall be commissioned only after the successful completion of the following tests. The tests shall be carried in the presence of STATE's representative.

- a. All main and auxiliary bus bar connections shall be checked and tightened.
- b. All wiring terminations and bus bars joints shall be checked and tightened.
- c. Wiring shall be checked to ensure that it is according to the drawings.
- d. All wiring shall be tested for insulation resistance by a 1000 Volts Megger.
- e. Phase rotation tests shall be conducted.
- f. Suitable injection tests shall be applied to all the measuring instruments to establish the correctness and accuracy of calibration and working order.
- g. Suitable injection tests shall be applied to all the measuring instruments to establish

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the correctness and accuracy of calibration and working order.

h. All relay and protective devices shall be tested for correctness of settings and operation by introducing a current generator and ammeter in the circuit.

i. High voltage test with 2.5KV for 1 min on power as well as control circuits.

### CIRCUIT BREAKERS:

Air Circuit Breakers:

General:

a. Air circuit breakers shall conform to IS 13947-1 /IEC947-1 for general rules and IS13947 - 2 /IEC947-2 for circuit breakers.

b. ACBs shall be suitable for operation on 3 phase 660 Volts, 50Hz AC supply and shall have a rated insulation voltage of 1100V AC.

c. All circuit breakers shall be fully tropicalized - (T2) standard and pollution degree IV.

Type & Construction:

a. The Breaker shall be suitable for rear horizontal & vertical mounting and line load reversibility, without any deration.

b. The breaker shall comply with isolating function requirement of IS 13947-2/IEC 947 - 2 sec 7.1.2.

c. The breaker shall offer total insulation of the control part with respect to the power part and preferably shall offer double insulation on the front face (Class II degree of operating safety).

d. Inspection of the main contacts should be facilitated by a mechanical wear indicator.

Operating Mechanism:

a. ACBs shall be provided with motor operated or manually operated quick make, quick break, trip-free operating mechanism.

b. Wherever specified, motorized spring charging mechanism suitable for AC or DC shall be supplied.

Interlocking & safety arrangement:

a. The microprocessor control unit shall be equipped with a push to reset mechanical indicator, for antipumping function.

b. It shall not be possible for breaker to be switched 'ON' until it is either in 'Service' or 'Test' position.

c. The breaker shall be capable of being racked into test or isolated position and kept locked in any of these positions.

d. It shall not be possible to withdraw the breaker when the springs are charged.

e. It shall not be possible to insert breaker racking handle when cubicle door is open. It shall have defeat interlock facility.

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f. Safety shutters should be closed automatically when ACB is withdrawn

g. OFF position pad-locking arrangement is required.

### Rating & Breaking Capacity

a. The rating of the circuit breaker shall be as per the drawings and schedule of quantities. The ACB shall have minimum Service Breaking Capacity ( $I_{cs}$ ) equal to Ultimate Breaking Capacity ( $I_{cu}$ )

b. The minimum Service breaking capacity ( $I_{cs}$ ) for rating upto 1600 A shall be 65 kA and for rating above 1600 A, the service breaking capacity shall be 75 kA.

c. The Short time withstand ( $I_{cw}$ ) for 1 sec for rating upto 1600 A shall be 50 kA and for rating beyond 1600

A Short time withstand ( $I_{cw}$ ) shall be 75 kA.

### Protection:

a. The microprocessor release shall be housed in separate enclosure and there shall be total insulation of the release with respect to the power circuit.

b. The microprocessor release shall measure the true rms values to make the measurement free from the influence of harmonics. The trip-time shall preferably be within 30 ms and the setting range shall cover the following:

Overload The rated current ( $I_r$ ) adjustable from 0.4 to 1.0 times the nominal current ( $I_n$ ) with adjustable time delay settings.

Short-circuit - adjustable from 1.5 to 10 times the rated current ( $I_r$ ) with time delay setting range from

Instantaneous to 0.4 sec Instantaneous - adjustable from 2 times the nominal current ( $I_n$ ) upto the circuit breaker

electro dynamical withstand. It should be possible to switch OFF the Instantaneous protection to enable total time discrimination up to the breaker breaking capacity.

### Earth fault

Adjustable threshold ( $0.2$  to  $I_n$ ) with time delay setting range from 100ms to 400ms.

Indication of type of fault (O/C, S/C or E/F) locally by LED is preferred.

Local over current pre-trip alarm is preferred by LED on microprocessor release with 2 levels:-

a. Glowing steady when load current reaches 90% of rated current ( $I_r$ )

b. Flashing when load current reaches 105% of rated current ( $I_r$ )

### Thermal Memory:

The microprocessor release shall optimize the protection of the equipment or the circuit conductors in the event of repeated overloads or faults by using thermal integration to memorize temperature rises.

### Safety:

Internal overheating of the microprocessor control unit shall be signaled by self-monitoring alarm.

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The microprocessor release shall make it possible to have full discrimination with downstream MCCBs.

Accessories:

ACB shall be provided with following accessories, if specified in schedule of quantities. Further these devices shall be field fitable from the front and common for all ratings.

- a. Under -voltage
- b. Shunt-trip
- c. Closing coil
- d. Auxiliary contacts: 4NO+4NC (provision for additional changeover switches wherever required)

Testing Test certificate Original Test certificate of the ACB as per IS13947-2/IEC947-2 shall be provided on request.

### Moulded Case Circuit Breakers (MCCB):

General

Moulded case circuit breakers shall be incorporated in the PCC/ MCC wherever required and shall be of current limiting type and preferably double break.

a. MCCBs shall conform to IS 13947-1/IEC 947-1 for general rules and IS 13947-2/IEC 947-2 for circuit breakers

in all respects.

b. MCCB should be suitable for horizontal & vertical mounting and Line –Load reversibility and shall be

suitable for Isolation.

c. MCCB shall be suitable for three phase 690 V, 50Hz, AC with a rated insulation voltage of 750 V AC and impulse withstand of 8 kV.

d. The MCCB shall be available in three & four pole version (selectable neutral protection at 0, 50% & 100%).

e. The MCCB shall provide Class II insulation between the front and internal circuits.

All the breakers shall have tropicalization as a standard feature.

Construction:

a. The MCCB case & cover shall be made of high strength heat resistant and flame retardant thermosetting insulating material.

b. The operating handle shall be quick make, quick break trip free type. The operating handle shall have

suitable 'ON', 'OFF', 'TRIPPED' indicators.

c. In order to ensure suitability for isolation complying with IS13947-2/IEC947-2, the operating mechanism

shall be designed such that the toggle or handle can only be in 'OFF' position.

d. Three phase MCCBs shall have a common operating handle for simultaneous operation and tripping of all

the three phases.

e. It shall be possible to “seal on” the thermal-magnetic or electronic trip units to prevent unauthorized

access to the settings.

f. It should be possible to interchange the trip units at site.

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### Rating & Breaking Capacity:

The rating of the circuit breaker shall be as per the drawings and schedule of quantities. The Service Breaking Capacity (Ics) in kA for different ratings at 415V AC, 50Hz, at 0.2 p.f shall be as follows:

- a. 25kA for ratings upto 100A
- b. 36KA for ratings above 100A and up to 630A
- c. 45KA for ratings above 630A

### Protection:

All breakers up to 250A shall have thermal-magnetic trip unit with adjustable overload protection and fixed magnetic protection.

The MCCBs ratings above 250A shall be fitted with electronic trip unit. The overload setting adjustable from 40% to 100% of the nominal current (In).

It should be possible to have one or more LED indication(s) on the electronic release - For overload as a pre-trip alarm

- a. Glowing at 90% of rated current (Ir).
- b. Flashing at 105% of rated current (Ir).

Fault trip indication by LED locally on the electronic release for O/C, S/C & E/F (if supplied) wherever release with

Communication option (COM) is specified.

The short circuit protection should be adjustable from 2 to 10 times the rated current (Ir).

The Instantaneous Short

Circuit protection to be fixed, without any time delay at 11 times the nominal current (In).

The Earth fault protection, if specified in schedule, shall have adjustable sensitivity with adjustable time delay settings.

- c. It shall be possible to fully co-ordinate the over-load & short-circuit tripping of the circuit breakers with the upstream and downstream circuit breakers to provide Total Discrimination.

### Accessories:

MCCBs shall be provided with the following accessories, if specified in schedule and all these devices shall be

fittable at site. Each of these units shall incorporate a pre-wired terminal strip which is accessible from the front

of the breaker without removing the cover. Preferably, the Shunt trip release and under voltage release shall be snap-in type.

- a. Under voltage
- b. Shunt trip
- c. Alarm switch
- d. Auxiliary switch
- e. Motor operated Mechanism

### Interlocking:

MCCBs shall be provided with the following interlocking devices for interlocking the door of the switchboard.

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Handle interlock to prevent unnecessary manipulations of the breaker.

Door interlock to prevent door being opened when breaker is in ON or OFF position

Door-interlock defeat to open the door even if the breaker is in ON position.

Front operated rotary handle should have OFF-position pad-locking facility.

Testing:

Test certificate

Original Test certificate of the MCCB as per IS13947-2/ IEC947-2 shall be provided on request

Contractors

Contractors shall comply with IS 13947 1 for general rules and IS13947-4-1 for standards pertaining to contactors

and motor starters. The contactor shall be capable of withstanding breaking & making capacities per following:

a. AC3 Category AC4 Category

b. Making Current - 10 times Rated Current 12 times rated current

c. Breaking current - 8 times Rated current 10 times rated current

d. Contactor shall be capable of withstanding an impulse voltage of 8KV and have an insulation voltage of 1000V.

The Contactors shall be capable of frequent switching and should operate without any deration at 55 deg. C for AC3 application.

The coil shall have 3 terminals and the insulation class shall be preferably H class, to sustain frequent switching

operations. The auxiliary contact block shall have a switching capacity of 240V at 2A.

Contactors shall have one auxiliary in-built and it shall be possible to have additional NO & NC contacts in steps of two.

Thermal Overload Relay

The Thermal Overload Relay (TOR) shall comply with IS 13947-1 for general rules and IS 13947-1 for standards

pertaining to contactor and motor starters and shall be designed for AC3.

a. The TOR shall be suitable for Type 1 and Type 2 coordination as per suitable clause in the relevant Indian Standards.

b. The TOR shall be capable of offering differential protection and shall be ambient compensated type, operable up to 70 deg. C.

c. The TOR shall be capable of withstanding short circuit equal to seventeen times the rated thermal current.

d. The TOR will be tripping class 10 A as a standard or class 20 for certain applications where specified.

e. The TOR should have built in single phasing protection and phase unbalance protection as per IEC947-4.

f. It shall be possible to mount the TOR on the underside of the contactor directly.

g. The design of the terminal shroud shall be such that it offers complete protection against

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direct finger

contact with the power terminal, as under IP 20 protection.

h. The TOR shall have in built NO & NC contact.

i. The "Reset" operation shall be clearly distinguished from the "Stop" operation.

j. The TOR shall have separate "Stop" and "Test" button.

k. The setting shall be of the adjustable type and there should be a provision of sealing to make the same

tamper proof.

l. The TOR shall be suitable for Aluminium termination, with a maximum permissible temperature rise of

65K, at the terminals, with an ambient temperature of 40 deg. C.

m. All the TORs shall have tropicalization as IEC 68 series as a standard feature.

Miniature Circuit Breakers (MCB)

a. MCB for ratings up to 125 Amps shall be available in 1, 2, 3 or 4 pole versions.

b. MCB casing shall be made of self-extinguishing material, tropicalized treatment 2 (relative humidity: 95%

at 55 deg. C).

c. MCB shall comply with IS8828-1996/ IEC 898-1995.

d. It shall be suitable for use in frequency range 40Hz to 60Hz and shall accommodate AC/ DC supply according to requirements.

e. Arc chutes should be provided for effective quenching of arc during operations and fault conditions.

f. It shall have trip free mechanism and toggle shall give positive contact indication.

g. It shall be suitable for mounting on 35 mm DIN rail/ surface mounting.

h. Line supply may be connected to either top or bottom terminals i.e there shall be no line load restriction.

i. Degree of protection, when the MCB is flush mounted, shall be IP40.MCB & shall be

supplied with clamping terminals fully open.

j. Contact closing shall be independent of the speed of the operator.

MCB's operating temperature range shall be -20 deg. C to + 60 deg. C

The characteristics should be in accordance with IS8828-1996.The breaking capacity of the

MCB shall be 10kA and

energy limiting class 3.

a. The rated impulse voltage  $U_{imp}$  of the MCB shall be greater than 4kV.

b. The MCB shall be capable of being used as Incomer circuit breaker and shall be suitable for use as an isolator.

c. Electrical endurance of the MCB should preferably be 20,000 opns.

d. Power loss per pole shall be in accordance with IS8828 - 1996 and the same shall be furnished by the manufacturer.

e. In case of multi pole MCBs in a single location (DB), it shall be possible to remove MCB without having to disturb other MCB's in the vicinity.

FUSE SWITCH UNITS:

a. The fuse switch units shall be of the load break, heavy duty, cubical type conforming to the requirement of IS 4064, 1978 (AC23 Duty) with 2 sets of auxiliary controls.



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- b. The fuse switch units shall be of double break and have quick make break mechanisms, designed to ensure positive operation even in the event of failure of operating springs.
- c. All fuse switch contacts shall be silver plated at current transfer surfaces.
- d. The units shall be provided with a front operating handle the ON and OFF position of the switch handle shall be clearly marked.
- e. Interlocks shall be provided so as to prevent opening of the unit door, when the switch is in the ON positions, and also to prevent closing of the switch with the door not properly secured. It should however, be possible for a competent examiner to operate the switch with the door open, by releasing the interlock.

### TESTING:

- a. Routine and type test shall be conducted as per BS 3185 and IS 4064. The original test certificate shall be furnished.
- b. Pre commissioning test at the site as per specification shall be conducted before commissioning.

### INSTRUMENT TRANSFORMERS:

#### Current Transformers:

Current Transformers shall be in conformity with IS: 2705 (Part I, II and III) in all respects. All current transformers used for medium voltage applications shall be rated for 1.1KV, current transformers shall have rated primary current, rated burden and class of accuracy as specified in the schedule. However, the rated secondary current shall be 5 A unless otherwise specified. The acceptable minimum class of various applications shall be as given below:

Measuring: Class I

Protection: Class 10 P.

Terminals of the current transformers shall be marked permanently for easy identification of poles. Current transformers shall be provided with Earthing terminals for Earthing chassis frame work and fixed part of the metal casing (if any). Current transformers shall be mounted such that they are easily accessible for inspection, maintenance and replacement. The wiring for CTs shall be copper conductor, PVC insulated wires with proper termination lugs wiring shall be bunched with cable straps and fixed to the panel structure in a neat manner.

### MEASUREMENT INSTRUMENTS:

#### General:

Direct reading electrical instruments shall be in conformity with IEC - 51, BS: 89 or IS: 1248. The accuracy of direct reading shall be 10 for Voltmeter. Other type of instruments shall have accuracy of 1. The errors due to variations in temperature shall be limited to a minimum. The meters shall be suitable for continuous operation between –

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10 degree C and +50 degree C. All meters shall be of flush mounting type with square pattern. The meter shall be enclosed in a dust tight housing. The housing shall be of phenolic mould. The design and manufacture of the meters shall ensure the prevention of fogging of instrument glass. Instrument meters shall be sealed in such a way that access to the measuring element and to the accessories within the case shall not be possible without removal of the seal.

The meters shall be provided with white dials and black scale markings. The pointer shall be black in colour and shall have zero position adjustment device which could be operated from outside. The direction of deflection shall be from left to right. Suitable selector switches shall be provided for all voltmeters intended to be used on three phase supply.

Supply:

Ammeters shall be moving-iron type. The moving part assembly shall be with jewel bearings. The jewel bearing shall be mounted on a spring to prevent damage to pivot due to vibrations and shocks. The damage ammeters shall be manufactured and calibrated as per the latest edition of IS: 1248 or BS: 89.

Ammeters shall be instrument transformer operated and shall be suitable for 5 A secondary of instrument transformer. The scales shall be calibrated to indicate primary current, unless otherwise, specified. The ammeters shall be capable of carrying sustained overloads during fault conditions without damage or loss of accuracy.

Voltmeters:

Voltmeter shall be moving -iron type. The range for 400 volts, 3 phase voltmeters shall be 0 to 500 volts. Suitable selector switch shall be provided for each voltmeter to read voltage between any two lines of the system. The Voltmeter shall be provided with protection fuse of suitable capacity.

Watt meter, Frequency meters and Power factor meters:

a. Wattmeter: Watt meter shall be of three phase, electro-dynamic type, suitable for use with current transformers associated with the particular panel. Wattmeter shall be provided with a maximum demand indicator.

b. Power factor meters: Polyphase power factor meters shall be of electro dynamic type with current and potential coils suitable for operation with current transformers associated with the particular panel. The scale shall be calibrated for 50% lag - 100% - 50% lead readings. Phase angle accuracy shall be +4 degrees.

c. Energy meters and reactive power meters: Tri vector meter shall be two element, integrating type kilowatt-hour, KVA, Kilovolt-ampere-hour reactive meters. The meters shall conform to IEC-

## Guide Specifications

170 in all

respects. Energy meters, KVA and KVARH meters shall be provided with integrating registers. The registers shall be able to record energy consumption of 500 hours corresponding to maximum current at the rated voltage and unity power factor. These meters shall be suitable for operation with current and potential transformers associated with the particular panel.

### RELAYS:

#### General

Protection relays shall be provided wherever required to trip and isolate the particular section under fault. All the relays shall be adjusted and co-ordinate for proper range of the particular circuit or equipment. Relays shall be provided with flag type indicators to indicate the cause of tripping. The flag indicators shall remain in position until they are reset by hand reset. The relays contacts shall be of silver or platinum alloy. The case shall be dust tight with a finish suitable for tropical country. The relays shall be capable of disconnecting faculty section of network or faculty equipment without causing interruption or disturbance to the remaining sections.

### OVERCURRENT RELAYS:

Combined over-current and earth fault relays:

Over-current relays shall be induction type with inverse definite minimum time lag characteristics. The over current relays shall be provided with adjustable current and time settings. The setting for current shall be 50 to 200% in step of 35%. The IDMT over current relays shall have time lag (Delay) of 0 to 3 seconds. The time setting multiplier shall be adjustable from 0.1 to unity. Over current relays shall be fitted with suitable tripping device with trip coil being suitable for operation on 5 amperes. Earth fault relay shall have current setting of 10% to 40% in step of 10% otherwise; the earth fault relays shall conform to specification laid down for over current relays.

### TESTING:

a. Instrument transformers shall be tested at factory as per IS: 2705 and IS: 3156. The test shall incorporate routine tests. Original test certificates in triplicate shall be provided.

b. Meters shall be tested as per IS: 1148. The tests shall include routine tests. Original test certificate in triplicate shall be furnished.

c. Suitable injection tests shall be applied to the secondary:

I. Circuit of every instrument to establish the correctness calibration and working order.

II. All relays and protective devices shall be tested to establish correctness of Setting and operation

by introducing a current generator and an ammeter in the circuit.

## 1.12. Technical Specifications – Electrical Works (Low Side)

### General Specification

#### SCOPE:

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In general, the prime vendor/ contractor shall supply, store, erect, test and commission all the equipment required for Electrical Installation. The contractor shall furnish all the materials, labour, tools and equipment for the electrical work, as shown in the accompanying drawings and in the bill of quantities and specifications herein after described.

### Technical Specification - Supply and Installation of Low Voltage Cables

#### 1.12.1. Type:

Low voltage cables shall be copper conductor (unless otherwise specifically mentioned for Aluminum), PVC insulated. The conductors of cable from 16sqmm size shall be stranded. Sector shaped stranded conductors shall be used for cables of 50sqmm size and above. The cable shall conform to IS: 1554 part - I in all respects.

The XLPE cables shall be ST HR inner sheathed ST2 - FRLS outer sheathed as per IS - 7098 (Part-1) wire stripped.

#### 1.12.2. RATING:

The cable shall be rated for a voltage of 1100 volts.

#### 1.12.3. CORE IDENTIFICATION:

Cores shall be provided with the following colour scheme of PVC insulation.

- a. 1 Core: Red/ Black/ Yellow/ Blue.
- b. 2 Cores: Red and Black
- c. 3 Cores: Red, Yellow and Blue
- e. 3 1 / 2 / 4 Core: Red, Yellow, Blue & Black.

#### 1.12.4. CABLES AND OTHER ITEMS:

- a. Specifications for XLPE Cables: IS 7098 - Part - I - 1988
- b. Specification for PVC insulated: IS 1554 - 1964 (Heavy duty) electric cables Part - I For voltage up to 1100 Volts.
- c. Specifications for PVC insulated: IS 694 - 1988 Cables for voltage up to 1100V Part - II With aluminum conductors.
- d. Glossary of terms for electrical cables: IS 1885 - 1971 and conductors.
- e. Code of practice for safety of buildings: IS 1646 - 1961
- f. (General) Electrical installation.

#### 1.12.5. Storing:

All the cables shall be supplied in drums. On receipt of cables at site, the cables shall be inspected and stored in drums with flanges of the cable drum in vertical position.

#### 1.12.6. Cables in indoor trenches:

Cables shall be laid in indoor trenches wherever, specified. Suitable cables in position. Trenches shall be filled with steel checkered trench covers.

#### 1.12.7. Cable on Trays / racks:

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Cables shall be laid on cable trays/ racks wherever specified. The cables laid shall be securely fixed to the Cable trays by means of lockable nylon ties.

### 1.12.8. CABLE TERMINATIONS:

Cable jointing shall be done as per the recommendations of the cable manufacturer. Jointing shall be done by qualified cable jointers. Each termination shall be carried out using brass compressions glands and cable sockets. Hydraulic crimping tool shall be used for making the end terminations. Cable gland shall be bonded to the earth by using suitable size G.I wire / tape.

### 1.12.9. CABLE TRAYS:

The cable trays shall be of ladder type / perforated steel section slotted angles as mentioned. The trays shall be complete with plates, Ts, elbows, risers, and all necessary hardware. The trays shall be galvanized as per IS 2629. The cable trays shall have suitable strength and rigidity to provide adequate support for all cables. It shall not present sharp edges, burs or projections, injurious to the insulation of the wiring and cables. The trays shall be adequately protected against corrosion and shall be made of corrosion resistant material. It shall have side rails or equivalent structural members. There shall be a continuous earth strip running on either side of the tray for earthing. The distance between power cable tray/ conduit and data cable tray / conduit should be between 1 to 1.5 feet.

### 1.12.10. CABLE SUPPORT SYSTEM:

The cable tray support system shall have the appropriate factory fabricated components. It shall be with ceiling support plates anchored with the ceiling with grip bolts. The perforated trays shall be supported with threaded studs with adjustable clamps and shall have nuts and washer accessories for leveling.

Installation of Cables Trays:

- a. Cables trays shall be installed as a complete system. Trays shall be supported properly from the building structure. The entire cable tray system shall be rigid and leveled.
- b. Each run of the cable tray shall be completed before the installation of cables.
- c. In portions where additional protection is required, non-combustible covers / enclosure shall be used.
- d. Cable trays shall be exposed and accessible.
- e. Where cables of different system are installed on the same cable tray, non-combustible, solid barriers shall be used for segregating the cables.
- f. Cable trays shall be grounded by two numbers earth continuity wires. Cables trays shall not be used as equipment grounding conductors.

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g. Cable trays shall be properly leveled and aligned as per the site conditions and a proper shop drawing shall

be produced before starting the work and got approved by the consultant / project manager.

The installation of cable tray support system shall be using the required accessories as mentioned above and using

grip bolts for proper strength in fixing.

### 1.13. Technical Specification - Low Voltage Distribution System

#### DISTRIBUTION BOARDS FOR POWER AND LIGHTING DISTRIBUTION:

a. Distribution boards shall be suitable for 415 volts, 3 phases A.C. supply of 230 volts single phase A.C. supply

as required. Distribution board shall generally conform IS: 2675 or BS: 214.

b. Type & Construction:

Distribution boards shall be of totally enclosed dead front safety type. The enclosures shall be made of the

best quality sheet steel of not less than 2 mm. The sheet steel shall be treated with a rigorous rust

inhibition process before fabrication. The distribution boards shall comprise of switch fuse unit or miniature circuit breakers as incoming and required number of circuit breakers or HRC fuses as outgoing.

The main and outgoing shall have rating as specified in the drawings and schedule. The distribution board

shall be provided with suitable earthing lug.

c. Bus Bars:

Suitable bus bars made of high conductivity, High Electrolytic grade, Solid copper and mounted on nonhydro scope insulating supports shall be provided. Separate earth line will be provided.

d. Circuit Breakers:

Miniature circuit breakers shall be of reputed design and make. Circuit breakers shall be equipped with

individually insulated, braced and protected connectors. The front face of all the breakers shall be flush

with each other.

e. H.R.C. Fuses:

Rating of the fuses and carriers shall be as per drawings and schedule of quantities. Fuse carriers and bases

shall be best grade phenolic moldings conforming to IS: 1300. They shall be non-inflammable and nondeteriorating type characteristics. It shall be link type and shall conform to IS: 1108.

f. Safety & Interlocks:

All the live parts shall be shrouded such that accidental contacts with live parts are totally avoided.

Distribution boards shall be provided with a front hinged door. Distribution boards interior assembly shall

be dead front with the front cover removed. Main lugs shall be shrouded. Suitable insulating barrier made

## Guide Specifications

of arc resistant material shall be provided for phase separation. Ends of the bus structures shall also be shrouded.

### g. Cabinet Design:

The distribution board cabinet shall be totally enclosed type with dust and vermin proof construction. The cabinet shall be stove enameled. The interior surface shall finish to an off-white shade. The interior

components shall be mounted and locked on to the study provided inside the cabinet. Over this, a cover

made of hilum sheet or stove enameled sheet shall be provided with slots for operating handle of breakers.

The cabinet shall be equipped with a front door having a spring latch and vault lock.

Cabinets shall have

detachable gland plates at both top and bottom.

### h. Terminals:

Distribution boards shall be provided with a terminal block of adequate size to receive mains and outgoing

circuits. The location of the terminal block shall be so located that crowding of wires in the proximity of

live parts is avoided. A neutral link having rating equal to that phase bus shall be provided.

### i. Directory

Distribution boards shall be provided with a directory indicating the area or loads served by each circuit

breaker, the rating of breakers, size of conductors, etc. The directory shall be mounted in metal holder

with a clear plastic sheet on inside surface of the front door.

### j. Installation:

Distribution boards shall be surface mounted recessed mounted as required by the Architects and at the

locations shown on the drawings. The boards shall be fixed with suitable angle iron clamps and bolts. All

the cables / conduits shall be properly terminated using gland / grips / check nuts etc.,

Wiring shall be

terminated properly using crimping lugs/ sockets & PVC identification per rules.

### k. Testing:

Distribution boards shall be tested at factory as per IS:2675 or BS: 214. The tests shall include insulation

test, high voltage test, etc. Distribution boards shall be tested for insulation resistance after the erection

## PVC CONDUITS & ACCESSORIES:

### CONDUITS

General conduits shall be of PVC extruded with original mix. The wall thickness of conduits shall be as follows: -

a. 19, 25 & 32mm – 1.5mm or 2mm thick.

## Guide Specifications

b. 38, 50mm and above - 2.5mm thick.

The PVC conduits shall conform to the requirements of IS: (latest edition) in all respects.

The conduits shall have

uniform wall thickness and uniform cross section throughout. The conduit shall be free from burrs. Conduits shall

bear the name or trade mark of the manufacturer on each length. The conduits shall be delivered to the site in

original bundles. Conduits of less than 19mm dia. Shall not be used. Conduit accessories such as bends, inspection

bends, inspection tees, elbows, reducers, draw boxes, junction boxes, etc. shall be of ISI MARK. The conduit

accessories shall conform in all respects to IS:3837. Boxes shall have internally tapped spouts. Junction boxes /

inspection boxes shall be provided with suitable covers.

### INSTALLATION OF CONDUITS:

#### OPEN / SURFACE CONDUIT SYSTEM:

Wherever, specifically called for, surface conduit system shall be adopted conduits shall be run in square and symmetrical lines. Before the conduits are installed, the exact route shall

be at site and approval of the user shall be obtained. Conduits shall be fixed by heavy gauge

GI saddles, secured to suitable plugs, at an interval of not more than 1 meter. Wherever couplers, bends couplers, bends or similar fittings are used, the saddles shall be provided on

either side at a distance of 30 cm from the centre of such fittings. Conduits shall be joined by means of screwed couplers and screwed accessories only. In long distance straight runs of conduits, inspection type

couplers or running type couplers with jam nut shall be provided. Threading shall be long enough to accommodate

pipes to the full threaded portion of the couplers, and accessories. Cut end of conduits shall have no sharp edges

nor any burrs left to avoid damage to the insulation of the conductors. Bends in conduit runs shall be done by

bending conduits by pipe bending machine or any other suitable device as far as possible.

Bends which cannot be

negotiated by pipe bends, shall be accompanied by introducing solid bends, inspection bends or cast-iron

inspection box. The radius of solid bends shall not be less than 7.5cm. Not more than three equivalent 90o bends

shall be used in a conduit running from outlet to outlet. Bends shall be properly drained and ventilated to prevent

sweating or condensation inside the pipes. The entire conduit opening shall be properly plugged with PVC

stoppers/ bushes. The conduits shall be adequately protected against rust by applying two coats of reputed

synthetic enamel paint after the installation is completed.

Wherever conduits terminate into point control box, outlet box, distribution board etc., conduits shall be rigidly

connected to the box / board with check nuts on either side of the entry to ensure proper



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electrical and mechanical continuity. The entire conduit system after installation shall be bounded to the earth as per the specifications given in IS 732 and IS 3043.

### RECESSED CONDUIT SYSTEM:

All the conduits including, bends, unions, junction boxes, etc., shall be cleaned and painted with two coats of bituminous paint before they are fixed in position. Conduits which are to be taken in the ceiling slab shall be laid on the prepared shuttering work of the ceiling slab before concrete is poured. The conduits shall be properly threaded and screwed into sockets, bends, junction boxes and outlet boxes and shall be made watertight by using bituminous hemp yarn at the screwed ends. The conduits in ceiling slab shall be straight as far as possible to facilitate easy drawing of wires through them. Before conduits are laid in the ceiling the positions of outlet points, point controls, junction boxes shall be set out clearly so as to minimize offsets and bends. Conduits recessed in walls shall be secured rigidly by means of steel hooks /staples at 0.8-meter intervals. Before conduit is concealed in the walls, all chases, grooves shall be neatly made to proper dimensions to accommodate the required number of conduits. The outlet boxes, point control boxes, inspection and draw boxes shall be fixed as and when conduit is being laid. The recessing of conduits in walls shall be so arranged as to allow at least 12 mm plaster cover on the same. All grooves, chases etc. shall be refilled with cement mortar and finished up to the wall surface before plastering of walls is taken up by the general contractor. Where conduits pass through expansion joints in the building, adequate expansion fittings or other devices shall be used to take care of any relative movement. Wherever conduits terminate into point control boxes, distribution boards etc., conduits shall be rigidly connected to the boxes; boards etc. with check nuts on either side of the entry to ensure electrical continuity. Running joints in conduits wherever necessary shall be rigidly held in aligned position by check nut tightened on running side. After conduits, junction boxes, outlet boxes, are fixed in position their outlets shall be properly plugged with PVC stoppers or with any other suitable material so that water, mortar, vermin or any other foreign material do not enter into the conduit system. All conduits end terminating into an outlet, draw box, junction box, point control boxes etc., shall be provided with bushes of PVC or rubber, after the conduit ends are properly filled to remove burrs and sharp edges. Concealed conduit laying, above false ceilings shall be executed in similar manner described above. Necessary GI pull wires shall be inserted into the conduit for drawing wires and proper size earth continuity wire shall be run throughout the length of the conduit with the earth wire being efficiently fastened to the conduit by means of special clamps.

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### ENCLOSURE FOR ELECTRICAL ACCESSORIES:

a. Enclosure for electrical accessories such as switches, sockets, fan regulators, etc. shall be of factory molded

GI boxes conforming to IS: 5133 - Part I. The dimensions of the enclosures shall be as per clauses 3.1 to

6.31 of IS: 5133. The wall thickness of GI enclosure shall not be less than 1.6 mm. The enclosure boxes

shall be provided with a minimum of four fixing lugs located at the corners for fixing the covers. all fixing

lugs shall have tapped holes to take machined brass screws.

b. 3.2 Sufficient number of knock-outs of 38mm/ 32mm/ 25mm dia. shall be provided for conduit entries. Enclosures shall be sufficiently strong to resist mechanical damage under normal service conditions, provision shall be made for bonding the enclosures to the earth. The enclosures shall be adequately protected against rust and corrosion both inside and outside.

### SWITCHES, SOCKETS AND ACCESSORIES:

a. General Requirements: Light control switches shall be of a 5A rating. Light control switches shall be of piano-key type design suitable for flush mounting for general lighting. Wherever specifically called for tumbler type switches shall be used for surface mounting. Light control shall have either integral mounting plates or white PVC/ Perspex cover plates as approved.

b. All sockets, 5A & 15A ratings, shall be of flush mounting type with control switches of piano- key type design of the same rating as that of the sockets. All sockets outlet shall be of 3 pin / 5 pin type. The socket shall be of high-quality polycarbonate with pins made of brass alloy and plated with a noble metal. Sockets shall be provided with PVC surface outlet plates with round corners and beveled edges. All the sockets shall be provided with plug tops of approved quality and design.

c. Industrial type sockets: Industrial type sockets shall be provided wherever required. Industrial sockets shall be totally metal clad with porcelain base incorporating the pins. Sockets shall have 3 pins for single phase applications and 4 pins and scraping earth of 3 phase applications. The sockets shall be provided with suitable metal clad plug top with suitable cable entry. Sockets shall have metal covers with chain. It shall have a suitable interlocked switch. Industrial type sockets shall be provided with a suitable sheet steel housing made of 16 gauge with the socket mounted in flush with cover of the housing.

d. Lamp holders, ceiling roses etc. Accessories for light outlets such as lamp holders, ceiling roses etc. shall be in conformity with requirements of relevant IS specification. Installation of switches, sockets & accessories: All the switches shall be wired on phases. Connections shall be made only after testing the wires for continuity, cross phase etc., with the help of a megger

e. Switches, sockets fan regulators etc., shall be housed in proper GI factory boxes. The arrangement of switches and sockets shall be neat and systematic. Covers for enclosure shall be molded accommodating switches, sockets etc., Outlets shall be terminated into a ceiling rose for fan points. For wall plug sockets, the conductor may be terminated directly

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into the switches and sockets.

f. The outlets, point control boxes etc. shall be set out as shown on the drawings. Before fixing these, the contractor shall obtain clearance from the SIA/ project manager with regard to their proper locations. The enclosure of sockets and 3rd pin of the sockets shall be connected to the ground through a proper size earth continuity wire.

g. POINT WIRING:

h. Point wiring shall commence from the first point control box/local control box for the points connected to the same circuit. Point wiring for lights, fans 5 A sockets, call bells etc. shall be carried out with PVC insulated wires. Only 2.5mm<sup>2</sup> wires shall be used. The point wiring shall be inclusive of 25mm / 32mm rigid PVC conduits of standard and with approved quality conduit accessories such as bends inspections bends, reducers, junction boxes etc. together with wiring accessories such as ceiling roses, lamp holders, connectors, point control boxes (enclosure for electrical accessories) etc., Point wiring shall be provided with 14 SWG Copper earth continuity wire for earthing 3rd pin of sockets, luminaries and fan fixtures. Light control shall be either single, twin or multiple points controlled by a switch as specified.

### Specification for IPDU

|                                     |  |
|-------------------------------------|--|
| <b>System Features</b>              |  |
| <b>Product Summary</b>              | CP8853 - rPDU, Monitored Unit Level EC, 32A, 230V, 7.3kW, Vertical, (36) IEC C13, (6) IEC C19, 3m power cord with 2P+E (IP44), Black Powder Coat.  |
| <b>Monitoring</b>                   | Input power monitoring with breaker level current monitoring.<br>Environmental monitoring via optional remote sensors.<br>Daisy chain Ethernet connectivity.<br>Local high visibility LED display. |
| <b>Monitoring Level 1</b>           | Phase (A) Monitoring (kWh, W, VA, PF, V, A)<br>Power Measurements Compliant with ANSI C12.1 and IEC 62053-21 at 1% Accuracy Class Requirements   |
| <b>Monitoring Level 2</b>           | Circuit / Breaker Monitoring (A)<br>Circuit/Breaker Current Measurements Independently Tested and Verified at 2% Accuracy  |
| <b>VLC Support</b>                  | Yes  |
| <b>Quantity Of Inputs</b>           | 1  |
| <b>Voltage</b>                      | 230V   |
| <b>Current</b>                      | 32A  |
| <b>VA per Input (Load Capacity)</b> | 7.3kW  |

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|  |  |
|--|--|
| <b>Frequency</b>                                 | 50/60Hz  |
| <b>Over Current Protection</b>                   | (2) 16A Single Pole Magnetic Breakers  |
| <b>Switch</b>                                    | Breaker/Switch Combination   |
| <b>Scrolling / Rotatable Digital Display</b>     | Yes  |
| <b>Power Cable Wire Gauge</b>                    | 4mm <sup>2</sup>   |
| <b>Power Cable Length</b>                        | 3m   |
| <b>Power Entry Location</b>                      | Bottom Front   |
| <b>Plug Type</b>                                 | IEC60309 2P+E, 32A, 250V, Splash proof IP44  |
| <b>Combined Total Receptacle/Socket Quantity</b> | 42   |
| <b>Receptacle/Socket Type #1</b>                 | IEC C13  |
| - Quantity                                       | 36   |
| - Quantity per Breaker                           | 18   |
| - Maximum Output per Receptacle/Socket           | 10A  |
| - Voltage per Receptacle/Socket                  | 230V   |
| <b>Receptacle/Socket Type #2</b>                 | IEC C19  |
| - Quantity                                       | 6  |
| - Quantity per Breaker                           | 3  |
| - Maximum Output per Receptacle/Socket           | 16A  |
| - Voltage per Receptacle/Socket                  | 230V   |
| <b>Internal RMS Voltage Sensor</b>               | Yes  |
| <b>Internal RMS Current Sensor</b>               | Yes  |
| <b>Network Connection</b>                        | Dual 10/100Mbps Ethernet   |
| <b>Protocols Supported</b>                       | DHCP, HTTP, HTTPS, IPv4, IPv6, LDAP, NTP, RADIUS, RSTP, SSH, SMTP, SNMP (v1/v2c/v3), Syslog, TACACS+ |
| <b>Data Access Formats</b>                       | CSV datalog, JSON API, JSON datalog  |
| <b>USB Support</b>                               | Yes  |
| <b>IP Reset Button</b>                           | Yes  |
| <b>Hard Reboot Button</b>                        | Yes  |
| <b>Serial Connection</b>                         | RS232 via RJ45   |
| <b>Remote Sensor RJ Connection Jacks</b>         | 1 (Supports up to 16 Sensors)  |
| <b>Maximum Operating Temperature</b>             | 60°C / 140F  |

## Guide Specifications

|  |  |
|--|--|
| <b>Heavy Steel - Powder Coat Finish</b>        | Black  |
| <b>Configuration</b>                           | 0U, Vertical   |
| <b>Toolless mounting HW – Center to Center</b> | 1560mm and 1645mm (Vertical mounting bracket included) |
| <b>Product Warranty</b>                        | 5 years  |
| <b>Certification/Agency Approvals</b>          | CE, EN55032 & EN55024, IEC62368-1, RoHS, China RoHS    |
| <b>Chassis Dimensions (HxWxD)</b>              | 1778mm x 51mm x 51mm                                   |

|                           |  |
|---------------------------|--|
| <b>Sensor Requirement</b> | SITC of Three sensors for each rack (two in the front and one in the back) covering one data point for dew point and air flow along with three data points for temperature- humidity. Sensors should be integral with supplied IPDU's. |
|---------------------------|--|

### Technical Specification INROW COOLING DX Unit

#### Server room,

|                          |   |   |
|--------------------------|---|---|
| Classification           | : | INROW COOLING UNITS – Critical Areas  |
|                          | : | SERVER ROOM   |
| Inside design conditions | : | Temperature: 22 Deg C $\pm$ 1 Deg C<br>Relative humidity: 50+/-5% RH<br>Noise level 60+/-5 dB A |
| Return Air Condition     | : | 35 Deg C @ 27% Rh   |
| Outside conditions       | : | Summer – _____ °C DBT   |
| Operation                | : | 24/7  |

#### EQUIPMENT SELECTION

Server room : \_\_\_\_\_kw – DX type In-row cooling units with inverter compressor, front discharge type incorporating R410A refrigerant.

#### **Cooling version**

The unit will feature a cooling circuit with one compressor. **The compressor will be a high efficiency Inverter scroll unit installed on the outdoor condensing unit so as to limit maintenance requirements inside the data center.** This is equipped with an electronic

## Guide Specifications

controller for managing cooling capacity, using **DC INVERTER Brushless technology**. An electronic board fitted with microprocessor will control effective compressor capacity using a PID algorithm (proportional – integral – derivative) so as to ensure continuous and precise modulation of compressor rotation speed. Minimum modulation will be at least 30% of nominal capacity. R410A ecological refrigerant will be used; no alternatives are permitted. The cooling circuit will include: electronic thermostatic valve, solenoid valve, high and low pressure switches, liquid sight glass and filter-drier. The low pressure switch features automatic reset and activation can be delayed when restarting in winter. The high pressure switch requires manual reset.

**The circuit will also include an oil separator to guarantee oil return to the compressor and reduce the risk of shutdown, plus a liquid separator.**

The evaporator coil will be made from copper pipes mechanically fixed to aluminium fins with hydrophilic treatment.

### **Air flow configuration**

**In** the InRow versions, the air to be cooled is taken in at the rear of the unit, directly from the hot aisle of the data center (35°C), with considerable benefits both in terms of energy efficiency and cooling capacity; it is then cooled and delivered into the cold aisle (18-20°C), that is, the front of the same racks where the air is taken in from.

The surface of the evaporator coil must be designed to deliver a high level of sensible cooling capacity, i.e. the SHR (Sensible Heat Ratio, ratio between sensible and total heat load) must be > 0.9, measured at an air inlet temperature of 35°C and 30% relative humidity. A steel condensate collection pan must be installed on the coil.

### **Energy Efficiency**

In order to provide best advantages in terms of energy saving, the CRAC efficiency shall increase when heat load reduces (partial load) or any time the cooling capacity exceeds the required capacity (for instance when outdoor temperature drops).

### **Control of the condensation stage**

The condensation stage must be controlled by measuring the compressor discharge pressure i.e. on the condensing unit, so as to be able to manage the effective pressure difference across the compressor and allow simultaneous control of the evaporator-condenser system.

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The condensation stage must be controlled by modulating the power supply voltage to the fans on the outside condenser.

### Active redundancy and shared mode

The cooling units will be capable of providing active redundancy. To ensure this, all the units installed, including the redundant unit, must be able to operate at the same time and at part loads.

This feature must also be able to increase system efficiency by reducing energy consumption at part loads.

### Protection function for long refrigerant lines

The unit will have a function that at regular intervals increases gas flow speed, so as to allow better oil return to the compressor even on very long refrigerant lines.

### Fans

The air-conditioning unit will have fans with backward-curved blades made from reinforced ultra-light and highly resistant polymer material. The motors are coupled directly to the fans (plug-fan), and are **EC (Electronically Commuted)** brushless motors: this technology allows continuous modulation of air flow-rate by continuously controlling fan speed via a 0-10V signal. Fan rotation speed can also be controlled directly on the user terminal, so as to allow adjustment of the flow-rate or external static pressure (ESP)

The motor can be powered at either 50 or 60Hz, and will have **IP54** ingress protection. All the fans are statically and dynamically balanced, have self-lubricating bearings and are mounted on vibration-damping supports.

The unit controller will be able to modulate fan speed at part loads, together with the compressor inverter. This further reduces power consumption during part-load operation.

The fans are designed to allow “**hot replacement**” in the event of faults, i.e. an individual faulty fan can be replaced without having to stop the entire unit, thus reducing system down time.

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### **Power supply**

The electrical panel is located at the front of the unit, and will be easily accessible and away from the air flow. This will be constructed and wired in compliance with standards IEC 204-1/EN60204-1 and will include: contactors and overload protectors for compressors and fans, PCB, and safety devices.

Power supply will be

230 volts, single-phase, 50Hz.

or

400 volts, three-phase + neutral, 50Hz

### **Controller with microprocessor**

The control system will include a microprocessor that will be programmed to manage all the functions of the air-conditioner. The system will include

- An electronic board housing the microprocessor, fitted inside the electrical panel.
- A user terminal as the interface.

The electronic board complies with EEC directive 89/336.

The user terminal is a backlit LCD with 132x64 pixel resolution and 6 buttons.

All the messages will be displayed using icons; no specific language needs to be known.

The main functions of the control system are to:

- control room temperature
- manage the compressor inverter;
- manage fan speed;
- monitor supply air temperature;
- manage alarms and warnings for correct maintenance;
- log up to 100 events;
- manage the unit in standby;



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- control room humidity (if a humidity probe is connected)
- manage the humidifier (if featured)
- manage from 1 to 3 electric heater stages for reheating (if featured);
- automatically manage the free cooling system (if featured);
- allow remote monitoring and control of the unit via LAN, network or BMS (LonWorks, BACnet, Modbus.....).

The controller requires **3 password levels** and can manage the following parameters:

- readings of sensors and probes and corresponding settings;
- activation of alarms, event log, digital output settings;
- LAN management;
- BM communication parameter settings;

When connected via LAN to other units - up to 10 - the controller can:

- manage, based on set times or events, automatic rotation of the unit/units in standby (1 or 2) ;
- manage the average temperature and humidity between the units;
- access all the control boards from just one remote user terminal,

In order to protect the software against incorrect settings, some parameters are protected by **2 password levels**: User level and Authorised service level.

### Filters

Regenerable polyester fibre filtering media treated with synthetic resins, supported by a frame with protective metal mesh. Efficiency grade G2/G4 in accordance with standard CEN-EN 779, and average efficiency G4 to ASHRAE 90.1. The filter is non-flammable.

### Noise

The units must be designed to reduce noise emissions. Specifically, in normal operation the compressor must not generate any type of impulse noise, not being measurable.

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### **Reheating**

The unit will be equipped with electric heaters, to allow temperature control during dehumidification cycles.

The electric heaters include stainless steel fins, and are fitted with safety thermostat to cut-off power supply and activate an alarm in the event of overheating. The heaters feature modulating operation, in 3 stages.

### ***Humidifier***

The unit will read the relative humidity (RH) and control the level by activating humidification cycles only when the return air humidity is too low (<40%, settable).

The humidifier is an immersed electrode model with modulation of steam production. It also features automatic control of dissolved salt concentration so as to allow untreated water to be used

### ***Communication boards***

The unit will be fitted with RS485 communication board for ModBus protocol.

### ***Alarm sensors :***

Dirty filter sensor: this sensor is needed to optimise filter operation, so they can be replaced only when necessary

Flood sensor: this sensor is needed if there is condensate water spillage outside unit

|            | <b>Cold aisle containment</b> |
|------------|-------------------------------|
| <b>NO.</b> | <b>DESCRIPTION</b>            |

## Guide Specifications

|    |  |
|----|--|
| a. | <p>Providing &amp; fixing double leaf Sliding with smooth Cylindrical auto closure on both of doors for entering Cold Aisle (Containment area) using the clear solid Polycarbonate Lexan Sheet Panel of 5 mm thickness.</p> <p>CRCA Frame of size: 50mmX25mmX1.5mm with Black Anodized/Powder Coated (40 Micron) max aisle covered 3600 mm width with max clear height of not more that 2400mm. including self screw and fasteners including gap filling with silicone and testing of air leakage.</p> |
| b. | <p>Providing &amp; fixing of Customized roof using the clear Soild Polycarbonate Lexan Sheet panel of 5 mm cut in accordance to the rack for the said cold aisle enclosure with support taken from the Rack Aluminum Frame of size: 38mmX38mmX1.5mm and Aluminum T - 25X25x1.5mm with Black Anodized/Powder Coated (40 Micron) - 800mm wide racks</p>  |
| c. | Air sealing kit ( Aisle wise )   |
| d. | Cutout entry on Roof panels for Gas Nozzles ( Optional)  |
| e. | Vertical filler panels 2100mm height x 200mm Multiwall 6mm   |
| F. | Vertical filler panels 2100mm height x 800mm Multiwall 6mm   |
| g. | Vertical filler panels 2100mm height x 600mm Multiwall 6mm   |
| h. | Vertical filler panels 2100mm height x 700mm Multiwall 6mm   |
| I. | Vertical filler panels 2100mm height x 300mm Multiwall 6mm   |

| Specification for Rack |   |
|------------------------|---|
| Sr no                  | Technical Specifications  |
| 1                      | 42U H x 800mm W x 1200mm D Server /Network Rack ( 2070mm x 800x 1200)   |
| 2                      | It Should all Steel Construction uses design parameters which incorporates latest industry and statutory guidelines for the racks for IT and Telecom Industry worldwide.  |
| 3                      | Picture Frame should be Made out of quality CRCA material of minimum 2mm thicknesses offers highly rigid and stable structure for loading per rack up to 1700KG (All load bearing members being made from 2.0mm CRCA Steel with added strength by way of multi-fold design) |

## Guide Specifications

|    |  |
|----|--|
| 4  | Bolted construction of the rack should enable the shipping of the Rack in CKD. The Racks should be assembled at site as per the user / system integrator's requirement.  |
| 5  | Broad Front and Rear Multi-folded Frames should offer required level of stability and squareness to the structure. Design Should ensure maximized width utilization for managing power distribution and vertical cable management. Based on functional configuration of the rack – one can use as much as 595mm out of 600mm for Server Rack and 790mm out of 800mm for Network Rack for mounting of Power Distribution Units and / or managing vertical cables at the rear of the rack. (This simply translates in to more clear space at the back of the mounted devices and least obstruction to the hot air moving out of the rack.) |
| 6  | It should offer access for the entire rack configuration from inside the rack. This eliminates the need for access from the side of the rack. In the vent of a complete row of racks – each rack can be changed in to its configuration independently without taking it out from the row since side access is not required for re-orient the rack internally. (e.g. Moving vertical mounting rails to accommodate different size of rack mounted device.)  |
| 7  | It should have large volumetric space (more of the clear space on sides of the mounted equipment as compared to conventional rack designs) inside the cubicle when closed with side panels or separator panels and doors, thus making it more efficient towards the heat management.   |
| 8  | It should be Multi fold heavy duty 19" mounting rails made from 2.0mm CRCA ensure further rigidity and load carrying capacity while maintaining the overall squareness of the structure. (As against conventional L Shaped Mounting Rails)   |
| 9  | Two pairs of such mounting rails have two mounting webs for the ease of mounting 19" equipment and accessories like shelves, chassis runners etc. These rails are fully adjustable and offer great deal of operational flexibility while setting up the rack for installations. This feature also makes the rack virtually fit for any kind of application – a truly user-friendly universal design.   |
| 10 | Second or the Inner Mounting Edge of these vertical mounting rails offer unique functional assistance for the vertical cable dressing too.   |
| 11 | These 19" Mounting rails are possible to recess throughout the depth of the rack.  |
| 12 | Doors and panels of Racks should be easily removable type. Every door should open 180 degrees – a much needed feature for the ease of servicing the rack after installation and / or mounting / removing the equipments. Rear door should be offered in split design for Network & Sever Rack.   |

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|    |   |
|----|---|
| 13 | Roof should have multiple gland plates which should be used for cable entry with Brushes .  |
| 14 | It should have Plinth frame to enhances the load carrying capacity of 1500 KG and should offer unhindered flexibility in configuring the cable entry in to the rack from bottom. This add-on offers even load distribution on the floor also. Top & Bottom entry Cutouts with Closures for the cables.  |
| 15 | Network Rack Should have 100mm wide Reducing Channels on Network Racks for great flexibility to route vertical cables. It should also have a slot in which cable tie or a Velcro band can be fixed from front side only. Brushes to be used on all the cable openings on front side and rear side of the air to avoid mixing of cold and hot air. |
| 16 | Server /IT Rack mount power distribution unit, 1Ph, 230V, 32A, 50/60Hz, Zero U standard with 24 X C13 & 2 X C19, 32AMPS - PDU Rating 7.3KVA/Bottom feed-3Mt/ Blue / Inlet Plug Not Installed  |
| 16 | Airsealing Kit on front side of the racks   |
| 17 | 1U Horizontal Cable Manager   |
| 18 | 300mm Vertical Cable basket for dressing cables   |
| 19 | Heavy Duty Fixed Shelf of 727mm Depth   |
| 20 | 1U ABS Plastic Blanking Panel of 30% per Rack   |
| 21 | Degree of Protection : IP20   |
| 22 | Coating : Powder coated black with fine texture – 60 to 80 uM   |
| 23 | Certificates of ISO 9001, 14001, 27001, 45001, CE, DIN 41494, EIA 310-D, RoHS Compliant & structural load carrying capacity test certificates of 1700kgs  |

## **SAFETY POLICY AND SAFETY TERMS AND CONDITIONS**

### **1. Objective**

The Tata Power engages contractor workforce to execute, run and maintain various operating sites and facilities across locations for various business verticals including Generation, Transmission, Distribution and Renewable. The activities range from project execution, operation, maintenance to facilities management.

The management of contractor safety represents a significant challenge for management. Tata Power has a responsibility to ensure that contractors are provided with enough information and support to enable them to conduct their roles safely and without endangering health and safety of their own workforce or that of our staff.

To ensure reduction in reportable injuries and achieve goal of zero accidents, first edition of contractor safety code of conduct was launched successfully in the year 2014. Since last four years after the launch of CSCC, Tata Power could achieve the objective of reduction in reportable injuries and fatalities.

Over the period, as the system was being matured, a need was felt to make second revision of the CSCC process. Objective of second revision is improve existing CSCC system and make it user friendly.

- 2. Scope:** This procedure applies to all operating and project sites of The Tata Power Company Ltd and Group companies including new businesses like EV charging, Home Automation etc.

### **3. Definitions**

- 3.1. Order Manager:** Order Manager is the Tata Power representative, who has the ownership of the given job.
- 3.2. Site Safety Management Plan:** It is the safety plan agreed between Contractor and Tata Power. It will contain the entire job specific safety requirement and will be signed by the contractor.
- 3.3. Contractor:** An individual or a company that provides services to Tata Power under a signed contract.
- 3.4. Emergency:** a serious, unexpected or dangerous situation requiring immediate action, which may result in loss of revenue/property, business discontinuity. In case of Emergency\*, services may be procured by selecting the qualified vendor based on the vendor category without the safety bid evaluation. It must be approved by MB level and above.
- 3.5. Expert Service jobs:** Jobs which needs expert services of contractor which does not involve direct exposure to the potential risk or work which involves only supervisory work such as expert for turbine overhaul, expert for boiler overhaul, expert for pump and motor, expert for compressor overhaul.
- 3.6. Head of the Division:** Business in charge of the division who is overall custodian of the generating station or transmission division or distribution division.
- 3.7. Category A Vendor: Vendor** eligible to carry out Very High & High risk (as per Tata Power Hazard Identification and Risk Analysis Procedure) and /or

Long-Term Contract related to operation and maintenance (O&M) of plant. Vendors must fulfil the requirement specified for Category A in Appendix 12-CSMF-5 of this document.

- 3.8. Category B Vendor:** Vendors eligible to carry out technical jobs, that are classified under Medium /low risk. Vendors must fulfil the requirement specified for Category B in Appendix 12-CSMF-5 of this document.
- 3.9. Category C Vendor:** Vendors eligible for to carry out low or very low risk administrative and office jobs. For this he must fulfil the requirement specified for Category C in Appendix 12-CSMF-5 of this document.
- 3.10. Category D Vendor:** All Consultants, Medical Practitioners or vendors taking job from Tata Power and working from their own premises (e.g. motor rewinding at vendor's shop floor, equipment sent for repair to vendor's works etc.) are classified as Category D Vendor
- 3.11. High Risk Jobs:** A Job or its activities are considered as Very High or High Risk when Order manager apply the "Tata Power Hazard Identification and Risk Analysis" procedure and found safety risk associated with are under Very High or High category. Indicative lists of jobs are given in appendix 15 of this document.
- 3.12. Medium Risk Jobs:** Jobs or its activities are considered as medium risk when Order manager apply "Tata Power Hazard Identification and Risk Analysis" procedure and found the same as Medium Risk.
- 3.13. Low Risk Jobs:** Any job or its activities are considered as Low or Very low risk while Order manager, calculate it by applying "Tata Power Hazard Identification and Risk Analysis" procedure and found it under Low or Very Low category.
- 3.14. Long Duration Jobs:** When the duration of job is 12 months or more, it is considered as Long duration job
- 3.15. High Value Jobs:** When the value of the job contract is Rs. One Crore or more it will be considered as High value job.

#### **4. Responsibilities**

- 4.1 Order Manager:** Order Manager is the Tata Power representative, who is responsible for:
- 4.1.1 Finalizing the Site Safety Management Plan along with Contractor, Safety Concurrences Group, Divisional Safety Head and Expert (External or Internal) if required.
- 4.1.2 Supervise and ensure work is carried out as per the Site Safety Management Plan including agreed Risk Assessment (HIRA/JSA) and Method Statement.
- 4.1.3 Conduct audit and evaluate Safety Performance of contractor.
- 4.1.4 Ensure contractors adhere to all statutory provisions.
- 4.1.5 In case any deviation is needed in agreed safety management plan or in CSCC process for execution of job, Management of Change procedure will be applicable, and approval may be obtained from divisional head /Cluster head.

**4.2 Contractor:** The person, entity or organisation who is executing the job for Tata Power under a contractual agreement and will be responsible for the following

- 4.2.1 To follow all Tata Power Critical Safety Procedure, Rules and guidelines given in [Safety Terms and Conditions](#)
- 4.2.2 Undertake job as per [Site Safety Management Plan CSM-F10](#) and method statements agreed with Tata Power.
- 4.2.3 Raise any concerns with regard to their work and its safety with the Tata Power Order Manager.
- 4.2.4 Report all injuries, near misses, unsafe acts/conditions, and occurrences to the Tata Power Order Manager immediately.
- 4.2.5 Ensure that all sub-contractors follow the Tata Power Safety Procedure and agreed [Site Safety Management Plan CSM-F10](#).
- 4.2.6 To follow all statutory requirements as per the laws of the land.
- 4.2.7 All vendors applying for A category jobs or submitting quote for high risk jobs shall obtain certificates of ISO 9001, ISO14001 and ISO45001 before submitting quote for high risk Jobs.

**4.3 Safety Concurrence Group:** It is Cross Functional Team constituted by Corporate Safety Team, which will have representatives from Execution department, Divisional safety and Corporate / Divisional contracts. SCG will be responsible for the following

- 4.3.1 Assessment of Safety Potential of new vendor before registration as per [CSM-F1- Safety Category Qualification Form](#).
- 4.3.2 Safety Evaluation of the bids as per evaluation format [CSM-F-9 Safety Bid Evaluation Criteria](#)
- 4.3.3 Finalization of the Site Safety Management Plan CSM-F-10 submitted by the contractor.
- 4.3.4 Corporate Safety Team / Cluster Safety Head will be part of SCG during Safety Bid Evaluation for following types of jobs
  - 4.3.4.1 High-Risk jobs to be carried out in Annual Overhaul / Major Shutdowns and Outages.
  - 4.3.4.2 Capex jobs of High-Risk Category

**5.1 Vendor Registration**

For Vendor Registration, Corporate Contract will issue following documents for evaluation of contractor's safety capability

- 1) [CSM-F1 –Safety Category Qualification Form](#)
- 2) [Safety Terms and Conditions](#)

The document [Safety Terms and Conditions](#) provides the information about Tata Power safety System to the contractor. Contractor will submit the [CSM-F1- Safety Category Qualification Form](#) with all relevant details and documents to Vendor Registration Initiator, which will in turn forward it to Safety Concurrence Group (SCG) for evaluation. The SCG will evaluate the details submitted by the contractor based on a predetermined criteria [CSM-F-5 Safety Potential Evaluation Criteria](#) for Vendor Registration and will determine the category (Category A/B/C/D) for which the contractor will be registered. As mentioned in the above criteria, a site visit may also be organized by SCG prior to registration under Category A and B. In case, the contractor does not qualify the safety criteria, the contractor will not be registered. However, he may apply afresh for registration after 6 months. Please refer [Appendix 1: Process Flow Chart for Vendor Registration](#).



## **5.2 Bid evaluation**

At the time of placing the Purchase Requisition (PR), Order Manager is required to declare the risk involved in the of the job (i.e. High Risk / Medium Risk / Low Risk jobs, based on the RPN in HIRA. If the Job is “High Risk” or “Long Duration”, then RFQ will be attached with following documents:

- 1) [CSM-F7- Blank Safety Competency Form](#)
- 2) [CSM-F8 PPE requirements](#)
- 3) [Safety Terms and Conditions](#)
- 4) [Job Specific Safety Requirement \(Educational and Professional Qualification, Skill & Experience Manpower, Tools and Tackles \(e.g. man lifter, use of drone, use & availability of rescue kit\), Work Methodology etc.\)](#)

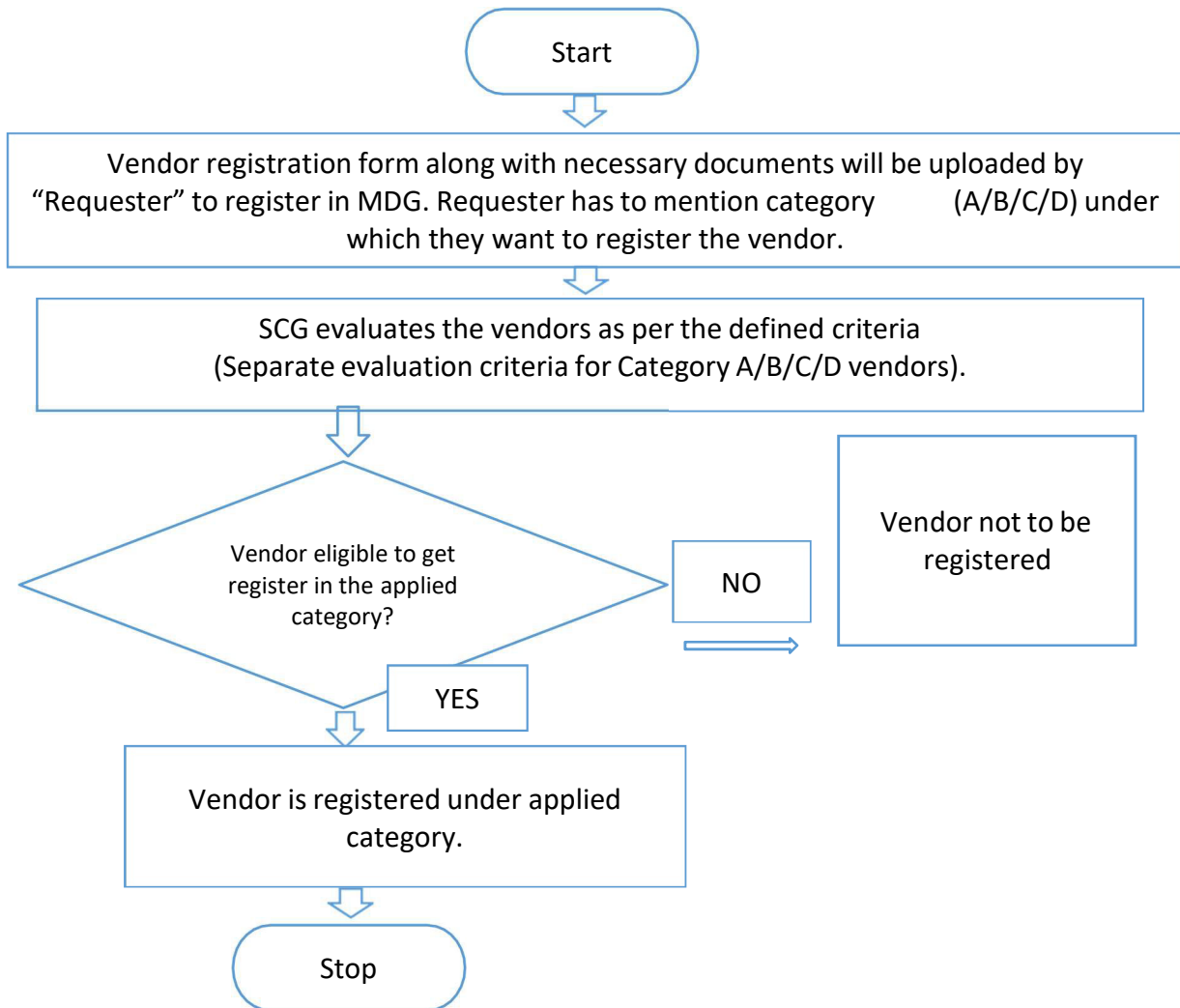
Otherwise the RFQ will be attached only with [Safety Terms and Conditions](#). Long term and low value jobs (see definition) are exempted from the CSCC process.

Corporate Contracts will collect duly filled [CSM-F7 Safety Competency Form](#) along with the bid. All other stakeholders will also put their efforts to get all relevant safety data during meeting / discussions with the vendor. SCG will evaluate the document as per the [CSM-F9 Safety bid evaluation criteria](#). If any specific condition related to Contract is required to convey to contractor, Site safety team will attach the same as Annexure for specific conditions of job and submit it to contract team along with safety bid evaluation form. Commercial bid of contractor will be considered for evaluation by contract team only if contractor is qualified in safety bid. Site Safety Management Plan, defining the complete procedure of executing the job at site will be signed by the contractor and SCG after mutual agreement. CC will attach a copy of site safety Management Plan and any specific condition of contract along with PO to the successful bidder. Please refer [Appendix 6: Process Flow Chart for issuing RFQ and PO significant health and safety risk associated with it](#).

## **5.3 Safety Performance Evaluation**

During the time of job execution, regular site inspection will be carried out by the Tata Power officials and violations will be dealt as per [CSM-F4 Safety Violation Penalty Criteria](#). Apart from this, monthly safety performance of the contractor will be evaluated based on the predetermined criteria as per [CSM-F11 safety Performance Score](#) and monthly score will be maintained by the Order Manager. Certain percentage of each running bill will be retained as Safety Retention amount and will be released on the basis of Safety Performance Score at certain intervals as defined in [CSM- F-3- Safety Performance Evaluation Criteria](#). Please refer [Appendix 10: Process Flow Chart for Safety Performance Evaluation](#). Percentage of retention amount is mentioned in safety terms and conditions.

## Appendix 1: Process Flow Chart for Vendor Registration



## Appendix 2: CSM-F-1 Safety Category Qualification form

1. "Safety Category Qualification Form" is part of vendor registration form. It needs to be filled by the contractor at the time of Registration and should be submitted to Requester / order manager with all relevant documents.
2. The same will be evaluated by Safety Concurrence Group of the Division (SCG) as per the criteria given in CSM-F-5.
3. Information provided by contractor will be verified during site visit.

### Safety Category Qualification Form

**Please consider my application for**

**Category A Vendor: Vendor eligible to carry out Very High- and High-risk O&M jobs**

**Category B Vendor: Vendors eligible to carry out technical jobs, classified as Medium / low risk**

**Category C Vendor: Vendors eligible for to carry out low or very low risk administrative and office jobs**

**Category D vendor: All Consultants, Medical Practitioners or vendors taking job from Tata Power and working from their own premises.**

| Name of the Vendor: |  |                                  |  |                    |        |        |
|---------------------|--|----------------------------------|--|--------------------|--------|--------|
| Sr. No              | Safety Information   | Remarks                          | Attachment   |                    |        |        |
| 1                   | Certified for<br>i. OHSAS 18001/ ISO 45001,<br>ii. ISO: 14001<br>iii. ISO: 9001<br>(ISO certificates to be issued from reputed accreditation agencies specified by Tata Power) | i. Y/ N<br>ii. Y/ N<br>iii. Y/ N | Attach copy of the certification                         |                    |        |        |
| 2                   | Safety Statistics for Last Three (3) Years<br>- LTIFR<br>- LTISR   | Yes/No                           |  | Year 1<br>Last FY) | Year 2 | Year 3 |
|                     |  |                                  | LTIFR  |                    |        |        |
|                     |  |                                  | LTISR  |                    |        |        |
| 3                   | Do you have Safety Policy?   | Yes/No                           | Attach copy of the safety policy.                        |                    |        |        |
| 4                   | Do you have Safety training process?   | Yes/No                           | Attach safety training process.                          |                    |        |        |
| 5                   | Do you have Safety organization structure e.g. Safety Officers and Safety Committees?  | Yes/No                           | Attach copy of the safety organization structure.        |                    |        |        |
| 6                   | Name and address of sites where work is in progress or worked earlier  | Yes/No                           | Site details to be attached for inspection by Officials. |                    |        |        |

Signature :

Name and Designation :

Stamp of Organization :

### Appendix 3: Safety Terms and Conditions

Please refer the attached document [Safety Terms and Conditions](#).

#### Appendix 4: CSM- F-3- Safety Performance Evaluation Criteria

1. A certain percentage of the bill value will be retained against every running bill as safety performance retention. The amount will be released with the last invoice or every six-month based on Safety Performance Score of contractors. The retention amount will be calculated based on contract value as below.

| Contract Value | Retention Amount (%) |
|----------------|----------------------|
| Up to 10 Lakhs | 2.5                  |
| 10 – 50 lakhs  | 2                    |
| 0.5 to 10 Cr   | 1.5                  |
| >10 Cr         | 1                    |

2. The evaluation criteria include Lead Indicators such as CFSA (Contractor Field safety Audit) score, percentage of workers trained in TPSDI, inspection of critical equipment. Lag indicators such as Fatalities, LWDC and man days lost.
3. The retention amount saved will go to a separate Safety Improvement Fund.
4. For the contract value of more than Rs 1 Cr or contract duration more than 12 months, the retention amount shall be released half yearly based on safety performance. For all remaining contracts, the retention amount will be released with the final bill.
5. Long term jobs with low value (Less than Rs. 1 Cr.) are exempted from the safety retention. Invoice of these type of jobs can be cleared without safety retention.
6. In case of job stoppage due to safety violations / unsafe observations at the site, no time extension shall be given to the contractor, if such delays are attributable to contractor.
7. In case of fatality, limb loss or loss of property, vendor must pay for liability, legal, statutory and additional mutually agreed settlement charges imposed by the appointed committee. This charge is over and above the retention amount.
8. The committee will finalize an amount between 5 -50 lakhs based on factors such as advise by statutory authorities, contract value and impact of accident etc.
9. Safety performance bonus 1% (limiting to 50 lakhs) of the invoice value will be considered at the end of the job if the contractual safety performance score 100%.
10. During the progress of the work, concerned Supervisor/Engineer will visit and inspect the work site regularly and evaluate the safety performance of the contractor based on matrix attached herewith and apply the Consequence management policy as applicable.
11. Order Manager, divisional chief and SBU head have the authority to terminate the contract in case of three consecutive serious violations.

|   | <b><u>Lead Indicators</u></b>  | <b>Unit Of measurement</b>     | <b>Target</b> | <b>weight age</b> |
|---|--|--------------------------------|---------------|-------------------|
| 1 | % of Employee certified in TPSDI/Authorized agency   | %                              | 50%           | 10                |
| 2 | CFSA score (Annexure 6.1)  | Average Severity of Violations | 1.49          | 20                |
| 3 | Monthly inspection completed by contractor for Critical Equipment, lifting Tools & Tackles and hand tools used at site as per Tata Power Checklist | %                              | 80            | 5                 |
| 4 | Revalidation of Condition of tools, tackles and equipment by Order Manger.   | %                              | 100           | 15                |
|   | <b><u>Lag Indicators</u></b>   |                                |               |                   |
| 1 | Number of Fatalities   | No.                            | 0             | 30                |
| 2 | Number of Lost workday case (LWDC)   | No.                            | 0             | 10                |
| 3 | Man-days Lost  | No.                            | 0             | 10                |

## Appendix 5: CSM- F-4 Safety Violation Penalty Criteria

Penalty shall be imposed on the contractors under the following circumstances for breaching the contractual agreements:

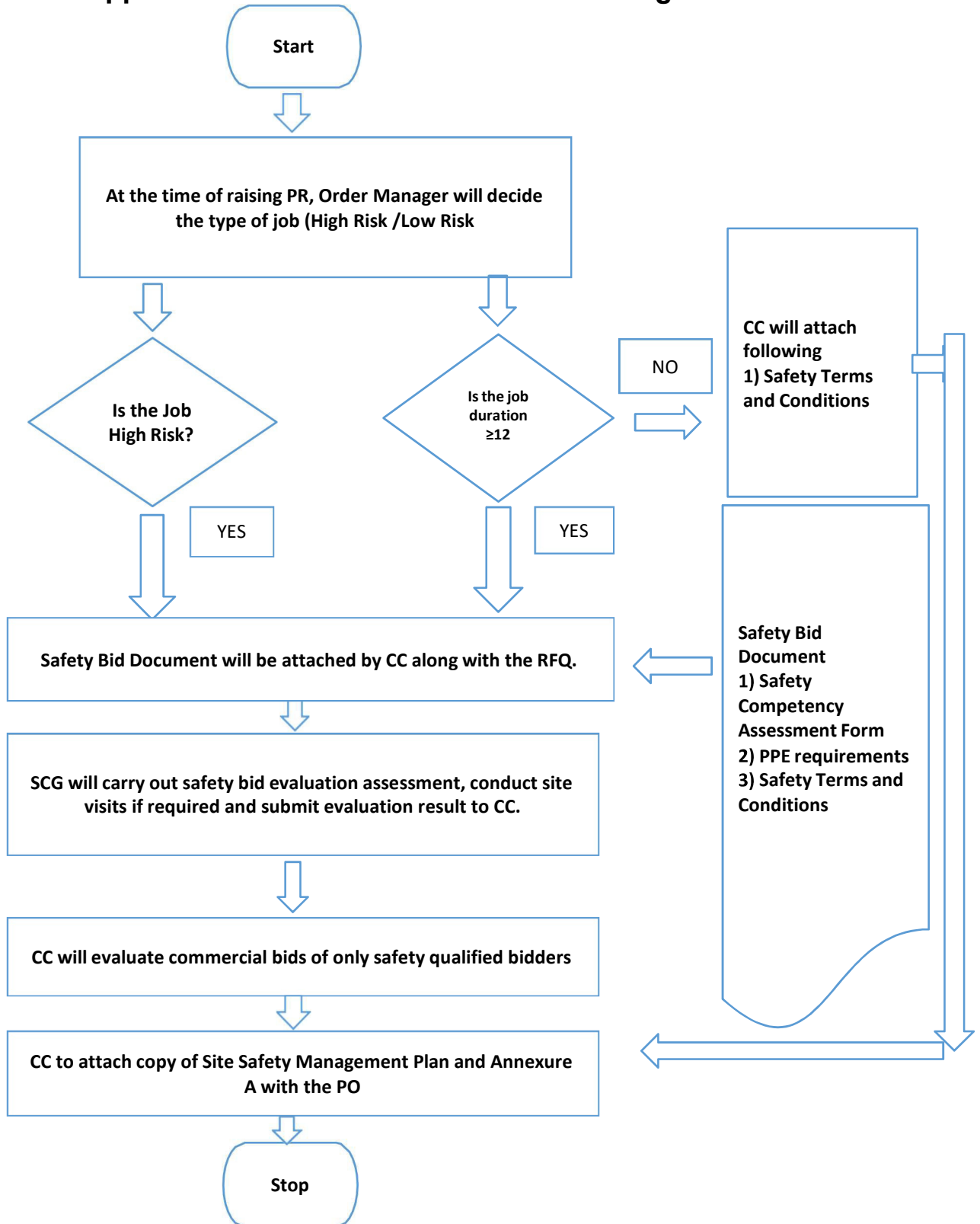
| S No | Description of violation  | Severit | Penalty |
|------|---|---------|---------|
| 1.   | Working without Permit  | 5       | 5000/-  |
| 2.   | Untrained (TPSDI) worker on high-risk jobs.                                   | 5       | 5000/-  |
| 3.   | Unhygienic/Bad condition of PPE   | 2       | 250/-   |
| 4.   | Not following Tata Power Procedure & Standard                                 | 4       | 2000/-  |
| 5.   | Unsafe Act/Condition of Severity 4  | 4       | 2000/-  |
| 6.   | Unsafe Act/Condition of Severity 5  | 5       | 5000/-  |
| 7.   | No Earthing of Electrical equipment   | 5       | 5000/-  |
| 8.   | Damaged welding cable   | 5       | 5000/   |
| 9.   | Violation of Positive Isolation Procedure (LOTO Not followed)                 | 5       | 5000/   |
| 10.  | ELCB of more than 30 mA/ELCB not working                                      | 5       | 5000/   |
| 11.  | On/Off switch of welding m/c not working                                      | 5       | 5000/   |
| 12.  | Electric cable tied with metal wire   | 5       | 5000/   |
| 13.  | Leakage found DA hose / cylinder  | 5       | 5000/   |
| 14.  | Use of LPG  | 5       | 5000/   |
| 15.  | Use of IC engine based Three-wheeler at the work site.                        | 5       | 5000/   |
| 16.  | Starting the job without Toolbox Talk   | 5       | 5000/   |
| 17.  | Spatter falling on DA hose / Gas-line/ pathways / Equipment                   | 5       | 5000/   |
| 18.  | No safety latch in crane hook   | 5       | 5000/   |
| 19.  | Load raised or swung over people or occupied areas of buildings               | 5       | 5000/   |
| 20.  | Persons standing in swing area of construction equipment.                     | 5       | 5000/   |
| 21.  | Using damaged slings.   | 5       | 5000/   |
| 22.  | Unstable scaffolding/nonstandard Scaffolding in use                           | 5       | 5000/   |
| 23.  | Handrails and mid-rails are missing   | 5       | 5000/   |
| 24.  | Safety Harness not anchored with lifeline/fixed structure                     | 5       | 5000/   |
| 25.  | Fall arrestor not provided/ Not being used.                                   | 5       | 5000/   |
| 26.  | Double lifeline not used for working at height                                | 5       | 5000/   |
| 27.  | No rubber mat in Electrical Distribution (DB) room                            | 4       | 2000/-  |
| 28.  | Water found accumulated in Electrical Distribution room/near welding machine. | 4       | 2000/   |
| 29.  | Inserting electric cables into socket, without using plug.                    | 4       | 2000/   |
| 30.  | Use of damaged electrical cable/two core cables.                              | 4       | 2000/   |
| 31.  | Inflammable material found in Distribution Room / welding areas.              | 4       | 2000/   |
| 32.  | Loose material falling into excavated pit                                     | 4       | 2000/   |
| 33.  | Water logging into excavated pit /trenches                                    | 4       | 2000/   |
| 34.  | No / inadequate Barricade   | 4       | 2000/   |
| 35.  | Undercut / cave-in found on sides of excavated pits                           | 4       | 2000/   |
| 36.  | Grinding wheel/ Coupling/ Piling winch/other rotating parts without guard     | 4       | 2000/   |
| 37.  | The HMV/Mobile Crane operator does not have a valid HMV driving license.      | 4       | 2000/   |
| 38.  | The loading area is not leveled properly.                                     | 4       | 2000/   |

|     |   |   |        |
|-----|---|---|--------|
| 39. | Ladder not anchored at top  | 4 | 2000/  |
| 40. | Opening found in working platform of scaffolding/floor  | 4 | 2000/  |
| 41. | Inadequate illumination at the working area   | 4 | 2000/  |
| 42. | Loose material lying on Gantry, platform  | 4 | 2000/  |
| 43. | Cleaning with Compressed Air.   | 3 | 500/-  |
| 44. | Gas Cylinders using without cap.  | 3 | 500/   |
| 45. | Gas Cylinders stored without securing   | 3 | 500/   |
| 46. | Bringing inside any other chemicals, apart from approved by Safety dept.  | 3 | 500/   |
| 47. | Using drum for sitting or accessing height.   | 3 | 500/   |
| 48. | Misusing emergency facilities like fire hydrant line/ hose box/ spray system/ eye wash etc.                               | 3 | 500/   |
| 49. | No provision of Safety net where falling materials or tools may occur   | 3 | 500/   |
| 50. | Taking electrical supply from non-designated outlet (other than socket).  | 3 | 500/   |
| 51. | Restricted gangways due to unwanted materials.  | 3 | 500/   |
| 52. | Not reporting incident.   | 3 | 500/   |
| 53. | Entering into restricted area like switch yard/ hazardous storage   | 3 | 500/   |
| 54. | Work without supervision  | 3 | 500/   |
| 55. | Parking of vehicle without applying wheel choke at right front-front and left rear-rear wheels other than passenger cars. | 3 | 500/   |
| 56. | Heavy Vehicle without helper or co-driver.  | 3 | 500/   |
| 57. | Not wearing florescent safety jacket at site.   | 3 | 500/   |
| 58. | People travelling in load body of vehicle.  | 3 | 500/   |
| 59. | Parking of vehicles at non designated area.   | 3 | 500/   |
| 60. | Shifting heavy materials without guide ropes.   | 3 | 500/   |
| 61. | Using other than 24V lamp inside the confined space/Use of other than 24V lamps.  | 3 | 500/   |
| 62. | Angular loading/ lifting with Crane or hoist.   | 3 | 500/   |
| 63. | By passing the limit switch/ Safety Interlock.  | 3 | 500/   |
| 64. | Housekeeping activities on road without proper barricade.   | 3 | 500/   |
| 65. | Trying to board or alit from running vehicle.   | 3 | 500/   |
| 66. | Cylinder Valves of Gas cylinders not closed when not in use.  | 3 | 500/   |
| 67. | Flash-back arrester not used.   | 3 | 500/   |
| 68. | Hand Trolley wheel found damaged.   | 3 | 500/   |
| 69. | Guy ropes of required length on both sides of object are not used during movement with load.                              | 3 | 5/ 00/ |
| 70. | Scotch block/wedge not provided, when the vehicle is parked.  | 3 | 500/   |
| 71. | Suitable Trolley not provided to hold the cylinders.  | 3 | 500/   |
| 72. | Locked First Aid box  | 3 | 500/   |
| 73. | Caution boards, danger signs (luminescent /red) along with emergency contact number are not found displayed.              | 3 | 500/   |
| 74. | Person found jumping barricading tape   | 3 | 500/   |

|      |  |   |                           |
|------|--|---|---------------------------|
| 75.  | Stacking of pipes, pile casing, drums without chock blocks/wedges  | 3 | 500/                      |
| 76.  | The terrain on which Heavy Equipment/Machinery moves is not reasonably hard.   | 3 | 500/                      |
| 77.  | Without Safety Helmet at working sites   | 4 | 250/-                     |
| 78.  | Without Crash Helmet (on bikes)  | 4 | 500/-                     |
| 79.  | Without Full body double lanyard Safety Harness (for work at height)   | 5 | 5000/-                    |
| 80.  | Without Hand gloves - Material Handling, Welding, Cutting,   | 4 | 100/-                     |
| 81.  | Without Safety goggles/ face shield - Welding/Cutting /Grinding  | 5 | 5000/-                    |
| 82.  | Handling Chemical without PVC Apron  | 5 | 5000/-                    |
| 83.  | Smoking in prohibited area (Closed Go-downs, Storage of flammable material, Storage of Gas cylinders)                                | 5 | 1000/-                    |
| 84.  | Sleeping at Workplace  | 3 | 100/-                     |
| 85.  | Driving beyond speed limit   | 3 | 1000/-                    |
| 86.  | Seat Belt While Driving (for front seat passengers and driver)   | 3 | 500/-                     |
| 87.  | Driving without license  | 4 | 1000/-                    |
| 88.  | Heavy Commercial vehicles without reverse horn   | 3 | 500/-                     |
| 89.  | Nonfunctional Head light/ taillight and side indicators  | 3 | 100/-                     |
| 90.  | Using Mobile Phone During Driving  | 5 | 5000/-                    |
| 91.  | Poor visibility of registration number/ without registration number  | 3 | 100/-                     |
| 92.  | Broken/ without Side view mirror   | 3 | 100/-                     |
| 93.  | Over speeding above specified limit  | 3 | 500/-                     |
| 94.  | Broken/ Without Pressure gauge on Oxygen/ LPG / Acetylene cylinder.  | 3 | 500/-                     |
| 95.  | Without Flash back arrestor on Industrial Acetylene & Oxygen cylinders.  | 5 | 5000/-                    |
| 96.  | Spillage of hazardous material/chemicals during transportation   | 4 | 2000/-                    |
| 97.  | Electrical equipment without Earthing/ ELCB/ Double Insulation Cable.  | 5 | 5000/-                    |
| 98.  | Lifting Tools & Tackles used without/ expired Test Certificates.   | 5 | 5000/-                    |
| 99.  | Housekeeping repeatedly not maintained   |   |                           |
| 100. | • First Time   | 3 | Warning                   |
| 101. | • Second Time  | 4 | 1000/-                    |
| 102. | • Third Time   | 5 | 5000/-                    |
| 103. | Serious Violation of House Keeping (after 1st or 2nd warning to be decided by Project Manager depending on the severity)             | 5 | Rs.10000/- and above      |
| 104. | Repeat Violation of same nature  | 5 | 5 X Penalty for Violation |
| 105. | Appointment of subcontractor without his Safety Bid Evaluation and/or without the permission of engineer in charge or Order manager. | 5 | 5% of Contract Value      |



**Appendix 6: Process Flow Chart for issuing RFQ and PO**



## Appendix 7: CSM-F-7 Safety Competency Form (Template)

**Name of the Vendor/Bidder : -**

**Name of the Sub Vendor (If job is given to Sub Vendor) : -**

**Description of the Job : -**

**Request for Quotation (RFQ) No. :-**

Vendor/Bidder to mandatorily provide the below safety competency related information.

### 1. Proposed Manpower Deployment Schedule: -

| Category of Manpower Deployed | Minimum Qualification & Experience | Proposed Numbers against each category month-wise |         |     |         |
|-------------------------------|------------------------------------|---|---------|-----|---------|
|                               |                                    | Month 1   | Month 2 | ... | Month n |
| Project Manager               |                                    |   |         |     |         |
| Site-In-Charge (Site Manager) |                                    |   |         |     |         |
| Shift-in-Charge               |                                    |   |         |     |         |
| Safety Officers               |                                    |   |         |     |         |
| Supervisors                   |                                    |   |         |     |         |
| Technicians                   |                                    |   |         |     |         |
| a.....                        |                                    |   |         |     |         |
| b.....                        |                                    |   |         |     |         |
| Highly Skilled Workmen        |                                    |   |         |     |         |
| a.....                        |                                    |   |         |     |         |
| b.....                        |                                    |   |         |     |         |
| Skilled Workmen               |                                    |   |         |     |         |
| Semi-Skilled Workmen          |                                    |   |         |     |         |
| Unskilled Workmen             |                                    |   |         |     |         |
| <b>Total Manpower</b>         |                                    |   |         |     |         |

**Instructions to Bidder to fill:**

1. Bidder to provide the overall site manpower deployment schedule as above.
2. Bidder to indicate (through colour code mentioned below ) their direct and sub-contracted employees
  - Direct bidder employee
  - Partly Direct / Partly sub-contracted
  - Sub-Contracted
3. Against each of the category, bidder to indicate the minimum qualification and experience of the proposed manpower.
4. Rows can be added to also identify other specialised manpower e.g. specific details to be included for high risk activities operators
5. Columns can be extended to the actual duration of Site activities.
6. Bidder to note that if operations is in shifts, then Shift-in-charge / safety officers are required for each shift of operation.

### 2. List of Tools, Tackles, Machines and Equipment: -

Bidder/ Vendor to provide the list of tools, tackles, equipment **to be used during the job / project execution**. Bidder/Vendor to ensure that all the lifting tools and tackles, pressure vessels are duly certified by the competent person authorised by the Chief Inspector of Factories of the respective state prior to start of the job

**3. Safety Records:**

Bidder to provide the details of fatalities and lost workday cases (LWDC), occurred in last three years (data to be provided for the last completed FY and preceding 2 years).

| Description               | Safety Data for Last 3 Years |           |           |
|---------------------------|------------------------------|-----------|-----------|
|                           | Year 1 (Last FY)             | Year 2    | Year 3    |
|                           | 20__ - __                    | 20__ - __ | 20__ - __ |
| Fatalities (Nos.)         |                              |           |           |
| Lost Workday Cases (Nos.) |                              |           |           |

In case of no fatalities, LWDC during any year, the form may be filled stating NIL against the respective year. Bidders are encouraged to also submit the RCA / incident investigation reports and the learning's implemented out of the above reported incidents

**4. Job Safety Plan/ Method Statement:**

Bidder to provide / enclose a detailed Site/Job Safety Plan along with a Method statement detailing the execution philosophy (how the bidder intends to execute the Job/Project), identifying all key activities which are required to be performed by the contractor at Site. Bidder to also list down all high-risk activities and provide the Hazard Identification and Risk Assessment (HIRA) for all such high-risk activities involved in the site work.

(Use Method Statement template attached as annexure A and sample as attachment B)

**5. Management System Certification: -**

| Sr. | Certification | Yes / No | If Yes, Year of Certification | If No, Next date for Certification |
|-----|---------------|----------|-------------------------------|------------------------------------|
|     | ISO 9001      |          |                               |                                    |

|                                 |  |  |  |
|---------------------------------|--|--|--|
| ISO 14001                       |  |  |  |
| OSHAS 18001 / ISO 45001         |  |  |  |
| Any other (please specify.....) |  |  |  |

Note: Please attach certificates to support above. In case not accredited for above but applied for, application letters may be attached.

### Appendix 8: CSM-F-8 PPE requirements

The Contractor shall ensure that the following PPE of Approved standards shall be available at all time and shall be used by his employees with no exception whatsoever.

|   |   |  |
|---|---|--|
| 1 | All contractor's employees at site  | Safety Florescent Jacket (orange color), Safety helmet & safety shoes with Composite or steel toe cap                                      |
| 2 | Workers mixing asphalt, cement, lime / concrete   | Safety goggle & protective Hand gloves and footwear, Nose mask.  |
| 3 | Welders / Grinders  | Welding screen/goggles, safety shoes, leather hand gloves, aprons, leg guard   |
| 4 | Stone breaker   | Protective goggle, hearing protection, anti-vibration hand gloves and Protective clothing.   |
| 5 | Electricians  | Rubber hand gloves & Electrical resistant shoes.   |
| 6 | Workers engaged in insulation using glass wool etc.                                       | Respiratory mask & leather Hand gloves, goggles.   |
|   | Workers engaged in coal handling plant, ash handling plant and working in high dust area. | Dust mask, Hand gloves, protective goggles.  |
| 7 | Workers working at a height of 1.8 Meter or above.  | Double lanyard full body harness, fall arrestor and safety net made of reinforced nylon fiber ropes firmly supported with steel structures |

• PPE shall be conforming to BIS/DGMS/DIN specifications, in good condition and shall be comfortable to his employees, when used.

## Appendix 9: CSM- F-10 Site Safety Management Plan / Method Statement

### Site Safety Plan / Method Statement (Template)

This Method Statement describes the specific safe working methods which will be used to carry out the described work. It gives details of work procedure with control measures to counter health and safety issues related to this work. The listed content of this Method Statement can be changed/modified subjected to job scope / specifications, but task specific method statement once finalized & approved, that should not be modified during work execution without permission from the approving authority.

|   |                  |             |  |
|---|------------------|-------------|--|
| Project/Job Name  |                  |             |  |
| Scope of work: -  |                  |             |  |
| Drawing References: -   |                  |             |  |
| Detail of Sub contractors involved: -                                 |                  |             |  |
| Method Statement Prepared By: -<br>Designation: - (e.g. Site Manager) | <u>Signature</u> | <u>Date</u> |  |

**1.0 Introduction** (*Describe purpose of the work, give details of type and scope of work being carried out*);

**2.0 Location of Work** (*Give site address and precise location on site where work is to be carried out.* )

**3.0 Safety Document /Specific Approval Required** (*Details of any safety documents or specific approval i.e. Client specific approval required to undertake the work*)

**5.0 Role & Responsibilities of Personnel/Parties Involved in activities:** -Clearly define role and responsibilities of all personnel involved in activity i.e. Site management staff including subcontractors' parties- Main contractor Project/Site Manager, Sub Contractor Site Manager, Project Engineer, Safety officer, Competent Supervisory Staff)

**6.0 Working/Activity Description:** - *It is important that all operatives should have clear idea of those operational sequences and responsible supervisor must verify their competency prior to their engagement in operation.*

### 6.1 Pre-Working Checks

**6.2 Resources (Equipment, tools including manpower) Details** *i.e. Equipment and Tools, specific operational equipment, test kits, lifting resources, Details of materials to be used in operation, including any reference to COSHH assessments in case of use of any chemicals, Details of the manpower allocated to the task, e.g. titles, qualifications, competences, direct manpower, contractors. Details of plant, tools and equipment to be used for the work, including the*

*availability of relevant statutory documents, checks or inspections etc. Details of fencing, barriers, cones, chains, dangers notices, warning signs etc.*

**Tools required for work:**

| Sr.No | Tools /Equipment /Machine | UOM | Required Qty. | Remark |
|-------|---------------------------|-----|---------------|--------|
| 1     |                           |     |               |        |
| 2     |                           |     |               |        |
| 3     |                           |     |               |        |
| 4     |                           |     |               |        |
| 5     |                           |     |               |        |
| 6     |                           |     |               |        |
| 7     |                           |     |               |        |
| 8     |                           |     |               |        |
| 9     |                           |     |               |        |
| 10    |                           |     |               |        |

**6.4 Operational Sequence of work:** - *Full description of the work, setting out the methodology in a sequential manner, including any reference to any identified operational restraints. Also refer here sec. 5.0 responsibilities part for every step of work sequence).*








| Sr.No | Activity | Details of job sequence | Risk Involved | Control Checks |
|-------|----------|-------------------------|---------------|----------------|
| 1.    |          |                         |               |                |
| 2.    |          |                         |               |                |
| 3     |          |                         |               |                |
| 4     |          |                         |               |                |
| 5.    |          |                         |               |                |

**6.7 Final Checks & restoration of work area after completion of work :-** *Those checks to be carried out by responsible supervisor in witness of his line hierarchy by use of specific checklist of certain operational checks and once those completed satisfactory, PTW (if applicable) to be closed and isolation arrangements to be restored by removing barricades/cautionary tags.*

**7.0 Task Specific Hazards:** - *Refer to Task Specific Risk Assessment and attach in appendix*

**Attachment:** - Specific Risk Assessment

In addition, please provide below control measures in risk assessment *(as applicable)*.

|  |  |  |  |   |  |   |   |
|--|--|--|--|---|--|---|---|
| <b>Fall Protection Measures: (Where Work at height cannot be avoided)</b>    |  |  |  |   |  |   |   |
| <b>Control Measures for Electrical Hazards</b>                               |  |  |  |   |  |   |   |
| <b>Others Hazard if any (please provide details)</b>                         |  |  |  |   |  |   |   |
| <b>Hazardous Substances to be used in job :</b><br>(Attach MSDS if required) | <br>Acute Toxic | <br>Health Hazard | <br>Corrosive | <br>Dangerous For the environment | <br>Oxidising | <br>Highly flammable | <br>Explosives |
|  | Yes /No  | Yes /No  | Yes /No  | Yes /No   | Yes /No  | Yes /No   | Yes /No   |

**7.0 Emergency Provisions:** -*Relevant operational possibility of a programme in the case of emergency situation i.e. electrical supply restoration. In addition emergency response provisions i.e. first aiders, fire fighting, and first aid arrangements, nearest onsite/offsite emergency response also to be considered during emergency planning.*



**8.0 "5S issues" / Waste Disposal/ Housekeeping and Environmental issues: -Details waste disposal processes and or housekeeping activities, Details of environmental impacts and control measures.**

**9.0 Personal Protective Equipment (PPE):- (Tick on PPE requirements for the task/Job**

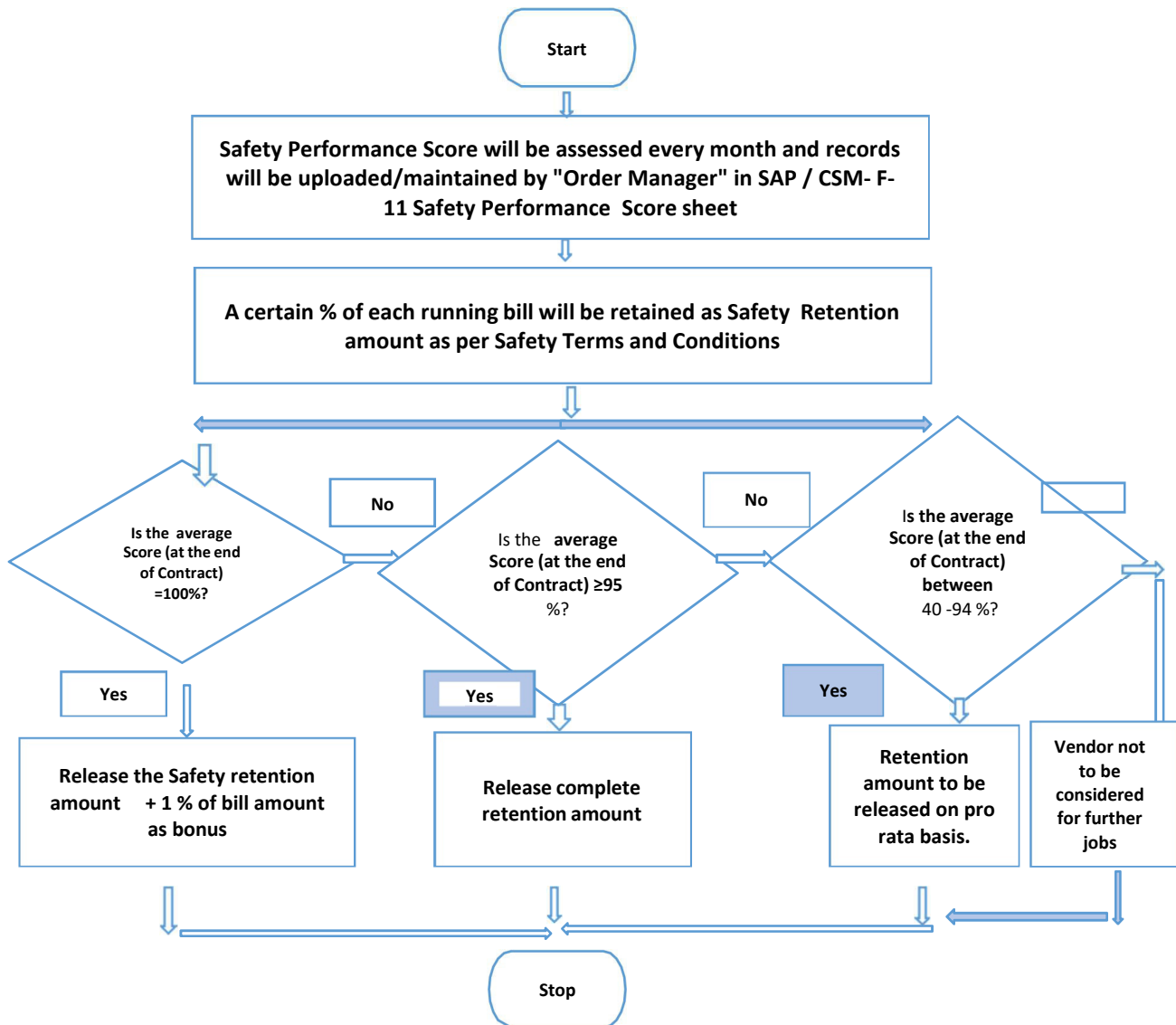
**10.0 First Aid facilities and Nearby Hospitals Details**

|   |   |  |  |   |   |   |   |
|---|---|--|--|---|---|---|---|
|  | Name of On-Site First Aider:  |  |  |   |   |   |   |
|   | First Aid Box Location:   |  |  |   |   |   |   |
|   | Location of Nearest Hospital:   |  |  |   |   |   |   |
| Required Personnel Protective Equipment:  | <br>Safety Boots | <br>Hard Hats | <br>Safety Gloves | <br>Hearing Protection | <br>Eye Protection | <br>Respiratory Protection | Other:<br>1. Hi-Viz<br>2. Coveralls<br>3. |

**11.0 Occupational Health, Fitness and COVID-19 related Preparedness:**

1. Please give a brief writeup / methodology of your organization planned to avoid impact of the COVID-19 pandemic at Tata Power working site.
2. Please give brief details of occupational health and hygiene related interventions planned by your organisation to ensure good health and fitness of workforce at Tata Power site.

**Appendix 10: Process Flow Chart for Safety Performance Evaluation**



### Appendix 11: CSM- F-11 Safety Performance Score

| S. No                 | Parameter  | Unit of Measurement            | Target | Weight age | Actual Performance           | Actual Score |
|-----------------------|--|--------------------------------|--------|------------|------------------------------|--------------|
| <b>Lead Indicator</b> |  |                                |        |            |                              |              |
| 1                     | % of Employee certified in TPSDI/Authorized agency   | Number                         | 50%    | 10         |                              |              |
| 2                     | CFSA score (Annexure 6.1)  | Average Severity of Violations | 1.49   | 20         |                              |              |
| 3                     | Monthly inspection completed for Critical Equipment, lifting Tools & Tackles and hand tools used at site | Number                         | 80%    | 10         |                              |              |
| 4                     | Condition of critical tools, tackles and equipment   | Number                         | 100%   | 10         |                              |              |
| <b>Lag Indicator</b>  |  |                                |        |            |                              |              |
| 1                     | Number of Fatalities   | No                             | 0      | 30         |                              |              |
| 2                     | Number of Lost workday case (LWDC) (reportable)  | No                             | 0      | 10         |                              |              |
| 3                     | Man-days Lost  | Man-days                       | 0      | 10         |                              |              |
|                       |  |                                |        |            | <b>Final Score</b>           |              |
|                       |  |                                |        |            | <b>Invoice Value</b>         |              |
|                       |  |                                |        |            | <b>Amount to be released</b> |              |

### Safety Performance Evaluation Criteria

#### Lead Indicators

|  |               |      |                |        |
|--|---------------|------|----------------|--------|
|  | <b>Target</b> |      |                |        |
| % of Employee certified in TPSDI/Authorized agency   | 50%           | 100% | Less than 100% |        |
| Score  |               | 10   | 5              |        |
|  | <b>Target</b> |      |                |        |
| CFSA score   | <=1.49        |      | 1.5 to 2.5     | >=3.51 |
| Score  | 20            |      | 15             | 10     |
|  | <b>Target</b> |      |                |        |
| Monthly inspection completed for Critical Equipment, lifting Tools & Tackles and hand tools used at site | >=80%         |      | 79 to 50%      | <50%   |
| Score  | 10            |      | 7              | 0      |
|  | <b>Target</b> |      |                |        |
| Condition of critical tools, tackles and equipment   | 100%          |      | <100%          |        |
| Score  | 10            |      | 0              |        |

**Lag Indicators**

|                             |    |        |    |
|-----------------------------|----|--------|----|
| Number of Fatalities        | 0  | >0     |    |
| Score                       | 30 |        | 0  |
| Number of LWDC (reportable) | 0  | >0     |    |
| Score                       | 10 |        | 0  |
| Number of man days lost     | 0  | 1 to 5 | >5 |
| Score                       | 10 | 5      | 0  |

**Appendix 12: CSM-F-5 Safety Potential Evaluation Criteria for Vendor Registration**

At the time of vendor registration, vendor will be registered under 3 categories

- 1) **Category A-** Vendors eligible to carry out High risk Jobs
- 2) **Category B-** Vendors eligible to carry out technical jobs that are low risk
- 3) **Category C-** Vendors eligible to carry out administrative and office jobs
- 4) **Category D-** Outsourced Jobs / Consultants /Medical Practitioners / Suppliers etc

For vendors to be registered under **Category A**, a safety potential evaluation will be carried out based on following parameters.

| Sr. No | Description  | Weight age (%) | Actual Score | Remarks         |
|--------|--|----------------|--------------|-----------------|
| 1      | Does the contractor have a valid ISO 45001/ OHSAS 18001/ Certification?                | 30             |              |                 |
| 2      | During site visit check for safety adequacy at site                                    | 30             |              | Annexure - 12.1 |
| 3      | Check the Safety statistics of Contractor  | 10             |              | Annexure - 12.2 |
| 4      | Check the Safety orientation & training process of Contractor                          | 15             |              | Annexure 12.3   |
| 5      | Check the organizational structure for safety professionals & engineers / supervisors. | 10             |              | Annexure - 12.4 |
| 6      | Certified/skilled workers as a percentage of overall workforce                         | 5              |              |                 |
|        | Total  | 100            |              |                 |

#### **Evaluation Criteria for Category B**

| Sr. No | Description  | Weight age (%) | Actual Score | Remarks        |
|--------|--|----------------|--------------|----------------|
| 1      | Does the contractor have a valid ISO 9001 certification?                               | 30             |              |                |
| 2      | During site visit check for safety adequacy at site                                    | 30             |              | Annexure -12.1 |
| 3      | Check the Safety statistics of Contractor  | 10             |              | Annexure -12.2 |
| 4      | Check the Safety orientation & training process of Contractor                          | 15             |              | Annexure -12.3 |
| 5      | Check the organizational structure for safety professionals & engineers / supervisors. | 10             |              | Annexure -12.4 |
| 6      | Certified/skilled workers as a percentage of overall workforce                         | 5              |              |                |
|        | Total  | 100            |              |                |

#### **Evaluation Criteria for Category C**

| Sr. No | Description | Weight age (%) | Actual Score | Remarks |
|--------|-------------|----------------|--------------|---------|
|--------|-------------|----------------|--------------|---------|

|   |   |     |  |                 |
|---|---|-----|--|-----------------|
| 1 | Does the contractor have a valid ISO 9001 certification?      | 40  |  |                 |
| 2 | Check the Safety statistics of Contractor                     | 40  |  | Annexure - 12.2 |
| 3 | Check the Safety orientation & training process of Contractor | 20  |  | Annexure - 12.3 |
|   | <b>Total</b>  | 100 |  |                 |

### **Annexure 12.1: Evaluation Criteria for Category D:**

Category D does not require any evaluation as it is for outsourced job outside the Tata Power company premise.

### **Annexure 12.2**

| Check List – Adequacy of Safety Statistics of Service Provider |  |  |            | Actual Marks obtained | Remarks |
|--|--|--|------------|-----------------------|---------|
| 1  | Check the safety statistics for last 3 years (LTIFR and LTISR)   | Statistics available                     | Marks<br>5 |                       |         |
|  |  | Statistics not available                 | 0          |                       |         |
|  |  |  |            |                       |         |
| 2  | Check the trend LTIFR for last 3 years   | LTIFR value                              | Marks      |                       |         |
|  |  | 0 to 0.2                                 | 5          |                       |         |
|  |  | 0.21 to 0.3                              | 2.5        |                       |         |
|  |  | >0.3                                     | 0          |                       |         |
| 3  | Check the trend of LTISR last 3 years  | LTISR value                              | Marks      |                       |         |
|  |  | 0 to 2                                   | 5          |                       |         |
|  |  | 2 to 3                                   | 2.5        |                       |         |
|  |  | >3                                       | 0          |                       |         |
| 4  | Has there been any Prosecution/Conviction for any contravention with regard to Safety & Health provisions under the Factories Act /Electricity Act/ BOCW Act and Rules framed there under? |  | Marks      |                       |         |
|  |  | No Prosecution                           | 10         |                       |         |
|  |  | Prosecution                              | 0          |                       |         |
|  |  | To be provided in written on letter head |            |                       |         |
| <b>Total</b>   |  | <b>25</b>                                |            |                       |         |

### **Annexure 12.3**

| Check List – Adequacy of Safety orientation & training process of Service provider |   |                          |       | Actual Marks obtained |
|--|---|--------------------------|-------|-----------------------|
| 1  | Records of safety trainings provided to safety officer/supervisor/workmen during last 1 year as percentage(%) of total employed by service provider | <b>Safety Officer</b>    | Marks |                       |
|  |   | ≥80% of employees        | 5     |                       |
|  |   | 50 to 79 % of employee   | 2.5   |                       |
|  |   | <50%                     | 0     |                       |
|  |   | <b>Safety Supervisor</b> | Marks |                       |
|  |   | ≥80% of employees        | 10    |                       |
|  |   | 50 to 79 % of employee   | 6     |                       |
|  |   | <50%                     | 0     |                       |
|  |   | <b>Workmen</b>           | Marks |                       |
|  |   | ≥80% of employees        | 10    |                       |
|  |   | 50 to 79 % of employee   | 6     |                       |
|  |   | <50%                     | 0     |                       |
| <b>Total</b>   |   | <b>25</b>                |       |                       |

**Annexure 12.4**

| Check List – Adequacy of organizational structure for safety professionals & engineers / supervisors. |   |                                       | Actual Marks obtained |    |
|---|---|---------------------------------------|-----------------------|----|
| 1   | Check availability of number of safety officers from government recognized institute as per workforce strength. | Marks                                 |                       |    |
|   |   | 1 in 50 employees                     |                       | 10 |
|   |   | 1 in 100 employee                     |                       | 6  |
|   |   | Any other                             |                       | 0  |
| 3   | Check availability of qualified workforce from government recognized institute/TPSDI.                           | Marks                                 |                       |    |
|   |   | 100% of safety officers qualified     |                       | 5  |
|   |   | 50 – 99% of safety officers qualified |                       | 3  |
|   |   | <50                                   |                       | 0  |
| <b>Total</b>  |   | <b>15</b>                             |                       |    |

### Appendix 13: CSM-F-9 Safety Bid Evaluation Criteria

The User has to select whether the job is high risk/ long duration at time of raising the PR.

- 1) The decision whether job is “**high risk**” or not has to be made by order manager on the basis of Risk involved (Risk Priority Number in HIRA) of the Jobs. An indicative list of high-risk jobs is attached as annexure
- 2) If a technical job is of low risk with estimated duration of the contract is 1 year or more the job should be treated as “**long duration**”.
- 3) All Safety bids will be evaluated by Safety Concurrence Group. Structure of SCG will be declared by Corporate safety. Corporate safety team will audit bid evaluation process of a few selected jobs and Quality of evaluated safety Bids.
- 4) Records of jobs sent by for Safety Bid evaluation shall be maintained by Corporate Contract team in existing tracing sheet along with other jobs.
- 5) For Safety Bid Evaluation will be based on following parameters.

|                            |   | Minimum Requirement  | Weight age (%) | Score Obtained |
|----------------------------|---|--|----------------|----------------|
| <b>Manpower</b>            | <b>Safety Officer (1 per 500 workers)</b>   | <b>Qualification-</b> Officer shall possess Advance Diploma In Industrial Safety by state technical board.<br><b>Experience-</b> Minimum 1-year experience in relevant field as mentioned in the job in PR.  | 5              |                |
|                            | <b>Safety Supervisor (1 per work site up to max. 50 workers)</b>  | <b>Qualification-</b> Supervisor shall possess ITI/ Diploma in relevant field.<br><b>Experience-</b> Minimum 2-year experience in relevant field as mentioned in the job in PR.<br><b>Training</b> – Trained and certified by TPSDI or equivalent institute in relevant safety procedures.<br><b>Note:</b> On request of the contractor/Users -TPDSI should vet & certify the skilled & experienced Technician if Technical Qualification is not adequate. | 5              |                |
|                            | <b>Technician (Skilled workers as electrician, rigger, fitter, welder, cable jointer, line men etc)</b> | <b>Experience-</b> Minimum 2 year experience in relevant field as mentioned in the job in PR.<br><b>Training</b> – Trained and certified by TPSDI or equivalent institute in relevant safety procedures.   | 5              |                |
| <b>Tools &amp; Tackles</b> | Equipment / Machines/ Tools & Tackles(lifting   | The list of Equipment /Machines / Tools and tackles to be used for job to be submitted by the contractor.  | 30             |                |



|                                      |                               |   |    |  |
|--------------------------------------|-------------------------------|---|----|--|
|                                      | and shifting tools)           | Evaluation of the list will be carried out based on<br>1) Suitability as per the relevant job<br>2) Make and age of the tools from authorized agencies defined by the user.<br>3) Certification by the competent authority of respective state. |    |  |
| <b>Safety Records</b>                | Safety Records                | Safety Records for last 3 years (as per vendor or as per our knowledge) – Recommendation?   | 15 |  |
| <b>Safety Plan</b>                   | HIRA/Contract Job Safety Plan | Adequacy of HIRA and Job Safety Plan with respect to relevant job. More weight age will be given to vendor for using mechanized work and advanced tools and equipment   | 20 |  |
| <b>Accredited Bodies certificate</b> | ISO-9001                      | ISO-9001  | 2  |  |
|                                      | ISO-14001                     | ISO-14001   | 3  |  |
|                                      | OHSAS 18001<br>ISO 45000      | OHSAS 18001/ISO 45000   | 15 |  |
|                                      |                               | <b>Total Score</b>  |    |  |

- 6) Vendor entitled to carry out the job only when qualified for the safety evaluation as follows:  
Contractor is qualified in safety bid only if his total score is more than 70% in all category 1 jobs such as high risk/long duration.
- 7) The Corporate Contract has to ensure that the vendor provides the filled “Safety Competency Form” along with the quotation.
- 8) Corporate Contract will forward the Safety Competency Form received from the contractor to the Safety Concurrence Group for evaluation.
- 9) In case SCG wants to visit the site, the Safety Competency will be based on evaluation at the time of site visit Annexure 13.1

**Annexure -13.1:**

| <b>Checklist to be used:</b> During site visit to check the adequacy Safety systems. |  |             |              |
|--|--|-------------|--------------|
|  |  | Observation | Score* (1-5) |
| 1  | Check the adequacy of safety policy and Safety Management system of the contractor.                      |             |              |
| 2  | Does the contractor have written down safety procedures?   |             |              |
| 3  | Check the records of Near miss, unsafe act, unsafe conditions and incidents.                             |             |              |
| 4  | Check the organization setup to implement the safety systems at site (safety officer, safety supervisor) |             |              |
| 5  | Check whether safety meeting and toolbox talk carried out regularly and records maintained or not.       |             |              |

|                         |  |  |  |
|-------------------------|--|--|--|
| 6                       | Is the process of incident investigation adequate or not?              |  |  |
| 7                       | Verify incident reporting and recording system                         |  |  |
| 8                       | Check the usage of equipment/tools and tackles.                        |  |  |
| 9                       | Check for housekeeping at site   |  |  |
| 10                      | Check the use of PPEs and general behavior of workforce towards safety |  |  |
| <b>Total Score</b>      |  |  |  |
| <b>Site Visit Score</b> |  |  |  |

Score\*- rating on the scale of 1-5 to be given based on the observations on site. Score of 1 is the lowest and core of 5 is the highest.

### Appendix 14: CSM-F-11.1 CFSA Format

| CONTRACTOR FIELD SAFETY AUDIT   |                   |   |             |                           |           |                      |          |                       |         |                     |          |            |                  |
|---------------------------------|-------------------|---|-------------|---------------------------|-----------|----------------------|----------|-----------------------|---------|---------------------|----------|------------|------------------|
| Project Name :                  |                   |   |             |                           |           |                      |          |                       |         |                     |          |            |                  |
| Date:                           |                   |   |             |                           |           |                      |          |                       |         |                     |          |            |                  |
| Description of Severity rating: |                   |   |             |                           |           | Audit Team:          |          |                       |         |                     |          |            |                  |
|                                 |                   | 1 = Untidy area, minor issues, sets poor example                              |             |                           |           |                      |          |                       |         |                     |          |            |                  |
|                                 |                   | 2 = Restricted access, unacceptable trash, disorderly                         |             |                           |           |                      |          |                       |         |                     |          |            |                  |
|                                 |                   | 3 = Rule or procedure violation, potential injury                             |             |                           |           |                      |          |                       |         |                     |          |            |                  |
|                                 |                   | 4 = Unsafe condition, serious injury potential                                |             |                           |           |                      |          |                       |         |                     |          |            |                  |
|                                 |                   | 5 = Immediate serious injury potential, stop activity immediately and correct |             |                           |           | Audit Time:          |          |                       |         | 10:00hrs -11:30 hrs |          |            |                  |
|                                 |                   |   |             |                           |           | Weather:             |          |                       |         | cloudy              |          |            |                  |
| Area                            | Description       | Responsible   |             | Number Personnel Observed |           | Violations           |          |                       | Remarks | Leading Indicators  |          |            |                  |
|                                 |                   | Engineer  | Contractors | Good Citizens             | Violators | Number of Violations | Severity | Violations x Severity |         | 4 & 5               | PPE      | Unsafe Act | Unsafe Condition |
| 1                               |                   |   |             |                           |           |                      |          |                       |         |                     |          |            |                  |
|                                 | <b>Sub Totals</b> |   |             | <b>0</b>                  | <b>0</b>  | <b>0</b>             | <b>0</b> | <b>0</b>              |         | <b>0</b>            | <b>0</b> | <b>0</b>   | <b>0</b>         |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  | <b>% of Observed People Working Safely</b>     |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>Number of Violations</b>                    |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>Average Severity of Violations</b>          |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>Number of Severity 4 &amp; 5 Violations</b> |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>% of 4 &amp; 5 Violations</b>               |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>Approximate Number of Workers Observed</b>  |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>Number of People on Site</b>                |  |  |  |  |  |  |  |  |  |  |  |
|  | <b>% of Workers Observed</b>                   |  |  |  |  |  |  |  |  |  |  |  |

## Appendix 15: Indicative List of High-Risk Jobs

To access the exhaustive list of High-risk jobs, please refer the following documents

- 1) [High Risk Jobs- Generation](#)
- 2) [High Risk Jobs- T&D](#)
- 3) [High Risk Jobs- Renewable](#)

| Indicative List of High-Risk Jobs -Generation Cluster |  |  |  |  |  |
|---|--|--|--|--|--|
| Sl. No.   | Jobs   |  |  |  |  |
| 1   | Demolition / Painting of Chimney   |  |  |  |  |
| 2   | Survey Sounding Jobs in Sea  |  |  |  |  |
| 3   | Dredging at Coal Birth Jetty   |  |  |  |  |
| 4   | Maintenance / Testing and Replacement of Extra High Voltage (132 KV etc.) Switchyard equipment |  |  |  |  |
| 5   | Maintenance of EOT Cranes  |  |  |  |  |
| 6   | Deep excavation (5 feet or more) near existing buildings /Structure s                          |  |  |  |  |
| 7   | Working inside confined spaces (entry through manhole)   |  |  |  |  |
| 8   | Operation Maintenance of elevators   |  |  |  |  |
| 9   | Working on Live control Circuits for identification of faults                                  |  |  |  |  |
| 10  | Cable laying and termination Jobs  |  |  |  |  |

| Indicative List of High-Risk Jobs - T&D Cluster |   |  |  |  |  |
|---|---|--|--|--|--|
| Sl. No.   | Jobs  |  |  |  |  |
| 1   | Transmission Line Tower Erection on columns, near live lines, In congested areas, In creeks, In the Sea   |  |  |  |  |
| 2   | Conductor Stringing on Tower Using Tensioner & Puller in the area such as Line Crossing, Near Live lines, Congested Areas, Road Crossing, Bridge Crossing, Railway line Crossing, In creeks ,In the Sea |  |  |  |  |
| 3   | Cable Pulling by Using winch Machine in City and Rural Areas  |  |  |  |  |
| 4   | Hot Washing of HT and Extra HT lines, Towers and switchyards equipment  |  |  |  |  |
| 5   | Installation of Lifts   |  |  |  |  |
| 6   | Installation of EOT Cranes  |  |  |  |  |
| 7   | Tower Dismantling   |  |  |  |  |
| 8   | Working on H Frame /Pole mounted Transformers   |  |  |  |  |
| 9   | Excavation in operational Area heaving power cables in receiving station  |  |  |  |  |
| 10  | Identification and spiking of cable / disconnection of cables from poles  |  |  |  |  |

## Indicative List of High-Risk Jobs - Renewable Cluster

| Sl. No. | Jobs  |  |  |  |  |
|---------|---|--|--|--|--|
| 1       | Working on Electrical Panels  |  |  |  |  |
| 2       | Hi Potting of Equipment   |  |  |  |  |
| 3       | Battery commissioning and maintenance   |  |  |  |  |
| 4       | Working on the nasal of Wind Turbine  |  |  |  |  |
| 5       | Working on live electrical switchyard, material Handling and Equipment installation         |  |  |  |  |
| 6       | Roof Top Solar Panels Installation and maintenance  |  |  |  |  |
| 7       | Working in live Electrical Switchyard, Material Handling, equipment installation            |  |  |  |  |
| 8       | All maintenance activities that requires climbing on Towers /Structures / Transformer/ GODs |  |  |  |  |
| 9       | Loading and Unloading of Solar Panels on trucks   |  |  |  |  |
| 10      | Structural Repair /Dismantling work at height.  |  |  |  |  |

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GENERAL CONDITIONS OF CONTRACT



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## 1.0 ORGANIZATIONAL VALUES

The Tata Group has always been a value driven organization. These values continue to direct the Group's growth and businesses. The six core Tata Values underpinning the way we do business are:

**Integrity** - We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.

**Understanding** - We must be caring, respectful, compassionate and humanitarian towards our colleagues and customers around the world and always work for the benefit of India.

**Excellence** - We must constantly strive to achieve the highest possible standards in our day to day work and in the quality of goods and services we provide.

**Unity** - We must work cohesively with our colleagues across the group and with our customers and partners around the world to build strong relationships based on tolerance, understanding and mutual co-operation.

**Responsibility** - We must continue to be responsible and sensitive to the countries, communities and environments in which we work, always ensuring that what comes from the people goes back to the people many times over.

**Agility** - We must work in a speedy and responsive manner and be proactive and innovative in our approach.

## 2.0 ETHICS

In our effort towards Excellence and in Management of Business Ethics at TPWODL, an Ethics Management Team is constituted.

The main objective of the Ethics Management Team is to:

1. Record, address and allay the issues and concerns on ethics raised by different stakeholders like employees, consumers, vendors, Associates etc. by initiating immediate corrective actions.
2. Ensure proper communication of the ethics policies and guidelines through prominent displays at all offices of TPWODL and through printed declarations in all concerned documents where external stakeholders are involved.
3. Ensure proper framework of policies as preventive measures against any ethics violation recorded by them.
4. Prepare and submit MIS of all issues and concerns, corrective and preventive actions on monthly basis to the top management for their information.

All Associates and Stakeholders are requested to register any grievance on ethics violation on our website [www.tatapower.com](http://www.tatapower.com)

## 3.0 CONTRACT PARAMETERS

### 3.1 Issue/Award of Contract

TPWODL awards the contract to the Associate in writing in the form of Purchase Order (PO) or Rate Contract (RC), hereafter referred as Contract, through in any or all of following modes physical handover / post / e-mail / web document / fax with all the attachments/enclosures which shall be part of the contract document.

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On receipt of the contract, the associate shall return to TPWODL copy of the contract document duly signed by legally authorized representative of associate, within two days of Effective Date of Contract for contracts having contract execution time less than 30 days and within five days for all other contracts.

### **3.2 Contract Commencement Date**

The date of issue/award of contract shall be the Effective Date of Contract or Contract Commencement date.

### **3.3 Contract Completion Date**

The date of expiry of Guarantee Period shall be deemed as the Contract Completion Date.

### **3.4 Contract Period/Time**

The period from Contract Commencement Date to Contract Completion Date shall be deemed as the Contract Period/Time.

### **3.5 Contract Execution Completion Date**

The stipulated date for completing the supply as per schedule of quantities shall be deemed as the Contract Execution Completion Date.

### **3.6 Contract Price /Value**

The total all inclusive price/value mentioned in the PO/RC is the Contract Price/Value and is based on the quantity, unit rates and prices quoted and awarded and shall be subject to adjustment based on actual quantities supplied and accepted and certified by the authorized representative of the company unless otherwise specified in schedule of quantities or in contract documents.

### **3.7 Contract Document**

The Contract Document shall mean and include but not limited to the following:

- NIT/Tender Enquiry, QR, Instruction to Bidders, Special Condition of Contract (SCC) of tender, GCC, Technical & Commercial Specifications including relevant annexure and attachments).
- Bids & Proposals Received from Associate including relevant annexure/attachments.
- RC/PO with agreed deviations from the tender/bid documents.
- All the Inspection and Test reports, Detailed Engineering Drawings.
- Material Dispatch Clearance Certificate (MDCC).
- Minutes of Meeting (MoM)

### **3.8 Contract Language**

All documents, instructions, catalogues, brochures, pamphlets, design data, norms and calculations, drawings, operation, maintenance and safety manuals, reports, labels, on deliveries and any other data shall be in English Language.

The Contract documents and all correspondence between the TPWODL, Third Parties associated with the contract, and the Associate shall be in English language.

However, all signboards required indicating "Danger" and/or security at site and otherwise statutory required shall be in English, Hindi, and local languages.

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### 3.9 Reverse Auction

TPWODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products / services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached in Annexure F. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form as mentioned in the Annexure J as a token of acceptance for the same.

### 4.0 SCOPE OF WORK

All the activities that are to be undertaken by the Associate to realize the contractual deliverables in completeness form Scope of Work. Following clauses list, but not limited to, major requirements of the scope of work.

The associate shall satisfy himself and undertake fully the technical/commercial requirements of items to be supplied as listed in the Schedule of Quantities together with the tests to be performed /test reports to be furnished before dispatch, arrangement of stage and final inspections during manufacturing as per terms and conditions of contract, technical parameters & delivery terms and conditions including transit insurance to be met in order to fully meet TPWODL's requirements.

Completeness: Any supplies and services which might have not been specifically mentioned in the Contract but are necessary for the scope mentioned in Special Terms & Conditions and/or completeness of the works at the highest possible level, including any royalties, license fees & compensation to be paid, whether incurred by the associates or by a third party for the work covered in the scope, regardless of when incurred, shall be supplied/provided by the associate without any extra cost and within the time schedule for efficient , smooth and satisfactory operation and maintenance of the works at the highest possible level under Indian conditions (but according to international standards for facility of this type), unless expressly excluded from the scope of supplies and services in this Contract.

TPWODL have the right, during the performance of the Contract, to change the scope and/or technical character of the Project and/or of the supplies and services stipulated in the Contract by submitting a request in writing to the Associate. The Associate shall, within fifteen days of receipt of such request from the TPWODL, provide Purchaser with a reasonably detailed estimate of the cost of the change outlined in the request.

In the event, TPWODL requests a change, the Contract price and time shall be adjusted upwards or downwards, as the case may be and shall be mutually agreed to. The associate shall not be entitled to any extension of time unless such changes adversely affect the time schedule.

The Associate shall not proceed with the changes as requested till adjustment of contract price and time schedule where so applicable in terms of or otherwise directed by the TPWODL.

### 5.0 PRICES/RATES/TAXES

Unless specified elsewhere in the contract document, the prices/rates are inclusive of cost of finished product for which MDCC will be issued by TPWODL, packaging and forwarding charges, freight and transit insurance charges covering loading at Associate's works, transportation to TPWODL store/site & unloading & delivery at TPWODL stores/TPWODL site, cost of documentation including all the relevant test certificates and other supportive documents to be furnished.

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The Prices/Rates are inclusive of all taxes, levies, cess and duties, particularly Goods and Services Tax as applicable. All government levy / taxes shall be paid only when the invoice is submitted according to the relevant act.

The prices/rates shall remain firm till actual completion of entire supply of goods/material/equipment as per contract is achieved and shall remain valid till the completion of the contract.

The prices shall remain unchanged irrespective of TPWODL making changes in quantum in all or any of the schedules of items of contract.

### **5.1 Changes in Statutory Tax Structure**

If rate of any or all of the statutory taxes and duties applicable to the contract changes, such changes shall be incorporated by default if the changes occur within the contract execution time and shall be applicable if the contract is executed by the Associate within the Contract Execution Time.

For execution of contracts beyond contract execution time, where the delay is not attributable to TPWODL no upward revision in tax /duties shall be considered irrespective of changes in the statutory tax structure either within the contract execution time or beyond. However, in such cases, benefits due to any downward revisions in statutory tax rates shall be passed on to TPWODL.

### **6.0 TERMS OF PAYMENT**

On delivery of the materials in good condition and certification of acceptance by TPWODL official, Associate shall submit the Bills/Invoices in original in the name of "TP Western Odisha Distribution Ltd" to invoice desk, complete with all required documents as under:

- Test Reports (4 sets).
- MDCC issued by TPWODL.
- Packing List.
- Drawing and Catalogue.
- Guarantee/Warrantee Card.
- Delivery Challan.
- O&M Manual.
- Copy of Order.
- Minutes of Meeting.

Bills/ invoices shall mention Supplier's GST Number. TPWODL will make 100% payment within 30 days of submission of the Bill/Invoice complete in all respects and along with all the requisite documents mentioned above, subject to condition that Associate has furnished the requisite Security-cum-Performance Guarantee as stipulated in the contract.

### **6.1 Quantity Variation**

Payment will be made on the basis of actual quantity of supplies/actual measurement of works accepted by TPWODL and not on the basis of contract quantity.

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## 6.2 Full and Final Payment

Full & Final Payment in all contracts shall be made subject to the associate submitting "No Demand Certificate" in the format as per Annexure-C.

## 7.0 MODE OF PAYMENT

Payment shall be made through crossed Cheque or RTGS whichever of the two modes chosen by the Associate, in favour of Associate's Bank Account on TPWODL records, on whose name Contract has been issued. Those Associates opting for the RTGS mode shall submit the details of Bank Account and other details as per annexure G. Further, for any payments made, TPWODL is not responsible for any consequences/disputes Associate have among the owners channel partners, sub-Associates and all such dispute/concerns shall be settled solely by the Associate.

## 8.0 SECURITY CUM PERFORMANCE DEPOSIT

Associates shall submit within 15 days from the effective date of issue of PO/RC, Security Performance Bank Guarantee (SPBG) in the format as per Annexure B of this document from banks acceptable to TPWODL for:

- (a) 5% of the PO value if purchase order value is more than Rs 5 Crores.
- (b) 10% of the PO value if purchase order value is less than Rs 5 Crores.

This shall remain valid till the end of the Guarantee Period of contract, plus one month.

- (c) 5% of the RC value in case of Rate Contract. This shall remain valid till the Guarantee period plus one month.

- For PO/RC values less than Rs. 5 lacs, Associate may request for deduction of amount equivalent to SPBG value from their first invoice. Such amount shall be withheld by TPWODL while processing the invoice and shall be released after completion of Guarantee Period plus one month.
- For PO/RC values less than Rs. 3 lacs, the clause (8.0) for Security cum Performance Bank Guarantee (SPBG) shall not be applicable.
- In case of RC (Rate Contract) after the expiry of RC validity, Associate shall have to submit SPBG. However, the Associate has the option to re-submit the SPBG as per actual RO (Release Order) value issued against the RC, valid for Guarantee Period plus one month. The Guarantee Period shall be considered as per the last RO issued against the said RC. The original SPBG as submitted against the RC shall be released on submission of the new SPBG to TPWODL. Alternatively, Associate may extend the validity of original SPBG only till the requisite period, i.e. Guarantee Period plus one month.

## 9.0 STATUTORY COMPLIANCE

### 9.1 Compliance to Various Acts

Associate should ensure adherence to all applicable laws, rules and regulation applicable under this contract from time to time. In case of violation any risk, costs etc shall be in associates account and keep TPWODL indemnified always till completion of contracts.

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## 9.2 SA 8000

As TPWODL is SA 8000 compliant, it expects its Associates to follow guidelines of SA 8000:2014 on the following aspects

1. Child Labour
2. Forced or Compulsory Labour
3. Health & Safety
4. Freedom of Association & Right to Collective Bargaining
5. Discrimination
6. Disciplinary Practices
7. Working Hours
8. Remuneration
9. Management System

## 9.3 Affirmative Action

TPWODL appreciate and welcome the engagement/employment of persons from SC/ST community or any other deprived section of society by their business associates.

### Relaxation in Contract Clauses under Affirmative Action for SC/ ST Business Associates\*\*

TPWODL believes that inclusive growth is the key to sustainable development, and to promote the same Policy on Affirmative Action for Scheduled Caste & Scheduled Tribe Communities has been adopted across the company.

Under the same pre-text, and to promote entrepreneurship among SC/ST community TPWODL has taken initiative by proposing relaxations in contract clauses as per below:

| S. No | Initiative                 | for SC/ ST BA's  | Guideline Document           |
|-------|----------------------------|--|------------------------------|
| 1     | Tender Fees                | 100% waiver for SC/ST community  | All Open Tenders             |
| 2     | Earnest Money Deposit      | 50 % relaxation of estimated EMD value                                   | All limited and Open Tenders |
| 3     | Performance Bank Guarantee | 50% relaxation in PBG for order value above 50 lacs else 25% relaxation  | All limited and Open tenders |
| 4     | Turnover                   | 25% relaxation in company turnover under qualifying requirement criteria | All Open Tenders             |

### \*\*Classification of BAs under SC/ST shall be governed under following guidelines:

- Proprietorship/ Single Ownership Firm: Proprietor of the firm should be from SC/ST community. Governing document shall be duly audited balance Sheet for the last FY bearing the name of proprietor.
- Partnership Firm: Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed and audited balance sheet/ ITR for last FY.
- Private limited company: Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing

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document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

*Note: Certification from SC/ST commission shall be required for deciding upon SC/ST status of a person.*

## **10.0 QUALITY**

### **10.1 Knowledge of Requirements**

The Associate shall be deemed to have carefully examined and to have knowledge of the equipment, the general and other conditions, specifications, schedules, drawings, etc. forming part of the Contract and also to have satisfied himself as to the nature and character of the work to be executed and the type of the equipment and duties required including wherever necessary of the site conditions and relevant matters and details. Any information thus procured or otherwise obtained from TPWODL/Consultants shall not in any way relieve the Associate from his responsibility and executing the works in accordance with the terms of contract.

### **10.2 Material/Equipment/Works Quality**

The items / works under the scope of the Associate shall be of the best quality and workmanship according to the latest engineering practice and shall be manufactured from materials of best quality considering strength and durability for their best performance and, in any case, in accordance with the specifications set forth in this Contract. All material shall be new. Substitution of specified material or variation from the process of fabrication/ construction/ manufacture may be permitted but only with the prior written approval of the TPWODL.

### **10.3 Adherence to Rules & Regulations**

The Associate shall procure and/or fabricate/erect all materials and equipment in accordance with all requirements of Central and State enactment, rules and regulations governing such work in India and at site. This shall not be construed as relieving the Associate from complying with any requirement of TPWODL as enumerated in the Contract which may be more rigid than and not contrary to the above mentioned rules, nor providing such construction as may be required by the above mentioned rules and regulations. In case of variance of the Technical Specification from the laws, ordinance, rules and regulations governing the work, the Associate shall immediately notify the same to the TPWODL. It is the sole responsibility of the Associate, however, to determine that such variance exists. Wherever required by rules and regulations, the Associate shall also obtain the statutory authorities' approval for the plant, machinery and equipment to be supplied by the Associate.

### **10.4 Specifications and Standards**

The Associate shall follow all codes and standards referred in the Contract Document. Codes and standards of other may be followed by the Associate with the prior written approval of TPWODL, provided materials, supplies and equipment according to the standard are equal to or better than the corresponding standards specified in the Contract.

Brand names mentioned in the Contract documents are for the purpose of establishing the type and quality of products to be used. The Associate shall not change the brand name and

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qualities of the bought out items without the prior written approval of the TPWODL. All such products and equipment shall be used or installed in strict accordance with original manufacturer's recommendations, unless otherwise directed by the TPWODL. In any circumstances the codes, specimen and standards prescribed by any government agency should not be violated.

## **11.0 INSPECTION/PARTICIPATION**

### **11.1 Right to Carry Out Inspection**

TPWODL reserves the right to send its representatives for inspection or participation at various stages of contract execution listed below, applicable as per contract construction.

- During basic design and detail engineering of material/ Equipment carried out by Associate /Outsourced Agencies.
- During manufacturing stages of the product at Associate's/Associate's Outsourced Agency's Plant/Facility.
- During Pre-dispatch Inspection and Testing of finished/manufactured product at Associate's/Associate's outsourced Agency's Plant/Facility.
- During Installation & Commissioning Activities/Stages.
- Prior to Clearing of the completed installation for commissioning.
- Any other stage as find appropriate by TPWODL during contract execution time.

All inspections and participations shall be carried out by TPWODL giving written intimation to the Associate or receiving appropriate advance written inspection call from the Associate, unless otherwise specified elsewhere in the contract document.

### **11.2 Facilitating Inspection**

The Associate shall provide all opportunities and information to TPWODL's engineers to get acquainted with the technical know-how and the methods and practices adopted by the Associate in basic and detail engineering. The Associate shall provide documents, drawings, calculations etc. as may be required by TPWODL's Engineers.

The Associate shall provide free of charge office accommodation, office facilities, secretarial services, communication facilities, general and drawing office stationary, etc. as may be reasonably required by the TPWODL's engineers. Similarly, facilities shall also be provided by Associate's outsource agencies/partners/authorized dealers (collectively termed as sub associates) if such basic and detail engineering activities are carried out in the design offices of sub-Associates.

The Associate shall be responsible for the safety of employees of TPWODL/Third Party Agency when they are at the Associate's /Associate's outsource agency's plant or facility for carrying out/witnessing inspection/testing. All statutory safety precautions as applicable shall be followed by the Associate during Inspection Testing. If TPWODL inspectors are not satisfied with the safety arrangements at the plant, TPWODL have the right to call off inspection till such time corrective action is taken by the Associate.

Before raising the call for pre-dispatch final inspection and testing, the Associate shall conduct all the tests—type tests, routine tests etc-as specified in the contract document and submit copies of the test certificates to TPWODL along with the inspection call, for scrutiny of TPWODL.



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The Associate and TPWODL shall jointly document all the observations, comments and action points after completion of inspection and it shall be binding on the Associate to provide compliance on all the points requiring compliance and furnish the compliance report to the designated authority of TPWODL for receiving clearance for dispatch of materials

### **11.3 Third Party Nomination**

TPWODL also may nominate a third party for the purpose of carrying out the inspection and such an agency shall be entitled to all the rights and privileges of TPWODL as far as conducting the inspection.

### **11.4 Waiver of Inspections**

TPWODL on its own discretion shall chose to waive off any inspection and ask the Associate to submit all the test reports as applicable as per contract specifications, related to inspection and testing of the goods ordered for scrutiny and clearance for dispatch.

### **11.5 Incorrect Inspection Call**

In case it is observed that the material offered for inspection is not ready at the time of TPWODL inspection visit rendering it as futile, all costs towards such inspection shall be recovered from the BA. Taxes as applicable on such recoveries shall be borne by the BA.

## **12.0 MDCC & DELIVERY OF MATERIALS**

### **12.1 Material Dispatch Clearance Certificate**

Associate shall deliver material/goods/equipment against Supply Contracts or Supply Part of Composite/Service Contracts only after receiving Material Dispatch Clearance Certificate (hereafter termed as MDCC) issued by designated authority of TPWODL. Material delivered at TPWODL stores or at project site without a valid MDCC issued by the designated official of TPWODL shall be rejected. MDCC shall be issued to associate furnishing compliance report on the action points documented during pre-dispatch inspection and testing at Associate's/ Sub Associate's plant/ facility. In case Pre-dispatch inspection is waived at the discretion of TPWODL, then, MDCC shall be issued on receiving all the test reports-routine& type-from the Associate and finding them in order.

The associate shall include and provide for securely protecting and packing the materials so as to avoid loss or damage during handling and transport by air, sea, rail and road or any other means.

All such packing shall allow to the extent possible for easy removal and checking at Site. The associate shall take special precautions to prevent rusting of steel and iron parts during transit by sea. Gas seals or other materials shall be utilized by the associate for protection against moisture during transit of all Plant and Equipment.

Each Equipment or parts of Equipment shall be tagged with reference to the assembly drawings and corresponding part numbers. Each bale or package shall contain a packing note quoting specifically the name of the associate, item description, quantity, item / package identification.

All packing cases, containers, packing and other similar materials shall be new and supplied free by the associate and it shall not be required to be returned to the associate.

Notwithstanding anything stated in this clause, the associate shall be entirely responsible for loss, damage or depreciation or deterioration to the materials and supplies due to faulty and/or insecure packing or otherwise during transportation to the Site until otherwise provided herein.

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In case of the consignments dispatched by road, the associate shall ensure that it or its subcontractors:

- i) Identify and obtain the correct type of trucks/trailers, keeping in view the nature of consignments to be dispatched.
- ii) Take such actions as may be necessary to avoid all possible chances of damages during transit and to ensure that all packages are firmly secured.

Timelines for inspection and MDCC is as below:

| S. No. | Inspection        | MDCC issuance time including Inspection time (max.) |
|--------|-------------------|---|
| 1      | Outside Sambalpur | 12 days   |
| 2      | Within Sambalpur  | 5 days  |
| 3      | Waiver*           | 3 working days                                      |

\* Associate is expected to raise the inspection call assuming that Inspection shall be carried out by TPWODL. The decision for waiver of inspection shall be on sole discretion of TPWODL.

### 12.2 Right to Rejection on Receipt

Goods/Material/Equipment delivered in condition physically damaged & incomplete as a product ordered, or not packed and transported as per the terms and conditions of the contract is liable to be rejected. Such item shall be lifted back by Associates within 15 days from receipt of rejection note from TPWODL and have to supply back the material within next 30 days or within the timeframe mutually decided by Associate and TPWODL.

If delivery of the material is beyond the agreed time, Liquidated damage clause, mentioned in this GCC separately shall be applicable; but the period for levy of LD shall be considered as per the original delivery schedule and not from the agreed timelines for material rectification.

### 12.3 Consignee

Unless otherwise specified in the Contract Document, Materials/Goods/Equipment shall be consigned to "Stores-In-Charge", TPWODL, Burla.

### 12.4 Submission of mandatory documents on Delivery

Following documents shall be mandatorily submitted by BA along with supply of material to TPWODL stores/site:

| S. No. | Documents  | Requisite                                    |
|--------|--|--|
| 1      | Invoice copy in original                             | With all consignments                        |
| 2      | LR copy  | Wherever required                            |
| 3      | Packing list   | With all consignments                        |
| 4      | MDCC   | With all consignments                        |
| 5      | Purchase order / Release order                       | Signed copy                                  |
| 6      | Test certificates                                    | With all consignments                        |
| 7      | Inspection/JVR report                                | In case pre-dispatch inspection is conducted |
| 8      | Device data in CD as per template for metering items | Wherever applicable                          |

## 12.5 Dispatch and Delivery Instructions

| S. No. | Instructions  |
|--------|---|
| 1      | Purchase order/ Release order no. shall be mentioned on invoice and on material   |
| 2      | TPWODL material code and material description shall be mentioned in invoice and on material.  |
| 3      | "Property of TPWODL" shall be embossed on material.   |
| 4      | The material shall be properly sealed and packed in standard packing as per purchase order terms & conditions.  |
| 5      | The weight and quantity of material shall be mentioned wherever applicable  |
| 6      | The material supplied shall be co-related with the packing list.  |
| 7      | The name plate detail on equipment shall include Material code, Material description, specification detail of material [as applicable], Serial No. Year of manufacturing, PO/RO no. and date, "PROPERTY OF TPWODL, Burla", Guarantee period and Associate's name. |
| 8      | In case of manual unloading, supplier / transporter shall deploy sufficient Labour for unloading the material at TPWODL central store.<br>For heavy item(s), crane will be provided by TPWODL [unloading cost will be recovered from the associate].              |
| 9      | The driver should have valid License and one helper in truck. All the documents of truck like registration papers, PUC etc. should be available in Truck.   |
| 10     | BA representative should accompany the material and get it unloaded / stacked in his presence wherever possible.  |

## 13.0 GUARANTEE

### 13.1 Guarantee of Performance

Associates shall stand guarantee that the equipment and material supplied under the contract is free from design, manufacturing, material, construction, erection & installation and workmanship & quality defects and is capable of its due, rated and intended quality performance, as an integrated product delivered under the contract, for a specific period termed as Guarantee Period(as elaborated elsewhere in this clause). The Associate should also guarantee that the equipment/material is new and unused except for the usage required for the tests and checks required as part of quality assurance.

### 13.2 Guarantee Period

The Guarantee Period will be equipment/service/work specific and shall be as specified in the Standard Specifications of TPWODL for the equipment/material/service/work and where standard specifications are not part of contract documents or guarantee period is not specified in the standard specifications,, the guarantee period shall be as per the Special Terms and Conditions of the Contract. In case of no mention of the guarantee period in standard specifications or SCC Guarantee Period will be 12 Months from the Date of Commissioning or 24 months from the date of delivery of final lot of supplies made, whichever is earlier.

### 13.3 Failure in Guarantee Period (GP)

If the equipment and material supplied under the contract fails to perform its due, rated & intended quality performance, during the Guarantee period, the associate is liable to undertake repair/rectify/replace the equipment and material supplied within time frame specified in the SCC or elsewhere in the contract documents at associate's cost to make the equipment and material supplied/service or work rendered under the contract of performing its due, rated and

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intended quality performance. If Associate fails to repair/rectify/replace the equipment or material supplied rendered under the contract, failed in Guarantee Period, TPWODL will be at liberty to get the same done at Associate's risks and costs and recover all such expenses plus the TPWODL's own charges (@ 20% of expenses incurred), from the Associate or from the "Security cum Performance Deposit" as the case may be.

If during the Warranty/ Guarantee period some parts of the supplies are replaced owing to the defects/ damages under the Warranty, the Warranty period for such replaced parts shall be until the expiry of twelve months from the date of such replacement or renewal or until the end of original Guarantee period, whichever is later.

Any repairs during the Guarantee Period shall be carried out by the Associate within 30 days of reporting the issue to Associate by TPWODL. However, if replacement of the Equipment is required, Associate shall notify the same to TPWODL within 7 days of reporting the issue by TPWODL. Thereafter, the total time for supply of new equipment/ material shall be equal to the original delivery period of that equipment/ material as specified in the Contract. In case the Associate is not able to rectify/ replace the faulty equipment/ material within the stipulated timelines as mentioned above, penalty shall be levied as per the Liquidated Damages clause mentioned in this document. The penalty amount shall be recovered from the payment due to the vendor or by encashment of the SPBG as the case may be.

#### **13.4 Cost of repairs on failure in GP**

The cost of repairs/rectification/replacement, required transportation, site inspection /mobilization/dismantling and re-installation costs as applicable, to be borne by Associate. The Associate has to ensure that the interruption in the usage of intended purpose of the equipment is minimized to the maximum extent. In lieu of the time taken for repairs/rectification/replacement.

#### **13.5 Guarantee period for Goods Outsourced**

If the Associate outsources partly equipment/materials/services from third party as mutually agreed upon at the pre award stage of contract, TPWODL shall have the benefit of any additional guarantee period if provided by the third party for the part supplied/executed by them.

#### **13.6 Latent Defect**

Hidden defects in manufacturing or design of the product supplied and which could not be identified by the tests conducted but later manifested during operation of the equipment are termed as latent defects. Associates shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Company.

#### **13.7 Support beyond the Guarantee Period**

The Associate shall ensure availability of spares and necessary support for a period of atleast 10 years post completion of guarantee period of equipment supplied against the contract.

#### **14.0 LIQUIDATED DAMAGES**

- a) For supplies which are of standalone use, multiple in quantities and having a single final delivery schedule, Liquidated damages shall be levied without prejudice to any of the other contractual rights of TPWODL, as described below:

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For delay of each week and part thereof from the delivery schedule specified in the contract, 1% of contract value corresponding to undelivered quantity, provided full quantity is supplied within 130% of the original contract time. If full contractual quantity is not delivered within 130% of contract time for delivery, TPWODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract value.

- b) For Supplies having phased delivery schedule as per contract terms, standalone use and multiple in quantities, Liquidated damages shall be levied without prejudice to any of the other contractual rights of TPWODL, as described below:

For the purpose of calculating and applying LD, each delivery lot shall be considered separately. For delay of each week and part thereof, from the delivery schedule specified for the lot, 1% of the contract value corresponding to the undelivered quantity of the lot subject to a maximum of 10% of the total contract value of the subject lot. However, if full contractual quantity is not delivered within 130% of contract time for delivery, TPWODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract value. Deduction of LD shall be on landed cost i.e contract value inclusive of taxes and in pursuant statutory compliance GST would be applicable at the stipulated rate and the same shall be borne by Business Associate. In case of LD deduction, a GST invoice shall be issued by TPWODL as a proof of deduction/ recovery.

#### **14.1 LD Waiver Request**

Any request of LD waiver shall be submitted within thirty (30) days of deducting LD. Request submitted beyond the timeline shall not be entertained.

#### **15.0 UNLAWFUL ACTIVITIES**

The Associate shall have to ensure that none of its employees are engaged in any unlawful activities (whether covered under the scope of the present GCC or not) subversive of the TPWODL's interest failing which appropriate action (legal or otherwise) may be taken against the Associate by the TPWODL, in accordance with the terms of the present GCC.

#### **16.0 CONFIDENTIALITY**

Associate and its employees or representatives thereof shall strictly maintain the confidentiality of various information they come across while executing the contract as detailed below.

##### **16.1 Documents**

All maps, plans, drawings, specifications, schemes and other documents or information related to the Contract/Project and the subject matter contained therein and all other information given to the Associate by the TPWODL in connection with the performance of the contract shall be held confidential by the Associate and shall remain the property of the TPWODL and shall not be used or disclosed to third parties by the Associate for any purpose other than for which they have been supplied or prepared. The Associate may disclose to third parties, upon execution of confidentiality agreements, such part of the drawings, specifications or information if such disclosure is necessary for the performance of the Work provided such third parties agree in writing to keep such information confidential to the same extent and degree as provided herein, for the benefit of the TPWODL.

##### **16.2 Geographical Data**

Maps, layouts and photographs of the unit/plant including its surrounding regions showing vital installation for national security of country or those of TPWODL shall not be published or

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disclosed to the third parties or taken out of the country without prior written approval of the TPWODL and upon execution of confidentiality agreements satisfactory to the TPWODL with such third parties prior to disclosure.

### **16.3 Associate's Processes**

Title to secret processes if any developed by the Associate on an exclusive basis and employed in the design of the equipment shall remain with the Associate. TPWODL shall hold in confidence such processes and shall not disclose such processes to the third parties without prior approval of the Associate and execution by such third parties of secrecy agreements satisfactory to the Associate prior to disclosure. Upon completion of contract, such processes shall become the property of the TPWODL. Title to technical specifications, drawings, flow sheets, norms, calculations, diagrams, interpretations of test results, schematics, layouts and such other information, which the Associate has supplied to the TPWODL under the Contract shall be passed on to the TPWODL. The TPWODL shall have the right to use these for construction, erection, start-up, Trial Run, operation, maintenance, modifications and/or expansion of the works including for the manufacture of spare parts.

### **16.4 Exclusions**

The provision of Clauses 16.1 to 16.3 shall not apply to information:

- Which at the time of disclosure are in the public domain which later on become part of public domain through no fault of the party concerned, or
- Which were in the possession of the party concerned prior to disclosure to him by the other party, or
- Which were received by the party concerned after the time of disclosure without restriction on disclosure or use, from a third party who did not acquire such information directly or indirectly from the other party or has no obligation of confidentiality for such information.

### **16.5 Violation**

In case of violation of this clause, the Associate is liable to pay compensation and damages as may be determined by the competent authority of TPWODL.

## **17.0 INTELLECTUAL PROPERTY RIGHTS**

If, in the course of performance of its functions and duties as envisaged by the scope of the present GCC, the Associate acquires or develops, any unique knowledge or information which would be covered, or, is likely to be covered within the definition of a trademark, copyright, patent, business secret, geographical indication or any other form of intellectual property right, it shall be obliged, under the terms of this present GCC, to share such knowledge or information with the TPWODL. All rights, with respect to, or arising from such intellectual property, as afore mentioned, shall solely vest in TPWODL.

Moreover, the Associate undertakes not to breach any intellectual property right vesting in a third party/parties, whether by breach of statutory provision, passing off, or otherwise. In the event of any such breach, the Associate shall be wholly liable to compensate, indemnify or make good any loss suffered by such third party/parties, or any compensation/damages arising from any legal proceeding/s, or otherwise. No liability of TPWODL shall arise in this respect, and any costs, damages, expenses, compensation payable by TPWODL in this regard to a third party/parties, arising from a legal proceeding/s or otherwise, shall be recoverable from the Associate.

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## 18.0 INDEMNITY

The Associate shall at all times indemnify, keep indemnified and hold harmless the TPWODL and its officers, directors, employees, affiliates, agents, successors and assigns against all actions, claims, demands, costs, charges and expenses arising from or incurred by reason of any infringement of patent, trade mark, registered design, copy rights and/or industrial property rights by manufacture, sale or use of the equipment supplied by the Associate whether or not the TPWODL is held liable for by any court judgement. In this connection, the TPWODL shall pass on all claims made against him to the Associate for settlement.

The Associate assumes responsibility for and shall indemnify and save harmless the TPWODL from all liability, claims, costs, expenses, taxes and assessments including penalties, punitive damages, attorney's fees and court costs which are or may be required to be paid by the TPWODL and its officers, directors, employees, affiliates, agents, successors and assigns arising from any breach of the Associate's obligations under the Contract or for which the Associate has assumed responsibilities under the Contract including those imposed under any local or national law or laws, or in respect to all salaries, wages or other compensation for all persons employed by the Associate or his Sub-Associates or suppliers in connection with the performance of any work covered by the Contract. The Associate shall execute, deliver and shall cause his Sub-Associate and suppliers to execute and deliver, such other further instruments and to comply with all the requirements of such laws and regulation as may be necessary there under to conform and effectuate the Contract and to protect the TPWODL.

The TPWODL shall not be held responsible for any accident or damages incurred or claims arising, due to the Associate's error there from prior to completion of work. The Associate shall be liable for such accidents and after completion of work for such accidents as the case may be due to negligence on his part to carry out Work in accordance with Indian laws and regulations and the specifications set forth herein.

## 19.0 LIABILITY & LIMITATIONS

### 19.1 Liability

Except for any specific liability which may be identified in the Contract and which may be payable hereunder, Associate shall not be liable for any special, incidental, indirect, or consequential Damages or any loss of business Contracts, revenues or other financial loss (or equivalents thereof no matter how claimed, computed or characterized) arising out of or in connection with the Performance of the Work or supply of Goods **unless caused by Associate's negligence, willful misconduct or breach of contract.**

If the Associate is a joint venture or consortium, all concerned parties shall be jointly and severally bound to the TPWODL for the fulfillment of the provisions of the Contract. The consortium or the joint venture shall designate one party as their leader, who will be the coordinator between the parties and TPWODL. The constituents & leader of the consortium or joint venture shall not be changed without the prior consent of TPWODL.

TPWODL shall have no liability or any special, incidental, indirect or consequential Damages for any loss of Business Contracts, revenues or other financial loss arising out of this Contract.

### 19.2 Limitation of Liability

The total liability of Associate against any contract shall be limited to the Total All Inclusive Contract Value.

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## 20.0 FORCE MAJEURE

Force Majeure applies if the performance by either Party ("the Affected Party") of its obligations under Contract is materially and adversely affected.

"Force Majeure" shall mean any event or circumstance or combination of events or circumstances referred below and their consequences that wholly or partly prevents or unavoidably delays any Party in the performance of its obligations under this Agreement, but only and to the extent that such events and circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided even if the Affected Party had taken reasonable care:

- Act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, embargo, blockade, revolution, riot, bombs, religious strife or civil commotion, etc. ▪ Politically motivated sabotage, or terrorism, etc.
- Action or Act of Government or Governmental agency for which remedy is beyond the control of the affected parties. ▪ Any act of God.

Note: Causes like power breakdown/ shortages/fire/strikes, accidents etc do not fall under Force Majeure.

Time being the essence of the Contract, if either party is prevented from the performance of its obligations in whole or in part due to an event of Force Majeure, then provided Notice of happening of any event by the Affected Party is given to the other party within seven (7) days from the date of occurrence of such event, which DIRECTLY has impact on works and submitted details and quantum of resulting effect, but at the same time had made all possible efforts to mitigate and overcome effects thereof, the Affected Party's performance under this Contract shall be suspended until such event ceases and the Scheduled Completion shall be delayed accordingly.

If Force Majeure event(s) continue for a period of more than three months, the parties shall hold consultation to discuss the further course of action.

Neither party shall be considered to be in default or in breach of its obligation under the Contract to the extent that performance of such obligation by either party is prevented by any circumstances of Force Majeure which arise after effective date of Contract.

Neither party can claim any compensation from the other party on account of Force Majeure.

## 21.0 SUSPENSION OF CONTRACT

### 21.1 Suspension for Convenience

TPWODL may, at any time and at its sole option, suspend execution of all or any portions of the schedule of items of contract to be supplied/work to be executed by Associate under the contract by providing to the Associate at least two business days written notice for contracts having contract completion period less than sixty days and at least seven business days' notice for all other contracts.

Upon receipt of any such notice, the Associate shall respond as follows as applicable as per contract construction.

- Immediately discontinue further supply of material/goods specified in the suspension notice for supply contracts



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- Immediately discontinue further service/work and supply of materials of those services/materials/work specified in the suspension notice for service /composite contract
- Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to TPWODL, of all orders, outsourcing arrangements, and rental Contracts to the extent that they relate to performance of the portion of Work suspended by the notice.
- Protect and maintain the portion of the service/Work already completed, including the portion of the Work suspended hereunder, unless otherwise specifically stated in the notice.
- Continue delivering/carrying out the supply/service/work items as per contract conditions, which do not fall under purview of the suspension notice.

On receipt of resumption notice from TPWODL, the Associate shall resume execution of contract as specified in the resumption notice, within the time frame specified in the resumption notice.

### **21.2 Suspension for Breach of Contract conditions.**

TPWODL shall suspend execution of whole/or part thereof the contract till such time Associate complies with the conditions stipulated under section clause 22.1 for breach/default of contract conditions.

### **21.3 Compensation in lieu of Suspension**

If the suspension of the contract in whole or in part is for convenience of TPWODL and not due to any breach of contract conditions by the associate, TPWODL at its discretion shall consider compensating all reasonable additional costs incurred by Associate in lieu of suspension of whole or part of contract, on representation of the Associate providing justified estimates of such additional costs and such estimates are found acceptable and approved by competent authority of TPWODL.

If the suspension of contract in whole or part thereof is due to breach of contract conditions (refer clause 22.1) by the Associate, Associate shall not be entitled for any compensation for any cost incurred in lieu of suspension of whole or part of contract and also shall be liable for compensating all the losses arising to TPWODL in lieu of suspension of contract. Resumption notice shall be subject to the Associate taking corrective action for the breach of contract conditions within the time frame and as per the terms specified in the suspension notice.

## **22 TERMINATION OF CONTRACT**

### **22.1 Termination for Default/Breach of Contract**

The contract / PO /RC shall be subject to termination by TPWODL in case of breach of the contract by the Associate which shall include but not be limited to the following:

- a. Withdrawal or intimation by the Associate of its intent to withdraw or surrender the execution / completion of the contracted work /PO or failure in ensuring adherence to any delivery schedules, in deviation of the contract/PO.
- b. Refusal or neglect on the part of the Associate to supply material/equipment of quantity or quality as specified by TPWODL and within the timeframe as specified in the contract document or refusal or neglect to execute the services/work in terms of the agreed standards of quantity or quality and/or within the timeframe specified in the contract/PO.

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- c. Failure in any respect to perform any portion of the Work contracted with promptness, diligence, or in accordance with the terms of the contract.
- d. Failure to furnish guarantees as specified and /or failure to comply with the terms thereof.
- e. Failure to furnish such relevant documents or information within the time specified which may be necessary for due execution / completion of the works and documentation.
- f. Liquidation, bankruptcy either voluntary or involuntary OR entering into any composition or compromise with its creditors, or Insolvency.
- g. In case any reasonable information has been received by TPWODL that Associate has adopted/ or attempted to adopt any unethical conduct, action in award of the contract /PO or at any time thereafter.
- h. Failure to comply with applicable statutory provisions as contained in the contract or failure to comply with the applicable laws.
- i. Failure to comply with safety regulations/clauses stipulated in the contract or as may be generally instructed by TPWODL.

If the default or breach as specified under clause 22 (except sub clause g thereof) be committed by the associate for the first time, TPWODL shall issue, along with notice of default or breach, a warning notice instructing the associate to take remedial/corrective action within the time frame stipulated in the warning notice and not to repeat the same in future. The timeframe for corrective action by the associate shall be specific to the nature of breach of contract and the same shall not be objected to by the Associate. If the Associate fails to comply with the instructions in the warning notice or in taking corrective action to the satisfaction of TPWODL then TPWODL may terminate the entire or part of contract at its discretion by issuing termination notice without incurring any liability on this ground.

In case the contract is terminated for any breach of the nature specified in clause 22 g stated above, TPWODL shall have the right to terminate all the contracts TPWODL is having with the Associate by issuing termination notice which shall be without prejudice to the other rights of TPWODL available to it under law.

Without prejudice to its right to terminate for breach of contract, TPWODL may, without assigning any reason, terminate the Contract in whole or in part at any time at its discretion while the contract is in force by serving a written notice of two weeks to the Associate.

In the event of TPWODL having proceeded with termination of the contract the associate shall comply and proceed further in the following manner:

- a) Associate shall discontinue the supply, on the expiry of the said period of two weeks.
- b) Associate shall ensure that no further steps are being taken towards discharge of the obligations, terms and conditions as contained in the contract/PO. This shall include initiation of actions not limited to discontinuation of other allied and associated arrangements which the associate might have entered into with third parties for due discharge of its obligations under the contract with TPWODL.
- c) The Associate shall perform thereafter such tasks as may be necessary to preserve and protect the terminated portion of the material/service/work in progress and the materials and equipment at TPWODL sites or in transit thereto. However the associate shall continue to fulfill its contractual obligations with regard to the part of contract not terminated.

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- d) It shall be open for TPWODL to conduct a joint assessment with the associate of the material, supplies, equipment ,works or in general as to the subject matter of the contract in regard to which the associate claims having completed its obligations before or during such termination.
- e) It shall be open to TPWODL to seek invocation of the performance bank guarantee or any other guarantee or other security deposit by whatever name called submitted by the associate, which shall not be objected to or protested against by the associate.

In case of termination of the contract the parties agree to be governed inter alia by the following:

- a) In case TPWODL exercises its right of termination as stated above the associate shall not dispute or object to the same.
- b) The Associate shall be entitled to receive and claim only such payments OR sums of money from TPWODL as may be found payable to it in regard to works executed by it under the terms of the contract and no other claim of any nature whatsoever shall be made by the Associate.
- c) All such provisions which the parties have agreed to survive and prevail even after termination of the contract shall remain effective despite the termination.

In the event of such termination, TPWODL may finish the Work by whatever method it may deem expedient, including the hiring of services and /or purchase of material equipment from such third parties as TPWODL may deem fit or may itself provide any labor or materials and perform any part of the Work. The associate undertakes to bear the incremental costs if any paid by TPWODL in such a case attributable to failure on the part of the associate. The Associate in such a case shall not be entitled to receive any further payments and any sums found payable to it may be adjusted by TPWODL against the amount recoverable from him on this ground. The same shall be without prejudice to other rights available to TPWODL under law against the associate.

Upon the termination of any of the contract due to occurrence of any circumstances provided in clauses stated above and constituting repeated breach or misconduct , TPWODL shall be entitled to bar the associates its agents , affiliates from undertaking any negotiation / tendering, bidding , participation activities concerning TPWODL for a period of two years from date of such termination. The same shall be without prejudice to other rights available to TPWODL.

### **22.2 Termination for Convenience of Associate**

Associate at its convenience may request for termination of contract, clearly assigning the reason for such request. TPWODL has full right to accept, reject or partially accept such request. However, associate shall continue its supply as per contract till final approval is given to associates for such termination.

### **22.3 Termination for Convenience of TPWODL**

TPWODL at its sole discretion may terminate the contract by giving 30 days prior notice in writing or through email to the Associate. TPWODL shall pay the Associate for all the supplies/ services rendered till the actual date of contract termination against submission of invoice by the Associate to that effect.

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## **23.0 DISPUTE RESOLUTION & ARBITRATION**

In case of any dispute or difference the parties shall endeavor to resolve the same through conciliatory and amicable measures within 15 Days failing which the matter may be referred by either party for resolution by the sole arbitrator to be appointed mutually by both the parties. The arbitral proceedings shall be conducted in accordance with Arbitration and Conciliation Act 1996 and the place of arbitration shall be Sambalpur. The language to be used at proceedings shall be English and the award of the arbitrator shall be final and binding on the parties. The parties shall bear their respective costs of arbitration. The associate shall continue to discharge its obligations towards due performance of the works as per the terms of the contract during the arbitration proceedings unless otherwise directed in writing by TPWODL or suspended by the arbitrator. Further, TPWODL shall continue making such payments as may be found due and payable to the associate for such works.

### **23.1 Governing Laws and Jurisdiction**

The parties shall be subject to the jurisdiction of the courts of law in Sambalpur and any matter arising here from shall be subject to applicable law in force in India.

## **24.0 ATTRIBUTES OF GCC**

### **24.1 Cancellation**

The Company reserves the right to cancel, add, delete at its sole discretion, all or any terms of this GCC or any contract, order or terms agreed between the parties in pursuance without assigning any reasons and without any compensation to the Associates.

### **24.2 Severability**

If any portion of this GCC is held to be void, invalid, or otherwise unenforceable, in whole or part, the remaining portions of this GCC shall remain in effect.

### **24.3 Order of Priority**

In case of any discrepancies between the stipulations in General Conditions of the Contract (GCC) and Special Conditions of Contract (SCC), the GCC shall stand superseded by the SCC to the extent stipulated hereinabove while balance portion of respective clauses of GCC shall continue to be applicable.

## **25.0 ERRORS AND OMISSIONS**

The Associate shall be responsible for all discrepancies, errors and omissions in the drawings, documents or other information submitted by him, irrespective of whether these have been approved, reviewed or otherwise accepted by the TPWODL or not. However any error in design/drawing arising out of any incorrect data/written information from TPWODL will not be considered as error and omissions on part of the Associate.

## **26.0 TRANSFER OF TITLES**

The title of ownership and property to all equipment, materials, drawings & documents shall pass to the TPWODL on acceptance of material by store/site after Inspection.

However, such passing of title of ownership and property to the TPWODL shall not in any way absolve, dilute or diminish the responsibility and obligations of the Associate under this Contract including loss or damages and all risks, which shall vest with the Associate.

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## 27.0 INSURANCE

The Contractor shall take out the Insurance Policies which shall cover all risks including the following, as applicable:-

- a) The value of the policy shall cover the total value of all the items till they are handed over to TPWODL.
- b) TPWODL shall be the principal holder of the policy. The Associate shall be the loss payee under the policy. Associate / Sub-contractor of the Associate shall not be holders or beneficiaries in the policy nor shall they be named in the policy. TPWODL reserves the exclusive right to assign the policy.
- c) While the payment of premium may be phased in agreement with the insurance company, at no time shall goods and services required to be provided by the associate shall remain uninsured in accordance with (a) above.
- d) A copy of the Insurance policy shall be made available to TPWODL prior to first dispatch lot of any Equipment and policy shall be kept alive and valid at all times up to the stage of final acceptance.
- e) TPWODL reserves the right to take out whatever policy that is deemed necessary by him if the associate fails to keep the said policy alive and valid at all times and/or causes lapses in payment of premium thereby jeopardizing the said policy. The cost of such policy(s) shall be recovered / deducted from the amount payable to the associate.
- f) The policy shall ensure that the TPWODL's decision regarding replacement of goods damaged, lost or rendered unusable shall be final.

In all cases, the associate shall lodge the claims with the underwriters and also settle the claims and shall also notify TPWODL of any filed claims. However, the associate shall proceed with the repairs and/or replacement of the equipment/components without waiting for the settlement of the claims. In case of seizure of materials by concerned authorities, the associate shall arrange prompt release against bond, security or cash as required. TPWODL, upon request by the associate, will extend all reasonable assistance to the associate in such a case.

All the insurance claims shall be processed and settled by the associate and the missing/damaged items shall be replaced/repared by them without any extra cost to TPWODL and without affecting the completion time.

## 28.0 SUGGESTIONS & FEEDBACK

We welcome all our Business Associates to write to us about their experience with TPWODL; be it our Company, our services or our people. Each and every concern, issue, query and suggestion from you will help us to become a better company to work with and shall help us develop a strong bonding of trust and a long term relationship with you.

You may send your feedback by filling up our Business Associate Feedback Form enclosed herewith as *Annexure-I*. You can also log on to our website [www.tatapower.com](http://www.tatapower.com) to provide your feedback.

- Suggestions for us
- Feedback form
- Knowledge Sharing/ Experience with TPWODL

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- Any issues with TPWODL.

Submission of feedback form is mandatory before the release of final payment to the BA.

## 29.0 CONTACT POINTS

In case Business Associate needs information with respect to payments or has any grievances, same may be lodged by log on to our website [www.tatapower.com](http://www.tatapower.com)

## 30.0 LIST OF ANNEXURES

| S. No. | Subject   | Annexure |
|--------|---|----------|
| 1.     | Performa for Bid Security Bank Guarantee                              | A        |
| 2.     | Performa for Performance Bank Guarantee (CP cum EP)                   | B        |
| 3.     | Performa for No Demand Certificate by Associate                       | C        |
| 4.     | Performa For Application For Issuance of Consolidated TDS Certificate | D        |
| 5.     | Business Associate Feedback Form                                      | E        |
| 6.     | Acceptance Form For Participation In Reverse Auction Event            | F        |
| 7.     | Form for RTGS Payment   | G        |
| 8.     | Vendor Appraisal Form   | H        |
| 9.     | Manufacturer Authorization Form                                       | I        |

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**ANNEXURE-A**

**PROFORMA FOR BID SECURITY BANK GUARANTEE**

**TP Western Odisha Distribution Ltd  
Burla**

WHEREAS, (Name of the Bidder) \_\_\_\_\_  
(hereinafter called "the BIDDER") has submitted his bid dated \_\_\_\_\_ for the  
(Name of Contract) \_\_\_\_\_ (hereinafter called "the BID").

KNOW ALL men by these presents we (Name of the  
Bank) \_\_\_\_\_ of (Name of the  
Country) \_\_\_\_\_ having our registered  
office at \_\_\_\_\_ (hereinafter called "the BANK) are bound unto The  
TP Western Odisha Distribution Ltd (TPWODL) in the sum of \_\_\_\_\_ for  
which payment well and truly to be made to the TPWODL the Bank binds himself, his  
successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

The CONDITIONS of this obligation are:

- i) If the Bidder withdraws his Bid during the period of bid validity specified in the Proforma of Bid or
- ii) If the Bidder having been notified of the acceptance of his Bid by the TPWODL during the period of bid validity fails or refuses to furnish the Contract Performance Bank Guarantee, in accordance with the Instructions to Bidders.

We undertake to pay the TPWODL upto the above amount upon receipt of its first written demand, provided that in its demand the TPWODL will note that amount claimed by it is due to it owing to the occurrence of one or both conditions, specifying the occurred condition or conditions.

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This Guarantee will remain in force upto and including the date (No of days as mentioned in tender enquiry) days after the closing date of submission of bids as stated in the Invitation to Bid or as extended by you at any time prior to this date, notice of which extension to the Bank being hereby waived, and any demand in respect thereof should reach the Bank not later than the above date.

**DATE** ..... **SIGNATURE OF THE BANK** .....

**WITNESS** ..... **SEAL** .....

(Signature, Name & Address) ( At least 2 witnesses)

**ANNEXURE- B**

**PROFORMA FOR PERFORMANCE BANK GUARANTEE (CP cum EP)**

**(On Rs.100/- Stamp Paper) Note:**

- a) Format shall be followed in toto
- b) Claim period of one month must be kept up
- c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

-----

**TP Western Odisha Distribution Ltd**

**Burla**

**CP cum EP BG No.....**

**Order/Contract No.....dated.....**

1. You have entered into a Contract No \_\_\_\_\_ with M/s. \_\_\_\_\_ (hereinafter referred to as "the Vendor") for the supply cum erection / civil work of \_\_\_\_\_ (hereinafter referred to as "the said Equipment") for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of the said contract, "the Vendor" agreed to furnish you with an irrevocable, unconditional and acceptable bank guarantee for 10% of the value of contract and to be valid till the end of Guarantee period plus one month towards "Contract cum Equipment performance". For this purpose you have agreed to accept the guarantee.
3. In consideration thereof, we, \_\_\_\_\_ hereby irrevocably and unconditionally guarantee to pay to you on demand but in any case before the end of five working days from the date of the claim and without demur and without reference to "the Vendor" such amount or amounts not exceeding the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) being \_\_\_\_\_% ( \_\_\_\_\_ percent) of the total value of the contract on receipt of your intimating that "the



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Vendor” has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfillment and “the Vendor” shall have no right to question such judgment.

4. You shall have the right to file / make your claim on us under the guarantee for a **further period of one month** from the date of expiry.
5. This guarantee shall not be revoked without express consent and shall not be affected by your granting time or any other indulgence to “the Vendor”, which shall include but not be limited to, postponement from time to time of the exercise the same in you or any right which you may have against “the Vendor” and to exercise the same in any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by

GENERAL CONDITIONS OF CONTRACT

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your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision have the effect of relieving our bank from its obligation under this guarantee.

6. We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to "the Vendor's" liabilities in respect of the premises
7. This guarantee shall not be affected by any change in the constitution of our Bank or "the Vendor" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Sambalpur branch and claim will also be payable at Sambalpur Branch (to be confirmed by Sambalpur Branch by a letter to that effect in case BG is from the branch outside Sambalpur).
9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) only and the guarantee will remain in force upto and including \_\_\_\_\_ (Date) and shall be extended from time to time for such period or period as may be desired by "the Vendor".
10. Unless a demand or claim under this guarantee is received by us in writing within one months from \_\_\_\_\_ (expiry date) i.e. on or before \_\_\_\_\_ (claim period end date), we shall be discharged from all liabilities under this guarantee thereafter.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

Bank's rubber stamp

1. Banks full address

Designation of Signatory

2. Bank official number

|            |  |               |
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**ANNEXURE-C**

**PROFORMA FOR “NO DEMAND CERTIFICATE” BY ASSOCIATE**

(On Company's Letter head or with Company Seal)

(To be submitted by the Associate to TPWODL Accounts Department at the time of receipt of full and final payment)

**(Certificate No. CCP/002)**

Name of the Project Order/

Contract No.

Dated

Name of the Associate Scheme

No. / Job No.

We, M/s. \_\_\_\_\_ (Associate) do hereby acknowledge and confirm that we have received the full and final payment due and payable to us from TPWODL, in respect of our aforesaid Order No \_\_\_\_\_ dated \_\_\_\_\_ including amendments, if any, issued by TPWODL to our entire satisfaction and we further confirm that we have no claim whatsoever pending with TPWODL under the said contract / W.O.

Notwithstanding any protest recorded by us in any correspondence, documents, measurement books and / or final bills etc., we waive all our rights to lodge any claim or protest in future under this contract.

We are issuing this “NO DEMAND CERTIFICATE” in favour of TPWODL, with full knowledge and with our free consent without any undue influence, misrepresentation, coercion etc.

**Place**

**Name**

(Company Seal)

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**ANNEXURE-D**

**PROFORMA FOR APPLICATION FOR ISSUANCE OF CONSOLIDATED TDS  
CERTIFICATE**

To be printed on the letterhead

To,

The TP Western Odisha Distribution Ltd,

Burla

**Sub: Application for issuance of Consolidated TDS Certificate for the FY \_\_\_\_\_**

Dear Sir,

I / we hereby request / authorize you to issue me / us a consolidate TDS Certificate for the financial year \_\_\_\_\_ against tax deducted at source by you from my / our payments / bills during the said year from time to time under Chapter XVII – B of the Income Tax Act, 1961. For and on behalf of

Signature

Name

Address

Contact No. (Land Line)

(Mobile)

PAN #

Assessing authority

**ATTACH THE COPY OF PAN CARD**

|            |  |               |
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**ANNEXURE-E**

**BUSINESS ASSOCIATE FEEDBACK FORM**

With an objective to improve our internal processes and systems, and serve you better, we solicit your valuable feedback & suggestions. It is estimated that it will take about 10 minutes to complete this survey. We assure you that your feedback shall be kept confidential. Please send the duly filled feedback form in the "TPWODL addressed - attached envelop"

**You are associated with us as**

- OEMs    Service Contractor    Material Suppliers    Material & Manpower Supplier

**You are associated with us for**

- Less than 1 year    More than 1 year but less than 3 years    More than 3 years

**Your office is located at**

- Sambalpur    Within 200 kms from Sambalpur    More than 200 kms from Sambalpur

**Your nearly turnover with TPWODL**

- Less than 25 Lacs    25 Lacs to 1 Crore    More than 1 Cr.

**Additional Information**

|                          |  |
|--------------------------|--|
| <b>Your Name</b>         |  |
| <b>Your Designation</b>  |  |
| <b>Your Organization</b> |  |
| <b>Contact Nos.</b>      |  |
| <b>Email</b>             |  |

*We once again thank you for your participation in this survey. Please spare 10 minutes to give your feedback on following pages (Section A to E)*

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### SECTION – A

(Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement).

| S. No. | Parameters   | 1            | 2                     | 3                 | 4                   | 5           | Remarks/<br>Suggestion |
|--------|--|--------------|-----------------------|-------------------|---------------------|-------------|------------------------|
|        |  | Do Not Agree | Slightly in Agreement | In Fair Agreement | Mostly in Agreement | Fully Agree |                        |
| 1      | You receive all relevant queries / tenders from us in timely manner.   |              |                       |                   |                     |             |                        |
| 2      | We provide you enough lead time to respond to our queries / tenders.   |              |                       |                   |                     |             |                        |
| 3      | We provide you adequate support (drawings, documents, clarifications, briefing etc.) to enable you meet our requirements.      |              |                       |                   |                     |             |                        |
| 4      | All following elements of our contract / purchase order are rational :   |              |                       |                   |                     |             |                        |
| 4.1    | Scope of Work  |              |                       |                   |                     |             |                        |
| 4.2    | Delivery / Execution Schedule  |              |                       |                   |                     |             |                        |
| 4.3    | Payment Terms  |              |                       |                   |                     |             |                        |
| 4.4    | Liquidated Damages   |              |                       |                   |                     |             |                        |
| 4.5    | Performance Guarantee  |              |                       |                   |                     |             |                        |
| 5      | Our purchase orders / contracts are simple, specific & easy to understand  |              |                       |                   |                     |             |                        |
| 6      | TPWODL demonstrate willingness to be flexible in administration of Contract / Purchase Order                                   |              |                       |                   |                     |             |                        |
| 7      | We provide timely responses / clarifications to your queries   |              |                       |                   |                     |             |                        |
| 8      | TPWODL representative you interact / coordinate with is adequately empowered to support you in meeting contractual obligations |              |                       |                   |                     |             |                        |
| 9      | TPWODL provide you all necessary infrastructure support for timely and quality completion of work (including AMC)              |              |                       |                   |                     |             |                        |
| 10     | TPWODL Engineer-in-Charge timely certifies the jobs executed/ material supplied  |              |                       |                   |                     |             |                        |
| 11     | TPWODL Engineer-in-Charge efficiently supervises the job execution for timely completion of job                                |              |                       |                   |                     |             |                        |
| 12     | BIRD (Bill Inward Receipt Desk) initiative has improved payment disbursement process   |              |                       |                   |                     |             |                        |

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| S. No. | Parameters   | 1            | 2                     | 3                 | 4                   | 5           | Remarks/<br>Suggestion |
|--------|--|--------------|-----------------------|-------------------|---------------------|-------------|------------------------|
|        |  | Do Not Agree | Slightly in Agreement | In Fair Agreement | Mostly in Agreement | Fully Agree |                        |
| 13     | Our approach for Inspection and Quality Assurance effective to expedite project completion?                |              |                       |                   |                     |             |                        |
| 14     | TPWODL never defaults on contractual terms   |              |                       |                   |                     |             |                        |
| 15     | In TPWODL Contracts closure is done within set time limit  |              |                       |                   |                     |             |                        |
| 16     | Our material receiving procedures are well defined and efficiently deployed to reduce mutual inconvenience |              |                       |                   |                     |             |                        |
| 17     | Bank Guarantees are released in time bound manner  |              |                       |                   |                     |             |                        |
| 18     | Our processes related to payment / account settlement are effective.                                       |              |                       |                   |                     |             |                        |
| 19     | You get payments on time   |              |                       |                   |                     |             |                        |
| 20     | TPWODL Employees follow Ethical behaviour  |              |                       |                   |                     |             |                        |

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### SECTION – B

SECTION – B (Please rate the following parameters on a scale of 1 to 5, where 1 - Minimum; 5 - Maximum)

| S. No. | Parameters   | 1 | 2 | 3 | 4 | 5 | Remarks/<br>Suggestion |
|--------|--|---|---|---|---|---|------------------------|
| 1      | How do you rate courtesy/ empathy/ attitude level and warmth of TPWODL employees you interact with from following team?                                      |   |   |   |   |   |                        |
| 1.1    | Project Engineering  |   |   |   |   |   |                        |
| 1.2    | District / Zones   |   |   |   |   |   |                        |
| 1.3    | Projects/HOG (TS &P)   |   |   |   |   |   |                        |
| 1.4    | Inspection & Quality Assurance   |   |   |   |   |   |                        |
| 1.5    | Stores   |   |   |   |   |   |                        |
| 1.6    | Metering & Billing   |   |   |   |   |   |                        |
| 1.7    | Accounts / Finance   |   |   |   |   |   |                        |
| 1.8    | Administration   |   |   |   |   |   |                        |
| 1.9    | IT & Automation  |   |   |   |   |   |                        |
| 2      | How would you rate TPWODL in comparison to your other clients in terms of <b>fairness of treatment and transparency</b> with its Business Associates?        |   |   |   |   |   |                        |
| 3      | How would you rate TPWODL in comparison to your other clients in terms of <b>processes and systems to manage partnership</b> with its Business Associates    |   |   |   |   |   |                        |
| 4      | How would you rate TPWODL in comparison to your other clients in terms of <b>building long term &amp; mutually relationship</b> with its Business Associates |   |   |   |   |   |                        |

### SECTION – C

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

| S. No. | Parameters  | Certainly No | Probably No | Certainly Yes | Probably Yes | Remarks/<br>Suggestion |
|--------|---|--------------|-------------|---------------|--------------|------------------------|
| 1      | Based on your experience with TPWODL, would you like to continue your relationship with TPWODL? |              |             |               |              |                        |
| 2      | If someone asks you about TPWODL, would you talk "positively" about                             |              |             |               |              |                        |



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|   |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
|   | TPWODL?   |  |  |  |  |  |
| 3 | Would you refer TPWODL name to others in your community, fraternity and society as a professional & dynamic organization? |  |  |  |  |  |

### SECTION - D

**If we ask you to rate us on a scale of 1 to 10, how will you rate TPWODL, that truly represents your overall satisfaction with us (please tick appropriate box) -**

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

### SECTION - E

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

Please spare your thoughts for TPWODL's improvement in particular areas of weaknesses, particularly relating to some great practices, attitudes that you have seen elsewhere in Indian and International Organizations, which you recommend TPWODL to adopt. Please give your valuable salient recommendations.

Please spare your thoughts for TPWODL's improvement in particular areas of major concerns for you. We also welcome your suggestions to adopt any best practices, attitudes that you

| Recommendation  | Please tick (✓) your top 5 expectations out of the following 10 points listed below -           |  |
|---|---|--|
| (Please list down improvement you expect from TPWODL) | <i>Timely payment</i>   |  |
| 1   | <i>Flexibility in Contracts/PO</i>  |  |
|   | <i>Clarity in PO,s &amp; Contracts</i>  |  |
| 2   | <i>Timely response to quarries</i>  |  |
|   | <i>Timely certification of works executed</i>   |  |
| 3   | <i>Clarity in Specs, drawings, other docs etc.</i>  |  |
|   | <i>Adequate information provided on website for tender notification, parties qualified etc.</i> |  |
| 4   | <i>Timely receipt of material at site for execution</i>   |  |

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|   |   |  |
|---|---|--|
|   | <i>Performance Guarantee/EMD released in time</i>                           |  |
| 5 | <i>Inspection &amp; quality assurance support for timely job completion</i> |  |

We thank you for your time and courtesy!!

**ANNEXURE-F**

**ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT**

***(To be signed and stamped by the bidder prior to participation in the auction event)***

In a bid to make our entire procurement process more fair and transparent, TPWODL intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

**The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:**

1. TPWODL shall provide the user id and password to the authorized representative of the bidder. (Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).
2. TPWODL will make every effort to make the bid process transparent. However, the award decision by TPWODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPWODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPWODL.
6. In case of intranet medium, TPWODL shall provide the infrastructure to bidders. Further, TPWODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out rightly rejected by TPWODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPWODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of the auction event shall be considered by TPWODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

**Signature & Seal of the Bidder**

|            |  |               |
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**ANNEXURE-G**

To,

DGM (Finance)  
The TP Western Odisha Distribution Ltd  
Burla

**Sub: e-Payments through National Electronic Fund Transfer (NEFT) OR Real Time Gross Settlement System (RTGS)**

Dear Sir,

We request and authorize you to affect e-payment through NEFT/RTGS to our Bank Account as per the details given below:-

Vendor Code :

Title of Account in the Bank :

Account Type :

(Please mention here whether account is Savings/Current/Cash Credit)

Bank Account Number :

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Name & Address of Bank :

Bank Contact Person's Names :

Bank Tele Numbers with STD Code :

Bank Branch MICR Code :

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(Please enclose a Xerox a copy of a cheque. This cheque should not be a payable at par cheque)

Bank Branch IFSC Code :

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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(You can obtain this from branch where you have your account)

Email Address of accounts person: :  
(to send payment information)

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Name of the Authorized Signatory: \_\_\_\_\_ :

Contact Person's Name:

Official Correspondence Address:

We confirm that we will bear the charges, if any, levied by our bank for the credit of NEFT/RTGS amounts in our account. Any change in above furnished information shall be informed to TPWODL well in time at our own. Further, we kept TPWODL indemnified for any loss incurred due to wrong furnishing of above information.

Thanking you,

For \_\_\_\_\_

**(Authorised Signatory)**

**(Signature with Rubber Stamp)**

**Certification from Bank:**

We confirm that we are enabled for receiving NEFT/RTGS credits and we further confirm that the account number (specify Bank a/c no.) of (Please mention here name of the account holder), the signature of the authorised signatory and the MICR and IFSC Code of our branch mentioned above are correct.

This also is certified that the above information is correct as per Bank record

**(Manager's/ Officers Signature under Bank Stamp)**

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**ANNEXURE-H**  
**VENDOR APPRAISAL FORM**

| <b>TO BE SUBMITTED BY VENDOR (To be filled as applicable)</b> |   |  |   |
|---|---|--|---|
| <b>VENDOR:</b>  |   |  |   |
| <b>1.0</b>  | <b>DETAILS OF THE FIRM</b>  |  |   |
|   | 1.1   | NAME (IN CAPITAL LETTERS)  | : |
|   | 1.2   | TYPE OF CONCERN (PROPRIETARY)<br>Partnership, Pvt. Ltd., Public Ltd. etc.              | : |
|   | 1.3   | YEAR OF ESTABLISHMENT  | : |
|   | 1.4   | LOCATION OF OFFICE<br>POSTAL ADDRESS<br>TELEGRAPHIC ADDRESSES,<br>TELEX NO.<br>FAX NO. | : |
|   | 1.5   | LOCATION OF MANUFACTURING UNITS  | : |
|   |   | i) UNITS 1   | : |
|   |   | ii) OTHER UNITS  | : |
| <b>2.0</b>  | <b>PRODUCTS MANUFACTURED</b>  |  |   |
| <b>3.0</b>  | <b>TURNOVER DURING THE LAST 3 YEARS (TO BE VERIFIED WITH THE LATEST PROFIT &amp; LOSS STATEMENT).</b> |  |   |
| <b>4.0</b>  | <b>VALUE OF FIXED ASSETS</b>  |  |   |
| <b>5.0</b>  | <b>NAME &amp; ADDRESS OF THE BANKERS</b>  |  |   |
| <b>6.0</b>  | <b>BANK GUARANTEE LIMIT</b>   |  |   |
| <b>7.0</b>  | <b>CREDIT LIMIT</b>   |  |   |
| <b>8.0</b>  | <b>TECHNICAL</b>  |  |   |
|   | 8.1   | NO. OF DESIGN ENGINEERS (INDICATE NO. OF YEARS EXPERIENCE IN RELATED FIELDS)           | : |
|   | 8.2   | NO. OF DRAUGHTS MEN  | : |
|   | 8.3   | COLLABORATION DETAILS (IF ANY)   | : |
|   |   | 8.3.1 DATE OF COLLABORATION  | : |
|   |   | 8.3.2 NAME OF COLLABORATOR   | : |
|   |   | 8.3.3 RBI APPROVAL DETAILS   | : |
|   |   | 8.3.4 EXPERIENCE LIST OF COLLABORATOR  | : |
|   |   | 8.3.5 DURATION OF AGREEMENT  | : |
|   | 8.4   | AVAILABILITY OF STANDARDS / DESIGN PROCEDURES / COLLABORATOR'S /                       | : |

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|-------------|---------------------------------------|---|---|
|             |                                       | DOCUMENTS (CHECK WHETHER THESE ARE LATEST/CURRENT)  |   |
|             | 8.5                                   | TECHNICAL SUPPORT, BACK-UP GUARANTEE, SUPERVISION, QUALITY CONTROL BY COLLABORATOR (WHEREVER ESSENTIAL). (THIS CLAUSE IS RELEVANT WHEN VENDOR'S EXPERIENCE IS INADEQUATE) | : |
|             | 8.6                                   | QUALITY OF DRAWINGS   | : |
| <b>9.0</b>  | <b>MANUFACTURE</b>                    |   |   |
|             | 9.1                                   | SHOP SPACE, LAYOUT LIGHTING, VENTILATION, ETC.  | : |
|             | 9.2                                   | POWER (KVA)   | : |
|             |                                       | MAINS INSTALLED   | : |
|             |                                       | UTILIZED  | : |
|             |                                       | STANDBY POWER SOURCE  | : |
|             | 9.3                                   | MANUFACTURING FACILITIES (ATTACH LIST OF EQUIPMENT AS APPLICABLE)   | : |
|             |                                       | 9.3.1 MATERIAL HANDLING   | : |
|             |                                       | 9.3.2 MACHINING   | : |
|             |                                       | 9.3.3 FABRICATION   | : |
|             |                                       | 9.3.4 HEAT TREATMENT  | : |
|             |                                       | 9.3.5 BALANCING FACILITY  | : |
|             |                                       | 9.3.6 SURFACE TREATMENT PRIOR TO PAINTING/ COATING, POLISHING, PICKLING, PASSIVATION, PAINTING, ETC.  | : |
|             | 9.4                                   | SUPERVISORY STAFF   | : |
|             | 9.5                                   | ADEQUACY OF SKILLED LABOURS (MACHINISTS, WELDERS, ETC.)   | : |
|             | 9.6                                   | NO. OF SHIFTS   | : |
|             | 9.7                                   | TYPE OF MATERIAL HANDLED (SUCH AS CS, SS, ETC.)   | : |
|             | 9.8                                   | WORKMANSHIP   | : |
|             | 9.9                                   | MATERIAL IN STOCK AND VALUE   | : |
|             | 9.10                                  | TRANSPORT FACILITIES  | : |
|             | 9.11                                  | CARE IN HANDLING  | : |
| <b>10.0</b> | <b>INSPECTION / QC / QA / TESTING</b> |   |   |
|             | 10.1                                  | NUMBER OF PERSONNEL (INDICATE NO. OF YEARS OF EXPERIENCE)   | : |
|             | 10.2                                  | INDEPENDENCE FROM PRODUCTION  | : |

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|--|---------------|--|---|
|  | 10.3          | AVAILABILITY OF PROCEDURAL WRITE UP/QUALITY PLAN   | : |
|  | 10.4          | INCOMING MATERIAL CONTROL AND DOCUMENTATION  | : |
|  | 10.5          | RELIABILITY/REPUTATION OF SUPPLY SOURCES   | : |
|  | 10.6          | STAGE INSPECTION AND DOCUMENTATION   | : |
|  | 10.7          | SUB-ASSEMBLY & DOCUMENTATION   | : |
|  | 10.8          | FINAL INSPECTION AND DOCUMENTATION   | : |
|  | 10.9          | PREPARATION OF FINAL DOCUMENTATION PACKAGE   | : |
|  | 10.10         | TYPE TEST FACILITIES   | : |
|  | 10.11         | ACCEPTANCE TEST FACILITIES   | : |
|  | 10.12         | CALIBRATION OF INSTRUMENTS AND GAUGES (WITH TRACEABILITY TO NATIONAL STANDARDS) (ATTACH LIST)  | : |
|  | 10.13         | STATUTORY APPROVALS LIKE BIS, IBR, ETC.(AS APPLICABLE)   | : |
|  | 10.14         | SUB-VENDOR APPROVAL SYSTEM AND QUALITY CONTROL   | : |
|  | 10.15         | DETAILS OF TESTS CARRIED OUT AT INDEPENDENT RECOGNIZED LABORATORIES  | : |
|  |               | i) FURNISH LIST OF TESTS CARRIED OUT AND THE NAME OF THE LABORATORY WHERE THE TESTS WERE CONDUCTED   | : |
|  |               | ii) CHECK AVAILABILITY OF CERTIFICATES AND REVIEW THESE WHEREVER POSSIBLE  | : |
|  | <b>11.0</b>   | <b>EXPERIENCE (INCLUDING CONSTRUCTION / ERECTION / COMMISSIONING) TO BE FURNISHED IN THE FORMAT INDICATED IN APPENDIX)</b>   | : |
|  | <b>12.0</b>   | <b>SALES, SERVICE AND SITE ORGANIZATIONAL DETAILS</b>  | : |
|  | <b>13.0</b>   | <b>CERTIFICATE FROM CUSTOMERS (ATTACH COPIES OF DOCUMENTS)</b>   | : |
|  | <b>14.0</b>   | <b>POWER SITUATION</b>   | : |
|  | <b>15.0</b>   | <b>LABOUR SITUATION</b>  | : |
|  | <b>16.0 *</b> | <b>APPLICABILITY OF SC/ST RELAXATION (Y/N) IF YES, SUPPORTING DOCUMENTS TO BE ATTACHED</b>   | : |
|  | <b>17.0</b>   | <b>ORGANIZATIONAL DETAILS</b><br>1. PF NO<br>2. ESI NO<br>3. INSURANCE FOR WORK MAN COMPENSATION ACT NO<br>4. ELECTRICAL CONTRACT LIC NO<br>5. ITCC / PAN NO<br>6. SALES TAX NO<br>7. WC TAX REG. NO | : |
|  | <b>18.0</b>   | <b>DOCUMENTS TO BE ENCLOSED:</b>   | : |

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|--|--|--|
|  | <ol style="list-style-type: none"> <li>1. FACTORY LICENSE</li> <li>2. ANNUAL REPORT FOR LAST THREE YEARS</li> <li>3. TYPE TEST REPORT FOR THE ITEM</li> <li>4. PAST EXPERIENCE REPORTS</li> <li>5. ISO CERTIFICATE –QMS, EMS, OHAS, SA</li> <li>6. REGISTRATION OF SALES TAX</li> <li>7. COPY OF TIN NO.</li> <li>8. COPY OF SERVICE TAX NO.</li> <li>9. REGISTRATION OF CENTRAL EXCISE</li> <li>10. COPY OF INCOME TAX CLEARANCE.</li> <li>11. COPY OF PF REGISTRATION</li> <li>12. COPY OF ESI REGISTRATION</li> <li>13. COPY OF INSURANCE FOR WORK MAN COMPENSATION ACT NO</li> <li>14. COPY OF ELECTRICAL CONTRACT LIC NO</li> <li>15. COPY OF PAN NO</li> <li>16. COPY OF WC TAX REGISTRATION</li> <li>17. DOCUMENTS IN SUPPORT OF SC/ST RELAXATION AT S.NO.16.0</li> <li>18. GSTN CERTIFICATE</li> </ol> |  |
|--|--|--|

\* **Classification of BA s under SC/ST shall be governed under following guidelines:**

- **Proprietorship/ Single Ownership Firm:** Proprietor of the firm should be from SC/ST community. Governing document shall be Proprietorship Deed.
- **Partnership Firm:** Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed.
- **Private Limited Company:** Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

*NOTE: Certification from SC/ST Commission shall be required for deciding upon SC/ST status of a person.*



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**ANNEXURE-I**  
**MANUFACTURER AUTHORIZATION FORM**

*(To be submitted on OEM's Letter Head)*

Date: .....

Tender Enquiry No.: .....

To,  
Chief (Procurement & Stores)  
The TP Western Odisha Distribution Ltd,  
Burla

Sir,

WHEREAS M/s. [name of OEM], who are official manufacturers of ..... having factories at [address of OEM] do hereby authorize M/s [name of bidder] to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us

.....and to subsequently negotiate and sign the Contract.

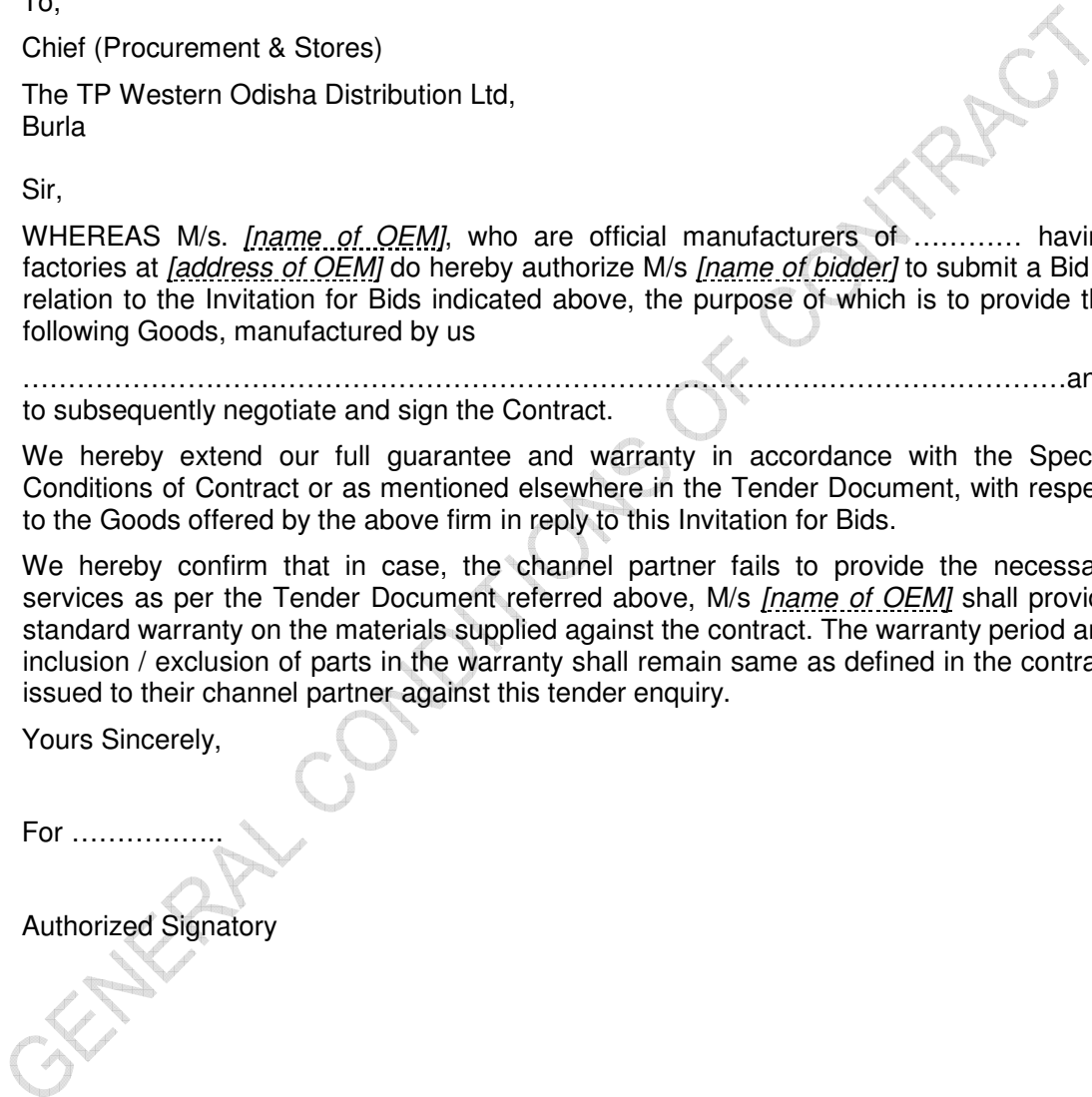
We hereby extend our full guarantee and warranty in accordance with the Special Conditions of Contract or as mentioned elsewhere in the Tender Document, with respect to the Goods offered by the above firm in reply to this Invitation for Bids.


We hereby confirm that in case, the channel partner fails to provide the necessary services as per the Tender Document referred above, M/s [name of OEM] shall provide standard warranty on the materials supplied against the contract. The warranty period and inclusion / exclusion of parts in the warranty shall remain same as defined in the contract issued to their channel partner against this tender enquiry.

Yours Sincerely,

For .....

Authorized Signatory



|   |  |              |
|---|--|--------------|
|  | TP WESTERN ODISHA DISTRIBUTION LIMITED         |              |
|   | WORK INSTRUCTION /OPERATING GUIDELINES         |              |
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| CLAUSE NO. | DESCRIPTION                                |
| <b>1.0</b> | <b>ORGANIZATIONAL VALUES</b>               |
| <b>2.0</b> | <b>ETHICS</b>                              |
| <b>3.0</b> | <b>CONTRACT PARAMETERS</b>                 |
| 3.1        | Issue/Award of Contract                    |
| 3.2        | Contract Commencement Date                 |
| 3.3        | Contract Completion Date                   |
| 3.4        | Contract Period/Time                       |
| 3.5        | Contract Execution Completion Date         |
| 3.6        | Contract Execution Period/Time             |
| 3.7        | Contract Price /Value                      |
| 3.8        | Contract Document                          |
| 3.9        | Contract Language                          |
| 3.10       | Reverse Auction                            |
| <b>4.0</b> | <b>SCOPE OF WORK</b>                       |
| 4.1        | Indemnity                                  |
| 4.2        | Display of notice boards at work site      |
| 4.3        | Disposal of waste at site                  |
| 4.4        | Deployment of workforce                    |
| 4.5        | Damage of Properties                       |
| 4.6        | Issuance of material                       |
| 4.7        | Company's right to use works               |
| 4.8        | Rights of TPWODL to vary the scope work    |
| <b>5.0</b> | <b>PRICES/RATES/TAXES</b>                  |
| 5.1        | Changes in statutory Tax Structure         |
| <b>6.0</b> | <b>TERMS OF PAYMENT</b>                    |
| 6.1        | Pre-requisites for payment                 |
| 6.2        | Bills and invoices                         |
| 6.3        | Payment and statutory deductions           |
| 6.3.1      | Statutory deductions                       |
| 6.4        | Guidelines for raising running/final bills |
| 6.5        | Quantity Variation                         |
| 6.6        | Full and Final Payment                     |
| <b>7.0</b> | <b>MODE OF PAYMENT</b>                     |

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| <b>9.0</b>  | <b>STATUTORY COMPLIANCE</b>   |
| 9.1         | Compliance to Various Acts  |
| 9.2         | SA 8000   |
| 9.3         | Affirmative Action  |
| 9.4         | Compliance to Labour Laws   |
| 9.5         | Compliance to C&D Waste Management Rules & Environment (Protection) Amendment Rules |
| <b>10.0</b> | <b>QUALITY</b>  |
| 10.1        | Knowledge of Requirements   |
| 10.2        | Adherence to Rules & Regulations  |
| 10.3        | Specifications and Standards  |
| <b>11.0</b> | <b>SAFETY</b>   |
| <b>12.0</b> | <b>GUARANTEE</b>  |
| 12.1        | Guarantee of Performance  |
| 12.2        | Guarantee period  |
| 12.3        | Failure in Guarantee period (GP)  |
| 12.4        | Cost of repairs on failure in GP  |
| 12.5        | Guarantee Period for Goods Outsourced   |
| 12.6        | Latent Defect   |
| <b>13.0</b> | <b>LIQUIDATED DAMAGES</b>   |
| 13.1        | LD Waiver Request   |
| 13.2        | Material Recovery   |
| <b>14.0</b> | <b>ASSIGNMENT OR SUBCONTRACTING</b>   |
| <b>15.0</b> | <b>UNLAWFUL ACTIVITIES</b>  |
| <b>16.0</b> | <b>CONFIDENTIALITY</b>  |
| 16.1        | Documents   |
| 16.2        | Geographical Data   |
| 16.3        | Associate's Processes   |
| 16.4        | Exclusions  |
| 16.5        | Violation   |
| <b>17.0</b> | <b>INTELLECTUAL PROPERTY RIGHTS</b>   |
| <b>18.0</b> | <b>INDEMNITY</b>  |
| <b>19.0</b> | <b>LIABILITY &amp; LIMITATIONS</b>  |
| 19.1        | Liability   |
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| <b>20.0</b> | <b>FORCE MAJEURE</b>                         |
| <b>21.0</b> | <b>SUSPENSION OF CONTRACT</b>                |
| 21.1        | Suspension for Convenience                   |
| 21.2        | Suspension for Breach of Contract Conditions |
| 21.3        | Compensation in lieu of Suspension           |
| <b>22.0</b> | <b>TERMINATION OF CONTRACTS</b>              |
| 22.1        | Termination for default/breach of contract   |
| 22.2        | Termination for convenience of associate     |
| 22.3        | Termination for convenience of TPWODL        |
| <b>23.0</b> | <b>Dispute resolution and arbitration</b>    |
| <b>24.0</b> | <b>Governing laws and jurisdiction</b>       |
| <b>25.0</b> | <b>ATTRIBUTES OF GCC</b>                     |
| 25.1        | Cancellation                                 |
| 25.2        | Severability                                 |
| 25.3        | Order of Priority                            |
| <b>26.0</b> | <b>INSURANCE</b>                             |
| <b>27.0</b> | <b>ERRORS AND OMISSIONS</b>                  |
| <b>28.0</b> | <b>TRANSFER OF TITLES</b>                    |
| <b>29.0</b> | <b>SUGGESTIONS &amp; FEEDBACK</b>            |
| <b>30.0</b> | <b>CONTACT POINTS</b>                        |
| <b>31.0</b> | <b>LIST OF ANNEXURES</b>                     |

## 1.0 ORGANIZATIONAL VALUES

The Tata Group has always been a value driven organization. These values continue to direct the Group's growth and businesses. The six core Tata Values underpinning the way we do business are:

**Integrity** - We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.

**Understanding** - We must be caring, respectful, compassionate and humanitarian towards our colleagues and customers around the world and always work for the benefit of India.

**Excellence** - We must constantly strive to achieve the highest possible standards in our day to day work and in the quality of goods and services we provide.

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**Unity** - We must work cohesively with our colleagues across the group and with our customers and partners around the world to build strong relationships based on tolerance, understanding and mutual co-operation.

**Responsibility** - We must continue to be responsible and sensitive to the countries, communities and environments in which we work, always ensuring that what comes from the people goes back to the people many times over.

**Agility** - We must work in a speedy and responsive manner and be proactive and innovative in our approach.

## **2.0 ETHICS**

In our effort towards Excellence and in Management of Business Ethics at TPWODL, an Ethics Management Team is constituted.

The main objective of the Ethics Management Team is to:

1. Record, address and allay the issues and concerns on ethics raised by different stakeholders like employees, consumers, vendors, Associates etc. by initiating immediate corrective actions.
2. Ensure proper communication of the ethics policies and guidelines through prominent displays at all offices of TPWODL and through printed declarations in all concerned documents where external stakeholders are involved.
3. Ensure proper framework of policies as preventive measures against any ethics violation recorded by them.
4. Prepare and submit MIS of all issues and concerns, corrective and preventive actions on monthly basis to the top management for their information.

All members of Team TPWODL, Associates and Stakeholders are requested to register any grievance on ethics violation.

## **3.0 CONTRACT PARAMETERS**

### **3.1 Issue/ Award of Contract**

TPWODL awards the contract to the Associate in writing in the form of Purchase order (PO) or a Rate Contract (RC), hereafter referred as Contract, through in any or all of following modes-physical handover / post / e-mail / web document / fax with all the attachments/enclosures which shall be part of the contract document

On receipt of the contract, the associate shall return to TPWODL copy of the contract document duly signed by legally authorized representative of associate, within two days of Effective Date of Contract for contracts having contract execution time less than 30 days and within five days for all other contracts.

### **3.2 Contract Commencement Date**

The date of issue/ award of contract shall be the Effective Date of Contract or Contract Commencement date.

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### **3.3 Contract Completion Date**

The date of expiry of Guarantee Period shall be deemed as the Contract Completion Date.

### **3.4 Contract Period/Time**

The period from Contract Commencement Date to Contract Completion Date shall be deemed as the Contract Period/Time.

### **3.5 Contract Execution Completion Date**

The stipulated date for completing the execution of all items in the schedule of quantities (Supply, Service and or both as applicable) shall be deemed as the Contract Execution Completion Date.

### **3.6 Contract Execution Period/Time**

The Period from Contract Commencement Date to Contract Execution Completion Date shall be the Contract Execution Period/Time. Timely Completion of Works/Timely Delivery of Materials is the essence of the contract. The period from effective date of contract to the date stipulated for completion of delivery of all items/completion of all the works/services, as per schedule of quantities of the contract is defined as contract execution completion time. The Delivery of Materials /The Completion of Works, as applicable, should be achieved in all respects as per schedules of quantities and all the terms and conditions of the contract, in the contract execution time.

Any revision/amendment in the originally stipulated contract execution time has to be approved by authorized representative of TPWODL.

### **3.7 Contract Price /Value**

The total all inclusive price/value mentioned in the PO/RC of the contract document is the Contract Price/Value and is based on the quantity, unit rates and prices quoted and awarded and shall be subject to adjustment based on actual quantities supplied/actual measurement of work done and accepted and certified by the authorised representative of the company unless otherwise specified in schedule of quantities or in contract documents.

### **3.8 Contract Document**

The Contract Document shall mean and include but not limited to the following:

- NIT/Tender Enquiry, QR, Instruction to Bidders, Special Condition of Contract (SCC) of tender, GCC, Technical & Commercial Specifications including relevant annexure and attachments).
- Bids & Proposals Received from Associate including relevant annexure/attachments.
- Letter of Intent (LOI/RC/PO) with agreed deviations from the tender/bid documents.
- All the Inspection and Test reports, Detailed Engineering Drawings.
- Material Dispatch Clearance Certificate (MDCC).
- Minutes of Meeting (MoM)

### **3.9 Contract Language**

All documents, instructions, catalogues, brochures, pamphlets, design data, norms and calculations, drawings, operation, maintenance and safety manuals, reports, labels, on deliveries and any other data shall be in English Language.

|            |   |              |
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The Contract documents and all correspondence between the TPWODL, Third Parties associated with the contract, and the Associate shall be in English language.

However, all signboards required indicating "Danger" and/or security at site and otherwise statutory required shall be in English, Hindi, and local languages.

### 3.10 Reverse Auction

TPWODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products / services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached in Annexure I. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form as mentioned in the Annexure I as a token of acceptance for the same.

### 4.0 SCOPE OF WORK

All the activities that are to be undertaken by the Associate to realize the contractual deliverables in completeness form Scope of Work. Following clauses list, but not limited to, major requirements of the scope of work.

The associate shall satisfy himself fully with the details and undertake fully the works as listed in schedule of quantities and conditions, under which the same to be performed. Associate may visit site to equip themselves with all the information required for the execution of work. Unless otherwise stated in the contract, the scope of work shall also include, but not limited to, the following.

The associate shall deliver equipment/material at site/stores, carry out erection, testing and commissioning and put into satisfactory operation as defined in contract. Unloading at site, storage, preservation, security and handling of the items at work places till completion of contract is also in scope of work.

The associate shall obtain statutory clearances for the works executed by him.

The associate shall provide comprehensive insurance for entire works for contract value and third party liability insurance to cover all risks till completion of contract.

All transport / lifting/ unloading/ storage/preservation of items at site shall be arranged by the Associate at no extra cost to TPWODL. All these activities shall be performed in line with original equipment manufacturers' recommendations and/or as per best engineering practices, with due consent of TPWODL Engineer-in-charge.

Completeness: Any supplies and services which might have not been specifically mentioned in the Contract but are necessary for the scope mentioned in Special Terms & Conditions and/or completeness of the works at the highest possible level, including any royalties, licence fees & compensation to be paid, whether incurred by the associates or by a third party for the work covered in the scope, regardless of when incurred, shall be supplied/provided by the associate without any extra cost and within the time schedule for efficient , smooth and satisfactory operation and maintenance of the works at the highest possible level under Indian conditions (but according to international standards for facility of this type), unless expressly excluded from the scope of supplies and services in this Contract.

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TPWODL have the right, during the performance of the Contract, to change the scope and/or technical character of the Project and/or of the supplies and services stipulated in the Contract by submitting a request in writing to the Associate. The Associate shall, within fifteen days of receipt of such request from the TPWODL, provide Purchaser with a reasonably detailed estimate of the cost of the change outlined in the request.

In the event, TPWODL requests a change, the Contract price and time shall be adjusted upwards or downwards, as the case may be and shall be mutually agreed to. The associate shall not be entitled to any extension of time unless such changes adversely affect the time schedule.

The Associate shall not proceed with the changes as requested till adjustment of contract price and time schedule where so applicable in terms of or otherwise directed by the TPWODL.

#### **4.1 Indemnity**

Associates shall undertake to fully indemnify TPWODL (also referred to as the Company in the GCC) against all kinds of liabilities or damages, of whatsoever nature, including compensation arising from any accident to the person or property of those in Associate's employment or to any other person or properties including those of TPWODL, arising due to reasons attributable to any, act, omission of the Associate the Associates, for the entire period of contract including period of guarantee.

Within 7 days of award of work, the Associates shall submit Indemnity Bond in the format as per Annexure-D to Order Issuing Authority.

In case of Labour /Erection/ Services Contracts having value more than Rs 2 Cr per Annum, Associates shall submit Indemnity Bond on Rs 100/- Non Judicial Stamp Paper in the format as per Annexure- D to Order Issuing Authority.

#### **4.2 Display of Notice Boards at Work Sites**

The Associate shall put up display notice board at each project site where the works are in progress indicating the information given below:

- Name of the Project.
- Estimated Cost of Project.
- Date of Commencement.
- Expected date of completion.
- Name of Associate and his telephone number.
- Name of Engineer-in-Charge and his telephone number.

#### **4.3 Disposal of Waste at Site**

Significant quantities of waste are generated during the execution of project and an integrated approach for effective handling, storage, transportation and disposal of the same shall be adopted. This would ensure the minimization of environmental and social impact in order to combat the climate change.

The associates shall follow the below criteria for disposal of waste at site during the execution of project.



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- Associate shall ensure that the detailed project plan include the waste management, segregation of all designated waste material (Recyclable/Non-Recyclable), collecting, storing, disposing and transferring the same to pre-arranged facility/destination in timely and safe manner as per environmental legislations during the execution of project. The project plan shall also include the innovative construction practice to eliminate or minimize waste, protect surface/ground water, control dust and other emissions to air and control noise during the execution of project. The copy of same shall be given to EIC before the commencement of project.
- The purchase policy of BA shall encourage the procurement of material with recycled and minimum packaging of goods during delivery. Associate shall provide the appropriate means for site to site transportation of materials to avoid damage and litter generation.
- Associate shall educate and inform to its project team about the requirement and responsibilities for waste minimization and disposal in general and provide training of practices that support this. Waste management should be treated like a safety program.
- In the event that area of contaminated or biological hazard is identified, Associate shall ensure that plant, equipment, personnel and any activity associated with the work is carried out in consultation with EIC of TPWODL.
- Associate shall ensure that the residents living near the site are kept informed about proposed working schedule and shall informed timings and duration of any abnormal noise full activity that is likely to happen.
- Associate shall ensure the regular maintenance and monitoring of vehicles and equipment for efficient fuel use so that emissions and noise are within acceptable limits to avoid air pollution.

#### **4.4 Deployment of Work Force**

Associate shall deploy adequate labour, as considered necessary by TPWODL for execution of the contract including Sundays and Holidays whenever required to do so with no extra cost to TPWODL. However, prior permission shall be taken from the site Engineer to carry out the work beyond normal working hours or on Sundays and Holidays. Female employees shall not be deployed beyond normal working hours/days and no child labour shall ever be deployed. Associate shall depute full time qualified and experienced engineers to supervise the work at site. All such staff shall be maintained from commencement to completion of all works to the entire satisfaction of the Engineer-in-Charge. Associate's employees deployed for the works under this contract will not be considered in Company's employment at any time. Associate shall continue to be responsible for all such employees, their safety, all types of statutory compliances related thereto and in any other manner whatsoever. The company will stand indemnified by the Associate in respect of all the above. At the same time Company upon noticing any breach or default on any statutory compliances, may at their sole discretion, decide to act in a manner as deemed fit at the risks and costs of the Associate.

TPWODL shall have the right to instruct the Associate to change the Sub- Associates or skilled /unskilled workers in case the conduct, the workmanship or speed of the work is not satisfactory.

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Associates shall submit duly signed undertaking regarding engagement of competent staff / employee commensurate to the nature of job to Engineer-in-charge in the format attached as Annexure – G.

#### **4.5 Damages of Properties**

The Associates shall take necessary steps to ensure that the equipment and installations of the Company, Third parties, including other utility services like water supply pipelines; open drains telephone cables etc. are not damaged during execution of the works. The Associates shall be responsible for all such damages and shall have to repair/ replace and/or compensate for the entire claims in respect of such damages at its own cost.

#### **4.6 Issuance of Materials**

The material issued to the Associate shall be in the custody of the Associates who shall be fully responsible for the same. After completion of the works, the Associates will reconcile the material. Any cost of material which is short or damaged/lost will be deducted from Associate bill/ deposits.

#### **4.7 Company's Right To Use Works**

If Taking Over Certificate is delayed for any reason, for which TPWODL's decision shall be final and binding upon the Associate, the Company shall be entitled to use the works or portion thereof without affecting Associate's responsibility and liability to complete the balance works as per company's directives from time to time, though Associate shall be afforded reasonable opportunity by the company to enable Associates to complete all balance works required for issuance of 'Taking Over Certificate' by the company.

#### **4.8 Rights of TPWODL to vary the scope work**

TPWODL shall have the right, during the performance of the Contract, to change the scope and/or technical character of the Project and/or of the supplies and services stipulated in the Contract by communicating the intent to do so in writing to the Associate. On receipt of such communication the Associate shall, within the time frame specified in the contract shall provide TPWODL with a reasonably detailed estimate of the cost of the change in scope outlined in the TPWODL communication. The change in the Contract price and time shall be revised upwards or downwards, as the case may be, and shall be mutually agreed to. The Associate shall not be entitled to any extension of time unless such changes adversely affect the time schedule.

The Associate shall not proceed with the changes in the scope of work till such time revision of Contract price and time schedule are approved and communicated to the associate by TPWODL.

Any change in the Scope of Work and/or Terms & Conditions of the order shall be intimated by TPWODL through an amendment to the contract. The amendment shall be treated valid only if signed by the authorized signatory of the original contract.

#### **5.0 PRICES/RATES/TAXES**

The Prices and Rates are inclusive of cost of materials supplied as per contract terms and for which MDCC is issued by TPWODL and to the extent required for completion of works, cost of service executed as per schedule of quantities, cost of testing as per contract terms, cost of documentations including all relevant test certificates and other supportive

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documents to be furnished as per contract terms. The rates shall remain firm till actual completion of contract.

The Prices/Rates are inclusive of all taxes, levies, cesses and duties, particularly Goods and Services Tax as applicable. All government levy / taxes shall be paid only when the invoice is submitted according to the relevant act.

The prices shall remain unchanged irrespective of TPWODL making changes in quantum in all or any of the schedules of items of contract.

### **5.1 Changes in Statutory Tax Structure**

If rate of any or all of the statutory taxes and duties applicable to the contract changes, such changes shall be incorporated by default if the changes occur within the contract execution time and shall be applicable if the contract is executed by the Associate within the Contract Execution Time.

For execution of contracts beyond contract execution time, where the delay is not attributable to TPWODL no upward revision in tax /duties shall be considered irrespective of changes in the statutory tax structure either within the contract execution time or beyond. However, in such cases, benefits due to any downward revisions in statutory tax rates shall be passed on to TPWODL.

## **6.0 TERMS OF PAYMENT**

### **6.1 Pre-Requisites for Payment**

- Associate should have completed execution of that part of contract, for which payment is sought, to the satisfaction of TPWODL's Engineer-in-Charge responsible for the contract and obtained certification for execution of the work.
- Associate has taken C-3 Form
- Associate has undertaken joint measurement of the work executed along with TPWODL's Engineer-in-charge.
- Associate's bills/invoices submitted have been certified by Engineer-In-Charge.

### **6.2 Bills & Invoices**

Unless specified otherwise in the special conditions of contract, Associate shall raise not more than one invoice/contract per month for the services rendered in the prescribed Tax Format and the invoice shall be submitted within 15 days of the following month at Invoice Desk, TPWODL.

All Bills shall be supported by joint measurement of work done, quality test report and a copy of wage sheet, if applicable (showing proof of having disbursed wages as per applicable law) and a copy of statement substantiating that statutory payments having been affected.

Bills/ invoices shall mention Associate's GST Number, PAN number as applicable.

Final bill submission after completion of project or execution of job must be within 30 days from the actual date of completion/execution of work awarded.

### **6.3 Payment & Statutory Deductions**

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Payment shall be released within 30 days from the submission of the bills. The associate shall submit "No Demand Certificate" in the format as per Annexure-D at the time of receipt of full and final payment. In case any non-compliance to contract conditions comes to TPWODL's notice, TPWODL will be entitled to deduct 30% of estimated wages plus 20% of wages as TPWODL's overheads. Associates would be obliged to provide the copy of monthly wage sheet in any case, failing which no payment shall be made. TPWODL at their sole discretion may deposit the PF etc. with statutory authorities. TPWODL will deduct the amounts of TDS as per statutory requirement under the income tax act and the DVAT Act and certificates (wherever applicable) will be issued to associate accordingly

In case of non-submission of PAN No TDS @ 20% shall be deducted from all payable amounts for which no TDS certificate shall be issued. TDS once deducted as above shall not be revised in any condition.

### 6.3.1 Statutory Deductions

TPWODL will deduct the amounts of TDS, TCS as per statutory requirement under the income tax act, the Goods and Services tax act, BOCW Act, or any other applicable tax act and certificates (wherever applicable) will be issued to associate accordingly.

For consumption of TPWODL's Water and Electricity by Associate for execution of Contract, Associate shall pay 0.5% & 1.0% respectively of contract value and it shall be deducted from the running bills.

The Engineer-in-Charge as stated in the Order shall be responsible for certification of the work executed and the bills. Bills (including original) shall be submitted in triplicate at Bill Inward Receipt Desk (BIRD) of TPWODL.

### 6.4 Guidelines for Raising Running/ Final Bills

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Contract Value Up to 5 Lakhs     | One Final Bill                        |
| Contract Value More than 5 lakhs | Monthly Running Bill & One Final Bill |

All Bills shall be processed only when all bank Guarantees are in place and before payments of Final Bill Associate have to furnish No Demand Certificate, as applicable.

### 6.5 Quantity Variation

Payment will be made on the basis of actual quantity of supplies/actual measurement of works accepted by TPWODL and not on the basis of contract quantity.

### 6.6 Full and Final Payment

Full & Final Payment in all contracts shall be made subject to the associate submitting "No Demand Certificate", in the format as per Annexure-C.

### 7.0 MODE OF PAYMENT

Payment shall be made through Cheque or RTGS whichever of the two modes chosen by the Associate, in favour of Associate's Bank Account on TPWODL records, on whose name Contract has been issued. Those Associates opting for the RTGS mode shall submit the details of Bank Account and other details as per annexure J. Further, for any payments made, TPWODL is not responsible for any consequences/disputes Associate have among the owners channel partners, sub-Associates and all such dispute/concerns shall be settled solely by the Associate.

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In case of service contracts, mostly the quantities of items indicated are estimated and preliminary. However, payments shall be made on the basis of actual quantity of work carried out and measured jointly by the Company and the Associate. Associates shall be responsible to organize joint measurements of works with TPWODL Engineer-in-Charge before raising any bill of work done. In the event Associate fails to do so, TPWODL at their sole discretion, may take measurements of work done and proceed as deemed fit and in such an event Associate's right to lodge any subsequent claim shall stand forfeited.

## 8.0 SECURITY CUM PERFORMANCE DEPOSIT

Associates shall submit within 15 days from the effective date of issue of PO/RC, Security cum Performance Bank Guarantee (SPBG) in the format as per Annexure B of this document from banks acceptable to TPWODL for:

- (a) 5% of the PO value if purchase order value is more than Rs 5 Crores.
  - (b) 10% of the PO value if purchase order value is less than Rs 5 Crores.
- This shall remain valid till the end of the Guarantee Period of contract, plus one month.
- (c) 5% of the RC value in case of Rate Contract. This shall remain valid till the Guarantee period plus one month.
    - For PO/RC values less than Rs. 5 lacs, Associate may request for deduction of amount equivalent to SPBG value from their first invoice. Such amount shall be withheld by TPWODL while processing the invoice and shall be released after completion of Guarantee Period plus one month.
    - For PO/RC values less than Rs. 3 lacs, the clause (8.0) for Security cum Performance Bank Guarantee (SPBG) shall not be applicable.
    - In case of RC (Rate Contract) after the expiry of RC validity, Associate shall have to submit SPBG. However, the Associate has the option to re-submit the SPBG as per actual RO (Release Order) value issued against the RC, valid for Guarantee Period plus one month. The Guarantee Period shall be considered as per the last RO issued against the said RC. The original SPBG as submitted against the RC shall be released on submission of the new SPBG to TPWODL. Alternatively, Associate may extend the validity of original SPBG only till the requisite period, i.e. guarantee period plus one month.

## 9.0 STATUTORY COMPLIANCE

### 9.1 Compliance to Various Acts

Associate should ensure adherence to the Anti-Lobbying, Debarment, Drug-Free, Child Labour, Factories Act and Shop and Establishment Workplace Certification, Registration details under Sales Tax and Works Contract Tax Act.

Associate shall bear the entire responsibility, liability and risk relating to coverage of its workforce under different statutory regulations including Workman's Compensation Act, ESI Act, Factories Act, 1948, the Contract Labour (Regulation and abolition) Act 1970, and any other relevant regulations as the case may be. Associate shall also be solely responsible for the payment of all benefits such as Provident Fund, ESI, Bonus, Leave compensation and other benefits as may be applicable under applicable labour laws, etc. as per the various statutory regulations and shall keep TPWODL indemnified in this regard against any such

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claim and provide documentary evidences of the same to TPWODL. TPWODL shall be entitled to, if necessary, make such payment and recover the amount from Associate.

Associate should ensure adherence to all applicable laws, rules and regulation applicable under this contract from time to time. In case of violation any risk, costs etc. shall be in associates account and keep TPWODL indemnified always till completion of contracts.

### 9.2 SA 8000

TPWODL expects its Associates to follow guidelines of SA 8000:2014 on the following aspects

1. Child Labour
2. Forced or Compulsory Labour
3. Health & Safety
4. Freedom of Association & Right to Collective Bargaining
5. Discrimination
6. Disciplinary Practices
7. Working Hours
8. Remuneration
9. Management System

### 9.3 Affirmative Action

TPWODL appreciate and welcome the engagement/employment of persons from SC/ST community or any other deprived section of society by their business associates.

#### Relaxation in Contract Clauses under Affirmative Action for SC/ ST Business Associates\*\*

TPWODL believes that inclusive growth is the key to sustainable development, and to promote the same Policy on Affirmative Action for Scheduled Caste & Scheduled Tribe Communities has been adopted across the company.

Under the same pre-text, and to promote entrepreneurship among SC/ST community TPWODL has taken initiative by proposing relaxations in contract clauses as per below:

| S.No. | Initiative                 | for SC/ ST BA's  | Guideline Document           |
|-------|----------------------------|--|------------------------------|
| 1     | Tender Fees                | 100% waiver for SC/ST community  | All Open Tenders             |
| 2     | Earnest Money Deposit      | 50 % relaxation of estimated EMD value                                   | All limited and Open Tenders |
| 3     | Performance Bank Guarantee | 50% relaxation in PBG for order value above 50 lacs else 25% relaxation  | All limited and Open tenders |
| 4     | Turnover                   | 25% relaxation in company turnover under qualifying requirement criteria | All Open Tenders             |

**\*\*Classification of BA s under SC/ST shall be governed under following guidelines:**

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- Proprietorship/ Single Ownership Firm: Proprietor of the firm should be from SC/ST community. Governing document shall be duly audited latest balance sheet bearing name of all the partners.
- Partnership Firm: Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed and duly audited latest balance sheet bearing name of all the partners.
- Private limited company: Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

*## Certification from SC/ST commission shall be required for deciding upon SC/ST status of a person.*

#### **9.4 Compliance to Labour Laws**

Bidder needs to ensure compliance to applicable labour laws including timely disbursement of wages. In case wages are not disbursed as per the stipulated timelines, then TPWODL shall pay the wages to BA employees on behalf of BA. Apart from deducting the amount of wages paid, TPWODL shall deduct an additional service charge equivalent to 25% of the wages paid from the payment due to BA.

#### **9.5 Compliance to Construction and Demolition Waste Management Rules & Environment (Protection) Amendment Rules**

BA is liable to follow the Construction and Demolition Waste Management Rules- 2016, Environment (Protection) Amendment Rules- 2018 and Guidelines on dust mitigation measures in handling construction material and C&D wastes issued by CPCB.

Following are some main points of above Rules/Guidelines for Construction work, cable laying jobs etc.

1. Barricading to be provided at site to cover complete area.
2. Construction material and waste should be inside the closed area made by using barricading.
3. Water sprinkling/fine spray from nozzles to be done to suppress the dust.
4. The board of Dust mitigation measures shall be displayed at site for public viewing with required details.
5. Loose sand or soil and construction material that causes dust shall be covered.
6. Transport material that are easily wind borne need to be covered by a sheet made of either jute, tarpaulin, plastic or any other effective material.
7. All areas for storing C&D waste/construction material to be demarcated and preferably barricaded particularly those materials that have potential to be dust borne.
8. Grinding and cutting of building materials in open area shall be prohibited.
9. Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.
10. No uncovered vehicles carrying construction material and waste shall be permitted.
11. Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures to be notified at the site.

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## **10.0 QUALITY**

### **10.1 Knowledge of Requirements**

The Associate shall be deemed to have carefully examined and to have knowledge of the equipment, the general and other conditions, specifications, schedules, drawings, etc. forming part of the Contract and also to have satisfied himself as to the nature and character of the work to be executed and the type of the equipment and duties required including wherever necessary of the site conditions and relevant matters and details. Any information thus procured or otherwise obtained from TPWODL/Consultants shall not in any way relieve the Associate from his responsibility and executing the works in accordance with the terms of contract.

### **10.2 Adherence to Rules & Regulations**

The Associate shall procure and/or fabricate/erect all materials and equipment in accordance with all requirements of Central and State enactment, rules and regulations governing such work in India and at site. This shall not be construed as relieving the Associate from complying with any requirement of TPWODL as enumerated in the Contract which may be more rigid than and not contrary to the above mentioned rules, nor providing such construction as may be required by the above mentioned rules and regulations. In case of variance of the Technical Specification from the laws, ordinance, rules and regulations governing the work, the Associate shall immediately notify the same to the TPWODL. It is the sole responsibility of the Associate, however, to determine that such variance exists. Wherever required by rules and regulations, the Associate shall also obtain the statutory authorities' approval for the plant, machinery and equipment to be supplied by the Associate.

### **10.3 Specifications and Standards**

The Associate shall follow all codes and standards referred in the Contract Document. Codes and standards of other may be followed by the Associate with the prior written approval of TPWODL, provided materials, supplies and equipment according to the standard are equal to or better than the corresponding standards specified in the Contract.

Brand names mentioned in the Contract documents are for the purpose of establishing the type and quality of products to be used. The Associate shall not change the brand name and qualities of the bought out items without the prior written approval of the TPWODL. All such products and equipment shall be used or installed in strict accordance with original manufacturer's recommendations, unless otherwise directed by the TPWODL. In any circumstances the codes, specimen and standards prescribed by any government agency should not be violated.

## **11.0 SAFETY**

All Associates shall strictly abide by the guidelines provided in TPWODL's Contractor Safety Management System (CSMS) as applicable at all stages during the contract period. Associate shall execute the contracts ensuring the following in and as order of priority:

- Safety of Human Beings.
- Safety of Equipment/Assets.
- Timely Completion of Contract.



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Safety related requirements as mentioned in our Contractor Safety Management System is attached as annexure K and is an integral part of this GCC. TPWODL may revise this CSMS document as a when required and the revised version shall be applicable on all contracts – current or future.

## **12.0 GUARANTEE**

### **12.1 Guarantee of Performance**

Associates shall stand guarantee that the equipment and material supplied/service or work rendered under the contract is free from design, manufacturing, material, construction, erection & installation and workmanship & quality defects and is capable of its due, rated and intended quality performance, as an integrated product delivered under the contract or a specific period termed as Guarantee Period(as elaborated elsewhere in this clause) The Associate should also guarantee that the equipment/material is new and unused except for the usage required for the tests and checks required as part of quality assurance.

### **12.2 Guarantee Period**

The Guarantee Period will be equipment/service/work specific and shall be as specified in the Standard Specifications of TPWODL for the equipment/material/service/work and where standard specifications are not part of contract documents or guarantee period is not specified in the standard specifications,, the guarantee period shall be as per the Special Terms and Conditions of the Contract. In case of no mention of the guarantee period in standard specifications or SCC Guarantee Period will be 12 Months from the Date of Commissioning or 24 months from the date of delivery of final lot of supplies made, whichever is earlier.

### **12.3 Failure in Guarantee Period (GP)**

If the equipment and material supplied/service or work rendered under the contract fails to perform its due, rated & intended quality performance, during the Guarantee period, the associate is liable to undertake repair/rectify/replace the equipment and material supplied/service or work rendered under the contract within time frame specified in the SCC or elsewhere in the contract documents at associate's cost to make the equipment and material supplied/service or work rendered under the contract of performing its due, rated and intended quality performance. If Associate fails to repair/rectify/replace the equipment or material supplied/service or work rendered under the contract, failed in Guarantee Period, TPWODL will be at liberty to get the same done at Associate's risks and costs and recover all such expenses plus the TPWODL's own charges (@ 20% of expenses incurred), from the Associate or from the "Security cum Performance Deposit" as the case may be.

If during the Warranty/ Guarantee period some parts of the supplies are replaced owing to the defects/ damages under the Warranty, the Warranty period for such replaced parts shall be until the expiry of twelve months from the date of such replacement or renewal or until the end of original Guarantee period, whichever is later.

Any repairs during the Guarantee Period shall be carried out by the Associate within 30 days of reporting the issue to Associate by TPWODL. However, if replacement of the Equipment is required, Associate shall notify the same to TPWODL within 7 days of reporting the issue by TPWODL. Thereafter, the total time for supply of new equipment/ material shall be equal to the original delivery period of that equipment/ material as specified in the Contract. In case

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the Associate is not able to rectify/ replace the faulty equipment/ material within the stipulated timelines as mentioned above, penalty shall be levied as per the Liquidated Damages clause mentioned in this document. The penalty amount shall be recovered from the payment due to the vendor or by encashment of the SPBG as the case may be.

#### **12.4 Cost of repairs on failure in GP**

The cost of repairs/rectification /replacement, apart from the actual cost of repairs/rectification/replacement is also inclusive of all associate costs of required transportation, site inspection /mobilization/dismantling and re-installation costs as applicable. The Associate has to ensure that the interruption in the usage of intended purpose of the equipment is minimized to the maximum extent In lieu of the time taken for repairs/rectification/replacement.

#### **12.5 Guarantee period for Goods Outsourced**

If the Associate outsources partly equipment/materials/services from third party as mutually agreed upon at the pre award stage of contract, TPWODL shall have the benefit of any additional guarantee period if provided by the third party for the part supplied/executed by them.

#### **12.6 Latent Defect**

Hidden defects in manufacturing or design of the product supplied and which could not be identified by the tests conducted but later manifested during operation of the equipment are termed as latent defects. Associates shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Company.

### **13.0 LIQUIDATED DAMAGES**

- a) For Services which are of standalone use, multiple in quantities and having a single final completion schedule, Liquidated damages shall be levied without prejudice to any of the other contractual rights of TPWODL, as described below:

For delay of each week and part thereof from the completion schedule specified in the contract, 1% of contract value corresponding to unexecuted work, provided full execution is done within 130% of the original contract time. If full contractual service/work rendered is not completed within 130% of contract time for execution, TPWODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract value.

- b) For services having phased completion schedule(milestone) as per contract terms, standalone use and multiple in quantities, Liquidated damages shall be levied without prejudice to any of the other contractual rights of TPWODL, as described below:

For the purpose of calculating and applying LD, each milestone shall be considered separately. For delay of each week and part thereof, from the execution of work schedule specified in the milestone, 1% of the contract value corresponding to the unexecuted work of the milestone, subject to a maximum of 10% of the total contract value of that milestone shall be levied. However, if full contractual service/work rendered is not completed within 130% of contract time for execution, TPWODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract

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value. Deduction of LD shall be on landed cost i.e contract value inclusive of taxes and in pursuant statutory compliance GST would be applicable at the stipulated rate and the same shall be borne by Business Associate. In case of LD deduction, a GST invoice shall be issued by TPWODL as a proof of deduction/ recovery.

### **13.1 LD Waiver Request**

Any request of LD waiver shall be submitted within thirty (30) days of deducting LD. Request submitted beyond the timeline shall not be entertained.

### **13.2 Material Recovery**

In case of any recoveries for materials or services (for material free issued by TPWODL and not reconciled by BA or for services claimed and paid in excess at the time of running bills), the total cost which shall be recovered from the BA, shall be the gross amount of material or services (i.e. including taxes) plus applicable taxes as prevailing at the time of such recoveries.

### **14.0 ASSIGNMENT OR SUBCONTRACTING**

Associates shall not assign/subcontract/outsource the schedule of activities of contract TPWODL enters with the associate, in part or full, without TPWODL's prior written approval. However outsourcing of materials/equipment/services by Associate to make the integrated product for which TPWODL's has placed the contract with the associate from suppliers, makes and agencies which have been mutually agreed upon during contract pre-award stage is permitted subject to following conditions.

In such cases where outsourcing is done by the Associate

- Shall ensure that outsourced suppliers comply with the technical and financial qualification requirements specified by TPWODL in the contract document
- Shall furnish all particulars about the proposed outsourcing agencies and the details of the goods/services/work outsourced to the Associate while seeking approval of TPWODL for inclusion for outsourcing. The Associate shall give approval or shall refuse approval in writing within thirty (30) days of receipt of such request. However the Associate shall not be entitled for any additional contract execution time whatsoever in lieu of the process for approval for outsourcing agencies, and shall be held responsible for any delay in the project execution time.
- Shall remain jointly and severally liable for any action, deficiency, and/or negligence on the part of his outsourcing agencies. The approval extended by the Associate to outsourcing agencies recommended by the Associate shall not discharge the later from his Contract obligations.

Shall submit to the Associate unpriced copies of purchase orders with technical specifications included in the orders, placed on outsourcing agencies as soon as the respective orders have been placed by the Associate.

### **15.0 UNLAWFUL ACTIVITIES**

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The Associate shall have to ensure that none of its employees are engaged in any unlawful activities (whether covered under the scope of the present GCC or not) subversive of the TPWODL's interest failing which appropriate action (legal or otherwise) may be taken against the Associate by the TPWODL, in accordance with the terms of the present GCC.

## **16.0 CONFIDENTIALITY**

Associate and its employees or representatives thereof shall strictly maintain the confidentiality of various information they come across while executing the contract as detailed below.

### **16.1 Documents**

All maps, plans, drawings, specifications, schemes and other documents or information related to the Contract/Project and the subject matter contained therein and all other information given to the Associate by the TPWODL in connection with the performance of the contract shall be held confidential by the Associate and shall remain the property of the TPWODL and shall not be used or disclosed to third parties by the Associate for any purpose other than for which they have been supplied or prepared. The Associate may disclose to third parties, upon execution of confidentiality agreements, such part of the drawings, specifications or information if such disclosure is necessary for the performance of the Work provided such third parties agree in writing to keep such information confidential to the same extent and degree as provided herein, for the benefit of the TPWODL.

### **16.2 Geographical Data**

Maps, layouts and photographs of the unit/plant including its surrounding regions showing vital installation for national security of country or those of TPWODL shall not be published or disclosed to the third parties or taken out of the country without prior written approval of the TPWODL and upon execution of confidentiality agreements satisfactory to the TPWODL with such third parties prior to disclosure.

### **16.3 Associate's Processes**

Title to secret processes if any developed by the Associate on an exclusive basis and employed in the design of the equipment shall remain with the Associate. TPWODL shall hold in confidence such processes and shall not disclose such processes to the third parties without prior approval of the Associate and execution by such third parties of secrecy agreements satisfactory to the Associate prior to disclosure. Upon completion of contract, such processes shall become the property of the TPWODL. Title to technical specifications, drawings, flow sheets, norms, calculations, diagrams, interpretations of test results, schematics, layouts and such other information, which the Associate has supplied to the TPWODL under the Contract shall be passed on to the TPWODL. The TPWODL shall have the right to use these for construction, erection, start-up, Trial Run, operation, maintenance, modifications and/or expansion of the works including for the manufacture of spare parts.

### **16.4 Exclusions**

The provision of Clauses 16.1 to 16.3 shall not apply to information:

- Which at the time of disclosure are in the public domain which later on become part of public domain through no fault of the party concerned, or

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- Which were in the possession of the party concerned prior to disclosure to him by the other party, or
- Which were received by the party concerned after the time of disclosure without restriction on disclosure or use, from a third party who did not acquire such information directly or indirectly from the other party or has no obligation of confidentiality for such information.

### **16.5 Violation**

In case of violation of this clause, the Associate is liable to pay compensation and damages as may be determined by the competent authority of TPWODL.

### **17.0 INTELLECTUAL PROPERTY RIGHTS**

If, in the course of performance of its functions and duties as envisaged by the scope of the present GCC, the Associate acquires or develops, any unique knowledge or information which would be covered, or, is likely to be covered within the definition of a trademark, copyright, patent, business secret, geographical indication or any other form of intellectual property right, it shall be obliged, under the terms of this present GCC, to share such knowledge or information with the TPWODL. All rights, with respect to, or arising from such intellectual property, as afore mentioned, shall solely vest in TPWODL.

Moreover, the Associate undertakes not to breach any intellectual property right vesting in a third party/parties, whether by breach of statutory provision, passing off, or otherwise. In the event of any such breach, the Associate shall be wholly liable to compensate, indemnify or make good any loss suffered by such third party/parties, or any compensation/damages arising from any legal proceeding/s, or otherwise. No liability of TPWODL shall arise in this respect, and any costs, damages, expenses, compensation payable by TPWODL in this regard to a third party/parties, arising from a legal proceeding/s or otherwise, shall be recoverable from the Associate.

### **18.0 INDEMNITY**

The Associate shall at all times indemnify, keep indemnified and hold harmless the TPWODL and its officers, directors, employees, affiliates, agents, successors and assigns against all actions, claims, demands, costs, charges and expenses arising from or incurred by reason of any infringement of patent, trade mark, registered design, copy rights and/or industrial property rights by manufacture, sale or use of the equipment supplied by the Associate whether or not the TPWODL is held liable for by any court judgement. In this connection, the TPWODL shall pass on all claims made against him to the Associate for settlement.

The Associate assumes responsibility for and shall indemnify and save harmless the TPWODL from all liability, claims, costs, expenses, taxes and assessments including penalties, punitive damages, attorney's fees and court costs which are or may be required to be paid by the TPWODL and its officers, directors, employees, affiliates, agents, successors and assigns arising from any breach of the Associate's obligations under the Contract or for which the Associate has assumed responsibilities under the Contract including those imposed under any local or national law or laws, or in respect to all salaries, wages or other compensation for all persons employed by the Associate or his Sub-Associates or suppliers in connection with the performance of any work covered by the Contract. The Associate

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shall execute, deliver and shall cause his Sub-Associate and suppliers to execute and deliver, such other further instruments and to comply with all the requirements of such laws and regulation as may be necessary there under to conform and effectuate the Contract and to protect the TPWODL.

The TPWODL shall not be held responsible for any accident or damages incurred or claims arising, due to the Associate's error there from prior to completion of work. The Associate shall be liable for such accidents and after completion of work for such accidents as the case may be due to negligence on his part to carry out Work in accordance with Indian laws and regulations and the specifications set forth herein.

## **19.0 LIABILITY & LIMITATIONS**

### **19.1 Liability**

Except for any specific liability which may be identified in the Contract and which may be payable hereunder, Associate shall not be liable for any special, incidental, indirect, or consequential Damages or any loss of business Contracts, revenues or other financial loss (or equivalents thereof no matter how claimed, computed or characterized) arising out of or in connection with the Performance of the Work or supply of Goods ***unless caused by Associate's negligence, willful misconduct or breach of contract.***

If the Associate is a joint venture or consortium, all concerned parties shall be jointly and severally bound to the TPWODL for the fulfillment of the provisions of the Contract. The consortium or the joint venture shall designate one party as their leader, who will be the coordinator between the parties and TPWODL. The constituents & leader of the consortium or joint venture shall not be changed without the prior consent of TPWODL.

TPWODL shall have no liability or any special, incidental, indirect or consequential Damages for any loss of Business Contracts, revenues or other financial loss arising out of this Contract.

### **19.2 Limitation of Liability**

The total liability of Associate against any contract shall be limited to the Total All Inclusive Contract Value.

## **20.0 FORCE MAJEURE**

Force Majeure applies if the performance by either Party ("the Affected Party") of its obligations under Contract is materially and adversely affected.

"Force Majeure" shall mean any event or circumstance or combination of events or circumstances referred below and their consequences that wholly or partly prevents or unavoidably delays any Party in the performance of its obligations under this Agreement, but only and to the extent that such events and circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided even if the Affected Party had taken reasonable care:

- Act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, embargo, blockade, revolution, riot, bombs, religious strife or civil commotion, etc.
- Politically motivated sabotage, or terrorism, etc.

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- Action or Act of Government or Governmental agency for which remedy is beyond the control of the affected parties.
- Any act of God.

Note: Causes like power breakdown/ shortages/fire/strikes, accidents etc. do not fall under Force Majeure.

Time being the essence of the Contract, if either party is prevented from the performance of its obligations in whole or in part due to an event of Force Majeure, then provided Notice of happening of any event by the Affected Party is given to the other party within seven (7) days from the date of occurrence of such event, which DIRECTLY has impact on works and submitted details and quantum of resulting effect, but at the same time had made all possible efforts to mitigate and overcome effects thereof, the Affected Party's performance under this Contract shall be suspended until such event ceases and the Scheduled Completion shall be delayed accordingly.

If Force Majeure event(s) continue for a period of more than three months, the parties shall hold consultation to discuss the further course of action.

Neither party shall be considered to be in default or in breach of its obligation under the Contract to the extent that performance of such obligation by either party is prevented by any circumstances of Force Majeure which arise after effective date of Contract.

Neither party can claim any compensation from the other party on account of Force Majeure.

## **21.0 SUSPENSION Of CONTRACT**

### **21.1 Suspension for Convenience**

TPWODL may, at any time and at its sole option, suspend execution of all or any portions of the schedule of items of contract to be supplied/work to executed by Associate under the contract by providing to the Associate at least two business days written notice for contracts having contract completion period less than sixty days and at least seven business day notice for all other contracts.

Upon receipt of any such notice, the Associate shall respond as follows as applicable as per contract construction.

- Immediately discontinue further supply of material/goods specified in the suspension notice for supply contracts
- Immediately discontinue further service/work and supply of materials of those services/materials/work specified in the suspension notice for service /composite contract
- Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to TPWODL, of all orders, outsourcing arrangements, and rental Contracts to the extent that they relate to performance of the portion of Work suspended by the notice.
- Protect and maintain the portion of the service/Work already completed, including the portion of the Work suspended hereunder, unless otherwise specifically stated in the notice.
- Continue delivering/carrying out the supply/service/work items as per contract conditions, which do not fall under purview of the suspension notice.

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On receipt of resumption notice from TPWODL, the Associate shall resume execution of contract as specified in the resumption notice, within the time frame specified in the resumption notice.

### **21.2 Suspension for Breach of Contract conditions**

TPWODL shall suspend execution of whole/or part thereof the contract till such time Associate complies with the conditions stipulated under section clause 22 for breach/default of contract conditions.

### **21.3 Compensation in lieu of Suspension**

If the suspension of the contract in whole or in part is for convenience of TPWODL and not due to any breach of contract conditions by the associate, TPWODL at its discretion shall consider compensating all reasonable additional costs incurred by Associate in lieu of suspension of whole or part of contract, on representation of the Associate providing justified estimates of such additional costs and such estimates are found acceptable and approved by competent authority of TPWODL.

If the suspension of contract in whole or part thereof is due to breach of contract conditions (refer clause 24.3) by the Associate, Associate shall not be entitled for any compensation for any cost incurred in lieu of suspension of whole or part of contract and also shall be liable for compensating all the losses arising to TPWODL in lieu of suspension of contract. Resumption notice shall be subject to the Associate taking corrective action for the breach of contract conditions within the time frame and as per the terms specified in the suspension notice.

## **22.0 TERMINATION OF CONTRACTS**

### **22.1 Termination for Default/Breach of Contract**

The contract / PO shall be subject to termination by TPWODL in case of breach of the contract by the Associate which shall include but not be limited to the following:

- a. Withdrawal or intimation by the Associate of its intent to withdraw or surrender the execution / completion of the contracted work /PO or failure in ensuring adherence to any delivery schedules, in deviation of the contract/PO
- b. Refusal or neglect on the part of the Associate to supply material/equipment of quantity or quality as specified by TPWODL and within the timeframe as specified in the contract document or refusal or neglect to execute the services/work in terms of the agreed standards of quantity or quality and/or within the timeframe specified in the contract/PO.
- c. Failure in any respect to perform any portion of the Work contracted with promptness, diligence, or in accordance with the terms of the contract.
- d. Failure to furnish guarantees as specified and /or failure to comply with the terms thereof.
- e. Failure to furnish such relevant documents or information within the time specified which may be necessary for due execution / completion of the works and documentation.
- f. Liquidation, bankruptcy either voluntary or involuntary OR entering into any composition or compromise with its creditors, or Insolvency.



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- g. In case any reasonable information has been received by TPWODL that Associate has adopted/ or attempted to adopt any unethical conduct, action in award of the contract /PO or at any time thereafter.
- h. Failure to comply with applicable statutory provisions as contained in the contract or failure to comply with the applicable laws.
- i. Failure to comply with safety regulations/clauses stipulated in the contract or as may be generally instructed by TPWODL.

If the default or breach as specified under clause 22 (except sub clause g thereof) be committed by the Associate for the first time, TPWODL shall issue, along the with notice of default or breach, a warning notice instructing the associate to take remedial/corrective action within the time frame stipulated in the warning notice and not to repeat the same in future. The timeframe for corrective action by the associate shall be specific to the nature of breach of contract and the same shall not be objected to by the Associate. If the Associate fails to comply with the instructions in the warning notice or in taking corrective action to the satisfaction of TPWODL then TPWODL may terminate the entire or part of contract at its discretion by issuing termination notice without incurring any liability on this ground.

In case the contract is terminated for any breach of the nature specified in clause 24 g stated above, TPWODL shall have the right to terminate all the contracts TPWODL is having with the Associate by issuing termination notice which shall be without prejudice to the other rights of TPWODL available to it under law.

Without prejudice to its right to terminate for breach of contract, TPWODL may, without assigning any reason, terminate the Contract in whole or in part at any time at its discretion while the contract is in force by serving a written notice of two weeks to the Associate.

In the event of TPWODL having proceeded with termination of the contract the associate shall comply and proceed further in the following manner:

- a. Associate shall discontinue the supply, on the expiry of the said period of two weeks.
- b. Associate shall ensure that no further steps are being taken towards discharge of the obligations, terms and conditions as contained in the contract/PO. This shall include initiation of actions not limited to discontinuation of other allied and associated arrangements which the associate might have entered into with third parties for due discharge of its obligations under the contract with TPWODL.
- c. The Associate shall perform thereafter such tasks as may be necessary to preserve and protect the terminated portion of the material/service/work in progress and the materials and equipment at TPWODL sites or in transit thereto. However the associate shall continue to fulfill its contractual obligations with regard to the part of contract not terminated.
- d. It shall be open for TPWODL to conduct a joint assessment with the associate of the material ,supplies, equipment ,works or in general as to the subject matter of the contract in regard to which the associate claims having completed its obligations before or during such termination.

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- e. It shall be open to TPWODL to seek invocation of the performance bank guarantee or any other guarantee or other security deposit by whatever name called submitted by the associate, which shall not be objected to or protested against by the associate.

In case of termination of the contract the parties agree to be governed inter alia by the following:

- a. In case TPWODL exercises its right of termination as stated above the associate shall not dispute or object to the same.
- b. The Associate shall be entitled to receive and claim only such payments OR sums of money from TPWODL as may be found payable to it in regard to works executed by it under the terms of the contract and no other claim of any nature whatsoever shall be made by the Associate.
- c. All such provisions which the parties have agreed to survive and prevail even after termination of the contract shall remain effective despite the termination.

In the event of such termination, TPWODL may finish the Work by whatever method it may deem expedient, including the hiring of services and /or purchase of material equipment from such third parties as TPWODL may deem fit or may itself provide any labor or materials and perform any part of the Work. The associate undertakes to bear the incremental costs if any paid by TPWODL in such a case attributable to failure on the part of the associate. The Associate in such a case shall not be entitled to receive any further payments and any sums found payable to it may be adjusted by TPWODL against the amount recoverable from him on this ground. The same shall be without prejudice to other rights available to TPWODL under law against the associate.

Upon the termination of any of the contract due to occurrence of any circumstances provided in clauses stated above and constituting repeated breach or misconduct, TPWODL shall be entitled to bar the associates its agents, affiliates from undertaking any negotiation / tendering, bidding, participation activities concerning TPWODL for a period of two years from date of such termination. The same shall be without prejudice to other rights available to TPWODL.

**22.2 Termination for convenience of Associate**

Associate at its convenience may request for termination of contract, clearly assigning the reason for such request. TPWODL has full right to accept, reject or partially accept such request. This convenience will be available to associate only after one year from the contract effective date. For this purpose, associate will provide a notice period of 90 days to TPWODL, Associate will have to pay TPWODL a 'termination convenience fee' equivalent to 5% of unexecuted contract value.

**22.3 Termination for Convenience of TPWODL**

TPWODL at its sole discretion may terminate the contract by giving 30 days prior notice in writing or through email to the Associate. TPWODL shall pay the Associate for all the supplies/ services rendered till the actual date of contract termination against submission of invoice by the Associate to that effect.

**23.0 DISPUTE RESOLUTION & ARBITRATION**

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In case of any dispute or difference the parties shall endeavour to resolve the same through conciliatory and amicable measures within 15 Days failing which the matter may be referred by either party for resolution by the sole arbitrator to be appointed mutually by both the parties. The arbitral proceedings shall be conducted in accordance with Arbitration and Conciliation Act 1996 and the place of arbitration shall be Sambalpur. The language to be used at proceedings shall be English and the award of the arbitrator shall be final and binding on the parties. The parties shall bear their respective costs of arbitration. The associate shall continue to discharge its obligations towards due performance of the works as per the terms of the contract during the arbitration proceedings unless otherwise directed in writing by TPWODL or suspended by the arbitrator. Further, TPWODL shall continue making such payments as may be found due and payable to the associate for such works.

#### **24.0 Governing laws and jurisdiction**

The parties shall be subject to the jurisdiction of the courts of law in Sambalpur and any matter arising here from shall be subject to applicable law in force in India.

#### **25.0 ATTRIBUTES OF GCC**

##### **25.1 Cancellation**

The Company reserves the right to cancel, add, delete at its sole discretion, all or any terms of this GCC or any contract, order or terms agreed between the parties in pursuance without assigning any reasons and without any compensation to the Associates.

##### **25.2 Severability**

If any portion of this GCC is held to be void, invalid, or otherwise unenforceable, in whole or part, the remaining portions of this GCC shall remain in effect.

##### **25.3 Order of Priority**

In case of any discrepancies between the stipulations in General Conditions of the Contract (GCC) and Special Conditions of Contract (SCC), the GCC shall stand superseded by the SCC to the extent stipulated hereinabove while balance portion of respective clauses of GCC shall continue to be applicable.

#### **26.0 INSURANCE**

The Associate shall arrange accident insurance policy for his foreign experts/specialists/personnel deputed to Site and Associate's/his sub-Associates' manufacturing works as well as for his Indian engineers and supervisory staff. The Associate shall also take out for his Indian workmen, where applicable, a separate policy as required under Workmen's Compensation Act.

Associates shall be responsible to suitably insure their entire work-force (to the extent of at least meeting requirements under Workmen Compensation Act) Tools, Plant, Third party liability at the project site, All Risk comprehensive insurance for the entire works (insurance for free issue items will be in TPWODL scope) for total contract value or any other such risks during execution of works, till the works are handed over to the company, in consultation with TPWODL and shall submit copies of such insurances to the Engineer-in-Charge for review / acceptance before commencing the work. Engineer-in-charge must ensure compliance to insurance requirement by Associate before commencement of works. TPWODL shall stand fully indemnified in this respect.

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## 27.0 ERRORS AND OMISSIONS

The Associate shall be responsible for all discrepancies, errors and omissions in the drawings, documents or other information submitted by him, irrespective of whether these have been approved, reviewed or otherwise accepted by the TPWODL or not. However any error in design/drawing arising out of any incorrect data/written information from TPWODL will not be considered as error and omissions on part of the Associate.

## 28.0 TRANSFER OF TITLES

The title of ownership and property to all equipment, installations, erections, constructions materials, drawings & documents shall pass to the TPWODL is after commissioning and complete handing over-taking over.

However, such passing of title of ownership and property to the TPWODL shall not in any way absolve, dilute or diminish the responsibility and obligations of the Associate under this Contract including loss or damages and all risks, which shall vest with the Associate.

The Associate shall take all corrective measures arising out of discrepancies, errors and omissions in drawings and other information within the time schedule and without extra cost to the TPWODL.

The Associate shall also be responsible for any delay and/or extra cost if any, in carrying out engineering, and site works by other agencies arising out of discrepancies, errors and omissions stated in as well as of any late revision/s of drawings and information submitted by the Associate.

## 29.0 SUGGESTIONS & FEEDBACK

We welcome all our Business Associates to write to us about their experience with TPWODL; be it our Company, our services or our people. Each and every concern, issue, query and suggestion from you will help us to become a better company to work with and shall help us develop a strong bonding of trust and a long term relationship with you.

You may send your feedback by filling up our Business Associate Feedback Form enclosed herewith as *Annexure-I*. You can also log on to our website [www.tpwesternodisha.com](http://www.tpwesternodisha.com) to provide your feedback.

## 30.0 CONTACT POINTS

In case Business Associate needs information with respect to payments or has any grievances, same may be submitted by log on to our website [www.tpwesternodisha.com](http://www.tpwesternodisha.com)

## 31.0 LIST OF ANNEXURES

| S. No. | Subject   | Annexure |
|--------|---|----------|
| 1.     | Performa for Bid Security Bank Guarantee            | A        |
| 3.     | Performa for Performance Bank Guarantee (CP cum EP) | B        |
| 4.     | Performa for No Demand Certificate by Associate     | C        |

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| 5.  | Performa for Indemnification on Statutory Compliance                  | D |
| 6.  | Performa For Application For Issuance of Consolidated TDS Certificate | E |
| 7.  | HR Service Level Agreement  | F |
| 8.  | Under taking for competence of workmen                                | G |
| 9.  | Business Associate Feedback Form                                      | H |
| 10. | Acceptance Form For Participation In Reverse Auction Event            | J |
| 11. | Form for RTGS Payment   | J |
| 12. | Contractor Safety Management System                                   | K |
| 13. | Vendor Appraisal Form   | L |

**ANNEXURE-A**

**PROFORMA FOR BID SECURITY BANK GUARANTEE**

**The TP Western Odisha Distribution Limited**

**Burla**

HEREAS, (Name of the Bidder) ..... (hereinafter called "the BIDDER") has submitted his bid dated ..... for the (Name of Contract) ..... (hereinafter called "the BID").

KNOW ALL men by these presents we (Name of the Bank) ..... of (Name of the Country) ..... having our registered office at ..... (hereinafter

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called "the BANK) are bound unto The TP Western Odisha Distribution Limited (TPWODL) in the sum of ..... for which payment well and truly to be made to the TPWODL the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this ..... day of ..... 20 .....

The CONDITIONS of this obligation are:

i) If the Bidder withdraws his Bid during the period of bid validity specified in the Proforma of Bid

or

ii) If the Bidder having been notified of the acceptance of his Bid by the TPWODL during the period of bid validity fails or refuses to furnish the Contract Performance Bank Guarantee, in accordance with the Instructions to Bidders.

We undertake to pay the TPWODL upto the above amount upon receipt of its first written demand, provided that in its demand the TPWODL will note that amount claimed by it is due to it owing to the occurrence of one or both conditions, specifying the occurred condition or conditions.

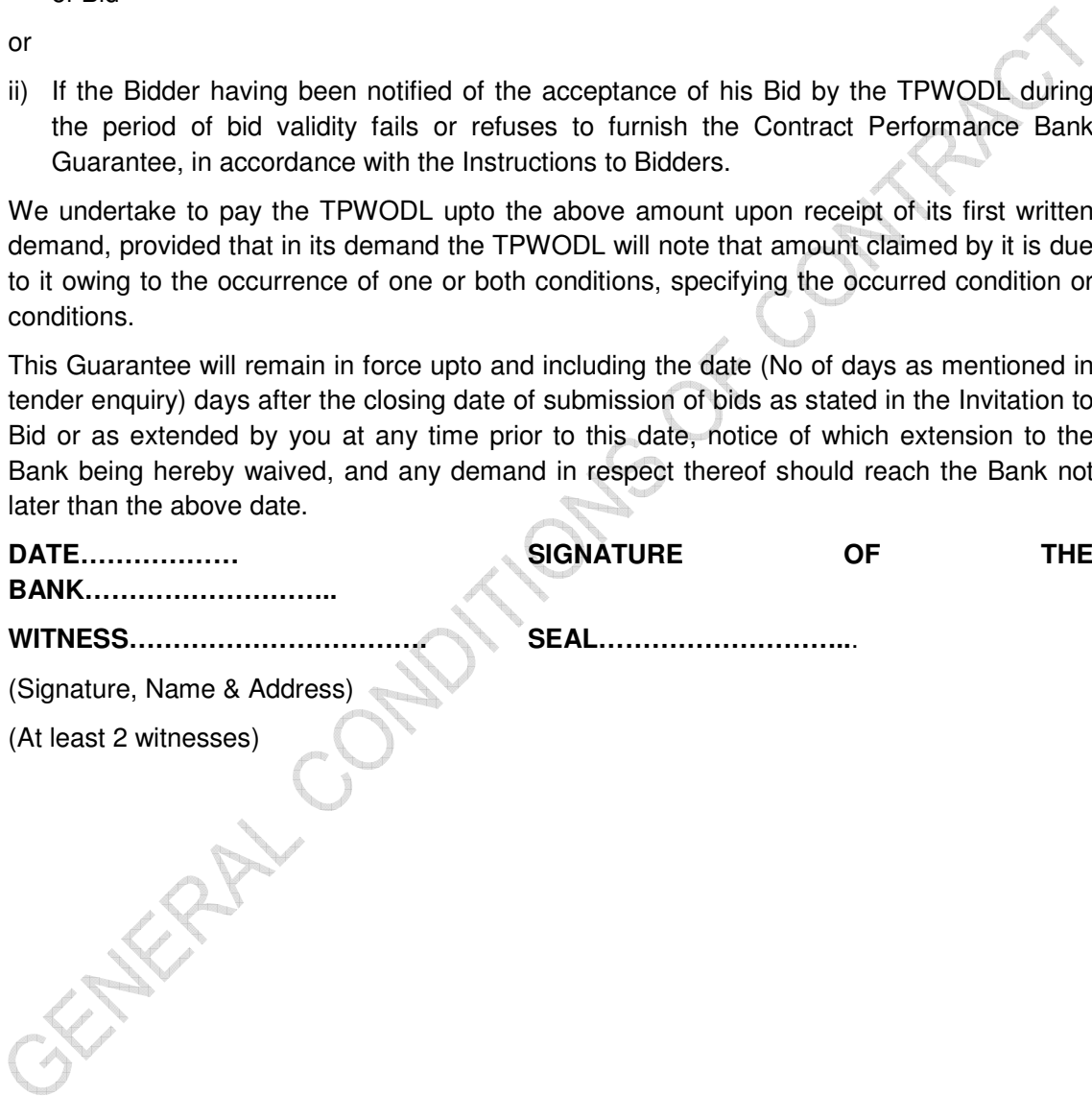
This Guarantee will remain in force upto and including the date (No of days as mentioned in tender enquiry) days after the closing date of submission of bids as stated in the Invitation to Bid or as extended by you at any time prior to this date, notice of which extension to the Bank being hereby waived, and any demand in respect thereof should reach the Bank not later than the above date.

**DATE.....** **SIGNATURE** **OF** **THE**  
**BANK.....**

**WITNESS.....** **SEAL.....**

(Signature, Name & Address)

(At least 2 witnesses)



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**ANNEXURE- B**

**PROFORMA FOR PERFORMANCE BANK GUARANTEE (CP cum EP)**

**(On Rs.100/- Stamp Paper)**

**Note:**

- (a) Format shall be followed in toto
- (b) Claim period of one month must be kept up
- (c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

-----  
 ----

**The TP Western Odisha Distribution Limited**

**Burla**

**CP cum EP BG No.....**

**Order/Contract No.....dated.....**

1. You have entered into a Contract No \_\_\_\_\_ with M/s. \_\_\_\_\_ (hereinafter referred to as "the Vendor") for the supply cum erection / civil work of \_\_\_\_\_ (hereinafter referred to as "the said Equipment") for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of the said contract, "the Vendor" agreed to furnish you with an irrevocable, unconditional and acceptable bank guarantee for 10% of the value of contract and to be valid till the end of Guarantee period plus one month towards "Contract cum Equipment performance". For this purpose you have agreed to accept the guarantee.
3. In consideration thereof, we, \_\_\_\_\_ hereby irrevocably and unconditionally guarantee to pay to you on demand but in any case before the end of five working days from the date of the claim and without demur and without reference to "the Vendor" such amount or amounts not exceeding the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) being \_\_\_\_\_% (\_\_\_\_\_ percent) of the total value of the contract on receipt of your intimating that "the Vendor" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfilment and "the Vendor" shall have no right to question such judgment.
4. You shall have the right to file / make your claim on us under the guarantee for a **further period of one month** from the date of expiry.
5. This guarantee shall not be revoked without express consent and shall not be affected by your granting time or any other indulgence to "the Vendor", which shall include but not be limited to, postponement from time to time of the exercise the same in you or any right which you may have against "the Vendor" and to exercise the same in any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or

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commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision have the effect of relieving our bank from its obligation under this guarantee.

6. We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to "the Vendor's" liabilities in respect of the premises
7. This guarantee shall not be affected by any change in the constitution of our Bank or "the Vendor" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Sambalpur branch and claim will also be payable at Sambalpur Branch (to be confirmed by Sambalpur Branch by a letter to that effect in case BG is from the branch outside Sambalpur)
9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) only and the guarantee will remain in force upto and including \_\_\_\_\_ (Date) and shall be extended from time to time for such period or period as may be desired by "the Vendor".
10. Unless a demand or claim under this guarantee is received by us in writing within one months from \_\_\_\_\_ (expiry date) i.e. on or before \_\_\_\_\_ (claim period end date), we shall be discharged from all liabilities under this guarantee thereafter.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 200\_\_

**Witness**

- |          |  |
|----------|--|
| 1. _____ | Bank's rubber stamp<br>Banks full address        |
| 2. _____ | Designation of Signatory<br>Bank official number |

**ANNEXURE-C**

**PROFORMA FOR "NO DEMAND CERTIFICATE" BY ASSOCIATE**

(On Company's Letter head or with Company Seal)



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(To be submitted by the Associate to TPWODL Accounts Department at the time of receipt of full and final payment)

**(Certificate No. CCP/002)**

Name of the Project

Order/ Contract No.

Dated

Name of the Associate

Scheme No. / Job No.

We, M/s. \_\_\_\_\_ (Associate) do hereby acknowledge and confirm that we have received the full and final payment due and payable to us from TPWODL, in respect of our aforesaid Order No \_\_\_\_\_ dated \_\_\_\_\_ including amendments, if any, issued by TPWODL to our entire satisfaction and we further confirm that we have no claim whatsoever pending with TPWODL under the said contract / W.O.

Notwithstanding any protest recorded by us in any correspondence, documents, measurement books and / or final bills etc., we waive all our rights to lodge any claim or protest in future under this contract.

We are issuing this "NO DEMAND CERTIFICATE" in favour of TPWODL, with full knowledge and with our free consent without any undue influence, misrepresentation, coercion etc.

**Dated**

**Signature**

**Place**

**Name**

**Designation**

**(Company Seal)**

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**ANNEXURE – D**

**PROFORMA FOR “INDEMNIFICATION ON STATUTORY COMPLIANCES”**

(To be submitted by the successful Bidder within seven days of award of work)

**(Certificate No. CCP/001)**

Name of the Project

Letter of Award / Contract No.

Dated

Name of the Associate

Scheme No. / Job No.

By this confirmation we, \_\_\_\_\_  
(Associate) are formally bound to M/s. TPWODL towards any sum which may be imposed, levied or hereinafter recovered by the Provident Fund Organization under the provisions of the Employees of the Provident Fund and Miscellaneous Provisions Act 1952 in respect of employees employed by us.

We well and truly bind ourselves and our heirs executors administrators and representatives jointly severally and respectively for the above payment only to be paid to M/s. TPWODL.

AND WHEREAS we, \_\_\_\_\_ (Associate) is making compliance of the Employees Provident Fund and Miscellaneous Provisions Act 1952, have entered into the above written bond for the indemnity to M/s. TPWODL against all losses from the acts or default of the said Associate in respect of compliance of the Provident Fund Act.

Similarly we hereby confirm that we have complied with all statutory and local laws and nothing is outstanding with regard to Local Sales Tax, Labour Laws, Local Municipal dues, Electricity dues etc. We have entered into the above written bond for the indemnity to M/s. TPWODL against all losses from the acts or default of the said Associate in respect of compliance of the Local Sales Tax Laws, Local Laws, Labour Laws, Local Municipal Dues, Electricity dues etc.

NOW THE CONDITION, of the above written bond is as such that if the Associate during the period of this contract commits any default or fails to make payment of Contributions in respect of his employees to the Employees Provident Fund Organization, he shall indemnify the Principal Employer M/s. TPWODL from all and every loss and damage caused to them from any act, omissions or negligence of the said Associate in respect of compliances under the Employees Provident Fund and Miscellaneous Provisions Act, 1952.

IN WITNESS to the above written bond we have here to set our hands, with our free consent.

**Dated**

**Signature**

**Place  
(Company Seal)**

**Name Designation**

|            |   |               |
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**ANNEXURE-E**

**PROFORMA FOR APPLICATION FOR ISSUANCE OF CONSOLIDATED TDS  
CERTIFICATE**

To be printed on the letterhead

To,

The TP Western Odisha Distribution Limited,

Burla

**Sub: Application for issuance of Consolidated TDS Certificate for the FY \_\_\_\_\_**

Dear Sir,

I / we hereby request / authorize you to issue me / us a consolidate TDS Certificate for the financial year \_\_\_\_\_ against tax deducted at source by you from my / our payments / bills during the said year from time to time under Chapter XVII – B of the Income Tax Act, 1961.

For and on behalf of

Signature

Name

Address

Contact No. (Land Line)

(Mobile)

PAN #

Assessing authority

**ATTACH THE COPY OF PAN CARD**

|            |   |               |
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## ANNEXURE - F

### SERVICE LEVEL AGREEMENT

(To be adhered to by Business Associates (BAs) in TPWODL on Human Resource Issues)

**1.0 The following shall be adhered to by the Business Associates during his / its association with TPWODL:**

**Shall Abide by TPWODL Core Values:**

- a) **Integrity** – We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.
- b) **Understanding** – We must be caring, show respect, compassion and humanity to our colleagues and customers and always work for the benefit of the communities we serve.
- c) **Excellence** – We must constantly strive to achieve the highest possible standards in our day to day work and in the quality of services we provide.
- d) **Unity** – We must work cohesively with our colleagues across the group and with our customers and partners to build strong relationships based on tolerance, understanding and mutual co-operation.
- e) **Responsibility** – We must continue to be responsible and sensitive to the communities and environments in which we work and always ensuring that what comes from the people; goes back to the people many times over.
- f) **Agility-** We must work in a speedy and responsive manner and be proactive and innovative in our approach.

**2.0 The Business Associate / his manager / supervisor who is responsible for managing the project site / performance contract etc. in TPWODL would also ensure adherence of these values by his employees / persons deployed by him in connection with his works undertaken in TPWODL.**

**3.0 TPWODL is a signatory to the United Nation Global Compact as an integral part of its Governance principles / business. The Business Associates are required to:**

- a) Support and respect the protection of human rights and make sure that they are not complicit in human right abuses.
- b) Respect freedom of association and effective recognition of the right to collective bargaining.
- c) Not to resort to any form of forced and compulsory labour.
- d) Shall ensure abolition of child labour in his area of work.
- e) There is no discrimination in respect of employment and occupation in respect of his employees.
- f) Support precautionary approach to environmental challenges.
- g) Promote greater environmental responsibility by himself and his employees in his areas of work.
- h) Deploy and defuse environmental friendly technologies while carrying out the works.
- i) Work against corruptions in all its form including extortion and bribery by himself and his employees.

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**4.0 The Business Associates are required to adhere to all applicable Labour Laws with special reference to the following:**

- a) No person below the age of 18 years and no child labour will be engaged directly or indirectly for executing the work connected with the business of TPWODL.
- b) Minimum wages along with other statutory dues like PF, ESI, etc. as applicable to the workers shall be made within the prescribed period of 7<sup>th</sup> / 10<sup>th</sup> day of the following month.
- c) Deduction / deposit / record keeping and all other requirements under Employees PF Act 1952, Employees State Insurance Act 1948 and other applicable acts (if any) shall be adhered to.
- d) Only statutorily authorized deductions (if any) shall be made in accordance with the relevant statutes.
- e) All the provisions of Contract Labour (R&A) Act 1970 shall be complied with in respect of the workers engaged for TPWODL work. The work will be commenced only after completing necessary formalities for obtaining Labour License (if applicable).
- f) Necessary registers / records, filing of returns etc. shall be maintained for verification by Statutory / TPWODL authorities.
- g) Payment of wages shall be made only in presence of and with certification of authorized representative of TPWODL or shall be made in the form of cheque / bank transfer to the employee.
- h) During the period of contract, the Business Associate will arrange for deployment of his supervisor / manager for total supervision and control of the work and their manpower. All the activities related to their manpower e.g. attendance, leave, wage disbursement etc. will be done under the supervision & control of Business Associates, While adhering to the prescribed standard / norms of production / productivity & quality. During execution of the work, Business Associate shall engage only such qualified / skilled manpower as may be envisaged / required for ensuring level of production / service into the contract / work order.
- i) Clearances as follows shall be obtained from IR & Welfare Group:
  - a. Clearance for commencement (before start of the work).
  - b. No Objection Certificate (after completion / before final settlement).
  - c. Copies of PF / ESI Challans shall be deposited with IR & Welfare Group every month
- j) The Business Associate shall indemnify TPWODL from any liabilities under applicable Labour Statutes.
- k) The Business Associate shall ensure safety and health of his employees and shall also maintain hygienic working environment / condition in his area of work.
- l) The Business Associate and his employee shall abide by Laws of Land and shall not violate any applicable provisions.

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- m) The Business Associate appreciates with and acquiesces to the right of TPWODL as principal employer to fulfil any of his legal obligations, if he fails to do so under applicable labour laws and deduct the same from his running bills / final payments / encashing security deposit / Bank Guarantee as the case may be. If there is any further shortfall TPWODL has the right to recover the same from the Business Associate.
- n) The Business Associate ensures that person employed by him adhere to the moral and legal conduct and shall not violate any standard conduct envisaged in the premise of TPWODL by all such as, Transparency, Safety, Discipline, Integrity etc. The Business Associate or his employees should refrain from corrupt practices, giving or taking bribe in connection with any TPWODL business.

**5.0 The 'Statutory Compliance Enforcement System' in TPWODL is detailed below for adherence by all concerned. Corporate IR & Welfare Group will be the process owner for implementation of the system with the help of concerned Engineer I/c or Officer I/c.**

- a) Statutory Compliance being a professed value in TPWODL Code of Conduct, the concerned Engineer / Officer in charges are requested to adhere to the provisions and advise respective Business Associates in their domain to comply in letter and spirit.
- b) Immediately after issuance of letter of intent, the authorized representative of the Business Associate will report to Corporate IR & Welfare group for completion of statutory requirements.
- c) Normally, the work will be started only after 'Clearance for Commencement of Work (CCW) is issued by IR & W group to the Business associate. However in exceptional exigencies in engineer I/c / Officer I/c may direct the Business Associate to start the work and inform IR & W group about the same. Statutory requirements in this case may be completed parallelly.
- d) First monthly bill will be released only after producing CCW to the finance department. Similarly closure of work and final settlement will be affected after issuance of no objection certificate from IR & W group.

**6.0 Requirements for 'Clearance for Commencement of Work' (CCW):**

- a) Submission of filled up Form 'A' for database (Annexure-1).
- b) Copy of PF Code allocation letter.
- c) Copy of ESI Code allocation letter.
- d) Submission of duly filled up Form IV CL(R&A) act (In case more than or equals to 20 workers during the period of contract).
- e) Submission of duly filled up Form VI A (Notice of Commencement).
- f) Copy of insurance cover note under WC Act 1923 (if applicable).
- g) Copy of Contract Agreement.
- h) Copy of indemnity bond (if applicable).
- i) Affidavit with regard to payment of wages through cheque / bank transfer only.

**7.0 Requirements during execution of work:**

- a) Copy of receipt of application for license / license (if applicable).

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- b) Copy of PF Challan (latest by 26<sup>th</sup> day of every Month).
- c) Copy of ESI Challan (latest by 26<sup>th</sup> day of every Month).
- d) Copy of Wage disbursement sheet / Bank statement.
- e) Filing / Maintenance of all statutory registers / reports / returns for inspection by Statutory/ TPWODL authorities.
- f) Certification of wage disbursement by authorized representative of TPWODL.
- g) Copy of 'Labour Welfare Fund' deposit certificate / Challan.
- h) Insuring safe working practices at the work place.

**8.0 Requirements for 'No Objection Certificate' (NOC) for closure of work:**

- a) Submission of duly filled up Form VI A (Notice of Completion).
- b) Copy of Half yearly / Annual return for ESI / PF / CL(R&A).
- c) Consolidated copy of wage sheet of last month indicating full & final settlement of all dues like retrenchment benefit, bonus, leave encashment etc. Copy of individual declaration by employees in Form X regarding termination of employment.
- d) Confirmation certificate regarding filling up of form for transfer / withdrawal of PF by the concerned workers.

**In case any of the above are deviated / not complied with the Letter of Award/Order shall be liable to be withdrawn / cancelled.**

**Enclosure:**

- 1) Form A
- 2) Form X
- 3) Form XI
- 4) Form VI A
- 5) Form XXIV

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**FORM (A)**

[To be submitted by the Business Associate to the Principal Employer within a week from  
LoA issuance]

**A. Details of the Agency**

1. Name of Agency :
2. Nature of work :
3. Local Address with Ph. No. :  
(With Father's name) :
4. Permanent Address (Full) :
5. PF code no. & Place :
6. ESI Code no. & Place :
7. Name and address of :  
Sub-contractor (if any)

**B. Details of Work**

8. Name of work (as specified in LOI/LOA) :
9. LOI/LOA Nos. & Dates :
10. Period of contract (Specify Dates) :  
[Including Extension period, if any] :
11. Work Area [Department / Location] :
12. Name / Cell no. of Officer I/c :
13. Maximum No. of workers and staff to be engaged on any day during the year.  
 >Supervisory Staff :  
 >Workers :
14. Do you have any other contract in TPWODL : Yes/No  
If yes, furnish details:
15. Details of Workmen's compensation Policy, if applicable



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Name \_\_\_\_\_ of \_\_\_\_\_ Insurance \_\_\_\_\_ Company \_\_\_\_\_  
 .....  
 .....Policy No ..... Number of persons covered .....  
 covered ..... Period of coverage: From ..... To .....

If no, I hereby undertake the liability arising out of Workmen's Compensation Act and Rules made there under.

**C. Details of workers to be engaged**

**No. of Workers**

| S. No. | Unskilled* | Semi-skilled* | Skilled* | Clerical / Supervisory |
|--------|------------|---------------|----------|------------------------|
|        |            |               |          |                        |

**\* Number to be indicated**

I/We shall fulfil all obligations arising from and under all relevant law in force from time to time. I/We undertake to keep the TPWODL indemnified against any loss or liability arising out of failure of my / our abiding the relevant laws.

The name of my / our representatives is ..... to enter the TPWODL Premises on my behalf.

**Date:**

***(Signature of the Business Associate  
or his Authorized Representative)***

**This Business Associate is / will be engaged in TPWODL.**

**(Signature and seal of  
Officer I/c of the Work)**

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**Form X**

**Undertaking**

I \_\_\_\_\_ hereby undertake that all the dues in respect of my employment with M/s \_\_\_\_\_ for the period of \_\_\_\_\_ to \_\_\_\_\_ have been settled and final payments including retrenchment benefit have been made to me in full.

( \_\_\_\_\_ )

Date:

**Form XI**

|            |   |               |
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**Undertaking**

With reference to the contract job awarded by M/s The TP Western Odisha Distribution Limited to M/s \_\_\_\_\_ vide work order No. \_\_\_\_\_ dated \_\_\_\_\_

I \_\_\_\_\_ on behalf of

M/s \_\_\_\_\_ hereby undertake:

1. that the dues in respect of the workmen/ employee(s) engaged by us for the said contract, payable as per the provisions of relevant statute pertaining to

- i. wages/ salary
- ii. PF & ESI, Labour Fund
- iii. All other statutory obligation

has been paid /settled in full and no amount/ compliance is due/ pending.

2. That in case any dispute / claim is raised by the concerned workers i.r.o. any dues / payments, M/s \_\_\_\_\_ will settle the same on its own and such liability will be borne by M/s \_\_\_\_\_

3. That M/s \_\_\_\_\_ hereby indemnify M/s TPWODL from any future liability i.r.o. any statutory obligation in respect of said contract.

Date:

\_\_\_\_\_ )

(

Authorized Signatory

For

M/s

\_\_\_\_\_

|            |   |               |
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**Notice for Commencement /Completion of contract work**

I/We, Sh. / M/s \_\_\_\_\_ (Name and Address of the Contractor) hereby intimate that the contract work \_\_\_\_\_ (name of work) in establishment of the \_\_\_\_\_ (name and address of the Principal Employer) for which License No. \_\_\_\_\_ dated \_\_\_\_\_ has been issued to me/us by the Licensing Officer \_\_\_\_\_ (name of the Headquarters), has been commenced / completed with effect from \_\_\_\_\_ date / on date.

**Signature of Contractor**

**With Office Seal**

**The Inspector**

\_\_\_\_\_  
\_\_\_\_\_

**FORM XXIV**

[See Rule 82(1)]

***Return to be sent by the Contractor to the licensing Officer (in duplicate)***

Half -Yearly Ending \_\_\_\_\_

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1. Name and address of the Contractor
2. Name and address of the Establishment
3. Name and address of the Principal Employer
4. Duration of Contract: From \_\_\_\_\_ to \_\_\_\_\_
5. No. of days during the half year on which
  - (a) the establishment of the principal employer had worked
  - (b) the contractor's establishment had worked
6. Maximum No. of contract labour employed on any day during the half –year:

| Men | Women | Children | Total |
|-----|-------|----------|-------|
|     |       |          |       |

7.
  - (i) Daily hours of work and spread over
  - (ii)
    - (a) whether weekly holiday observed and on what day
    - (b) if so, whether it was paid for
  - (iii) No. of man – hours of overtime worked
8. No. of man days worked by

| Men | Women | Children | Total |
|-----|-------|----------|-------|
|     |       |          |       |

9. Amount of wages paid

| Men | Women | Children | Total |
|-----|-------|----------|-------|
|     |       |          |       |

10. Amount of deductions from wages, if any

| Men | Women | Children | Total |
|-----|-------|----------|-------|
|     |       |          |       |

Whether the following have been provided –

- (i) Canteen : \_\_\_\_\_
- (ii) Rest rooms : \_\_\_\_\_
- (iii) Drinking water : \_\_\_\_\_
- (iv) Crèches : \_\_\_\_\_
- (v) First Aid : \_\_\_\_\_

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**Signature of**

**contractor**

Place \_\_\_\_\_

Date \_\_\_\_\_

GENERAL CONDITIONS OF CONTRACT

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**ANNEXURE – G**

**UNDERTAKING FOR COMPETENCE OF WORKMEN**

Name of Associate :

Tender No. :

Item :

With reference to the tender mentioned above, I/We \_\_\_\_\_,  
hereby undertake that the workmen/ employee(s) engaged by M/s  
\_\_\_\_\_ for the job against said tender shall be competent in all  
respect, commensurate to the nature of job.

Date:

\_\_\_\_\_  
( )

Authorized Signatory

For M/s

Seal

**ANNEXURE-H**

**BUSINESS ASSOCIATE FEEDBACK FORM**

|            |   |               |  |  |  |
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With an objective to improve our internal processes and systems, and serve you better, we solicit your valuable feedback & suggestions. It is estimated that it will take about 10 minutes to complete this survey. We assure you that your feedback shall be kept confidential. Please send the duly filled feedback form in the "TPWODL addressed - attached envelop"

**You are associated with us as**

- OEMs       Service Contractor       Material Suppliers       Material & Manpower Supplier

**You are associated with us for**

- Less than 1 year       More than 1 year but less than 3 years       More than 3 years

**Your office is located at**

- Sambalpur       Within 200 kms from Sambalpur       More than 200 kms from Sambalpur

**Your nearly turnover with TPWODL**

- Less than 25 Lacs       25 Lacs to 1 Crore       More than 1 Cr.

**Additional information**

|                          |  |
|--------------------------|--|
| <b>Your Name</b>         |  |
| <b>Your Designation</b>  |  |
| <b>Your Organization</b> |  |
| <b>Contact Nos.</b>      |  |
| <b>Email</b>             |  |

*We once again thank you for your participation in this survey. Please spare 10 minutes to give your feedback on following pages (Section A to E)*

**SECTION - A**

(Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.).

| S. | Parameters | 1 | 2 | 3 | 4 | 5 | Remarks/ |
|----|------------|---|---|---|---|---|----------|
|----|------------|---|---|---|---|---|----------|



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| No. |  | Do Not Agree | Slightly in Agreement | In Fair Agreement | Mostly in Agreement | Fully Agree | Suggestion |
|-----|--|--------------|-----------------------|-------------------|---------------------|-------------|------------|
|     |  |              |                       |                   |                     |             |            |
| 1   | You receive all relevant queries / tenders from us in timely manner.   |              |                       |                   |                     |             |            |
| 2   | We provide you enough lead time to respond to our queries / tenders.   |              |                       |                   |                     |             |            |
| 3   | We provide you adequate support (drawings, documents, clarifications, briefing etc.) to enable you meet our requirements.      |              |                       |                   |                     |             |            |
| 4   | All following elements of our contract / purchase order are rational :   |              |                       |                   |                     |             |            |
| 4.1 | Scope of Work  |              |                       |                   |                     |             |            |
| 4.2 | Delivery / Execution Schedule  |              |                       |                   |                     |             |            |
| 4.3 | Payment Terms  |              |                       |                   |                     |             |            |
| 4.4 | Liquidated Damages   |              |                       |                   |                     |             |            |
| 4.5 | Performance Guarantee  |              |                       |                   |                     |             |            |
| 5   | Our purchase orders / contracts are simple, specific & easy to understand  |              |                       |                   |                     |             |            |
| 6   | TPWODL demonstrate willingness to be flexible in administration of Contract / Purchase Order                                   |              |                       |                   |                     |             |            |
| 7   | We provide timely responses / clarifications to your queries   |              |                       |                   |                     |             |            |
| 8   | TPWODL representative you interact / coordinate with is adequately empowered to support you in meeting contractual obligations |              |                       |                   |                     |             |            |
| 9   | TPWODL provide you all necessary infrastructure support for timely and quality completion of work (including AMC)              |              |                       |                   |                     |             |            |
| 10  | TPWODL Engineer-in-Charge timely certifies the jobs executed/ material supplied  |              |                       |                   |                     |             |            |
| 11  | TPWODL Engineer-in-Charge efficiently supervises the job execution for timely completion of job                                |              |                       |                   |                     |             |            |
| 12  | BIRD (Bill Inward Receipt Desk) initiative has improved payment disbursement process   |              |                       |                   |                     |             |            |

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| S. No. | Parameters   | 1            | 2                     | 3                 | 4                   | 5           | Remarks/<br>Suggestion |
|--------|--|--------------|-----------------------|-------------------|---------------------|-------------|------------------------|
|        |  | Do Not Agree | Slightly in Agreement | In Fair Agreement | Mostly in Agreement | Fully Agree |                        |
| 13     | Our approach for Inspection and Quality Assurance effective to expedite project completion?                |              |                       |                   |                     |             |                        |
| 14     | TPWODL never defaults on contractual terms   |              |                       |                   |                     |             |                        |
| 15     | In TPWODL Contracts closure is done within set time limit  |              |                       |                   |                     |             |                        |
| 16     | Our material receiving procedures are well defined and efficiently deployed to reduce mutual inconvenience |              |                       |                   |                     |             |                        |
| 17     | Bank Guarantees are released in time bound manner  |              |                       |                   |                     |             |                        |
| 18     | Our processes related to payment / account settlement are effective.                                       |              |                       |                   |                     |             |                        |
| 19     | You get payments on time   |              |                       |                   |                     |             |                        |
| 20     | TPWODL Employees follow Ethical behavior   |              |                       |                   |                     |             |                        |

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**SECTION - B**

SECTION – B (Please rate the following parameters on a scale of 1 to 5, where 1 - Minimum; 5 - Maximum)

| SN  | Parameters   | 1 | 2 | 3 | 4 | 5 | Remarks/<br>Suggestion |
|-----|--|---|---|---|---|---|------------------------|
| 1   | How do you rate courtesy/ empathy/ attitude level and warmth of TPWODL employees you interact with from following team?                                      |   |   |   |   |   |                        |
| 1.1 | Project Engineering  |   |   |   |   |   |                        |
| 1.2 | District / Zones   |   |   |   |   |   |                        |
| 1.3 | Projects/HOG (TS &P)   |   |   |   |   |   |                        |
| 1.4 | Inspection & Quality Assurance   |   |   |   |   |   |                        |
| 1.5 | Stores   |   |   |   |   |   |                        |
| 1.6 | Metering & Billing   |   |   |   |   |   |                        |
| 1.7 | Accounts / Finance   |   |   |   |   |   |                        |
| 1.8 | Administration   |   |   |   |   |   |                        |
| 1.9 | IT & Automation  |   |   |   |   |   |                        |
| 2   | How would you rate TPWODL in comparison to your other clients in terms of <b>fairness of treatment and transparency</b> with its Business Associates?        |   |   |   |   |   |                        |
| 3   | How would you rate TPWODL in comparison to your other clients in terms of <b>processes and systems to manage partnership</b> with its Business Associates    |   |   |   |   |   |                        |
| 4   | How would you rate TPWODL in comparison to your other clients in terms of <b>building long term &amp; mutually relationship</b> with its Business Associates |   |   |   |   |   |                        |

**SECTION – C**

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

| S. No. | Parameters  | Certainly NO | Probably NO | Probably YES | Certainly YES | Remarks/<br>Suggestion |
|--------|---|--------------|-------------|--------------|---------------|------------------------|
| 1      | Based on your experience with TPWODL, would you like to continue your relationship with TPWODL?                           |              |             |              |               |                        |
| 2      | If someone asks you about TPWODL, would you talk “positively” about TPWODL?   |              |             |              |               |                        |
| 3      | Would you refer TPWODL name to others in your community, fraternity and society as a professional & dynamic organization? |              |             |              |               |                        |

**SECTION - D**

**If we ask you to rate us on a scale of 1 to 10, how will you rate TPWODL, that truly represents your overall satisfaction with us (please tick appropriate box) –**

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

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### SECTION – E

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

Please spare your thoughts for TPWODL's improvement in particular areas of weaknesses, particularly relating to some great practices, attitudes that you have seen elsewhere in Indian and International Organizations, which you recommend TPWODL to adopt. Please give your valuable salient recommendations.

Please spare your thoughts for TPWODL's improvement in particular areas of major concerns for you. We also welcome your suggestions to adopt any best practices, attitudes that you have observed / experienced elsewhere in Indian/ International organization.

| Recommendation  | <i>Please tick (✓) your top 5 expectations out of the following 10 points listed below -</i>    |  |
|---|---|--|
| (Please list down improvement you expect from TPWODL) | <i>Timely payment</i>   |  |
| 1   | <i>Flexibility in Contracts/PO</i>  |  |
|   | <i>Clarity in PO,s &amp; Contracts</i>  |  |
| 2   | <i>Timely response to quarries</i>  |  |
|   | <i>Timely certification of works executed</i>   |  |
| 3   | <i>Clarity in Specs, drawings, other docs etc.</i>  |  |
|   | <i>Adequate information provided on website for tender notification, parties qualified etc.</i> |  |
| 4   | <i>Timely receipt of material at site for execution</i>   |  |
|   | <i>Performance Guarantee/EMD released in time</i>   |  |
| 5   | <i>Inspection &amp; quality assurance support for timely job completion</i>                     |  |

We thank you for your time and courtesy!!

|            |   |               |
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## **ANNEXURE - I**

### **ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT**

***(To be signed and stamped by the bidder prior to participation in the auction event)***

In a bid to make our entire procurement process more fair and transparent, TPWODL intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

**The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:**

1. TPWODL shall provide the user id and password to the authorized representative of the bidder. *(Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).*
2. TPWODL will make every effort to make the bid process transparent. However, the award decision by TPWODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPWODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPWODL.
6. In case of intranet medium, TPWODL shall provide the infrastructure to bidders. Further, TPWODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be outrightly rejected by TPWODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPWODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of the auction event shall be considered by TPWODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

**Signature & Seal of the Bidder**

## **ANNEXURE - J**

To,



|            |   |               |
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Contact Person's Name :

Official Correspondence Address :

We confirm that we will bear the charges, if any, levied by our bank for the credit of NEFT/RTGS amounts in our account. Any change in above furnished information shall be informed to TPWODL well in time at our own. Further, we kept TPWODL indemnified for any loss incurred due to wrong furnishing of above information.

Thanking you,

For \_\_\_\_\_

**(Authorised Signatory)**

**(Signature with Rubber Stamp)**

**Certification from Bank:**

We confirm that we are enabled for receiving NEFT/RTGS credits and we further confirm that the account number (specify Bank a/c no.) of (Please mention here name of the account holder), the signature of the authorised signatory and the MICR and IFSC Code of our branch mentioned above are correct.

This also is certified that the above information is correct as per Bank record

**(Manager's/ Officers Signature under Bank Stamp)**



## ANNEXURE - K

### CONTRACTOR SAFETY MANAGEMENT SYSTEM

#### 1. OBJECTIVE

The objective of the Contractor Safety Management System is to lay down clear guidelines for all Business Associates (including their associates, staff and agents) which would facilitate them to observe all statutory rules and regulations, comply with applicable standards of Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010 & (safety requirements for construction, operation and maintenance of electrical plants and electric lines) Regulations, 2011, TPWODL Safety Manual and Guidelines and thus, ensure creation of safe working environment for all stakeholders of our network.

#### 2. SCOPE

All contracts (minor and major) will be subject to the provisions of this document.

**Minor Contracts:** Contracts which satisfy all the criteria listed under the head “Minor Contracts”.

**Major Contracts:** Contracts which satisfy any two or more criteria listed under the head “Major Contracts”

| Criteria                                       | Minor Contracts                             | Major Contracts                                       |
|--|---|---|
| Value of Contract                              | < Rs. 1500000/- (less than Rs. Fifteen Lac) | >= Rs. 1500000/- (Equal or more than Rs. Fifteen Lac) |
| Period   | Period less than 1 year                     | Any period  |
| Working on energized electrical equipment      | No  | Yes   |
| Working on height (above 1.8 Mtrs from ground) | No  | Yes   |
| Work involving construction activity           | No  | Yes   |
| Working with hazardous goods or chemicals      | No  | Yes   |
| Work involving danger to general public        | No  | Yes   |

**Note:** Exceptions for major and minor contract are – in house software development, supply of material or equipment but no direct or indirect installation of the same material, administration contracts (courier, water supply, printing, security, transport, etc.), minor civil work like plastering at ground level or flooring, etc. The facility management (housekeeping) contract will always be treated as a minor contract.

#### 3. INFORMATION REQUIRED AT TIME OF VENDOR REGISTRATION OR BEFORE COMMENCEMENT OF CONTRACT

3.1 Business Associate is required to fill the Safety Management System Questionnaire as per *annexure 1* and submit along with the vendor registration process / bid /

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tender document. The filled questionnaire will be scrutinized by Engineer In-charge / indenting group and recommend suitability of the BA with respect to safety requirements. The fulfilment of statutory requirements for vendor registration pertaining to labour laws etc. shall be done by BA Cell on being referred to it.

3.2 Business Associate is required to take suitable risk control measures mentioned against the identified Hazards and Risk document provided for all contracts as per *annexure 2*. The primary objective of this is to evaluate the understanding of the BA towards risk mitigation and employment of safe work procedures. BA is required to conduct the Hazard identification and Risk Assessment study as per the procedure and deploy more or other measures if deemed necessary.

3.3 Business Associate shall comply with **Statutory Requirements related to Safety and Occupational Health** and submit the "Safety Undertaking" as per *annexure 4*.

#### 4. GENERAL SAFETY CONDITIONS REQUIRED TO BE FULFILLED BY BUSINESS ASSOCIATES

The requirements of the contractor safety management system applicable to the minor or major contracts related to various groups are as following –

- 4.1 Maintenance of Distribution Network – *Annexure 3.1*
- 4.2 Distribution Projects – *Annexure 3.2*
- 4.3 EHV Projects – *Annexure 3.3*
- 4.4 Maintenance of Sub transmission network – *Annexure 3.4*
- 4.5 Civil / Generation Projects – *Annexure 3.5*
- 4.6 Meter Management Group (MMG), Revenue Recovery Group (RRG), Energy Auditing Group, AML, MRG, etc. – *Annex3.6*
- 4.7 Maintenance and Operation of Street Light. – *Annexure 3.7*

1. *Please note that hydra cranes used by any dept should be ACE Model No. FX 150 ACE SX 150, Escorts Model No. TRX 1550 or contemporary. Use of old generation hydra cranes like ACE 14XW or ACE 12 XW, etc are prohibited.*

**(Details as per Annexure attached)**

**Note:** *For minor contracts, the BA shall assign the duties of Safety Representative to the Work Supervisor. Work Supervisor will deliver all duties and responsibilities of Safety Supervisor as detailed in this document.*

The Business Associate (BA) having major contract will appointing Safety supervisor, engineer / manager for the TPWODL work. The BA shall make all necessary arrangements for getting their workforce safety trained and competency checked from the DOSEC of TPWODL before deployment in the field. BA Cell shall recommend the suitability after competency checked by Engineer In-charge and SAFETY group (or his representative) of TPWODL. After getting the clearance from DOSEC, BA cell and receiving temporary I-card issued by TPWODL, Business Associate shall commence the working.

Safety Representative of Business Associates will formally become the nodal point for safety concerns for TPWODL. **BA shall not frequently transfer or terminate the services of any of the safety representatives appointed for TPWODL work site. BA needs to ensure that Safety representative is available at all points of time; failing which the work being carried out in the interim (period when Safety representative is not available) shall be treated as working under improper supervision and due penal provisions shall be initiated against the BA.** BA will be required to provide all applicable infrastructure

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and power to ensure smooth working of the safety representative to maintain a sound safety management system. **In all contracts safety representative will not be assigned any other activity at site apart from the works related to safety management. The duties are detailed in clause 5.5 of this document.** TPWODL will be auditing the facilities provided to the BA's safety team time to time.

The Safety Representative of the BA shall be required to meet and follow the instructions of the Engineer In-charge and SAFETY Group of TPWODL. He shall be responsible for providing the MIS and/or any other relevant information, as and when desired, within the stipulated time frame as per the requirements of TPWODL. Any non-conformance to safety will lead to the negative marking or issue of safety violation challan/ tokens which shall affect the monthly evaluation and performance of BA.

All contracts where BA has to depute vehicle for their staff and equipment to move from one location to other, the BA shall ensure that vehicle complies all required statutory clearances and requirement as per The Motor Vehicle Act, 1988 as well as TPWODL Road Safety Policy and are in good & safe state of working.

## 5. QUALIFICATION AND EXPERIENCE OF THE SAFETY AND SITE PERSONNEL

Qualification and experience required for the safety and site personnel are as following:

**5.1 Safety Supervisor:** It is mandatory that educational qualification of safety supervisor be ITI (of relevant trade) / Diploma (Any branch of engineering) and he has a working experience on electrical system / relevant field of work at least 5 yrs for ITI and 3 years for Diploma holder. Having formal experience of the safety systems will be an added advantage

**5.2 Safety Engineer:** It is mandatory that educational qualification of safety engineer be at least Diploma (relevant branch) and he has working experience on electrical system of at least 3 yrs. Having the formal experience of the safety systems will be an added advantage.

**5.3 Safety Manager:** The educational qualification of safety manager should be graduate engineer with working experience on electrical system / network of at least 3 yrs. OR Diploma in Industrial Safety with working experience of 05 years including at least 02 years on electrical network.

However, clause 5.1, 5.2 and 5.3 are not applicable for minor contracts. In such cases, BA shall assign the duties of Safety Representative to the Work Supervisor. Work Supervisor will deliver required duties of Safety Representative (as per clause 5.5) in addition to other duties without diluting the importance of safety.

**5.4 Site Skilled Personnel:** For all responsibility related to site activities and operations, the BA shall employ only qualified and skilled persons and shall comply the provisions of section 19 & 29 of Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2010. Persons holding valid approvals only by any Government approved agency or a competency assessment panel or a team set up by TPWODL shall be allowed to perform the High Risk / High Hazard activities (refer page 1). The skill / qualification required for the electrician and electrical supervisor are given in *annexure 5*. The contracts related to maintenance of Distribution Network, Distribution Projects, Extra High Voltage Projects, maintenance of Sub-Transmission Network,

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Meter Management Group & Energy Audit Group, maintenance and operation of street lights, shall preferably have at least 20 per cent of ITI qualified electricians in the first year of the contract. This figure shall preferably be incremented by 15 per cent every subsequent year.

*Note: For the competency assessment may please refer the work instructions. An employee shall have to necessarily undergo the competency assessment check once in every eighteen months.*

#### **5.5 Requirements from the Safety Representative(s) of the Business Associate:**

- 5.5.1 Safety training of 2 hrs/employee/month and one day of safety induction training to all new employees joining the BA will be conducted by the BA as per Safety training modules of TPWODL.
- 5.5.2 Safety Talk / tool box talk before start of shift to BA employees.
- 5.5.3 Ensuring the availability & proper usage of the standard safety equipment (PPE)
- 5.5.4 Periodic inspection of PPE to ensure their serviceability and maintaining the 10% buffer stock of standard PPEs.
- 5.5.5 Ensuring the adherence to standard operating procedures of TPWODL as mentioned in TPWODL Safety standard and O & M and concerned function's manual.
- 5.5.6 Safety inspections / audits as per the process of TPWODL
- 5.5.7 Working in close coordination SAFETY Group of TPWODL.
- 5.5.8 Reporting of unsafe acts, unsafe conditions, near miss, incident or accident to Engineer In-Charge and SAFETY Group of TPWODL immediately after its occurrence.
- 5.5.9 Regular HIRA at site and comply the control measures as stated in the detailed HIRA as per the *annexure 2*. Also deployment of JSA based checklist shall be ensured.
- 5.5.10 Ensuring compliance with safety and other laws as may be applicable and providing for safety assurance.

#### **5.6 Training and Syllabus:** The BA shall not deploy any person at work place / site or send newly recruited personnel directly to DOSEC for competency assessment without Safety Induction Training.

5.6.1 All new BA employees have to necessarily undergo one and half days Safety training and Competency assessment at training centre of BA cell. This training will be conducted once in a week. After the completion of Safety training & Competency assessment I-card will be issued to all competent BA employees

5.6.2 BA is expected to initially train and judge the capability of the workman at his own end before further recommending the workmen for Competency assessment. If any BA workman sent for competency assessment. In case any BA workman fails in the Competency test at DOSEC, it will be deemed that BA has not imparted sufficient training at his end and actual cost of training ₹ 7500/ BA employee/ failed attempt will be recovered.

5.6.3 The workers who have imparted Safety Training and issued I-Cards of TPWODL, are not deployed at TPWODL worksites/ voluntarily left the job by workers/ used somewhere else other than TPWODL by the BA, in that case Management reserves the rights to intervene and recover the actual cost of training i.e. ₹ 7500/BA employee. (*Exempted for attrition rate of BA workers less than or equal to 10% of total workforce deployed at TPWODL*)

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5.7 It is desired that Safety representative of the BA to impart the general safety training to each employee of duration 2 hrs per month. The training will be organized at BA level and the record to be sent to engineer in-charge and SAFETY group of TPWODL every month. Please refer schedule and syllabus in *annexure 6*.

**List of Personal Protective Equipment (PPE) and Maintenance schedule:** BA shall commence the project or any work only when the required PPE are made available to the team of employees involved in the work. Each PPE of BA shall be checked / inspected by the safety representative / supervisor at zone before the work start or as prescribed in the list. Safety representative shall regularly check the healthiness of each PPE allocated to lineman. Suitable record shall be maintained at zone. Defective PPE shall be immediately replaced or within 24 hours by the BA. In no case linemen or any other official of BA may be allowed to work with defective PPE. It is preferred that BA ensures minimum stock of each PPE at zone for immediate replacement with defective one. The PPE shall be IS / BS / CE marked and exactly as per the standard or specification mentioned in the *annexure 7*. Working without PPE / non-standard PPE shall be treated as safety violation and penalty as stated in section 6.0 of this document. If TPWODL finds that BA has not provided the adequate / appropriate PPE to their staff, TPWODL reserves the rights to stop the work and call the BA to provide appropriate PPEs at the risk. If the BA fails to provide the required PPEs at the risk then the same shall be provided by TPWODL at the actual cost of the PPE. The amount shall be charged to BA and same shall be first recovered from the current bill of BA or any future payment to be made to BA. In the event of any balance amount still left for recovery, the same shall be adjusted against retention amount or by invoking bank guarantee submitted by BA.

**5.8 Safety Audit / Inspection & HIRA:** The BA shall get the required safety inspection / audit conducted by his technical team comprising of safety representative as per the *annexure 8*. The safety representative will be required to conduct the HIRA (Hazard Identification and Risk Assessment) as per *annexure 2* of the process and work undertaken at least two times in a year or every time if a new process / activity / machine is introduced or whenever an accident take place. The risk identified to be addressed suitably with –

- Engineering Control
- Management Control, and
- Personal Protective Equipment.

The safety representative of BA shall inform and educate for the identified risk and hazard control methods to employees, supervisor and engineer as well as the engineer in-charge and SAFETY group of TPWODL.

**5.9 Safety Performance and Safety MIS:** The BA shall maintain good practice of safety all through the contract duration. Safety shall always be of paramount importance during the contract period. Safety performance will be monitored on yearly basis throughout the period and no relaxation will be given for bad performance. BA with good track record and excellent performance will be rewarded suitably as per clause 6.0 of this document. The BA has to provide monthly “Performance Report – Safety” to engineer in-charge and SAFETY group TPWODL this shall be part of monthly bill along with training details. Performa of the report is enclosed as *annexure 9*.

**5.10 Pre – Employment Medical Check-up and Fitness of employees engaged for the critical works:** The BA shall submit the health fitness certificate for all those workers involved in climbing the pole or working at height for following diseases:

5.10.2 Epilepsy

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- 5.10.3 Colour blindness
- 5.10.4 Deafness
- 5.10.5 Vertigo & height phobia

Every year BA will give an undertaking stating that all the employees are fit to work and have not developed aforesaid diseases. The Record of such medical check-ups shall be submitted to BA Cell before issue of temporary identity card. The records shall be maintained at BA Cell. All such medical check-ups shall be repeated once in a year for all workers involved in climbing the pole or working on electrical network.

## 6. REWARD AND PUNITIVE MEASURES

**6.1** To support the enforcement of good SHE & DM practices by the Business Associate and to eliminate repeated or continuing safety violations, use of appropriate reward and punitive measures shall be made. Each unsafe act or violation of the safety guidelines as described in the Safety Manual of the TPWODL will be audit criteria of this system. Broadly the measures identified are following:

- 6.1.1 Working without PPE/ Safety Gadgets
- 6.1.2 Working without proper tools and tackles, barricading, Poor condition of Crane / Hydra / Vehicle, using without certification / Licence, Incompetent driver/ Helper
- 6.1.3 Working without creation of effective safety zone
- 6.1.4 Improper Supervision at worksite, Lineman/ Supervisor working without competency
- 6.1.5 Working without adherence to PTW process or authorization/ not adherence to SOPs / W.I. of TPWODL.
- 6.1.6 Improper Working at height equal to or above 1.8 mtrs without taking proper fall protection measures/ Poor condition of Ladder

### 6.2 Measures of Reward and Punitive Measures

The Engineer In-Charge, NSO, SC, ASOs, CSI / SIs and SAFETY group will conduct the surprise audits of the work / project and if any non-conformance is found the same will be booked and entered in the format "Safety Violation Record" *annexure 10*. The flow of the information is given below:

| Safety Violation Escalation & Monitoring process  |  |
|---|--|
| Action  | Responsibility   |
| Safety Violation form has been filled and counter foil sent to SAFETY team for information. The main form is to be given to BA supervisor / Engineer in-charge. <i>(Automatically generated if Site audit done through Mobile App.)</i> | Engineer In-charge/ NSO / SC / SAFETY Group /CSI/ ASO/ Any authorised TPWODL official. |
| ↓   |  |
| Entry of the violation in the master record and sending the information to concerned Manager, HoG, HoD, Head and Chief (O &S). <i>(Automatically generated if Site audit done through Mobile App.)</i>                                  | SAFETY Group   |
| ↓   |  |
| Forwarding the information Centralized Account Payable (CAPS) for amount deduction from the   | Engineer In-charge   |

|   |   |
|---|---|
| current bill of the BA, <i>if any</i> .   |   |
| ↓   |   |
| HoG (Safety – II) & HoG (Safety & Quality – Commercial) and CAPS to generate the MIS of the violations and the amount deducted. | SAFETY Group  |
| ↓   |   |
| The pool of the amount generated after the deduction to be utilized in safety welfare of BA employees.                          | SAFETY Group with approval of CFO/Chief (O & S) /CEO&MD |

The safety violations have been rated from 1 to 5 (figure 6.3) as per the gravity of the violation. If the same violation is repeated it may escalate into a higher penalty. If a particular Business Associate employee violates safety norms three times, he shall not be allowed to work in TPWODL for a period of one year from the date of the 3<sup>rd</sup> violation.

### 6.3 Safety Violation Escalation Matrix

#### 6.3.1

GENERAL CONDITIONS OF CONTRACT

| Consequence of Safety Violation Observed<br>(Not related to Incident/ Accident) |  | Violation             |                                |     |   | Subsequent Violations   |
|---|--|-----------------------|--------------------------------|-----|---|---|
| S.No.   | Safety Violation   | 1st                   | 2nd                            | 3rd | 4th   |   |
| 1   | Working without PPE (Helmet/Gloves/Safety Harness/ Safety Shoes etc.)  | A                     | B                              | C   | D   | Will attract the same penalty as applicable in the 4th violation. |
| 2   | Improper Working at Height   | A                     | B                              | C   | D   |   |
| 3   | Working without proper tools and tackles                               | A                     | B                              | C   | D   |   |
| 4   | Poor condition of Crane/Hydra/ Vehicle/Incompetent driver/ Helper      | A                     | B                              | C   | D   |   |
| 5   | Violation of SOP/ WI   | B                     | C                              | D   | E   |   |
| 6   | Working without adherence to PTW process or authorization/ Safety Zone | C                     | D                              | E   |   |   |
| <b>Legend</b>   | <b>Action to be taken</b>  | <b>Responsibility</b> | <b>Penalty Amount (in Rs.)</b> |     | The number of violations are to be calculated cumulatively over the contract period and not on monthly basis. |   |
| <b>A</b>  | Warning letter   | Engineer Incharge     | Nil                            |     |   |   |
| <b>B</b>  | Levy of Penalty  | Engineer Incharge     | 2,000                          |     |   |   |
| <b>C</b>  | Memo to BA & Levy of Penalty   | Head of Group         | 4,000                          |     |   |   |
| <b>D</b>  | Memo to BA & Levy of Penalty   | Head of Department    | 10,000                         |     |   |   |
| <b>E</b>  | Memo to BA, Levy of Penalty and termination of Contract                | Head of Department    | 1,00,000                       |     |   |   |

Figure 6.3 (1a)-Penalty Matrix for Safety violation (Applicable for Minor Contracts)

| Consequence of Safety Violation Observed<br>(Not related to Incident/ Accident) |  | Violation             |                                |     |   | Subsequent Violations   |
|---|--|-----------------------|--------------------------------|-----|---|---|
| S.No.   | Safety Violation   | 1st                   | 2nd                            | 3rd | 4th   |   |
| 1   | Working without PPE (Helmet/Gloves/Safety Harness/ Safety Shoes etc.)  | B                     | C                              | D   | D   | Will attract the same penalty as applicable in the 4th violation. |
| 2   | Improper Working at Height   | B                     | C                              | D   | D   |   |
| 3   | Working without proper tools and tackles                               | A                     | B                              | C   | D   |   |
| 4   | Poor condition of Crane/Hydra/ Vehicle/Incompetent driver/ Helper      | B                     | C                              | D   | E   |   |
| 5   | Violation of SOP/ WI   | C                     | D                              | E   |   |   |
| 6   | Working without adherence to PTW process or authorization/ Safety Zone | C                     | D                              | E   |   |   |
| <b>Legend</b>   | <b>Action to be taken</b>  | <b>Responsibility</b> | <b>Penalty Amount (in Rs.)</b> |     | The number of violations are to be calculated cumulatively over the contract period and not on monthly basis. |   |
| <b>A</b>  | Levy of Penalty  | Engineer Incharge     | 5,000                          |     |   |   |
| <b>B</b>  | Memo to BA & Levy of Penalty   | Engineer Incharge     | 10,000                         |     |   |   |
| <b>C</b>  | Memo to BA & Levy of Penalty   | Head of Group         | 25,000                         |     |   |   |
| <b>D</b>  | Memo to BA & Levy of Penalty   | Head of Department    | 50,000                         |     |   |   |
| <b>E</b>  | Memo to BA, Levy of Penalty and termination of Contract                | Head of Department    | 1,00,000                       |     |   |   |

Figure 6.3 (1b)-Penalty Matrix for Safety violation (Applicable for Major Contracts)

Once the BA reaches the “BLACK” (color – “5”) category, i.e. highest level of safety violation, “Termination” notice to BA will be issued from the office of the Head of Department (equivalent to Addl GM/ GM/ Sr. GM level) and further, *if required*, continuation / extension of contract will only be initiated by Functional Head of the department (equivalent to Sr. GM / VP level) and approved by CEO & MD. Till the extension, the contract will remain suspended.



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TPWODL encourages the reportage of the safety violation during the contract work by BA. Any TPWODL employee can register a safety violation against the BA in the "Safety Violation Form" *annexure 10*. Initially the observer has to fill the form and handover the counterfoil (lower portion) of the document to the supervisor of the BA, inform the site engineer of TPWODL and send the top portion of the Safety Violation Form to SAFETY group for the further necessary action against the BA. **The cumulative nos. of Safety Violations pertaining to any particular BA shall be calculated on yearly basis.**

Safety violations resulting in incident / accident will be treated as per gravity of the injury / fatality and its impact as well as type i.e. minor or Major. Consequences of incident / accident are shown in the matrix (figure 6.3(2) for major and 6.3(3) for minor) below. In case of any accident, findings and recommendations of Accident Enquiry Committee will be final and binding and will supersede the arbitration clause of GCC.

| Consequence Of an Incident / Accident<br>(In case of <b>MAJOR</b> contract) |  | Incident / Accident   |                  |  |          | Action<br>Required              |
|---|--|---|------------------|--|----------|---------------------------------|
| Sl. No  | Type of the injury   | 1st   | 2nd              | 3rd  | 4th      |                                 |
| 1   | Slight injury (First Aid Case)   | <b>F</b><br>(Strengthening of process through continuous improvement in the work procedure) |                  |  |          | Take risk reduction<br>measures |
| 2   | Minor injury (No or Hospitalization less than 48 Hrs)                        | <b>F</b>  | <b>G</b>         | <b>G</b>   | <b>H</b> |                                 |
| 3   | Major injury (Bone injury or burn or Hospitalization more than 48 Hrs)       | <b>G</b>  | <b>G</b>         | <b>H</b>   | <b>I</b> |                                 |
| 4   | Single fatality  | <b>J</b>  | <b>K</b>         |  |          | Intolerable                     |
| 5   | Multiple fatalities (Two or more fatalities during one event)                | <b>K</b>  |                  |  |          |                                 |
| Legend  | Action to be taken   | Responsibility  | Penalty (in Rs.) | <i>The number of violations are to be calculated cumulatively over the contract period and not on monthly basis.</i> |          |                                 |
| <b>F</b>  | Memo to BA and levy of penalty   | Engineer Incharge   | 5,000/-          |  |          |                                 |
| <b>G</b>  | Memo to BA and levy of penalty   | Head of Group   | 20,000/-         |  |          |                                 |
| <b>H</b>  | Memo to BA and levy of penalty   | Head of Group   | 50,000/-         |  |          |                                 |
| <b>I</b>  | Memo to BA and levy of penalty   | Head of Department  | 2,00,000/-       |  |          |                                 |
| <b>J</b>  | Memo to BA and levy of penalty   | Head of Department  | 5,00,000/-       |  |          |                                 |
| <b>K</b>  | Memo to BA, levy of penalty, termination of contract and black listing of BA | Functional Head   | 10,00,000/-      |  |          |                                 |

Figure 6.3 (2) - Penalty Matrix for Incident / Accident in Major Contracts

(For example: In major contracts, if there is first incidence of major injury say bone injury (Cat. 3) where worker was hospitalized for more than 48 hrs then a penalty of amount Rs.20000/- will be deducted from the current bill produced for the payment. This penalty will be similar for first two incidents. However, it will increment to next higher category i.e. Rs. 50,000/- on subsequent incidents as per the above matrix)

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| Consequence Of an Incident / Accident<br>(In case of <b>MINOR</b> contract)       |  | Incident / Accident   |          |                  |          | Action<br>Required   |
|---|--|---|----------|------------------|----------|--|
| Sl. No  | Type of the injury   | 1st   | 2nd      | 3rd              | 4th      |  |
| 1   | Slight injury (First Aid Case)   | <b>L</b><br>(Strengthening of process through continuous improvement in the work procedure) |          |                  |          | Take risk reduction<br>measures  |
| 2   | Minor injury (No or Hospitalization less than 48 Hrs)                            | <b>L</b>  | <b>M</b> | <b>M</b>         | <b>N</b> |  |
| 3   | Major injury (Bone injury or burn or Hospitalization more than 48 Hrs)           | <b>M</b>  | <b>M</b> | <b>N</b>         | <b>O</b> |  |
| 4   | Single fatality  | <b>P</b>  | <b>Q</b> |                  |          | Intolerable  |
| 5   | Multiple fatalities (Two or more fatalities during one event)                    | <b>Q</b>  |          |                  |          |  |
| Legend  | Action to be taken   | Responsibility  |          | Penalty (in Rs.) |          | <i>The number of violations are to be calculated cumulatively over the contract period and not on monthly basis.</i> |
| <b>L</b>  | Memo to BA and levy of penalty   | Engineer Incharge   |          | 5,000/-          |          |  |
| <b>M</b>  | Memo to BA and levy of penalty   | Engineer Incharge   |          | 10,000/-         |          |  |
| <b>N</b>  | Memo to BA and levy of penalty   | Head of Group   |          | 25,000/-         |          |  |
| <b>O</b>  | Memo to BA and levy of penalty   | Head of Department  |          | 1,00,000/-       |          |  |
| <b>P</b>  | Memo to BA and levy of penalty   | Head of Department  |          | 3,00,000/-       |          |  |
| <b>Q</b>  | Memo to BA, levy of penalty, termination of contract and black listing of the BA | Functional Head   |          | 5,00,000/-       |          |  |
| <b>Figure 6.3 (3) - Penalty Matrix for Incident / Accident in Minor Contracts</b> |  |   |          |                  |          |  |

(For example: In minor contracts, if a worker meets with a non-fatal accident say bone injury (Cat. 3) where he was hospitalized for more than 48 hrs then a penalty of amount Rs. 10,000/-, will be charged from the current bill produced for the payment. This penalty will be similar for first two incidents. However, it will increment to next higher category i.e. Rs. 25,000/- on subsequent incidents as per the above matrix.)

In case of single or multiple fatalities described under legends J&K of 6.3(2) and P&Q of 6.3(3), the concerned BA may be debarred from extension of contract or participate in new contract. In such event the approval of Chief (O & S) will be necessary for extension or award of new contract to concerned BA.

### 6.3.2 COMPENSATION FOR BA PERSONNEL

In the event of any untoward incident/ accident, the Business Associate shall ensure prompt medical assistance such as treatment, sickness benefit, etc. is provided to the victim(s) as per the Employees' Compensation Act, 1923 or Employees' State Insurance Act, 1948, as applicable. Also, the BA will be required to take adequate measures for compensating the victim(s) or his/her/their kin as follows:

#### I. For Death or Permanent / Total Disablement

The BA shall take an insurance coverage of at least Rs. 10 lakhs for each engaged employee, to cover any incidence of Death or Permanent / Total Disablement (Permanent/Total Disability shall be considered as defined under Employees' Compensation Act, 1923). In the event of any such unfortunate incident, the BA would ensure that adequate compensation is paid immediately to the family of the victim(s) from his own resources. This compensation shall be covered under the insurance policy subscribed by the BA mentioned earlier and the arrangement should be such that it would get reimbursed to the BA by the insurance agency subsequently.

#### II. For Permanent Partial Disablement and Temporary Total Disablement

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The compensation in this case will be as per provisions of the Employees' Compensation Act, 1923 or Employees' State Insurance Act, 1948, as applicable.

Accordingly, the BA shall obtain a suitable Insurance Policy on award of Contract and submit documentary evidence of the policy to the BA Cell before commencement of work. The BA shall ensure that the Insurance policy is active at all times and all employees are covered in all respects till the conclusion of contract period or till working with TPWODL. The BA shall submit a copy of the policy after periodic renewals to the BA Cell.

However, on occurrence of such unfortunate incident, if it is found that the victim(s) is/are not covered under any insurance policy, the BA shall be liable to pay the entire sum of Rs. 10 lakhs from his own resources.

Further, in case of an accident resulting in Death or Permanent / Total Disablement while on duty, the appointed BA Nodal Officer will ensure that the BA complies with all statutory provisions and benefits i.e. PF, Compensation, Gratuity etc., and that all these are made available to the employees' nominee(s) as per the stipulated timelines.

**6.3.3** TPWODL rewards the BA with good track record of safety management. It is proposed that BA complying with Contractors Safety Management, Safety Manual and Safety process will be rewarded suitably as per the procedure, rule and regulations of the TPWODL. In any case major accident is reported during an assessment period BA will not be eligible for this reward scheme. Assessment of contracts will be once in year. Generally the assessment cycle is calendar year and guidelines will be declared time to time.

#### Abbreviations Used in the Document

|                               |  |
|-------------------------------|--|
| TPWODL                        | TP Western Odisha Distribution Limited   |
| BA                            | Business Associate   |
| HIRA                          | Hazard Identification & Risk Assessment  |
| JSA                           | Job Safety Analysis  |
| EHV                           | Extra High Voltage   |
| SAFETY                        | Safety, Occupation Health, Environment & Disaster Management                                     |
| MMG                           | Meter Management Group   |
| EAG                           | Energy Audit Group   |
| PPE                           | Personal Protective Equipment  |
| SOP                           | Standard Operating Procedures  |
| CSI/SI                        | Circle Safety In-charge / Safety In-charge   |
| ASO                           | Area Safety Officer  |
| NSO                           | Nodal Safety Officer   |
| SC                            | Safety Coordinator   |
| HoG / HoD                     | Head of Group / Head of Department   |
| AGM / GM / VP                 | Assistant General Manager / General Manager / Vice President                                     |
| CFO / Chief (O & S)/ CEO & MD | Chief Finance Officer / Chief (Operating & Safety) / Chief Executive Officer & Managing Director |
| COS                           | Corporate Operation Services   |
| CAP                           | Centralized Account Payable System   |

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|     |                                 |
|-----|---------------------------------|
| PTW | Permit To Work                  |
| GCC | General Conditions of Contract. |

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**Annexure 1 (Refer Para 3.1)**

***Business Associate Safety Management System Questionnaire***

| Certification   |  |                      |                  |    |                |
|---|--|----------------------|------------------|----|----------------|
| The information provided in this questionnaire is a summary of the company's occupational health and safety management system.  |  |                      |                  |    |                |
| Company Name:   |  |                      |                  |    |                |
| Turnover and experience:  |  | Name of top officer: |                  |    |                |
| Date:   |  | Position             |                  |    |                |
| Contract Details  |  |                      |                  |    |                |
| Contract Name   |  |                      | Contract Number: |    |                |
| Business Associates Safety Management System Questionnaire  |  | Marks                | Yes              | No | Score achieved |
| <i>Safety Policy and Management</i>   |  |                      |                  |    |                |
| <b>- Is there a written company Safety policy?</b><br>- If yes provide a copy of the policy, if No please refer Note 1.   |  | 1                    |                  |    |                |
| <b>- Does the company have an Safety Management system</b><br>- If yes provide details, if No please refer Note 1.  |  | 1                    |                  |    |                |
| <b>- Is there a company Safety Management System manual or plan?</b><br>- If yes provide a copy of the content page(s), if No please refer Note 1.  |  | 2                    |                  |    |                |
| <b>- Are Safety and occupational health responsibilities clearly identified for all levels of Management and staff?</b><br>- If yes provide details, if No please refer Note 1.   |  | 2                    |                  |    |                |
| <i>Safe Work Practices and Procedures</i>   |  |                      |                  |    |                |
| <b>- Has the company prepared safe operating procedures or specific safety instructions relevant to its operations and relevant work as per contract?</b><br>- If yes provide a summary listing of procedures or instructions, if No please refer Note 2. |  | 1                    |                  |    |                |

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| Certification  |   |  |  |  |
|--|---|--|--|--|
| - Comments   |   |  |  |  |
| - <b>Is there a register of injury or accident?</b><br>- If yes provide a copy (format)  | 1 |  |  |  |
| - <b>Is there a documented incident or accident investigation procedure?</b><br><br>- If yes provide a copy of a standard incident report form, if No please refer Note 2.<br><br>- Comments             | 1 |  |  |  |
| <i>Safety Training</i>   |   |  |  |  |
| - <b>Describe how occupational health and safety training is conducted in your company</b><br><br>If No please refer Note 1.   | 2 |  |  |  |
| - <b>Is a record maintained of all training and induction programs undertaken for employees in your company?</b><br><br>- If yes provide examples of safety training records, if No please refer Note 2. | 1 |  |  |  |
| - <b>Are regular safety inspections / audits are undertaken at worksites?</b><br><br>-If yes provide details (formats), if No please refer Note 3.   | 1 |  |  |  |
| - <b>Is there a procedure by which employees can report hazards at workplaces?</b><br><br>- If yes provide details if No please refer Note 1.  | 1 |  |  |  |
| <i>Safety Monitoring</i>   |   |  |  |  |

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| Certification   |   |                      |  |  |
|---|---|----------------------|--|--|
| - Is there an officer / supervisor responsible for monitoring workplace / worksite safety?<br><br>- If yes provide details  | 1   |                      |  |  |
|   |   |                      |  |  |
| <i>Safety Performance Monitoring</i>  |   |                      |  |  |
|   |   |                      |  |  |
| - Are employees regularly provided with information on company health and safety performance?<br><br>- If yes provide details   | 1   |                      |  |  |
|   |   |                      |  |  |
| - Has the company ever been convicted of an occupational health and safety offence?<br><br>- If yes provide details   | NO Marks<br>(Negative mark ONE for each case) |                      |  |  |
| - Has there been any major accident of employee at TPWODL site in past  | NO Marks<br>(Negative mark ONE for each case) |                      |  |  |
| - Has there been any fatal accident of employee at TPWODL site in past.<br>- (Note: Bid evaluation committee has to take cognizance of the incident and shall evaluate the bid only after formal approval of competent authority i.e. CTO.<br>- In case of yes please refer Note 4. | NO Mark<br>(Negative mark FIVE for each case) |                      |  |  |
| Minimum of 75% marks is required for qualification.   |   | Total Marks achieved |  |  |
| <i>Company Reference</i>  |   |                      |  |  |
| 1. Name of company<br>2. Name of company  |   |                      |  |  |

**Note**

1: If company does not have formal procedure on Safety Management System than vendor may submit proposed Safety road map along with safety action plan and brief safety policy on his letter head signed by head of the organization.

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*2: The vendor may submit the same in the Safety Action Plan.*

*3: The vendor may utilize the same format of TPWODL or on request SAFETY group will assist the vendor in developing the audit system. For other points also vendor may take the assistance of SAFETY group for development of Safety management system.*

*4: The vendor may submit the Safety Improvement Plan and Safety Action Plan for his employees based on following points.*

- i. Action plan for enhancing safety awareness*
- ii. Action plan for safety training of employee*
- iii. Action plan for increasing safety audit in field*
- iv. Action plan for provision and utilization of safety PPE.*
- v. Action plan for fatality reduction.*
- vi. Action plan for enhanced supervision at site*
- vii. Action plan for making employee more responsible and accountable for safety.*
- viii. Action plan for availability and utilization of all required tool and equipment.*
- ix. Safety Improvement done in last two years, specially highlighting those which have been taken after the fatal accident along with results.*
- x. Safety initiatives planed or started recently.*
- xi. Any other point.*

*Based on above points and documentary evidences vendor will be required to submit a detailed report in support of his bid. The bid evaluation committee and competent authority will scrutinize the facts and the evidence submitted. If found satisfactory competent authority i.e. CTO may accord his approval for bid opening otherwise his tender shall be disqualified.*



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**Annexure 2 (Refer Para 3.2 and 5.8)**

***Risk Assessment Form***

|                      |
|----------------------|
| Business Associate:  |
| Scope of the work:   |
| BA's Representative: |
| Telephone:           |
| Signature:           |
| Date:                |

| Specific Task/Activity                    | Potential Hazards/Consequences                            | Class of Risk | Control Measures  |
|---|---|---------------|---|
| Working at Height                         | Fall from height  | 2             | <ol style="list-style-type: none"> <li>1. Mandatory usage of JSA checklist prior to start of work</li> <li>2. Use appropriate ladder</li> <li>3. Use full body safety harness having double lanyard.</li> <li>4. Use Electrical Safety Shoes if working on electrical network otherwise use safety shoes.</li> <li>5. Use Safety helmet.</li> <li>6. Use PPE as per the annexure 7 of this CSM document</li> <li>7. Refer Work instruction related to Working at Height for other details</li> <li>8. Use of metal scaffold to be ensured in height work (cup lock type)</li> <li>9. Deploy competent workforce who are medically fit</li> </ol>                              |
| Working on electrical equipment / network | Electric flash / electrocution                            | 3             | <ol style="list-style-type: none"> <li>1. Mandatory usage of JSA checklist prior to start of work</li> <li>2. Use Electrical Safety Shoes while working on electrical network.</li> <li>3. Use Electrical Safety gloves of appropriate voltage rating.</li> <li>4. Use face shield / visor attached with helmet.</li> <li>5. Use Safety helmet.</li> <li>6. Use PPE as per the annexure 7 of this CSM document</li> <li>7. Mandatory usage of Insulated tools &amp; tackles on electrical system</li> <li>8. Mandatory compliance for Lock Out &amp; Tag out system. Refer Work instruction related to Working on electrical equipment / network for other details</li> </ol> |
| Excavation / Civil work                   | Collapse of soil, Fall in excavated pit leading to Injury | 2             | <ol style="list-style-type: none"> <li>1. Use safety shoes.</li> <li>2. Use Safety helmet.</li> <li>3. Use PPE as per the annexure 7 of this CSM document</li> <li>4. Hard Barricading of the worksite.</li> <li>5. Refer Work instruction related to excavation / civil work for other details</li> </ol>  |

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| Specific Task/Activity   | Potential Hazards/Consequences            | Class of Risk | Control Measures   |
|--|---|---------------|--|
| Material lifting & Mechanical Erection work  | Fall of material/object, Topple of crane, | 2             | <ol style="list-style-type: none"> <li>1. Mandatory compliance of crane checklist</li> <li>2. Visual condition check of lifting tools and tackles such as wire rope sling, belt sling, chain, pulley block, D-shackles, etc. shall be ensured.</li> <li>3. The operator's physical fitness and alertness should be judged by sup. / EIC.</li> <li>4. Use PPE as per the annexure 7 of this CSM document</li> <li>5. Refer Work instruction related to Material lifting &amp; Mechanical Erection work</li> </ol> |
| Road Safety  | Road Accidents                            | 3             | <ol style="list-style-type: none"> <li>1. Mandatory compliance of TPWODL Road Safety policy W07 (COR-P-12)</li> </ol>  |
| <p><i>Note: This information for the general indication purpose. The detailed risk assessment shall be conducted before start of the work by the authorized representative of the BA. The report of same shall be submitted to engineer in-charge along with annexure 4 of the CSM document.</i></p> |   |               |  |

### Guidelines for filling the Risk Assessment Form

- *Specific Task/Activity* - The documentation of each major task associated with the contract.
- *Potential Hazards* - The identification of hazards associated with each activity or task to be carried out.
- *Class of Risk* - Each hazard should be evaluated as a level of risk, described as Risk Class 1, 2 or 3 defined above.
- *Control Measure* - The identification and documentation of actions required to eliminate or reduce the hazards that could lead to accident or injury.

Hazard / Risks shall be classified according to the following schedule:

- Class 1: Potential to cause injury treatable with first aid
- Class 2: Potential to cause death or permanent injury
- Class 3: Potential to cause more than one or more lost time injuries.

### Annexure 3.1 (Refer Para 4.0)

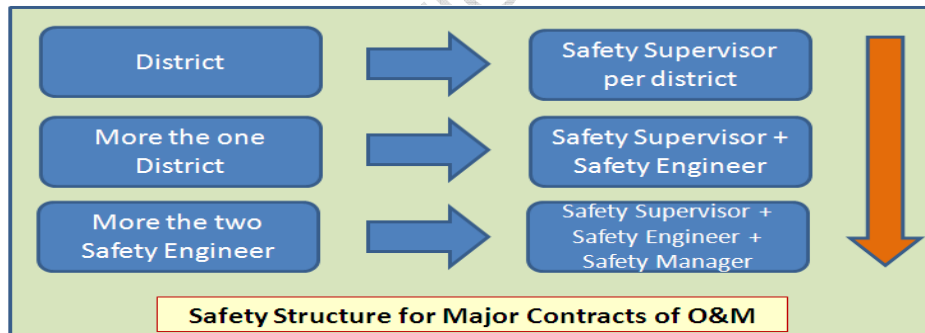
#### **General Safety Conditions for the Maintenance of Distribution Network Contracts:**

A BA awarded a contract (O&M) work of maintenance of distribution network will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.

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- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPWODL approved list in *annexure 7*.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system in a district. In case the BA has been awarded work in more than one district, then the following safety structure will be adopted.



### Annexure 3.2 (Refer Para 4.0)

#### General Safety Conditions for the Distribution Projects Major Contracts:

A BA awarded a major contract work of TS&P in area of a circle will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1.

|            |   |               |
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- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPWODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system in the area. In case the BA has been awarded work in more than one circle, then the following safety structure will be adopted.



### **Annexure 3.3 (Refer Para 4.0)**

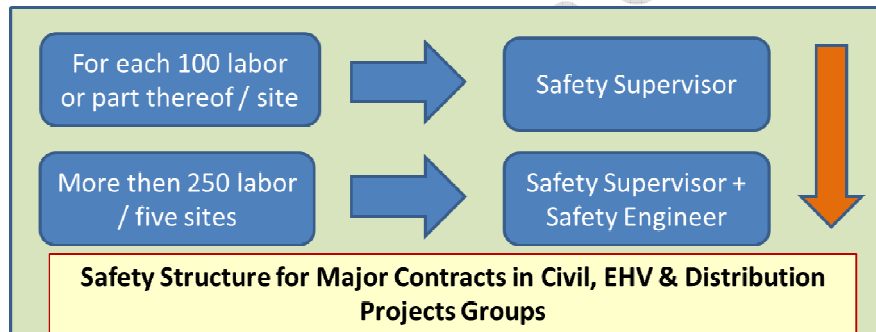
#### **General Safety Conditions for the major EHV Projects Contracts:**

A BA awarded a major contract work of EHV projects will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.

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- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPWODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system in the area. In case the BA has been awarded work in more than one circle, then the following safety structure will be adopted.
- BA shall refer Construction Safety Manual in TPWODL Safety Manual for details.



#### **Annexure 3.4 (Refer Para 4.0)**

#### **General Safety Conditions for the Maintenance of Sub – Transmission Network Contracts:**

A BA awarded a major contract work of maintenance of sub – transmission network in area of a power system will be required to fulfil the following conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.

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- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPWODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Coordinator for managing a complete safety management system in the area. In case the BA has been awarded work in more than one area power system, then the following safety structure will be adopted.



### Annexure 3.5 (Refer Para 4.0)

#### **General Safety Conditions for the major contract work in Civil / Generation Projects:**

A BA awarded a major contract work of / in civil or Generation project will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPWODL approved list in annexure 7.

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- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor (for workforce upto 100 at site) / a safety engineer (for workforce upto 250 at site) / safety manager (for more than two safety engineers) for managing a complete safety management system at the project site. In case the BA has been awarded more than one major contracts, then the following safety structure will be adopted.
- BA shall refer Construction Safety Manual in TPWODL Safety Manual for details.



### **Annexure 3.6 (Refer Para 4.0)**

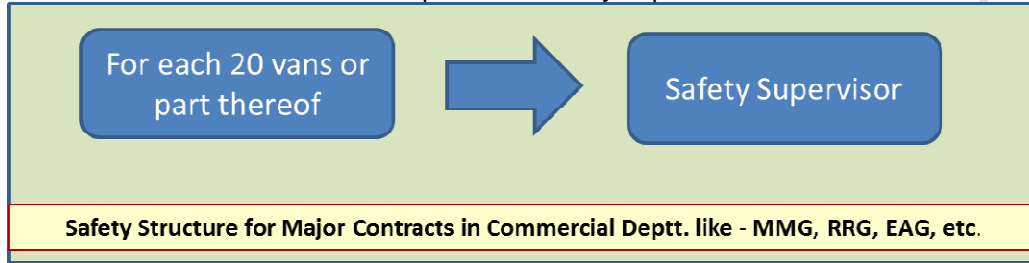
#### **General Safety Conditions for the major contract work in Commercial Department like - MMG, RRG, EAG, etc.:**

A BA awarded a major contract work in meter management group & energy auditing group will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment (PPE) as per the TPWODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.

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- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.
- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- BA shall ensure to depute a Safety Supervisor for managing a complete safety management system for the work as per the following safety structure.
- The BA for the RRG work shall depute one Safety supervisor.



### **Annexure 3.7 (Refer Para 4.0)**

#### **General Safety Conditions for the major contract work in O&M of street light group:**

A BA awarded a major contract work in operation and maintenance of street light group will be required to fulfil the following safety conditions:

- BA shall provide Safety Policy and safety objectives of their company.
- BA shall comply with all statutory requirements like: applicable acts, regulations, codes of practice, OHSAS Standards, etc.
- BA shall provide the filled safety management questionnaire as per Annexure 1
- BA shall conduct a job risk assessment and provide information as per Annexure 2
- BA shall abide by Safety manuals, guidelines of TPWODL.
- BA shall provide its organisation structure & responsibilities in terms of Safety Management to TPWODL.
- BA shall document the work practices and procedures in terms of Safety Management.
- BA shall ensure safety training and induction program for the employees
- BA shall conduct safety audits & inspections as per TPWODL procedures provided by SAFETY group.
- BA shall provide and ensure the proper usage of the safety equipment PPE as per the TPWODL approved list in annexure 7.
- BA shall ensure periodic inspection of PPE to ensure its serviceability as per the specification given by TPWODL.
- BA shall ensure the adherence to standard operating procedures or guidelines laid down by TPWODL.
- BA shall ensure reporting of any unsafe act, unsafe conditions, near miss, incident or accident to engineer in-charge and SAFETY team of TPWODL.



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- BA shall provide safety performance and Safety MIS (*annexure 9*) to engineer in-charge and SAFETY group periodically. Based on any non-confirmation to the safety procedures and guidelines, BA is liable to be negatively marked for his performance and suitable penalty will be imposed.
- Each BA shall ensure to depute a Safety Supervisor for managing a complete safety management system for the work awarded as per the below structure.



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**Annexure 4 (Refer Para 3.3)**

**Safety Undertaking by way of Affidavit**

I \_\_\_\_\_ s/o \_\_\_\_\_ R/o \_\_\_\_\_ (AUTHORIZED REPRESENTATIVE/PARTNER/DIRECTOR/PROPRIETOR ) of M/S \_\_\_\_\_ (name of company/firm) having its office at (Complete address of Company), authorized vide power of attorney dated -----/Board resolution dated----/letter of authority dated----, hereinafter referred to as **Contractor [or Business Associate (BA)]** which expression shall, unless it be repugnant to or inconsistent with the meaning or context thereof, be deemed to include its heirs, executors, administrators, and assigns do hereby affirm and undertake as under :

1. The present undertaking shall remain in force from the date of execution of contract awarded by TPWODL and shall be valid till the date of termination of the said contract by either parties. The undertaking is binding on me (contractor) as well as my sub-contractor and its employees, representatives etc.
2. That I(the contractor) will be responsible and liable to comply and abide by all the safety rules, instructions and regulations as may be specified and laid down by TP Western Odisha Distribution Limited (TPWODL) so as enable TPWODL to achieve its goal of Zero On site incidences.
3. That the Contractor shall be fully responsible for ensuring occupational health and safety of its employees, representatives, agents as well as of its subcontractor's employees, at all times during the discharge of their respective obligations under the contract including any methods adopted for performance of their tasks / work.
4. That Contractor shall ensure ,at its own expense to arrange for and procure, implement all requisite accident prevention tools, first aid boxes, personal protective equipment, fire extinguisher, safety training, Material Safety Data Sheet, pre-employment medical test, etc. for operations & activities including as & when so specified by TPWODL specifically. , failing which TPWODL shall be entitled, but not obliged, to provide the same and recover the actual cost thereof from the Contractor's payments.
5. That the Contractor shall engage adequate and competent Safety – Supervisor / Engineer / Manager / Skilled persons at site as per the Para 5 (Qualification and experience of safety personnel) and Annexure 3 of Contract Safety Management.
6. That the Contractor shall engage the competent Site – Supervisor with each group of workers for safe and correct workmanship, proper co-ordination of material and site work as per contract.

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7. That the Contractor shall immediately replace supervisor in case it is found to be not up to the level of skill and experience required as in skill and experience required in *annexure 5* of this document, but any such replacement shall be only with the prior concurrence of TPWODL .
8. That the Contractor and its subcontractors shall abide by all the safety guidelines as per Safety Manual, Contract Safety Management and other guidelines issued from time to time by TPWODL during the contract period.
9. That in case the Contractor and/or any of its Subcontractor fail to ensure the compliance as required in terms of this undertaking the Contractor shall keep and hold TPWODL / its directors / officers / employees indemnified against any / all losses / damage / expense / liability / fines / compensation / claims / action / prosecutions or the like which might be suffered by TPWODL or to which TPWODL might get exposed to as a result of any breach /wilful negligence /deliberate default on the part of the Contractor /Subcontractor in complying with the same. Contractor shall also furnish any press release, clarification etc. if sought by TPWODL for any near miss or safety violations, accidents, which are attributable to fault of Contractor.

DEPONENT

VERIFICATION

Verified at **Sambalpur** on this \_Day of \_\_\_\_\_ 20\_\_ that the contents of the above affidavit are true and correct and nothing material has been concealed therefrom

DEPONENT

**Annexure 5 (Refer Para 5.4)**

**SKILL / QUALIFICATION REQUIRED FOR ELECTRICIAN AND ELECTRICAL SUPERVISOR**

**Skill / Qualifications Required for Electrician (Certificate of Competency Class-II):**

1. Formal education in ITI – Wireman/ Electrician trade.

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OR

2. Working experience of minimum three years of practical wiring.

OR

3. Have completed three years apprenticeship course through Apprenticeship Advisor, Odisha Govt. / other state Govt. in the trade of Lineman / Wireman / Electrician.
4. A candidate must have attained the age of Eighteen years.

**Skill / Qualifications Required for Electrical Supervisor (*Certificate of Competency Class-I*):**

1. Have at least five years' experience of practical wiring after passing the certificate of competency class-II i.e. electrician.

OR

2. Recognized Degree or Diploma or equivalent qualification in Electrical Engineering from any Technical institute / College or University recognized by the Board.

AND

Must have completed the training/job in rectifying the common defects in electrical line and power installation for a period of one and three years after passing Degree or Diploma respectively

OR

3. Possessing the valid certificate of certificate of competency class – 1 (Electrical Supervisor)

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**Annexure 6 (Refer Para 5.6)**

**Training Module for BAs Worker & Supervisor**

**Training for BA Supervisor**

**Duration – 02 Hrs / Month**

**Methodology:** Lecture and Practical Demonstration of Safety Zone Creation

**Session: 1**

**Topic:** Electrical Safety Aspects

**Sub Topics:**

1. Learning specifics of HT & LT Network of zone
2. Major type of HT / LT / service lines / street light maintenance works
3. Understanding the need of Safety
4. Understanding the safe process of maintenance :
  - Planning of the maintenance job
  - Availability of men, material & machine, PPEs, Safety gear and approved PTW
  - Briefing of the job by the supervisor of the TPWODL
  - Identification of Risks associated with the maintenance work and planning for controlling measures by TPWODL supervisor
  - Creation of safety zone by TPWODL supervisor and satisfying that the network is dead – Use of Neon Tester, Shorting Chain and Safety Tagging
  - Start of the work – Right person for the right job
  - Alert supervision
  - Completion of the job – Check points
  - Energization of network
  - Actions to be taken in case of some accident

**Session: 2**

**Topic:** Use of Electrical Testing Equipment

**Methodology:** Lecture and Practical Demonstration

**Sub Topics:**

1. Meggar, Hi Pot, Clamp On Meter, Neon Tester, Discharge Rod, Line tester etc.

**Session: 3**

**Topic:** Awareness of Electrical Safety Aspects

- A. Understanding the need of this Training and Safety
- B. Learning specifics of HT & LT Network
- C. Major type of work to be carried out in zones
- D. Switching Operations (Do's & Don'ts) including Street Light Switching
- E. Working on Height (*practical demo also*)
- F. Understanding the Safe Process of Maintenance / Working:
  - Planning of the job
  - Availability of men, material & machine, PPEs, Safety gear and approved PTW
  - Briefing of the job by the supervisor
  - Permit to Work
  - Safety Tagging and Lock Out Tag out
  - Identification of Risks associated with the work to be carried out and planning for controlling measures by proper supervision

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- Concept of "**Safety Zone**"
- Identification and use of Neon Tester, Shorting Chain, Clamp On Meter, Hi Pot, Meggar etc.
- Completion of the job – Check points
- Accident Theory & Incident Reporting
- Actions to be taken in case of some accident

**Session: 4**

**Topic: Identification, Demonstration and Usages of Tools, PPEs and other Safety Gears and demonstration of working on HT pole**

**Session: 5**

**Topic: Practical demonstration of Safety Zone creation**

**FREQUENCY**

**Regular Safety Training Program**

- It will be conducted for all field & supervisor staff of BA in such a manner that all BA Personnel attend at least two hours safety training during every month.

**One Day Induction Safety Training Programs:**

- This training will be for the new BA's personnel, who have been cleared by the Cross Functional Panel to undergo Safety training and who are likely to be deployed at various work sites of TPWODL by the BA, as a part of AMC / Work Contract.

**Duration / Periodicity:**

- Duration and periodicity has been defined above. However, this is subject to change at the discretion of TPWODL.

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**Annexure 7 (Refer Para 5.7)**

**LIST OF PERSONAL PROTECTIVE EQUIPMENT AND TESTING FREQUENCY**

| Sl. No. | Name of PPE   | IS / EN Standard          | Testing Frequency  | Remarks  | Ref Brand & Model   |
|---------|---|---------------------------|--|--|---|
| 01      | Leather Safety Shoes (Color – Black) with PU toe cap.               | IS:15298 (Part-2)         | Monthly and visual check every day for any crack or damage in the leather or sole. |  | BATA (Model No.- Endura L/C)<br><br>Liberty (Model No. – 7198-01 HT Barton Black – Warrior)       |
| 02      | HDPE Safety helmet with chin strap and ratchet type for adjustment. | IS:2925-1984              | Monthly and visual check every day for any crack in shell.                         |  | Karam (PN Safetech )<br><br>Joseph Leslie<br><br>Accent Industries<br><br>Honeywell               |
| 03      | Full body harness (Safety belt)                                     | EN 361                    | Monthly and visual check every day of the bends and the harness.                   |  | Karam (PN Safetech )<br><br>Joseph Leslie<br><br>Accent Industries                                |
| 04      | Electrical Safety Gloves  | EN: 60903 CE marked       | Weekly and visual check for any crack and blow test before every work.             | Manufactured not beyond 12 months.                           | Make Sparian / Sumitech / CATU supplied with inner cotton glove with over glove of split leather. |
| 05      | Full face visor with safety helmet                                  | EN: 166 CE marked (Visor) | Monthly and visual check every day for any crack in shell.                         | Clear acrylic visor attached with safety helmet.             | Karam (PN Safetech )<br><br>Joseph Leslie<br><br>Accent Industries<br><br>Honeywell               |
| 06      | Fire Proof jacket for chest protection                              |                           | Monthly and visual check every day.  |  |   |
| 07      | Safety Chain for shorting cum earthing.                             | As per TPWODL standard    | Weekly and visual check before every work.   | Made of brass, Total length – 5.5 meters and made of 12 SWG. |   |




*Note:*

1. Any other Personal Protection Equipment required beyond above list will be according to BIS or EN Standards.
2. All Personal Protection Equipment will be checked by the engineer in-charge or SAFETY group of TPWODL.

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3. Safety Representative of the BA has to maintain the record of the availability, condition and checking of the PPEs.
4. All tools required as per the contract must be according to respective IS / EN standards.
5. TPWODL may revise or add the above list of PPE and their specifications as and when feel necessary. The information about new specifications /models will be circulated by the Engineer In-charge (EIC), which shall adhere by the business associated in the shortest possible time. The EIC shall issue a memo / instruction to BA with timeline for implementation. Any delay will be treated as non- compliance / safety violations. Refer picture of each PPE given in next page.

**Pictures of PPE for reference purpose.**

| Sl. No. | Name of PPE   | IS / EN Standard  | Picture  |
|---------|---|---|--|
| 01      | Leather Safety Shoes (Color – Black) with PU toe cap.   | IS:15298(Part-2) and with test report of electrical resistance. |    |
| 02      | HDPE Safety helmet with chin strap and ratchet type for adjustment.   | IS:2925-1984  |   |
| 03      | Full body harness (Safety belt)<br><br>The straps at shoulder and thigh shall have full pad for comfort. The back shall be so designed that harness straps do not tangle with each other. | EN 361:2002<br>EN 358 : 2000<br>IS: 3521:1991/2002              |  |



|    |   |                           |  |
|----|---|---------------------------|--|
| 04 | Electrical Safety Gloves – Composite type Soft electrical gloves as per size of individual. | EN: 60903 CE marked       |    |
| 05 | Full face visor with safety helmet  | EN: 166 CE marked (Visor) |    |
| 06 | Fire Proof jacket for chest protection  |                           |  |
| 07 | Safety Chain for shorting cum earthing.   | As per TPWODL standard    |  |
| 08 | Reflective jacket to each workmen   | As per TPWODL standard    |  |

Note : Picture shown are for indicative purpose only. Actual product may differ.

**Annexure 8 (Refer Para 5.8) LIST OF AUDITS TO BE CONDUCTED**

| Audits   | Responsibility           | Freq.       | Ref. Doc.         |
|--|--------------------------|-------------|-------------------|
| Permit to Work & Field Audit   | BA Safety Representative | Weekly      | F04 (COR P - 12)  |
| Tool Bag & PPE's Audit   |                          | Weekly      | F06 (COR P - 12)  |
| First Aid Box Maintenance Record   |                          | Fortnightly | F08 (COR P - 12)  |
| Fire Extinguisher Record<br><i>(Applicable for the BA involved in major construction works and have storage of flammable material at worksite)</i> |                          | Monthly     | F09 (COR P - 12)  |
| Safety Talk Register   |                          | Weekly      | F18 (COR P - 12)  |
| Site Safety Audit  |                          | Daily       | F29A (COR P - 12) |

Note:

1. (BA Safety Representative has to use the formats as per Safety process COR – P – 12 of TPWODL)

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**Annexure 9 (Refer Para 5.9)**

**PERFORMANCE REPORT – SAFETY**

**FOR THE MONTH OF.....**

Name of BA :

.....

Name of the Project and Purchase order No:

.....

Date of commencement of work:

.....

Man Hour Worked in this month (No. of employees X 8 Hrs + Overtime):

.....

Cumulative Man Hour worked:

.....

Total Number of

Minor Injury (this month): ..... Minor Injury (Total) .....

Major Injury (this month): ..... Major Injury (Total): .....

**Detail of the Incident / Sub Standard Acts and Condition**

| Activity  | This Month | Cumulative (Total) | Day Lost (this month)  | Days Lost (Cumulative) |
|---|------------|--------------------|--|------------------------|
| No. of the Incident   |            |                    |  |                        |
| No. of lost time injuries   |            |                    |  |                        |
| No. of dangerous occurrences  |            |                    |  |                        |
| No. of near miss reported   |            |                    |  |                        |
| Substandard Act/Conditions observed   |            |                    | Attach details of observation of this month                            |                        |
| Safety Violation Notice received (from TPWODL) (both in numbers and in Rs.) | No.        | No.                | No. of violation letter received and compliance report for the TPWODL. |                        |
|   | Rs.        | Rs.                |  |                        |

*Note: Cumulative means total from date of commencement of work according to the contract.*

Detail of the Accident / Near Miss Incidents:

| Date and Time | Type of the incident | Name of Employee | Brief Description | Corrective and Preventive actions recommended |
|---------------|----------------------|------------------|-------------------|---|
|               |                      |                  |                   |   |

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Details of the Safety Violations:

| Date and Location | Brief Description | Name of employee involved | Action Taken |
|-------------------|-------------------|---------------------------|--------------|
|                   |                   |                           |              |

Detail of the Safety Talk / Tool Box Talk / Safety Training

| Date and Location | Topic (s) | Total Number of employees (Worker / Supervisor) | Number of participants (Worker / Supervisor) |
|-------------------|-----------|---|--|
|                   |           |   |  |

Detail of the Safety Meeting

| Date and Location | Number of participants | Topics discussed | Major Observations / Innovation |
|-------------------|------------------------|------------------|---------------------------------|
|                   |                        |                  |                                 |

Detail of the Safety Inspection /Audit: (as per TPWODL site audit checklist F29A(COR-P-12))

| Date | Area / Location | Major Observations | Recommendations | Action Taken |
|------|-----------------|--------------------|-----------------|--------------|
|      |                 |                    |                 |              |

Any other Safety, Occupational Health, Environment & Disaster Management Promotional Activity (During this month):

| Date | Location | Activity | Level of Participation | Number of participation |
|------|----------|----------|------------------------|-------------------------|
|      |          |          |                        |                         |

Signature of the BA Safety Representative  
HoG

Signature of ZM /

Name, E. No. and Date

Name, E. No. Date.

*Note: The original form to be deposited with Engineer in-charge and a copy to SAFETY group on or before 5<sup>th</sup> of every month along with bill. List of training of the current month and status of PPE to be also mentioned individual wise.*

*BA may include additional lines if required. The TPPDL may revise the format as and when deemed required.*

**ANNEXURE-L**

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### VENDOR APPRAISAL FORM

| <b>TO BE SUBMITTED BY VENDOR (To be filled as applicable)</b> |   |  |
|---|---|--|
| <b>VENDOR:</b>  |   |  |
| <b>1.0</b>  | <b>DETAILS OF THE FIRM</b>  |  |
|   | 1.1   | NAME (IN CAPITAL LETTERS) :  |
|   | 1.2   | TYPE OF CONCERN (PROPRIETARY) Partnership, Pvt. Ltd., Public Ltd. etc. :                 |
|   | 1.3   | YEAR OF ESTABLISHMENT :  |
|   | 1.4   | LOCATION OF OFFICE<br>POSTAL ADDRESS<br>TELEGRAPHIC ADDRESSES,<br>TELEX NO.<br>FAX NO. : |
|   | 1.5   | LOCATION OF MANUFACTURING UNITS :  |
|   |   | i) UNITS 1 :   |
|   |   | ii) OTHER UNITS :  |
| <b>2.0</b>  | <b>PRODUCTS MANUFACTURED</b> :  |  |
| <b>3.0</b>  | <b>TURNOVER DURING THE LAST 3 YEARS (TO BE VERIFIED WITH THE LATEST PROFIT &amp; LOSS STATEMENT).</b> : |  |
| <b>4.0</b>  | <b>VALUE OF FIXED ASSETS</b> :  |  |
| <b>5.0</b>  | <b>NAME &amp; ADDRESS OF THE BANKERS</b> :  |  |
| <b>6.0</b>  | <b>BANK GUARANTEE LIMIT</b> :   |  |
| <b>7.0</b>  | <b>CREDIT LIMIT</b> :   |  |
| <b>8.0</b>  | <b>TECHNICAL</b>  |  |
|   | 8.1   | NO. OF DESIGN ENGINEERS (INDICATE NO. OF YEARS EXPERIENCE IN RELATED FIELDS) :           |
|   | 8.2   | NO. OF DRAUGHTSMAN :   |
|   | 8.3   | COLLABORATION DETAILS (IF ANY) :   |
|   |   | 8.3.1 DATE OF COLLABORATION :  |
|   |   | 8.3.2 NAME OF COLLABORATOR :   |
|   |   | 8.3.3 RBI APPROVAL DETAILS :   |
|   |   | 8.3.4 EXPERIENCE LIST OF COLLABORATOR :  |

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|            |                    | 8.3.5 DURATION OF AGREEMENT   | : |
|            | 8.4                | AVAILABILITY OF STANDARDS / DESIGN PROCEDURES / COLLABORATOR'S / DOCUMENTS (CHECK WHETHER THESE ARE LATEST/CURRENT  | : |
|            | 8.5                | TECHNICAL SUPPORT, BACK-UP GUARANTEE, SUPERVISION, QUALITY CONTROL BY COLLABORATOR (WHEREVER ESSENTIAL). (THIS CLAUSE IS RELEVANT WHEN VENDOR'S EXPERIENCE IS INADEQUATE) | : |
|            | 8.6                | QUALITY OF DRAWINGS   | : |
| <b>9.0</b> | <b>MANUFACTURE</b> |   |   |
|            | 9.1                | SHOP SPACE, LAYOUT LIGHTING, VENTILATION, ETC.  | : |
|            | 9.2                | POWER (KVA)   | : |
|            |                    | MAINS INSTALLED   | : |
|            |                    | UTILIZED  | : |
|            |                    | STANDBY POWER SOURCE  | : |
|            | 9.3                | MANUFACTURING FACILITIES (ATTACH LIST OF EQUIPMENT AS APPLICABLE)   | : |
|            |                    | 9.3.1 MATERIAL HANDLING   | : |
|            |                    | 9.3.2 MACHINING   | : |
|            |                    | 9.3.3 FABRICATION   | : |
|            |                    | 9.3.4 HEAT TREATMENT  | : |
|            |                    | 9.3.5 BALANCING FACILITY  | : |
|            |                    | 9.3.6 SURFACE TREATMENT PRIOR TO PAINTING/ COATING, POLISHING, PICKLING, PASSIVATION, PAINTING, ETC.  | : |
|            | 9.4                | SUPERVISORY STAFF   | : |
|            | 9.5                | ADEQUACY OF SKILLED LABOURS (MACHINISTS, WELDERS, ETC.)   | : |
|            | 9.6                | NO. OF SHIFTS   | : |
|            | 9.7                | TYPE OF MATERIAL HANDLED (SUCH AS CS, SS, ETC.)   | : |
|            | 9.8                | WORKMANSHIP   | : |
|            | 9.9                | MATERIAL IN STOCK AND VALUE   | : |
|            | 9.10               | TRANSPORT FACILITIES  | : |

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|               | 9.11   | CARE IN HANDLING   | : |
| <b>10.0</b>   | <b>INSPECTION / QC / QA / TESTING</b>  |  |   |
|               | 10.1   | NUMBER OF PERSONNEL (INDICATE NO. OF YEARS OF EXPERIENCE)  | : |
|               | 10.2   | INDEPENDENCE FROM PRODUCTION   | : |
|               | 10.3   | AVAILABILITY OF PROCEDURAL WRITE UP/QUALITY PLAN   | : |
|               | 10.4   | INCOMING MATERIAL CONTROL AND DOCUMENTATION  | : |
|               | 10.5   | RELIABILITY/REPUTATION OF SUPPLY SOURCES   | : |
|               | 10.6   | STAGE INSPECTION AND DOCUMENTATION   | : |
|               | 10.7   | SUB-ASSEMBLY & DOCUMENTATION   | : |
|               | 10.8   | FINAL INSPECTION AND DOCUMENTATION   | : |
|               | 10.9   | PREPARATION OF FINAL DOCUMENTATION PACKAGE   | : |
|               | 10.10  | TYPE TEST FACILITIES   | : |
|               | 10.11  | ACCEPTANCE TEST FACILITIES   | : |
|               | 10.12  | CALIBRATION OF INSTRUMENTS AND GAUGES (WITH TRACEABILITY TO NATIONAL STANDARDS) (ATTACH LIST)      | : |
|               | 10.13  | STATUTORY APPROVALS LIKE BIS, IBR, ETC.(AS APPLICABLE)   | : |
|               | 10.14  | SUB-VENDOR APPROVAL SYSTEM AND QUALITY CONTROL   | : |
|               | 10.15  | DETAILS OF TESTS CARRIED OUT AT INDEPENDENT RECOGNIZED LABORATORIES                                | : |
|               |  | i) FURNISH LIST OF TESTS CARRIED OUT AND THE NAME OF THE LABORATORY WHERE THE TESTS WERE CONDUCTED | : |
|               |  | ii) CHECK AVAILABILITY OF CERTIFICATES AND REVIEW THESE WHEREVER POSSIBLE                          | : |
| <b>11.0</b>   | <b>EXPERIENCE (INCLUDING CONSTRUCTION / ERECTION / COMMISSIONING) TO BE FURNISHED IN THE FORMAT INDICATED IN APPENDIX)</b> |  |   |
| <b>12.0</b>   | <b>SALES, SERVICE AND SITE ORGANIZATIONAL DETAILS</b>  |  |   |
| <b>13.0</b>   | <b>CERTIFICATE FROM CUSTOMERS (ATTACH COPIES OF DOCUMENTS)</b>   |  |   |
| <b>14.0</b>   | <b>POWER SITUATION</b>   |  |   |
| <b>15.0</b>   | <b>LABOUR SITUATION</b>  |  |   |
| <b>16.0 *</b> | <b>APPLICABILITY OF SC/ST RELAXATION (Y/N)<br/>IF YES, SUPPORTING DOCUMENTS TO BE ATTACHED</b>                             |  |   |

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| 17.0 | <b>ORGANIZATIONAL DETAILS</b><br>1. PF NO<br>2. ESI NO<br>3. INSURANCE FOR WORK MAN COMPENSATION ACT NO<br>4. ELECTRICAL CONTRACT LIC NO<br>5. ITCC / PAN NO<br>6. SALES TAX NO<br>7. WC TAX REG. NO   | : |
| 18.0 | <b>DOCUMENTS TO BE ENCLOSED:</b><br>1. FACTORY LICENCE<br>2. ANNUAL REPORT FOR LAST THREE YEARS<br>3. TYPE TEST REPORT FOR THE ITEM<br>4. PAST EXPERIENCE REPORTS<br>5. ISO CERTIFICATE –QMS, EMS, OHAS, SA<br>6. REGISTRATION OF SALES TAX<br>7. COPY OF TIN NO.<br>8. COPY OF SERVICE TAX NO.<br>9. REGISTRATION OF CENTRAL EXCISE<br>10. COPY OF INCOME TAX CLEARANCE.<br>11. COPY OF PF REGISTRATION<br>12. COPY OF ESI REGISTRATION<br>13. COPY OF INSURANCE FOR WORK MAN COMPENSATION ACT NO<br>14. COPY OF ELECTRICAL CONTRACT LIC NO<br>15. COPY OF PAN NO<br>16. COPY OF WC TAX REGISTRATION<br>17. DOCUMENTS IN SUPPORT OF SC/ST RELAXATION AT S.NO.16.0<br>18. GSTN CERTIFICATE |   |

\* **Classification of BA s under SC/ST shall be governed under following guidelines:**

- **Proprietorship/ Single Ownership Firm:** Proprietor of the firm should be from SC/ST community. Governing document shall be Proprietorship Deed.
- **Partnership Firm:** Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed.
- **Private Limited Company:** Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

**NOTE: Certification from SC/ST Commission shall be required for deciding upon SC/ST status of a person.**